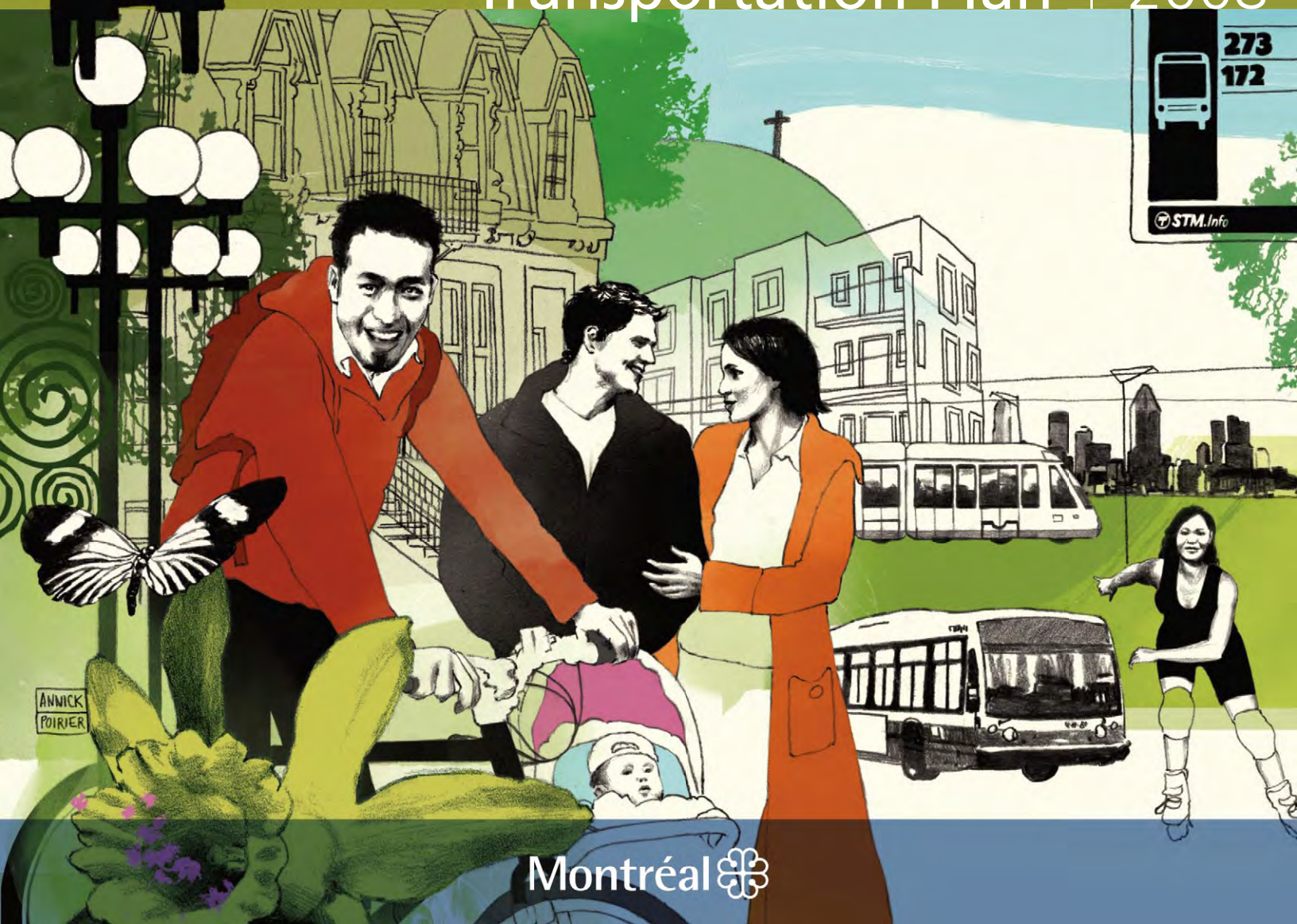


Réinventer
Montréal

Transportation Plan | 2008



Montréal

This document was prepared by

Service des infrastructures, transport et environnement

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Message from the Mayor of Montréal

The *Transportation Plan* that we have just adopted envisions a green and modern Montréal that, having made the right choices at the right time, functions as an efficient and competitive metropolis offering an ideal environment for living and prospering, while meeting the needs of residents and visitors alike.

Our administration is proud to present Montréal's first *Transportation Plan*. This plan has been enriched and augmented by the contributions of the many individuals who participated in public consultations. It is for this reason that the Plan reflects measures up to the aspirations and values of Greater Montréal residents who are seeking to roll out initiatives that will have a dramatic effect on reducing greenhouse gases, pollution and on improving air quality and the safety and ease with which we can get about. Like many other great cities, Montréal has made the collective decision that it is possible to both support the economy and protect the environment, while making travel easier. With this well-named Plan, we can now truly engage in the process of reinventing our great city.

The Plan before us is bold and ambitious, as it must be. By proposing massive investment towards the development of public transit, carpooling, carsharing, alternatives to cars, and active forms of transportation, such as walking and bicycling, the *Transportation Plan* calls for major changes in our habits and behaviour.

The *Transportation Plan* will also serve as a new tool in making our city a more beautiful place in which to live. Our administration is committed to taking action in every area that will help us turn Montréal into a true metropolis of the 21st century. Our *Transportation Plan* represents a major contribution to this effort.

This Plan will serve as a vital resource in making Montréal a leader among the world's great cities. At the same time, we want to ensure that the Montréalers of today and tomorrow have a present and future well suited to their aspirations. Now, more than ever before, we are determined to pursue our efforts to *Reinvent Montréal*.

A handwritten signature in black ink, reading "Gérald Tremblay". The signature is fluid and cursive, with the first name being more prominent.

Gérald Tremblay
Mayor of Montréal



Message from Claude Trudel

The *Société de transport de Montréal* (STM), a publicly owned transit authority, is at the heart of Greater Montréal's economic development. By contributing to quality of life and environmental protection, the STM helps millions of people pursue their studies, engage in recreational activities, go shopping and participate in other activities.

Far more than being just a driving force in economic development, public transit also represents a key strategy in sustainable development, because it provides an excellent method of reducing greenhouse gases.

Many recent events have created a strong political will to give fresh support to metropolitan Montréal's public transit system. These events include the spring 2002 *Montréal Summit*, which recognized the importance of investing in additional infrastructure and in improving and developing new public transit services.

The STM is proud to be part of this outstanding *Transportation Plan* that will enable Montréal to make public transit one of the primary mechanisms deployed in its efforts to improve its citizens' quality of life.

The STM's mission and its commitments seek to improve the speed, comfort and safety of current modes of transportation and to providing broader coverage, with services even more closely tailored to the varied needs of today's Montréalers. This effort marks a dramatic shift in favour of sustainable development.

The STM, which is actively involved in deploying this vast upgrade in its services, has targeted a ridership increase of over 25% by 2021. The Government of Québec's *Plan vert* [Green Plan] and the City's unfailing support have endowed the STM with the substantial financial resources it needs to meet these goals for the first time in many years.

Through this support, the STM launched the first major initiative under its service upgrade program on January 7, 2008.

Both the City and the STM are firmly committed to making Montréal North America's leader in public transit. We are now taking action consistent with this goal.

A stylized, handwritten signature in black ink, likely belonging to Claude Trudel.

Claude Trudel
Chair of the Board of the STM

Transportation Vision

Montréal has adopted a Transportation Vision and strategic objectives that correspond with the positions adopted at the *Montréal Summit* in June 2002. This Vision subsequently received widespread approval in various consultation sessions held with key partners, transportation stakeholders and the public. The Transportation Vision consists of:

“Meeting the transportation needs of all Montréal residents by providing our community with a high quality of life and ensuring its role as a prosperous and environmentally friendly economic powerhouse. To achieve this goal, Montréal intends to significantly reduce its dependence on cars through massive investment in various forms of public transit and active transportation, including the tramway system, the subway system, bus rapid transit service, trains, bikes and walking, and by encouraging such more appropriate uses for cars as carpooling, carsharing and taxi service.”



Message from André Lavallée

TRANSPORTATION PLAN PRIORITIES

Not only is Montréal a city that is outstanding in so many different ways, it is an urban centre that is firmly committed to meeting its challenges.

We presented Montréal's very first *Transportation Plan* on May 17, 2007. This ambitious proposal seeks to make public transit the backbone of human transportation and a key tool in Montréal's development.

The proposal has received so much popular support that we decided not to await its actual adoption before investing large sums in the immediate upgrade of STM services and in launching several new development programs.

In the months following its release, the proposal triggered broad discourse in many forums, resulting in many contributions from the public during consultation sessions hosted this fall by the City Council's *Commission permanente sur la mise en valeur du territoire, l'aménagement urbain et le transport public*, chaired by Councillor Manon Barbe, and by the Agglomeration Council's *Commission permanente sur l'environnement, le transport et les infrastructures*, chaired by Councillor Michael Applebaum.

These sessions confirmed the very strong commitment of Montréal stakeholders to the Vision, to the Plan's proposed strategic orientations, to the suitability of the Plan's 21 Development Programs and to the clear desires of these parties to participate in the plan's implementation. The general priorities to which Montréal is committed were also shaped by recommendations from elected officials. Such priorities include the downtown tramway, subway extensions to the east and then to the west, the rail shuttle between downtown Montréal and the airport (accompanied by upgraded commuter train service in the West Island), the East End commuter line, swift implementation of a vast network of bus and carpool lanes, deployment of the bike path network and finally, implementation of the *Pedestrian Charter* and measures to enhance safe travel. Elected officials also backed certain urgent roadwork projects that would support trade and the shipment of freight, promote development of the port and the airport and permit certain major housing developments on the island to move forward.

Making Montréal's *Transportation Plan* a reality will require expenditures in excess of \$8 billion over a 20-year period. Such an effort will also clearly require major investments by Montréal, the other levels of government and many additional partners.

The Government of Québec has already confirmed that it will make big investments that will allow many of the Plan's key projects to be carried out, including reconstruction of *Rue Notre-Dame*, acquisition of new subway cars and equipment, deployment of a new fleet of commuter trains and creation of the East end commuter line. Montréal obviously hopes that the Government of Québec will maintain and develop funding programs created under the recently adopted *Politique québécoise du transport collectif* [Québec Public Transit Policy]. Montréal will also continue to seek the federal government's pledge to provide permanent funding to public transit and to formulate a national public transit strategy.

Montréal must, however, acquire new financial resources to fund its own contributions to the Plan.

From its inception in May 2007, the *Transportation Plan* has spurred discussion of numerous options, including a toll system. There is every indication that this user-pays principle will generate positive benefits and win widespread acceptance, as long as such moneys are specifically earmarked for public transit and certain kinds of infrastructure work.

Many stakeholders have, however, emphasized that Montréal should not act on its own and must bring its metropolitan partners on board its Vision. We concur in that view.

When it submitted this Plan in May 2007, Montréal had already committed itself to being part of a metropolitan effort aimed at optimizing land-use planning, human transportation and the shipment of freight based on principles of sustainable development.

All parties agree that transportation issues are not limited to the Island of Montréal. They are also of concern to Laval, Longueuil and all of the region's municipalities. The region's vast daily traffic jams attest to this fact.

Many of Montréal's intended projects obviously concern human access to the island and to facilities and infrastructure throughout the metropolitan region.

In 2005, the *Coalition métropolitaine pour la relance du transport en commun*, which had been created on the initiative of the Chair of the *Communauté métropolitaine de Montréal*, achieved an initial consensus on the importance of investing in public transit. The Coalition defined various priorities, such as the proposed rail shuttle between downtown Montréal and the airport, as well as the development of public transit between the South Shore and Montréal. More recently, when the subway extension

to Laval was completed, the region's elected officials unanimously declared that these facilities were "metropolitan" in character. They also agreed to pursue their discussions aimed at reviewing the governance and funding of public transit throughout the region.

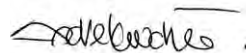
Montréal thus seeks to establish a regional toll system with revenues shared among the municipalities concerned. Such moneys will fund their own contributions to the development of local and regional projects and to operate public transit systems and promote active forms of transportation.

This proposal is likely to lead to a broad-based dialogue that could result in the selection of one or more options or new alternatives. Clearly, we have no choice but to reach beyond the local jurisdictions to reconcile the regional and local aspects of transportation.

Public comments on the *Transportation Plan* have shown that, outside their daily concerns about highway congestion and fuel prices, Montréalers of the 21st century want the federal and provincial governments and the island's municipalities to work together in deploying initiatives that will substantially cut down on greenhouse gases and pollution, while making a marked improvement in air quality and the environment.

In the past year, Montréalers have clearly stated what they want for themselves and their children: a green city, a city that will reinvent itself through sustainable development, the formulation of alternatives to the car, new comfortable and efficient public transit infrastructure, the highest quality of urban development and neighbourhoods in which families can live and travel about in a safe and satisfying atmosphere.

This Vision has served as our foundation in preparing this Plan. We firmly believe that the adoption of the *Transportation Plan* is similar in scope to the signing of a unifying and enduring social contract between Montréal residents and their elected municipal officials.



André Lavallée
Executive Committee member
responsible for Urban Planning and Public Transit

21 Development Programs for Reinventing Montréal Within 10 years!

EFFICIENT TRANSPORTATION IS IMPORTANT FOR GETTING TO WORK, OBTAINING HEALTH CARE, EDUCATION, TRAINING, RECREATION, CULTURE AND ENSURING THE COMMUNITY'S ECONOMIC PROSPERITY. HOWEVER, OTHER EQUALLY IMPORTANT ISSUES MUST NOW BE TAKEN INTO ACCOUNT WHEN MAKING OUR PERSONAL AND COLLECTIVE TRAVEL CHOICES. THESE ISSUES INCLUDE PROTECTING THE ENVIRONMENT, AIR QUALITY, QUALITY OF LIFE, THE PEACE, QUIET AND CHARACTER OF NEIGHBOURHOODS; THE HEALTH AND SAFETY OF RESIDENTS; THE QUALITY, COMFORT AND DESIGN OF URBAN DEVELOPMENT; SOCIAL EQUALITY AND INVESTMENT COST.

The *Transportation Plan's* assessment lists the major investments needed for Montréal's municipal road system, bridges, tunnels and other assets. The assessment also lists the various kinds of work still needed for upgrading different interchanges, boulevards and intersections.

The assessment also underscored the need to set aside many billions of dollars just for public transit, with respect to the maintenance and development of existing systems of public transit and bike paths and for the creation of new forms of transit.

Montréal intends to exert strong leadership in proposing transportation priorities and solutions through this process.

The Plan sets out the ambitious and inspiring choice of making massive investments in the development of alternatives to the car, such as public transit, carpooling, carsharing, demand management, accompanied by active forms of transportation such as walking and bicycling.

From an economic perspective, Montréal, which is a major port of entry into North America, must also maintain its position as a freight hub. As part of that strategy, Montréal will be engaged in an action plan aimed at optimizing freight shipment throughout the *Communauté métropolitaine*

de Montréal (CMM). Greater Montréal generates more than half of Québec's gross domestic product. These roles entail substantial trade throughout Québec, the rest of Canada and the world.

Montréal is also the economic, social and cultural heart of the metropolitan region, which means it must be regionally accessible. This requirement imposes significant demands on the City in terms of infrastructure and services.

Public consultation sessions regarding the proposed *Transportation Plan* served to highlight a new need to recognize the structural impact of transit systems throughout the metropolitan region and to encourage higher population density in the better-served sectors.

Montréal is, accordingly, proposing an ambitious undertaking consisting of 21 Development Programs that it wants to carry out simultaneously over the next decade. These development programs are geared to improving the City's environment and resident quality of life in very fundamental ways. This Plan will require the active participation of all stakeholders in the transportation sector, since the Vision on which it is based must certainly be a collective one if it is to become a reality.

The selection of these particular programs does not address every action described in the *Transportation Plan*. Achieving the proposed goals will, however, oblige the City administration and its partners to focus on carrying out the local and island-wide projects that will most likely spur the desired changes.

DEVELOPMENT PROGRAM NO. 1 CREATING TRAMWAYS AT THE CENTRE OF THE AGGLOMERATION

The first tramway line, which will supplement the subway system and the pedestrian circulation system, will loop through the densest concentration of jobs and activities, running between the business centre, the Montréal Harbourfront, Old Montréal, the new CHUM, UQAM, the *Quartier des spectacles* and the *Quartier International de Montréal*.

Lines will then be installed along *Avenue du Parc*, followed by *Chemin de la Côte-des-Neiges*. The initial network will thus be some 20 kilometres in length, have an exceptional impact on the urban environment and serve as an important catalyst for multiple projects.

The Du Parc line could also be extended northward to serve the residential Parc-Extension sector, as well as the *L'Acadie-Chabanel* industrial and commercial hub. The City will also study the

possibility of using a tramway or a modern and environmentally friendly shuttle to link *Avenue du Parc* and the section of *Chemin de la Côte-des-Neiges* in Mount Royal Park.

Other routes could also be envisioned. The system could extend eastward and northward along *Rue Notre-Dame* and *Boulevard Pie-IX*, with coverage concentrating on the Maisonneuve sector. Other corridors, such as *Boulevard Henri-Bourassa*, *Avenue du Mont-Royal* and *Rue Ontario*, as well as the Lachine Canal route in the west, could be developed because of the potential they offer for transportation and consolidated urban development.

DEVELOPMENT PROGRAM NO. 2

CREATING A RAIL SHUTTLE BETWEEN DOWNTOWN MONTRÉAL AND MONTRÉAL-TRUDEAU INTERNATIONAL AIRPORT

Montréal recognizes the crucial role that the Montréal-Trudeau International Airport plays in its economic development strategy. The airport, which is subject to traffic congestion in its immediate vicinity, particularly along the surrounding highways, only has limited public transit coverage. Montréal-Trudeau International Airport is one of Canada's main ports of entry and should accordingly benefit from world-class accessibility, particularly as aviation activities are expected to enjoy sustained growth over the next few years, climbing from 12 million passengers in 2007 to a projected 16.4 million in 2016.

The trip by rail shuttle should take about 20 minutes. An initial ridership study in 2005 forecast that the shuttle would carry over 2.4 million airport passengers annually by 2016, without counting trips by airport employees.

This project would, furthermore, serve as an opportunity to improve the urban landscape and introduce design concepts along the route, to create a positive impression on arriving visitors.

A subsequent phase of this project would also serve as an opportunity to improve train service between downtown Montréal, the airport and the West Island. This project would not only be of benefit to airport users, but to West Island residents, employees and employers as well.

DEVELOPMENT PROGRAM NO. 3

UPGRADING MONTRÉAL'S SUBWAY SYSTEM

The 336 MR-63 cars that were placed in service when the system opened in 1966 are at the ends of their service lives. The program to replace these cars shall require an investment estimated in excess of \$1.1 billion. The Government of Québec will shoulder 75% of this cost. The *Société de transport de Montréal* (STM) is currently working on calls for tender and the number of cars will be calculated on the basis of ridership.

By late 2008, the 423 MR-73 cars will also be renovated and overhauled to keep them in good condition and boost their capacities. These cars must be replaced over the longer term. The acquisition of new rolling stock will also be accompanied by modernization programs to upgrade subway stations and installed equipment to increase operational reliability and universal access to the system, particularly with elevators in stations.

DEVELOPMENT PROGRAM NO. 4

EXTENDING SUBWAY LINES IN EASTERN MONTRÉAL

Montréal plans to boost subway service substantially to its new economic hubs in the eastern and central west portions of the island by extending the subway system. Within the near term, Montréal wants to begin by extending the Blue Line (5) from *Boulevard Saint-Michel* to *Boulevard Pie-IX*. Pie-IX is the island's largest north-south public transit corridor for current and prospective riders. The new station would permit transfers to the *Boulevard Pie-IX* reserved lane bus and the East End commuter line, while also upgrading East End service by offering a critical new east-west travel route in the centre of the island.

In a second phase, the line would be extended 5.1 km, from *Boulevard Pie-IX* to Saint-Léonard and Anjou. Montréal believes that a forecast ridership increase of some 50%, would far and away justify extending Line 5 to Anjou.

At the Government of Québec's request, the *Agence métropolitaine de transport* (AMT) has already begun considering other options for extending the subway system, particularly the Orange Line (2) to Bois-Franc, the Yellow Line (4) and another extension to Laval.

DEVELOPMENT PROGRAM NO. 5

UPGRADING STM SERVICE TO BOOST RIDERSHIP BY 8% WITHIN FIVE YEARS

In late 2007, Montréal and the STM began rolling out a service upgrade plan targeting 8% growth in ridership by 2012, in line with the *Politique québécoise du transport collectif* [Québec Public Transit Policy]. Meeting this objective would

require a substantial (approximately 16%) increase in service. The STM's service upgrade plan is focusing on increasing the size of the bus fleet, introducing articulated buses on some 20 high-ridership lines, increasing the frequency of rush hour subway service and expanding the system's capacity at start or end of peak periods, during weekday lunch hours and evenings, and during weekends afternoons and evenings. With the agglomeration's assistance, the STM has also begun to deploy a set of initiatives to enhance accessibility, cleanliness, safety, user friendliness and user information.

DEVELOPMENT PROGRAM NO. 6 **PROMOTING CARPOOLING, CARSHARING** **AND TAXI SERVICE**

Montréal recognizes that cars do not represent a sustainable form of transportation. Various practices, such as carpooling and carsharing, do however serve to reduce overall car use and improve quality of life. Montréal therefore intends to:

- ask the Government of Québec to develop a network of carpool lanes on the island's highways and access roads to boost the current morning rush hour occupancy rate of 1.27 persons in Montréal-bound vehicles;
- consider, as of 2008, the possibility of allowing carpooling on certain municipal bus lanes;
- install parking facilities for carpooling, carsharing, fuel-efficient vehicles and micro-cars;
- support the taxi industry's initiatives to improve service, particularly by modifying taxi stands, training drivers and providing bike racks;

- promote the taxi industry's use of clean vehicles, particularly by creating an "ecotaxi" category.

The Government of Québec has demonstrated its support for the carpooling aspects of the Plan. It announced the creation of a reserved lane in each direction for use by vehicles with two or more people, as well as taxis, along a five-kilometre stretch of the rebuilt *Rue Notre-Dame*, thereby laying the foundation of a future carpool system.

DEVELOPMENT PROGRAM NO. 7 **ENHANCING PUBLIC TRANSIT RIDERSHIP CAPACITY IN** **THE CHAMPLAIN BRIDGE-BONAVENTURE CORRIDOR**

The City has previously publicized its intention of redeveloping the Bonaventure Expressway into an urban boulevard. This three-phase project will serve to overhaul one of Montréal's key gateways, while enhancing and developing public transit in the downtown/Champlain Bridge/South Shore corridor.

The AMT, the STM and the City are already in the process of considering every measure that can be deployed to increase the capacity of buses in downtown Montréal and make it easier for them to use the Bonaventure corridor (creation of reserved lanes). Such actions must not interfere with the longer term establishment of a guided rail system such as a light rail in the downtown Montréal/South Shore corridor.

DEVELOPMENT PROGRAM NO. 8 **CREATING A RAPID BUS SYSTEM RUNNING ON ITS** **OWN RESERVED LANE**

Certain public transit routes, such as *Boulevard Pie-IX* and *Boulevard Henri-Bourassa*, are already experiencing very heavy usage, particularly during rush hour periods. Montréal wants to install separate reserved and rapid lanes along these routes to provide regular, reliable and swift service throughout the day. Such transportation is well suited to the more outlying sectors of the City. These new reserved lanes could be used by articulated buses or trolleys, as well as tramways over the longer term.

The Pie-IX bus rapid transit (BRT) service will be the first express route to be established in the short term and will accommodate new bus lines providing direct links between the East End and downtown Montréal. The corridor's potential ridership is estimated at some 70,000 users per day, which compares favourably with total ridership in commuter trains or at the three Laval subway stations.

A second express bus route is planned for *Boulevard Henri-Bourassa* over the mid- and long terms, running between *Boulevard Pie-IX* and the Henri-Bourassa subway station. This major public transit corridor, which is Montréal's largest, has daily ridership of 70,000 users and is currently served by reserved lanes during rush hours.

Other corridors present similar opportunities. There is *Rue Notre-Dame* and the CN right-of-right in the East End to Pointe-aux-Trembles and the Doney spur in the West Island, south of Highway 40. The latter route would promote the use of public transit to Saint-Laurent's Technoparc, which is the second leading employment destination for West Island residents.

DEVELOPMENT PROGRAM NO. 9

ESTABLISHING BUS PRIORITY MEASURES ALONG 240 KILOMETRES OF ARTERIAL ROADS

To increase public transit use, such service must carry riders comfortably and efficiently along public roads. Montréal, in conjunction with the STM, will accordingly set up priority initiatives for public transit users along the entire 240 km of its arterial and collector routes with bus service. At the present time, buses enjoy priority over cars only along a very small portion of the system. The priority initiative could, depending on the situation, include the creation of new reserved lanes, involve changes in traffic signals, and modifications in road layout, road markings, snow removal practices and parking facilities.

Initially, six of the most heavily travelled routes will benefit from these kinds of initiatives. They are *Boulevard Saint-Michel*, *Rue Beaubien*, *Boulevard Rosemont*, the *Sauvé/Côte-Vertu* and *Saint-Jean/Pierrefonds* corridors, as well as *Rue Notre-Dame*, from *Rue Dickson* to the *Pointe-aux-Trembles* sector.

DEVELOPMENT PROGRAM NO. 10

DEVELOPING LOCAL TRANSPORTATION PLANS

Improving travelling conditions is not simply a matter of providing additional infrastructure and transportation services, but also of planning that is more closely tailored to today's travel requirements. Such planning gives greater consideration to the relationship between transportation and land use planning, to demand management and to such car alternatives as public transit and active forms of transportation.

Montréal has, accordingly, asked the municipalities and boroughs to produce their own local transportation plans within three years. These plans, which would dovetail with the strategic orientations expressed in this *Transportation Plan*, will set out the necessary guidelines for developing road, pedestrian and cycling infrastructure.

The municipalities and boroughs have also been asked to prepare priority action plans on travel safety within one year, particularly with respect to pedestrian amenities.

Other plans, such as the *Plan directeur de gestion des déplacements du centre-ville* [master plan for transportation management in downtown Montréal], *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal] and *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal] will set out the measures necessary for improving access and safety in these sectors.

Montréal also recognizes the key role that employers and institutions must play in meeting its new goals for transportation and human mobility. Montréal therefore intends to ensure from this point forward that all major real estate developments are accompanied by a trip management plan that will take into account all transportation issues based on the existence and capacity of public transit and active transportation, as well as carpooling, bike transportation, carsharing and taxi service. Montréal will ask the Government of Québec to pass new rules requiring the CMM's institutions and businesses to develop transportation management plans for their employees and users. As a major employer, the City Administration intends to serve as a model in this field and adopt a set of initiatives aimed at managing its employees' transportation needs.

To this end, Montréal seeks to expand the areas served by its *centres de gestion des déplacements* [commuter management centres] (CGD) as well as to create new CGDs that will provide coverage for all sectors of the agglomeration. Through its Public Transit Policy, the Government of Québec will use employer programs to support the establishment of these CGDs.

Finally, Montréal also plans to revise urban planning regulations so they place caps on the number of parking spaces and to revise the parking policy it adopted more than 12 years ago.

DEVELOPMENT PROGRAM NO. 11

REBUILDING RUE NOTRE-DAME

The highly awaited near-term completion of this project should result in significant quality of life improvements for the neighbourhoods along this route, which are now constantly inundated by constant streams of vehicles of all sorts. This initiative should serve to promote the development of vast areas of what is now industrial wasteland in the East End and the deployment of a far more efficient public transit system for this vast portion of the island. Following public consultation sessions, the project was amended to include a bus lane on *Rue Notre-Dame*, which will feed into the lane planned along the full length of *Boulevard Pie-IX*. This new service will give riders from the north-eastern portion of the island quick access at all times of day to downtown Montréal. Complete reconstruction of this section of road will also serve as an opportunity for redeveloping access routes to the port and providing more direct links to the primary road system for heavy traffic. It will also include the creation of a carpool and taxi lane in each direction along a five kilometre stretch of road.

In the wake of the changes planned for *Rue Notre-Dame*, and to ensure that this route fits properly into the City's urban environment, Montréal is also seeking to cover exposed sections of the Ville-Marie Expressway. Recent work to cover similar sections in the course of the *Quartier International de Montréal* project illustrates the intended effect. Other projects currently under study could present opportunities for covering additional sections of the expressway, thereby eliminating the gap in the urban fabric created by the open-cut expressway.

DEVELOPMENT PROGRAM NO. 12 **CREATING THE EAST END COMMUTER LINE**

The planned line would be 51 km long, 35 km of which would run through Montréal. The line would connect downtown Montréal, the boroughs of Ahuntsic-Cartierville, Montréal-Nord, Saint-Léonard, Anjou and Pointe-aux-Trembles/Rivières-des-Prairies, and the cities of Repentigny and Mascouche. The Government of Québec has already given a green light to this project. The seven new stations planned for Montréal would promote denser development of the sectors concerned, resulting in better use of urban infrastructure. Park and ride facilities would be set up near certain stations and bike racks would be installed at each station. Stations and rolling stock will comply with universal access standards. Local bus routes will be reorganized to promote the use of these new facilities and permit better local service.

The East End commuter line is scheduled to begin service between Mascouche and downtown Montréal in 2010. Service could, however, start even sooner between Montréal and Repentigny.



DEVELOPMENT PROGRAM NO. 13 DOUBLING MONTRÉAL'S BIKE PATH SYSTEM WITHIN SEVEN YEARS

Montréal wants to encourage the use of the bicycle for basic transportation. The present system contains nearly 400 km of bike paths. It will double in size to 800 km within seven years. Completion of this ambitious project will help

Montréal become the world's foremost bike city. The creation of a new east-west bike path on *Boulevard De Maisonneuve* in downtown Montréal in 2007 has made bike transportation an integral part of the transportation system. Since the winter of 2007, Montréal has also kept a portion of its bike path system open year-round, its *White Network*. In 2007, Montréal began developing a self-service bicycle system that,

by 2009, will permit the use of 2,400 bikes parked at 300 docking racks. Regulations will also be revised to require parking lot operators to set aside a minimal number of bike parking spaces. Montréal will, over the years, also begin upgrading its existing bike path system.

DEVELOPMENT PROGRAM NO. 14 IMPLEMENTING THE PEDESTRIAN CHARTER

Montréal has developed a Charter to provide a clear definition for new road use principles that support walking and reverse the downturn in this practice. Such an initiative will give pedestrians more room by taking space away from motor vehicles. Montréal has already publicized the various initiatives it plans to deploy to make it clear that the pedestrian comes first in its transportation system. The *Pedestrian Charter*, which was discussed at major public consultation sessions in 2006, now represents a key component of the *Transportation Plan*. Many of the activities described in the proposed *Pedestrian Charter* have already been implemented. These include a continued island-wide ban on right turns on red, the installation of countdown pedestrian signals, a bigger budget at the start of the year to mark out intersections and a greater number of police officers assigned to safety and traffic. In 2008, Montréal will formulate a guide for the development of public roads and parks that will focus on pedestrian needs, as well as universal access standards. The municipalities and boroughs have also been asked to produce profiles of how much walking their residents do and to prepare action plans to promote this form of transportation. Pedestrian initiatives will be included in the local transportation plans and the priority action plans that the municipalities and boroughs are asked to produce.



DEVELOPMENT PROGRAM NO. 15

ENHANCING THE PEDESTRIAN CHARACTER OF DOWNTOWN MONTRÉAL AND OF THE CITY'S CENTRAL DISTRICTS

Montréal enjoys an excellent reputation as a city in which people enjoy walking, both day and night. Walking is in fact the main form of short-haul morning rush hour transportation for 40% of all people within the City's central districts. In addition to the various measures the City plans to deploy throughout the island, Montréal wants to place special emphasis on enhancing the pedestrian character of downtown Montréal and its central districts.

The City therefore intends to place special emphasis on continuing to develop the Indoor Pedestrian Network, which is already more than 30 km in length and links 10 subway stations and the key train stations and bus terminuses. Montréal also plans to quickly enhance security at intersections, as it did when installing the *Boulevard De Maisonneuve* bike path, starting with those along *Rue Sainte-Catherine* and *Boulevard René-Lévesque*.

The creation of pedestrian streets represents another means of enhancing the pedestrian character of downtown Montréal and the City's central districts, while adhering to the spirit of the Transportation Vision. The recent example at the Jean-Talon Market illustrates the new enthusiasm that shop owners (who were initially very cool to the idea) have expressed for this project. In the fall of 2008, Montréal will engage in consultations with the municipalities and boroughs on roads that could be converted in downtown Montréal and other sectors to pedestrian-only use. The selection of such routes will be based on their functions, layout, etc. Old Montréal (and *Rue Saint Paul* in particular), which receives from



13 to 15 million visitors each year, has already been targeted for this effort as part of the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal].

DEVELOPMENT PROGRAM NO. 16

RESTORING THE APPROPRIATE QUALITY OF LIFE TO MONTRÉAL'S RESIDENTIAL NEIGHBOURHOODS

The *Transportation Plan* recommends the creation of new green neighbourhoods. This strategy would promote the designation of perimeters with rules and amenities aimed at

calming traffic, increasing security and restoring the quality of life appropriate to the residents of these neighbourhoods. These perimeters will include residential neighbourhoods, school and park zones, hospitals, public facilities and, in certain cases, commercial or tourist activities. Municipalities and boroughs, which will be responsible for targeting and deploying appropriate initiatives, will be in charge of defining such green perimeters in their local transportation plans. This effort will be supported by the establishment of implementation criteria,



the adoption of harmonization rules setting priorities for various needs (truck network, bus service, bike path, etc.), and the resources needed to assist the municipalities and boroughs in this undertaking.

DEVELOPMENT PROGRAM NO. 17 **ENHANCING TRANSPORTATION SAFETY**

Although Montréal remains one of North America's safest cities, more than 12,000 people are injured and some 50 killed in accidents on its roadways every year. Inattention, distraction and failure to comply with the *Code de la sécurité routière* [Highway Safety Code] are listed as the main causes of such incidents. Major efforts are still required to change these behaviours. To remedy this problem, the *Transportation Plan*

proposes a set of initiatives, most of which can be promptly implemented. In addition to setting up a *bureau de la sécurité des déplacements* [office of travel safety] in 2008, Montréal will also enhance certain street layouts. As part of this process, it will boost safety at some 50 intersections each year (starting with the most hazardous) by increasing visibility, continuing to install pedestrian crossing lights, modifying traffic signal phasing and timing, improving street lighting, marking pedestrian crossings more clearly and narrowing certain crossings. Montréal will also reduce speed limits from 50 km/h to 40 km/h on all local roads (other than arterial routes), and provide enhanced safety measures in construction areas. Montréal will, moreover, attempt to change the behaviour of road users by maintaining a large presence of traffic police officers, by supporting the Government of Québec's ban on hand-held cell phone use by

drivers and by conducting campaigns to promote compliance with the *Code de la sécurité routière* [Highway Safety Code].

DEVELOPMENT PROGRAM NO. 18 **MAINTAINING AND COMPLETING THE ISLAND'S ROAD SYSTEM**

Montréal has, over the past few years, significantly boosted its funding for the restoration and recurring maintenance of that portion of the road system for which it maintains responsibility, even though this system partly also meets regional needs. Over the next few years, Montréal intends to maintain its current annual investment level of about \$160 million. Furthermore, while the *Transportation Plan* clearly demonstrates an unequivocal preference

for public transit and active transportation, certain improvements and additions must be made to the existing road system.

Montréal therefore intends to give priority to carrying out the following projects on:

- improved safety measures for *Rue Notre-Dame* (east of *Rue Dickson* to *Rue Curatteau*);
- redevelopment of *Rue Sherbrooke Est*, from *36^e Avenue* (Pointe-aux-Trembles) to *Rue Notre-Dame*;
- repair of *Rue Sherbrooke*, from *Boulevard Pie-IX* to *Rue Papineau*;
- extension of *Boulevard Cavendish*: an initial phase of the project will create a link between Royalmount and Cavendish, while a second will link two existing sections of Cavendish;
- extension of *Boulevard Langelier* from *Boulevard des Grandes-Prairies* to *Boulevard Henri-Bourassa*;
- extension of *Boulevard Rodolphe-Forget* (Bourget);
- extension of *Boulevard Jacques-Bizard* to Highway 40;
- creation of an urban boulevard along the right-of-way of Highway 440;
- creation of a new structure connecting *Île Bizard* with the Island of Montréal.

Such work will seek to ensure important roles for public transit and active forms of transportation. The road system will be reorganized so that travel by public transit can be more competitive with the car. Bike lanes will be installed. Such changes should be designed to facilitate safe and comfortable travel by pedestrians. Each project will be designed as a truly integrated urban development project rather than as a mere road link.

DEVELOPMENT PROGRAM NO. 19

FACILITATING FREIGHT SHIPMENT AND TRANSPORTATION IN SUPPORT OF THE ECONOMY

Greater Montréal is a hub for the transcontinental shipment of freight. By maintaining and upgrading the performance of such strategic infrastructure as its port, its airports, its rail system and its road system, Montréal can continue to enjoy efficient trade with the region and the rest of the world. The *Transportation Plan's* recommendations are geared to boosting Montréal's competitiveness and appeal, by offering favourable conditions to existing businesses and for new investments, all the while protecting the public's peace, quiet and quality of life. The reconstruction of *Rue Notre-Dame* will help boost land access to the Port of Montréal. The creation of a rail shuttle running from the airport to downtown Montréal will help support the airport system's growth. The Plan also sets out a strategy for improving train service along the Montréal-Toronto corridor.

Montréal will be on the lookout for any structural change that may be expected as part of the globalization of trade and new forms of production and will participate in efforts aimed at optimizing the movement of goods, while emphasizing intermodal shipping, throughout

the CMM. Montréal will in the meantime continue to work with industry stakeholders through the *Comité interrégional pour le transport des marchandises* [interregional committee for freight shipment] (CITM), which is responsible for enhancing Greater Montréal's position as a shipping hub. As part of this process, Montréal intends to participate actively in the planned Ontario-Québec Continental Gateway and Trade Corridor so that it can promote shipping and trade along the strategic St Lawrence/Great Lakes corridor.

Montréal also wants to extend the trucking network in the urban agglomeration and further reduce risks relating to the shipment of hazardous materials by road.

DEVELOPMENT PROGRAM NO. 20

REVIEWING GOVERNANCE

Montréal cannot and does not plan to make its vision a reality on its own or in a vacuum. The agglomeration forms the core of a community with over 3.6 million residents. The *Transportation Plan* and the priorities it advocates require the participation of large groups of stakeholders and private individuals based in Montréal and its suburbs, private or public businesses and such key players as the *ministère des Transports du Québec* (MTQ), the AMT, the CMM, the STM, as well, of course, as the higher levels of government.

Montréal can have an impact on a portion of the transportation system, but it has little influence on transportation occurring within the region, such as inter-regional travel transiting the island, the shipment of freight, transportation habits of the region's residents, fuel and emission rules

for different kinds of vehicles and so forth. The fact that discussions among the concerned parties have occasionally been difficult is partly due to the large number of different management structures and decisions that apply throughout the metropolitan region.

In 2002, the *Bernard Report* confirmed that an effective and efficient public transit system first requires a metropolitan vision to drive and support it. In 2003, Montréal endorsed this recommendation of the *Bernard Report* and is now reasserting the urgent need to pursue discussions and reach a consensus with its regional partners and the Government of Québec with respect to metropolitan governance in the area of public transit on such topics as inadequate financial resources, equitable municipal contributions, the CMM's role and an outlook favouring public transit.

The *Transportation Plan* recommends the establishment of a governance mechanism to provide CMM elected officials with responsibility for metropolitan public transit pursuant to the CMM's incorporating Act, under which it has been responsible, since 2001, for "planning and coordinating public transit and funding its metropolitan aspects, in view of government transportation policies." The AMT's role will thus be reviewed so that it will become the transportation authority reporting to the CMM Council and operate metropolitan transportation facilities and commuter trains.

DEVELOPMENT PROGRAM NO. 21 ACQUIRING MEANS EQUAL TO OUR ASPIRATIONS

Carrying out the *Transportation Plan* will cost some \$8 billion over 20 years. The Plan will require major investments from Montréal, the other levels of government and various additional partners.

Montréal plans to earmark slightly more than an additional \$240 million per year to carry out the *Transportation Plan's* 21 Development Programs over the next 10 years and in particular to develop public transit systems and active forms of transportation, as well as to make certain improvements to the road system.

The higher levels of government have recently created or modified transportation programs similar in concept to the Transportation Vision that will make a substantial contribution to carrying out different projects. Two such efforts are the transfer of the federal fuel excise tax, which will channel new funding to public transit through SOFIL and the new *Politique québécoise du transport collectif* [Québec Public Transit Policy], which will pay 50% of the cost of providing new public transit services.

Problems remain, however, in providing funding for transportation throughout the City. Montréal must acquire the financial resources it needs to meet the cost of its Plan.

To pay for the Plan's projects, that often affect the entire region, Montréal proposes the creation of a fund that could be fed by a new source of money targeting cars—urban tolls. Montréal hopes that the region's other municipalities will concur in this choice and that an urban toll system throughout the CMM will serve as the basis of this fund.

In view of the big stakes involved in funding the *Transportation Plan*, Montréal will create a special commission in the fall of 2008.

This commission will preside over public forums that will bring together elected officials, experts and citizen representatives and will ensure that regional partners take part in funding discussions. Some studies will be conducted to document the various ideas at work in this process properly. All proposals for funding the Plan will be considered. At the conclusion of this event, different options and original ideas will be considered for meeting the financial targets needed to carry out local and regional public transit projects.

Until that time, Montréal will continue to call upon the higher levels of government, particularly with respect to establishing a national strategy on public transit and obtaining new permissive powers at the provincial level.

Figures A, B and C present the 21 Development Programs' main projects pertaining to public transit, the road system and bicycle transportation.

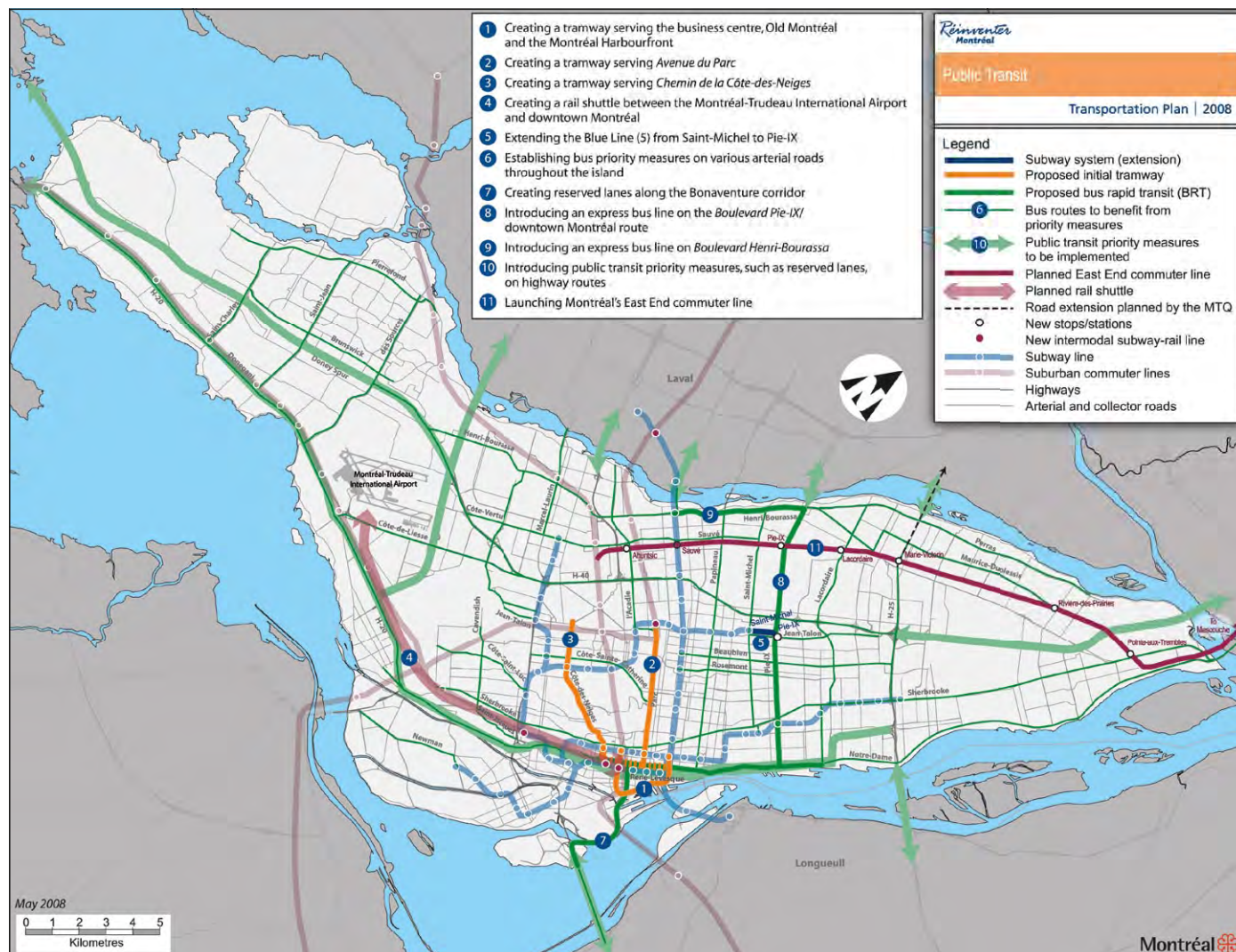
FIGURE A | Public Transit-Main Projects


FIGURE B | Road System-Main Projects

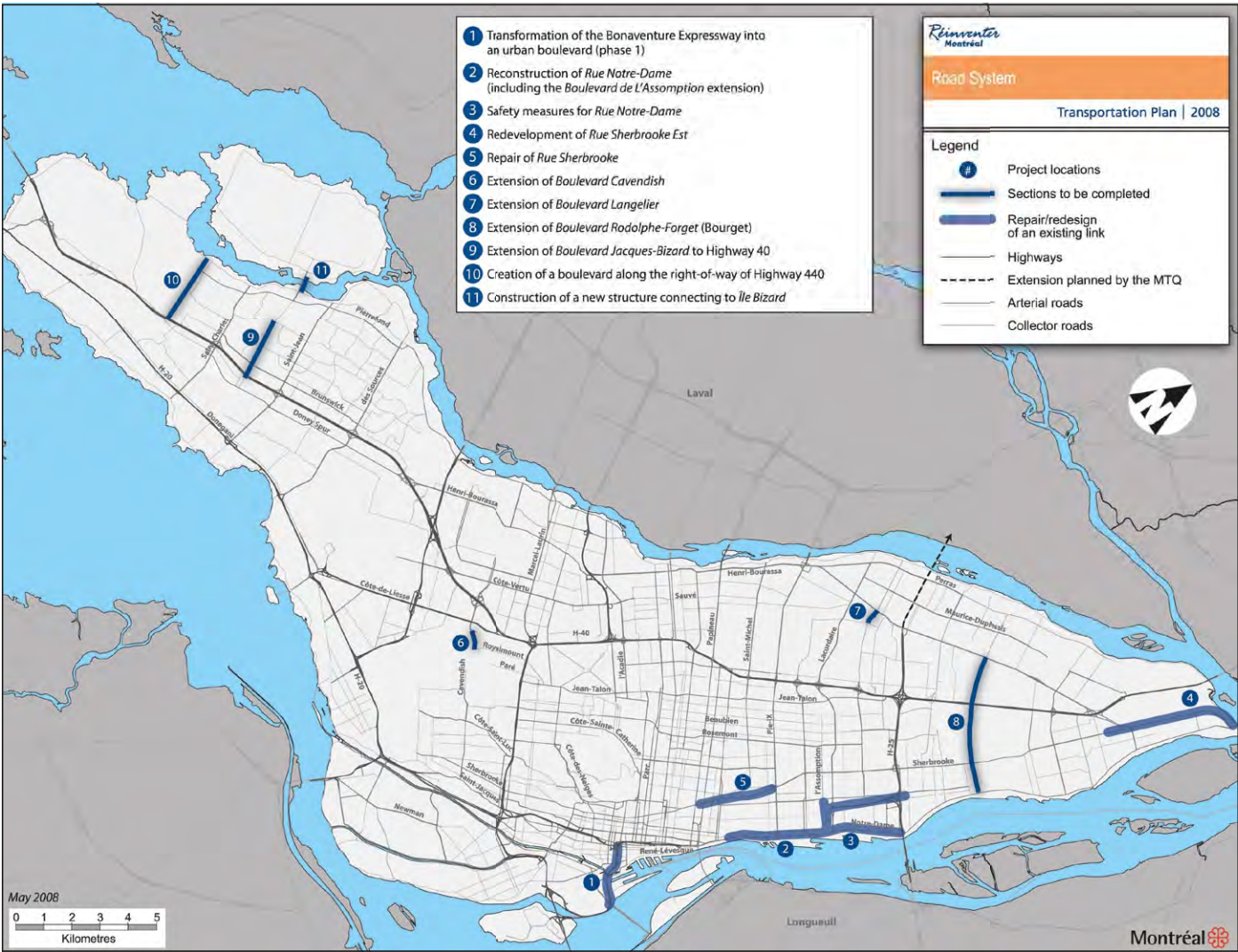
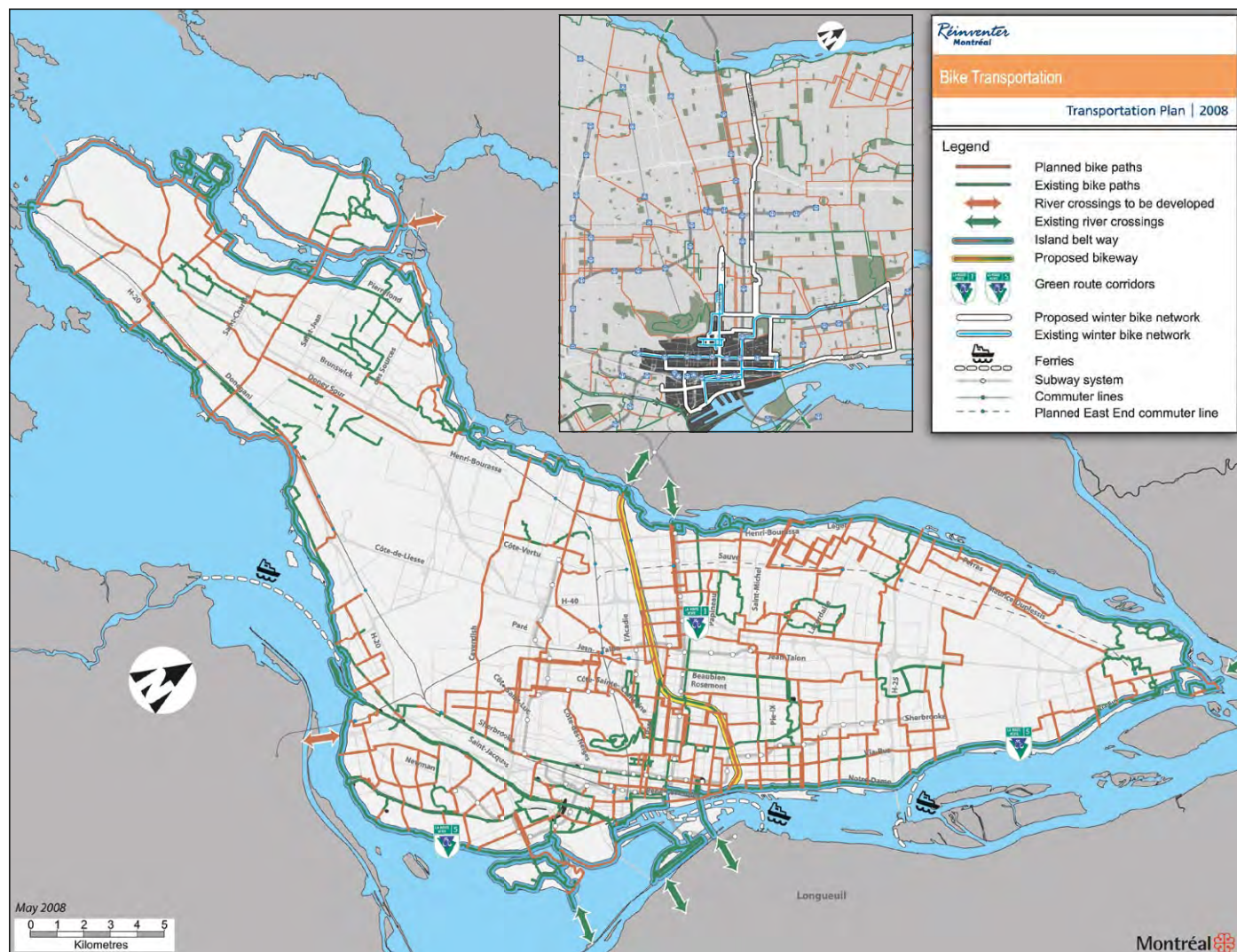
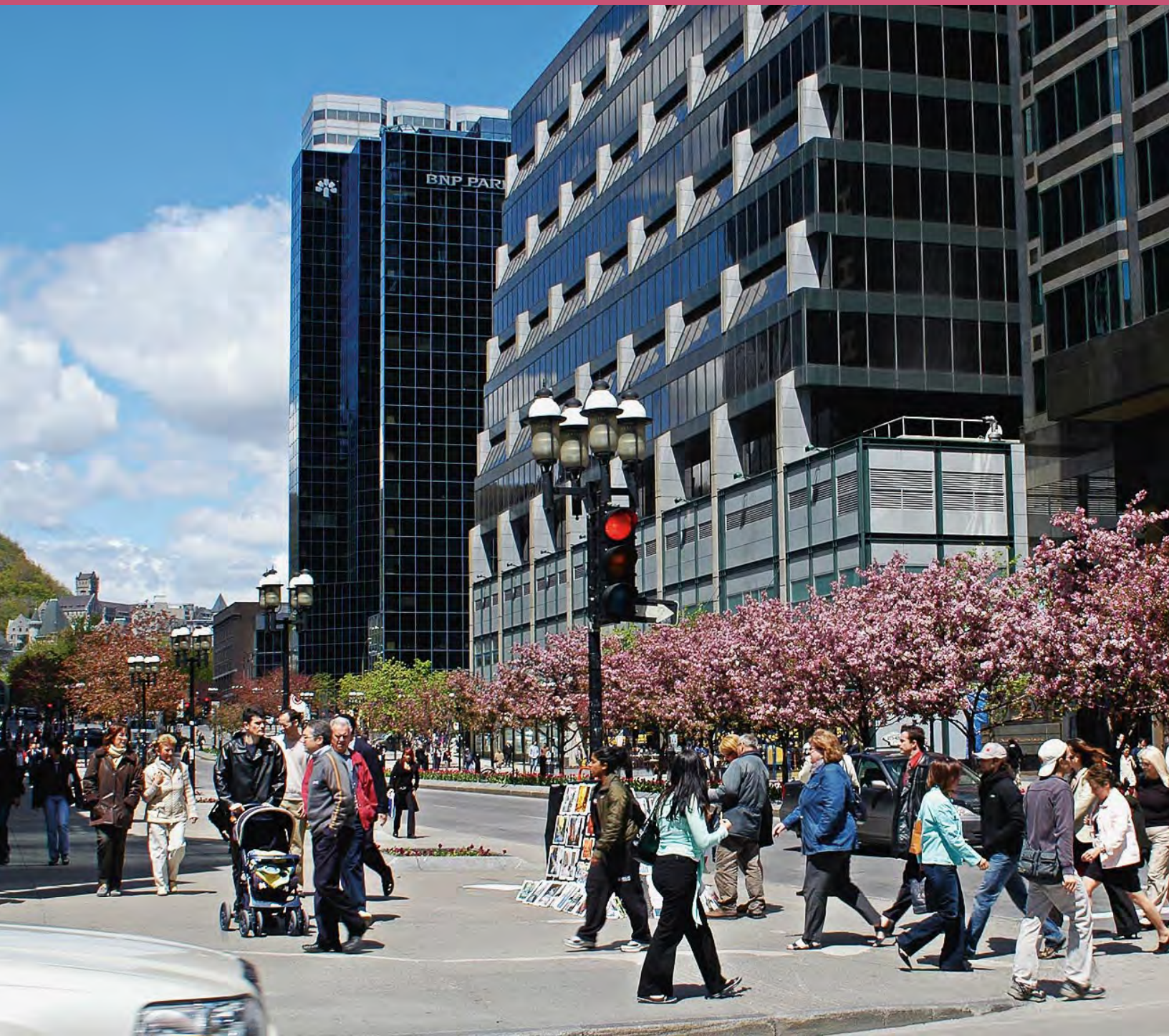


FIGURE C | Bike Transportation-Main Projects





Formulation of the *Transportation Plan*

THE CITY AND ITS KEY PARTNERS AGREED ON THE NEED FOR MONTRÉAL TO ADOPT A TRANSPORTATION PLAN AT THE JUNE 2002 MONTRÉAL SUMMIT. THIS PLAN WAS TO BE BUILT AROUND SOLID PRINCIPLES:

- selecting public transit as the preferred means of transporting people;
- promoting alternatives to the car, such as public transit and active forms of transportation (walking and bicycling);
- reinforcing Montréal's position as a shipping hub;
- tailoring transportation services to strengthen existing centres and to confine urban sprawl;
- defining specific targets for reduced car use.

Following the Summit, Montréal endorsed a comprehensive plan emphasizing quality of life, entitled *Imaginer • Réaliser Montréal 2025—Un monde de créativité et de possibilité* [Imagining • Building Montréal 2025—A World of Creativity and Opportunities]. The *Transportation Plan* lies at the heart of this broad strategy. The *Transportation Plan* has also embraced the general principles of the *Master Plan* endorsed by the City Council in 2004, particularly with respect to consolidating the centre of the island and increasing the density of sectors under development.

In 2002, Montréal decided on a multi-phased approach to formulating the *Transportation Plan*.

The first phase was to develop the Transportation Vision and the City's key goals with respect to the *Vision et objectifs* [vision and objectives] document. Montréal's fall 2004 consultations with its key partners (governments, public

and private transportation firms, the economic community and special transportation interest groups) and boroughs yielded a consensus not just on the direction to take but on the wording of a draft Transportation Vision.

The second phase emerged from extensive deliberations and served to define Montréal's existing transportation system in the document entitled *Portrait et diagnostic* [portrait and assessment] and to target the systems strengths and weaknesses with respect to the Transportation Vision. The City Council's *Commission sur le transport, la gestion des infrastructures et de l'environnement* held public consultation sessions on this text in June and September of 2005 and most participants concurred with its positions.

On May 17, 2007, Montréal released the Plan's working paper, as key step prior to the Plan's adoption. The paper strongly advocates the bold choice of making public transit the method of choice for transporting people and a critical tool in structuring Montréal's development in line with quality of life and climate change issues. The draft plan proposed an overall plan and vision, accompanied by a list of strategic, high-priority projects that Montréal must carry out if it is to implement the kind of sweeping change that could generate exceptional benefits for the agglomeration and its residents.

Public consultation sessions on the draft plan were conducted from June to September 2007 by two commissions. One was the City Council's *Commission sur la mise en valeur du territoire, l'aménagement urbain et le transport collectif*. The other was the agglomeration's *Commission sur l'environnement, le transport et les infrastructures*. The proposals appearing in the Plan were generally received with great enthusiasm by session participants and the public at large, as well as Montréal's partners and stakeholders. The presentation of over 100 submissions by these various groups to both commissions demonstrated strong interest in the Plan.

This final version of the Plan incorporates recommendations of commissions that emerged out of the consultation sessions and that were tabled on December 19 with the City Council and on December 20, 2007 with the Agglomeration Council.

Scope of the Plan

The *Transportation Plan* expresses a very strong commitment to the following major issues:

- development of public transit and active transportation;
- reduced car use;
- transportation safety.

As Montréal already enjoys a solid record in the area of public transit, including a subway system that ranks among the world's best and most efficient, it plans to promote optimal use and development of existing systems. By emphasizing public transit, Montréal has

opted for serving the largest possible number of residents, thus subscribing to the principle of social equity, and of giving Montréalers access to their homes, jobs, studies and recreational activities. By the same stroke, it confirms the core role that public transit plays in structuring the City.

In view of this strong commitment, the agglomeration's Transportation Vision as it appears in this final version of the Plan has grown out of the draft Vision formulated during the initial *Vision et objectifs* phase:

“Meeting the transportation needs of all Montréal residents by providing our community with a high quality of life and ensuring its role as a prosperous and environmentally friendly economic powerhouse. To achieve this goal, Montréal intends to significantly reduce its dependence on cars through massive investment in various forms of public transit and active transportation, including the tramway system, the subway system, bus rapid transit (BRT) services, trains, bikes and walking, and by encouraging such more appropriate uses for cars such as carpooling, carsharing and taxi service.”

The *Transportation Plan* is based on this Transportation Vision and now serves as the frame of reference for the City's strategic efforts in this area. The Plan also serves as a guide for Montréal's positioning within the *Communauté métropolitaine de Montréal* and in its discussions with the various levels of government.

Joint Implementation of the *Transportation Plan*

The *Transportation Plan* provides a specific set of proposals that are consistent with its strategic orientations. These proposals pertain to the various fields that have an influence on the organization of transportation. The Plan's 21 Development Programs represent a basic selection of projects that are to be implemented over the next 10 years. Not all of these programs fall directly under the City's authority. As bold an approach as these may seem, such projects are critical in striking a new and sustainable balance between the public's need for mobility and the quality of the environment.

These development programs attest to Montréal's recognition that investment in the growth of public transit and other transportation systems is a matter of importance and urgency. The City hopes that this approach is shared throughout the region and backed by the other levels of government. The municipalities and boroughs will also have major roles in rolling out the various measures that the plan proposes. They are already involved in planning, developing and carrying out various projects in line with the Plan's priorities.

Carrying out these development programs over a 10-year period, or following through on the set of *Transportation Plan* proposals over a total 20-year period, will require participation by many stakeholders. Montréal has recommended the creation of an organizational structure that would include a committee consisting of major Plan partners. This committee would draw up a detailed program for joint implementation of the *Transportation Plan*.

It is for these reasons that Montréal has asked the higher levels of government and its regional partners to throw their support behind the *Transportation Plan*'s strategic orientations and to match their action priorities with those of the Plan. Only by developing a common vision can the metropolis succeed in building a far more effective, competitive and attractive transportation system.

Follow-Up and Review

The *Transportation Plan* is to be carried out over a 20-year period. Its 21 Development Programs are to be implemented within a 10-year horizon. Montréal, in conjunction with its boroughs, the municipalities and its key partners, will begin defining supply and outcome indicators in 2008 to guide follow-up on these efforts.

SUPPLY AND OUTCOME INDICATORS

Supply indicators can be used in assessing the scope of changes that have been made to the transportation system. Outcome indicators are used to measure the impact of such changes on the transportation habits of Montréal residents and on other social and environmental factors pertaining to transportation (accessibility, safety, health, the environment, the economy, etc.). The public consultation process served to confirm the key outcome factors to be assessed.

They are:

- change in modal share for different forms of human transportation, allowing the measurement of any changes in automobile use;
- environmental impact, such as greenhouse gas emissions;
- safer travel;
- levels of public and private investment;
- growth impacts within the Québec transportation sector;
- lower personal direct transportation costs;
- reduction in certain public costs.

ANNUAL FOLLOW-UP

Annual follow-up to the *Transportation Plan* will employ supply indicators to provide a summary of actions taken by Montréal and its partners. Such indicators would include such items as the number of hours of bus service or the number of intersections made safer for pedestrians.

This annual follow-up will serve as a means of assessing the amounts and kinds of investments earmarked for transportation within Montréal and the region. Such an effort will allow the agglomeration, the boroughs, the reconstituted municipalities and key partners to provide any necessary adjustments to the production schedule and to budget allowances, and particularly to three-year capital expenditure programs. Through this process, Montréal will essentially be adopting a best efforts approach.

FIVE-YEAR FOLLOW-UP

A follow-up on outcomes will be performed every five years and synchronized with the metropolitan region's *Origin-Destination* survey. This survey, which is also conducted every five years, focuses on transportation habits. The next such survey will occur in 2008, with results probably available by 2009. Montréal would, however, prefer that the survey be conducted more frequently (if not on an ongoing basis) to ensure tighter control over the Plan's outcomes.

REVIEWING THE PLAN IN 2012

The supply and outcome follow-ups will be used in updating the *Transportation Plan*. Although the Vision aspires to be permanent in nature, the Plan must adjust the pace of activities to actual results and to ensure that the Plan works in lock-step with Montréal's development. Updates could trigger changes in projects, the definition of new actions, and the establishment of new time horizons and fresh priorities. An initial update of the Plan, which is scheduled for 2012, will be submitted for public consultations and adoption.



Vision and Strategic Objectives: Time for Sweeping Change

SOME OF THE UNDESIRABLE DEVELOPMENTS IN TRANSPORTATION THAT WILL CONTRIBUTE TO CLIMATE CHANGE AND THE SWIFT DECLINE OF OUR PLANET INCLUDE STEADILY RISING CONGESTION ON THE CITY'S ARTERIES, A HIGH DEMAND FOR OFTEN INADEQUATE PUBLIC TRANSIT SERVICE, A NOTABLE DETERIORATION IN AIR QUALITY AND AN OMNIPRESENCE OF CARS, PARTICULARLY IN RESIDENTIAL NEIGHBOURHOODS. SUCH CHANGES ARE WORKING AGAINST MONTRÉAL'S GOAL OF PROVIDING AN OUTSTANDING, SECURE AND SAFE LIVING ENVIRONMENT.



The effort involved in producing the *Transportation Plan* has helped to better clarify the nature of the Vision and of defining issues pertaining to the environment, the economy, land-use planning and efficient travel. Sweeping change is now required.

Montréal must acquire an increasingly efficient system of transportation that can ensure the movement of people and merchandise under

good conditions, contribute to the quality of life of its citizens, and support economic development.

Properly targeted strategies must be formulated to address increasing mobility and varied needs for access throughout the agglomeration, coupled with demands imposed by sustainable development and public finances. It is for this

Transportation Vision

Montréal has approved a Transportation Vision and strategic objectives that correspond with the positions adopted at the Montréal Summit in June 2002. This Vision subsequently received widespread endorsement in various consultation sessions held with key partners, transportation stakeholders and the public. The Transportation Vision consists of:

“Meeting the transportation needs of all Montréal residents by providing our community with a high quality of life and ensuring its role as a prosperous and environmentally friendly economic powerhouse. To achieve this goal, Montréal intends to significantly reduce its dependence on cars through massive investment in various forms of public transit and active transportation, including the tramway system, the subway system, bus rapid transit service, trains, bikes and walking, and by encouraging such more appropriate uses for cars as carpooling, carsharing and taxi service.”

reason that the Plan seeks to clarify principles and reconcile the local and regional aspects of transportation, while considering other aspects of human activity and of the manner in which the agglomeration is structured.

PROVIDING OPTIMAL TRANSPORTATION CONDITIONS IN TERMS OF TIME, COMFORT, ACCESSIBILITY, SAFETY AND COST

Personal mobility is vital to meeting social and economic needs, particularly in terms of getting to work, to healthcare services and to educational, training or cultural activities. The transportation system should, accordingly, provide a better level of performance and lower costs. Public transit and active forms of transportation should under such circumstances be favoured because they help improve the environment and quality of life and distribute associated costs and services on an equitable basis.

A gradual review should be conducted of the transportation system and its related structures to see how they measure up in terms of universal access principles, particularly in terms of travel by foot or by public transit.

IMPROVING QUALITY OF LIFE, PARTICULARLY IN AREAS OF HEALTH AND SAFETY

Peace and quiet in local neighbourhoods, family quality of life, safety and health are increasingly affected by increasing motor vehicle traffic. The transportation system should contribute to these factors by organizing a system of transportation that is less dependent on private vehicles and that focuses on increased use of public transit, walking and bicycles.

IMPROVING THE QUALITY OF THE ENVIRONMENT

The Plan seeks to reduce the emission of pollutants, consume resources on a rational basis and cut greenhouse gases (GHGs) in accordance with the *Kyoto Protocol* and the

need to protect natural environments. These concerns are also expressed in *Premier Plan stratégique de développement durable de la collectivité montréalaise* [Montréal's first strategic plan for sustainable development], which seeks to achieve a better equilibrium between protection of the environment and responsible development of the Montréal agglomeration. It should be noted that, despite improvements in atmospheric quality since 1970 in terms of fewer pollutants, smog episodes caused by high ozone concentrations have become increasingly common, even in winter. GHG emissions are also constantly rising in the urban transportation sector.

SUPPORTING THE VITALITY OF MONTRÉAL'S ECONOMY

The transportation system should support economic activities within the Montréal agglomeration. The Island of Montréal remains Québec's chief industrial powerhouse and also its primary consumer market. The process of shipping and delivering freight must be facilitated to enhance the vitality of Montréal's economy.

Promoting Universal Access as a System-Wide Concept

"The principle of universal access means that all individuals, including those with functional limitations, should be able to make use of buildings, urban spaces, programs, services and communications."

Universal access has been on the list of Montréal's priorities since the 2002 *Montréal Summit*. That event spurred great interest in this issue and resulted in the establishment of a development program consisting of members of the public and city representatives. Montréal accordingly made a commitment with its partner organizations to each year draw up an action plan and a summary of actions taken to improve universal access. These actions pertain to four sectors of development:

- architectural access;
- access to programs, services and jobs;
- enhancing awareness among and training of city workers;
- access to municipal communications.

Through its range of development programs and projects carried out with its partners, the *Transportation Plan* has made universal access a system-wide principle. Montréal is therefore committed to pursuing its efforts to promote a universally accessible transportation system.

We must strike a balance, however, between the need to make transportation systems work efficiently and the need to maintain peace and quiet in urban areas and ensure the safety of residents. The *Stratégie de développement économique de Montréal* (Montréal's economic development strategy) supports this objective by proposing a set of positioning statements for Montréal that can serve as important tools for growth. Improving the transportation system's performance fits in with initiatives aimed at giving Montréal one of the best standards of living and quality of life among major North American cities.

JOINT PLANNING OF TRANSPORTATION AND LAND-USE

Montréal is aware that transportation infrastructure has a lasting effect on territorial organization. Such infrastructure helps strengthen business and residential sectors. The *Transportation Plan* does, however, demonstrate that such infrastructure can also prove a significant source of disturbance to an urban community, due to road congestion, atmospheric pollution, increased travel times and distances, urban sprawl, etc. Transportation and land use must, accordingly, be jointly planned throughout the Island of Montréal and the *Communauté métropolitaine de Montréal* (CMM) to ensure that the urban setting represents an attractive, safer, less polluted and more satisfying living environment. Like the *Master Plan*, the *Transportation Plan* proposes a more rational approach to the use of space. In line with this approach, transportation systems must provide better structure, operate more efficiently and be better integrated into the urban fabric.

The Pedestrian Charter THE DECLARATION

Montréal recognizes that pedestrians come first in an urban area. By placing pedestrians at the heart of its priorities, Montréal seeks to ensure that all appropriate measures are taken to make walking a safe and enjoyable form of transportation. Thus, the City wants to reduce the impacts linked to the growing usage of vehicles, such as air pollution, noise, GHG emissions, infrastructure cost and the space that vehicles occupy in an urban area. Montréal also wants to combat the sedentary lifestyle, a particular public health problem of growing concern.

Walking should become a means of transportation that is preferred, rather than merely endured. To achieve this goal, Montréal will provide pedestrians with a safe and satisfying environment, in which walking with a specific purpose, for a stroll, or for tourism, will prove to be both an agreeable and desirable experience.

The *Pedestrian Charter* will accordingly help:

- focus efforts by the municipalities and the boroughs on improving the safety and user-friendliness of the pedestrian experience;
- ensure that the streets once again serve as settings for meetings and social interaction;
- ensure the harmonious incorporation of historical and heritage issues in the planning of pedestrian amenities.

The City administration is counting on the support of residents to achieve meaningful results. No initiative will ultimately work if drivers and bicyclists fail to respect pedestrians and if pedestrians fail to behave safely.

THE BACKGROUND

Various strategic documents produced in response to the 2002 *Montréal Summit*, such as the *Master Plan*, *Premier Plan stratégique de développement durable de la collectivité montréalaise* [Montréal's first strategic plan for sustainable development], the *Guide d'aménagement pour un environnement urbain sécuritaire* [guide to planning for a safe urban environment] and the *Charte des milieux de vie montréalais*¹ [Montréal Living Environments Charter], have taken positions and proposed initiatives aimed at significantly enhancing quality of life for residents. All of these documents collectively serve to recognize the fundamental role of active forms of transportation, such as walking, in urban planning and quality of life.

SCOPE AND FOLLOW-UP

The *Pedestrian Charter* forms an integral part of the *Transportation Plan*. It is derived from the Transportation Vision, which is designed to: "meeting the transportation needs of all Montréal residents by providing our community with a high quality of life and ensuring its role as a prosperous and environmentally friendly economic powerhouse. To achieve this goal, Montréal intends to significantly reduce its dependence on cars through massive investment in various forms of public transit and active transportation, including the tramway system, the subway system, bus rapid transit (BRT) services, trains, bikes and walking, and by encouraging more appropriate uses for cars such as carpooling, carsharing and taxi service."

Montréal will set up a watchdog committee to ensure compliance with the Charter's goals. This committee will be responsible for enhancing pedestrian safety and ensuring better pedestrian access to public transit, to educational institutions and healthcare establishments, to community

facilities, to cultural buildings, to parks, green spaces and public areas. The committee will also do its best to make walking more enjoyable, particularly by including historical and heritage structures in the experience.

OBJECTIVES

The *Pedestrian Charter* seeks to make walking a preferred form of transportation, particularly by improving the manner in which public rights-of-way are shared. This goal will require a redefinition of the role played by motorized transportation and the promotion of more rational use of cars. Such redefinition presumes sweeping cultural changes that will lead to improved quality of life of Montréal residents, of the environment, of public health in general.

The *Pedestrian Charter's* objectives are consistent with those of the *Transportation Plan*.

PROVIDING OPTIMAL TRANSPORTATION CONDITIONS IN TERMS OF TIME, COMFORT, ACCESSIBILITY, SAFETY AND COST

Like all other road users, pedestrians want to get to their destinations quickly, at least when such walking is utilitarian in nature. To promote walking (which means a combination of walking and public transit use), along with more rational car use, while ensuring universal access, we must:

- provide the unobstructed space necessary to walk in a calm manner;
- gradually eliminate physical breaks in pedestrian routes and avoid creating new ones;
- provide shorter trajectories;
- guarantee adequate maintenance of sidewalks and of the curb lane.

SUPPORTING MONTRÉAL'S ECONOMY

Pedestrians contribute to economic activity. Just consider how many pedestrians stroll down commercial streets and through public markets. If walking is to play a more important role in economic activity, we must:

- provide pedestrians with good access to services, consumer goods, community activities and public transit;
- review the commercial mix of major development projects so as to promote street front shops;
- consider the role that pedestrians play in the economy.

MAKING TRANSPORTATION SYSTEMS FIT SMOOTHLY INTO THE URBAN ENVIRONMENT AND CONTRIBUTE TO ITS STRUCTURE

It is widely known that transportation systems have a lasting effect on land use. Such systems and the activities they permit are at times sources of disruption to the urban environment. Transportation systems and land use must, accordingly, be planned as part of a joint process. To ensure that specific needs of pedestrians are taken into account and to establish conditions conducive to walking, we must:

- prioritize the pedestrian during the conception and design of the public domain;
- consider the quality of the urban environment to be an incentive to walking;
- promote the creation of densely populated neighbourhoods with multiple functions;

- enhance the social role of the street in providing natural support for neighbourhood life.

IMPROVING QUALITY OF LIFE FOR RESIDENTS, PARTICULARLY WITH RESPECT TO HEALTH AND SAFETY

The issues of transportation and good health have become inextricably linked, not only because of efforts to eliminate the adverse impacts of transportation activities on the living environment, but also because of sedentary lifestyles. Maintaining peace and quiet in residential neighbourhoods continues to take high priority as a response to these adverse impacts. Enhanced safety is also a key factor in quality of life. To improve the quality of life of Montréal residents, we must:

- ensure that people can easily get to their jobs, schools and other activities on foot;
- ensure easy access and a reasonable distance to public transit services;
- control vehicle speeds for the benefit of all road users;
- ensure that drivers can see pedestrians;
- make road users aware of safety issues;
- improve the safety of pedestrian thoroughfares and in particular of pedestrian crossings;
- keep pedestrian thoroughfares free of obstructions;
- provide adequate protection for pedestrians when obstructions are present.

IMPROVING ENVIRONMENTAL QUALITY

Reducing pollution and ensuring sustainable use of resources requires the promotion of active forms of transportation, such as walking. Cutting down on GHG emissions means:

- getting people to want to walk;
- developing an urban environment that is conducive to pedestrian activities.

EQUITABLE, EFFECTIVE AND RESPONSIBLE MANAGEMENT

At a time of limited resources, decision-making must be more consistent and infrastructure must be more carefully planned. This means:

- seeking a concerted approach by all partners (residents, associations, the private sector, the different levels of government and educational institutions);
- improving development project designs to take specific pedestrian needs into account;
- making the public more aware of the benefits of walking;
- deploying funding mechanisms aimed at enhancing the walking experience.

SCOPE

The municipalities, boroughs and their partners must take action in many areas to meet the goals of the *Pedestrian Charter*. Strategic documents produced by Montréal and its partners suggest multiple activities that fall within the Charter's scope.



PLANNING AND MANAGING LIVING ENVIRONMENTS

- Including specific pedestrian needs in urban planning regulations;
- Considering pedestrian needs, including universal access, throughout the planning process;
- Alleviating gaps in the urban fabric;
- Developing routes to frequented by pedestrian areas of activity;
- Reviewing the quality, visual appeal and functionality of pedestrian corridors;

- Redefining public rights of way to promote walking;
- Gradually modifying the Indoor Pedestrian Network to comply with universal access principles.

MAINTENANCE, SNOW REMOVAL AND DE-ICING

- Eliminating conflicts resulting from the presence of permanent and seasonal equipment;
- Ensuring consistent sidewalk surfaces;
- Adequately removing snow and ice from sidewalks;
- Correcting drainage issues;
- Properly maintaining road markings.

ACTIVE AND PASSIVE SAFETY MEASURES

- Strictly enforcing the *Code de la sécurité routière* [Highway Safety Code];
- Adapting traffic volumes to the road hierarchy;
- Monitoring vehicle speeds;
- Protecting pedestrians along the road system;
- Improving safety at various conflict points and near subway stations;
- Reducing the widths of pedestrian crossings;
- Defining safe school routes;

- Introducing traffic calming measures on residential streets;
- Eliminating delivery procedures that obstruct pedestrian passage;
- Protecting pedestrians near obstructions;
- Adequately lighting streets and crossings for pedestrians;
- Ensuring better visibility for pedestrians and drivers at intersections;
- Identifying and increasing the safety of routes for people with reduced mobility.

USER AWARENESS AND INFORMATION

- Making the public aware of the importance of courteous driving habits;
- Making pedestrians aware of their rights and responsibilities;
- Promoting the benefits of walking in terms of health and the environment, particularly among business and schools;
- Making construction site managers more aware of the risks posed to pedestrians by obstructions;
- Setting up an information system for pedestrians;
- Providing signs indicating walking times and distances, where appropriate;
- Standardizing sign use in the Indoor Pedestrian Network;
- Following up on the *Pedestrian Charter*.



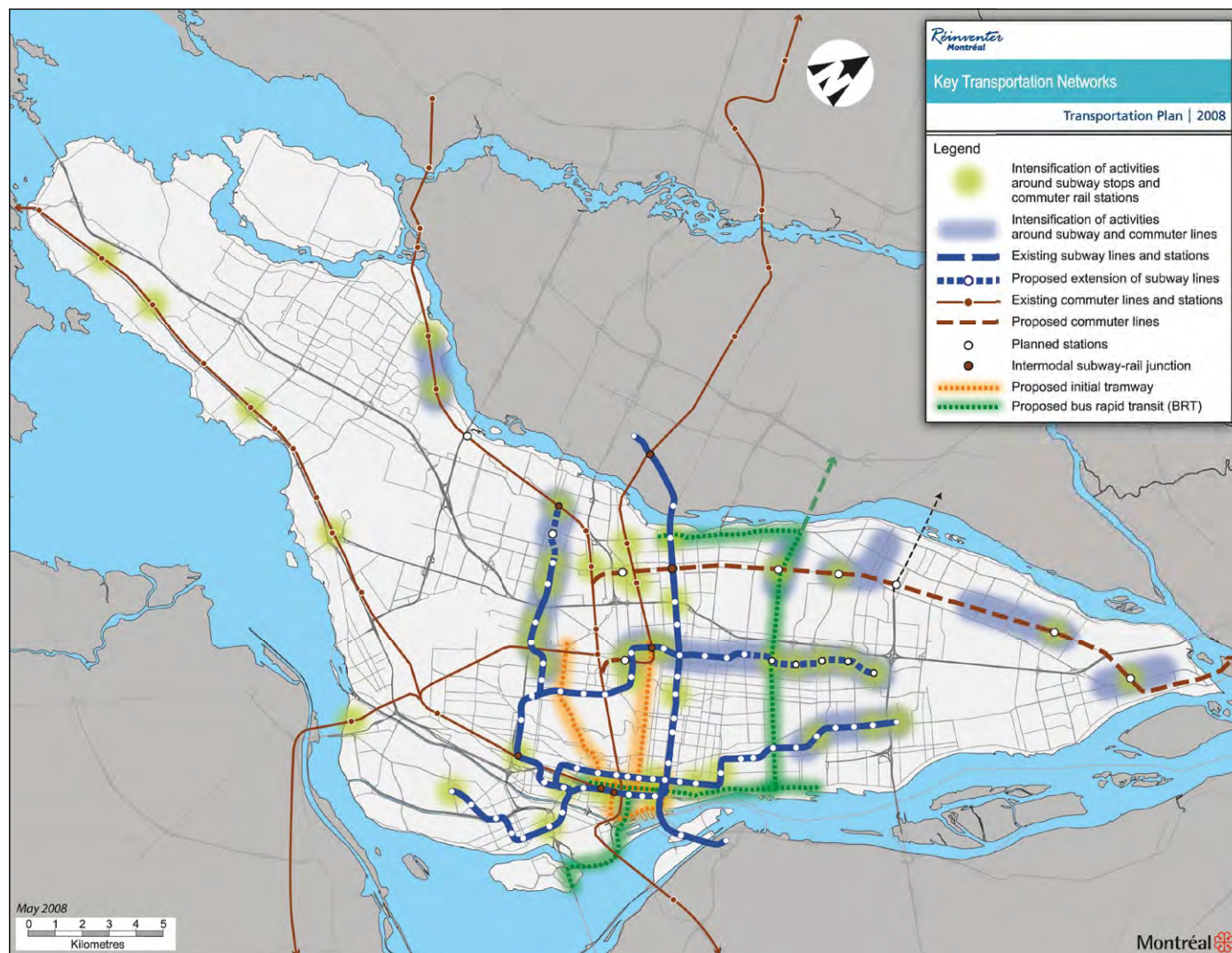
Transportation Systems: Their Crucial Roles in Land-Use Planning

The *Master Plan* proposes a land use concept involving intensive and more strategic use of our territory. Such use would be geared to increased ridership on public transit infrastructure by increasing the density and diversification of activities relating to the existing or the planned public transit system. Figure 1 illustrates sectors that are conducive to enhanced levels of activity. Montréal will now ensure that proposed projects have a higher land use density and provide a range of different urban functions and superior development of public land. This approach will also reduce the need for motor vehicles and promote alternative forms of transportation.

By adopting this approach, accompanied by concepts of social equality, environmental respect and economic viability, Montréal is expressing its support for principles of sustainable development.

Such support entails an awareness of the important role urban planning plays in the sustainability of communities, in the business case for investment in public infrastructure and in the increased use of public transit and of active forms of transportation.

The *Transportation Plan* expresses Montréal's desire to opt for an approach based on quality, excellence and innovation in transportation and urban planning, in view of increasing the quality of our living environments and contributing to economic development. This means that

FIGURE 1 | Sectors with Potential for Enhanced Levels of Activity

the planning of a street or the installation of a transportation infrastructure will serve as an opportunity to enhance the city's image, in line with Montréal's distinctive urban fabric.

All major infrastructure work will now be treated as an urban, and not just as a transportation, project. Such projects must, accordingly, be developed to fit as harmoniously as possible into the urban landscape and to emphasize excellence in their designs.

Montréal is fortunate to be able to bring together major residential and business sectors within a dense and structured area. Transportation

The *Transportation Plan* proposes a set of structuring activities that will help provide adequate service to residential, business and educational sectors, as well as certain sectors that will benefit from detailed planning. To best enhance existing neighbourhoods, Montréal will seek to fit this work seamlessly into the built environment, thereby helping to strengthen and revitalize the areas served.

The comfort and safety of pedestrians and bicyclists in their daily travels will be ensured by developing the public domain in view of ensuring the safe and secure coexistence of pedestrian, bicycle and motor vehicle traffic. This secure

The *Transportation Plan* also seeks to boost ridership by enhancing the image of public transit and the manner in which it is perceived. Public space around subway stations, tram lines, commuter train stations, intermodal stations and BRT services will benefit from special measures to facilitate access and create a safe and agreeable environment that meets user needs.

Ultimately, the need to reinvent the transportation system and make it comply with the need for mobility and the principles of sustainable development poses a huge challenge that will only be possible to meet if we are able to master the close relationship between urban planning and transportation. We must begin with this task by questioning the hegemonic role of the automobile.

Montréal and Kyoto!

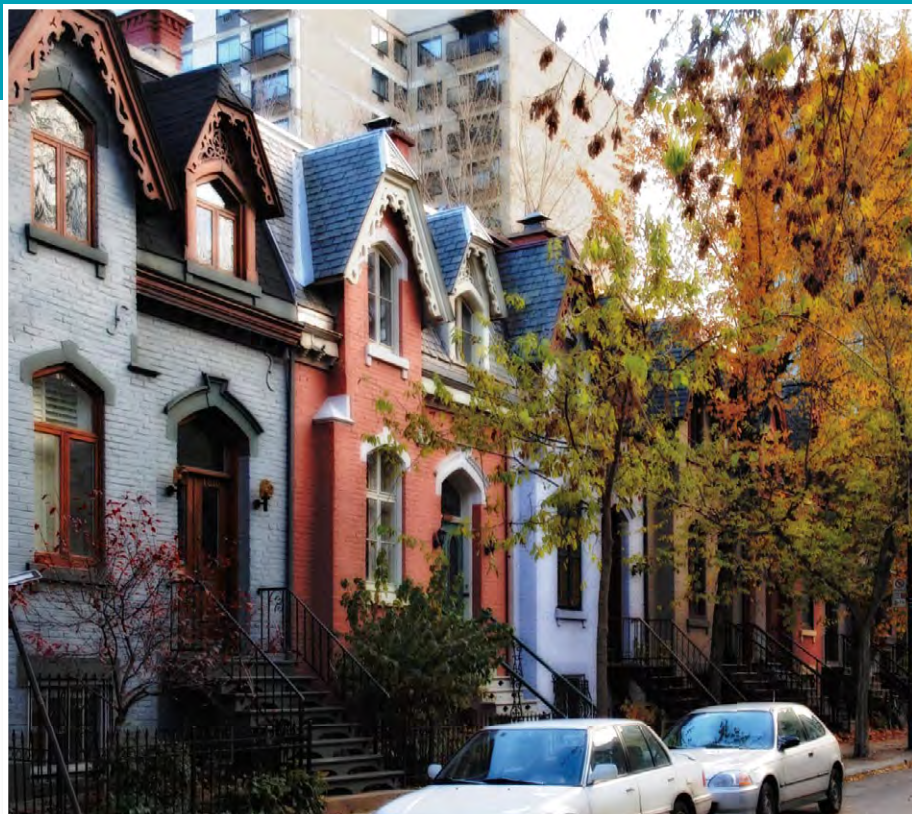
Montréal wishes to, and should, take clear-cut action in the area of transportation. It must, accordingly, adopt decisive if not sweeping measures to achieve a maximum impact on the collective effort needed to reduce its GHG emissions. Montréal is quite aware of the scope of the challenge that it must meet in fulfilling the objectives of the *Kyoto Protocol*. That is why Montréal is committed to setting the lead in transportation. It calls on all of its residents and partners, including institutions and all businesses, as well as the CMM's municipalities and the two higher levels of governments, to join forces and undertake activities that are as concrete and purposeful as the *Transportation Plan*.

We might recall that during the United Nations Climate Change Conference held in Montréal in December 2005, the City undertook, in the *World Mayors and Municipal Leaders Declaration on Climate Change*, to implement



corridors will, accordingly, be planned around the presence of such sectors and serve to strengthen and develop the territory. Montréal intends to promote this same approach throughout the CMM with respect to issues of transportation and land use.

environment may entail efforts designed to remove gaps in the urban fabric, to provide a grid of streets that permit short and direct foot passage to reduce walking distances from homes and public transit facilities, to narrow roadways as part of traffic calming measures, to create sidewalks of suitable width, to produce geometric layouts for intersections that give priority to pedestrian traffic and so forth.



policies aimed at achieving an overall 30% reduction in the community's GHG emissions from all sources by 2020. The transportation sector is responsible for significant GHG emissions and must certainly make a large contribution to their reduction.

There are various means of reducing the GHGs emitted by the transportation sector and the movement of people in particular. They include cutting annual distances travelled, decreasing the numbers of trips made, employing active forms of transportation, using public transit more often and driving vehicles that consume less fuel (such as hybrids and compacts, rather than SUVs).

Transportation is responsible for 38% of Québec's GHG production. In 2003, the transportation sector emitted an estimated 14 million tonnes of GHGs in Greater Montréal. Laval's three new subway stations are considered to be responsible for cutting Greater Montréal's GHGs by some 20,000 tonnes annually. In its follow-ups on the *Transportation Plan*, Montréal plans to evaluate the contributions of proposed initiatives.

The challenge is huge. With growth in housing and jobs predicted throughout the area, transportation of all kinds (human, freight and business) will rise. If nothing is done, travel conditions may gradually deteriorate, with transportation systems becoming saturated and fuel costs climbing.

Through its legal authority and in its role as manager of the system and so forth, Montréal can have an impact on a portion of the transportation system. However, the City has little influence on much of the travel that takes place throughout the region, such as trucking, transportation supporting economic development and inter-regional travel transiting the island. The municipalities cannot hold on their own shoulder full responsibility for reducing GHGs generated by transportation, particularly in view of their limited financial resources and legislative authority.

The higher levels of government should play an important role in the field of transportation. Decisions with respect to land-use planning, development and operation of transportation systems and legislation should all work together at both the provincial and federal levels to meet reduced GHG emission targets.

Regulations setting fuel consumption standards for the nation's vehicles are a matter of great importance that falls primarily under federal authority. The issue of GHG emissions from vehicles of all types should not be considered solely with respect to how these vehicles are used, but at the very source. In other words, the fuel economies of all vehicles that are permitted to operate in our territory must be improved. To promote the use of fuel-efficient vehicles, Montréal plans to introduce a green label program that will confer certain benefits on efficient vehicles.

The GHGs emitted by the transportation system are a direct result of the public's consumption habits. Big changes are needed in our behaviour and in our choices of activities if we are to reduce energy consumption and at the same time cut down on GHG emissions.

Montréal at the Heart of the Region's Transportation System

GENERAL INFORMATION ON MONTRÉAL

POPULATION AND EMPLOYMENT

In 2001, Greater Montréal was home to more than 3.4 million residents and provided more than 1.6 million jobs. The bulk of the population and employment was located on the Island of Montréal, with some 1.8 million residents and 1.1 million jobs (Tables 1 and 2).

Based on the *Master Plan's* growth forecasts, the Island of Montréal's population may climb by 9.3% in the 2001 to 2021 period², or an annual 0.45%, representing a slight decline in population growth from prior years. Based on Montréal's desire to attract some 40% to 50% of Greater Montréal's annually predicted 15,000 new households by 2021, this growth scenario is based on shares achieved in recent years, which represent a turnaround in terms of previous periods. The selected growth scenario for employment is based on the CMM's forecasting exercise, which predicts some 110,000 new jobs on the island (from 1,112,800 to 1,223,000), or a 9.9% increase over a 20-year period.

MOVING PEOPLE

In 2003, Greater Montréal's population made an estimated eight million trips each day, with some two million of them during the morning rush hour³. Most trips during the morning rush hour were to the Island of Montréal (nearly 1.2 million trips), of which more than three quarters began on the island itself (Table 3).

TABLE 1 Predicted Population Growth in Greater Montréal, 2001-2021 (in thousands)						
	HOUSEHOLDS		CHANGE (%)	POPULATION		CHANGE (%)
	2001	2021		2001	2012	
Island of Montréal	805.8	943.4	17.1%	1,812.7	1,981.2	9.3%
Rest of Greater Montréal	611.6	774.0	26.6%	1,613.7	1,869.1	15.8%
Total	1,417.4	1,717.4	21.2%	3,426.4	3,850.3	12.4%

TABLE 2 Predicted Job Growth in Greater Montréal, 2001-2021 (in thousands)			
	JOBS		CHANGE (%)
	2001	2021	
Island of Montréal	1 112.8	1,223.0	9.9%
Rest of Greater Montréal	509.9	682.2	33.8%
Total	1,622.7	1,905.2	17.4%

TABLE 3 Predicted Growth in Number of Trips in Greater Montréal, 2003-2021—Morning Rush Hour (in thousands)			
NUMBER OF TRIPS IN 2003		DESTINATION	
ORIGIN	ISLAND OF MONTRÉAL	REST OF GREATER MONTRÉAL	TOTAL
Island of Montréal	885	53	938
Rest of Greater Montréal	271	687	958
TOTAL	1,156	740	1,896

NUMBER OF TRIPS IN 2021		DESTINATION	
ORIGIN	ISLAND OF MONTRÉAL	REST OF GREATER MONTRÉAL	TOTAL
Island of Montréal	976	68	1,044
Rest of Greater Montréal	292	841	1,133
TOTAL	1,268	909	2 177

CHANGE FROM 2003 - 2021		DESTINATION	
ORIGIN	ISLAND OF MONTRÉAL	REST OF GREATER MONTRÉAL	TOTAL
Island of Montréal	10.3%	28.3%	11.3%
Rest of Greater Montréal	7.7%	22.4%	18.3%
TOTAL	9.7%	22.8%	14.8%

Based on the expected growth of jobs and the population, the number of morning rush hour trips within the island could rise moderately by 2021, by some 91,000 (+10.3%) and by 112,000 (+9.7%) for all trips to the island⁴. The annual 0.52% rise in trips to Montréal is similar to the population's anticipated rate of growth and comparable with figures recorded from 1987 to 2003, during which the growth in the number of trips in the region was in the order of 0.6% annually.

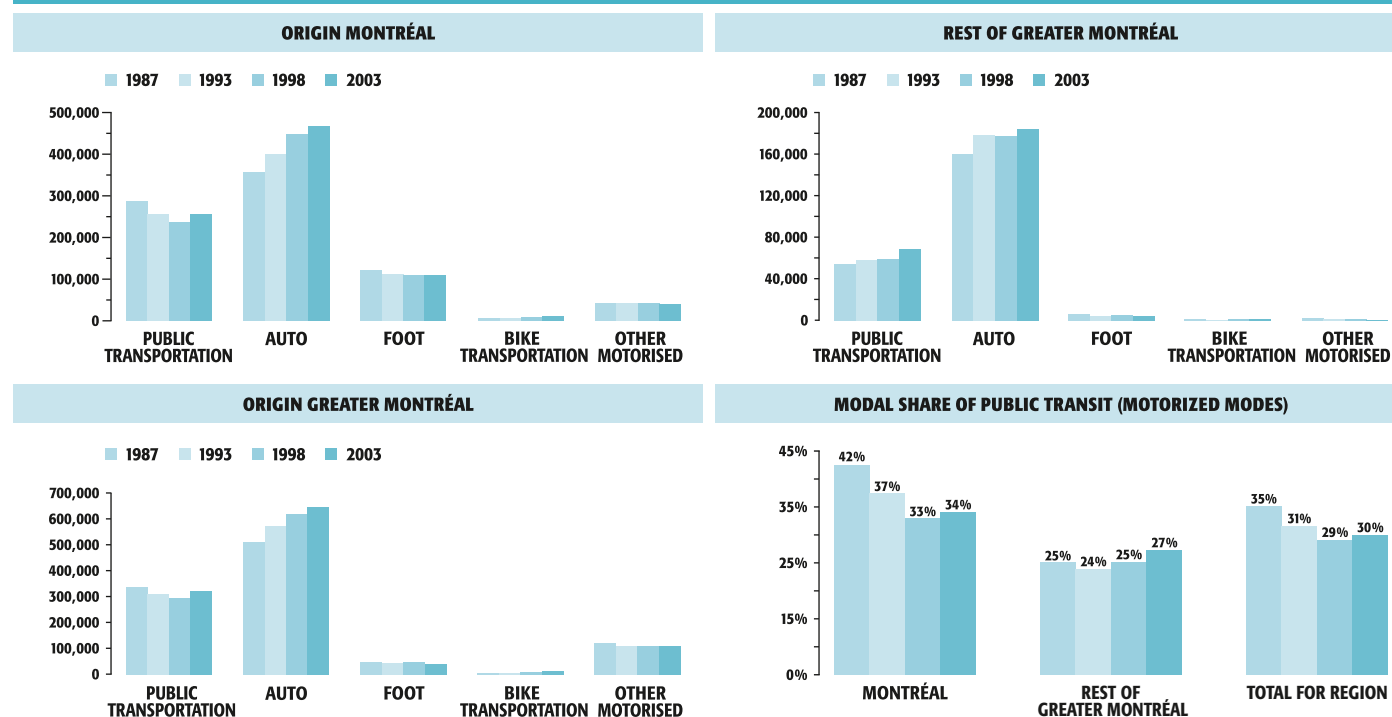
MODAL SHARE OF HUMAN TRANSPORTATION

The number of trips by car to Montréal increased more rapidly (an annual 1.5%) from 1987 to 2003 than travel by other means (Figure 2), while travel by public transit dropped an average 0.3%. Reduced public transit ridership to the Island of Montréal, during the 1987 to 2003 period (with its modal share declining from 38% to 33%), was solely due to travel originating on the Island of Montréal. The increase in car usage originating within the island was also greater

than that coming from outside it. Consequently, public transit's modal share for travel originating in or destined for the island dropped from 42% in 1993 to 34% in 2003 (Figure 2). However, this trend shifted from 1998 to 2003, when the modal share of public transit trips rose slightly, following many years of decline.

The modal share of public transit may decline in coming years simply because most new households will be established in more peripheral areas of the Island of Montréal. Because ridership in these areas is currently less

FIGURE 2 | Trips to the Island of Montréal from 1987 to 2003—Morning Rush Hour



Source: AMT, O-D surveys 1987-2003. Processed by the STM and Tecsalt in 2006.

PRIMARY ROAD SYSTEM

Legend
Evolution of the primary road system

- Prior to 1961
- 1961-1970
- 1971-1980
- 1981-1990
- After 1990
- Project announced

SUBWAY SYSTEM

COMMUTER LINES

Montreal / Blainville-Saint-Jérôme

- Service inaugurated in 1982
- Service interrupted in 1981
- Service restored in 1997 (to Blainville)
- Extension to Saint-Jérôme in 2007

Montreal / Repentigny / Mascouche

- Service scheduled to begin in 2010

Montreal / Saint-Hilaire

- Service inaugurated in 1859
- Service interrupted in 1988
- Service restored in 2000 (to McVasterville)
- Extension in 2002 (to Saint-Hilaire)

Montreal / Deux-Montagnes

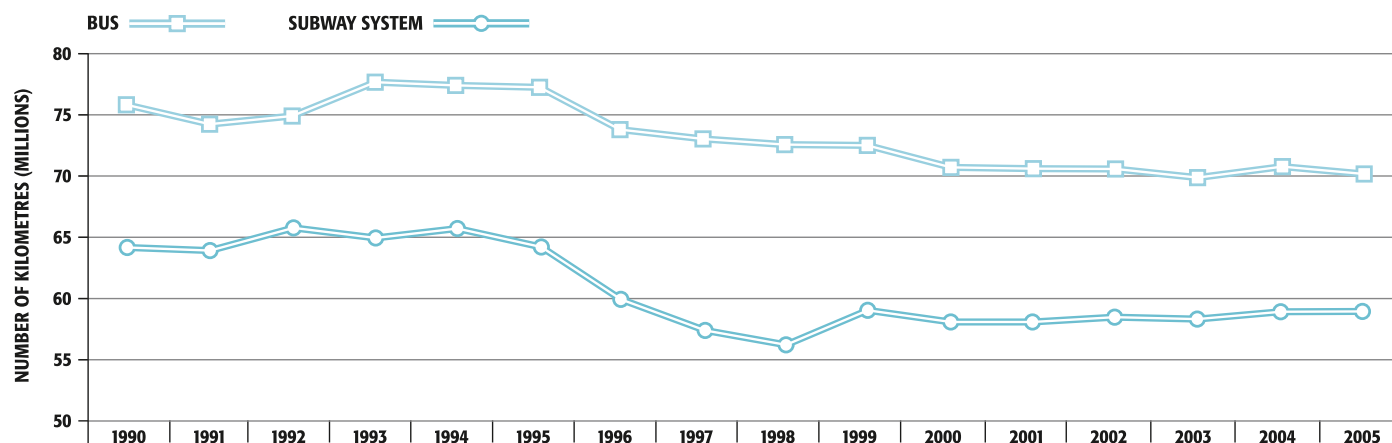
- Service inaugurated in 1918
- Modernized in 1995

Montreal / Dorion-Rigaud

- Service inaugurated in 1889
- Upgraded in 1989

Montreal / Davelon-Candiac

- Service inaugurated in 1887
- Service interrupted in 1980
- Service restored in 2001 (to Davelon)
- Extension to Candiac in 2005

FIGURE 4 | Growth in Services Offered by the STM, 1990-2005 (in millions of kilometres)

Source: STM, Plan stratégique de développement du transport en commun, 2007.

than it is in the more central sectors, the use of current ridership rates in projecting those for 2021 might reveal a decline in public transit's modal share for travel to the Island of Montréal. Factors other than the manner in which the population is distributed throughout Greater Montréal could also influence the modal share of public transit travel to the Island of Montréal. These would include development of the region's main employment hubs, aging of the population and the rate of car ownership by households.

PROVIDING TRANSPORTATION FOR PEOPLE

Greater Montréal's public transit services have played a key role over the past few decades in the region's demand for transportation. The highway and subway systems, which currently represent the key means of transporting the region's people, were for the most part

introduced in the 1960s and 1970s, particularly for Expo 67 and the 1976 Olympic Games (Figure 3).

Their ability to transport people throughout Greater Montréal in the 1980s was primarily marked by the addition of some 20 subway stations. Bus and subway service declined from 1990 to 2005 (Figure 4). The *Société de transport de Montréal* (STM) was responsible for almost 82% of public transit travel throughout Greater Montréal in 2005.

In 1992, the Government of Québec withdrew its funding of Québec's public transit services, and called upon the municipalities involved to offset this shortfall in resources. During

this same period, there was a substantial rise in public transit services (such as the redeployment of commuter lines) along the island's periphery.

Multiple fare hikes over the past few years were designed to restore service levels on the Island of Montréal. These successive fare hikes served to reduce STM ridership. The STM's current fares remain the lowest in North America, however, and service and quality levels represent the key conditions for increasing ridership.

Furthermore, commuter train service was restored for Greater Montréal in the 1990s. Five commuter lines are now in operation and a sixth, the East End commuter line, should begin running in 2010.

Comparing Montréal with Other Cities

Montréal is well positioned compared to major American cities and even European cities, in terms of the efficiency of its transportation system for people. Montréal may be thought of as one of North America's great centres of public transit, which is a plus in terms of the effort major cities have been asked to make to combat climate change⁵. The following indicators serve in gauging such efficiency:

RESIDENTIAL DENSITY

Montréal's urban density of some 3,600 people/km² is the highest of the Canadian and American cities with which it was compared, and similar to many European centres. Denser development usually works in favour of more efficient transportation systems, particularly for short hauls and largely involving public transit or active forms of transportation (walking and bicycling).

PUBLIC TRANSIT RIDERSHIP

Montréal is among the top-ranked US and Canadian cities in terms of public transit ridership, with an average of 140 public transit trips per person, per year. This figure is comparable to, or even higher than, those for public transit ridership in many European cities.

SUPPLY OF PUBLIC TRANSIT SERVICES

In addition to density of development, public transit coverage has a big impact on ridership. Montréal ranks highly among Canadian and US cities for such coverage. The service offered in



Montréal is comparable to that of European cities. The subway, which is the backbone of Montréal's public transit system, plays a major role in this respect, as is the case in other large cities.

CAR OWNERSHIP

Montréal's reduced reliance on cars is not only illustrated by its rate of car ownership (0.4 vehicles/person, the lowest of any Canadian or US city), but ranks on a par with the even lower rates of European cities. Montréal benefits from the presence of one of the world's largest carshare services, with some 12,000 members.

DISTANCE TRAVELLED AND FUEL CONSUMED

With lower levels of car ownership, Montréal posts lower annual distances travelled and less annual per capita fuel consumption. Montréal's figures for these two gauges are below those of any Canadian or American city, although they are higher than those of European urban centres.

Transforming Montréal by Overhauling the Transportation System

Many major changes in Montréal over the past few decades have substantially altered its urban landscape. These include the development of its transportation infrastructure, a more diversified economic and industrial structure, marked growth in downtown Montréal with the establishment of head offices of major corporations and so forth. Montréal's suburban populations have grown along with this process, placing further pressure on the maintenance and development of transportation systems.

Major metropolises face the challenge of innovating so that economically competitive solutions can be offered over the next few years to ensure the delivery of goods and transportation services to the public based on principles of sustainable development, environmental preservation and quality of life.

Such a challenge can only be met with a commitment to transform and upgrade the transportation system and to rethink its deployment and organization.

The *Transportation Plan* targets nine areas for action:

GIVING PRIORITY TO PEDESTRIANS BY IMPROVING WALKING CONDITIONS

Montréal recognizes that the pedestrian comes first in the urban space and confirms the necessity for pedestrians and all other forms of transportation with which they share their space to behave safely, particularly by complying with the *Code de la sécurité routière* [Highway Safety Code]. By placing pedestrians at the

heart of its priorities, Montréal plans to ensure the maintenance of an appropriate balance so that people can get about safely and pleasantly by foot. Through this approach, Montréal also seeks to help resolve a public health matter of increasing concern, the sedentary lifestyle and its relationship to obesity.

To meet this goal, Montréal intends to:

- improve conditions for walking;
- improve the safety of getting about on foot;
- include pedestrian access requirements in plans for the road system and for the development of public areas;

- take universal access into account in all projects.

MAKING PUBLIC TRANSIT THE CORNERSTONE OF MONTRÉAL'S DEVELOPMENT

Increased public transit ridership is one of methods best suited for reducing road congestion, cutting down on GHG emissions and improving quality of life. If public transit services are to appeal to, attract and retain riders, they must prove competitive in terms of comfort and travel time. They must provide adequate service to the City's various neighbourhoods and major economic hubs.



Photo credit: STM.

To meet this goal, Montréal intends to improve public transit service and:

- boost speed;
- improve quality, access and comfort;
- increase intermodal service;
- enhance capacity;
- gradually install universal access throughout the system;
- modify propulsion technologies;
- improve paratransit service.

DEVELOPING BICYCLE FACILITIES AND DEPLOYING NEW INITIATIVES AIMED AT PROMOTING INCREASED BICYCLE USE THROUGHOUT THE CITY

Montréal considers the bicycle to be a key component of its transportation system. Bicycles are fast, efficient, small, low-profile, non-polluting and take up little space. Bicycles easily rival the car and public transit for short- and medium-haul trips. Montréal recognizes the bicycle's potential for development and the contribution it makes to quality of life and to the environment. It recognizes the need to increase and improve infrastructure reserved for its use.

To achieve this goal, Montréal intends to:

- double its network of bike paths from 400 km to 800 km;
- improve the existing network's condition;
- increase the number of parking spaces for bikes;

- improve the manner in which bicycles interact with transit systems;
- provide greater access to bicycle use;
- make a portion of the bike network available on a year-round basis.

PROMOTING CARSHARING AND CARPOOLING

Montréal recognizes that the automobile is not a sustainable form of transportation. The amount of space taken up by roadways and parking facilities, as well as the pollution, traffic and other problems caused by cars are some of the reasons why this is so. However, carsharing

programs have shown that it is possible to meet car travel needs without owning a vehicle. This strategy can result in an overall reduction in automobile use, with less urban space used for this form of transportation. By promoting carsharing and carpooling, Montréal is expressing its desire to improve quality of life and reduce the adverse impact of an excessive rise in motor vehicle use on the island.

To achieve this goal, Montréal intends to:

- ensure that all parts of the island are covered by *centres de gestion des déplacements* [commuter management centres] (CGD);



- create parking facilities for carsharing, fuel-efficient vehicles, micro-cars and carpooling;
- develop a network of carpool lanes;
- encourage carpooling and carsharing.

PROVIDING LEADERSHIP IN SAFE TRAVEL WITHIN THE ISLAND AND ADOPTING THE “ZERO ACCIDENT” APPROACH

All methods of travel throughout Montréal should be risk free. Montréal realizes that meeting such an objective requires drivers, pedestrians and bicyclists to be more aware of the need to comply with the *Code de la sécurité routière* [Highway Safety Code]. By making safety a core concern, Montréal seeks to ensure more peaceful coexistence among the various road users and to provide a more important role for pedestrians and public transit.

To achieve this goal, Montréal intends to:

- enhance the safety of its roadways, particularly at intersections, by giving pedestrians and bicyclists the right of way;
- ensure compliance with the *Code de la sécurité routière* [Highway Safety Code].

SHARING THE ROAD SYSTEM AND GIVING BIGGER ROLES TO WALKING, BICYCLING AND PUBLIC TRANSIT

Montréal wants to modify its transportation system and give bigger roles to public transit, bicycling and walking. While maintaining its concern for the system's overall efficiency, Montréal plans to establish travel conditions that are more respectful of the living environment.

To achieve this goal, Montréal intends to:

- ensure road rights of way are adequately shared;
- improve traffic management;
- improve the hierarchy and functionality of the road system;
- complete connections between different sections of the road system;
- increase the proportion of the road system that is in good condition.

TREATING PARKING AS A STRATEGIC TOOL FOR REDUCING THE USE OF CARS

Cities have adapted to automotive needs and Montréal has been no exception to this rule over the past several decades. In view of this fact, the right to park and drive soon came to be perceived as a possibility and entitlements, despite all the space they consume. Montréal now seeks to reverse this trend by supporting sustainable urban development.

To achieve this goal, Montréal intends to:

- review requirements for parking space;
- encourage businesses to offer public transit users the same kinds of benefits they now give drivers;
- tailor parking access to sustainable transportation practices;
- improve user information.

PROMOTING TRANSPORTATION SUPPORTING ECONOMIC DEVELOPMENT AND THE SHIPMENT OF FREIGHT

The importance of shipping freight by road and the importance of this function to the entire region's economy are well known. Because of the versatility it offers, this form of transportation is now the one best suited and adapted to supplying the Island of Montréal's needs. Montréal does, however, recognize the adverse impact that such transportation causes in terms of the noise and pollution it generates, the substantial space it consumes and the damage it causes to road infrastructure. Innovative solutions must be developed so that the transportation of goods within an urban environment can continue to play its proper role and contribute to the growth and vitality of the Montréal agglomeration, while also letting the population live in peace and quiet. Montréal supports intermodal freight transport.

To achieve this goal, Montréal intends to:

- boost land access to the Port of Montréal;
- support growth of the airport system;
- maintain the rail system's strategic role;
- establish initiatives to support the shipment of freight by intercity bus service;
- ensure efficient truck flows and better coexistence of trucks with the urban space;
- reduce risks related to the transportation of hazardous materials by road.

DEPLOYING THE MOST EFFECTIVE AND INNOVATIVE TRANSPORTATION TECHNOLOGIES

In view of future challenges, we must step up our efforts to produce new ideas and new ways of doing things that will allow us to maximize resources and public and private investment so that we can reduce the noise and pollution caused and energy consumed by transportation systems. Our quality of life depends on this.

To achieve this goal, Montréal intends to:

- ensure a technology watch for transportation;
- adopt a plan on intelligent transportation systems (ITS);
- establish an advanced land transportation industrial cluster;
- Help set up the *Observatoire scientifique* and the *Forum québécois de la mobilité durable* [scientific observatory and Québec forum on sustainable mobility].

Consistency of Initiatives

In its role as a living space, an economic powerhouse and an international city of tourism, Montréal serves as a regional hub for human and freight transportation.

Montréal assumes and seeks to develop this role of central city as part of a sustainable development strategy and in an effort to provide a safe and satisfying living space for Montréalers. Because transportation is vital to municipal and regional activities, Montréal has formulated its

Transportation Vision and invites Montréalers and partners, in a spirit of collaboration, to adopt the approach of the *Transportation Plan*.

The Plan primarily targets Montréal residents. Each of us has an impact on transportation in Montréal, because of where our activities are located, how we choose to get to them and our transportation habits. The *Transportation Plan* encourages Montréalers to bring their transportation habits into line with this Vision.

CONSISTENCY WITH THE CITY'S PLANS

The *Transportation Plan* is a strategic document designed to work in tandem with other texts that Montréal has adopted, such as the *Master Plan* and *Premier Plan stratégique de développement durable de la collectivité montréalaise* [Montréal's first strategic plan for sustainable development]. Several of these plans entail legal obligations, because under the *Charte de la Ville de Montréal* [Charter of Montréal], "The City must draw up a plan for the development of its territory that encompasses the environmental, transportation and community, cultural, economic and social development objectives pursued by the City."

Among these planning documents, the *Master Plan* relates most closely to the *Transportation Plan*. Both texts serve as opportunities for the City to ensure that urban planning and transportation work hand-in-hand and to offer the community collective choices that correspond with its Transportation Vision. This Vision is largely based on the development of an effective system of public transportation, active forms of transportation and the protection of living environments.

The local and regional projects that have been set out in the *Transportation Plan* represent the desired transportation framework for the Montréal agglomeration by 2025. Carrying out these projects will involve a collective effort requiring everyone's participation. It will be necessary to ensure that Transportation Vision-inspired projects prove a good fit with the *Master Plan* and to ensure that the Plan's goals are met. Montréal residents, the municipalities and the boroughs, as well as the CMM, the provincial and federal governments, major public and private institutions and private developers and corporations are all being asked to take active roles in following through on the *Transportation Plan*.

THE MUNICIPALITIES AND BOROUGHS

Montréal intends to launch the *Transportation Plan* within the very near term by starting with those initiatives that fall under the regulatory authority of the Montréal agglomeration or various municipal bodies that already possess the necessary professional, material and financial resources. This approach means that the municipalities and boroughs will be able to implement key Plan components, because they hold direct responsibility for developing Montréal's local neighbourhoods. Several projects pertaining to bicycle use and traffic safety, for example, have already been carried out or are underway.

The municipalities and boroughs also bear a special responsibility for producing local transportation plans. Such plans not only include general measures that apply to the island as a whole, but to plans to convert certain sectors or streets into pedestrian-only areas and to define green neighbourhoods. Once the *Transportation Plan* has been adopted, the municipalities and



boroughs will have about three years to follow through on this exercise. Local plans will define the types of action each municipality and borough will take under the Transportation Vision and rank their priorities within each of Montréal's 34 administrative units.

Over a short term of about one year following adoption of the *Transportation Plan*, the municipalities and boroughs will produce priority action plans for quick implementation of measures aimed at limiting or reducing problems pertaining to road safety, pedestrian travel and traffic calming.

To support the municipalities and boroughs in their respective efforts, Montréal will adopt the principles and harmonization rules needed to ensure that a balance is struck between the need for local and regional travel and the development and protection of living environments. Specifically, land-use planning guides will soon be given to the municipalities and boroughs to assist them in this process.

The municipalities and boroughs may also benefit from expertise developed among the CGDs to carry out their priority action and local transportation plans.

THE COMMUNAUTÉ MÉTROPOLITAINE DE MONTRÉAL

Regional partners are currently pursuing their discussions on a new framework for land-use planning in which the CMM, as well as the regional county municipalities and Québec's different urban agglomerations will each exert complementary sets of responsibilities for land-use planning. All of the parties already understand that issues pertaining to land-use planning, the environment and transportation are inseparable and require the implementation of a global and integrated metropolitan strategy.



The *Transportation Plan* recognizes that interaction between the Montréal agglomeration and the municipalities that surround it is important to Greater Montréal's development. Thus Montréal wants its *Transportation Plan* to have a decisive impact on policies that will result from the CMM's new land-use framework, and the planning of metropolitan transportation that should fall exclusively under the CMM's authority. Montréal will actively participate in these exercises.

THE PROVINCIAL AND FEDERAL GOVERNMENTS

The public transit ridership goals that have been set in the *Transportation Plan* are consistent with those of the *Politique québécoise du transport collectif* [Québec Public Transit Policy]. In its Plan, Montréal has endorsed a number of projects that the Government of Québec, (the *ministère des Transports du Québec* [MTQ] and the *Agence métropolitaine de transport* [AMT]) are already targeting.

Out of a concern for consistency, Montréal will, in conjunction with the CMM's elected officials and government agencies, define regional priorities and project funding structures.

PUBLIC INSTITUTIONS AND PRIVATE BUSINESSES

Montréal is asking businesses, developers and institutions to review their transportation requirements and adopt management plans for the transportation they generate. Montréal will set the lead itself by asking the Government of Québec to make these new practices mandatory.

Governance

The manner in which transportation is organized throughout Greater Montréal has been a subject of lively debate for many years.

Because of the close relationship between transportation and land-use planning, the development of Montréal and its region are largely subject to transportation decisions. Such decisions have a decisive economic, environment and social impact on quality of life among residents of Montréal and its surrounding communities.

The *Transportation Plan* must be considered within the broader context of transportation throughout metropolitan Montréal, of how well the Plan fits into a regional approach and of what it adds to existing planning tools.

This is because the *Transportation Plan's* success certainly depends on the innovative character of its proposals, efforts devoted to its implementation and desires of its decision makers. However, such success also largely depends on the ability of the Plan's project to dovetail neatly with a shared approach to development of the metropolitan region, with Montréal at its core.

A RECENT HISTORY OF TRANSPORTATION GOVERNANCE BODIES

Many milestones over the past few decades have marked the progress that regional decision-makers have made in seeking a governance model suitable to the transportation field.

1990: CONSEIL MÉTROPOLITAIN DE TRANSPORT EN COMMUN

The *Conseil métropolitain du transport en commun* (CMTC) was established in 1990 and served as the first forum in which municipal elected officials from Montréal's, Laval's and Longueuil's transportation authorities could exercise certain metropolitan

powers over public transit. In particular, the CMTC received a grant permitting it to offset the cost of integrating fare structures among Greater Montréal's three transit systems.

The CMTC lacked the means to live up to its aspirations, however, due to the lack of a regional transportation plan, the fact that it did not have jurisdiction over the actual transportation situation, and the context where the provincial government cut its grants for public transit operations.

1995: TABLE DES PRÉFETS ET MAIRES DU GRAND MONTRÉAL

In the spring of 1995, the Government of Québec recommended the establishment of a new financial and institutional framework to provide for the creation of a government agency known as the AMT. A few months later, the *Table des préfets et maires du Grand Montréal* responded to this proposal with another in its report entitled: *Vers un Plan de transport pour la région de Montréal*.

In terms of governance, elected regional officials sought to create an agency that would be a partner, rather than a representative of the government and that would comply with the decentralization plans made by the government of that period. For this reason, it seemed essential for the future agency to consist primarily of elected officials appointed by the region.

1996: AGENCE MÉTROPOLITAINE DE TRANSPORT

The AMT is a government agency that was created in 1996 to help people get about metropolitan Montréal through the use of public transit. The AMT's incorporating act states from its very start that the agency would join in other regional bodies.

As a government agency, the AMT implements the policies, programs and projects that the MTQ places under its charge. As a public transit transport authority, the AMT runs the metropolitan commuter train system and bus network.

The AMT is also responsible for formulating a metropolitan strategic development plan that fits into planning efforts of the CMM and regional county municipalities. In the opinion of the region's elected officials, this plan should represent one component in their respective development plans. The plan should for this reason be implemented in a manner that respects the various land-use planning responsibilities of these municipal authorities.

2000: COMITÉ DES ÉLUS DE LA RÉGION MÉTROPOLITAINE DE MONTRÉAL

The *Comité des élus de la région métropolitaine de Montréal* was formed in the spring of 2000 in conjunction with the Government of Québec's implementation of municipal activities reorganization.

The *Comité des élus*'s work pertained to the creation of the CMM, to the responsibilities it would decide to give this body and to the eventual deployment of a regional growth sharing program. Since the committee believed that public transit would be one of the CMM's biggest future responsibilities, it held deliberations on the organization and operation of public transit services, decision-making structure and cost efficiency.

Since the AMT had been working to promote the development of a metropolitan public transit system since 1996, the committee recommended that the AMT remain a separate entity but report thereafter to the CMM's board. The AMT's board of directors would consist of

elected officials appointed by the CMM's board, plus two named by the Government of Québec. The AMT's chairperson would be an elected official on the CMM's board.

The *Comité des élus* ultimately recommended that the CMM, rather than the AMT, be responsible for adopting a public transit development plan.

2001: COMMUNAUTÉ MÉTROPOLITAINE DE MONTRÉAL

In the wake of municipal reorganizations that took place in 2000, the Government of Québec established the CMM in 2001. One of the CMM's most important responsibilities would be to plan and coordinate public transit and fund its metropolitan features, in line with government transportation policies.

This municipal agency consisted of elected officials appointed by each of the five geographic sectors making up metropolitan Montréal (Montréal, Laval, the North Shore, Longueuil and the rest of the South Shore).

In the area of transportation, the CMM is responsible for approving the strategic plans of the AMT and of Greater Montréal's three transportation authorities, for approving the AMT's budget and for rejecting, where appropriate, any metropolitan fares that the AMT may set. The CMM must also be consulted with respect to the AMT's three-year capital expenditure program. The CMM must finally establish a metropolitan arterial road network, set minimum standards for managing this network, and set standards for standardizing road signs, traffic lights and traffic flow.

2001: LAND-USE PLANNING FRAMEWORK AND GOVERNMENT PRINCIPLES, MONTRÉAL METROPOLITAN REGION 2001-2021

The CMM's establishment was a key factor in the development of the metropolis, with respect to land-use planning and regional development. The CMM was thus put in charge of formulating a metropolitan plan that would provide the Government of Québec with an opportunity to clarify its policy thrusts for the metropolitan area and to define a frame of reference.

The land-use planning framework that was sent to the CMM and to neighbouring regional county municipalities in 2001 served to define various issues relating to transportation, including:

- regional development in line with an urbanization process that limits social and environmental costs and impacts, while optimizing the use of all existing infrastructures and facilities;
- regional development employing heavy public transit infrastructure as the main framework for future urban development of the metropolitan area;
- incorporation of metropolitan transportation planning into land-use planning;
- development of public transit in view of making it the preferred means of transporting people to and from the centre of the metropolitan region;
- upgrading the functionality of the provincial strategic road system and thus the role it plays in supporting economic development of the MCMA (Montréal Census Metropolitan Area), neighbouring regions and Québec as a whole.



By adopting a land-use planning framework that is binding on government representatives and departments, as well as the municipalities, the Government of Québec sought to ensure consistency among the initiatives conducted within the metropolitan region.

Aware of the remaining problems, the Government of Québec did, however, ask the MTQ to propose within the next few months a review of the institutional and financial framework for public transit in the metropolitan region.

2002: BERNARD REPORT ON FUNDING PUBLIC TRANSIT

The primary task assigned to the representative for the Montréal region was to review the financial framework for public transit. Performing this task also proved an opportunity to draw up a report on the situation and to rethink the institutional framework for public transit.

The report noted on this topic that Greater Montréal has two regional agencies with the authority to plan, coordinate and fund the metropolitan features of public transit.

Since its establishment, the AMT has played a central role in the planning and funding of public transit. The agency also serves as an authority responsible for managing metropolitan commuter lines, services and facilities.

The CMM, on the other hand, is the only political authority that possesses all of the powers needed to formulate and implement a public transit development strategy and that can support it by taking action on land use, the environment and economic development.

With respect to institutional framework, the *Bernard Report* noted that a large metropolitan area such as Montréal can only maintain an efficient and effective system of public transit if there is a broad metropolitan vision that embodies and drives it. The report also noted that it is the regional directors who must formulate such a vision, precisely in keeping with their roles. The report said that the CMM is the only political authority with all of the powers needed to formulate and implement a public transit development strategy that could support such a strategy by taking action in areas of land use, the environment and economic development.

The report accordingly recommended that the AMT retain its status as a government agency, but that the planning, coordination and funding of public transit, and the integration of networks and fares, become the CMM's responsibility. This arrangement served to distinguish between the allocation of resources and management of the regional network, with the AMT becoming the organizing authority for regional transportation.



In 2003, the City endorsed this recommendation of the *Bernard Report* and presently reaffirms the importance of pursuing discussions on the metropolitan governance of public transit so that a consensus may be achieved with its regional partners and with the MTQ.

2005: THE CMM'S PUBLIC TRANSIT DECENTRALIZATION PROJECT

In response to the government's desire to enhance local and regional autonomy, the CMM called on the Government of Québec in February of 2005 to support a plan for the institutional and financial decentralization of public transit in the metropolitan region.

The CMM asked Québec to give elected officials more responsibility for metropolitan public transit, to negotiate a better balance between the contributions of the various financial partners and to give it the fiscal space it needs to address significant established needs.

In 2005, the CMM's elected officials reiterated their predecessors' demands on public transit, namely that the AMT's board of directors should consist primarily of municipal elected officials and that the CMM should be responsible for planning metropolitan transportation.

No consensus was achieved, however, on the institutional framework for public transit. Since financial issues had become critical, industry efforts within the *Coalition métropolitaine pour la relance du transport en commun* focused largely on the search for sustainable solutions to the problem of funding public transit.

2006: POLITIQUE QUÉBÉCOISE DU TRANSPORT COLLECTIF [QUÉBEC PUBLIC TRANSIT POLICY]

In June 2006, the Government of Québec released its new *Politique québécoise du transport collectif* [Québec Public Transit Policy], *Pour offrir de meilleurs choix aux citoyens* [Better choices for citizens].

The policy states that the situation in Montréal is characterized by the coexistence of local and metropolitan public transit services. Although people travel throughout the metropolitan region, responsibilities for the transportation systems that make such movement possible are broken down among a large number of authorities. Furthermore, the sharing of public transit operating and capital expenditure costs remains a thorny issue, particularly in terms of subway funding.

In recognizing that change is needed, the Government of Québec seeks to bolster a metropolitan vision in planning, developing and organizing the transportation services offered by the different transport authorities. The Government of Québec is also aware of the pressing need to find more equitable cost sharing formulas for the metropolitan region as a whole.

Out of a desire to promote local autonomy, the Government of Québec wants to maintain the deliberative process that the CMM launched in 2005. Québec therefore appointed a representative to support it in this effort. The CMM has had several months to establish a regional consensus and to conclude an agreement on new rules for funding metropolitan public transit. Its responsibilities did not extend to the institutional organization of transportation throughout the region.

2007: AGREEMENT PROPOSED BY THE QUÉBEC GOVERNMENT REPRESENTATIVE ON RULES FOR SHARING THE METROPOLITAN SUBWAY DEFICIT SHARE FOR THE 2007-2011 PERIOD

Following months of discussion within an "advisory committee," the CMM's elected officials approved an agreement in principle with the MTQ to share the subway deficit among the metropolitan partners. The Montréal agglomeration would be responsible for up to 64% and the other municipalities, up to 16%. A grant from the Government of Québec would supplement these municipalities' contributions.

This agreement represented recognition by the CMM's municipalities that Montréal's subway system is a metropolitan-wide transportation facility, just like its commuter trains. However, this new contribution from the CMM's municipalities was destined to reignite the debate over the governance of transportation within the metropolitan region.

The agreement also provided for the creation of a committee to oversee the governance and funding of public transit in Greater Montréal. This committee was to submit its recommendations by December 31, 2008.

METROPOLITAN ISSUES

HISTORIC CONTINUITY AND THE URGENT NEED TO ACT

Everything that could be said about the government of metropolitan public transit has been said over the past 15 years and certain proposals of the *Bernard Report* (December 2002) still receive very broad support from



elected officials. However, the restructuring of some of the metropolitan region's municipalities did put discussions with respect to the funding and the institutional framework of metropolitan public transit on the backburner.

At the time it tabled its *Transportation Plan*, Montréal was still pursuing discussions with its metropolitan partners on the governance and funding of metropolitan public transit, as provided in the 2007 agreement on rules for sharing the subway deficit.

Without anticipating the outcome of discussions that are supposed to wrap up in December of 2008, Montréal wishes to broaden the dialogue. It also wishes to define its preferred strategic orientations for the governance of metropolitan transportation.

In view of the vast investments required for transportation over the short term, the metropolitan region must quickly define a governance mechanism that will endow regional elected officials with the appropriate powers. These powers involve planning regional transportation in conjunction with the planning of land-use, the environment and economic

development, as well as determining what the investment priorities will be, how they will be implemented and how they will be funded.

THE ISSUES: TRANSPORTATION AS PART AND PARCEL OF LAND USE, THE ENVIRONMENT AND ECONOMIC DEVELOPMENT

Straightaway, Montréal feels important to recall that the principal transportation issues discussed in *Cadre d'aménagement et orientations gouvernementales – Région métropolitaine de Montréal 2001-2021*, are still extremely relevant and that it recognizes them. These issues are:

- development of Montréal in view of promoting a process of urban growth that limits social and environmental costs and impacts, while optimizing the use of all existing infrastructure and facilities;
- development of Montréal using heavy public transit infrastructure as the primary framework for future urban development of the metropolitan area;
- incorporation of metropolitan transportation planning into land-use planning;
- development of public transit in view of making it the preferred means for transporting people to and from the centre of the metropolitan region;
- upgrading the functionality of the provincial strategic road system and thereby the role it plays in supporting economic development of the MCMA (Montréal Census Metropolitan Area), neighbouring regions and Québec as a whole.

The *Bernard Report* also defined four major timely issues that remain at the heart of Montréal's concerns. They are:

- inadequate financial resources;
- equity issues with respect to municipal contributions, particularly with regard to the subway system and commuter lines;
- the CMM's future role as the region's key governance authority;
- public transit ridership's continuing decline compared with car use.

More recently, a study by the Board of Trade of Metropolitan Montréal noted that the presence of an efficient transportation sector is a factor in Greater Montréal's wealth and competitiveness. The transportation of people and goods remains a mainstay of Montréal's economy. A good public transit system facilitates such mobility. The contribution of such a system to the economy is significant. This contribution will become even greater over the next few years, because of the importance of quality of life in the knowledge-based economy, increased urbanization, energy concerns and an aging population.

The challenges relating to these issues, plus that of the environment, exceed the jurisdiction and authority of the agglomeration and the local municipalities. Such challenges can only be met as part of a heightened sense of accountability by elected officials within a body that is "capable of pursuing an integrated and multisectoral strategy applicable to the entire metropolitan region⁶."

SETTING PRIORITIES: A SOCIAL CHOICE

The sharing of responsibilities for planning regional transportation among the CMM and the AMT is characterized by the lack of an adequate process for defining priorities. That is one reason why no action has been taken within the region on these issues for many years. The CMM must quickly be given responsibility for planning and setting priorities as part of an effort to decentralize government and increase accountability among local officials. A government agency is clearly not in a position to make the social choices inherent in setting priorities.

PROPOSALS FOR A NEW SYSTEM OF GOVERNANCE

Montréal wants the CMM's role in transportation to be increased. Montréal also wants the CMM to receive the full authority it needs to pursue an integrated and multisectoral strategy aimed at ensuring the competitiveness of the metropolitan region and improving quality of life for its residents. Montréal therefore proposes:

1) RECOGNIZING THE ROLE OF THE CMM AND REVIEWING THAT OF THE AMT

In 2000, the act to establish the CMM gave regional elected officials, in-principle, the responsibility for public transit in the metropolitan region. However, the act did not afford these officials any real means of assuming such responsibility.

The AMT has accordingly retained significant responsibilities for the planning and funding of metropolitan public transit, although it had originally been destined for absorption by an eventual regional authority upon its creation in 1996. Montréal believes that full authority should be transferred to the CMM so that it can fully implement its role in the planning, coordination and funding of metropolitan public transit.

The AMT, which currently holds the status of a government agency, should become a *autorité organisatrice de transport* [transport authority] (AOT) reporting to the CMM board, like transport authorities that report to the cities. This AOT should have its own board of directors consisting primarily of elected officials capable of defining and imposing a regional vision of transportation.

2) MAKING THE CMM RESPONSIBLE FOR MOST PUBLIC TRANSIT PLANNING, COORDINATION AND FUNDING FUNCTIONS

Greater Montréal's administrative and political fragmentation has often been the topic of criticism. The transportation field is a good example of this situation.

To reinforce its regional vision, Montréal plans to concentrate the planning, coordination and funding of metropolitan public transit within the CMM and to reorient the mission of the new metropolitan AOT around its role as an operator of commuter trains and metropolitan facilities.

The CMM should accordingly be responsible for formulating a strategic regional transportation plan, because it is the only entity capable of adopting an integrated development strategy that not only takes transportation, but land use, the environment and economic development into account.

The CMM should also approve the three-year capital expenditure program for different forms of transportation and metropolitan facilities, as well as the budget and fare structure of the new metropolitan AOT.

Lastly, the CMM should also administer operating and capital expenditure funds earmarked for metropolitan public transit, without anticipating the outcome of current discussions on funding sources, assistance programs and cost sharing among the municipalities.

3) MAINTAINING THE CURRENT ROLES OF TRANSPORT AUTHORITIES AND OF MUNICIPAL AND INTERMUNICIPAL TRANSPORTATION AGENCIES

The organization of local public transit services in Greater Montréal has been moulded by the development of the suburbs north and south of Montréal. Montréal does not seek to change the current situation, which is characterized by the coexistence of three transport authorities, nine intermunicipal transport councils, a regional transport council and three municipal transport authorities.

This situation can remain in place, as long as harmonization, integration and sharing mechanisms ensure greater regional equity for riders, taxpayers and participating organizations.





A1 Providing Better Public Transit Service

Public Transit: Cornerstone of Development

1. STRATEGIC ORIENTATIONS

IMPROVEMENT AND EXPANSION OF PUBLIC TRANSIT SERVICES ARE NOT ONLY PRIMARY GOALS OF THE *TRANSPORTATION PLAN*, BUT FUNDAMENTAL PREREQUISITES FOR HARMONIOUS AND PRUDENT REGIONAL DEVELOPMENT. FOR MANY DECADES, THE METROPOLITAN REGION HAS DEVELOPED IN LINE WITH MOTORISTS' NEEDS. THE HIGH COST OF THIS APPROACH, ITS ADVERSE EFFECT ON THE ENVIRONMENT, ITS UNPRODUCTIVE USE OF LAND (PARKING LOTS, SPACE ON THE STREETS) AND THE NUISANCE IT CAUSES TO RESIDENTS HAS NOW BECOME MANIFEST.

Many facts and much data demonstrate the contribution that public transit makes to Montréal's economy apart from the job created and the operating and capital expenses generated. In 2003, public transit saved Montréal households some \$600 million in transportation costs⁷. Such savings provide these households greater buying power so that they can spend more on shopping, cultural excursions and recreational activities. If they had instead spent this money on their cars, the spin-offs would only have been half as great. Public transit also supports business in the industrial, commercial, tourist and academic sectors.

Montréal believes that public transit should serve to meet a greater proportion of transportation needs for Montréalers and off-island residents travelling to their homes, jobs, places of study and recreational activities on the island.

In particular, Montréal is targeting a minimum:

- 8% increase in public transit ridership by 2012 as recommended in the *Politique québécoise du transport collectif* [Québec Public Transit Policy].
- 26% increase in public transit ridership by 2021⁸. This very ambitious goal is similar to those of transportation plans for several of the world's great cities, such as Paris and London.

As part of this approach, Montréal agreed with the STM in 2007 to deploy immediately their service upgrade program aimed at meeting the 8% target for ridership growth over five years. The *Transportation Plan's* 2021 target, however, represents a formidable challenge that will require



a substantial increase of some 50% in services and infrastructure and must be simultaneously accompanied by a sweeping change in transportation habits.

This desire is expressed at a time of great reliance on cars. Such reliance has, unfortunately, only increased over the past few years. In addition to changing our habits, more frequent car use impairs the competitiveness of transportation alternatives. During the 1987 to 1998 period, which saw few major investments in this area, public transit ridership to Montréal declined an overall 13.2%. Following numerous improvements to the public transit system from 1998 to 2003, particularly on a regional level, such ridership rose 9.6%, thereby preserving public transit's modal share.

The *Transportation Plan's* assessment identifies the following issues relating to the deployment of new services, to evolving customers needs and to Montréal's own development:

- saturation of supply among the different forms of public transit: limited residual capacity of the bus fleet and of certain subway segments during rush hours;
- need to maintain, restore and replace subway rolling stock and infrastructure: public transit performance remains closely linked to that of the subway system;
- need to implement universal access throughout the public transit system gradually;
- access to different parts of the City: the public transit system must adapt to the needs of sectors undergoing transformation and development;

- major travel corridors: public transit's overall edge with respect to the car has declined in several key corridors on the Island of Montréal;
- diversification of public transit modes: must be better tailored to the environments they serve;
- use of the car as a supplement to public transit: opportunity to develop intermodal relationship between cars and public transit;
- specific needs of different customer groups: seniors, persons with reduced mobility and students;
- fares among the lowest in North America, despite a series of hikes;
- high public expectations in terms of cleanliness of vehicles and facilities.
- development of a modern tramway system that will supplement subway service by providing coverage to central Montréal and various strategic corridors and by enhancing the urban space, including certain areas with great potential for economic development;
- development of a complete BRT network operating on reserved lanes;
- development of a priority road system for buses, with reserved lanes and other priority measures, aimed at boosting the general performance of bus service;
- addition of some 500 buses at rush hour, to provide more frequent, comfortable and rapid service; broad expansion of the bus system's capacity and performance; the bus system will carry a large share of new riders, provide detailed and efficient coverage of the region and offer better travel times along Montréal's major arterial roads;

2. PROPOSED ACTIONS

In response to these issues, Montréal and its partners will create a public transit system that represents a competitive alternative to the car because it provides more services and universally accessible facilities that are better suited to rider needs. The overall strategy formulated in a group planning effort involving Montréal and the STM is based on the following concepts:

- maintenance and improvement of subway capacity; the subway system will accordingly be upgraded and extended and remain the system's foundation in terms of transportation capacity. It will serve as a lever in urban development and quality of life;
- add to the public transit system with park and ride facilities located upstream of the congestion so that cars can be more effectively integrated into the public transit system.

To ensure that public transit remains competitive, Montréal and the STM agree to keep fares affordable. Rider fares will not, in other words, rise in real terms, but merely stay in pace with the rate of inflation.

Greater rate diversification is also desired, so that needs of different rider groups can be accommodated. The STM has already forged partnerships with organizations (sports and recreational events, festivals and carsharing organizations) in which fares are bundled into an event's ticket price. The STM plans to expand this practice. By introducing a smart card and related technology in 2008, the STM will have greater flexibility in this area. Consequently, partnerships with universal, cultural and sporting institutions can now be envisioned and promoted. Fares adjusted to client profiles (such as families) are possible and will be instituted.

The Montréal university community is one of the first groups that will be targeted with this approach, because of its size and the opportunity to make young people loyal public transit riders.

> ASSESS FREE PUBLIC TRANSIT SERVICE FOR UNIVERSITY STUDENTS

Many universities and transport authorities in the United States and Canada (including Sherbrooke, Québec, as of 2004) have agreements allowing university students to use public transit services at no charge.

The STM intends to work with universities in studying the appropriateness and feasibility of establishing such an initiative within the short term.

2.1 MONTRÉAL'S SUBWAY SYSTEM

Montréal created up a subway system in the 1960s that has become the true backbone of Montréal's transportation system. The subway has also served as an important catalyst of urban and economic development. In the late 1970s, the Government of Québec joined Montréal in developing the subway system.

Three out of five public transit riders travel by subway, which is essential to the good operation and efficiency of Montréal's public transit system.

The subway system, however, now requires basic upgrades if it is to maintain its role. This system is facing multiple challenges:

- saturation at certain points of the system during rush hours, a situation that has been aggravated by the new extension to Laval;
- rolling stock that is almost at the end of its service life;
- obsolescence of installed equipment and the need to renovate stations;
- necessity of ensuring development potential for downtown Montréal.

There are several components in the strategy for enabling the subway system to shoulder its full public transit role.

UPGRADING THE SUBWAY SYSTEM

Since the system receives intense use during rush hour periods and many of its components have reached or will soon reach the ends of their service lives, Montréal intends to give priority to upgrading infrastructure and rolling stock.

Actions on rolling stock will be aimed at enhancing the system's reliability and providing the new capacity needed to meet the desired growth in ridership. Such efforts are particularly important along the recently opened Montmorency–Berri-UQAM section of the Orange Line (2), where ridership exceeds all forecasts.

From 1996-1999, the STM carried out the first phase of the *Réno-Stations* program, which focused on renovating the original system's stations and tunnels. The STM recently set up a maintenance program for its building inventory, including Phase II of *Réno-Stations*. This second phase includes the renovation of auxiliary structures and of the 28 stations that have been added since 1976. The STM is also carrying out its *Réno-Systèmes* program to replace or overhaul installed subway equipment and enhance operational reliability.

> REPLACING HALF OF THE SUBWAY FLEET

The MR-63 cars that went into service in 1966 have already reached the ends of their service lives. The existing 336 existing cars will be replaced under a vast equipment renewal program to be conducted over the 2006 to 2015 period. The number of cars to be acquired will be calculated based on ridership and capacity. There is also a plan to obtain an option to purchase additional cars to boost peak capacities. Reliability of the new cars will rise and they will accommodate about 15% more riders due to a better internal design and the fact that passengers will be able to move between cars.

This program represents an investment of \$1.1 billion. In May 2006, the Government of Québec announced its intention of taking on 75% of the funding to replace the MR-63, with the rest to be assumed by the local communities.

> RENOVATING AND REFURBISHING THE MR-73 SUBWAY CARS

This essential project is geared to achieving a 10% increase in car capacity by late 2008 and to keep car interiors in good condition. The 423 cars are nearly 30 years old and have travelled an average of 2.3 million kilometres each. They will be given a more functional interior design that will generate additional capacity over the next three years. This program will require an investment of \$37 million.

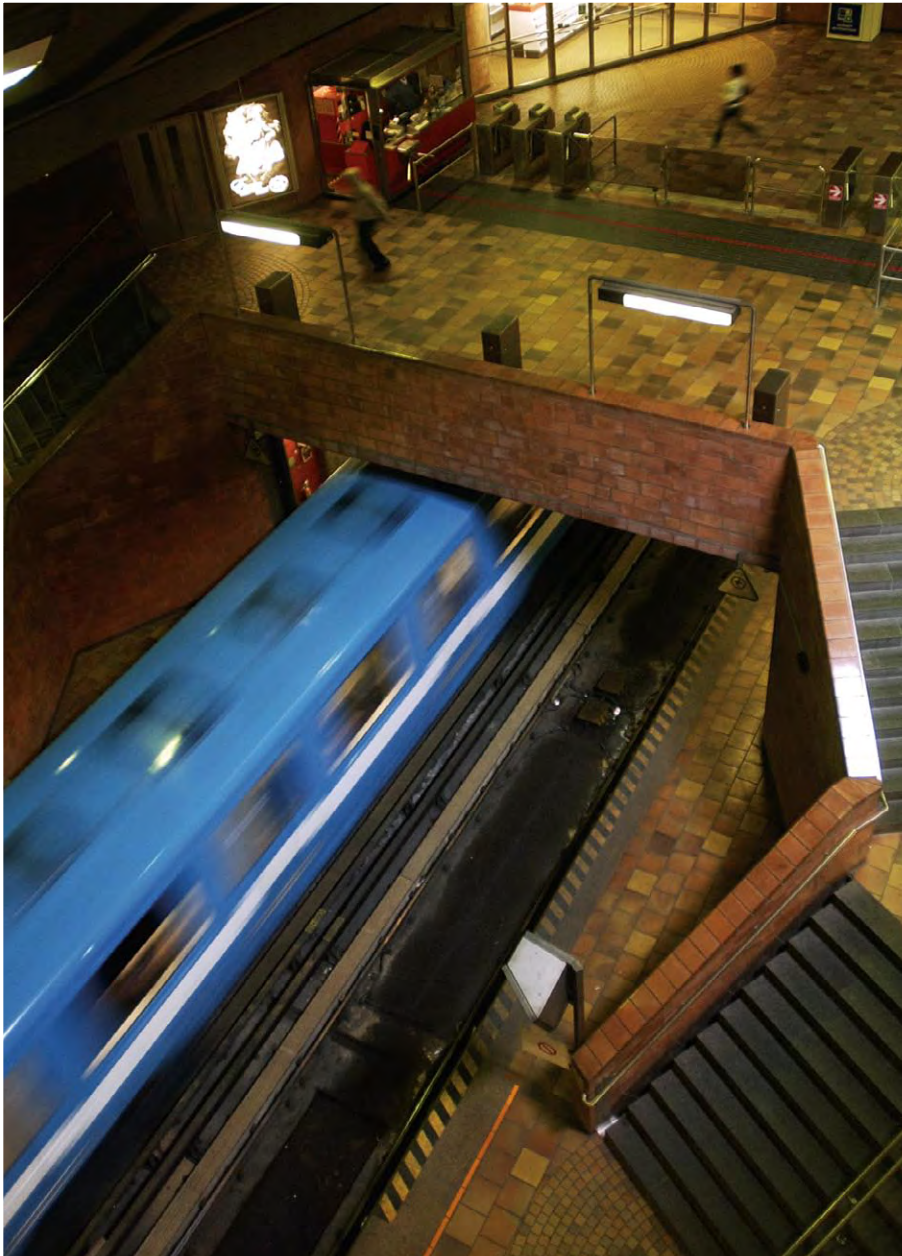
> REPLACING MR-73 SUBWAY CARS

Over the longer term, the 423 second-generation cars must be replaced, as they have also reached the ends of their service lives. The estimated price tag of this replacement program is \$1.4 billion.

EXPANDING THE SUBWAY SYSTEM

The opening of subway stations in Laval in 2007 clearly demonstrated to any doubters the very great value of this form of transportation in daily travel. Laval subway ridership is not only on target, but has exceeded forecasts.

Montréal plans to extend subway lines, provide residents with better access and integrate the system with other public transit services, to boost the coverage of its eastern and centre-west sectors of the island significantly (Figure 5):



➤ **EXTENDING THE BLUE LINE (5)
FROM SAINT-MICHEL TO PIE-IX**

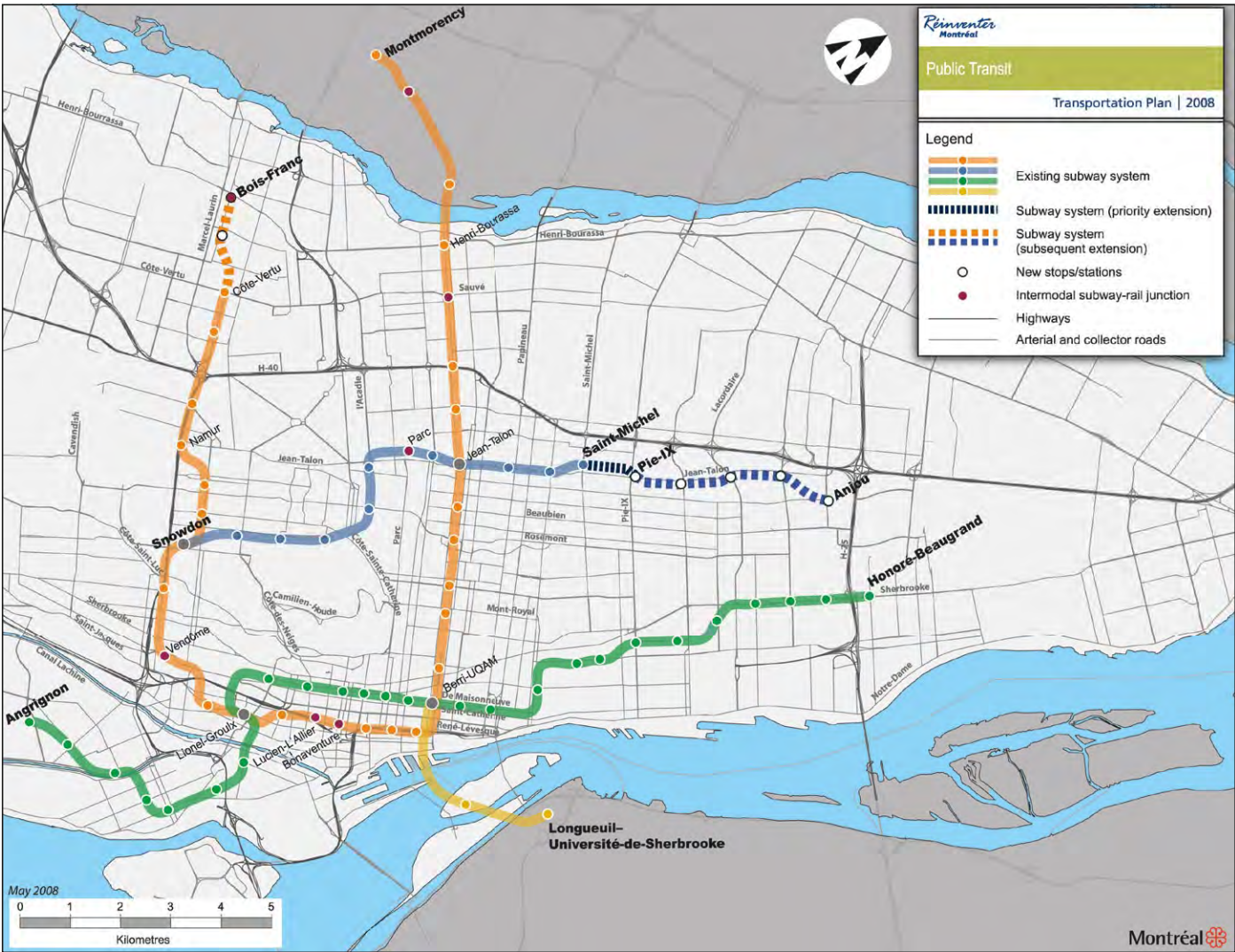
This process will involve the addition of a short one-kilometre segment providing a direct link from the subway system to Pie IX, the island's largest north-south bus corridor in terms of current and potential ridership. The new station will facilitate transfers between existing and future services (express buses and the East End commuter line), thus becoming a pillar of development in East End transportation. The cost of this first phase is estimated at \$170 million⁹.

➤ **EXTENDING THE BLUE LINE (5)
FROM PIE-IX TO SAINT-LÉONARD AND ANJOU**

In a second phase, the subway's Blue Line will be extended 5.1 km from Pie-IX to Saint-Léonard and Anjou. This project will take the system further into the East End and provide better access, particularly toward the Côte-des-Neiges hub and the current and planned campuses of the *Université de Montréal* [Montréal University]. In addition to being the system best suited to high demand corridors, underground extension of the subway system will considerably improve coverage of the Anjou business hub, while the four new stations will intersect major north-south corridors within the East End.

The latest estimates show that extension of the Blue Line (5) to Anjou will serve to boost that line's ridership, which currently carries some 30,000 users during workdays, by approximately 50%. Montréal believes that the anticipated ridership fully warrants extending the Blue Line (5) to Anjou. The cost of this extension is forecast at \$775 million⁹, plus the purchase of additional rolling stock.

FIGURE 5 | Subway System





**> EXTENDING THE ORANGE LINE (2)
FROM CÔTE-VERTU TO BOIS-FRANC**

This project will involve the addition of two stations along a stretch of some 2.2 kilometres. The terminus will become an intermodal station on the Montréal-Deux-Montagnes train line. This extension will provide better service to the Saint-Laurent borough, which is experiencing sustained growth of its population and economic activities. Commuter rail riders will also be able to connect to the subway system and travel more easily to sectors west of the mountain. The cost of the extension is forecast at \$340 million⁹, plus the purchase of rolling stock.

Opportunity assessments should be conducted over the long term on such other possible expansions as westward extensions of the Green and Blue Lines within the Island of Montréal and extensions to Longueuil and Laval.

IMPROVING SERVICE QUALITY

The subway system should offer better service to meet the needs of current and future riders.

**> IMPROVING SUBWAY RIDERSHIP CAPACITY
DURING OFF-PEAK HOURS**

This effort will involve increasing service at the start and end of rush hour periods, during lunch hours and evenings on weekdays, and afternoons and evenings on weekends. These changes in subway schedules, most of which went into effect in 2007, will better meet the needs of riders in the denser central portion of the island by allowing them to draw on the efficiency of the system's most effective mode. The operating cost of this service increase is relatively low and does not require additional rolling stock.

**> INCREASING SUBWAY FREQUENCY
DURING RUSH HOURS**

Service frequency will be boosted over the medium term by upgrading subway control and operations systems. This initiative, combined with enhanced subway capacity and additional cars, will increase rider comfort during peak periods and help draw new riders from the centre of the island.

**IMPROVING ACCESS, CLEANLINESS, SAFETY,
USER-FRIENDLINESS AND INFORMATION**

**> GRADUALLY INTRODUCING UNIVERSAL ACCESS
THROUGHOUT THE SUBWAY SYSTEM**

This initiative is designed to provide gradual access to the subway system for people in wheelchairs and individuals with reduced mobility, as well as other specific groups, particularly through the installation of elevators. Five stations (Bonaventure, Henri-Bourassa, Lionel-Groulx, Berri-UQAM and Côte-Vertu) will initially be made accessible by 2010. At the rate of three stations per year, the STM plans to provide its entire subway system with the same level of access provided in the three new Orange Line (2) stations in Laval.

**> ENHANCING CLEANLINESS
IN THE SUBWAY SYSTEM**

In 2007, the STM conducted a cleanliness awareness campaign entitled *Gardons notre espace propre*. This campaign focused on increasing the cleanliness of facilities and vehicles, by making riders more aware of their share of the responsibility for this effort.

Under its 2007-2010 cleanliness and maintenance program, Montréal signed cooperative agreements with the STM to share responsibility among the STM and the boroughs for upkeep of areas around subway stations and bus shelters. Cleanliness is also considered to be an important factor in rider safety.

> IMPROVING SAFETY IN THE SUBWAY SYSTEM

The safety of subway riders has always been a priority for Montréal and the STM. Such safety, combined with reliability of the transit system, makes riders feel safer. Through its efforts, the STM managed to cut the number of crimes against persons by 48% from 1999 to 2002.

Montréal and the STM have, since 2004, worked to create a police unit dedicated to patrolling the subway system and improving public safety. In 2007, Montréal announced the creation of the *Division du réseau de transport en commun* [transit network division] of the *Service de police de la Ville de Montréal* [City of Montréal Police Department] (SPVM).

Workers are assisted by the maintenance and development of an extended closed circuit television system within the subway system. It should be noted that federal assistance of \$8.5 million (Transit-Secure program) was given to the STM enabling it to meet rider expectations on prevention and safety more effectively.

> INCREASING THE RANGE OF COMMERCIAL SERVICES OFFERED NEAR SUBWAY STATIONS

The STM maintains a program for developing commercial space within subway stations that supports neighbouring businesses so that riders can easily do their shopping and perform other daily tasks in the course of their travel. The City is also working with the STM to develop vacant lots near subway entrance shelters and for the

aerial rights above such structures. The City and its boroughs are also seeking to promote increased activity around subway stations, as recommended in the *Master Plan*.

> IMPROVING INFORMATION FOR SUBWAY RIDERS

As part of the *Réno-Systèmes* project, each subway station's platform will be equipped with communication systems displaying real-time information on arrivals and service disruptions. The project seeks to create a more user-friendly subway system, let riders plan their trips more effectively and reduce inconvenience caused by unexpected events.

> AN ONLINE SUBWAY SYSTEM

The subway system will become a Wi-Fi zone in 2009, so that riders will be able to access the Internet and email.

Facts about Modern Tramways :

- they run along their own, reserved rights-of-way, which means fast, reliable and regular service that is competitive with travel by car;
- stations are characterized by distinctive shelters, raised platforms, dynamic wait time displays, information panels and so forth;
- their spacious and attractive cars may consist of multiple (articulated or other) units, and often have low floors to permit easier embarkation and debarkation at stations, particularly for persons with reduced mobility;
- they have the right-of-way at intersections;
- vehicle layout and design is geared to ensure the comfort and safety of pedestrians and riders and is best adapted to the needs of different kinds of user groups;
- they permit the use of non-polluting propulsion systems.

2.2 A TRAMWAY SYSTEM AND BUS RAPID TRANSIT (BRT) SERVICES OPERATING ON RESERVED LANES

The success of the subway system, which runs along its own right-of-way, is due to its high levels of efficiency. Because of high construction costs, however, only those corridors presenting very strong levels of demand warrant the installation of a subway line.

The current success of high-efficiency bus services already operating in Montréal (reserved lanes, *R-Bus*, *Express*) has demonstrated the need for rapid, frequent and reliable transportation services that cover corridors and hubs situated at a distance from subway routes. The development of a medium-capacity system working in tandem



with the subway to serve multiple corridors and hubs will help boost public transit ridership in Montréal.

The Island of Montréal's ten most heavily travelled bus corridors carry some 40% of the STM bus system's total ridership. The Henri-Bourassa, Pie-IX, Notre-Dame, du Parc and Côte-des-Neiges lines alone are responsible for some 20% of the STM's daily bus ridership.

To support and supplement the subway system, Montréal and the STM plan to develop a tramway system and BRT services running on reserved lanes. Such service will enhance coverage to the centre of the island, which has Montréal's highest population and job density.

A modern tramway or BRT can be set up in an initial phase, depending on the corridor to be served. The fact that the two systems share compatible designs will subsequently make it possible to include the BRT system within the tramway system.

MONTRÉAL OPTS FOR THE TRAMWAY

The tramway's ability to build on the existing urban structure and revitalize arterial roads and local neighbourhoods makes it well suited to the principles set out in Montréal's *Transportation Plan*. The tramway also corresponds with the *Master Plan's* objectives.

Modern tramways that have been created in recent years are unlike the ones that served Montréal until 1959. They are reliable, attractive, user-friendly and comfortable systems that can transport large numbers of riders. Such vehicles, which are currently operating in many northern cities, are very well suited to our climate.

Such service is particularly appropriate for urban sectors with the kind of density or diverse activity that generates a demand for short- or long-haul service at all times of day and in both directions. Running on street-level tracks, such systems often provide an opportunity to redefine how

the road is shared, particularly by absorbing car lanes or parking spaces and by permitting major urban renewal activities to proceed.

Montréal has opted for the creation of three initial tramway lines totalling about 20 km in length and situated at the heart of the agglomeration (Figure 6). This initial tramway system will have a remarkable impact on the urban environment and help get many other projects off the ground.

The first line, which serves to supplement the subway system and the pedestrian circulation system, will provide a loop through the business centre, the Montréal Harbourfront, Old Montréal, the new CHUM, UQAM, the *Quartier des spectacles* and the *Quartier International de Montréal*, which have the densest employment and numbers of activities. The system will then be rolled out along *Avenue du Parc*, followed by *Chemin de la Côte-des-Neiges*. Some 129,000 residents and 305,000 jobs would be located within 500 m of this strategically designed initial route.

FIGURE 6 | Tramway System

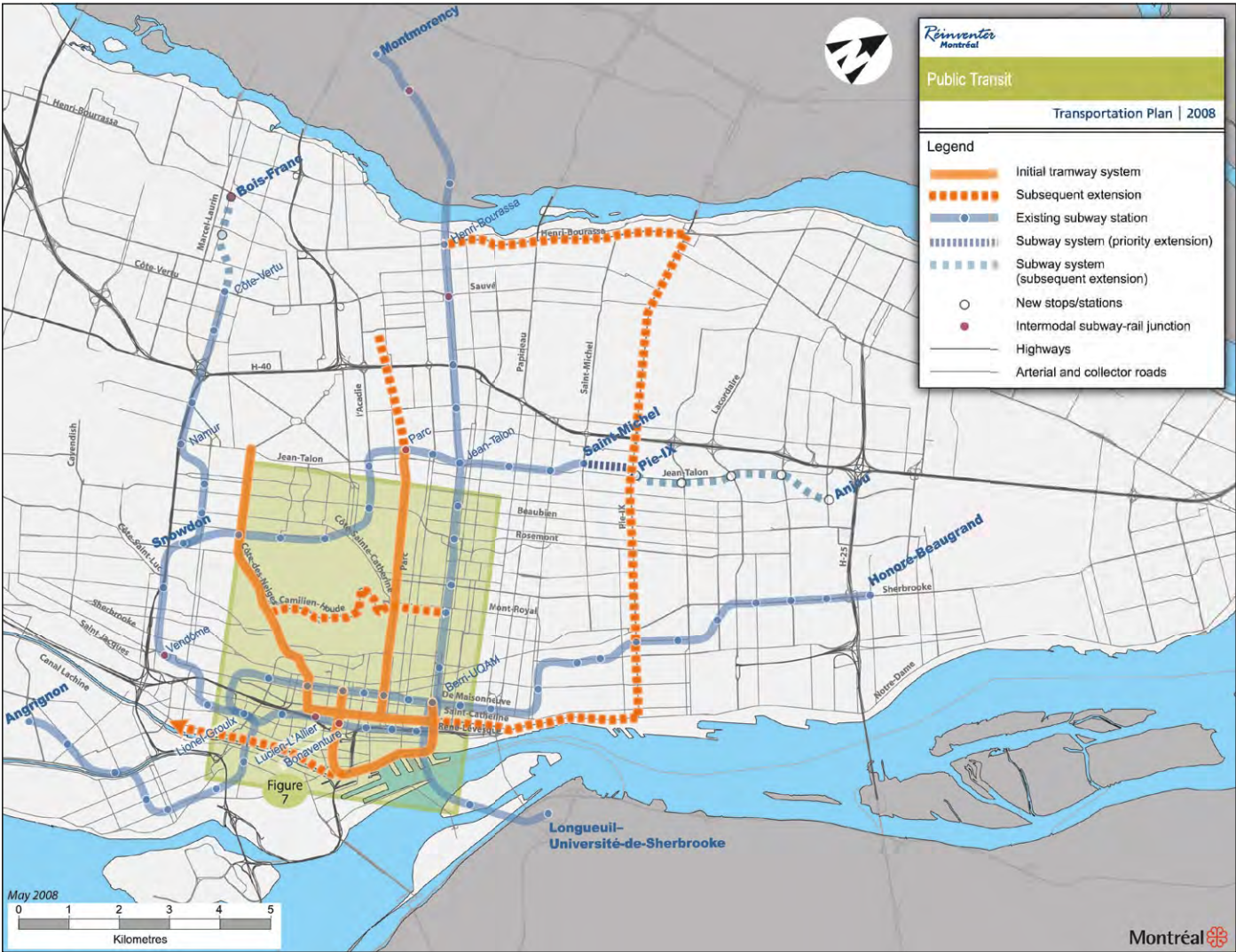
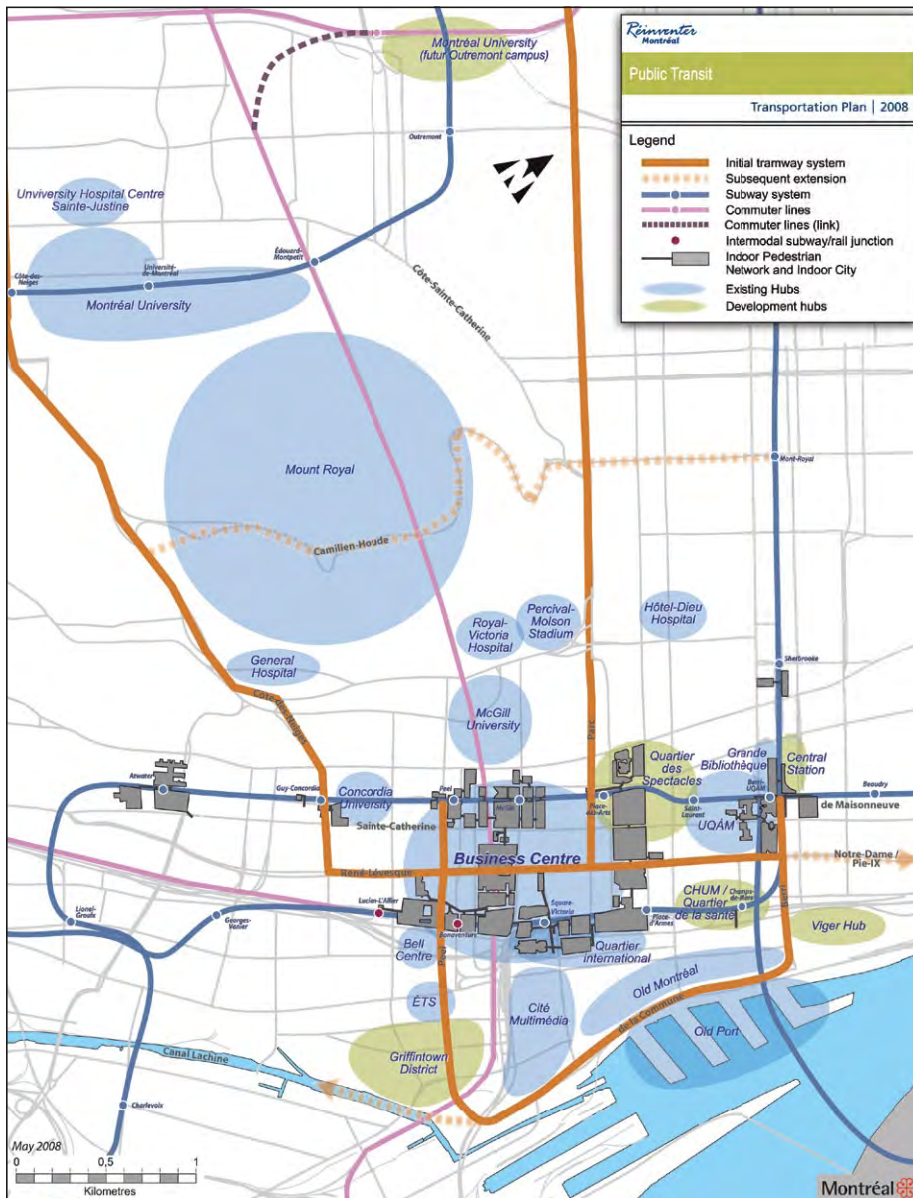


FIGURE 7 | Initial Downtown Tramway Line

Montréal will set up a steering committee in 2008 consisting of Montréal's key transportation stakeholders. This committee will be charged with the responsibility for producing the initial tramway system and putting it into service as soon as possible.

> **TRAMWAY THROUGH THE BUSINESS CENTRE, OLD MONTRÉAL AND THE MONTRÉAL HARBOURFRONT**

The first line of the system in question will loop through downtown Montréal along Berri, de la Commune, Peel and René-Lévesque. This six-kilometre stretch will provide transportation within the downtown area by linking institutional, commercial, cultural and tourist hubs, such as Old Montréal and the Old Port. The tramway will also back up the subway system (Orange Lines 1 and 2) by facilitating access and serving as a catalyst for various development sites, such as Griffintown, the new CHUM, UQAM, the *Quartier des spectacles* and the *Cité Multimédia* (Figure 7). Total investments of \$5 billion are underway in areas of culture, education, health and housing. The cost of this line has been estimated at \$260 million.

Consideration should be given to the use of the existing railway right-of-way at the Old Port. Montréal could use the opportunity provided by the tramway's creation to carry out other urban development work.

> **AVENUE DU PARC TRAMWAY**

This line will serve the *Avenue du Parc* corridor from the Parc subway station on the Blue Line (5) and connect with the heart of the business district through *Boulevard René-Lévesque*.

The tramway will supplement service on and ease congestion of the subway's Orange Line (2) along this high-volume corridor. This line, which has already been studied by the *Agence métropolitaine de transport* (AMT), will run for about seven kilometres and provide a capacity for 13.7 million trips per year. The tramway will not only serve riders along the corridor, but users of the new campus of the *Université de Montréal* [Montréal University] located in the former Outremont railroad yards and those of the Montréal-Blainville-Saint-Jérôme commuter line. The tramway's creation will require complete reconfiguration of the public right-of-way with respect to traffic lanes, sidewalks, street furniture, lighting and so forth. It will also entail revitalization efforts for the *Avenue du Parc* corridor.



The AMT's initial studies set the cost of this line at \$475 million, which is higher than the average of \$40 million/km used in calculations for the *Transportation Plan*. The AMT's estimate includes \$313 million for the transportation system and \$162 million for the urban renewal effort, which will include the replacement of buried infrastructure. This estimate will be revised to take into account the system's overall length, the manner in which other tramway lines are shared and the order in which each line is to be installed.

> CHEMIN DE LA CÔTE-DES-NEIGES TRAMWAY

The six-kilometre route from *Rue Jean-Talon* to *Boulevard René-Lévesque* along the *Chemin de la Côte-des-Neiges* corridor will complete the initial system. *Chemin de la Côte-des-Neiges* is the main arterial road flanking the west side of Mount Royal and thus serves as a key corridor to downtown Montréal from the north-western quadrant. Daily public transit ridership is currently estimated at 43,000, making this route Montréal's fifth largest corridor. The tramway will also serve the large institutional trip generators, including the *Université de Montréal* [Montréal University] and large hospitals. As with the *Avenue du Parc* tramway, the line will provide an

opportunity for reviewing the urban planning of this corridor, particularly at the Côte-des-Neiges/Remembrance intersection. That intersection may be rebuilt as a street level intersection (as was the *Avenue du Parc* and *Avenue des Pins* crossover), permitting easier access to Mount Royal from the west. The preliminary cost estimate for this line is \$250 million¹⁰.

> INSTALLING TRAMWAY LINES ALONG OTHER STRATEGIC CORRIDORS IN SUBSEQUENT PHASES

Once the initial network has been completed, it may be extended as needs evolve and as opportunities for development and urban integration arise. The du Parc line could be continued northward to serve the residential Parc-Extension sector and the *L'Acadie-Chabanel* industrial and commercial hub. Consideration will also be given to the possibility of linking the *Avenue du Parc* and *Chemin de la Côte-des-Neiges* lines along the *Chemin Camillien-Houde* route through Mount Royal Park in an effort to enhance transportation and the environment. Other corridors may also be used, including *Rue Notre-Dame*, *Boulevard Pie-IX*, *Boulevard Henri-Bourassa* and the Lachine Canal, because they offer potentials both for transportation and for enhancing urban development. *Avenue du Mont-Royal* and *Rue Ontario* can also be considered for these purposes.

SETTING UP BUS RAPID TRANSIT SERVICES

Montréal and the STM also plan to set up BRT services along high ridership corridors. Such services are similar in nature to a tramway, in the sense that vehicles operating on reserved lanes can offer excellent capacity, comfort, user-friendliness, reliability and speed. Buses, however, have greater freedom of movement, can employ vehicles of different sizes and engine types and provide a variety of services in terms of frequency of passage and sector covered. BRT lines are well suited to the City's less central sectors (Figure 8).

A BRT line offers certain advantages over an ordinary reserved bus lane. It is specifically designed to provide greater comfort (in terms of stations and raised platforms), they employ

FIGURE 8 | Bus Priority System and Bus Rapid Transit (BRT) Services

intelligent transportation systems (real-time display of wait times and information panels) and they provide a higher quality of service. Such facilities would also permit the eventual conversion of these lines to a tramway or trolleybus system.

Montréal intends to carry out the first two projects described below on a priority basis and to consider the potential of the third project proposed.

➤ CREATING A BRT LINE ON THE BOULEVARD PIE-IX—DOWNTOWN MONTRÉAL CORRIDOR

This corridor permits direct and efficient service to downtown Montréal along *Boulevard Pie-IX*, *Rue Notre-Dame* and *Boulevard René-Lévesque*. With 41,000 daily riders (and 10,000 during the rush hour alone), *Boulevard Pie-IX* is currently the East End's primary north-south public transit corridor. This road will become the structural axis for public transit in the East End, serving as an artery with access to many bus lines. This corridor will also benefit by the extension, in an initial phase, of the Blue Line (5) east to *Boulevard Pie-IX*. As long as service on *Boulevard Pie-IX* is extended to downtown Montréal along a reserved lane that has been planned for *Rue Notre-Dame*, this BRT corridor will reduce the load on the subway's Orange Line (2) and Green Line (1), thus providing substantial additional capacity for new riders.

Montréal considers that this line is of such a high priority that its installation along *Boulevard Pie-IX* is to begin immediately in conjunction with the AMT under an accelerated schedule that will offer service at the earliest possible opportunity.

Such service will be integrated along corridors to downtown Montréal to the planned reconstruction of *Rue Notre-Dame* and the creation of a tramway along certain sections of *Boulevard René-Lévesque*. With a total length of some 20 km (from *Boulevard Henri-Bourassa*, on the north, to downtown Montréal, plus an extension to *Rue Dickson* on *Rue Notre-Dame*), the project bears a preliminary price tag of \$100 million¹¹. Montréal also wants to examine the opportunity for running trolleybuses along this corridor, a development that would facilitate subsequent technological migration to the tramway.

In a second phase, the BRT line along the *Boulevard Pie-IX* corridor would be extended to Highway 440 in Laval. The service's reserved lane could also accommodate other bus lines serving the metropolitan region's northeast quadrant. The cost of this extension is estimated at \$15 million.

➤ CREATING A BRT LINE ON BOULEVARD HENRI-BOURASSA

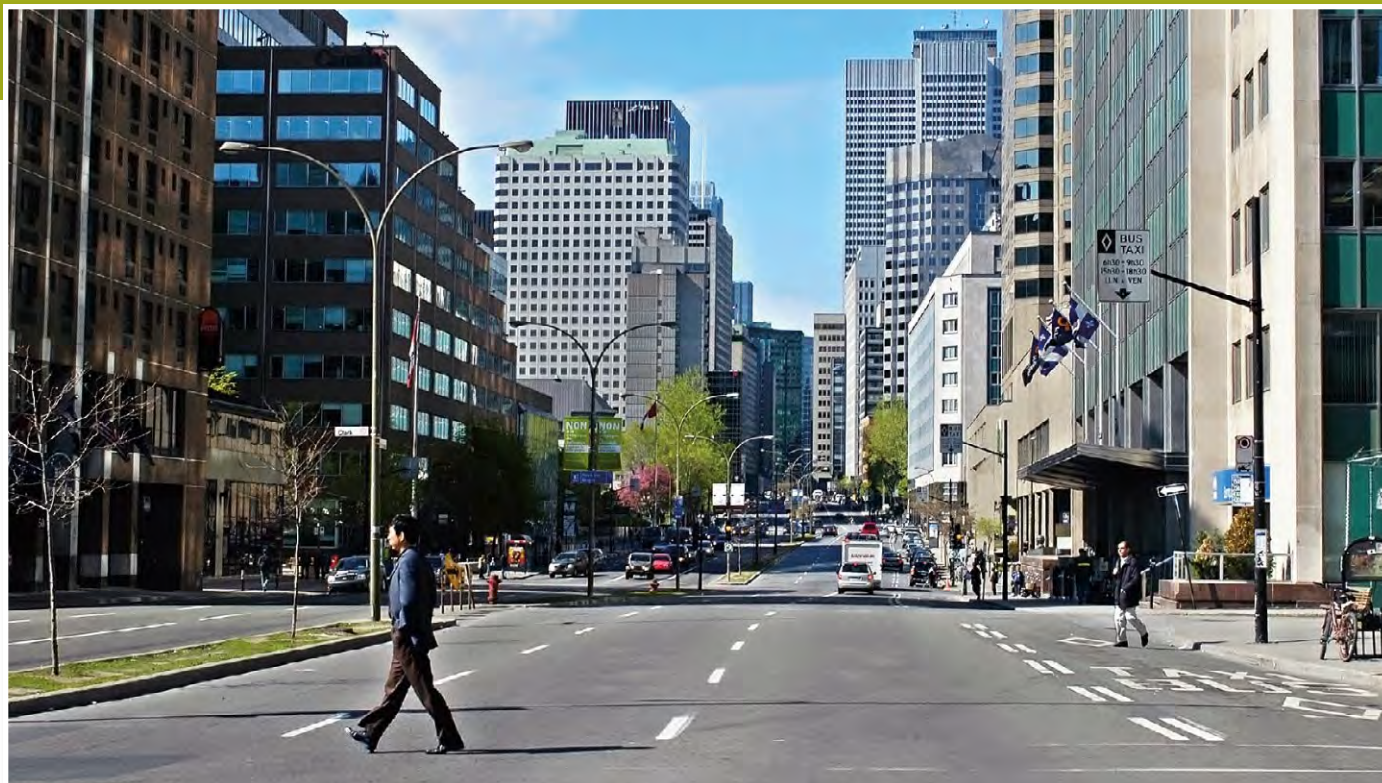
The designated section runs from the Henri-Bourassa subway station to *Boulevard Pie-IX* and already has a reserved bus lane during rush hour periods. *Boulevard Henri-Bourassa* is currently Montréal's biggest public transit corridor, hosting a multitude of northern and north-eastern bus lines and serving major schools. Daily ridership on all bus services stands at 70,000, which is greater than the total number of riders on all of Greater Montréal commuter lines. With a BRT system, all bus lines will run on reserved lanes at all times, for swift, reliable and regular service. The cost of this approximately five-kilometre line is estimated at some \$25 million. It could be put into service within ten years.

➤ CREATING BRT LINES ALONG UNUSED RAIL RIGHTS-OF-WAY

Two corridors (one, the rail right-of-way running alongside *Rue Notre-Dame* and the East End rail line and the other, the Doney spur to the south of Highway 40 in the West Island) offer potentials for developing solid public transit corridors. These corridors should be maintained for eventual development into BRT lines.

The AMT has already studied the East End rail right-of-way as part of its *Via-Bus* project. The project was aimed at promoting a rapid link to downtown Montréal that would also draw on the public transit infrastructure planned as part of the reconstruction of *Rue Notre-Dame*. It would supplement the AMT's East End commuter line project, since it would primarily serve residents living on the south side of the island.

Use of the Doney spur would respond to a major need of transportation service to Saint-Laurent's Technoparc site, the second biggest employment destination for West Island residents. This approximately 10 km link lies north of *Boulevard Hymus*. It connects *Boulevard Saint-Jean* in Pointe-Claire, south of the Fairview station, to the Montréal-Deux-Montagnes commuter line, near the Bois-de-Saraguay nature park after crossing Highway 40. The spur ultimately offers the possibility of connecting several major destinations in line with demand (*Boulevard Thimens* and the Bois-Franc commuter train station), as well, possibly, as the Bois-Franc subway station and the AMT's planned A-13 station.



2.3 MONTRÉAL'S BUS SYSTEM

The bus system is a vital link in the public transit system because the bus plays a key role in which kind of transportation a rider selects and because it is often the first form of public transit many riders use. A large share of new public transit ridership will use the bus as its initial mode of transportation.

The bus system's capacity is used to the maximum during rush hour because of the current size of the bus fleet, which would make it impossible to carry the additional ridership forecast for 2025.

Montréal's bus system does not currently offer the kind of competitive benefits that would allow it to challenge the car in terms of travel time

or comfort. A significant effort must be deployed to give buses such advantages and to make such travel more comfortable.

The STM intends to take action in different areas to transform its bus system:

CREATING GREATER TRANSPORTATION CAPACITY

➤ EXPANDING THE BUS FLEET

The set of new services proposed and coverage for new riders targeted by the Plan will require a significant expansion of the bus fleet, with the addition of some 500 units to the existing 1,600 current vehicles for an investment of about \$300 million. Purchasing a large number of buses, which will also entail increased garage space and the hiring of new workers, represents

the Plan's most significant initiatives in terms of transportation capacity. A bigger fleet will also mean the creation of additional access facilities and more platforms around subway stations and bus terminuses. To reduce the bus fleet's environmental impact, some of the new buses will burn cleaner fuels or employ cleaner technologies (hybrids, biodiesel engines, fuel cells and trolleybuses).

Increasing the fleet's size will provide an opportunity to modify interior designs and various technical features of these vehicles to give greater comfort and ensure universal access. Such acquisitions will also represent opportunities to diversify the fleet in terms of size and engine type.

➤ INTRODUCING ARTICULATED BUSES ON SOME 20 HIGH RIDERSHIP LINES

The introduction of articulated buses substantially boosts capacity along the selected routes and ensures greater comfort and on-time performance. Such buses will provide better service, particularly on rapid route. The STM will begin by buying 202 articulated buses at a total cost of \$184 million. The STM should take possession of the first vehicles in 2009 and receive the last in 2011. However, these purchases are targeted at replacing existing buses, so they will not boost the current fleet's size.

DEPLOYING BUS PRIORITY MEASURES ON SOME ARTERIAL ROADS THROUGHOUT THE ISLAND

In addition to the 40 existing kilometres of reserved lanes, Montréal and the STM will set up measures over the next ten years that will give priority to buses on some 240 kilometres of arterial roads (Figure 8).

More specifically, such initiatives will include the creation of bus lanes, changes in traffic signal operations (pre-emption, green early start phase and green extension), modifications in road geometry and markings, and tighter management of traffic, snow removal and parking. All of these measures will give buses priority over cars and help brand them as being dynamically efficient.

These initiatives will boost the competitiveness of public transit along key corridors for both short- and long-haul trips. Buses currently enjoy no competitive edge over cars except on a very small portion of the arterial road system.

Many of these corridors, however, particularly in the centre of the island, sustain high travel volumes, sometimes in excess of 10,000 trips on a typical weekday.

The six most heavily travelled public transit corridors will initially benefit from priority measures. They are:

- on *Boulevard Saint-Michel*, between *Boulevard Henri-Bourassa* and the Joliette subway station;
- on *Rue Beaubien*, from the Beaubien to the Honoré-Beaugrand subway stations, along Highway 25;
- on *Boulevard Rosemont*, from the Rosemont subway station to *Boulevard Pie-IX*;

- on *Rue Notre-Dame*, from *Rue Dickson* to Pointe-aux-Trembles;

- on the Sauvé/Côte-Vertu corridor, from *Boulevard Saint-Laurent* to *Boulevard Cavendish*;

- on the Saint-Jean/Pierrefonds corridor, from *Boulevard Château-Pierrefonds* to Highway 20.

Downtown Montréal, which is the island's focal point and an important trip generator, will benefit from the time savings generated by these initiatives, even if the public transit system already offers important competitive advantages over the car. Furthermore, the East End and the



West Island will draw significant benefits from these initiatives because of the public transit's current poor ability to compete with cars and of its low modal share.

Implementation of priority measures across the bus system as a whole on the agglomeration's principal arterial roads will be spread over a ten year period and require an investment of some \$60 million.

CREATING EXPRESS BUS LINES

Montréal plans to deploy express bus lines to downtown Montréal and the subway system:

> INCREASING THE NUMBER OF DIRECT EXPRESS BUS LINES TO DOWNTOWN MONTRÉAL

The corridors with the greatest potential are located in the centre-east (from *Boulevard Pie-IX* to *Boulevard Langelier*) and centre-west (future extension of *Boulevard Cavendish*) portions of the island. The new services will also provide support for the BRT lines running along the Pie-IX and Notre-Dame/René-Lévesque corridors.

The speed of this direct, no-transfer service will result in reduced travelling time. Such service will support and supplement the subway system during rush hour periods.

> EXTENDING EXPRESS BUS AND MÉTROBUS SCHEDULES

This initiative is designed to extend schedules for existing and future services between the morning rush hour and afternoon periods.

Riders will benefit from the greater speed, comfort and reliability of express coverage throughout the day.

> IMPROVING COMFORT OF EXPRESS BUS AND MÉTROBUS SERVICE

The maximum number of passengers will be downwardly revised or changes will be made to interior bus layouts.

MAKING OPERATIONS MORE ATTRACTIVE AND EFFECTIVE

The *Transportation Plan* supports the STM's proposals to significantly improve the services it offers and tailor them to rider needs.

> IMPROVING ON-TIME PERFORMANCE AND INFORMATION FOR USERS

Replacement of onboard bus radio communication systems and the launch of a new operating system will permit real-time tracking of on-time bus performance. These tools will also be used to improve rider information, including the announcement in buses of the next stop, and real-time schedule announcements of the next buses at bus stops. This information will give riders a greater sense of security and let them plan their trips more effectively.

> INCREASING LIMITED-STOP SERVICE RUNNING IN CONJUNCTION WITH LOCAL LINES

Limited-stop service will be introduced to lines that carry two kinds of riders, those who travel locally and others who travel longer distances. Such service would only stop at strategic locations such as transfer points and centres of activity.

> INCREASING RUSH HOUR SERVICE

Service frequency before and after rush hour periods will be increased on about 30 bus lines. This initiative will redistribute peak demand and increase comfort on board buses at the height of rush hour.

> INCREASING COMFORT ON BOARD REGULAR BUS LINES

By increasing bus frequency, riders will have more space. A redesign of vehicle interiors will also serve to enhance other vehicle components and boost rider comfort. Such a measure will draw riders by rebranding the image of the bus.

> INSTALLING SHELTERS AT 50% OF ALL BUS STOPS

About 1,600 bus shelters are in service at some 30% of the system's stops. Certain major stops would be equipped with larger and more comfortable shelters.

TAILORING THE SERVICE TO SPECIFIC RIDER GROUPS

The STM is pursuing its efforts to develop new types of targeted transportation services designed to provide better responses to the needs of specific rider groups and to the public as a whole. Certain initiatives aimed at meeting these goals will be rolled out over the next few years.

> CONTINUING THE *ENTRE DEUX ARRÊTS* [BETWEEN STOPS] PROGRAM

The STM created the Between Stops program to increase safety for women in the City. Under this program, drivers let women travelling on their own after dark in any STM bus (including the night network) disembark between stops.

> SETTING UP DAYTIME BUS LINES OFFERING DIRECT CONNECTIONS TO SENIORS' RESIDENCES

Such service will connect seniors' residences to *centre local de services communautaires* [local community service centre], shopping centres and recreational lounges throughout the island, primarily during the day between rush hours. The sectors best suited for such service include Montréal-Nord, Villeray/St-Michel/Parc-Extension, Saint-Léonard, Cartierville, Saint-Laurent, Rosemont, Pointe-aux-Trembles, Rivière-des-Prairies and LaSalle. This initiative is aimed at addressing the specific needs of a rapidly growing ridership group with respect to walking distances, wait times at stops and crowding inside vehicles. The STM will introduce such service to certain Montréal neighbourhoods in 2008.

> REVISING INTERIOR BUS DESIGNS TO ACCOMMODATE YOUNG FAMILIES

Serious consideration will be given to the issue of improving access for riders with strollers. The STM will propose a pilot project designed to assess the impact of providing space for strollers on the bus.

> IMPROVING LATE EVENING AND NIGHT SERVICE

Detailed studies will be conducted in view of improving non-rush hour service, particularly late evening and at night, for workers with atypical schedules and young people.

> MAKING ALL STM BUS LINES WHEELCHAIR ACCESSIBLE

The STM offers service to some 15,000 eligible paratransit riders. It provided some 1.7 million trips by minibus or taxi in 2005. In addition to paratransit services, efforts to modify public transit equipment and services so that they can more reliably meet the needs of riders with reduced mobility have also been approved. At the present time, such riders can access some 66% of the STM's bus system. The gradual replacement of buses that do not have low floors will eventually make all STM lines accessible to riders in wheelchairs.

This initiative is part of a vast project to gradually introduce universal access (which is currently limited for people in wheelchairs, with reduced mobility and certain other riders) to the subway system. An effort will be made to increase access to subway stations gradually, particularly through the installation of elevators, in view of facilitating transfers from surface lines (regular buses and paratransit vehicles) to the subway system.

IMPROVING ACCESS TO PUBLIC TRANSIT IN CERTAIN SECTORS

Action must be taken on a priority basis in those sectors that pose the greatest challenge to public transit service. Such sectors include those undergoing development or transformation, low-density neighbourhoods and industrial areas.

> CREATING A SHUTTLE TO MOUNT ROYAL PARK

Because of its vast popularity, Mount Royal Park should be equipped with excellent service that is properly attuned to its regional function as a venue for recreation and relaxation. The route along *Voie Camillien-Houde*

and *Chemin Remembrance* will be served by an environmentally friendly shuttle designed to reduce car traffic on the mountain. Such a shuttle will offer a pleasant ride and access to the mountain's key attractions. This form of transportation, which is better suited to policies for developing and preserving Mount Royal, will also help reduce the amount of space set aside for parking. A tramway could be used over the medium term to provide service to Mount Royal Park. The planned shuttle would fall within the scope of the work aimed at improving access to Mount Royal by the *Table de concertation du Mont-Royal*.

> ENSURING ACCESS TO SECTORS IN DEVELOPMENT

The *Master Plan* lists all areas that are to be built up or transformed. An effort will be made to create new bus service, improve or modify existing bus lines and also create new public transit taxi service for many sectors undergoing residential, commercial, industrial or academic development. Over the short term, this effort will result in such projects as the creation of a strong link between downtown Montréal and *L'Île-des-Sœurs*, the creation of an Old Montréal/Old Port tourist shuttle, improved service to the Saint-Laurent Technoparc, route alterations to provide service to new housing developments in Pierrefonds and Saint-Laurent, service to new sectors to be developed at the former Turcot and Outremont railroad yards and so forth.

> ASSESSING OPPORTUNITIES TO INTRODUCE MORE SUITABLE FORMS OF TRANSPORTATION

With a bigger bus fleet, the STM will acquire a wider range of vehicles better suited to the sectors each serves. This initiative will apply

to residential sectors, to narrow streets and to lower ridership areas. Such formats as minibuses and shared taxis are better suited to low density neighbourhoods, provide greater flexibility and reduce energy demands. Sectors with special functions, such as Old Montréal and Mount Royal Park, will also benefit from more suitable vehicles.

> IMPROVING DAYTIME ACCESS TO INDUSTRIAL SECTORS

This effort will involve partnerships with businesses aimed at achieving optimal service schedules for low-density sectors.

> IMPROVING THE BUS SYSTEM'S STRUCTURE IN THE SOUTHWEST AND WESTERN PORTIONS OF THE ISLAND

System structure will be modified to facilitate direct access to these sectors' economic hubs. Fewer transfers will be required. Similar changes have been made over the past few years in the East End, in view of providing service that is better tailored to rider needs. Two sectors of the island are currently being considered for this effort: the southwest (Sud-Ouest, Verdun, LaSalle and Lachine) and the West Island.

REDUCING THE ENVIRONMENTAL IMPACT OF BUSES

This effort will involve reducing the quantities of pollutants and greenhouse gases emitted by bus propulsion systems. Under the Government of Canada's Urban Transport Showcase Program (UTSP), the STM has become a partner in carrying out a mixed public transit project aimed at testing an integrated set of GHG reduction measures. Over the medium terms, bus operations should be:





> INTRODUCING THE USE OF GREEN FUELS, SUCH AS BIODIESEL

In 2008, the STM gradually began to power its 1,600 buses with a biofuel to reduce pollution and GHGs. As part of a pilot project, the STM used biodiesel from March 2002 to March 2003 to fuel 155 buses operating in downtown Montréal.

> USING CLEAN TECHNOLOGIES, SUCH AS DIESEL-ELECTRIC HYBRID PROPULSION OR MODERN TROLLEYBUSES

The new buses that the STM buys will run on cleaner engine technologies. The STM placed eight hybrid buses in service in 2008 as part of a pilot project, but ultimately plans to expand such propulsion techniques to a larger share of its fleet.

> DEVELOPING ECO-FRIENDLY PRACTICES

In 2005, the STM launched a green program encouraging bus drivers to adopt driving habits that save fuel. With adequate training, drivers can help cut GHG emissions by more than 10,000 tonnes per year. The \$2 million cost of this initiative corresponds to employee training expenses. Green practices could, it is believed, save an equivalent amount in fuel costs.

2.4 PARATRANSIT

Door-to-door paratransit services offer no fixed itineraries or schedules planned far in advance. Different kinds of vehicles provide paratransit services, including minibuses, ordinary taxis and accessible taxis.

Paratransit has experienced significant growth over many years (up some 65% in ten years). In just three years, paratransit ridership has climbed nearly 40%. Paratransit vehicles performed more than 1.9 million trips in 2006.

The STM has expanded paratransit service to meet demand more effectively. There has been a 20% increase, for example, in the use of ordinary taxis for paratransit needs. A serious attempt has been made to address the need for accessible taxis. These efforts will be pursued in the future. State-of-the-art tools, such as the *Accès V* system for processing travel requests quickly, have made such initiatives possible. Other solutions (which include the deployment of a Web-based reservation system and reassessment of the radio communication system) will also be brought on board in the near future.

Additional efforts may be necessary, however, to improve paratransit service. Various actions will be rolled out over the next few years:

- standards will be developed for paratransit service quality (courtesy, maximum ridership, maximum and minimum frequencies, on-time performance, time on board vehicles);
- in collaboration with the *ministère des Transports du Québec* (MTQ), vehicles that are better suited to rider needs (urban minibuses) will be placed in service. Such vehicles will give riders greater comfort, permit more versatile service and help cut greenhouse gas emissions. Electrically powered vehicles may also be deployed for paratransit use.

2.5 MONTRÉAL'S SHORTLIST OF METROPOLITAN PROJECTS

Travel within Greater Montréal is not confined to specific sectors. Some trips cross over territories served by different transport authorities and require use of more than one service. Montréal supports all initiatives by transport authorities aimed at coordinating the services each provides and improving travel conditions for riders who must use more than one system.

Montréal wants to roll out metropolitan projects that will not only meet transportation needs, but help structure regional development. Montréal therefore intends to support and work with the AMT and other partners in carrying out the following projects that could help meet *Transportation Plan* goals.

EAST END RAIL SERVICE

For more than a decade, commuter train service has spearheaded a certain renewal in regional public transit service, with total rush hour travel to Montréal from outlying areas up 17% from 1993 to 2003. The metropolitan region's main transportation corridors are now equipped with rail services. The AMT plans to make major upgrades to these train lines over the next few years.

Only the eastern corridor lacks its own service. However, in March 2006, the Government of Québec announced the start of work aimed at creating an East End commuter line.

> CREATING AN EAST END COMMUTER LINE

This 51 km-long commuter line, with 35 km running through the Island of Montréal, will link downtown Montréal, the boroughs of Montréal-Nord and Pointe-aux-Trembles—

Rivière-des-Prairies and the cities of Repentigny and Mascouche (Figure 9). There will be five departures each morning to Montréal and one in the opposite direction, providing capacity for 5,500 riders. The line will have 11 stations, including seven¹² on the island. These stations will be located to promote the kind of urban development most appropriate to the use of public transit.

These stations will also benefit from urban development operations aimed at boosting the development potential and density of neighbouring sectors. The selected route will require use of the tunnel through Mount Royal, thereby assuring competitive travel times of about 40 minutes from the Pointe-aux-Trembles station at the eastern tip of the island to downtown Montréal. The project, with an estimated price tag of about \$300 million, is slated to begin operation in the fall of 2010.



FIGURE 9 | Commuter Lines



Creation of this new rail line will require the reorganization of bus line services, in terms of accessibility and schedule synchronization, to facilitate feeder service to the new stations and access to the sectors covered, in particular to the industrial areas.

The plan for an East End commuter line also includes the creation of park and ride facilities at certain stations. These actions are designed to accommodate riders from sectors with less bus coverage and to ensure significant intermodal operations. Parking lots with large numbers of bike racks will be created at new Montréal train stations. The number of spaces for each station will be calculated based on their accessibility and function. New stations and train access will meet various standards of universal access.

RAIL SHUTTLE BETWEEN THE AIRPORT AND DOWNTOWN MONTRÉAL

Montréal recognizes the crucial role that the Montréal-Trudeau International Airport plays in its economic development strategy. *Aéroports de Montréal* (ADM) has invested more than \$1.3 billion since 2000 in upgrading its infrastructure. Such work is essential for maintaining the sustained growth of aviation activities over the next few years. Air traffic is expected to rise from 12 million passengers in 2007 to 16.4 million in 2016. Some 25,000 workers also commute to the airport each day. As part of its desire to enhance access to the airport and give a world-class brand, Montréal wants to:

> CREATE A RAIL SHUTTLE BETWEEN MONTRÉAL-TRUDEAU INTERNATIONAL AIRPORT AND DOWNTOWN MONTRÉAL

The Montréal-Trudeau International Airport is one of the key gateways to Canada and requires world-class access. Very limited public transit services, which are subject to road conditions on the highways to downtown Montréal and in the local vicinity, provide coverage at the airport. It is at least partly for this reason that the market share of public transit at the airport (4%) is lower than the North American average (6%). The planned rail shuttle trip would take about 20 minutes from downtown Montréal to the airport. According to a ridership study conducted in 2005, the potential exists for more than 2.4 million airport passengers each year by 2016, without counting trips by workers. The project would be carried out in view of environmental considerations and urban integration. The project will improve the urban landscape by highlighting design in welcoming travellers to a UNESCO recognized City of Design.

Montréal has been working since 2007 with the ADM, the AMT, the *Communauté métropolitaine de Montréal* (CMM), the MTQ and Transport Canada in producing project feasibility studies. In early 2008, these partners launched a prefeasibility study for different rail routes, including one that would provide a connection to Lucien-L'Allier station and compared them with the plan providing a connection through Central Station, as indicated in the *Master Plan*. Results will be released in the fall of 2008.

Work on this metropolitan development project will wrap up in 2014 and, based on prior studies conducted in 2005, the price tag could range

from \$475 million to \$575 million, depending on the selected scenario. The prefeasibility study will be used in finalizing the cost estimate for the preferred route.

This project represents an opportunity to upgrade train service between downtown Montréal, the airport and the West Island. The train corridor developed for the airport shuttle between Dorval station and downtown Montréal could be used for all passenger trains, including the Montréal/Dorion-Rigaud commuter line.

This project would not only serve airport users, but West Island residents, employees and employers. Furthermore, the creation of a new service with reverse commute potential during rush hours would help expand the labour pool for West Island companies.

METROPOLITAN BUS LINKS

Montréal is proposing a substantial increase in metropolitan bus service, which provides a crucial backup to the commuter lines.

The creation of BRT services on the island will permit service to be integrated throughout the metropolitan region. In addition to extending the Pie-IX BRT line to Laval, Montréal recommends taking the following actions:

> CREATING RESERVED LANES ALONG THE BONAVENTURE CORRIDOR

This action will serve to enhance the downtown Montréal/Champlain Bridge/South Shore corridor, which, with some 17,000 morning rush

hour riders, is one of the region's two main river crossings. Bundling a BRT line with the *Boulevard Bonaventure* project would serve to accommodate metropolitan buses and improve access to *L'Île-des-Sœurs*. The estimated cost of this dedicated lane would be \$30 million. The inclusion of a BRT line in the Bonaventure corridor is consistent with the Montréal Harbourfront development project and would not interfere with the establishment of a light rail system (LRS) or any other longer-term solution between downtown Montréal and the South Shore.

> BOOSTING THE CAPACITY OF THE BONAVENTURE CORRIDOR'S DOWNTOWN TERMINAL TO ACCOMMODATE METROPOLITAN BUSES

Expansion of the Champlain Bridge corridor is presently limited by the downtown terminal's capacity to accommodate additional buses. The addition of new platforms at a site adjacent to the existing terminal and the creation of more stops elsewhere in downtown Montréal could serve to increase this capacity. The proposed BRT system would also serve other destinations throughout Montréal.

> INTRODUCING PRIORITY MEASURES, SUCH AS BUS LANES, ALONG HIGHWAY CORRIDORS

Highway 40 (east of Highway 25 and west of Highway 13), Highway 20 (west of the Turcot interchange and after the Louis-Hippolyte La Fontaine Bridge-Tunnel), Highway 13, the Laval portions of Highways 13, 15 and 25, and Highways 10 and 720 are all candidates for priority measures, as is *Rue Notre-Dame* between Highway 25 and the Jacques-Cartier Bridge (Figure 10). Such measures will be of benefit to buses, taxis and, where appropriate, to carpools.

Photo Credit : Société du Havre





PARK AND RIDE FACILITIES

Park and ride facilities play an essential supporting role for large transit systems. Such facilities let cars bring riders closer to Montréal, while reducing traffic to central, and in particular, to downtown Montréal. Park and ride facilities, which are strategically located upstream of congested areas, currently allow 6% of all car trips to be replaced by use of public transit. Park and ride lots help minimize the distances vehicles must travel on the road, relieving congestion and cutting down on atmospheric pollution and greenhouse gases.

The current saturation of park and ride facilities and high bimodal demand clearly demonstrates that need exceeds supply. Most of the island's park and ride facilities are full. Many vehicles park for the day along the Green (1) and Orange (2) lines. There is, however, some reserve capacity at the Ruisseau, Bois-Franc, Pointe-Claire, Sherbrooke-Est and Angrignon station park-and-ride facilities.

► CREATING PARK AND RIDE FACILITIES NEAR SUBWAY STATIONS

Parking facilities will be installed on road segments with reserve capacity, such as the Angrignon/downtown Montréal stretch of the Green Line (1) and the Côte-Vertu/

downtown Montréal stretch of the Orange Line (2) of the subway system. Consideration will be given to providing park and ride facilities at proposed subway line extensions. The existing Namur and Radisson park and ride facilities will be expanded. These lots will help optimize subway use, while providing an alternative for thousands of riders now parking on the street.

► ESTABLISHING LOWER CAPACITY PARK-AND-RIDE FACILITIES NEAR EXPRESS BUS LINES

Such lots will help build ridership for certain express bus lines. These small lots will be located in relatively undeveloped areas.



> INSTALLING NEW PARK-AND-RIDE FACILITIES AND EXPANDING EXISTING SITES ALONG THE MONTRÉAL/DORION-RIGAUD LINE

Such efforts are aimed at accommodating riders with less access to bus service and also at providing significant intermodal service. Parking lots will be created or expanded at the Baie-d'Urfé, Beaurepaire and Cedar Park stations, once access studies have been conducted for each station.

2.6 OTHER STRATEGIC AMT PROJECTS

In addition to projects to which Montréal has given high priority, the Government of Québec, through the AMT, has also revealed its intention of carrying out the following work:

UPGRADING SERVICE ON THE MONTRÉAL/ SAINT-JÉRÔME LINE

This line, which was placed in service in 1997, enjoyed quick success and now transports 10,000 passengers per day, thus cutting down on the presence of cars in Montréal. In 2006, the Montréal/Blainville line was extended to Saint-Jérôme and equipped with the new Chabanel station in Montréal. Montréal strongly supports other changes to this line that will be of benefit to Montréal:

> LETTING THE SAINT-JÉRÔME/MONTRÉAL LINE USE THE MOUNT ROYAL TUNNEL

The plan is to provide a rail link to the Deux-Montagnes line through the Mount Royal Tunnel to cut travel time to downtown Montréal and to convert existing car drivers into new riders.

The project's cost would be about \$50 million. The line would only offer a few transfer points to the subway system, thus reducing pressure on it.

> CREATING A STATION FOR THE OUTREMONT-UNIVERSITÉ DE MONTRÉAL [MONTRÉAL UNIVERSITY] SITE

The planned new *Université de Montréal* [Montréal University] campus is likely to generate substantial public transit use. The site is expected to accommodate over 9,000 students as well as 1,600 workers. The plan includes 800 housing units and 1,000 student housing units. The proposed station would cost about \$2 million.

> DEVELOPING A MORE FUNCTIONAL DESIGN FOR THE BOIS-DE-BOULOGNE STATION

Although the station is located in a key site, it cannot play its full role because of multiple physical and functional obstacles.

UPGRADING SERVICE ON THE MONTRÉAL/DEUX MONTAGNES LINE

The Montréal/Deux-Montagnes line, which is the most heavily travelled route on the commuter rail system with 30,000 riders each day, provides a vital link between the region's central and north-western quadrants. It plays an important role because car travel through the corridor, which has few road links and must contend with congestion on Highways 13, 15, 20 and 40, is difficult. In providing such service, particularly to the Pierrefonds-Roxboro and Île-Bizard-Sainte-Genève boroughs, Montréal supports the following projects:

> LAYING A SECOND TRACK ALONG THE DEUX-MONTAGNES LINE BETWEEN THE BOIS-FRANC AND ROXBORO-PIERREFONDS STATIONS

A second track will boost the line's ability to serve the island's northwest quadrant. The project will require an investment of \$33 million and be completed within five years.

INCREASING THE SPEED, COMFORT AND RELIABILITY OF COMMUTER TRAIN SERVICE

The proposed commuter train system will require the following modification:

> UPGRADING LAYOUT AND INFRASTRUCTURE AT CERTAIN STATIONS (WITH PRIORITY GIVEN TO THE DEUX-MONTAGNES, DORION-RIGAUD AND BLAINVILLE/SAINT-JÉRÔME LINE)

These projects will cost about \$10 million. The work will include improved access to the Baie-d'Urfé station.

The service will greatly benefit from synchronization between bus and trains, particularly on the Montréal/Deux-Montagnes and Montréal/Dorion-Rigaud lines.

The AMT proposes purchasing locomotives and passenger cars to boost service capacity. Six new locomotives and 50 double-decker cars are needed to upgrade this service. The project will require the creation of yards and maintenance centres. The AMT places a total price tag on the project of \$336 million over more than ten years.

The AMT is also committed to boosting the reliability of current trains by restoring locomotives and passenger cars. It will need

to buy nine diesel/electric locomotives and 54 double-decker cars. It will also be necessary to restore 82 passenger cars. The cost over 20 years has been assessed at \$378 million.

3. SUMMARY

Montréal is proposing a considerable development of public transit service within the agglomeration to meet resident needs for mobility and to reduce reliance on the car.

This effort involves a vast and diversified strategy based on making the most of existing proven forms of transportation, like the subway system. However, it is also based on introducing medium capacity modes (a modern tramway system and a BRT system). These new modes of transportation will not only provide riders with fresh travel options, they will boost the system's overall efficiency, by serving as supplement to the subway system and to ordinary bus service. Such projects will also provide effective coverage of the areas served, at a lower cost than extending subway lines.

One aspect of this strategy will also deliver bus service that is not only more in tune with the needs of today, but faster, more reliable and more comfortable. This goal can be achieved by ensuring more efficient operations and leading-edge technological innovations, such as operating systems.

Regionally, the *Transportation Plan* recommends maintaining the effort of providing new services and infrastructure. The planned East End commuter line will, in particular, fill in a key gap in the various metropolitan corridors. This project, which was born out of a regional consensus, will serve the interests of Montréalers.

All of the proposed public transit projects will require massive investments to be made over many years by the higher levels of government, the community and Montréal. Operating expenses will also rise. Table 4 provides an idea of cost by major components. Total investment over a 15 to 20 year period will stand at some \$6.3 billion.

Furthermore, operating expenses will rise by some \$140 million per year from the STM's 2007 operating budget of about \$880 million, with some \$310 million of this amount paid by the agglomeration.

TABLE 4 | Cost of Public Transit Projects Proposed by Montréal (in millions of \$)

	CAPITAL COSTS				ANNUAL OPERATING COSTS
	0-5 Years	5-10 Years	10 or More Years	TOTAL	
Subway System	207	1,140	2,525	3,872	33.1
Replacing MR-63 subway cars		1,140		1,140	
Replacing MR-73 subway cars			1,140	1,140	
Extending the subway system					
- Blue line (5) from Saint-Michel to Pie-IX	170			170	2.9
- Blue line (5) from Pie-IX to Anjou			775	775	13.0
- Orange line (2) from Côte-Vertu to Bois-Franc			340	340	5.7
Other actions	37			37	11.5
Tramways	260	725		985	38.0
Tramway line in business centre and Old Montréal	260			260	13.0
Tramway line on the du Parc and René-Lévesque corridors		475		475	13.4
Tramway line on the Côte-des-Neiges corridor		250		250	11.6
Tramway lines on other key corridors (subsequent phases)	<i>To be determined</i>				<i>To be determined</i>
Bus Rapid Transit (BRT) Services	55	70		125	20.0
BRT line along the Pie-IX/downtown Montréal corridor	55	45		100	15.0
BRT line along Henri-Bourassa		25		25	5.0
BRT line along unused rail right-of-way	<i>To be determined</i>				<i>To be determined</i>
Bus System	214	166	94	474	50.0
Increasing size of bus fleet (500 buses)	132	84	84	300	
Bus priority measures on some of the island's arterial roads	30	30		60	
Express lines					25.0
Operating modes	47	47		94	
Service quality and accessibility	5	5	10	20	25.0
Environmental initiatives	<i>Internal cost to the STM</i>				<i>Internal cost to the STM</i>
Metropolitan projects to which Montréal has given top priority	850	33	15	898	
East End commuter line	300			300	
Rail shuttle between Montréal-Trudeau International Airport and downtown Montréal	550			550	
Metropolitan bus links		33	15	48	
TOTAL	1,586	2,134	2,634	6,354	141.1

A2 Promoting Active Modes of Transportation

Walking: Each Step Counts

1. STRATEGIC ORIENTATIONS

MONTRÉAL IS WELL KNOWN AS A SAFE CITY FOR TAKING A STROLL IN THE DAY OR NIGHT. WALKING IS ALSO THE MAIN WAY FOR MANY MONTRÉALERS, AND PARTICULARLY THOSE LIVING IN THE CITY'S CENTRAL DISTRICTS, TO GET AROUND. NUMEROUS FACTORS COULD EXPLAIN WHY WALKING THROUGH THESE NEIGHBOURHOODS IS SO POPULAR. THEY NOT ONLY HAVE HIGHER POPULATION DENSITIES, BUT ALSO OFFER A BROADER MIX OF URBAN FUNCTIONS.

Thirty-five percent of all trips of less than two kilometres within the Island of Montréal are made on foot¹³. Furthermore, almost all trips by foot within the Island of Montréal (96%) are less than two kilometres in length. A recent study by the Canada Mortgage and Housing Corporation (CMHC)¹⁴ also confirmed that Montréalers are interested in walking. The CMHC study indicated that among those people who had made at least one trip during the reference day, Montréal residents are the least likely to have made all of a given day's trips by car. Moreover, the proportions of central city residents who solely travelled by car to get about were 29% for Montréal, compared with 43% for Toronto, 56% for Vancouver and 66% for Calgary.



Specific efforts have been made in the past to make walking a safer and more satisfying experience:

- maintaining island-wide ban on right turn on red;
- installing countdown pedestrian signals;
- making certain school zones safer, with markings, signage and surveillance;
- phasing traffic signals to give pedestrians more time to cross the street;
- providing traffic calming measures;
- widening sidewalks, particularly in downtown Montréal (*Quartier International de Montréal, Rue McGill, Boulevard Saint-Laurent and Boulevard De Maisonneuve*, etc.);
- narrowing pedestrian crossings at certain intersections;
- increasing the number of police officers assigned to traffic and safety;
- launching awareness campaign (*Opération bon pied, bon œil!*) in which the *Service de police de la Ville de Montréal* [City of Montréal Police Department] (SPVM) called upon pedestrians and drivers to make sure they maintain visual contact with each other at crossings.

Montréal has also recently adopted a number of strategic documents, such as the *Master Plan*, the *Premier plan stratégique de développement durable de la collectivité montréalaise* [Montréal's first strategic plan for sustainable development] and the *Guide d'aménagement pour un environnement urbain sécuritaire* [Guide to

planning for a safe urban environment], all of which recognize the crucial role of walking with respect to quality of life.

During the second half of the twentieth century, however, the car's presence continued to rise in Montréal, as it did in most other cities. This phenomenon reached the point that some sectors, as described in the *Master Plan*, were and continue to be specifically designed for the car and often represent spaces that are less pleasant or safe for pedestrians. Low-density neighbourhoods that are far from employment hubs and shopping centres, whose customers arrive primarily by car, were built around automotive use. These sectors are characterized by:

- inadequate street furniture;
- absence or inadequacy of sidewalks;
- wide roadways;
- interruptions in pedestrian routes;
- vehicle speeding.

There is a striking difference between the City's central districts and those that developed in the last 30 years. The modal share occupied by walking in the City's central districts ranges from about 40% to 50% for trips of less than two kilometres during morning rush hour, while this figure drops below 20% in outlying areas.

This situation has resulted in a constant island-wide decline in walking during morning rush hours since 1987. For at least 17 years, walking declined as primary form of transportation from

52% in 1993 to 45% in 2003 for distances of less than two kilometres. The number of trips to school by bicycle or foot stands at 40%, an also constantly declining percentage.

In view of the potential contribution that walking can make to good public health, Montréal hopes for a significant increase in foot travel during rush hours by 2021.

While this goal is entirely feasible, it will require sweeping changes in the design of pedestrian spaces.

Montréal has identified three constraints for walkers. First, pedestrian safety is often affected by conflicts with other users of public space. Second, pedestrian-only areas, such as sidewalks, are frequently inadequate in many places: their surfaces are often irregular or uneven; they have planting wells that are too deep and missing grill covers; and they are often next to streets with poor drainage causing pedestrians to be splashed by passing vehicles. Finally, the urban layout may fail to give pedestrians adequate consideration with respect to unobstructed passage, user-friendliness of the space and good access—particularly at schools and transit access points.

2. PROPOSED ACTIONS

In 2006, a draft *Pedestrian Charter* was considered in a public consultation session hosted by the City Council's *Commission sur la mise en valeur du territoire, l'aménagement urbain et le transport collectif*. The *Charter* supported one of the *Transportation Plan's* core principles—that the pedestrian comes first in Montréal's transportation system. The *Charter* also proposed a new strategy for sharing the street that would make walking a safer and more satisfying experience.

To make walking the preferred form of transportation and to begin to reverse a decline in its practice, Montréal has developed a charter enshrining the principle of a new walker-friendly means of sharing the street. This strategy would, in particular, result in less space being allocated to motor vehicles and more to pedestrians.

The Positioning chapter of this document contains Montréal's *Pedestrian Charter*, which forms an integral part of the *Transportation Plan*.

The *Charter* touches on all aspects of urban pedestrian life, including safety, comfort and access. In accordance with the principles laid out in the *Charter*, Montréal proposes that the following actions:

2.1 IMPLEMENTING THE PEDESTRIAN CHARTER

Rolling out the *Pedestrian Charter* among the boroughs and reconstituted municipalities will involve putting three projects into play:

> PRODUCING ACTION PLANS

This project consists of having each borough and municipality draw up a profile of conditions for pedestrians within their jurisdictions and define priorities for action that would improve conditions for walking, by emphasizing remedies for deficiencies in the pedestrian circulation system. The action plans will include the pedestrianization of some streets in certain sectors, based on the European *green neighbourhood* concept. Creation of the action plans described in the *Pedestrian Charter* will represent an expenditure of some \$1 million over the next five years.

Downtown Montréal will be the focus of special attention. A comprehensive analysis will be conducted on conditions near hubs that generate pedestrian traffic, particularly those in the vicinity of public transit facilities.

For example, when the bike path was created on *Boulevard De Maisonneuve*, the 36 intersections concerned were redesigned and given a strong pedestrian look.

In producing these action plans, Montréal will adopt an approach based on partnerships with the university community (specifically with schools of urban planning and transportation engineering), as well as with the *Direction de*

santé publique de Montréal, the *Institut national de santé publique du Québec*, *Héritage Montréal* and *Québec en forme*¹⁵.

The action plans will be incorporated into the local transportation plans that are to be produced by the municipalities and boroughs.

> DEFINING AND PROMOTING BEST PRACTICES

The definition and promotion of achievements within Montréal that are consistent with the *Pedestrian Charter's* objectives will help ensure the dissemination of projects within the population and encourage public participation in municipal life.

Prizes will be awarded each year to encourage the municipalities and boroughs to deploy practices consistent with the Charter. An annual seminar for municipal partners will serve to share the expertise developed within the projects produced over the prior year. This event will be an opportunity to develop local initiatives.

Such an approach will make it possible to conduct a survey of achievements. The data gathered through this process will be compiled into a collection of fact sheets. The resulting information will be posted on the Web so that the entire community can benefit from it.

> PRODUCING A GUIDE TO THE DEVELOPMENT OF PEDESTRIAN FACILITIES, INCLUDING UNIVERSAL ACCESS CRITERIA

This guide will be used to update and harmonize criteria and standards for the development of public roads and parks throughout Montréal in accordance with pedestrian needs. It will have a section on the particular needs of individuals





with functional limitations. The guide will be prepared in conjunction with the City's various partner organizations.

This project will be carried out once the *Transportation Plan* has been adopted, so that it can serve as a reference for the municipalities and boroughs in producing their own action plans and in implementing the *Pedestrian Charter*.

The guide will place a special emphasis on the location and configuration of street furniture, sidewalk width, terrace sizes and the

harmonization of all these features within a single urban space so as to enhance safe travel by people with functional limitations.

2.2 PEDESTRIAN SAFETY

The SPVM [City of Montréal Police Department] set up the *Table de concertation provinciale sur les piétons* in 2005 and coordinated it until 2007. This group was responsible for issuing recommendations aimed at reducing the number of traffic accidents involving pedestrians.

To improve the safety of its pedestrians in view of the Table's recommendations, Montréal is committed to:

> ADAPTING TRAFFIC SIGNALS TO PEDESTRIAN NEEDS

This project involves completing the existing program. All traffic signals will be modified within five years to enhance pedestrian safety. Former mechanically controlled lights will gradually be replaced by those equipped with electronic controllers. This project will be an opportunity to enhance the pedestrian character of downtown Montréal.

The project will enable Montréal:

- to improve pedestrian comfort and safety by adding exclusive pedestrian phases, in some cases simultaneously at all four corners of the intersection;
- to continue increasing the time for pedestrian to cross the street at a slower pace, to assist seniors and families with young children.

➤ **INSTALLING COUNTDOWN TRAFFIC SIGNALS AT INTERSECTIONS**

At the present time, 962 (44%) of Montréal's intersections are equipped with digital countdown signals. This proportion is 46% for the agglomeration as a whole. This project consists of completing the existing program and targeting intersections that warrant the installation of digital countdown signals for pedestrians. In view of the benefits where required, traffic signals will be equipped with such systems through 2010. This project's estimated price tag is \$1.8 million. A portion of this cost may be allocated under the *Canada-Québec Infrastructure Program (CQIP)*.

➤ **ENSURING THAT VEHICLES YIELD FOR PEDESTRIAN CROSSINGS AND PEDESTRIANS AT INTERSECTIONS**

As the *Direction de santé publique de Montréal* stated in a report published in 2005¹⁶, an average of five pedestrians are injured in accidents with vehicles each day on the Island of Montréal. Figure 11 illustrates the geographic breakdown of these injuries. As the figure shows, most such accidents occur in the central boroughs, even though residents there own

fewer cars and, in percentage terms, are the greatest users of public transit and active forms of transportation. In other words, those who opt for alternatives to the car are more likely to suffer as a consequence, particularly in terms of their health and quality of life.

With failure to yield at pedestrian crossings a widespread phenomenon, Montréal intends to remedy this situation to ensure pedestrian safety and to encourage walking. To achieve this goal, Montréal will take action in several areas: improved signage, clearer markings, stepped up policing activities, and the production of annual awareness campaigns. By emphasizing the need to yield for pedestrians at intersections, Montréal is clearly stating that it no longer intends to tolerate bad habits that have developed over the years.

The situation's urgency demonstrates that immediate action should be taken in this area. Montréal therefore intends to start modifying all of its pedestrian crossings in 2008, to boost their visibility to motorists and to enhance safety for pedestrians. In conjunction with various partners, Montréal will also launch a broad campaign aimed at enhancing resident awareness of the need to comply with *Code de la sécurité routière* [Highway Safety Code] provisions. Signage will also be gradually improved and policing activities increased. This project has an estimated cost of \$4.4 million, \$4 million of which is to be spent in 2008 for altering pedestrian crossings. An annual \$100,000 has been earmarked for the awareness campaign.

➤ **CLEARING INTERSECTIONS**

It is often difficult to see pedestrians at intersections because of vehicles parked near the stop line. By eliminating parking spaces adjacent

to intersections, pedestrians and motorists will both be able to see each other, and their safety will be increased.

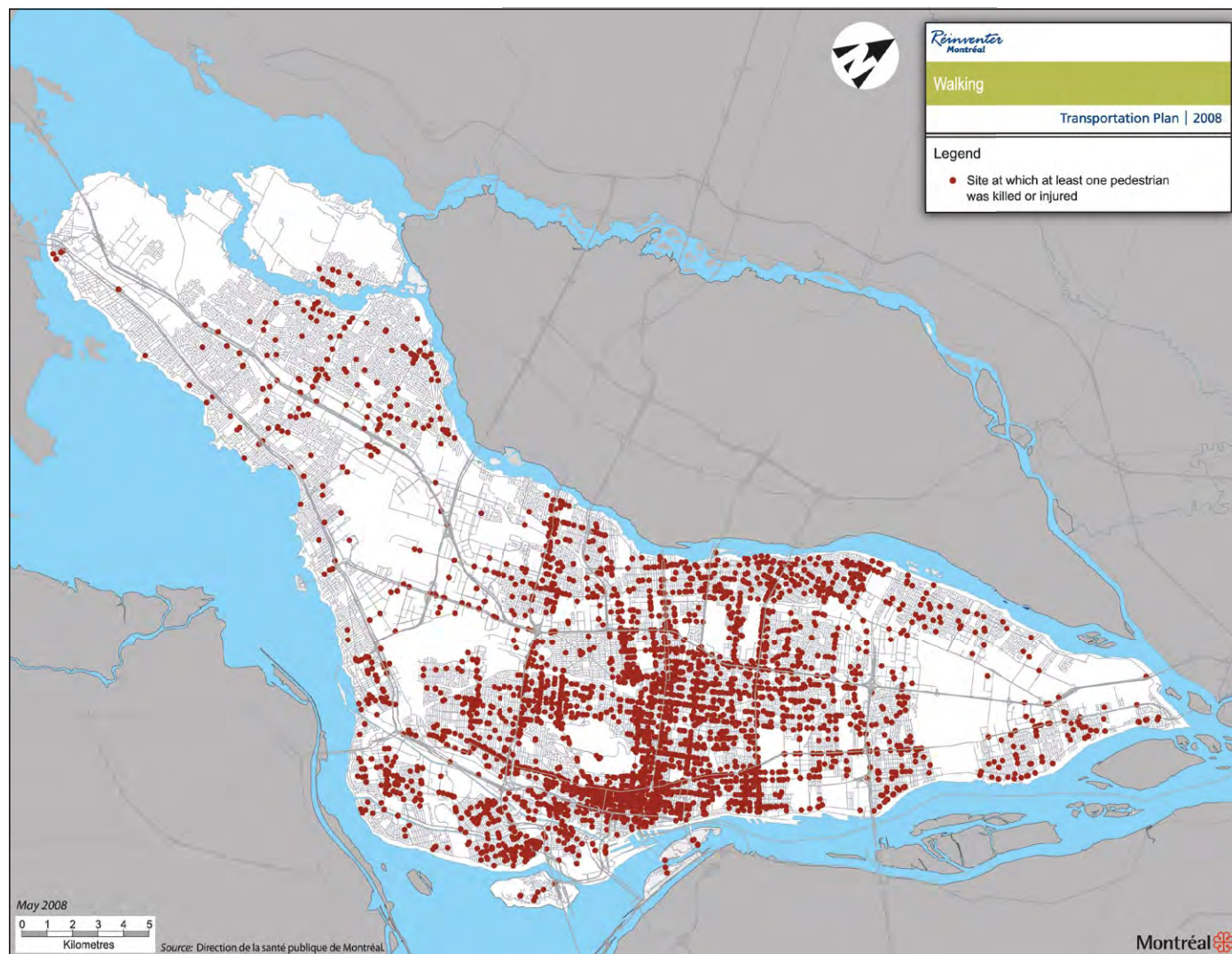
In 2008, Montréal, in conjunction with the municipalities and boroughs, will eliminate parking spaces at intersections on arterial roads. Sectors with the highest density of pedestrians, such as central Montréal and in particular, school zones, and areas around healthcare institutions and public transit services facilities, will be the first to be targeted by this measure. This initiative will be an important step in restructuring the public space to serve groups other than motorists.

➤ **ENHANCING SAFETY AROUND HEALTHCARE INSTITUTIONS AND IN SCHOOL ZONES**

Montréal previously carried out a program to boost safety in the vicinity of schools. More than 300 schools have benefited from safety enhancement initiatives as the result of this program.

The City has agreed to revive this program. Selected schools will receive special attention in terms of signage, school crossings, bus stops, corridors and parking regulations. School administrations will be asked to administer this program, which will be supervised by the boroughs and municipalities and supported by the SPVM [City of Montréal Police Department]. The estimated cost of this program, which will start in 2008, is \$3.5 million.

Another module of this program will target the needs of healthcare institutions.

FIGURE 11 | Locations of Pedestrian Road Accident Victims Requiring Ambulance Assistance (1998-2003)

2.3 COMFORT

To make walking a more satisfying experience, Montréal intends:

> DEVELOPING AND IMPLEMENTING A SYSTEMATIC PROGRAM OF SIDEWALK REPAIR, PARTICULARLY IN NEIGHBOURHOODS WITH HIGH POPULATION DENSITIES

To ensure the quality of its sidewalk system, Montréal will set up a sidewalk repair program involving:

- preparation of surveys on deficiencies that affect pedestrian comfort and safety;
- preparation of a guide to harmonize practices;
- scheduling of actions.

This project will require a large allocation of some \$25 million over the next five years. The effort will include a preliminary study that will serve to define sectors in which action must be taken, to prepare a guide for harmonization of practices and to develop the action program. In contrast with prior efforts, this program to repair sidewalks along the arterial road system will no longer be contingent on the roadwork program.

> PRIORITY SNOW AND ICE REMOVAL FROM SIDEWALKS

Snow removal operations have, for many years, emphasized clearing roads for motor vehicles. Now, however, pedestrians are at the top of the list. Following tabling of the *Pedestrian Charter's* preliminary version, several boroughs have modified their snow removal practices to give priority to sidewalks and public transit access points.



Furthermore, in view of the climate change expected over the next few years, Montréal will completely rethink its snow and ice removal operations. New ice removal methods will be developed and snow removal priorities revised to ensure pedestrian safety.

2.4 INCORPORATION OF PEDESTRIAN LAND USE NEEDS

Residential neighbourhoods, school zones, areas surrounding parks, seniors' residences, hospitals and public transit access points should be treated as sensitive sectors, because they represent the heart of Montréal's living space and define the community's identity.

Physical barriers that pose obstructions to pedestrians will be gradually removed wherever possible. While certain central hubs of activity are close to each other, they remain isolated because they are inadequately linked, despite

the presence of numerous pedestrian overpasses and tunnels. In some cases, the facilities are intimidating and cause pedestrians to go out of their way to avoid them.

Aware of the importance of making walking a satisfying experience, Montréal has decided to:

> DEPLOY MEASURES TO ASSIST PEDESTRIANS NEAR SUBWAY STATIONS, COMMUTER TRAIN STATIONS AND MAJOR PUBLIC TRANSIT ACCESS POINTS

As described in the *Master Plan*, public transit riders are also good walkers. The *Master Plan* says that the areas around public transit access points are high traffic pedestrian areas that also play important roles as meeting places. They should function within our living space as true public squares and be developed in a user-friendly manner. To achieve this goal,

Montréal will improve access to subway stations, commuter train stations and major public transit access points, such as bus terminuses.

All public transit access points will be studied and priorities for action formulated. The program to be instituted will seek to modify ten subway stations and five commuter train stations or bus terminuses each year. An amount of \$1.25 million has been earmarked to install directional signalling, street furniture, safety devices and various other amenities over a five-year period. Additional funding may be subsequently invested once the action plan has been finalized.

➤ PEDESTRIANIZATION OF CERTAIN STREETS

The project involves targeting high pedestrian corridors and hubs that could be pedestrianized, particularly in the central boroughs. Borough councils, in conjunction with the executive committee, will be responsible for drawing up a list of streets that could be pedestrianized. The concepts proposed will be submitted to public consultation sessions.

The *Ville de Montréal* has, through the present, developed different ways of closing streets, including short-term, seasonal and complete pedestrianization and pedestrianization in conjunction with festivals. The formula applied as part of this project will be flexible and permit vehicular access to such authorized parties as residents.

In the fall of 2008, Montréal will consult with the municipalities and boroughs with respect to routes in downtown Montréal and other sectors that could be pedestrianized. The choice of

such routes will be based on such criteria as their function, pedestrian traffic, layout, etc. Old Montréal (and in particular *Rue Saint Paul*), which hosts from 13 to 15 million visitors each year, is already targeted for such an effort under the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal].



Such projects will improve quality of life and safety of travel on foot and by bicycle, while reducing reliance on the car. Each will be subject to an impact analysis on the balance of urban activities and on the quality of life in neighbouring communities, pursuant to the *Master Plan*.

➤ REINFORCING THE PEDESTRIAN CHARACTER OF DOWNTOWN MONTRÉAL AND THE CITY'S CENTRAL DISTRICTS

In accordance with the strategic orientations of the *Master Plan*, Montréal intends to give greater weight to pedestrian needs in redeveloping public property. Streets in central Montréal and in particularly “picturesque” routes in downtown Montréal that offer comfortable, satisfying and stimulating environments for pedestrians, will benefit from special measures.

The boroughs and related municipalities will subsequently benefit from such action and from expertise developed in the matter.

➤ CONTINUED DEVELOPMENT OF AND IMPROVED SIGNAGE FOR THE INDOOR PEDESTRIAN NETWORK

The Indoor Pedestrian Network, which appears in Figure 12, began in 1962 with the construction of a special link between Central Station and the Place Ville-Marie shopping gallery. It is now more than 30 km in length, which makes it one of the largest such networks in the world. It is built around ten downtown subway stations and plays a key role in getting people from point A to point B. Some studies estimate that 500,000 people use it each day.

The Indoor Pedestrian Network plays an important role in the support it provides to surface transportation, particularly in the business centre, where it helps relieve sidewalk congestion. This network also encourages intermodality, by providing links between such major transport hubs as Lucien-L'Allier Station, Central Station, the downtown Montréal bus terminals, the subway system and many buildings and universities. The network has been expanded over the years due to various property development projects.

Montréalais take pride in their Indoor Pedestrian Network and Montréal will, accordingly, employ every opportunity offered by new projects to enhance it, particularly in the course of the cultural and institutional development projects envisioned for the area around *Place des Arts* and in the *Quartier de la santé*.

FIGURE 12 | Indoor Pedestrian Network





Special attention will be given to the following projects:

- future Concordia University buildings, with links to the Guy-Concordia subway station;
- construction of CHUM and development of the future *Quartier de la santé*, near the Champ-de-Mars station;
- extension of the system's "international corridor" (*Place Bonaventure/Palais des congrès de Montréal*) in the *Quartier de la santé*, with links to the Champ-de-Mars subway station;
- extension of the system's "cultural corridor" (*Place des Arts/Palais des congrès de Montréal*) to provide links with new facilities in the *Quartier des spectacles*.

Montréal will also consider the option of linking the downtown McGill University campus to the Indoor Pedestrian Network and the subway system.

Finally, the harmonized signage project, which was first launched in the *Quartier International de Montréal* in conjunction with neighbouring property owners, will gradually be extended to other segments and buildings. In the wake of the success achieved in the *Quartier International de Montréal* sector and a warm response from residents, Montréal is committed to:

- continuing to put harmonized signage in place;
- ensuring better mutual support between indoor and surface systems by putting up signs in the Indoor Pedestrian Network that direct users to important destinations on the surface;
- improving sign quality;
- installing artwork in the indoor system;
- ensuring that improvements in the system take the needs of individuals with functional limitations into account.

2.5 UNIVERSAL ACCESS

Montréal will consider the needs of people with functional limitations in all of the proposed actions. The *Ville de Montréal* has, in the past, worked closely with various organizations representing persons with functional limitations. These kinds of productive associations will continue in the future.

> FORMULATING A UNIVERSAL ACTION ACCESS PLAN EACH YEAR

The *Ville de Montréal* has been working for many years in close cooperation with various association partners to take the needs of individuals with reduced mobility into account. Universal access has been a municipal priority since the Montréal Summit in June 2002. Under these circumstances, and in view of amendments to *Act to secure handicapped persons in the exercise of their rights with a view to achieving social, school and workplace integration*, the City and its association partners are committed to annually producing an action plan and a review of actions taken in four areas of development: architectural accessibility, access to programs, services and jobs, training Montréal's workers and raising their awareness on this issue and, finally, access to municipal communications.

Chapter A1 lists activities designed to improve access to public transit.

Furthermore, the *Plan d'action 2008 de la Ville de Montréal en matière d'accessibilité universelle* [Montréal's 2008 action plan on universal access] proposes the following projects:

- revising land use standards for public property that will make it universally accessible and including these standards in a pedestrian planning guide;

- continuing installation of countdown pedestrian signals, as previously discussed;
- continuing installation of tactile tiles at curb ramps so individuals with a visual impairment can detect intersections (pilot project).
- continuing installation of audible signals at targeted intersections to improve access for individuals with a visual impairment.

The budget associated with this effort will be reviewed each year, based on the annual action plan submitted and results achieved.

3. SUMMARY

Montréal seeks to increase the practice of walking and to propose activities that would affect the safety, comfort and user-friendliness of this form of travel. Montréalers should no longer have

to sacrifice their quality of life to permit the urban fabric to be moulded around the car’s needs. Rather, every means will be deployed to enable Montréalers to reclaim the streets in particular and the public space in general. This effort should not only help keep residents in Montréal, but draw new households to our city. The *Pedestrian Charter* will provide the framework needed to carry out actions that will give pedestrians a lead role in the transportation system.

TABLE 5 | Cost of Projects for Pedestrians (in thousands of \$)

WALKING	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Carrying out action plans described in the <i>Pedestrian Charter</i>	1,000					
Defining and promoting best practices	100					50
Preparing a guide for the development of pedestrian facilities, including universal access criteria	100					
Adapting traffic signals to pedestrian needs		600			600	
Installing digital countdown signals at intersections		1,800			1,800	
Ensuring respect for pedestrian crossing and for pedestrians at intersections	100	4,300			4,300	100
Clearing intersections	50	250			250	
Increasing safety in school zones	500	3,000			3,000	
Setting up a systematic sidewalk repair program	500	25,000			25,000	
Removing snow and ice from sidewalks first	100					
Deploying pedestrian-friendly measures at major public transit facilities	250	1,000			1,000	
Pedestrianizing certain streets	1,000		10,000		10,000	
Enhancing the pedestrian character of downtown Montréal and the City's central districts	To be determined					
Continuing development of Indoor Pedestrian Network and improving its signage	50	250			250	
Formulating a universal access action plan on an annual basis						50
TOTAL	3,750	36,200	10,000		46,200	200

Bicycling: Gets You There Faster!

1. STRATEGIC ORIENTATIONS

Bicycles are enjoying increasing popularity, particularly as a practical form of transportation. The benefits they offer are now widely recognized: they take up little space and are fast, efficient and non-polluting. They are also good for our health. Rolling out incentives to greater bicycle use thus affords multiple benefits, including better public health and an improved quality of life within an urban setting. The creation of new bike paths will also give the street a new feel, by making it a more comfortable, user-friendly and safe environment. Use of bicycles to reduce traffic also increases the mobility of all people, whether they are bicyclists, pedestrians or drivers, while ensuring a more equitable shared use of city streets.

Bicycle amenities in Montréal have not, however, developed in step with their popularity over the past few years. There has been little progress in terms of improving bike parking facilities and the integration of such facilities into various public transit modes, such as subways, buses, taxis and commuter lines.

Montréal was rated the number one cycling city in North America for 1999 and won an award as the best city for bicyclists among cities with over one million inhabitants. Still, much work must be done to continue winning such eminent awards—or at the very least remain a leader among cities committed to implementing bicycle initiatives.

Change is needed. That is why Montréal has decided to become over the next few years the point of reference for bicycle-friendly cities and

to serve as a source of inspiration through bold and innovative initiatives. It is only in this way that Montréal will be able to change the habits and behaviour that will permit increased bicycle use for all types of trips, whether to work, to recreational activities, to school and so forth.

Montréal recognizes bicycle transportation as a core component of its current transportation system and intends to innovate by deploying new measures capable of further promoting active forms of transportation. Not only is today's bike path system incomplete, but it only partially addresses this objective. The following factors have an impact on bicyclist travel conditions or safety: the inadequate number of bike links to employment hubs, services, schools, parks,

Great successes to date!

- Implementation of the *Plan d'accessibilité et de mobilité à vélo au centre-ville* [plan for bicycle access and mobility in downtown Montréal];
- Creation of new year-round bike paths;
- Redesign of the *Île Perry* bridge bikeway, the first phase in creating the bikeway along the old Canadian Pacific right-of-way;
- Creation in 2007 of a new bike path along *Boulevard De Maisonneuve*, in the heart of downtown Montréal;
- Creation of some 30 kilometres of winter bike path (*White Network*).



and subway stations, the insufficient number of bike racks and the system's many gaps. The *Master Plan*, which was adopted in 2004, took these factors into account and proposed various means of remedying the situation, and of encouraging and facilitating bicycle travel. Montréal also plans to formulate a bicycle plan in the near future. This planning tool will help it provide better planning and coordination of all actions required for further increasing active transportation.

2. PROPOSED ACTIONS

Specific actions will be taken with respect to bicycle facilities, bike parking, positive interaction between bicycles and public transit and communications.

Montréal intends to take action in different areas:

2.1 THE BIKE PATH NETWORK

► DOUBLING THE LENGTH OF MONTRÉAL'S BIKE PATH NETWORK

The *Transportation Plan* has embraced the *Master Plan's* strategic orientation of developing Montréal's existing bike path network and proposes to double it. From a current 400 km, the island's system would grow to 800 km. This ambitious bike path development project will be carried out in a structured manner



over a period of five to seven years, while continuing to promote new links between the boroughs, the related municipalities and major trip generators (Figure 13). The estimated price tag for an additional 400 km of bike paths is \$50 million. Montréal previously applied to the Government of Québec for financial assistance in this area under its *Plan vert* [Green Plan].

Montréal's network consists of three types of bike paths:

- bike paths on the street and bike paths with their own rights-of-way. Bike paths with their own rights-of-way are completely isolated from vehicular traffic and primarily located in parks. On-street bike paths are physically separated from other lanes of traffic and thus provide greater safety for more vulnerable groups of riders (children, seniors and families);
- a bicycle lane is situated to the right of motor vehicle lanes on the street and is reserved for bicyclists. Such lanes are permanent and easily maintained. They are primarily designed to support the bicycle's use as a form of transportation;
- a designated roadway is a road that is officially recognized as a bikeway shared by bicyclists and motorists.

Montréal must, on a priority basis:

**> COMPLETE PRODUCTION OF THE PLAN
D'ACCESSIBILITÉ ET DE MOBILITÉ À VÉLO
AU CENTRE-VILLE [PLAN FOR BICYCLE ACCESS
AND MOBILITY IN DOWNTOWN MONTRÉAL]**

The *Plan d'accessibilité et de mobilité à vélo au centre-ville*, which was adopted in 2005, provides for the creation of 26 kilometres

of bike paths. At the present time, 62% (16 km) of this work has been done. A major effort has been made to create new bike paths. In 2007, a bike path was installed on *Boulevard De Maisonneuve*, between *Rue Berri* and *Rue Greene*. Bike lanes were also set up on *Rue Viger* and *Rue Saint-Antoine*, making it easier to get around downtown Montréal by bicycle. Montréal will install other major bike paths beginning in 2008, particularly on *Rue St-Urbain* and *Chemin de la Côte-Sainte-Catherine*.

**> CREATING THE ISLAND'S
FIRST VÉLOROUTE [BIKEWAY]**

This project involves rehabilitating the current Canadian Pacific right-of-way, which runs across the island from *Rivière-des-Prairies* to the *St Lawrence River*. A portion of this right-of-way could be transformed into a linear urban park focusing on the needs of bicyclists.

**> COMPLETING THE ISLAND
OF MONTRÉAL BELTWAY**

One of the major projects to arise out of the *Montréal Summit* in 2002 was the West Island beltway. Gaps in this route, which are present along some 15% of the island's periphery, should be completed (particularly on the West Island), so that bicyclists will easily be able to tour the island by bicycle.

> IMPROVING CROSS-RIVER BICYCLE LINKS

It is not easy to leave the island by bicycle, with ferries out of service, the bike bridge temporarily closed and the bike sidewalk unusable, etc. Cross-river bicycle travel is important and solid links should be provided between the shores.

**> CONDUCTING A PILOT PROJECT WITH BICYCLES
SHARING BUS AND TAXI LANES**

Bikes, taxis and buses can easily share a single lane of traffic. This strategy developed out of the observation that average speeds of bicycles and city buses are quite similar. Reserved lanes also frequently serve the same business and commercial sectors that are bicyclist destinations.

The project would modify the layout of such reserved lanes to ensure safe travel for bicyclists. This new amenity may prove beneficial in Montréal, as long as the creation of parallel bike lanes do not prove necessary.

> UPGRADING THE EXISTING BIKE PATH NETWORK

The *Master Plan* emphasizes the need to upgrade the existing bike path network. This objective, which is also mentioned in the *Transportation Plan*, involves assessing and targeting corrective measures that could serve to boost comfort and safety.

A safe and well-maintained bike path network is one gauge of satisfaction for bicyclists, who will be happy to use it regularly. Periodic action should also be performed on a regular basis to increase the service life of such infrastructure.

Bringing the bike path network up to standard, according to technical requirements recognized in Québec, will require an investment of \$23 million. Work on the network as a whole will be scheduled over the next few years.

> DEVELOPING MONTRÉAL'S WHITE NETWORK

With increasingly mild winters, bicycle use is gaining in popularity during the cold season. While most bicyclists put their rides into storage once the bike paths are officially closed for the season, many persevere to brave sometimes difficult weather conditions and continue to prefer this form of transportation over any other despite certain inconveniences. It is for this reason that Montréal intends to keep a portion of its bike path open on a year-round basis by setting up a winter bike path (*White Network*).

Safety is significantly enhanced when bicyclists ride on well-maintained bike paths that have been cleared of snow. Such paths let riders avoid riskier streets and large arterial roads.

Figure 14 shows the 63 planned kilometres of Montréal's *White Network*. In 2007, nearly 30 km of bike paths were already serviceable in the winter. Other sections will be added in 2008 and in coming years.

The cost of transforming some sections of the seasonable bike network into a permanent one has not yet been assessed. Such an operation will take place over some five years, after which the City will be equipped with a *White Network*, or a bike network operating on a year-round basis.

> ENSURING EXPANDED FERRY SERVICE

Four ferry services currently operate between Montréal and the South Shore at the following locations:

- between Lachine and Châteauguay;
- between *promenade Bellerive* and *Île Charron*;



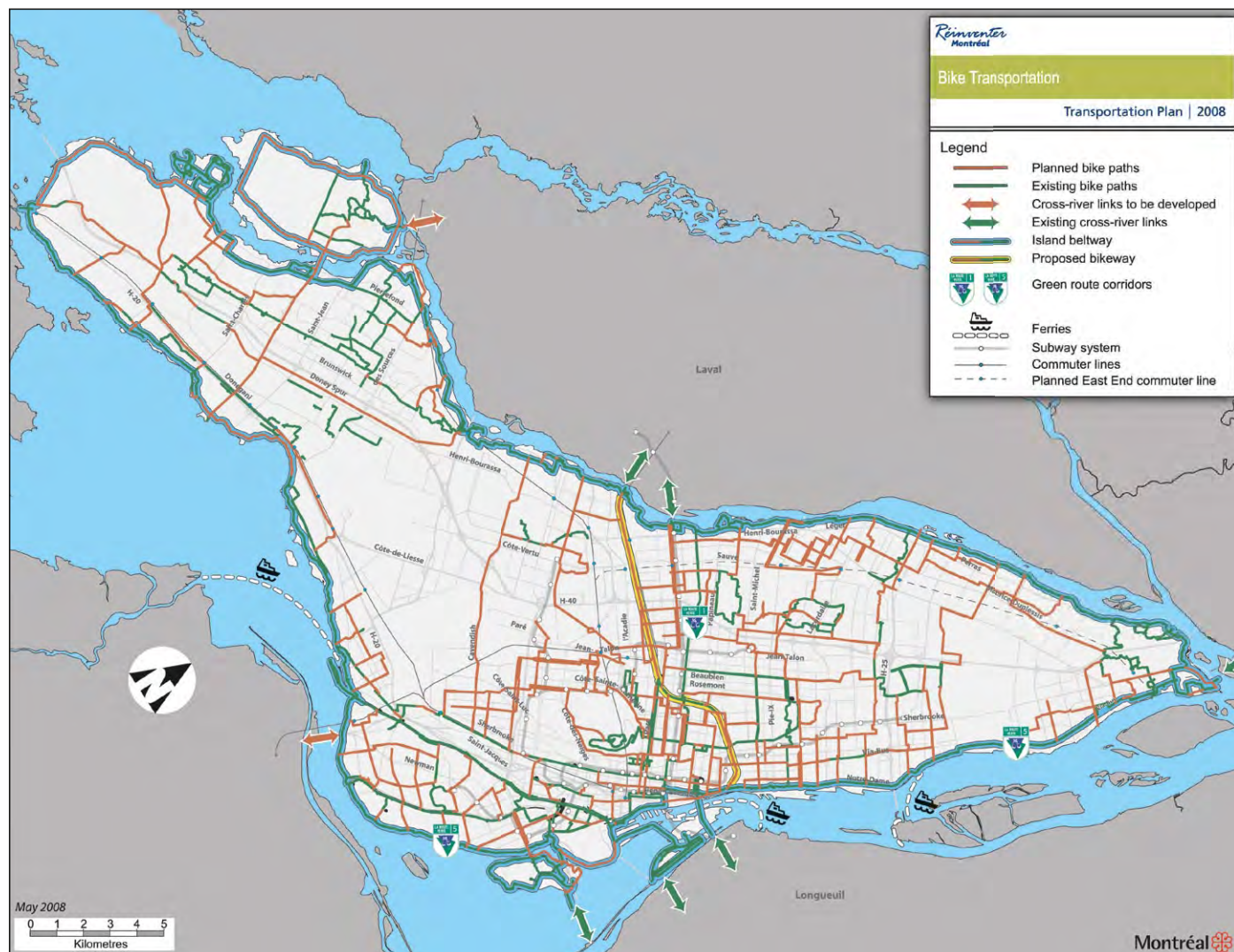
FIGURE 13 | Current and Planned Island-Wide Bike Path Network

FIGURE 14 | White Network: Winter Bike Network



- between the Old Port of Montréal and *Île Sainte-Hélène*;

- between the Old Port of Montréal and Longueuil.

Ferry service from the Island of Montréal to adjacent regions is a practical means of carrying both bicyclists and pedestrians from one shore to the next.

However, ferry operation periods are often variable and limited, ranging from May or June until September or early October. Ferry schedules begin also somewhat restricted. Departures from Old Port of Montréal to Longueuil, for example, begin at 10:35 a.m. on weekdays, with returns from the Longueuil's Réal-Bouvier marina to Montréal, at 11:00 a.m. Such service, in other words, primarily targets at tourists and others who want to go for a boat ride.

Operating periods, schedules and departure frequencies must be revised before such ferries can become an important link in the active transportation trip chain of walking and bicycling, and also bring commuters on board.

Fares must also be revised if the service is to become accessible and competitive with respect to other forms of transportation.

Montréal intends to ensure the development and continuity of ferry services, through such means as obtaining financial support from the Government of Québec.

2.2 SELF-SERVICE BICYCLES

➤ CREATING A SELF-SERVICE BICYCLE SYSTEM

This effort will involve designing and developing a bicycle rental system that riders can use to get about for a specified period at low cost. These bicycles are equipped with identification and tracking systems and work in conjunction with docking racks specifically designed for such use. This kind of system will first be set up in downtown Montréal and subsequently extended to other parts of town.

The presence of a fleet of bicycles situated throughout downtown Montréal could prove a real boon to bicycle use. For short trips, even during office hours, bicycle rentals could prove a worthwhile and inexpensive alternative to the car.

The *Master Plan* recommends that a self-service bicycle system be created, but is essentially limited to educational institutions and businesses. To promote increased bicycle use as a means of transportation, such service must be available to all potential users.

The estimated cost of setting up a self-service bike system in Montréal is \$15 million. Preliminary estimates are based on the installation of 300 docking racks accommodating 2,400 bicycles. Montréal has asked the *Société en commandite Stationnement de Montréal*, in conjunction with the *Regroupement des Corporations de développement économique et communautaire* [Community economic development corporation] (CDEC), to carry out this project.



2.3 BIKE PARKING

> INCREASING BICYCLE PARKING FACILITIES BY 500%

This effort will produce a big increase in the number of bicycle parking facilities, particularly in downtown Montréal where demand is highest, by adding safe and easily accessible docking racks in adequate numbers. The *Master Plan* also refers to this concern by suggesting the creation of adequate number of secure bike parking areas, particularly near places of work or study and located inside buildings or sheltered from bad weather.

Montréal intends to share responsibility for bicycle parking facilities with its partners (property owners and institutions) so that they make necessary efforts in areas falling within their jurisdiction. Montréal plans to amend its current by-law and require parking lot owners in downtown Montréal to set aside space for bicycle parking facilities and then to adopt such a by-law for the island as a whole. This new by-law would target owners and operators of parking lots and owners of residential and commercial buildings and would require them to provide a significant number of spaces for bikes. The boroughs are asked to play an important role with these partners in getting them to shoulder such responsibility.

The presence of secure and easily accessed bicycle parking facilities is an incentive to the use of bicycles for transportation. Furthermore, high quality and properly placed parking facilities will greatly reduce the risk of vandalism or theft.



> CREATING A NETWORK OF BIKE STATIONS

A bike station is an indoor area designed and laid out to permit large numbers of bicycles (often several hundreds) to be parked. Such stations provide a variety of services, such as lockers, repair shops, showers, toilets, babysitting, etc. A bike station is located in an area popular with bicyclists, often near a busy bike crossroad.

Such service offers multiple benefits to bicyclists, who would be able to find a range of services under one roof. Furthermore, the docking racks in such facilities are secure and dissuade thieves. Because they are kept indoors, the bicycles are also protected from bad weather.

> CREATING NEW BICYCLE PARKING FACILITIES AT SUBWAY STATIONS

This initiative has already been included in the *Master Plan*. It is based on the principle of more effectively combining bicycle use with public transit by offering bicyclists the opportunity to park their bikes in a secure, weather-protected area near a subway station. The idea involves reviewing the number and quality of existing parking facilities and proposing new and more attractive ones capable of better meeting bicyclist needs.

More people would ride their bikes to subway stations if they knew they could securely park them there. Providing secure bicycle parking is also an economical means of encouraging active transportation.

➤ AMENDING THE BY-LAW TO REQUIRE OWNERS OF CAR PARKING LOTS IN DOWNTOWN MONTRÉAL TO SET ASIDE SPACE FOR BIKE PARKING

Bicyclists who opt to ride downtown to its centres of employment should have the same ability to park their bikes as car owners have to park. Around ten bikes can fit in a single car space.

Such a by-law, in conjunction with Montréal's other efforts, would help make up for the inadequacy of bicycle parking in certain neighbourhoods.

The addition of new year-round bike racks throughout the City, as well as at subway and train stations, the replacement of worn-out racks with more secure and better designed equipment, and the creation of bike stations, would cost some \$43 million over about 15 years. As with the self-service bicycle project, Montréal plans to call on partners from the private sector to operate certain aspects of the bicycle parking project. Such partners could consist of limited partnerships or social economy enterprises.

Parking lot owners throughout the island will be asked to set aside space for bicycles.

2.4 BUS AND TAXI BIKE RACKS

➤ INSTALLING BIKE RACKS ON SOME STM BUSES

This initiative is designed to combine two forms of transportation: bicycles and public transit. The idea is also endorsed by the *Master Plan*, which suggests that Montréal develop such a system based on experiences elsewhere. Many transport authorities in both Canada and the United States have mounted a bike rack on the front of every city bus.

This initiative would let bicyclists significantly extend their range of travel and traverse significant obstacles, such as tunnels or bridges with no bicycle access. Furthermore, should the weather turn cold or rainy, or in the event of a breakdown or fatigue, a bicyclist could simply place his or her bicycle on the rack and take the bus home.

The STM, which does not currently have any buses equipped with a bike rack in service, is responsible for assessing and determining which sectors would be served and which bus lines might offer this new service to bicyclists. The STM intends to proceed with a pilot project to define methods for installing bike racks on part of its fleet.

➤ EQUIPPING MONTRÉAL'S TAXIS WITH BIKE RACKS

The idea of mounting bike racks on the backs of the island's taxis is similar to that of installing such racks on buses. This concept also appears in Montréal's *Master Plan*, which describes it as an opportunity to provide a better mix between bicycle use and public transit.

This initiative would offer essentially the same benefits as the city bus project, except that bike racks on taxis would offer greater versatility to bicyclists who would not have to be bound by bus schedules.

Taxi operations throughout Montréal are governed by provincial laws and municipal regulations, all of which are overseen by the *Bureau du taxi et du remorquage* (BTR). Montréal intends to work with that agency in determining what levels of service should be offered to bicyclists.

2.5 REVIEWING REGULATIONS

➤ REVIEWING EXISTING REGULATIONS AND STANDARDS ON BICYCLE ACCESS TO SUBWAYS AND COMMUTER LINES

Certain practices must be reconsidered if bicycle use is to be increased and its interdependence with other forms of transportation promoted. This means considering the possibility of extending the period in which bicycles can be taken aboard subways and trains. For reasons of safety and comfort, bicycles are currently banned during the heavily-used rush hour period.

2.6 A COMMUNICATIONS CAMPAIGN BUILT AROUND A SENSE OF GOOD CITIZENSHIP AND BETTER COEXISTENCE OF DIFFERENT FORMS OF TRANSPORTATION ON THE ROADWAYS

At a time of expected growth in the number of bicyclists and pedestrians, we must make the streets better suited to their needs, so that each person can get about safely. Significant efforts must be made in this area to remind all parties—pedestrians, bicyclists and motorists—not only of their rights, but of their responsibilities.

In conjunction with its partners, Montréal will conduct communications campaigns aimed at educating people and sharing the roads more effectively. These campaigns should result in a change in attitude and in behaviour and encourage greater compliance with the *Code de la sécurité routière* [Highway Safety Code].

3. SUMMARY

Bicycling around Montréal can be a very satisfying and worthwhile experience, as long as the bicyclist feels comfortable enough to want to repeat the experience and use a bicycle on a regular basis for all kinds of travel.

Dedicated bicycle infrastructure has not, however, evolved at the same pace as the rise in popularity of bicycles as a form of transportation. For this reason, the bike paths of many boroughs are

incomplete, poorly integrated into the urban framework and provide no links to large trip generators or adjacent boroughs.

So few bike racks are located on sidewalks and public places in certain locations that bicycles are locked to street furniture. The bicycle will become a more efficient vehicle if it is better integrated into such transit systems as subways, buses, taxis and commuter train lines, as is the case in many European countries.

In view of this fact, Montréal recognizes that the needs of bicycle riders have changed and that their travel habits have significantly evolved. It is time to review certain practices, tailor our behaviour to this new context, innovate and rethink the bike network's function. The creation of new bicycle infrastructure throughout the island over the next few years, an increase in the number of bike parking spaces and a stronger intermodal relationship between bicycles and public transit are some of the reasons why bicycle use might rise substantially in coming years.

TABLE 6 | Cost of Bike Projects (in thousands of \$)

BIKE TRANSPORTATION	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Doubling the length of the bike path network	6,000	30,000	20,000		50,000	
Upgrading existing bike path network		8,000	7,500	7,500	23,000	
Developing Montréal's White Network	To be determined	To be determined				To be determined
Setting up a system of self-service bikes ¹		15,000			15,000	
Increasing number of bike racks by 500% ¹		13,000	15,000	15,000	43,000	
Equipping STM buses and taxis with bike racks		2,500	250	250	3,000	
Reviewing regulations on bicycle access to subways and commuter lines	To be determined	To be determined				To be determined
TOTAL	6,000	68,500	42,750	22,750	134,000	-

¹ Partnerships based on a business plan.

Montréal has for some time invested in developing new bike paths and in upgrading the existing network. The scale of work proposed under the *Transportation Plan* will require the formulation of a program dedicated to the bicycle network under which Montréal would invest \$15 million per year over the next six years. Such a scenario would make it possible to better plan the set of actions aimed at doubling the length of the bike path network and completing upgrades to the existing network.



A3 Promoting Collective Use of the Car

Carpooling: Together, We Make a Difference

REGIONAL ORGANIZATION AND EFFORTS

MANY RIDE-MATCHING SERVICES ARE AVAILABLE FOR GREATER MONTRÉAL'S CARPOOLERS. THE OLDEST IS *ALLO STOP*, WHICH MATCHES INTERCITY RIDERS WITH DRIVERS. IN 2005, THE *AGENCE MÉTROPOLITAINE DE TRANSPORT (AMT)* CREATED *COVOITURAGE ALLÉGO* AS PART OF ITS *ALLÉGO* PROGRAM. THIS ON-LINE RIDE-MATCHING SERVICE HELPS PEOPLE ORGANIZE CARPOOLS TO A PLACE OF WORK OR STUDY OR TO A PARK AND RIDE LOT.

Covoiturage Allégo is free for all workers and students situated within metropolitan Montréal if their businesses or institutions subscribe to this service and team up with a *centre de gestion des déplacements* [commuter management centre] (CGD).

CGDs are partners of *Covoiturage Allégo*. Business and institutions that subscribe to this service receive a range of carpool assistance resources, including recruiting booths in businesses, trade privileges or discounts, guaranteed trips back home, follow-ups on carpoolers, etc. Over 250 businesses and institutions are currently enrolled in *Covoiturage Allégo*.

SILVER LINING ON MEDIOCRE RESULTS

Despite efforts deployed over the past few years, the situation hardly appears to have evolved. The average vehicle on Montréal's streets during morning rush hour only carries 1.27 riders.

There are many reasons for this situation. Certainly the most important concern the absence of a true network of reserved lanes and the lack of dedicated carpool parking. The Island of Montréal has just one high-occupancy vehicle

(HOV) lane, which is on the northbound side (only) of Highway 15. Carpoolers also do not receive any tax or insurance benefits.

The American experience has shown that carpooling programs supported by related measures (reserved lanes, parking, etc.) can generate reductions of from 10% to 30% in commuter trips per participating company.

PROPOSED ACTIONS

Montréal hopes to take the opportunity provided by different kinds of work on the road system to implement carpool-friendly initiatives and revive this practice. It plans to seek the participation of its partners and recommends the following projects:

➤ PROMOTING CARPOOLING IN PUBLIC TRANSIT CORRIDORS THROUGH PRIORITY MEASURES

The public transit section of this document discusses the possibility of promoting carpooling along public transit corridors by providing priority measures on the primary road system.

The following primary roads are particularly targeted for such priority initiatives: Highway 40 (east of Highway 25 and west of Highway 13), Highway 20 (west of the Turcot interchange and after the Louis-Hippolyte La Fontaine Bridge-Tunnel), Highway 13, the Laval portions of Highways 13, 15 and 25, and Highways 10 and 720. Such priority measures could also be deployed on *Rue Notre-Dame* between Highway 25 and the Jacques-Cartier Bridge.

Project feasibility should be assessed on a case-by-case basis, because the introduction of carpooling along these corridors could, in certain cases, undermine the effectiveness of public transit priority measures. Montréal also proposes considering the possibility of permitting carpooling in certain municipal bus lanes as of 2008.

➤ INTRODUCING CARPOOL PARKING

The section on parking discusses the carpool parking project. In most cases, efforts will pertain to existing parking lots that will set aside at least 10% of their space for carpool vehicles as a condition of renewing their occupancy permits. Carpool space will be required for any circumstance in which a new parking lot seems to be warranted.

➤ ENCOURAGING THE USE OF PARKING LOTS AT SHOPPING CENTRES AND MAJOR INSTITUTIONS FOR CARPOOLERS

Letting carpoolers leave their vehicles in the parking lots of shopping centres and major institutions, as discussed in the Parking section, may prove worthwhile. Montréal plans for this



reason to target sectors conducive to hosting such facilities and to undertake negotiations with their owners.

➤ ENCOURAGING CARPOOLING

The section on demand management discusses the efforts Montréal plans to deploy to find alternatives to single-occupancy cars. To ensure the success of any physical actions taken (reserved lanes and parking lots), Montréal, in partnership with businesses and institutions, wants to enhance public awareness of the benefits of carpooling. Cooperation with the CGDs will enhance the likelihood of this operation's success. The annual \$100,000 to be earmarked for this project is aimed at developing a strategy for making single-occupancy drivers more aware of carpooling opportunities.

Carsharing: One More Step Toward Integrated Mobility

Montréal's carshare service has 12,000 members and a fleet of 535 vehicles, a figure that grows 30% each year. According to industry data, there may be as many as 18,000 members by 2009.

This new way of using the car is one of a series of innovative and attractive transportation products that offers many benefits, particularly in the densely populated neighbourhoods typical of Montréal. However, perhaps because of their lack of familiarity with this service or their failure to adopt a transportation strategy gearing to reducing dependency on the car, financial assistance from the three levels of government for carshare services is relatively unstructured.

Lack of parking space limits the growth in carsharing. Change is in the air, though, and various new initiatives will be announced in 2008. Since carsharing works hand in glove with other existing transportation systems (taxis, subways, trains, buses and active forms of transportation), and none of these systems can rival the private automobile on its own, Montréal is delighted by the agreement announced in January 2008 between the *Société de transport de Montréal* (STM) and *Communauto*. Based on a new program bundling public transit and shared cars, the *DUO auto + bus* [car + bus DUO] gives riders who agree to purchase 12 consecutive monthly STM passes the right to use *Communauto* vehicles for just \$5 over the price of that pass, without paying *Communauto*'s usual \$500 membership fee. Since 77% of all *Communauto* members in Québec who join this organization decide not to buy a car or to rid of at least one of their cars, the *DUO auto + bus* [car + bus DUO] program constitutes an effective means of competing with actual ownership of a vehicle.

Various European experiences demonstrate that the bundling of carsharing and public transit services will boost fare revenues, despite discounting. Such bundling also encourages optimal use of the most appropriate transportation modes in terms of their relative efficiency and respective cost.

Despite years of decline, public transit ridership began to climb again in 1996. This new rise in ridership remains quite shaky, however, given easy access to cars and limits to public funding. Such growth requires a sustained effort to improve public transit service and develop new versatile and attractive products that will

add a new component to the transportation mix. Carsharing fits into this desire of providing new products that work in conjunction with public transit and meet the increasingly diverse mobility requirements dictated by modern life.

Carsharing could ultimately become an important resource in meeting the goals of the *Transportation Plan*. Montréal wants, accordingly, to take action to grow carsharing and commits itself to:

**> DEPLOYING EVERY NECESSARY EFFORT
TO PROVIDE PARKING SPACES FOR CARSHARING
SO THAT THIS SERVICE CAN EXPAND**

Because Montréal wants to see this new form of transportation develop, it will make every effort necessary to provide carshare parking spaces. Various initiatives will be rolled out to meet this objective, including recognition of carsharing businesses as public interest enterprises, having the boroughs and municipalities include carsharing needs in their local transportation plans and replacing carsharing spaces should a parking lot close. Costs and details of this project appear in the parking section of this document.

> JOINING CARSHARE SERVICES

Montréal intends to explore carefully the possibility of having its workers use *Communauto* vehicles for their business trips, as do those of Westmount and Gatineau. In addition to helping to protect the environment, such an effort would also save money.

Taxis: For Effective and Flexible Transportation

1. STRATEGIC ORIENTATIONS

The 4,500 taxis in operation on the island constitute a core component of the transportation system and supplement other public transit services, particularly at off-peak hours and to low-coverage sectors. Taxis serve residents and visitors and make more than 37 million trips per year. Montréal recognizes the role of the taxi as an effective and versatile form of transportation that helps reduce dependence on private cars and supports the region's economic activities.

Through the *Bureau du taxi et du remorquage* (BTR), Montréal is responsible for administering all taxi activities on the island. The BTR is accordingly responsible for performing management, guidance, monitoring and compliance functions to ensure that riders enjoy the best possible service and that the roads are shared with other users in a harmonious manner.

Since a cab is often a visitor's first contact with Montréal, the taxi industry plays a key role in the metropolitan area's tourist industry. The BTR administers various aspects of the industry to make sure that taxi drivers fulfill their roles as ambassadors of Montréal, particularly with respect to courteous service, appropriate conduct and an excellent knowledge of the region.

A survey conducted in September 2006 by the BTR on the quality of taxi service in the metropolitan region, frequency of use and reasons why people take cabs, user safety and general satisfaction with taxi activities, showed that Montréal's taxi drivers act generally as

professionals of the road who do an excellent job of fulfilling their roles as ambassadors for the metropolitan area.

Ninety-five percent of all users said they were satisfied with their taxi rides, in contrast with what is commonly a negative image of the taxi industry. Since almost all respondents took a cab at least several times a year (and more than 40% did so several times a month, which translates as an average of 39 taxi trips per year), the important role that taxis play among a large share of Montréal's population becomes quite clear.

Montréal hopes to boost the number and share of trips that people take by public transit, by bicycle and on foot. By supplementing these modes, the taxi should take on a greater share of the transportation burden, particularly in downtown Montréal.

Given these facts, the taxi sector is facing many challenges: enhancing service quality, bolstering links with other modes of transportation, promoting the use of clean vehicles and encouraging innovation and the use of new technologies by the industry.

2. PROPOSED ACTIONS

To meet these challenges, Montréal is committed to supporting the taxi industry, particularly in the following areas.

2.1 IMPROVING THE QUALITY OF CUSTOMER SERVICE

Although most customers said they were satisfied with their taxi trips, the industry has adopted improved service as one of its key priorities over the coming years. Improving service for residents and visitors will essentially involve striking a better balance between supply and demand and by a better quality of services from drivers. To meet the needs of industry users more effectively, Montréal therefore wants the BTR, in association with its partners, to agree to:

> ESTABLISHING A POLICY FOR SETTING UP TAXI STANDS

A taxi stand policy will be developed in conjunction with all of the industry's partners, to improve the balance between supply and demand. This policy will seek to provide a greater number of smaller taxi stands throughout the City that are better equipped with street furniture, better maintained and more adequately cleared of snow. Before this policy is implemented, specific supply and demand rules will be spelled out, particularly with respect to taxi stand size and location.

This initiative will require investments for nonrecurring research and development costs, preparation of a background paper, capital expenditures and the cost of consultations with partners.



➤ DEVELOPING THE ACCESSIBLE TAXI MARKET

With 180 accessible taxis currently in use, this private, effective and versatile form of transportation is exclusively reserved for individuals with reduced mobility and in particular those not served by the STM's paratransit service. To ensure a better balance between supply and demand for this particular service, the number of accessible taxi permits issued will be increased according to customer needs.

➤ IMPROVING TAXI DRIVER TRAINING

This initiative seeks to provide better training for all taxi drivers through a continuing education program provided by the BTR. In addition to the 150 hours of mandatory basic training, plus training on riders with reduced mobility and on the promotion of tourism, this program will offer a series of courses pertaining to various strategies contained in the *Transportation Plan*, particularly with respect to safe transportation and energy efficient driving techniques and will be aimed at all drivers.

2.2 IMPROVING THE TAXI'S ABILITY TO SUPPORT BICYCLE TRANSPORTATION

➤ INTRODUCING INCENTIVES AIMED AT INCREASING THE NUMBER OF TAXIS EQUIPPED WITH BIKE RACKS

As mentioned in the Bicycle section, Montréal supports the project to equip all of the agglomeration's taxis with bike racks. Not only will this measure enable bicyclists to extend their range of travel significantly, it will provide them with additional options. Stands for taxis with bike

racks will be set out in appropriate locations on the island to support this measure. Through this strategy, which is included in the *Master Plan*, Montréal will have an opportunity to provide greater support to transportation by bicycle.

2.3 PROMOTING INDUSTRY ADOPTION OF "CLEAN" TAXIS

➤ CREATING A "GREEN TAXI" CATEGORY AND USING VEHICLES RECOGNIZED FOR THEIR FUEL EFFICIENCY

To help the taxi industry make certain environmentally friendly choices, Montréal proposes making "green taxis" available to riders who are concerned about the impact of their taxi trips. This project will involve the BTR's creation of a new vehicle category, the "green taxi." Fuel consumption limits will be proposed on the basis of Canada Natural Resources' EnerGuide and will be periodically reviewed. All "green taxis" will have to meet this standard.

The Government of Québec, which announced a program of grants to taxi owners for buying electrical or low-fuel consumption hybrid vehicles, has recently begun encouraging the purchase of fuel efficient taxis.

Just like individuals with reduced mobility who can request a paratransit vehicle, riders can request a "green taxi" for their trips. Under the green taxi project, Montréal will support the development of consensus within the industry, rather than the drafting of new regulations.

2.4 PROMOTING INNOVATION AND MODERNIZATION OF THE TAXI INDUSTRY

Montréal is committed to supporting the *Table de concertation de l'industrie du taxi à Montréal* and the *Table de concertation de l'industrie du transport par taxi du Québec* (both of which primarily consist of members of the industry and institutional stakeholders), in their studies, activities and projects pertaining generally to innovation and modernization. As part of this effort, Montréal will participate in various discussions and take positions on various industry issues, including:

- use of a GPS system in taxis;
- adopting behaviour that is both safe and environmentally friendly;
- permitting taxis to carry ads;
- introducing the use of credit and debit cards in taxis.

As a UNESCO City of Design, Montréal should consider adopting a single colour for its taxis. Montréal will, in conjunction with the taxi industry, set up a task force to study that issue.

3. SUMMARY

Intermodal transportation is an important means of moving people from one place to another and the taxi industry plays an essential role in this process. Taxis serve a key function within the metropolitan area, because of their vital position in the tourist industry and because of their critical ability to dispense transportation throughout the island. Through the various initiatives and projects set out in its *Transportation Plan*, Montréal recognizes the taxi as a versatile and effective form of public transportation and as a necessary support for Montréal's economy.



Managing Demand: Doing More with Less

EFFORTS ACHIEVED IN GREATER MONTRÉAL

Managing demand consists of a set of measures aimed at promoting attractive and competitive alternatives to the single-occupancy car. Proposed solutions, ranging from car sharing to reserved lanes and parking spaces, are often described as being innovative, because they affect individual behaviour by influencing the need for, scheduling of and selection of a particular form of transportation.

Demand management becomes increasingly necessary at a time of scarce public funds, particularly as conventional solutions fail to address thorny issues of mobility and road congestion¹⁷.

The AMT developed and rolled out its *Allégo* program a few years ago to support demand management initiatives. The CGDs are at least partially responsible for this program's deployment.

The CGDs provide consulting services to businesses and institutions on the organization, management and promotion of alternatives to the car. The CGDs also help implement the *Allégo* program. The Island of Montréal is home to four CGDs:

- *Voyagez futé Montréal*;
- *Centre de gestion des déplacements de l'Est*;
- *Centre de gestion des déplacements de Saint-Laurent*;
- *Centre de gestion des déplacements de Côte-des-Neiges*.

MONTRÉAL'S INVOLVEMENT

Montréal recognizes the crucial role played by employers and institutions in fulfilling the Vision of its *Transportation Plan*. Under these circumstances, it is committed to:

- **ASKING THE GOVERNMENT OF QUÉBEC TO REQUIRE INSTITUTIONS AND EMPLOYERS WITH MORE THAN 100 EMPLOYEES LOCATED IN THE COMMUNAUTÉ METROPOLITAINE DE MONTRÉAL (CMM) TO DEVELOP AN EMPLOYEE TRANSPORTATION MANAGEMENT PLAN AND TO ENSURE THAT IT IS FUNDED BY THE POLITIQUE QUÉBÉCOISE DU TRANSPORT COLLECTIF [QUÉBEC PUBLIC TRANSIT POLICY]**

Improving public transit and initiatives supporting the active forms of transportation that will be deployed will not on their own have the impact needed to get people to switch over from single-occupancy vehicles to sustainable forms of transportation. Such efforts will only succeed if employers become involved in this process.

Since 2000, employers and institutions have been asked to implement voluntary demand management measures under the *Plan de gestion des déplacements pour la région métropolitaine de Montréal* [greater Montréal area transportation management plan] that was presented by the *ministère des Transports du Québec* (MTQ). While results have been encouraging, they could be much better. Legal provisions requiring companies to deploy such initiatives would serve to make their application widespread.

Through this project, Montréal will propose CGD services to any business from which it intends to require a transportation management plan.

Based on results achieved in developing transportation management plans among institutions and employers with more than 100 employers, Montréal will consider the possibility of reaching out to smaller firms with this initiative through such groups as professional associations, chambers of commerce, etc.

> ENSURING THAT ALL MAJOR PROJECTS ADOPT TRANSPORTATION MANAGEMENT PLANS

Montréal must recognize that major construction projects, such as CHUM, will create new parking demands. To support large-scale projects while reducing the demand they generate for additional parking space, Montréal will now require developers to produce transportation management plans that consider all aspects of transportation in terms of the existence of such alternatives to the single-occupancy car as public transit and active forms of transportation. Montréal will accordingly propose the services of a CGD to any developer from which it requires a transportation management plan.

> ENSURING CGD COVER OF ALL SECTORS OF THE MONTRÉAL AGGLOMERATION

CGDs are the key link between transport authorities, employers and institutions. They will also be asked to assist in formulating the local transportation plans of the City's boroughs and related municipalities. To assist employers in their efforts to promote public transit and active forms of transportation, Montréal encourages the expansion of CGD territories and, in some cases, the creation of new CGDs. With its *Politique québécoise du transport collectif* [Québec Public Transit Policy], the Government of Québec supports CGD creation through employer programs. Montréal will ask the Government of Québec to boost its approximately \$2 million annual contribution for CGD operations.

> INSTITUTING DEMAND MANAGEMENT INITIATIVES IN THE MUNICIPALITIES AND BOROUGHS

Montréal already participates in the *Allégo* program, which promotes initiatives favouring public transit, carpooling and active forms of transportation. The program provides for three phases of implementation. The first phase, which ended in 2006, targeted *Cité Multimédia's* Louis-Charland building.

The second phase, which began in 2007, is aimed at city workers employed by the City's Departments. The last phase, which is scheduled for 2008, will pertain to employees employed by the boroughs and municipalities.

With more than 29,000 municipal workers, the agglomeration offers a very high potential for reducing greenhouse gases. Measures that are deployed will be tuned to the availability of public transit in the sector in question. The success of these measures is conditional on the adoption of a strategic parking management philosophy geared to sustainable transportation. This approach would accordingly involve a revision of employee parking benefits.

Demand management also embraces other measures. Some promote the use of cars by more than one person at a time (carpooling lanes, park and ride facilities, etc.) and are covered in the sections on parking and the regional public transit system. Certain coercive measures, such as those pertaining to parking taxes, are considered in Part IV—Cost and Funding.

The Road System

1. THE STRATEGIC ORIENTATIONS

THE ROAD SYSTEM, WHICH IS USED BY MOST FORMS OF TRANSPORTATION, IS VITAL TO MONTRÉAL'S ECONOMIC PROSPERITY AND TO RESIDENT WELL-BEING. THESE ROADS CURRENTLY SUPPORT 85% OF ALL MONTRÉAL-BOUND MORNING RUSH HOUR TRIPS, EXCEPT FOR NON-MOTORIZED TRAVEL SUCH AS WALKING AND BICYCLING AND TRIPS MADE SOLELY IN THE SUBWAY OR ON COMMUTER TRAIN LINES. AUTOMOTIVE TRAVEL IS RESPONSIBLE FOR 60% OF ALL MORNING RUSH HOUR TRAVEL BY PEOPLE TO MONTRÉAL.

Motorized transportation creates pressure on living environments, however, by reducing peace and quiet, by increasing noise and by emitting atmospheric pollutants, which now represent a public health problem. Some of these trips are over short or medium distances and could be performed some other way, as by walking, using a bicycle or by public transit.

To counter the rising trend in car use, Montréal plans to emphasize increased use of public transit and active forms of transportation, as a means of diminishing the number of rush hour commuter car trips by 2021.

Meeting the *Transportation Plan's* modal share objectives should result in a 15% reduction in rush hour trips by car to Montréal, compared with current projections for 2021. The volume of rush hour trips to Montréal is at the present time expected to rise some 10% from 2003 to 2021. In view of the projected 26% growth in public transit riders by 2021 and an increase in active forms of transportation, this 10% increase will be covered by public transit and active forms of transportation. The 15% decline is with respect to what automotive travel would be if public transit ridership and the number of trips by some form of active transportation were to remain at the levels of the past few years.

Some of the Plan's other initiatives, including impact on modal shifts, is more difficult to assess and should permit a 20% reduction in anticipated travel by automobile. These initiatives include more carpooling, the creation of tolls and a more restrictive parking policy. Furthermore, possible transfers of modal share to public transit will require an increase in such services. The Plan's annual follow-ups will reveal



how these measures are evolving in terms of implementation and impact. Five-year reviews of the Plan will help in adjusting public transit services accordingly and will, in particular, require discussions with the Government of Québec about its public transit policy.

Montréal specifically does not want to boost road capacity to the island. Rather, it is seeking a new way of sharing the roads that will let public transit and active forms of transportation play a decisive role.

Montréal's road system will be developed to provide quicker travel times by public transit, more competitive with those achieved by car. Many bike paths will also be created, promoting greater bicycle use. Walking, which Montréal recognizes as its prime form of transportation, will also be supported by enhancements aimed at increasing the comfort, safety and user-friendliness of pedestrian travel. Carpooling will be supported by changes that make it possible to carry more people in cars on highways and municipal roadways. Intelligent transportation systems (ITS) will optimize the manner in which all of these modes use the road system.

To protect and enhance quality of life in its residential neighbourhoods, Montréal will also launch traffic calming initiatives on local streets. Access to schools, institutions and places of employment generate local trips that will be facilitated and made safer. Speed limits on local streets will be reduced.

Montréal wants to fill in the gaps in its road system to improve its functionality and access to areas of employment, residential sectors and sectors that generate shipping needs, as recommended in the *Master Plan*. Areas under



development will be served by road extensions or redesigns, while other measures will target improvements in the existing built context.

The municipal road system, which was developed many decades ago, is aging and subject to intense use. Montréal plans to rehabilitate and upgrade its road infrastructure to preserve its functionality and to improve its comfort, particularly for public transit riders, bicyclists and pedestrians.

Action is also recommended to ensure a structure and functionality that corresponds with the needs of transportation and of protecting living environments.

2. PROPOSED ACTIONS

To adapt the road system to public transportation and to active forms of transportation and to more adequately integrate it within the urban space, Montréal proposes to make changes in the following areas.

2.1 A NEW SHARING OF THE ROADS

To ensure better balance between the different forms of transportation, Montréal proposes:

➤ SHARING ROADWAYS WITH PUBLIC TRANSIT SYSTEM AND ACTIVE TRANSPORTATION USERS

Montréal proposes a new system for sharing the roads that will place greater emphasis on active forms of transportation and on public transit. Major road repair work represents a valuable opportunity to rethink this sharing process. The recent reconstruction of such arterial roads as *Rue McGill* has given over a portion of the roadway to active forms of transportation. Some projects, such as reconstruction of *Rue Sherbrooke Est*, and the installation of improved safety measures along *Rue Notre-Dame*, have served as opportunities to strike a better balance between the different modes of transportation. Furthermore, some of the road projects mentioned in this chapter seek a broader means of sharing the roadways, so as to serve the needs of public transit, pedestrians and bicyclists.

The *Transportation Plan* recommends, for example, maintaining the Viau Bridge's central bus lane following the inauguration of subway service to Laval and studying the possible use of this lane for carpooling. The lane will permit public transit services to get through despite any interruptions on the subway line.

Montréal will also earmark an annual \$4 million for the support of various projects to share the roadway with public transit services and active forms of transportation.

2.2 REHABILITATION AND UPGRADE OF THE ROAD SYSTEM

The growing requirements of aging urban infrastructure for maintenance, rehabilitation and on some occasions, reconstruction must contend with increasingly limited resources. This issue will pose a huge challenge over coming decades.

The challenge is all the greater since road repair presents an opportunity to reconsider the various ways in which a road can be used. This process must consider the growing needs for comfort and reliability that users desire, along with needs

resulting from the use of more and more heavier vehicles. These needs will be reflected in the budgets needed to carry out such work.

Such large-scale efforts will oblige Montréal to make major investments, not only in roadwork, but in its entire buried infrastructure, such as water mains and sewer lines. Similar investments will also have to be made by its partners, whose facilities are installed within public property, in such areas as communications and energy.





Montréal is therefore committed to:

> RESTORING AND MAINTAINING THE ARTERIAL AND LOCAL ROAD SYSTEMS, THEIR STRUCTURES AND RELATED COMPONENTS

Montréal is currently formulating a road system management plan that will guide the strategy to be used in rehabilitating the system and in providing for its recurring maintenance. This approach will include provisions to ensure that road markings are always visible. Restoration of road system will improve user comfort

and safety and residents' quality of life. It will also meet new requirements and reduce the necessity for recurring stop-gap maintenance on the system (potholes, patching, etc.). Over the past few years, Montréal has boosted its investment under this heading by some \$85 million, thereby increasing the annual total to about \$160 million. Montréal intends to maintain this level of effort over the next few years.

Montréal's repair plans include *Rue Sherbrooke* between *Avenue Papineau* and *Boulevard Pie-IX*.

2.3 MANAGING TRAFFIC AND TRANSPORTATION

Since the road system has come of age and should be increasingly shared among needs other than those of single-occupancy vehicles, traffic management should be improved to strike a good balance between traffic flow, travel time, consistency of speed and safety, while optimizing access for all transportation modes. By upgrading its traffic signals, Montréal will now be able to employ various traffic signal management strategies that take the needs of public transit into account and can tweak them where necessary.

> REVISING THE ROAD SYSTEM'S STRUCTURE

Modernization of the agglomeration's road classification system is consistent with the *Master Plan*. The last road classification system was produced in 2000. Appropriate classifications will help keep residential neighbourhoods quiet and permit development projects to fit neatly into the urban framework.

> INTRODUCING TRAFFIC CALMING MEASURES ON LOCAL RESIDENTIAL STREETS

This effort must begin with the production of a traffic calming policy and of harmonization by-laws that define a framework and principles of deployment to assist the boroughs and municipalities in this process. Montréal will produce a guide on the implementation of calming measures that will include street selection criteria, recommended solutions and methods of application.

The municipalities and boroughs will set up traffic calming projects. These projects will serve to reduce through traffic and speed limits

on local streets to enhance pedestrian and bicyclist safety. Some of the techniques will serve to modify street design and the direction of traffic flow. All of these measures will help produce green neighbourhoods. This green neighbourhood concept that promotes safe active transportation and a better quality of life is defined in the chapter on Safe Travel and Quality of Life.

The problem of through traffic becomes particularly apparent in older neighbourhoods with rectilinear street grids that facilitate access to minor parallel routes. These older neighbourhoods also have the most traffic. In some case, vehicles use alleys to bypass congestion.

International experience has shown that traffic calming measures reducing the speed and volume of traffic significantly improve the safe movement of people and neighbourhood quality of life. Gradual efforts to increase safety in local neighbourhoods will encourage more residents to get to their destinations on foot.

> FORMULATING A TRAFFIC AND TRANSPORTATION MANAGEMENT PLAN

This effort will involve formulating a traffic and transportation management plan for downtown Montréal within three years. Because of downtown Montréal's strategic importance, the plan will target this specific sector and be produced in conjunction with the boroughs concerned.

> EXTENDING THE TRUCKING NETWORK THROUGHOUT THE MONTRÉAL AGGLOMERATION

The creation of a real island-wide trucking network is a product that falls under the agglomeration's authority. It will involve

producing a trucking plan for the island as whole, coordinating and supporting the municipalities and boroughs in formulating new or amending existing by-laws on truck and utility vehicle traffic. A consistent and complete trucking network, that will in particular serve to control the transportation of hazardous materials, will ensure the peace and quiet of residential neighbourhoods and increase safety in such sectors. The new system will include an island-wide parking policy for trucks and will serve to harmonize permit issuance throughout the island for non-standard vehicles.

> IMPROVING OBSTRUCTION MANAGEMENT

Montréal wants to reduce the number of problems associated with obstructions on the roads and sidewalks. The formulation of standard specifications will oblige contractors to employ standard signage and to create pedestrian bypasses around road development projects. The project provides for the harmonization of by-laws concerning obstruction permits. Such action will serve to reduce the work's impact on all parties and improve the system's safety.

> UPGRADING TRAFFIC SIGNALS

By late 2008, Montréal will have completed an initial phase in this process with the upgrade of 800 intersections, including the replacement of traffic signal controllers. The second phase will comprise the upgrade of 1,400 intersections equipped with traffic signals, the reorganization of coordination networks and the implementation of new light coordination plans by 2010. The estimated cost of the project's second phase is \$30 million. The upgrade is a prerequisite to the replacement of existing pedestrian lights with countdown signals.

> IMPLEMENTING REAL-TIME TRAFFIC SIGNAL MANAGEMENT

Four key arterial roads (Henri-Bourassa, Crémazie, Sherbrooke and Pie-IX) will be equipped with a real-time traffic signal management system. This project, which will begin by upgrading the traffic signals, will not only serve to produce a steadier stream of traffic while reducing travel time on these arterial roads, but will cut down on the number of stops, certain types of collisions, fuel consumption and vehicle emissions. The project bears an estimated price tag of \$10 million.

2.4 A ROAD SYSTEM TO BE REDEVELOPED

Montréal intends to redevelop certain segments of the existing road system to make them fit better into the surrounding environment, to promote an improved quality of life and to optimize transportation services in conjunction with different partners, including the Government of Québec, on most of the projects. Montréal has adopted a conventional approach by targeting all of the projects needed. However, not all of them can actually be carried out (Figure 15).

> REBUILDING RUE NOTRE-DAME

The *Ville de Montréal* and the *ministère des Transports du Québec* (MTQ) are working together to produce this project on a fast-track basis. The work will involve redeveloping *Rue Notre-Dame Est* from *Rue Amherst* to *Boulevard de L'Assomption*, by installing facilities that will support public transit (reserved lanes and other priority measures), plus a carpool and reserved taxi lane.



The current plan to rebuild *Rue Notre-Dame* results from a search for optimal solutions addressing the technical constraints and the needs expressed by all parties. Public consultation sessions on the urban integration aspect of this plan that were organized in the past few months resulted in the presentation of 55 written submissions and illustrated the concerns of residents and groups involved in the matter.

Once the sessions had concluded, the MTQ and the City announced a set of enhancements to the planned reconstruction of *Rue Notre-Dame* and confirmed that work would start in October of 2008.

The main enhancements target improvements to public transit and alternatives to single-occupancy vehicles:

- creation of a bus lane on *Boulevard Pie-IX*. This project will allow public transit riders to travel from one end of *Boulevard Pie-IX* to

the other (from *Boulevard Henri-Bourassa* to *Rue Notre-Dame*), in both directions and at any time of day. This high-efficiency service will ultimately allow buses to use the reserved public transit lane on *Rue Notre-Dame* and drive directly into downtown Montréal;

- the project will also create a carpool and reserved taxi lane. This lane will be the first link in a network of carpool lanes that will be installed throughout the island.

Giving the right-of-way to public transit is a basic principle in the planned reconstruction of *Rue Notre-Dame*. This project will increase reserved public transit service for 5,600 riders during morning rush hours. The permanent presence of a reserved public transit lane in each direction will be the key to improving service in the East End. The project plans to connect with public transit services in the neighbourhoods concerned, so that they can share in the timesavings generated by the reserved lanes.

Bicycle usage will also be built into the project. A continuous bike path along the north side of *Rue Notre-Dame* will link the existing bike path, starting from *promenade Bellerive* at *Rue Souigny* in the East End, to downtown Montréal.

Efforts to rebuild *Rue Notre-Dame* will also focus on redeveloping parks, public areas and portions of Montréal's shoreline heritage. This work will provide visual access to the river, particularly at Champêtre Park and Bellerive Park. Morgan Park, to the north of *Rue Notre-Dame* and Champêtre Park, to the south, between *Rue William-David* and *Rue Letourneux*, near *Boulevard Pie-IX*, will be joined by a 130 m wide concrete slab which will become a park over *Rue Notre-Dame* (which lies below it at this point). The new regional Morgan-Champêtre Park will be enlarged and a new lookout built by the port. Bellerive Park, located along *Rue Fullum*, will receive special attention, including the construction of another concrete slab over *Rue Notre-Dame* (also covered at this location) on which the park will be extended.

The project will also serve to enhance many heritage structures, such as the *Pied-du-Courant* site, the Craig pump station, the *Tonnellerie* building and the Letourneux firehouse.

These improvements will be carried out in view of the presence of the harbour facilities that have made Montréal a shipping hub and one of the main maritime gateways to the Atlantic Coast. Harbour operations, and particularly those relating to containerized traffic, are currently on the rise and generate some \$2 billion in annual benefits to the Montréal economy. The port has expressed its intention of beginning to expand its operations under a recently released plan. The *Rue Notre-Dame* project fits in with this anticipated development.

By building on the planned improvements to *Rue Notre-Dame* and ensuring that this route is properly incorporated into the urban environment, Montréal plans to cover exposed sections of the Ville-Marie Expressway between the Jacques-Cartier Bridge and the *Palais des congrès de Montréal*. The MTQ has given the go-ahead to study the opportunity, feasibility and cost of such a project.

The public consultation sessions served in confirming the importance of developing the areas around the highway if it is covered. The recent covering of sections of the Ville-Marie Expressway during construction of the *Quartier International de Montréal* represents a good example of this approach. Other projects, currently under study, could represent opportunities to continue covering the highway and eliminating the barrier effect of the recessed trench highway.

> TRANSFORMING THE BONAVENTURE EXPRESSWAY INTO AN URBAN BOULEVARD

The Bonaventure Expressway will be redeveloped in three phases. The first will involve transformation of the current infrastructure into a major arterial municipal road, from *Rue Brennan* to *Rue Saint-Jacques*. This redevelopment would be aimed at underscoring the importance of this portal to Montréal and at permitting a superior quality of urban development in keeping with the *Cité Multimédia* and the *Quartier International de Montréal*. With an estimated price tag of \$90 million, this initial phase will begin in 2009.

The second phase will involve rerouting the Bonaventure Expressway, so that a riverside park can be created between the Victoria and Champlain bridges. The final phase will link the first two segments.

The project will take into account the planned introduction of tramway service in downtown Montréal and Old Montréal, as well as optimization of the Bonaventure corridor in its role as a key public transit link with the South Shore.

> IMPROVING SAFETY MEASURES FOR RUE NOTRE-DAME

This work is designed to upgrade the area east of *Rue Dickson* to *Rue Curatteau* (portion not included in the planned reconstruction of *Rue Notre-Dame*) by creating a central mall, geometric corrections to certain difficult intersections, changes to the traffic signal phasing and upgrades to the bike path. The project should cost about \$9 million.

> REDEVELOPING RUE SHERBROOKE EST

Redevelopment of *Rue Sherbrooke Est* from 36^e Avenue in Pointe-aux-Trembles to *Rue Notre-Dame* will include pedestrian and bicycle amenities and support for public transit.

The project has already begun and will be completed at a cost of some \$60 million.

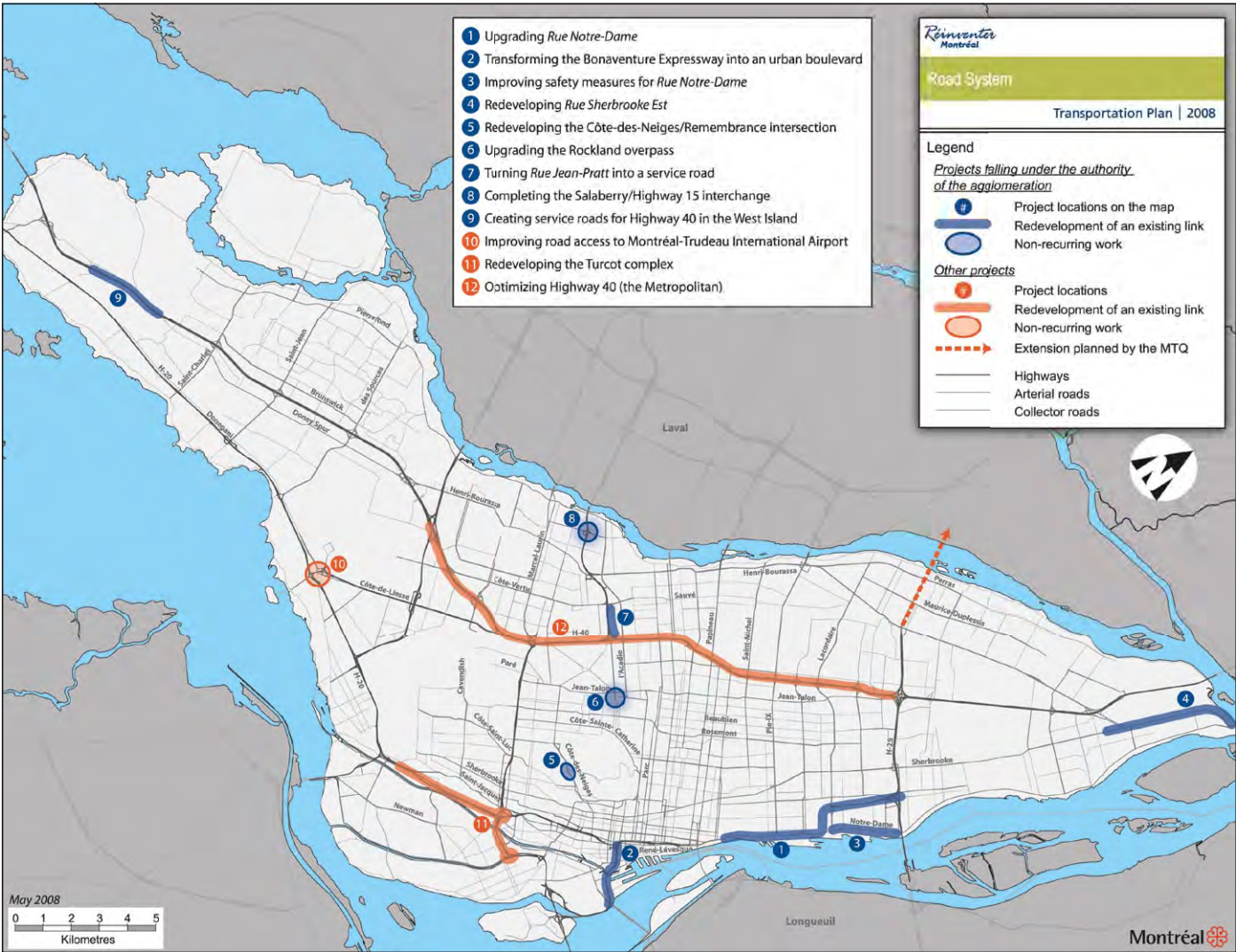
> REDEVELOPING THE CÔTE-DES-NEIGES/ REMEMBRANCE INTERSECTION

The project involves removing the existing overpass structure and replacing it with a traditional intersection, while maintaining the bus lane along *Chemin de la Côte-des-Neiges*. The project will increase safety for pedestrians and bicyclists and help reduce through traffic on *Chemin Remembrance* and *Camillien-Houde*. The number of traffic lanes, public transit coverage and active transportation access to Mount Royal will be reviewed as part of this process. This project is consistent with efforts of the committee supporting improved access to Mount Royal Park.

> UPGRADING THE ROCKLAND OVERPASS

The overpass requires major work. Two scenarios are under study. One is to perform major restoration work, the other is to demolish and rebuild the structure. Rebuilding it would provide an opportunity to review the functionality of this infrastructure and include measures supporting active forms of transportation.

FIGURE 15 | Road System to be Redeveloped



> TURNING RUE JEAN-PRATT INTO A SERVICE ROAD

The transformation of *Rue Jean-Pratt* into a service road running along the east side of the Laurentian Highway will facilitate the departure of heavy vehicles from the *L'Acadie-Chabanel* sector.

> COMPLETING THE SALABERRY/HIGHWAY 15 INTERSECTION

The creation of an on-ramp from *Boulevard de Salaberry* southbound onto the Laurentian Highway should help reduce the use of *Boulevard de L'Acadie* for through traffic.

> INSTALLING SERVICE ROADS ALONG HIGHWAY 40 IN THE WEST ISLAND

Completion of the partial Highway 40 service roads, west of the intersection with *Chemin Sainte-Marie*, is linked to redevelopment of *Chemin Sainte-Marie* and its interchange with Highway 40 (project also associated with work on *Boulevard Morgan* and *Boulevard 440*). This will improve the West Island's road structure and highlight the shoreline.

In addition to projects planned by Montréal, the Government of Québec has expressed its intention of carrying out the following activities over the short, medium and long terms:

> UPGRADING ROAD ACCESS TO MONTRÉAL-TRUDEAU INTERNATIONAL AIRPORT

Reconstruction of the Dorval interchange will maintain existing highway links and create a direct connection between the airport and the primary road system. The project will involve a redesign of the local street grid, incorporate

public transit services (bus, commuter line and Via Rail) and consider the needs of pedestrians and bicyclists. This project will have a total estimated price tag of \$210 million.

> REDEVELOPING THE TURCOT COMPLEX

Major rehabilitation is required of the Turcot interchange's infrastructure, because it will soon have reached the limits of its service life. The MTQ acquired the Turcot yards a few years ago and is currently working on plans to redevelop the Turcot, Montréal-Ouest, Angrignon and De la Vérendrye interchanges. This project has an estimated cost of \$1.5 billion, and according to information obtained from the MTQ, the work will be scheduled over a seven-year period (2010 to 2017). Environmental impact studies began in 2007.

This project offers an opportunity for Montréal and the MTQ to review and upgrade public transit services and amenities for active transportation in this sector and to assist in the development of the Turcot yards.

> OPTIMIZING HIGHWAY 40 (THE METROPOLITAN)

The MTQ is working on an optimization study of Highway 40 from Highway 13 to Highway 25. Changes under consideration by the MTQ will include measures such as modifying road layouts in certain locations, revising entrance and exit organization and redeveloping the Décarie interchange and the Côte-de-Liesse traffic circle. Various projects on that route will be grouped by phase and take place over an interval that has not yet been determined.

2.5 A ROAD SYSTEM TO BE COMPLETED

In its chapter on transportation, the *Master Plan* recommends producing strategic links between the City's sectors by completing the road system. These recommendations refer not only to the barrier effect created by the arterial grid, but to the fact that it is not complete. There are many related problems:

- isolation of certain neighbourhoods;
- longer car routes;
- problematic bus routes;
- difficulty of developing less accessible areas;
- incomplete structuring (local traffic on highways and through traffic on local roads).

Completion of the road grid would make it easier to get to the primary road system from such areas as industrial and commercial zones and shipping terminal facilities that generate freight shipments.

The *Transportation Plan* forecasts that 138,000 new households will be established and 110,000 additional jobs will be introduced on the Island of Montréal from 2001 to 2012. Many of these jobs and households will be located in sectors that are already dense and built up. Completion of the road grid is, however, a prerequisite to the development of real estate at the eastern and western ends of the island. This is particularly so in the Rivière-des-Prairies—Pointe-aux-Trembles and Pierrefonds-Roxboro boroughs.

The road system offers different kinds of support to economic development:

- redevelopment of a road corridor is a good opportunity to upgrade the urban network;
- the arterial system is an effective tool for structuring the urban space;
- local access will help expand business market areas;
- the arterial road and primary road system is particularly important in effectively channelling freight and service vehicles.

Montréal has set up various projects to complete the existing road system by closing its gaps, resolve its deficiencies and ensure that the roadways promote the development of economic activity and public transit. Much of this work is targeting the East End and the West Island, where the arterial system is incomplete. Priorities, which should be regularly reviewed, must of course be assigned to such projects.

Montréal intends to carry out certain projects to complete the road system (Figure 16):

> EXTENDING BOULEVARD CAVENDISH

This project would involve filling in the gap between the two existing segments of *Boulevard Cavendish*, the northern half of which lies in Saint-Laurent and the southern in Côte-Saint-Luc, and provide a connection east to *Boulevard Jean-Talon* along *Rue Royalmount*. The project will include a public transit lane and direct feeder service to the Namur subway station (which is underused compared with more northern stations) of bus lines from the west. The project would also permit the creation of shuttle service with guaranteed travel time



between the subway system and the airport. The Cavendish/Royalmount junction will be created in an initial phase, while steps are taken in 2008 to produce the second (Cavendish-Cavendish link), thereby speeding up the work. This project, and particularly its second phase, would help integrate the sector and improve access to the Notre-Dame-de-Grâce, Hampstead, Côte-Saint-Luc, Saint-Laurent and Mont-Royal sector. The total cost of the project would be some \$140 million.

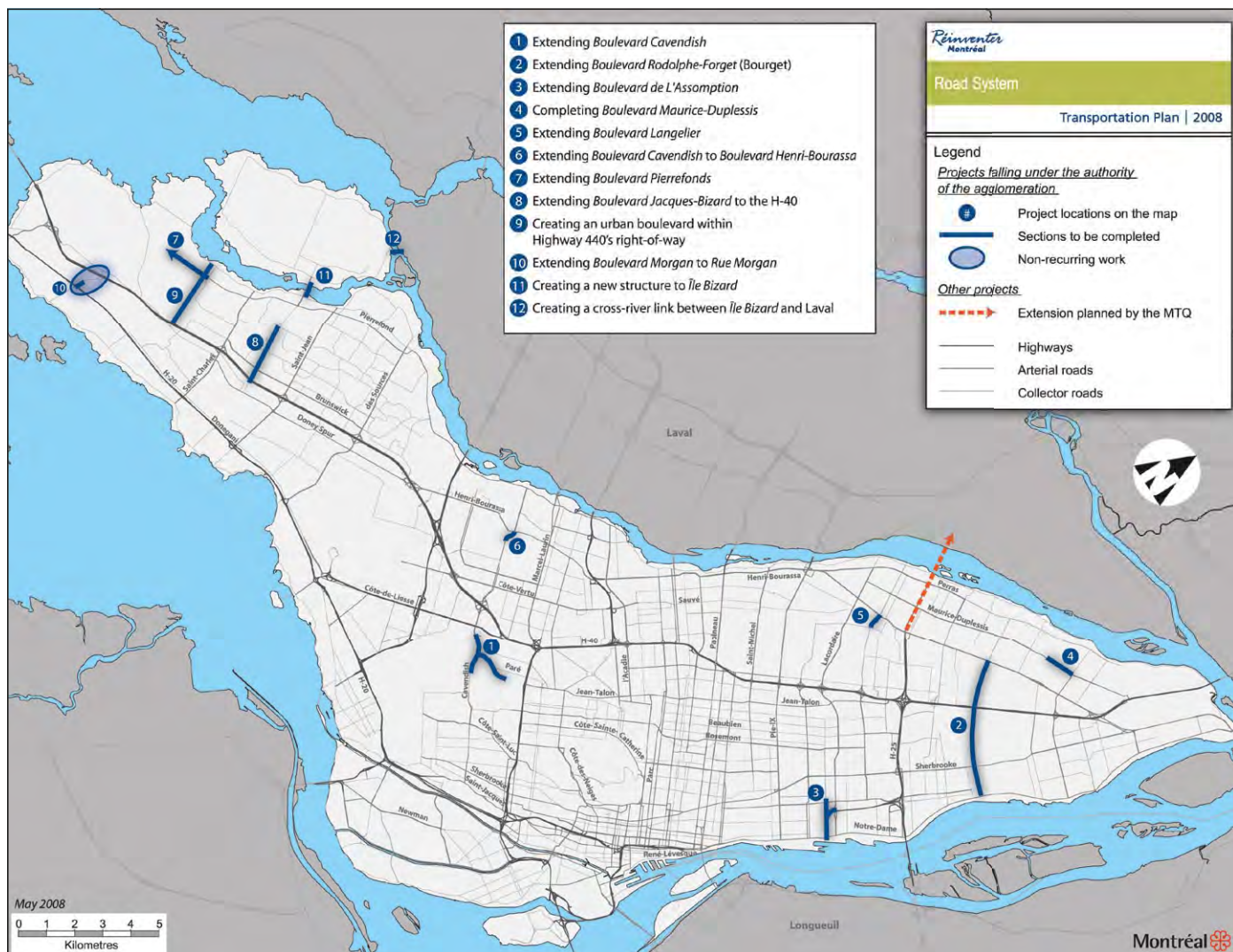
> EXTENDING BOULEVARD RODOLPHE-FORGET (BOURGET)

A new road corridor more than five kilometres long between *Boulevard Henri-Bourassa* and *Rue Notre-Dame* will be built to Rivières-des-Prairies, along the *Boulevard Rodolphe-Forget*

corridor. The segment from *Rue Sherbrooke* to *Rue Notre-Dame* could be produced along the *Rue Lakefield* corridor. This project would be carried out at the pace of the sector's urban development and would provide link-ups with collector roads, improved bus service along a better route, development of the East End's arterial grid and development of the trucking network. This project would cost some \$50 million.

> EXTENDING BOULEVARD DE L'ASSOMPTION

Providing the missing link in *Boulevard de L'Assomption*, between *Rue Hochelaga* and *Rue Notre-Dame*, would let heavy traffic bypass *Rue Dickson* and permit direct bus service along the Notre-Dame/Lacordaire corridors. This project is associated with the plans to rebuild *Rue Notre-Dame* and would use part of that corridor's right-of-way.

FIGURE 16 | Road System to be Completed

> UPGRADING BOULEVARD MAURICE-DUPLESSIS

Only a short section of *Boulevard Maurice-Duplessis* is missing between *Boulevard de la Rivière-des-Prairies* and *Boulevard Saint-Jean-Baptiste*. Construction would occur at the pace of and in support of urban development, and would also permit the creation of uninterrupted bus lines. Project cost would be some \$12 million.

> EXTENDING BOULEVARD LANGELIER

The CN rail line that will be used by the East End commuter line will divide *Boulevard Langelier*, between *Boulevard des Grandes-Prairies* and

Boulevard Henri-Bourassa. Joining these sections will improve access between Saint-Léonard and Montréal-Nord and permit unbroken bus service.

> EXTENDING BOULEVARD CAVENDISH TO BOULEVARD HENRI-BOURASSA

The project involves completing the arterial grid of this developing sector by installing the 800-metre missing link between *Boulevard Henri-Bourassa* and *Avenue Ernest-Hemingway*. *Boulevard Cavendish* will be extended to *Boulevard Toupin*. The key principle, however,

will be to reduce through traffic along *Boulevard Toupin* and nearby residential neighbourhoods. The project will cost approximately \$10 million.

> EXTENDING BOULEVARD PIERREFONDS

The West End's arterial grid will be expanded by extending *Boulevard Pierrefonds* west of *Boulevard Château-Pierrefonds* in line with urban development, to support the residential development of *Pierrefonds Ouest* and the northern portion of *Sainte-Anne-de-Bellevue*. The project will cost about \$40 million.

> EXTENDING BOULEVARD JACQUES-BIZARD TO HIGHWAY 40

This extension will connect *Boulevard Pierrefonds* and Highway 40, to create a complete interchange with the highway and connect to *Rue Stillview* to the south. This expansion of the arterial grid will provide for a better distribution of traffic among the sector's major corridors. Project cost is estimated at \$25 million.

> CREATING A BOULEVARD WITHIN HIGHWAY 440'S RIGHT-OF-WAY

An urban boulevard will be installed within Highway 440's right-of-way, between *Boulevard Gouin Ouest* and Highway 40, to support residential development in western Pierrefonds. It will also connect with *Boulevard Pierrefonds* and *Boulevard Antoine-Faucon*. The project will include redevelopment of the *Sainte-Marie/Anse-à-l'Orme* interchange.

In stating that it plans to create an urban boulevard, Montréal is clearly asserting its opposition to any highway project for this corridor.



> **EXTENDING BOULEVARD MORGAN
TO RUE MORGAN**

This project will seek to improve access to the Baie-d’Urfé industrial sector, reduce heavy through traffic in the residential sector and facilitate access to the commuter train station. It will involve the reconstruction of interchanges with Highways 20 and 40. This project will cost an estimated \$40 million.

> **CREATING NEW LINKS TO ÎLE BIZARD**

■ **Creating a new structure between
Île Bizard and the Island of Montréal**

This project will involve widening the existing bridge or adding another bridge at a different location to ensure uninterrupted access to the island, particularly in the event of an accident on or repair to the existing bridge. The structure would be built for a total cost of some \$28 million.

■ **Creating a cross-river connection between
Île Bizard and Laval for pedestrians,
bicyclists and emergency vehicles**

Construction of a foot/bike bridge would provide direct access to the commuter train and could carry emergency vehicles. The cost of this structure would be an estimated \$10 million.



3. SUMMARY

Montréal is seeking to improve the road system in ways that are consistent with such goals as promoting public transit and active forms of transportation. Montréal is, accordingly, seeking to optimize the use of the system by:

- sharing the roadway to give more space to public transit and active forms of transportation;
- rehabilitating and upgrading its existing network of roads and highways;
- enhancing travel safety;

- increasing the system’s functionality, by redeveloping it, filling in missing links and ensuring better traffic management;
- providing adequate traffic flow on the arterial system to channel vehicles and eliminate through traffic on local streets;
- controlling highway congestion.

These efforts are also based on using the road system as a means of structuring and enhancing the urban space.

On the one hand, certain projects target easier access to different sectors of the City. On the other, road projects are part of broader urban actions and serve to enhance the existing built context.

TABLE 7 | Cost of Road System Projects Proposed by the Government of Québec (in millions of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Improving road access to Montréal-Trudeau International Airport ¹		105	105		210	
Redeveloping the Turcot Complex		500	1,000		1,500	
Optimizing Highway 40 (the Metropolitan)	To be determined	To be determined				To be determined
TOTAL		605	1,105		1,710	

¹ Contribution from the agglomeration: \$30 million.

TABLE 8 | Cost of Montréal's Proposed Road System Projects (in millions of \$)

	CAPITAL COST				ANNUAL OPERATING COST
	0-5 Years	5-10 Years	10 or More Years	TOTAL	
<i>Sharing rights-of-way</i>					4.0
<i>Managing traffic</i>	42			42	7.0
Upgrading traffic signals	30			30	
Installing real-time management of traffic signals	10			10	
Introducing other traffic management measures	2			2	7.0
<i>Redeveloping the road system</i>	464	470	13	947	
Rebuilding <i>Rue Notre-Dame</i>	300	450		750	
Transforming the Bonaventure Expressway into an urban boulevard	90			90	
Improving safety measures along <i>Rue Notre-Dame</i>	9			9	
Redeveloping <i>Rue Sherbrooke Est</i>	40	20		60	
Redeveloping the Côte-des-Neiges/Remembrance intersection			8	8	
Upgrading the Rockland overpass ¹	25			25	
Installing a service lane along <i>Rue Jean-Pratt</i>			1	1	
Completing the Salaberry/Highway 15 interchange			4	4	
Installing service roads along Highway 40 in the West Island	<i>To be determined</i>				<i>To be determined</i>
<i>Completing the road system</i>	154	119	150	423	
Extending <i>Boulevard Cavendish</i>	60		80 ²	140	
Extending <i>Boulevard Rodolphe-Forget</i> (Bourget)	20	30		50	
Extending <i>Boulevard de L'Assomption</i>	<i>Included in the Notre-Dame project</i>				<i>Included in the Notre-Dame project</i>
Upgrading <i>Boulevard Maurice-Duplessis</i>	6	6		12	
Extending <i>Boulevard Langelier</i>	10	18		28	
Extending <i>Boulevard Cavendish</i> to <i>Boulevard Henri-Bourassa</i>	10			10	
Extending <i>Boulevard Pierrefonds</i>		20	20	40	
Extending <i>Boulevard Jacques-Bizard</i> to Highway 40	10	15		25	
Installing a boulevard within Highway 440's right of way	10	30		40	
Extending <i>Boulevard Morgan</i> to <i>Rue Morgan</i>			40	40	
Building a new structure to access <i>Île Bizard</i>	28			28	
Creating a cross-river link between <i>Île Bizard</i> and Laval for pedestrians, bicyclists and emergency vehicles			10	10	
TOTAL	660	589	163	1,412	

¹ Project costs are presented based on the most expensive scenario.² Although capital expenditure costs for Phase 2 of the plan to extend Boulevard Cavendish appear in the 10 or More Years column, the agglomeration intends to begin this phase as soon as possible, once Canadian Pacific clarifies its intentions as to the future of the St-Luc yards.

Parking: A Tool for Reducing Reliance on Cars

According to the International Association of Public Transport (UITP), cars sit idle throughout 95% of their existence. However, transportation planning efforts often overlook parking, although it represents a major tool in transportation management strategies, since it must be used at the beginning and end of every trip by a motor vehicle. In view of these facts, Montréal's success in managing parking will be crucial in achieving the Transportation Vision because it will help reduce dependence on cars.

1. STRATEGIC ORIENTATIONS

The combination of a dynamic downtown Montréal that is home to many residents, of dense central districts, of outlying neighbourhoods built primarily around use of the car and of industrial areas with ample parking in a context of rising motor vehicle use, that nonetheless remains under better control than in the rest of the metropolitan region, makes the issue of parking in Montréal very complex.

In the past, decisions on parking in Montréal, as in other parts of the world, were often designed to support an increase in supply to meet a constantly growing demand. In addition to placing a mortgage on the potential for real-estate development, particularly in downtown Montréal, this approach resulted in a substantial rise in the use of cars and in particular, single-occupancy vehicles, to the detriment of public transit and active forms of transportation. This approach also had an adverse impact on air quality, noise management and safety—all decisive factors in the quality of life.

Accommodating so many vehicles meant sacrificing large amounts of urban space that could have hosted more productive or convivial activities. To remedy this situation, the *Master Plan* recommends the construction of buildings on vacant land now used as off-street surface parking lots. Such an effort will increase Montréal's real-estate wealth, while helping to consolidate and enhance the attractiveness of the downtown area.

In addressing this goal, the *Master Plan* suggests that a regulation be adopted to provide a maximum number of parking spaces for retail stores and services, offices and public, institutional and industrial facilities located within 500 metres of a subway or commuter train and designated as having potential for increased levels of activity. The Plan also proposes that the parking units needed within this 500-metre radius be installed within the building.

Montréal's determination to make significant improvements to public transit, active forms of transportation and alternatives to single-occupancy cars has thus resulted in a desire not to boost parking capacity over the next few years, particularly in downtown Montréal and sectors with good subway and train coverage. To make this desire a reality, Montréal is fully aware that any plan to reduce the parking supply should be accompanied by a substantial upgrade in local and metropolitan public transit service.

Montréal also wants to promote new uses for the car. This would mean tailoring parking services to such new phenomena as carsharing, carpooling, and bimodal travel (car plus public transit) and new fuel-efficient vehicles.

Parking Facts and Figures:

- over 160,000 vehicles park in downtown Montréal each day;
- 53% of the parking space in downtown Montréal is used by Montréalers;
- residents of the city's older districts do not have enough parking spaces for their own use;
- the number of parking sticker holders rose from 16,000 to 36,000 between 1996 and 2002;
- usage of park and ride facilities is more than 85% of capacity;
- 55% of park and ride facility users live in Montréal;
- inadequate parking for carshare vehicle hampers the expansion of this new form of transportation;
- 32 illegal parking lots, with over 2,000 spaces, were shut down in Ville-Marie borough;
- surface parking lots represent a considerable loss of real-estate value and revenue to the City;
- parking signs are complicated and hard to understand;
- monthly parking rates in downtown Montréal are the third highest in Canada (\$372 for reserved spaces and \$260 for unreserved spaces).



Parking in residential neighbourhoods should be structured so that residents can leave their vehicles at home and take public transit or travel by active forms of transportation. This is not currently the situation in certain districts. Street cleaning rules, particularly in sectors with reserved parking for residents, must be revised because they currently require vehicles to be moved, which promotes their use.

Privately owned off-street parking lots have often been set up willy-nilly over the past few decades without respect for any rules. Consequently,

these parking practices must be reviewed and a greater effort made to pursue existing initiatives to control illegal practices and improper land use, while making street parking signs easier to understand.

2. PROPOSED ACTIONS

In line with these strategic orientations, Montréal will take action in the following areas:

2.1 STRATEGIC PARKING MANAGEMENT

Based on the 2003 *Origin-Destination* survey, 161,000 vehicles park in downtown Montréal on a daily basis. Of this number, 53% belong to island residents, 30% of whom live in the City's central districts.

To engage in a genuine strategic parking management, Montréal intends to:

> ADOPT A PARKING POLICY

The *Ville de Montréal* adopted a set of parking guidelines about 12 years ago. In view of the past few years' administrative reforms and growing environmental concerns, an overhaul of these guidelines has become essential.

The parking policy must fit into a regional framework applicable to the entire *Communauté métropolitaine de Montréal* (CMM). If not, such a policy could serve to impede the vitality of downtown Montréal, to the benefit of outlying areas.

The parking policy will be designed to:

- cap the number of parking spaces in sectors with good public transit coverage;
- facilitate parking for residents, enabling them to rely primarily on public transit and active forms of transportation;
- reduce through traffic on residential streets;
- promote business and commercial activities;
- reduce the impact of urban heat islands;

- convert off-street, open-air parking lots into real estate development projects, wherever possible;
- improve information for users;
- develop a park and ride network;
- ensure freight deliveries;
- establish conditions conducive to carsharing;
- require the creation of bike parking spaces in all new projects.

The goal for short-term parking is to guarantee a minimum number of spaces and permit healthy competition with large shopping centres located both on and off the island. This strategy is essential to maintain the vitality of commercial streets at the heart of the city.

The parking policy will support actions under *Premier plan stratégique de développement durable de la collectivité montréalaise—Phase 2007-2009* [Montréal's first strategic plan for sustainable development—Phase 2007-2009], which is designed to control the adverse consequences resulting from large, paved parking lots. Such lots generate urban heat islands and contribute to climatic warming. Montréal wants to work in partnership with parking lot operators to create green spaces on existing lots, particularly between alleyways and along the side of the street.

➤ AMEND URBAN PLANNING PARKING SPACE RULES

Strategic parking management requires modifications to urban planning regulations of the reconstituted municipalities and the boroughs. The parking sections of these regulations are based on various criteria that

depend on the nature of the project. Proximity to public transit is only taken into account very occasionally.

To create conditions more propitious to the use of alternatives to the single-occupancy vehicles, Montréal hopes to reverse current thinking that sets a minimum number of parking spaces (floor) by establishing a maximum number (ceiling) in sectors with high public transit coverage. Such changes will promote a modal shift to public transit and active forms of transportation. Particular attention must be given to residential sectors that already suffer from a serious lack of parking, so that residents will not use the street as a substitute for limited off-street parking.

In the case of large corporate or institutional projects that serve as transportation generators, any tightening of parking requirements should also be accompanied by a transportation management plan. Such organizations must clearly outline their parking needs, in view of existing parking in the sector and the availability of public transit services.

Montréal has already undertaken a fundamental shift in this field by greatly altering the requirements that public and private developers within the agglomeration must meet with respect to transportation impact studies. In addition to its past traffic regulations, the *Ville de Montréal* now requires developers to demonstrate that their projects promote the use of public transit and active forms of transportation, and limit the use of single-occupancy vehicles.

Montréal has also promised to help employers and institutions prepare transportation management plans. The section of this document pertaining to demand management provides details on this assistance.

➤ WORK WITH THE GOVERNMENT OF QUÉBEC AND THE CMM TO ASSESS THE POSSIBILITY OF REQUIRING BUSINESSES THAT OFFER FREE PARKING TO HAVE THEIR EMPLOYEES CHOOSE BETWEEN FREE PARKING AND AN EQUIVALENT PUBLIC TRANSIT BONUS

This project draws on the American “Parking Cash Out” concept, whereby employers that provide free parking must also give employees the choice of an equivalent pay out to use public transit. In conjunction with the Government of Québec, Montréal wants to consider the possibility of requiring the implementation of such an initiative among businesses and institutions located in sectors with high public transit coverage.

For such a project to work effectively and not act as an incentive for businesses and institutions to move away from sectors with high public transit coverage (towards industrial parks located in the vicinity of highways), it must cover the entire CMM.

Such a program would draw attention to the opportunity cost of parking and create a level playing field for public transit riders and motorists. It would also help meet the growth target of 8% by 2012 that the Government of Québec set in 2006 in the *Politique québécoise du transport collectif* [Québec Public Transit Policy].

➤ CONDUCT AN IN-DEPTH REVIEW OF PARKING BENEFITS FOR MUNICIPAL WORKERS

Experience has shown that it will only be possible to promote increased use of public transit and active forms of transportation for commuters if greater restrictions are placed on the use of single-occupancy vehicles.



That is why, as an ecologically responsible employer concerned with the principles of sustainable development, as illustrated by the adoption in 2005 of *Premier plan stratégique de développement durable de la collectivité montréalaise* [Montréal's first strategic plan for sustainable development], the *Ville de Montréal* wants to set an example by encouraging its employees to reduce their use of single-occupancy vehicles and in so doing actively contribute to controlling climate change. To meet this goal, the City will conduct a complete review of the benefits it gives its employees, and particularly those who receive an allowance to use their personal cars and a free parking space.

Such a review will play a vital role in highlighting the importance that Montréal places on public transit, on active forms of transportation and on shared car use (carpooling and carsharing). All transportation experts agree that easily accessible, constantly available, free or low-cost parking will inevitably generate car use.

This project will not require any outlay by the City and could actually generate savings, because certain lots must be leased for employee parking.

2.2 MATCHING AVAILABILITY OF PARKING SPACE TO SUSTAINABLE TRANSPORTATION PRACTICES

To match the availability of parking space to sustainable transportation practices and particularly to shared uses of the car, Montréal is committed to:

➤ INTRODUCING NEW CARSHARE PARKING SPACE IN 2008

Although carsharing is a new form of transportation that is consistent with the philosophy of the *Transportation Plan* and corresponds with its Vision, there has been little official response

to the phenomenal growth of this sector. In 2008, some 12,000 Montréalers were enrolled in a carshare service (a figure which is rising by about 30% per year), drawing on a fleet of 535 vehicles. Based on data from *Communauto*, the only company currently providing carshare service, there could be as many as 18,000 subscribers by 2009.

Growth in carsharing is currently limited by lack of parking space. Things have begun to change, however, and these changes will begin to accelerate in 2008. Since January 2008, such growth has been encouraged by the formation of a partnership with the *Société de transport de Montréal* (STM). This partnership will help Montréalers benefit from the *DUO auto+bus* [car + bus DUO] program, a new transportation concept that bundles public transit and carsharing.

As of 2007, *Le Plateau-Mont-Royal* borough had already tripled parking space for carsharing customers. Sector residents who belong to a carshare service are also given space to park on the street.

Ville-Marie borough has teamed with private partners to deploy a carsharing network in downtown Montréal, which is primarily seeking business-oriented clients. The City of Westmount has, furthermore, become the second biggest user of carshare services (after Gatineau) for employee business trips. Montréal intends to weigh carefully this option, which has been deployed in such American cities as Philadelphia in the belief that such partnerships generate savings.

Since the desire to expand this new form of transportation is closely linked to the availability of parking space, Montréal will make every necessary effort to ensure the development of carsharing, including:

- extending official recognition to carshare firms as public interest enterprises;
- asking the boroughs to build their carsharing needs into local transportation plans;
- ensuring that any parking spaces on public parking lots used for carshare vehicle are replaced, if such lots are closed;
- assigning off-street parking to carshare use, in conjunction with the *Société en commandite Stationnement de Montréal* and the boroughs;
- reserving on-street carshare parking spaces;
- developing management tools for facilitating the cleaning and snow removal of dedicated carshare parking spaces;
- providing universal parking stickers to carshare vehicles.

This effort is designed to create hundreds of new spaces for carshare vehicles and thereby spur the development of this new form of transportation.

> CREATING CARPOOL PARKING

Montréal-bound vehicles carry an average of 1.27 persons. At a time of great climatic change and the development of a collective awareness of the adverse impact that cars have on public health, it is no longer acceptable for vehicles to have such low occupancy rates. That is why Montréal wants to encourage its residents and those of the suburbs to carpool. Carpool parking spaces will be created and clearly marked to assist in this effort.

When renewing parking lot occupancy permits in 2008, Montréal will negotiate with their operators the possibility of setting aside at least 10% of their space for carpooling. A means of administering this initiative will be formulated with representatives of this industry.

The Centre for Sustainable Transportation (CST) defines a system of sustainable transportation as one 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;
- Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy;
- Limits emissions and waste within the planet’s ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.”

> CREATING PARKING SPACE FOR FUEL-EFFICIENT VEHICLES AND MICRO-CARS

To encourage residents to select fuel-efficient vehicles, Montréal will offer discounted parking for electric and hybrid vehicles and for micro-cars (less than three metres) as of 2008. Montréal will also work in conjunction with the operators of private parking lots to ensure that they also provide special benefits to such vehicles. These vehicles will be identified by a green sticker system that owners will be able to obtain from the *Ville de Montréal*.

Recharging stations for electric vehicles will gradually begin to be installed at key locations, once the industry starts offering such vehicles that are accredited by Transport Canada and approved for use on public roadways. No such stations will be installed immediately, because the car industry is not yet selling any all-electric vehicles. Montréal nonetheless intends to be a leader in this field. This initiative will help Montréal acquire renown throughout North America for its support of electric vehicles.

> DEVELOPING A NETWORK OF PARK AND RIDE FACILITIES

Most major cities that rely on public transit have developed park and ride facilities. Overall, such lots contain more than 7,000 spaces and are present on the Island of Montréal, primarily at commuter train stations. The park and ride facilities located on the island are an asset for Montréal because they help promote the *DUO auto+bus* [car + bus DUO] plan. These lots serve up to 6% of all motorists headed to downtown Montréal, not counting those people who leave their vehicles in lots located off the island.

Montréal wants to increase the number of island-based park and ride facilities located upstream of the congestion. These lots are primarily intended for members of the public transit loyalty club program developed by the *Agence métropolitaine de transport* (AMT) and its partners.

Such lots could be produced in conjunction with the private sector, since building them at reasonable cost may be contingent on the construction of office or commercial structures within which they could be located, as per the *Master Plan*. This project should spur many island residents who park in downtown Montréal during morning rush hours (53%) to use public transit. This change will considerably reduce through traffic on residential streets, thereby improving the quality of life in these neighbourhoods.

Montréal is also encouraging the AMT to continue building park and ride facilities outside the island. These facilities strike a fair balance between use of the car and use of public transit for residents from suburbs near and far. While some people feel such facilities are a special free bonus for suburbanites, they also substantially reduce the daily influx of commuters into Montréal's older neighbourhoods.

This infrastructure project, designed to support the future of public transit, will request large outlays in the order of \$25 million. A study of prospective locations and management mechanisms will be initiated in 2008 to gradually offer new space beginning in 2010.

> PROMOTING USE BY CARPOOLERS AND PUBLIC TRANSIT RIDERS OF PARKING LOTS AT SHOPPING CENTRES AND LARGE INSTITUTIONS

It may prove beneficial to allow carpool and public transit users to leave their vehicles at parking lots of shopping centres, major institutions and recreational facilities (the Olympic Stadium). Rather than pave over new land and impede the development potentials of lots located near public transit stops that could be used for more cost-effective purposes, Montréal will target sectors conducive to the creation of such lots and engage in negotiations with their owners.

This project is based on the American "Shop and Ride" concept. It involves charging users a monthly fee that can be spent at the end of each month in participating stores located in the shopping centre concerned. This formula has proved win-win for all stakeholders (users, shopkeepers, public transit authorities and municipalities).

Furthermore, use of part of the Olympic Park parking lot, which has some 4,000 spaces, could serve as another means of creating incentive parking space. The strategic location of this facility near the Pie-IX subway station and the future BRT line should be evaluated for its potential.

> ELIMINATING ILLEGAL PARKING LOTS AND UNLAWFUL PRACTICES

Gradual and significant improvements in public transit and active forms of transportation to downtown Montréal will be accompanied by the City's desire to reduce excess parking capacity in the downtown area and ban the creation of additional space.

Anyone passing through downtown Montréal will certainly notice that many parking lots are overfilled. The City will have zero tolerance for such practices in the future. In 2008, the City will ensure full compliance with this regulation by asking the boroughs and municipalities to support this stance.

Montréal also wishes to introduce a sense of order in off-street parking and conduct an inventory of the legal status of different parking lots. The removal of illegal lots will improve the appearance of downtown Montréal and promote real-estate development. Such an initiative will inevitably reduce parking space. Parking space represents a considerable economic loss for the City in terms of property value and tax revenue.

Illegal parking lots are not a new concern for Montréal. The Ville-Marie borough launched a wide-ranging vacant lot development program a few years ago. At the present time, over 38,000 square metres of illegal lots, with 2,000 parking spaces, have been closed at 32 sites. Montréal intends to pursue the work that it has begun and will support the boroughs' efforts in this area.

2.3 USER INFORMATION

To improve information for motorists, Montréal is committed to:

> SIMPLIFYING ON-STREET PARKING SIGNS

Problems arise with respect to how on-street parking signs should be displayed. By seeking to adapt regulations to every possible situation,



a wide variety of difficult-to-interpret signs have emerged. Montréal is committed to standardizing parking sign content throughout the agglomeration, while complying with the various areas of responsibility of the different boroughs and municipalities. It will formulate certain standards to facilitate the understanding of these signs by virtue of its harmonization authorities.

> DISPLAYING AVAILABLE PARKING LOCATIONS

By creating an information system that indicates which spaces are available, Montréal wants to let motorists know about the many parking spaces available inside buildings. Such a measure should

help optimize the current number of parking spaces and help avoid the need for adding new ones.

Better indication of available parking spaces will eliminate the need to drive around and look for space. It will also reduce the proliferation of poorly produced homemade signs that mar downtown Montréal's beauty.

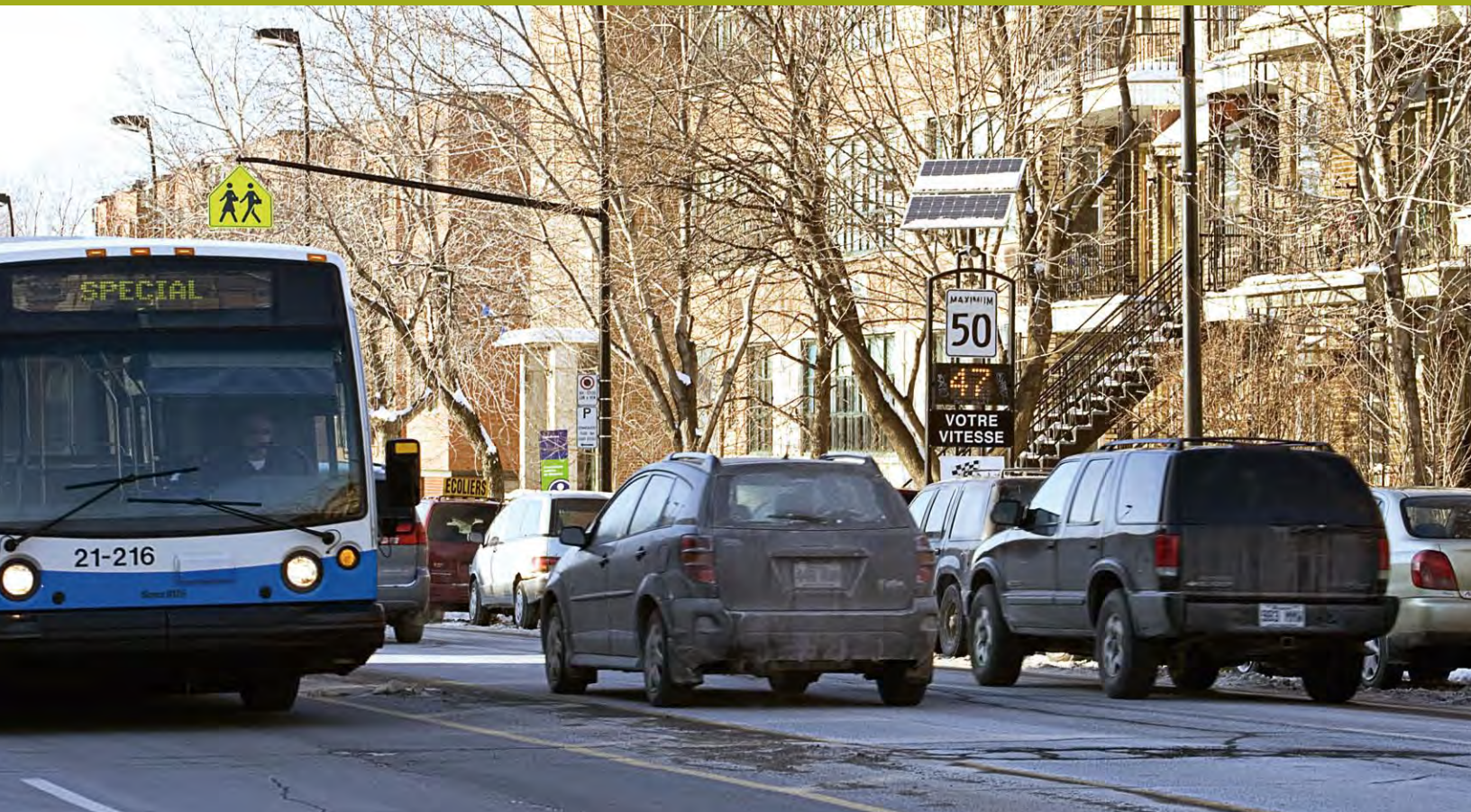
3. SUMMARY

Montréal and other cities made parking-related decisions in the 1970s and 1980s that tended to increase the number of spaces to meet a constantly rising demand. This situation has significantly promoted use of the car over public transit.

Things must change. We now know that transportation planning efforts have for too long overlooked the issue of parking, although it represents an essential part of the process. All parking initiatives can accordingly serve as an important means of enabling the *Transportation Plan* to meet Montréal's Transportation Vision.

TABLE 9 | Cost of Parking Projects (in thousands of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Adopting a parking policy	500					
Amending urban planning regulations on numbers of parking spaces	<i>To be determined</i>					
Considering the possibility of allowing businesses that already provide parking let their employees choose between free parking and an equivalent public transit bonus	100					
Conducting an in-depth review of parking benefits given to municipal workers	<i>To be determined</i>					
Beginning to create carshare parking in 2008	50	100			100	
Creating carpool parking	50					
Creating parking for fuel-efficient vehicles and micro-cars	50		100		100	
Developing a park-and-ride network	200	25,000			25,000	
Promoting use of parking facilities at shopping centres and institutions	250					
Eliminating illegal parking lots and illegal practices	250					
Simplifying on-street parking signs	100					
Displaying available parking locations		1,000			1,000	
TOTAL	1,550	26,100	100		26,200	



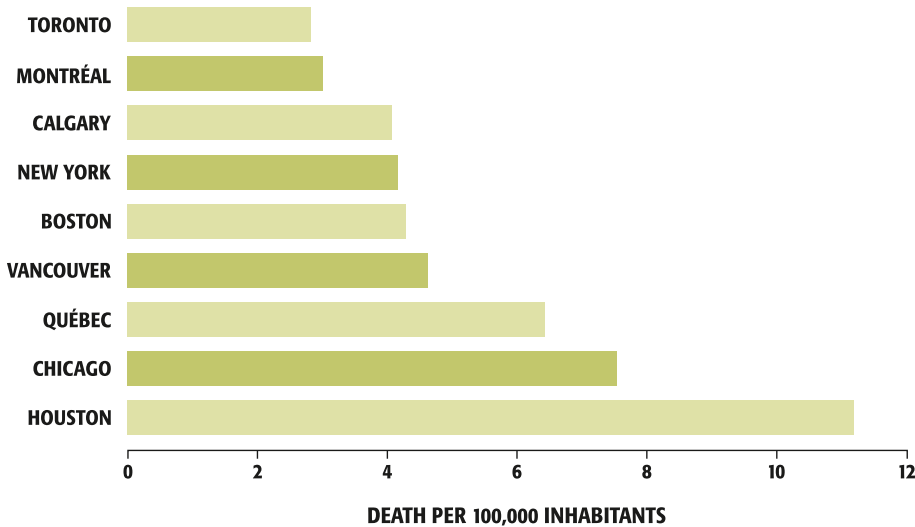
Safe Travel and Quality of Life—Non-Negotiable Issues!

1. STRATEGIC ORIENTATIONS

TRANSPORTATION CREATES IMPACTS THAT DIRECTLY AFFECTS OUR HEALTH AND QUALITY OF LIFE. MONTRÉAL IS WELL AWARE OF THIS ISSUE. MONTRÉAL'S STRATEGIC PLANS, SUCH AS THE MASTER PLAN AND THE PREMIER PLAN STRATÉGIQUE DE DÉVELOPPEMENT DURABLE DE LA COLLECTIVITÉ MONTRÉLAISE [MONTRÉAL'S FIRST STRATEGIC PLAN FOR SUSTAINABLE DEVELOPMENT], HAVE SET GUIDELINES AND MECHANISMS FOR CARRYING OUT ACTIVITIES THAT CAN MITIGATE SUCH PROBLEMS. TRAVEL SAFETY PLAYS A PRIMORDIAL ROLE IN QUALITY OF LIFE AND REPRESENTS A KEY PUBLIC HEALTH FACTOR.

Montréal's travel safety enhancement efforts have made it one of North America's safest cities (Figure 17). Montréal remains concerned with the safety of streets users, and in particular, pedestrians and bicyclists. These efforts take the form of programs to boost safety in school and park zones, programs to make street intersections safer, banning right turns on red, improved street lighting program, significant boost in the presence of police dedicated to ensuring safe transportation conditions, upgrade of traffic signals and installation of digital countdown pedestrian crossing lights.

FIGURE 17 | Average Road Accident Death Rates



However, there are still too many road victims. Each year, more than 12,000 people are injured and 50 to 70 killed in a road accident in Montréal. The number of injuries has been on the rise since 1997.

To make Montréal an environment in which travel is safe and unlawful behaviour not tolerated, Montréal will make a greater effort to reduce the number of accidents that occur over the next decade by 40%. This will be the first step in a *zero accident* plan.

New efforts, greater than those we have applied in the past, will be required if we are to achieve our goals. Such efforts must be part of a strategic process that has been planned with key stakeholders in the transportation safety field and in partnership with all Montréalers.

2. PROPOSED ACTIONS

Existing safety measures will be maintained. Montréal, accordingly, renews its decision to ban right turns on red. The inherent nature of the *Transportation Plan's* strategy to boost modal shares for public transit and of active forms of transportation and to reduce car use will clearly support the safety of all travels and help improve quality of life.

In supporting this strategy, Montréal will take action with respect to traffic safety by creating *green neighbourhoods*, redeveloping streets and changing user behaviour through education and awareness programs.

To be successful in these undertakings and channel all efforts appropriately, Montréal will create a *bureau de la sécurité des déplacements* [office of travel safety] in 2008.



2.1 SETTING UP A BUREAU DE LA SÉCURITÉ DES DÉPLACEMENTS [OFFICE OF TRAVEL SAFETY]

Montréal is committed to setting up a *bureau de la sécurité des déplacements* [office of travel safety] in 2008. This office will be the municipal forum that handles all issues within the agglomeration relating to travel safety. The office will fall under the agglomeration's authority and is, as a permanent committee, active in the formulation, implementation and monitoring of strategies, in conjunction with its partners, to reduce the number of road deaths and injuries.

The office will be responsible for developing and operating data management tools on accidents, producing assessments, proposing targeted or general programs and projects, developing tools for analysis and evaluations, conducting travel safety audits, conducting inspections, preparing a three-year action plan, assessing the effectiveness of the measures, performing economic analyses and periodically communicating actions and results.

Montréal will ask the Government of Québec to make financial contributions to the office's operating costs.

The office will develop special agreements to fund these strategies with such government agencies as the *ministère des Transports du Québec* (MTQ) and the *Société de l'assurance automobile du Québec* (SAAQ), as well as with other agencies, such as the Insurance Bureau of Canada (IBC).

The *Table de concertation provinciale sur les piétons*, which was created and coordinated by the *Service de police de la Ville de Montréal*

[City of Montréal Police Department] (SPVM) from 2005 to 2007, is one example of the kind of project that could fall under the office's responsibility. That is why 17 agencies have joined the Table to document this issue and submit recommendations for reducing the number of accidents involving a pedestrian. The *bureau de la sécurité des déplacements* [office of travel safety] will promote coordinated management of stakeholder activities, thereby ensuring greater efficiency for investments in safety in Montréal.

The office will maintain close ties with universities and research institutions to systematically determine and evaluate emerging techniques and technologies that will respond to the travel safety issues of today and tomorrow.

Montréal will work through this office with the Government of Québec and support all efforts aimed at protecting road users, whether by reformulating the *Code de la sécurité routière* [Highway Safety Code], banning hand-held cell phone use at the wheel, automating control systems, creating new policies regarding on-board systems, and taking action on speed limits, impaired driving and such broader topics as winter driving conditions.

2.2 CREATING GREEN NEIGHBOURHOODS

Under the Montréal Living Environments Charter and in accordance with the public planning principles of the public domain set out in the *Master Plan*, Montréal will create *green neighbourhoods* to enhance the safety of pedestrians and bicyclists and promote a good residential quality of life.

A green neighbourhood is a sector defined by signs and benefitting from the redevelopment of public property (roadways, sidewalks, squares and parks) aimed at promoting more walking and bicycling and at making these forms of transportation user-friendly for everyone. Access to public transit from such sectors is facilitated and cars are limited to local travel and slow speeds, representing one solution to the issue of through traffic. This concept applies to residential neighbourhoods and to zones around schools, hospitals and other public institutions, as well as to certain commercial or tourist sectors and streets.

The *Ville de Montréal's* efforts to date provide a good fit with the green neighbourhood concept:

- in 1992, Montréal established a 30 km/h speed limit for school and park zones;

Social Cost of Road Victims

If we calculate the cost of an accident (\$432,600 for a deceased victim, \$114,425 for a seriously injured victim, \$12,900 for a slightly injured victim and \$7,355 for a victim suffering only material damage) and then calculate the savings generated over a 10-year period by targeted 40% reduction in accidents, the number of accidents prevented in Montréal would generate savings of \$1 billion for Québec society over 10 years (\$100 million per year).

Note: Amount calculated based on the human capital method: SAAQ, Évaluation et évolution de 1985 à 2000 des coûts de l'insécurité routière du Québec, 38^e annual AQTR congress, 2003.

- in 1999, Montréal formulated a trucking plan primarily aimed at maintaining peace and quiet in residential neighbourhoods;
- implementation of this concept includes the limitation and even the prohibition of truck traffic on residential streets, while ensuring an efficient system for the movement of freight;
- the boroughs and the reconstituted municipalities have been carrying out traffic calming projects for many years.

Green neighbourhoods stand out in particular for such initiatives as:

- special signs notifying road users that they are entering a *green neighbourhood*;
- deployment of traffic calming measures to discourage through traffic and cut car speeds;
- permanent or temporary closure of streets or alleys to cars;
- increased plant life and beautification of such neighbourhoods, which can be coordinated with traffic calming measures;
- increased markings on pedestrian crossings and improved street lighting;
- reduction of the maximum authorized speed from 50 km/h to 40 km/h on all roads in the sector;
- limits of 30 km/h in school and park zones and other sectors requiring a significant reduction in traffic speeds;
- changes in parking regulations and directions of street travel.

In 2008, an effort will be made to define various ways of creating *green neighbourhoods*. Out of a concern for harmonization, Montréal will first identify implementation criteria for these neighbourhoods. Such criteria must not only take the road system's structuring into account, but must protect the key transportation corridors. Furthermore, to ensure that the deployment of traffic calming measures is always taken into account when developing *green neighbourhoods*, Montréal will also adopt a procedure that includes a policy and harmonization by-laws, thereby creating an implementation framework and accompanying principles. In the case of new housing developments, Montréal will work to ensure that real-estate development supports traffic calming with the appropriate amenities.

The definition and designation of *green neighbourhoods* within the agglomeration will fall under local responsibility and will be included in the local transportations plans of the municipalities and the boroughs.

To support efforts to plan *green neighbourhoods*, Montréal will acquire a set of tools within the short term that are designed to assist the municipalities and boroughs, in conjunction with the guidelines contained in the *Pedestrian Charter*:

➤ **A GUIDE TO THE IMPLEMENTATION OF TRAFFIC CALMING MEASURES FOR THE MONTRÉAL AGGLOMERATION;**

➤ **A GUIDE TO AMENITIES FOR PEDESTRIANS, INCLUDING UNIVERSAL ACCESS CRITERIA;**



- > **A TRANSPORTATION MANAGEMENT MASTER PLAN;**
- > **A REVISED STRUCTURE OF THE ROAD SYSTEM;**
- > **A TRUCKING PLAN FOR THE MONTRÉAL AGGLOMERATION;**
- > **A TECHNICAL ASSISTANCE OFFICE.**

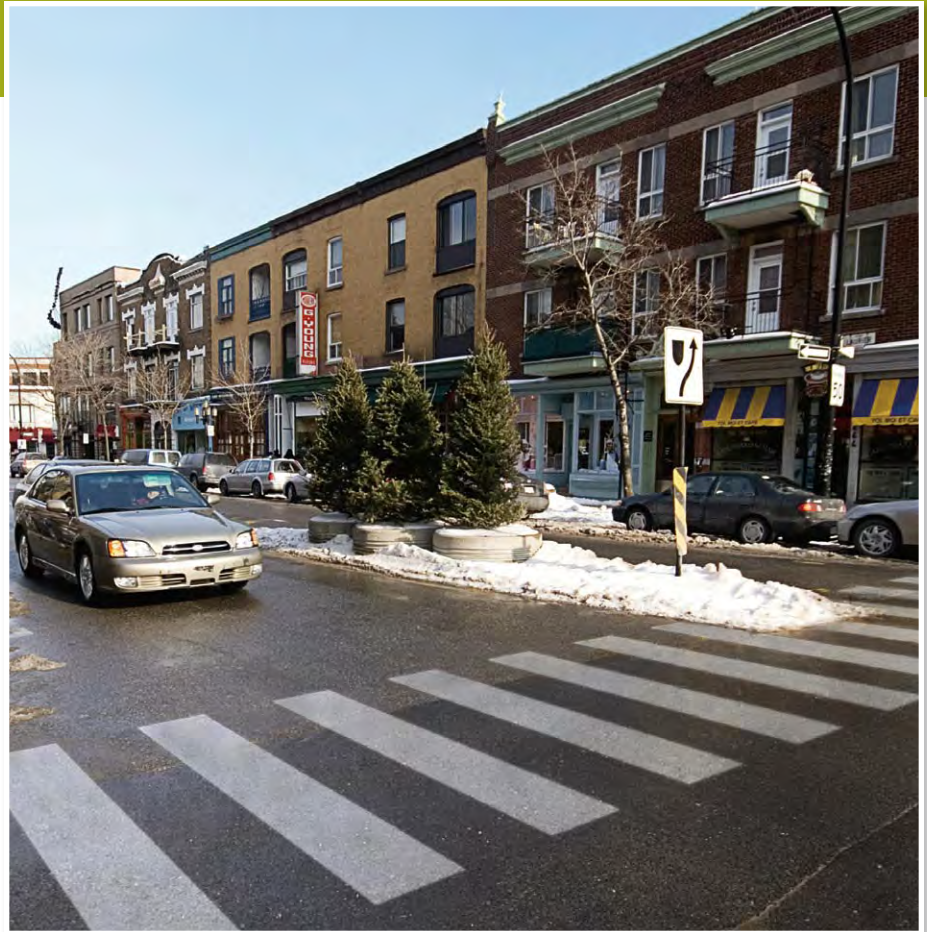
Montréal will also ask the Government of Québec to recognize the *green neighbourhood* concept officially by including it among normative documents (such as the MTQ's standards of land use and signage) used in Québec.

2.3 MODIFYING STREET DESIGN

User safety along the streets depends on the presence of amenities supporting the coexistence of different forms of transportation (walking, bicycles and cars), particularly by managing any conflict between these modes. We might recall that 65% of all accidents take place at intersections, 63% of pedestrian injuries occur at intersections and 55% of pedestrian injuries occur along arterial roads. Like the plan to improve safety measures on *Rue Notre-Dame* that was completed in 2008, Montréal will continue to modify street designs to improve the safety of all users, giving priority to pedestrians and bicyclists.

As mentioned in previous sections of the plan, Montréal will, in 2008:

- begin reviewing all pedestrian crossings to boost their visibility to motorists and to make them safer for pedestrians (\$4 million in 2008);
- deploy pedestrian-friendly measures in the vicinity of subway stations.



In addition to roads located in *green neighbourhoods*, Montréal will take action on the entire road system and in particular along key transportation corridors. As part of this process, the following projects will be carried out:

> **ENHANCING THE SAFETY OF 50 INTERSECTIONS EACH YEAR**

Last February, Montréal launched the operation, *Réaménagement des intersections, votre sécurité réinventée* [redeveloping intersection and reinventing your safety].

This safety enhancement program is designed to systematically target 50 intersections that pose problems (primarily for pedestrians) each year and to respond with simple and effective physical measures, such as enhancing visibility (by prohibiting parking at intersections, for example), the installation of pedestrian crossing lights, alterations to light phasing and timing, geometric adaptations, improved lighting, improved and modified marking of pedestrian crossings and narrower pedestrian crossings. This program will require an annual budget of \$6 million.

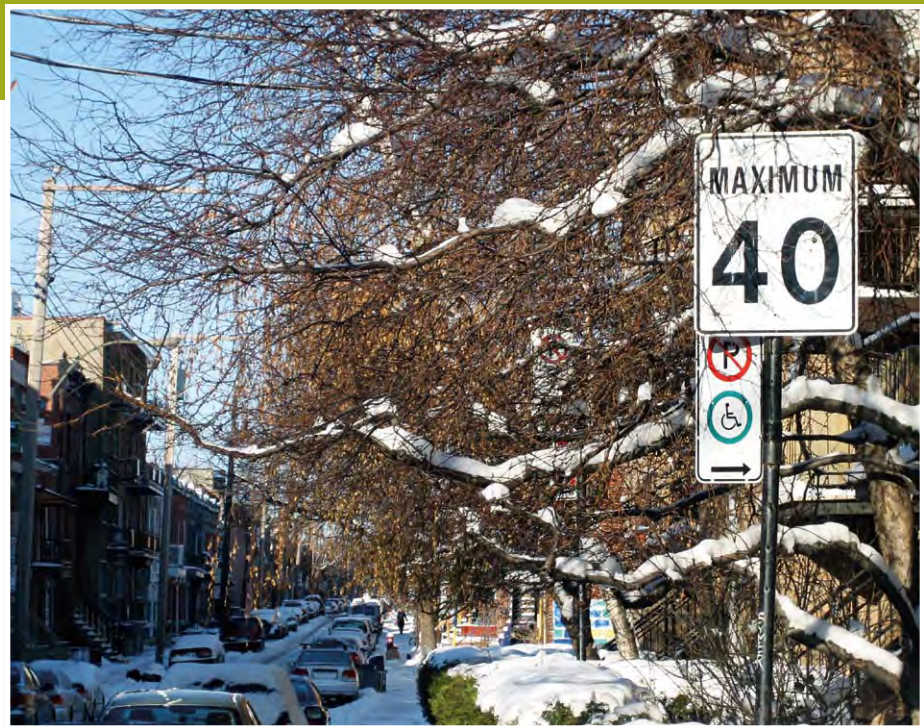
Under the responsibility of the *bureau de la sécurité des déplacements* [office of travel safety], measures to improve safety at intersections will be systematically assessed. Improved safety measures will be deployed throughout the island, in conjunction with the boroughs and municipalities.

Five hundred intersections will be reviewed over a ten year period under this program. It bears mention that the safety improvement program carried out at 12 intersections in 1994 resulted in an average benefits/costs ratio (social cost of accidents over engineering and construction costs) of 14 to 1.

➤ CUTTING THE SPEED LIMIT FROM 50 KM/H TO 40 KM/H

This effort involves reducing speed limits to 40 km/h on all local roads and in green neighbourhoods. The speed limits on arterial roads will generally remain unchanged, except on such segments as along *Rue Sainte-Catherine* in downtown Montréal, which may be subjected to reduced speeds, depending on the period, type of activity, or concentration of pedestrians. Speed reductions on certain arterial roads could also be considered by the *bureau de la sécurité des déplacements* [office of travel safety] for certain particularly sensitive and at-risk sectors.

The impact of this initiative on motorists' travelling times will be small compared to the benefits it brings to the environment and to the safety of Montréalers. This initiative will help reduce the chance of accidents and the seriousness of injuries. A pedestrian struck by a vehicle moving at 50 km/h stands a 70% chance of dying. This figure drops to 25% if the vehicle is travelling at 40 km/h.



Certain boroughs already enforce this speed limit and others are in the process of adopting new by-laws on posted speeds. To harmonize this new regulation and provide one all-encompassing regulation rather than a maze of different ones across the island, Montréal will ask the Government of Québec to amend the *Code de la sécurité routière* [Highway Safety Code] accordingly.

➤ ENHANCING SAFETY IN CONSTRUCTION ZONES

Montréal will develop a set of measurements and tools to make construction zones (both on and off the street) safe for pedestrians and bicyclists at all times and to ensure uninterrupted access past such areas. This project will also help reduce the risk of accidents by motorists. Within the short term, actions will be taken to:

- include master specification standards on construction site signage and safety amenities in calls to tender for road work;

- provide a procedure for the issuance of obstruction permits by the boroughs and the reconstituted municipalities;

- consider modifying fines, if appropriate;

- add or amend standards to provide greater consideration to the maintenance of pedestrian and bicycle routes within the urban context;

- hire and train inspectors in the boroughs and the reconstituted municipalities to ensure compliance with obstruction permits;

- in conjunction with the *Régie du bâtiment du Québec*, revise the Construction Code to bolster requirements for protecting the public in the vicinity of construction sites and adjust information to and training of inspectors and partners accordingly;

- develop a “clean construction site” code that could result in memorandums of understanding between Montréal and its construction industry partners.

These efforts target:

- management of the movement of pedestrians and bicyclists at construction sites;
- management of the movement of people with reduced mobility at construction sites;
- maintenance of public transit services;
- reduced overflow of car traffic into residential and *green neighbourhoods*;
- reduced number of accident victims in the vicinity of construction sites;
- greater public support for Montréal’s road-related initiatives.

Since 2007, Montréal has required contractors to comply with special provisions to protect pedestrians in the vicinity of such major project construction sites as roadwork on *Boulevard Saint-Laurent*.

2.4 CHANGING BEHAVIOUR

Far too many violations of the *Code de la sécurité routière* [Highway Safety Code] are committed on Montréal’s roadways. SAAQ studies show that:

- more than one out of two drivers fails to comply with city speed limits;
- one out of four motorists says that he frequently or very frequently, races through orange lights;



- 28% of all pedestrians do not always comply with traffic lights;
- 45% of pedestrians questioned said they jaywalk.

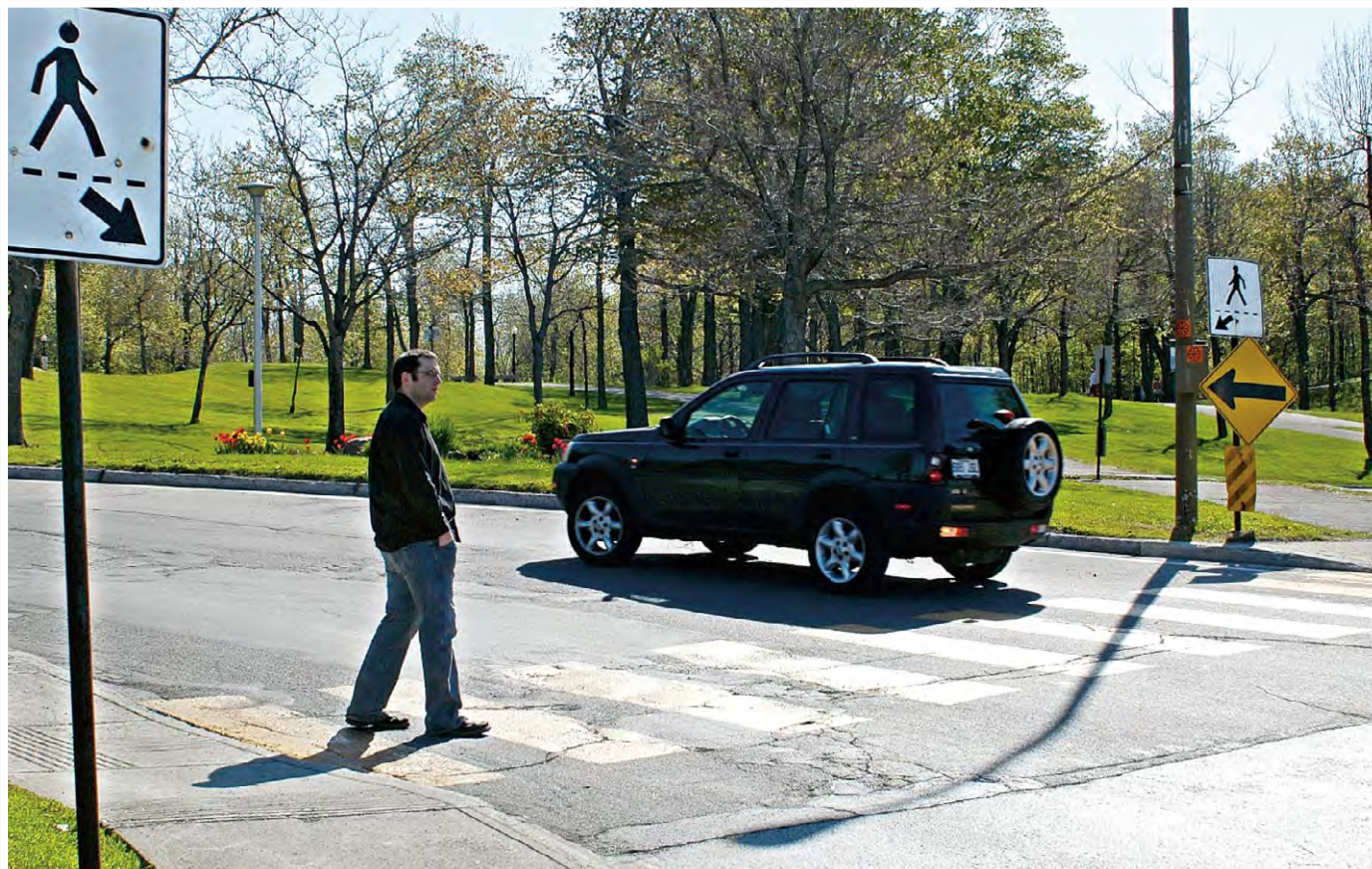
Lack of attention, distraction and failure to comply with the *Code de la sécurité routière* [Highway Safety Code] are often cited as contributing factors:

- in 2005 in Montréal, 4,542 people were victims of a collision caused by lack of attention or a distracted driver;
- going through a red light or driving at reckless speeds is recognized as the primary contributing factor in 20% to 25% of all accidents.

Such violations increase the risk of accidents. Montréal will take further action to modify this kind of behaviour.

> STEPPING UP POLICE PRESENCE TO ENSURE COMPLIANCE WITH THE *CODE DE LA SÉCURITÉ ROUTIÈRE* [HIGHWAY SAFETY CODE]

In 2006, Montréal hired 133 new police officers assigned to travel safety. The presence of these new officers increases the real and perceived risk of being ticketed and encourages road users to comply with the *Code de la sécurité routière* [Highway Safety Code]. The SPVM [City of Montréal Police Department] is currently



reorganizing its neighbourhood police stations to boost their ability to respond and to increase their presence in the field.

➤ **BANNING CELLPHONE USE AT THE WHEEL**

Driving a car requires the driver's full attention, particularly in an urban environment involving ever-changing speeds, movements and conflicts. Lack of attention and distraction are recognized as accident risk factors. Montréal supports the introduction of new legislation aimed at banning cellphone use at the wheel and supports *Loi modifiant le Code de la sécurité routière* [Act to Amend the Highway Safety Code] and the *Règlement sur les points d'inaptitude* [Regulation respecting demerit points], adopted by Québec's National Assembly on December 12, 2007. This statute forbids a driver from using a hand-held cellphone while at the wheel and imposes fines and demerit points for doing so.

➤ **CONDUCTING CAMPAIGNS TO ENHANCE AWARENESS OF THE CODE DE LA SÉCURITÉ ROUTIÈRE [HIGHWAY SAFETY CODE]**

To promote compliance with the *Code de la sécurité routière* [Highway Safety Code] and encourage more courteous conduct among pedestrians, bicyclists and motorists, Montréal will step up awareness campaigns and police surveillance. To enhance their effectiveness, both operations will be conducted simultaneously based on comprehensive strategies and with the participation of all partners concerned (municipalities, boroughs, the SAAQ, the MTQ, the *Direction de santé publique de Montréal*,

school boards, *CAA Québec*, etc.). These efforts will seek to modify behaviour that poses a risk to the public and to achieve long-term social support for compliance with the *Code de la sécurité routière* [Highway Safety Code] and on sharing the roadway.

In addition to organizing ongoing control and prevention activities, Montréal will carry out several campaigns to heighten public awareness and to make travel safety a societal issue. Montréal will conduct two pedestrian safety campaigns in 2008 and initiate a campaign targeting bicyclists and motorists to encourage behaviour conducive to a better sharing of the roadway. The *bureau de la sécurité des déplacements* [office of travel safety] will be responsible for planning these campaigns with the Government of Québec.

➤ **DEPLOYING PHOTO RADAR**

The photo radar experience has been positive for several Canadian provinces and European nations. Montréal is considering this system as a means of encouraging drivers to comply with speed limits. Not only does this kind of automated equipment permit ongoing monitoring of problem sites, but works like a police presence to increase motorists' real and perceived risk of being ticketed. While such equipment does not replace the presence of officers in the field, it does supplement their operations.

On November 14, 2007, Québec Minister for Transport Julie Boulet announced the tabling of a *Projet de loi modifiant le Code de la sécurité routière* [Bill to amend the Highway Safety Code] and the *Règlement sur les points*

d'inaptitude [Regulation respecting demerit points]. This bill, which was adopted by Québec's National Assembly on December 12, 2007, proposes the implementation of a pilot project to install red light cameras and photo radar systems at traffic signals. Deployed in some 15 sites in Québec at which accidents have been due to recurring problems of excessive speed and failure to stop at red lights, the pilot project will continue for 18 months and be reviewed by the National Assembly after 12 months.

Montréal supports the Government of Québec in its implementation of this pilot project and assures its cooperation, particularly with respect to deployment sites located within the agglomeration. Since this initiative deserves adequate assessment, Montréal will consider what impact these tools have on travel safety within the island. In conjunction with the Government of Québec, Montréal will establish the process for installing automated systems. In particularly sensitive areas of the island, such as *Boulevard Notre-Dame*, there is every reason to believe that this initiative will boost user safety, while reducing various annoyances associated with high-speed traffic (noise, environmental impact, etc.).

Through its *bureau de la sécurité des déplacements* [office of travel safety], Montréal will also simultaneously consider the set of possibilities represented by new automated control technologies.

TABLE 10 | Cost of Projects Promoting Safe Travel and Quality of Life (in thousands of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	Over 10 years	TOTAL	
Creating green neighbourhoods	To be determined					
Modifying street designs	5,200	30,000	30,000		60,000	450
Changing behaviour	700					200
Setting up the bureau de la sécurité des déplacements [office of travel safety]						1,450
TOTAL	5,900	30,000	30,000		60,000	2,100

3. SUMMARY

Montréal is taking a new approach to making transportation safer within the island. Its projects are part of a *zero accident* vision designed to prevent road accidents over the long term. The vision's first target is a 40% reduction in accidents within ten years. This effort will focus on increasing safety on the road system, starting with better protection for pedestrians and bicyclists and ensuring that all users comply with the *Code de la sécurité routière* [Highway Safety Code]. This 40% target will be reassessed and reviewed as part of the five-year follow-up and adjustment of the Plan.

D | Transportation Supporting Economic Development and the Shipment of Freight

Transportation in Support of Montréal's Economy

1. STRATEGIC ORIENTATIONS

GREATER MONTRÉAL IS BY FAR QUÉBEC'S MOST IMPORTANT POWERHOUSE OF ECONOMIC ACTIVITY, RESPONSIBLE FOR MORE THAN HALF THE PROVINCE'S GROSS DOMESTIC PRODUCT. THE MANUFACTURING, COMMERCIAL, FINANCIAL, ACADEMIC AND CULTURAL PERFORMANCE OF THE METROPOLITAN REGION CLEARLY ATTESTS TO ITS ECONOMIC VERSATILITY. THESE SECTORS GENERATE SUBSTANTIAL TRADE WITHIN QUÉBEC, WITH THE REST OF CANADA AND ABROAD.



Montréal is also a North American shipping hub that enjoys a strategic position within the heart of the St Lawrence/Great Lakes trade corridor, by far Canada's most important trade route. This function requires an effective and well-integrated transportation system with an optimal use of such strategic transportation infrastructure as the port, the airports, the rail system and the highways. Better conditions for accessing facilities and for achieving intermodal integration will support trade between Greater Montréal and the rest of the world. These principles are consistent with those of Montréal's *Master Plan*.

The *Transportation Plan's* proposals seek to support Montréal's competitiveness and attractive force by creating conditions conducive to existing businesses and new investment, while protecting the population's peace, quiet and quality of life. These proposals take globalized trade, new production methods and an anticipated sustained growth of trade¹⁸ into account.

As part of a strategy that combines economic performance, GHG reduction and quality of life, Montréal supports intermodal shipping. While it is well recognized that rail transportation is the mode best suited to long-haul carriage, Montréal's preference for intermodal transportation recognizes the essential role that trucking plays, particularly for local shipping and certain transportation markets, as well as the challenges that this mode poses in terms of protecting residential environments.

To issue an appropriate assessment of the situation and optimize the freight distribution system, Montréal reiterates the importance of possessing an excellent knowledge of all freight distribution movements and drawing up



an adequate portrait of freight transportation throughout the region. *Origin-Destination* surveys are well suited to establish this portrait. For this reason, Montréal is encouraging the Government of Québec to set up all means of developing strategic planning tools and is itself committed to actively participating in this effort.

With the great proliferation of international trade, the shipping industry is experiencing uninterrupted growth that is a source of constant challenge. In addition to competition between businesses and regions, the industry is also under pressure from clients seeking greater performance, as well as communities demanding that shipping activities form a better fit with their environments. The shipping industry is undergoing major change as a result of these competitive forces and cities are interested in developing a better understanding of the issues and finding the necessary solutions.

Because shipping is an issue that transcends administrative borders, it must also be considered from a metropolitan and national perspective. That is why Montréal has asked the *Communauté métropolitaine de Montréal* (CMM) and the *ministère des Transports du Québec* (MTQ) to participate in this exercise. Montréal will continue to work with stakeholders in this industry by participating in the work of

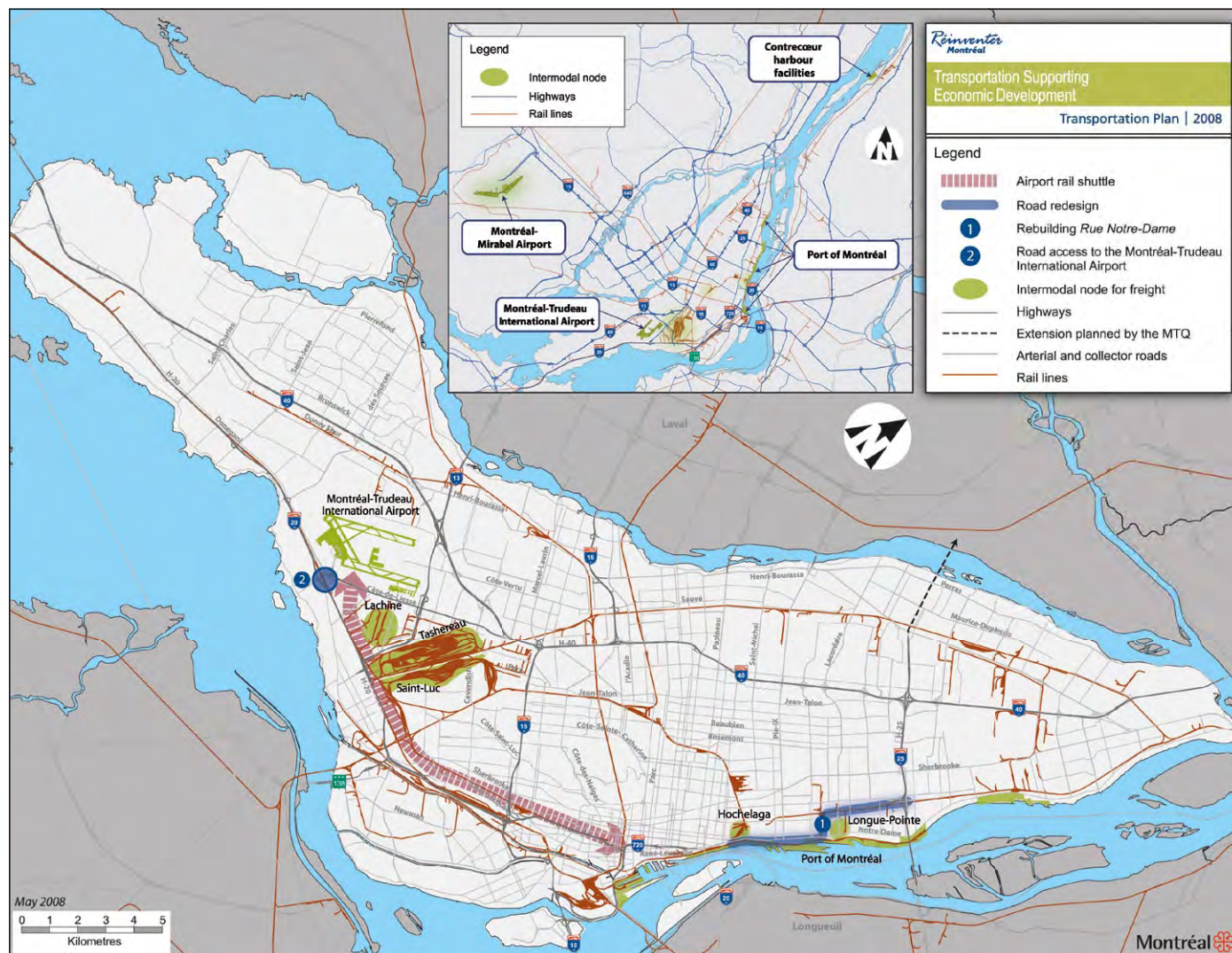
the *Comité interrégional pour le transport des marchandises* [interregional committee for freight shipment] (CITM), which is responsible for reinforcing Greater Montréal's position as a shipping hub. The CITM is participating in a project sponsored by the industry-government Ontario-Québec Continental Gateway and Trade Corridor organization, aimed at developing trade along the St Lawrence/Great Lakes corridor.

Montréal is also equipped with a wide range of intercity transportation services for people. The quality and connections offered by these services are well suited to the mobility needs of different customer groups. Such services are also important to Montréal's influence and to its role as a centre of tourism.

2. PROPOSED ACTIONS

Montréal has decided to support economic activity primarily through initiatives targeting increased land access to strategic infrastructure (Figure 18). Improvements to the road system are at the top of this list. Such efforts, which are also consistent with the *Transportation Plan's* other objectives, will meet the needs of the transportation industry and of all other economic activities that depend on it.

FIGURE 18 | Strategic Infrastructures



Although port and rail systems do not fall under municipal authority, Montréal wants to ensure that their infrastructure is durable. Montréal seeks through its land-use planning efforts to develop a better coexistence between the port and rail systems and other urban functions.

2.1 ENHANCING LAND ACCESS TO THE PORT OF MONTRÉAL

Montréal's history is closely linked to that of its port, which has not only become one of the world's busiest inland ports over the years, but one of the main maritime gateways to North America. The Port of Montréal handled more than 26 million tonnes of merchandise in 2007. Almost half of these goods were containerized, its most competitive market by far. Montréal's approximately 22 km of harbour facilities stand out for their versatility and their excellent modal integration, particularly with respect to road and rail shipment. These facilities are so competitive that Montréal has become a North American market leader, rivalling America's East Coast ports.

The Montréal Port Authority (MPA) instituted a *Development plan for 2020* to triple handling capacity and double container volume. The current container facilities are operating at close to maximum capacity and will be expanded, while other development phases will affect harbour facilities in Montréal-Est and Contrecoeur, on the South Shore.

This plan contains a proposal to overhaul its marine terminal completely so that it can grow in the large cruise ship market.

Montréal recognizes the economic impact of the port and its role as a pillar of development for island-wide freight shipment and seeks to facilitate the land access on which the competitiveness of these facilities largely depend.

Montréal is, accordingly, now in the process of improving safety measures along the eastern portion of *Rue Notre-Dame*. This redesign of the segment running from *Rue Dickson* to Highway 25 will affect all of the main entrances to the port. These entryways will be improved, to permit safer and unimpeded truck movements.

Port operations generate some 2,000 truck trips each day. For reasons of safety, access to and coexistence with the urban environment, Montréal will substantially boost road access, while protecting neighbouring residential communities, through such actions as:

> REBUILDING RUE NOTRE-DAME⁹

The plan to upgrade *Rue Notre-Dame* is also designed to spur economic development of the East End. Complete reconstruction of the roadway between the Ville-Marie Expressway and *Rue Dickson* will boost performance and enable this arterial road, which currently supports truck traffic similar to that of a highway (5,000 to 8,000 units per day, depending on the segment), to accommodate heavy vehicles more effectively. The reconstruction will also provide better connections with the highway system, thereby keeping heavy traffic out of local neighbourhoods.

The planned developments take into account the presence of harbour facilities that make Montréal a shipping hub and a key maritime gateway to the Atlantic Coast. Port activities are constantly on the rise, particularly with respect to containerized freight, and generate spin-offs of some \$2 billion per year throughout Montréal's economy. The port has expressed its intention to further develop its activities under a recently

released plan. The plan to rebuild *Rue Notre-Dame* serves as an appropriate response to the scheduled development.

The project has also been designed to boost values of vacant industrial sites by improving access to them, particularly by extending *Boulevard de L'Assomption*.

> PRESERVING THE PHYSICAL AND FUNCTIONAL INTEGRITY OF THE HARBOUR FACILITIES AND THEIR RAIL ACCESS

In view of the fact that 55% of the containerized traffic is transhipped to rail lines, which reduces the need for trucks on city streets, Montréal supports the port's rail service and is committed to working with the MPA and the railways to preserve the port's rail access and rights-of-way.

This proposal will help the port maintain its competitiveness in serving distant North American markets. Montréal also intends to discuss the possible elimination of the Old Port's rail spur as part of a land development project with the appropriate agencies.

2.2 SUPPORTING SUSTAINED GROWTH OF THE AIRPORT SYSTEM

The region's two airports (Montréal-Trudeau and Mirabel) serve as links between Montréal and the rest of the world. With over 12 million passengers and nearly 300,000 tonnes of containerized freight in 2007, plus more than \$1 billion in investments since 2000, Montréal's airport system is enjoying constant growth. Traffic of 16.4 million passengers is forecast for 2016. Montréal supports the growth of Montréal-Trudeau International Airport and is participating with other partners in:



**> CREATING A RAIL SHUTTLE BETWEEN
MONTRÉAL-TRUDEAU INTERNATIONAL AIRPORT
AND DOWNTOWN MONTRÉAL²⁰**

This project would provide local and foreign travellers with a quick and comfortable transportation alternative. For Montréal, the rail link takes priority over plans to improve road access to the airport. The service will be tailored to the specific needs of tourists and business travellers by ensuring them a satisfying experience in their discovery of Montréal. Public transit service to the airport remains very limited at the present time and relies primarily on heavily congested roads. Targeted travel time between downtown Montréal and the airport would be about 20 minutes on the planned rail shuttle. The airport renovation project has already included the creation of a train station in its planning.

Montréal agreed in 2007 to conduct project pre-studies in conjunction with the *Aéroports de Montréal* (ADM), the *Agence métropolitaine de transport* (AMT), the CMM, the MTQ and Transport Canada. In early 2008, the partners launched a prefeasibility study of different rail routes, including one connecting to the Lucien-L'Allier Station, to compare it with the route connecting to Central Station, as indicated in the *Master Plan*. The outcome of this effort will be released in the fall of 2008.

Work on this metropolitan development project will be completed in 2014. According to studies conducted in 2005, costs could range from \$475 million to \$575 million, depending on the selected scenario. The prefeasibility study will serve to finalize the cost estimate for the route that will be selected.

> REDEVELOPING THE DORVAL INTERCHANGE²¹

Although the rail shuttle project is deemed a priority, reconstruction of the Dorval interchange will ensure uninterrupted highway links and their integration into the local road system. It will also enhance the appearance of one of the most important gateways to Montréal and provide the airport with better and more user-friendly access. The project will also serve to redefine major business sectors with development potential. This reconstruction work will provide an opportunity to redesign the local street grid, integrate bus and commuter train services and consider the needs of pedestrians and bicyclists. The project seeks an overall improvement of land access to the airport, while creating a true genuine intermodal hub.

2.3 PRESERVING THE STRATEGIC ROLE OF MONTRÉAL'S RAIL SYSTEM

Greater Montréal is a large industrial and commercial centre that benefits from the presence of two trans-continental railways that ensure good access to almost all North American markets. The port's competitiveness is also due to the presence of the rail network. Montréal seeks to preserve its excellent position in the rail system. Montréal is therefore committed to:

> PRESERVING THE PHYSICAL AND FUNCTIONAL INTEGRITY OF RAIL LINES WITHIN THE ISLAND

Urban rail lines represent “non-renewable assets” that are of great value for the shipment of freight, and for passenger and commuter train service. Harmonious coexistence between the rail system and adjacent urban activities has proved

an essential guarantee for maintaining the rail system. To achieve this goal, negotiations must continue with the higher levels of government on alleviating and reducing problems related to rail transportation.

> IMPROVING PASSENGER TRAIN SERVICE ON THE MONTRÉAL-TORONTO LINE

Montréal, which hosts the head office of Via Rail, Canada's leading provider of passenger train services, is located in the Québec City-Windsor corridor, the nation's biggest rail market and at the junction of lines serving the Maritime Provinces and the Northeastern United States. Some two million passenger trips each year are made to or from Montréal and, in most cases, Toronto, Québec City, Ottawa and Halifax. Montréal believes that it is important to fortify its intercity links, particularly to Ontario's capital.

This line is the biggest in Canada and its performance is often subject to priority freight convoys. Montréal has asked the Government of Canada, Via Rail and both of the major rail systems to ensure that passenger trains improve travel time and receive priority treatment. Montréal is, accordingly, supporting the initiative by the governments of Canada, Québec and Ontario to update feasibility studies on a high-speed train line between Québec City and Windsor.

Since two major lines run through this corridor, Montréal recommends that one be reserved for passenger trains. Service increased dramatically on the Montréal-Ottawa line, for example, once Via Rail acquired part of the rail line between the two towns. Upgrades to infrastructure and grade crossings permitted higher speeds and better on-time performance.



2.4 ONGOING IMPLEMENTATION OF INITIATIVES TO SUPPORT INTERCITY BUS SERVICE

Intercity bus service is supported by relatively well-developed highway and arterial systems. These buses are, however, subject to the same constraints as general traffic, particularly along approaches to Montréal. Such vehicles are generally permitted to use reserved bus lanes (other than reverse reserved bus lanes) within Greater Montréal.

The Central Bus Station is downtown Montréal's intercity bus depot. It is linked to the subway system's key transfer point, the Berri-UQAM station (lines 1, 2 and 4). Buses carry 1.9 million travellers each year between Montréal and key destinations within Québec, Ontario and the Northeastern United States.

Certain actions in support of public transit (creating priority measures, such as bus lanes) will benefit intercity buses entering the metropolitan region.

2.5 ENSURING AN EFFICIENT FLOW OF FREIGHT BY TRUCK

Industry and trade are highly dependent on trucks to provide them with supplies and distribute their goods. Trucks play a key role in all intermodal transportation chains, usually by providing local service.

However local and long distance trucks both often experience delays due to Greater Montréal's chronic highway congestion. Numerous issues, such as gaps in the highway system, the urban location of harbour facilities and the incomplete trucking network, hinder the efficient flow of these vehicles.

The Island of Montréal is the nerve centre for Québec's trucking activity. A dense industrial and commercial presence, plus the fact that Québec's highway system converges on Montréal, have generated substantial heavy vehicle traffic on the island. One survey revealed that 63% of Québec's heavy vehicles enter metropolitan Montréal, and most (five out of six) use the island's road system²².

Such activity can pose a real hazard to living environments if left unregulated. Montréal is seeking with its trucking network to strike the fairest possible balance between quality of life and the needs of consumers and industries. The trucking network is still Montréal's preferred means of ensuring a smooth and efficient flow of traffic in local neighbourhoods. Montréal is therefore committed to:



➤ EXPANDING THE TRUCKING NETWORK THROUGHOUT THE MONTRÉAL AGGLOMERATION²³

This project is designed to create a complete trucking network throughout the agglomeration as part of a centralized planning process. Through this effort, Montréal recognizes the importance of and necessity for the network to be comprehensively managed and coordinated across the agglomeration. The project accordingly recommends that the network be placed under the agglomeration's authority. The trucking network will encompass and harmonize all municipal and borough traffic by-laws pertaining to trucks and tool vehicles. This effort will make it possible to assess the situation in the field and make any necessary modifications. A new trucking map will

be produced for the entire agglomeration. The new network will include an island-wide truck parking policy and harmonize the issuance of road permits for oversized vehicles throughout the island.

Extending and harmonizing the trucking network throughout the agglomeration would make it easier to provide uninterrupted truck routes, to forge links between certain key sectors, to facilitate service to industrial and commercial zones and to ensure standard signage. Furthermore, as the *Master Plan* also describes, the presence of a trucking network will preserve the peace and quiet of residential neighbourhoods. By reducing the proportion of municipal roads used by trucks, it will also help prevent conflicts from arising between residential and industrial neighbourhoods.

Montréal will also monitor vehicle weights and sizes and delivery areas and schedules within certain defined perimeters, such as downtown Montréal. These actions are based on the assumption that changes will be made to Québec's laws and regulations.

> INCREASING SURVEILLANCE AND MONITORING BY SAAQ HIGHWAY CONTROLLERS AND MONTRÉAL POLICE OFFICERS

Contrôle routier Québec, an agency of the *Société de l'assurance automobile du Québec* (SAAQ), and the SPVM [City of Montréal Police Department] ensure compliance with all rules of the road applicable to the shipment of freight on the Island of Montréal.

Contrôle routier Québec uses special equipment throughout the island to protect Montréal's road system. Mobile monitoring stations serve the Island of Montréal, while seven permanent monitoring stations, equipped with scales, are located just outside the island. The SAAQ also plans to invest over the next few years in the construction of three more permanent monitoring stations equipped with leading-edge equipment, to make up for certain deficiencies in the island's monitoring equipment.

Some major problems do seem to exist, however, in enforcing various aspects of truck transportation. That is why Montréal is committed to increasing monitoring and surveillance of truck shipping on the island. Montréal will also ask the Government of Québec to improve its monitoring measurements as well. In addition to ensuring and protecting the population peace and quality of life through compliance with regulations, these measures will target certain potential issues in the trucking network and provide a quick response to eliminate them.

> STUDYING NEW WAYS OF DISTRIBUTING FREIGHT

The leading North American metropolises are subject to important structural changes in how they distribute goods. Delocalization of the manufacturing industry, new logistical and distribution techniques and intermodal transportation are modifying transportation services throughout these cities. These economic trends are already at work in Greater Montréal where we can already see a distribution and transshipment facilities gradually being spread over a wider area owing to the expected completion of a beltway.

This redeployment of the distribution system is part of a metropolis-wide planning process in which the CMM and the CITM are asked to participate. This exercise will consider the stake of businesses with transcontinental supply chains and Montréal's strategic position as a hub in this system. This kind of exercise requires an in-depth and detailed understanding of freight distribution movements. *Origin-Destination* surveys have proven to be suitable tools for producing this profile.

> OPTIMIZING URBAN TRUCK TRAFFIC

A better knowledge of new distribution practices would permit a better understanding of urban truck traffic. With its metropolitan partners, Montréal intends to evaluate various initiatives aimed at letting off pressure on the road system, protecting highway and street facilities, avoiding various public restrictions and annoyances and ensuring peace and quiet for residents. The creation, for example, of outlying intermodal centres could help to consolidate freight prior to delivery in the metropolitan region to permit the use of smaller trucks for such sensitive areas as historic and densely populated sectors.

2.6 REDUCING THE RISK OF SHIPPING HAZARDOUS MATERIALS BY ROAD

The agglomeration is a hub for the shipment of hazardous materials by road. Large quantities of hazardous materials that pose potential risks to the public, to the environment and to infrastructure, depart from and travel to the island each day along its roadways.

Six percent of all truck travel in the metropolitan region involves the shipment of hazardous materials²⁴. According to MTQ data, few road accidents involving a truck carrying hazardous materials occurred on the island from 1999 to 2002. Forty-three percent of such accidents during that period took place on the highway system, and 57% on the municipal road system²⁵. The data also show that truck accidents on the municipal system that involved hazardous materials occurred primarily during morning rush hours.

A quantitative assessment of the consequences of road accident scenarios involving hazardous materials²⁶ revealed that, while unlikely, such accidents could have a major impact on the population, on infrastructure and on the environment, as well as on emergency service response abilities.

The transportation of hazardous materials is permitted on all of the island's roads just like any other kind of freight shipment, except for the L.H.-La Fontaine and Ville Marie tunnels, in accordance with the *Règlement sur le transport des matières dangereuses* [MTQ's transportation of dangerous substances regulation]. For purposes of public safety, however, Montréal is equipped with a hazardous substance response team²⁷ and response plans in the event of an accident. The municipal administration is currently taking

a more prevention-oriented approach and plans to review certain practices that will reduce risk at the source and promote peace and quiet in residential neighbourhoods.

Montréal accordingly intends to:

**> INCLUDE CONSIDERATION FOR
THE TRANSPORTATION OF HAZARDOUS
SUBSTANCES IN THE MONTRÉAL
AGGLOMERATION'S TRUCKING NETWORK**

This project is designed to include consideration for the transportation of hazardous substances in the trucking network systematically, so as to provide a comprehensive vision on the shipment by road of goods to users. This project would involve the production of a hazardous substance map listing certain prohibitions and stipulating certain authorized routes for the transportation of hazardous materials.

To ensure consistency in the various routes permitted for the transportation of hazardous materials, this project must be part of a larger framework. The project should, accordingly, be carried out in close conjunction with partners from the trucking industry, as part of the overall regional plan pertaining to the shipment of freight within the CMM.

**> SETTING TIME SLOTS FOR THE TRANSPORTATION
OF CERTAIN HAZARDOUS MATERIALS**

Montréal has committed itself to consulting with the transportation and the hazardous waste site industries, along with industry stakeholders, by June 2009, with respect to confirming shipment by road of certain hazardous materials at certain times of day in sensitive and at-risk sectors of the agglomeration.

Such a restriction would ensure greater safety for the island's residents, environment and infrastructure, by reducing the risk of road accidents involving hazardous materials and the consequences of such incidents.

To ensure overall consistency, this project must be part of a comprehensive outlook and a multidisciplinary context. Montréal therefore wants this project to be carried out in conjunction with different partners from the industry, particularly within the scope of the CITM's activities.

3. SUMMARY

The proposed actions are aimed at supporting Montréal's economic activities. Some of these efforts will fall directly under the authority of the agglomeration. That would be the case of changes to the municipal road system, which is the primary point of access to the major port, rail and air facilities used for the national and international human and freight transportation.



Innovation: Toward Better Services for Montréalers

THE TRANSPORTATION SECTOR IS TEEMING WITH OPPORTUNITIES FOR TECHNOLOGICAL INNOVATION. SUCH INNOVATIONS CAN HELP INCREASE THE MOBILITY OF MONTREALERS, PARTICULARLY THROUGH:

- optimal management of the road system;
- improved public transit service;
- more information for users;
- choices of routes or modes, based on real-time information transmitted to users.

Montréal and its partners are aware of the important issues involved in this process and have taken the lead in employing different technologies available in various fields (see box).

Although Montréal is already equipped with many intelligent transportation system (ITS) applications, it seeks to pursue its efforts in this area. Montréal is, accordingly, committed to:

Many ITS-related projects are underway, such as the traffic signal upgrade (City), the parking terminals, the public transit ticket sale and collection system (*Société de transport de Montréal*) and the Montréal system of bus priority measures.

> ENSURING A TECHNOLOGICAL WATCH ON TRANSPORTATION

Montréal will continue to ensure a technological watch and focus its attention on the following fields of application:

VEHICLES

- Buses (clean technology);
- Municipal fleet vehicles (clean technology);
- Taxis (navigation, clean technology).

MAINTENANCE

- Optimization of snow removal and de-icing operations;
- Garbage collection (clean technology);
- Road marking (development of permanent products).

NETWORK MANAGEMENT AND USER SAFETY

- Surveillance systems ensuring compliance with public transit schedules;
- Red light cameras;
- Photo radar;
- Parking terminals (time stamps);
- Recharge stations for electric vehicles;
- Real-time traffic signal management;
- High-occupancy vehicle lanes;

- Real-time information for road and public transit users;
- Traffic management centres;
- Detection systems;
- System for the sale and collection of public transit tickets;
- Management of public transit riders;
- Tracking of public transit vehicles;
- Public transit safety;
- Surveillance of road traffic.

An annual budget of \$50,000 has been earmarked for ensuring a technological watch on these issues.

> ADOPTING A PLAN ON INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

The expression “intelligent transportation systems” (ITS) designates a vast range of technologies used in the transportation field to make networks operate more securely, more efficiently, more reliably and more ecologically, without necessarily having to make significant changes in the existing infrastructure²⁸.

Intelligent transportation systems are used to improve management and operations, as well as user services.

The range of technologies considered will include all transportation telematics applications, including on-board and fixed base electronic systems, telecommunications, information and databases, control systems and e-payment systems²⁹.

An ITS plan will help optimize Montréal's investments and ensure maximum spin-offs due to the use of new technologies in the field of transportation.

Montréal wishes through this effort to be a leader in this field, particularly in terms of research and development and to assert its role in the development of integrated ITS technologies throughout Québec, North America and the world.

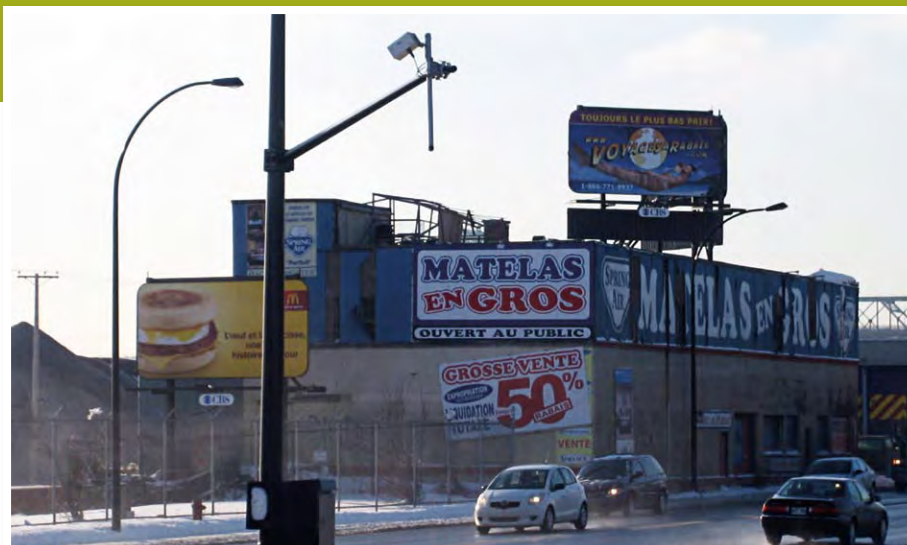
Transportation is a constantly evolving field. Montréal must adopt an ITS plan if it wishes to remain competitive with other major cities in North America and abroad. A budget of \$100,000 has been earmarked for developing this plan, which Montréal is to table in 2010.

> SETTING UP A LEADING-EDGE LAND TRANSPORTATION CLUSTER

Montréal's economic development strategy supports development of the human and freight transportation sector and seeks to promote different developing markets. Montréal will accordingly assess the feasibility of setting up an industrial cluster dedicated to the transportation sector, particularly with respect to leading-edge land transportation.

The sectors envisioned for this industrial cluster are:

- new methods of propulsion and new fuels;
- information technologies and telecommunications;
- vehicle design;
- production of transportation equipment.



An advanced land transportation industrial cluster for the *Communauté métropolitaine de Montréal* (CMM) would represent a group of emerging technologies with high growth potentials. An industrial cluster in this sector would permit:

- greater consensus building among all stakeholders;

- positioning of Greater Montréal;
- ensuring project development with the appropriate funding sources;
- supporting the initiatives in order to achieve the objectives of the *Kyoto Protocol*.

Creation of the advanced land transportation industrial cluster will require an initial investment of some \$100,000. First and foremost, this effort will represent the very initial phase of a project that is designed to become far more ambitious. This first phase will consist of bringing together the stakeholders considered for the purpose of setting up an action plan to maximize spin-offs ripple effects in this field within Greater Montréal.

An annual budget of \$500,000 has been earmarked for operations of the advanced land transportation industrial cluster. The higher levels of government will be asked to contribute financially to this project so that Montréal can become an international leader in this up-and-coming field, with a future market estimated at several billion dollars.

> HELPING TO SET UP THE OBSERVATOIRE SCIENTIFIQUE AND FORUM QUÉBÉCOIS DE LA MOBILITÉ DURABLE [SCIENTIFIC OBSERVATORY AND QUÉBEC FORUM ON SUSTAINABLE MOBILITY].

Montréal, in partnership with the *Institut d'urbanisme* of the *Université de Montréal* [Montréal University], the *Association du transport urbain du Québec* and the *Union des municipalités du Québec* [Union of Québec municipalities], will help set up the *Observatoire scientifique* and the *Forum québécois de la mobilité durable* [scientific observatory and Québec forum on sustainable mobility]. The observatory and forum will serve as a venue for deliberation and research that will compile information from throughout the world and develop new strategies in the development of sustainable mobility and city development planning.

> THINKING AHEAD ABOUT A POSSIBLE PETROLEUM SHORTAGE

Governments, businesses and the public plan and make decisions each day based on the assumption that petroleum will always be available at a reasonable cost everywhere on earth. Over the past few years, however, much evidence has been presented that petroleum consumption will peak in the near

future, followed by a steep decline. When we consider the fundamental role petroleum plays in different spheres of activity, the consequences of such an event are of great concern. Even the most optimistic predictions on this topic reveal that the world has very little time to adapt to this situation and to modify the behaviour and lifestyles of modern societies, particularly with regard to transportation. For this reason, Montréal, like other cities such as Portland, is committed to thinking ahead about this issue so that it can reduce its exposure to the price hikes and other implications of "peak oil."



Costs and Funding

EXISTING FUNDING FOR THE TRANSPORTATION SYSTEM

THE *TRANSPORTATION PLAN*'S ASSESSMENT OF THE MUNICIPAL ROAD SYSTEM, BRIDGES, TUNNELS AND OTHER ASSETS REVEALS THAT MAJOR INVESTMENTS MUST BE MADE IN THIS INFRASTRUCTURE. **THE PLAN HAS DEMONSTRATED THAT OUTLAYS OF MANY BILLIONS OF DOLLARS ARE REQUIRED SIMPLY FOR PUBLIC TRANSIT.** THE *TRANSPORTATION PLAN*'S PUBLIC CONSULTATION SESSIONS THAT WERE HELD IN AUGUST AND SEPTEMBER OF 2007 ILLUSTRATED THAT **FUNDING SHOULD BE PARTIALLY GENERATED WITH THE HELP OF NEW REVENUE SOURCES PROVIDED BY TRANSPORTATION SYSTEM'S USERS AND THAT SUCH SOURCES SHOULD BE STABLE AND PERMANENT.** BEFORE CONSIDERING THESE NEW SOURCES, WE SHOULD REVIEW HOW GREATER MONTRÉAL'S TRANSPORTATION SYSTEM IS CURRENTLY FUNDED.

The funding of Greater Montréal's transportation system is quite complex. The provincial and federal governments, the agglomeration, the *Communauté métropolitaine de Montréal* (CMM), the municipalities, businesses and public users are all responsible for helping to fund the system and to enjoy its benefits and spin-offs ripple effects.

Current funding mechanisms are generally organized in the following manner:

- the higher levels of government (the *ministère des Transports du Québec* [MTQ]) and the federal government (the Jacques-Cartier and Champlain Bridges Incorporated) shoulder full responsibility for the funding of capital expenditures for and operation of the **primary road system** (highways and bridges), out of consolidated government funds;
- Montréal assumes full responsibility for funding capital expenditures for and operations of the **local road system** (arterial roads, collector roads, local streets, bike paths, sidewalks and pathways) out of the consolidated fund that is drawn on property taxes. However, federal-provincial grant programs also help to fund infrastructure to different degrees;
- the Government of Québec's program of governmental assistance to public transit largely covers the funding of **capital expenditures for public transit** at the following general rates:
 - 50% to purchase city buses,
 - 75% to construct buildings and to create park and ride facilities and reserved lanes,
 - 75% to replace or repair rail-based systems (subways, trains and tramways),
 - 100% to build rail-based systems (subways, trains and tramways),
 - the remainder is absorbed by the organizing authority;
- the *Agence métropolitaine de transport* (AMT) pays for **regional public transit** operations by drawing on a fund supplied by regional sources (fuel tax and motor vehicle registration fees), assisted by municipal contributions and fare revenues, to pay for commuter train and metropolitan bus services. Under a 2007 agreement, the CMM's municipalities agreed to fund the "metropolitan subway deficit share," with the result that the agglomeration is no longer the only entity funding subway operations;
- more recently, a Canada-Québec agreement that was signed in 2005 provided for the transfer of a portion of the federal gasoline excise tax to municipal infrastructure work, including the water supply, sewage, local road and transit systems. The agreement provided for the federal government to spend \$1.3 billion on Québec as a whole over the five-year 2005-2009 period. This recurring revenue transfer is now permanent since the adoption of the 2008 federal budget and will stand at \$2 billion per year as of 2009-2010. Gasoline excise tax revenue is paid to the *Société de financement des infrastructures locales du Québec* (SOFIL);

- the Government of Québec also makes payments to SOFIL. Moreover, the municipalities contribute 15.5% of the total cost of the projects selected. An amount of \$504 million (\$411 million from the federal government and \$93 million from the provincial and municipal governments), or 23% of SOFIL's funding, has been earmarked for public transit and is distributed among the different public transit authorities, based on their respective ridership. An amount of \$365.7 million over five years has been set aside for the *Société de transport de Montréal* (STM);
- in 2006, the Government of Québec also added a major component to its public transit policy under its *Fonds vert* [Green Fund]. The new *Politique québécoise du transport collectif* [Québec public transit policy] includes a grant program to develop public transit services. The program pays half of the expenses incurred by such efforts. The program has earmarked a five-year \$120 million public transit budget for Québec as a whole and \$10 million for active forms of transportation and demand management.

PROPOSED PROJECT COSTS

The *Transportation Plan* proposes a new Vision oriented around public transit, active forms of

transportation and a far more sophisticated approach to demand management. It stands out in contrast to transportation philosophies that focus on increasing the use of cars.

The Plan describes 21 Development Programs, each consisting of projects that dovetail with this new Vision. All of the projects and operations resulting from the Plan have been the subjects of cost assessments based on existing information or parameters that are generally recognized in the transportation industry. **Their implementation will require substantial financial resources from the provincial and federal governments, the agglomeration, the CMM, businesses and public transit system riders.** It may be possible to fund some of the proposed projects through existing government programs.

OVERALL PLAN COSTS

All of the infrastructure projects propose under the *Transportation Plan* will require investments of some \$8.1 billion over a 20-year period. Appendix A details the costs of all of these projects.

Table 11 presents these costs by period for public transit, active transportation and safety, as well as for the road system and parking.

COST OF MONTRÉAL'S
21 DEVELOPMENT PROGRAMS

The 21 Development Programs will involve total capital expenditures of \$5.1 billion over ten years (Table 12). These costs will primarily serve in the implementation of public transit projects and active forms of transportation.

Costs were shared among the organizations concerned in accordance with the existing distribution of financial responsibilities, based on the assumption that existing sources of funding will be maintained and that Montréal will have access to new sources of funding.

NECESSARY FINANCIAL
CONTRIBUTIONS

A substantial financial effort will be required over a ten year period to permit the deployment and operation of the projects set out in these 21 Development Programs.

The financial requirements of the 21 Development Programs represent average annual capital expenditures and operating costs of some \$240 million, in addition to the existing agglomeration Council and City Council transportation budgets. Table 13 presents the average financial effort of the agglomeration and its partners for each five-year period.

TABLE 11 | Total Cost of the Plan's Projects by Major Category (in millions of \$)

	0-5 Year Period	5-10 Year Period	10-20 Year Period	TOTAL
Public transit and active transportation	1,760	2,240	2,720	6,720
Road system and parking	600	650	160	1,410
TOTAL	2,360	2,890	2,880	8,130

TABLE 12 | Capital Costs of the 21 Development Programs (*in thousands of \$*)

DEVELOPMENT PROGRAMS	CAPITAL COST			COST SHARING	
	0-5 Years	5-10 Years	Total 10 Years	Montréal Agglomeration	Partners
Development Program 1 Creating Tramways at the Centre of the Agglomeration	260,000	725,000	985,000	344,750	640,250
Development Program 2 Creating a Rail Shuttle Between Downtown Montréal and Montréal-Trudeau International Airport	550,000	0	550,000	0	550,000
Development Program 3 Upgrading Montréal's Subway System	0	1,140,000	1,140,000	285,000	855,000
Development Program 4 Extending Subway Lines in Eastern Montréal	170,000	0	170,000	0	170,000
Development Program 5 Upgrading STM Service to Boost Ridership by 8% in Five Years	220,000	160,000	380,000	140,000	240,000
Development Program 6 Promoting Carpooling, Carsharing and Taxi Service	-	-	-	-	-
Development Program 7 Increasing Public Transit Capacity in the Champlain Bridge-Bonaventure Corridor	90,000	30,000	120,000	90,000	30,000
Development Program 8 Creating a Bus Rapid Transit (BRT) System Running on Its Own Reserved Lane	55,000	70,000	125,000	0	125,000
Development Program 9 Establishing Bus Priority Measures along 240 Kilometres of Arterial Roads	30,000	30,000	60,000	60,000	0
Development Program 10 Developing Local Transportation Plans	-	-	-	-	-
Development Program 11 Rebuilding <i>Rue Notre-Dame</i>	300,000	450,000	750,000	250,000	500,000
Development Program 12 Creating the East End Commuter Line	300,000	0	300,000	0	300,000
Development Program 13 Doubling Montréal's Bike Path System Within Seven Years	66,000	42,500	108,500	65,500	43,000 ¹
Development Program 14 Implementing the <i>Pedestrian Charter</i>	33,550	0	33,550	33,550	0
Development Program 15 Enhancing the Pedestrian Character of Downtown Montréal and of the City's Central Districts	2,650	10,000	12,650	12,650	0
Development Program 16 Restoring the Appropriate Quality of Life to Montréal's Residential Neighbourhoods	-	-	-	-	-
Development Program 17 Enhancing Transportation Safety	30,000	30,000	60,000	60,000	0
Development Program 18 Maintaining and Completing the Island's Road System	127,000	173,000	300,000	230,000	70,000
Development Program 19 Facilitating Freight Shipment and Transportation in Support of the Economy	-	-	-	-	-
Development Program 20 Reviewing Governance	-	-	-	-	-
Development Program 21 Acquiring Means Equal to Our Aspirations	-	-	-	-	-
TOTAL 21 DEVELOPMENT PROGRAMS	2,234,000	2,860,500	5,094,700	1,571,450	3,523,250

¹ Partnership based on a business plan.

TABLE 13 | Annual Financial Requirements (in millions of \$)

	MONTREAL AGGLOMERATION	OTHER PARTNERS	TOTAL
21 Development Programs (0-5 year average)	155	330	485
21 Development Programs (5-10 year average)	315	375	690
21 Development Programs (0-10 year average)	240	355	595
Other Plan initiatives: 10-20 years	185	240	425
TOTAL	215	300	515

Financial requirements for the first five years will be less than in subsequent periods because several projects will require preliminary studies as part of their normal production sequences. Operating and implementation costs will, accordingly, be higher during the five to ten year period.

Current expenditures of the agglomeration and the municipalities under the heading of transportation stand at \$1.8 billion (Table 14) for 2007.

These costs include operating expenses and capital expenditures. Additional costs of some \$240 million will thus add about 13% per year to current spending levels.

FUNDING OF THE TRANSPORTATION PLAN

GENERAL ISSUE OF FUNDING

Now more than ever before, Canada’s cities play a major part in the nation’s economic, social, cultural and environmental development. Over the past 50 years, the roles and responsibilities of the cities have grown in importance and in complexity. However, and in contrast with the other levels of

TABLE 14 | Transportation Operating Costs and Capital Expenditures for the Ville de Montréal and the Agglomeration in 2007 (in millions of \$)

Agglomeration	1,464
Ville de Montréal	332
TOTAL	1,796

government, the cities are experiencing higher levels of spending, with no increase in funding. That is because:

- property taxes, which represent the main source of revenue for the cities, do not expand in line with commercial activity and economic growth³¹;
- the methods of funding imposed on the cities are obsolete and do not enable them to contend with the exponential growth in costs for municipal infrastructure and particularly for new transportation services and facilities.

It should be noted that the grants and assistance recently awarded by the federal and provincial governments, particularly in the field of transportation, have greatly helped

the municipalities. Permanent transfer to the municipalities and to public transit authorities (2005-2009) of a portion of gasoline excise tax revenues, the new Building Canada fund (which will provide \$8.8 billion over seven years for infrastructure projects) and rebate of the goods and services tax are all important federal initiatives.

Provincially, the new *Politique québécoise du transport collectif* [Québec Public Transit Policy], which was adopted in 2006 and is funded by a tax on oil companies, represents a significant gesture that will help revitalize Montréal’s public transit services over the 2007-2011 period. The STM may receive up to \$140 million in five years to pay 50% of the new expenses forecast under the service upgrade program submitted to the MTQ. The policy requires financial support from the municipalities equal to the difference between the amount of the grant and fare revenues generated by service upgrades and expenses.

However, because the municipalities lack a comprehensive strategy for the next 20 years, they will not be able to fund new and growing needs or the restoration and construction of their infrastructure particularly that related to transportation. The municipal fiscal framework must be modernized.

POTENTIAL SOURCES OF FUNDING OUTSIDE THE EXISTING FRAMEWORK

Various strategies have been suggested for providing new funding outside the present framework. These new methods of funding transportation in Montréal should be based on the following principles:

- “transportation” should be treated as a single entity and funding sources drawing on a balanced mix of general and use taxes should serve to address user needs for all forms of transportation. The agglomeration's property taxes already play a large role in funding transportation (Table 14);
- all economic agents and stakeholders (particularly, the higher levels of government, because of the broad socio-economic benefits of transportation) are called upon to help fund the Plan;
- the user-pays principle should be applied wherever possible;
- contributions from the federal and provincial governments should support more environmentally friendly forms of transportation;
- public transit fares should rise at the inflation rate so that this source of funding can be maintained in real terms.

INITIATIVE FOR A COMPREHENSIVE AND LONG-TERM SOLUTION

In June of 2006, the Big City Mayors Caucus of the Federation of Canadian Municipalities (FCM) published a report entitled *Our Cities, Our Future*. This report discussed challenges that the cities face in remaining competitive and in continuing to deliver a good quality of life to their residents. At the end of this report, the 22 mayors of Canada's largest cities recommended: sharing growth revenue, implementing a national public transit strategy and redeveloping roles and responsibilities with adequate financial resources.

> CHANGES REQUESTED OF THE FEDERAL GOVERNMENT:

- 1) The federal government should share the equivalent of 1% of the goods and services tax (GST) to ensure a good quality of life and competitiveness of the cities. Revenue transferred under this measure would total an annual \$5 billion for all of Canada's municipalities and, in particular, an annual amount of \$250 million for Montréal. After having unsuccessfully asked the Government of Québec in 2007 to collect the 1% reduction in GST, Montréal is repeating this request in the *Transportation Plan* and plans to earmark this funding to help meet this goal.
- 2) The federal government's adoption of a national transit strategy should also become a core component of an updated fiscal framework. Adoption of this strategy will in particular result in an annual investment of \$2 billion to ensure proper maintenance and expansion of transit systems. This initiative would serve in addition to the maintenance of existing funding, such as the transfer of gasoline excise tax revenues.

- 3) The transfer to the municipalities of a share of gasoline excise tax revenues has become a permanent measure, as confirmed by the 2008 budget. However, the FCM believes that the addition of an escalator clause linking the tax to economic activity would represent a significant enhancement to the recently created program.
- 4) The allocation of a specific fuel tax to a municipal transit and assets fund would represent an even more significant initiative for the municipalities. A tax of 9% per litre or 13¢ per litre throughout the agglomeration would help generate some \$240 million annually, which is comparable to the *Transportation Plan's* requirements over the next ten years.

> CHANGES SOUGHT FROM THE GOVERNMENT OF QUÉBEC:

- 1) Montréal is once again asking the Government of Québec to define new tax fields. These new fields will let Montréal draw on revenue sources that correspond with economic levels of activity, while also giving Montréal the authority it requires to assume its role as a metropolis.
- 2) Montréal is also seeking changes in the Québec transit assistance program so that it provides better support to such facilities as buses and provides assistance to active forms of transportation, which are becoming core components of Montréal's transportation system.

3) With respect to funding metropolitan transit, the CMM's municipalities agreed in 2007 to share the "metropolitan" subway deficit. The Government of Québec agreed to help pay this deficit. This agreement is enabling the agglomeration to recover some \$14 million per year (that it had previously paid on its own) over the 2007-2011 period. A new set of discussions and negotiations will take place in 2008 on other topics, including more equitable funding of commuter trains. Montréal is asking the Government of Québec to make sure that the new sharing scheme defined in this area is equitable.

> SOCIALLY RESPONSIBLE USER FEES

If overall contributions from users must not rise in real terms (that is, more than inflation), the user-pays principle (as described in the section on *Potential Sources of Funding Outside the Existing Framework*) may be applied. Fees for transportation services that are not only clearly targeted, but well understood and accepted by users, can support the Transportation Vision by triggering changes in transportation choices. Such fees can also make significant contributions to the funding of long-term projects.

Among these new funding methods and strategies, Montréal proposes that:

1) The agglomeration creates a fund in the short term to support investment projects (and their related expenses) under the *Transportation Plan*. This new fund would draw on a new revenue source targeting the automobile. Montréal believes that the creation of a regional toll system will have a positive impact

on regional transportation choices and will help bring together the resources needed to set up public transit and active transportation development projects in view of improving travel conditions in Greater Montréal. Montréal hopes to obtain net annual revenues of some \$200 million through this user fee system.

The CMM's municipalities not only contribute, as does Montréal, to the regional effort to control the adverse impact of road congestion but to support sustainable development of the region and its transportation system. Montréal has agreed to participate in a metropolitan plan to, in conjunction with land-use planning, optimize human and freight transportation based on principles of sustainable development. Greater Montréal's competitiveness with respect to other great metropolises largely depends on this effort. For this reason, Montréal earnestly desires that the idea of a fund to pay for the kinds of transportation projects that it has proposed for itself be extended to all CMM municipalities.

A regional toll system would enable CMM municipalities to make their own contributions to the development and operation of local and regional public transit and active transportation projects. Preliminary calculations project some \$425 million in potential annual revenues for the region. The CMM will have to work out methods for sharing revenue from the new regional funding source.

Tolls will be paid through an electronic system without slowing traffic. Different rates will apply to different kinds of vehicles and certain exemptions (emergency vehicles, buses, taxis, etc.) are possible.

Changes to public transit will be needed to support introduction of the toll system and to address the modal shift that this initiative may entail.

2) Should it receive the authority to do so, Montréal will draw on other revenue sources over the short and long terms.

Montréal will also pursue its efforts with the governments of Québec and of Canada to make major changes in the municipal tax system, including diversification of funding sources, particularly as part of the FCM's efforts to convince the federal government to set up a national strategy supporting the municipalities in their development of public transit.

Without adequate funding for public transit projects, Montréalers and all users of the transportation system face increased travel times on the Island of Montréal and the rest of the region, decreased economic competitiveness of Montréal and a deterioration in the environment and of quality of life.

INCLUSIVE FORUMS TO BE ORGANIZED

In view of the big stakes involved in funding the *Transportation Plan*, Montréal will create a special commission in the fall of 2008. This commission will preside over public forums that will bring together elected officials, experts and citizen representatives and will ensure that regional partners take part in funding discussions.

Certain studies will be conducted to properly document various potential funding methods. All proposals for funding the Plan will be considered. At the conclusion of this event, the various alternatives and new ideas presented may be shortlisted so that the financial targets needed for carrying out local and regional public transit projects can be met.

APPENDICES

APPENDIX 1 | Detailed Breakdown of *Transportation Plan* Project Costs

THIS APPENDIX CONTAINS ALL TABLES THAT APPEARED AT THE END OF EACH CHAPTER IN PART 3. THE INFRASTRUCTURE PROJECTS THAT HAVE BEEN PROPOSED WILL COST A TOTAL OVER SOME \$8.1 BILLION OVER 20 YEARS.

Most of the projects proposed for the 0-to-10 year period fall within the 21 Development Programs. A few exceptions include those that are part of an existing program, such as the MR-73 subway car renovations and the project to upgrade and provide real-time management to traffic signals.

TABLE A.1 | Cost of Public Transit Projects Proposed by Montréal (in millions of \$)

	CAPITAL COSTS				ANNUAL OPERATING COSTS
	0-5 Years	5-10 Years	10 or More Years	TOTAL	
Subway System	207	1,140	2,525	3,872	33.1
Replacing MR-63 subway cars		1,140		1,140	
Replacing MR-73 subway cars			1,140	1,140	
Extending the subway system					
- Blue line (5) from Saint-Michel to Pie-IX	170			170	2.9
- Blue line (5) from Pie-IX to Anjou			775	775	13.0
- Orange line (2) from Côte-Vertu to Bois-Franc			340	340	5.7
Other actions	37			37	11.5
Tramways	260	725		985	38.0
Tramway line in business centre and Old Montréal	260			260	13.0
Tramway line on the du Parc and René-Lévesque corridors		475		475	13.4
Tramway line on the Côte-des-Neiges corridor		250		250	11.6
Tramway lines on other key corridors (subsequent phases)	<i>To be determined</i>				<i>To be determined</i>
Bus Rapid Transit (BRT) Services	55	70		125	20.0
BRT line along the Pie-IX/downtown Montréal corridor	55	45		100	15.0
BRT line along Henri-Bourassa		25		25	5.0
BRT line along unused rail right-of-way	<i>To be determined</i>				<i>To be determined</i>
Bus System	214	166	94	474	50.0
Increasing size of bus fleet (500 buses)	132	84	84	300	
Bus priority measures on some of the island's arterial roads	30	30		60	
Express lines					25.0
Operating modes	47	47		94	
Service quality and accessibility	5	5	10	20	25.0
Environmental initiatives	<i>Internal cost to the STM</i>				<i>Internal cost to the STM</i>
Metropolitan projects to which Montréal has given top priority	850	33	15	898	
East End commuter line	300			300	
Rail shuttle between Montréal-Trudeau International Airport and downtown Montréal	550			550	
Metropolitan bus links		33	15	48	
TOTAL	1,586	2,134	2,634	6,354	141.1

TABLE A.2 | Cost of Projects for Pedestrians (*in thousands of \$*)

WALKING	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Carrying out action plans described in the <i>Pedestrian Charter</i>	1,000					
Defining and promoting best practices	100					50
Preparing a guide for the development of pedestrian facilities, including universal access criteria	100					
Adapting traffic signals to pedestrian needs		600			600	
Installing digital countdown signals at intersections		1,800			1,800	
Ensuring respect for pedestrian crossing and for pedestrians at intersections	100	4,300			4,300	100
Clearing intersections	50	250			250	
Increasing safety in school zones	500	3,000			3,000	
Setting up a systematic sidewalk repair program	500	25,000			25,000	
Removing snow and ice from sidewalks first	100					
Deploying pedestrian-friendly measures at major public transit facilities	250	1,000			1,000	
Pedestrianizing certain streets	1,000		10,000		10,000	
Enhancing the pedestrian character of downtown Montréal and the City's central districts	<i>To be determined</i>					
Continuing development of Indoor Pedestrian Network and improving its signage	50	250			250	
Formulating a universal access action plan on an annual basis						50
TOTAL	3,750	36,200	10,000		46,200	200

TABLE A.3 | Cost of Bike Projects (in thousands of \$)

BIKE TRANSPORTATION	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Doubling the length of the bike path network	6,000	30,000	20,000		50,000	
Upgrading existing bike path network		8,000	7,500	7,500	23,000	
Developing Montréal's <i>White Network</i>	<i>To be determined</i>	<i>To be determined</i>				<i>To be determined</i>
Setting up a system of self-service bikes ¹		15,000			15,000	
Increasing number of bike racks by 500% ¹		13,000	15,000	15,000	43,000	
Equipping STM buses and taxis with bike racks		2,500	250	250	3,000	
Reviewing regulations on bicycle access to subways and commuter lines	<i>To be determined</i>	<i>To be determined</i>				<i>To be determined</i>
TOTAL	6,000	68,500	42,750	22,750	134,000	-

¹ Partnerships based on a business plan.

TABLE A.4 | Cost of Road System Projects Proposed by the Government of Québec (in millions of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Improving road access to Montréal-Trudeau International Airport ¹		105	105		210	
Redeveloping the Turcot Complex		500	1,000		1,500	
Optimizing Highway 40 (the Metropolitan)	<i>To be determined</i>	<i>To be determined</i>				<i>To be determined</i>
TOTAL		605	1,105		1,710	

¹ Contribution from the agglomeration: \$30 million.

TABLE A.5 | Cost of Montréal's Proposed Road System Projects (in millions of \$)

	CAPITAL COST				ANNUAL OPERATING COST
	0-5 Years	5-10 Years	10 or More Years	TOTAL	
<i>Sharing rights-of-way</i>					4.0
<i>Managing traffic</i>	42			42	7.0
Upgrading traffic signals	30			30	
Installing real-time management of traffic signals	10			10	
Introducing other traffic management measures	2			2	7.0
<i>Redeveloping the road system</i>	464	470	13	947	
Rebuilding <i>Rue Notre-Dame</i>	300	450		750	
Transforming the Bonaventure Expressway into an urban boulevard	90			90	
Improving safety measures along <i>Rue Notre-Dame</i>	9			9	
Redeveloping <i>Rue Sherbrooke Est</i>	40	20		60	
Redeveloping the Côte-des-Neiges/Remembrance intersection			8	8	
Upgrading the Rockland overpass ¹	25			25	
Installing a service lane along <i>Rue Jean-Pratt</i>			1	1	
Completing the Salaberry/Highway 15 interchange			4	4	
Installing service roads along Highway 40 in the West Island	<i>To be determined</i>				<i>To be determined</i>
<i>Completing the road system</i>	154	119	150	423	
Extending <i>Boulevard Cavendish</i>	60		80 ²	140	
Extending <i>Boulevard Rodolphe-Forget</i> (Bourget)	20	30		50	
Extending <i>Boulevard de L'Assomption</i>	<i>Included in the Notre-Dame project</i>				<i>Included in the Notre-Dame project</i>
Upgrading <i>Boulevard Maurice-Duplessis</i>	6	6		12	
Extending <i>Boulevard Langelier</i>	10	18		28	
Extending <i>Boulevard Cavendish</i> to <i>Boulevard Henri-Bourassa</i>	10			10	
Extending <i>Boulevard Pierrefonds</i>		20	20	40	
Extending <i>Boulevard Jacques-Bizard</i> to Highway 40	10	15		25	
Installing a boulevard within Highway 440's right of way	10	30		40	
Extending <i>Boulevard Morgan</i> to <i>Rue Morgan</i>			40	40	
Building a new structure to access <i>Île Bizard</i>	28			28	
Creating a cross-river link between <i>Île Bizard</i> and Laval for pedestrians, bicyclists and emergency vehicles			10	10	
TOTAL	660	589	163	1,412	

¹ Project costs are presented based on the most expensive scenario.² Although capital expenditure costs for Phase 2 of the plan to extend Boulevard Cavendish appear in the 10 or More Years column, the agglomeration intends to begin this phase as soon as possible, once Canadian Pacific clarifies its intentions as to the future of the St-Luc yards.

TABLE A.6 | Cost of Parking Projects (in thousands of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	10 or More Years	TOTAL	
Adopting a parking policy	500					
Amending urban planning regulations on numbers of parking spaces	<i>To be determined</i>					
Considering the possibility of allowing businesses that already provide parking let their employees choose between free parking and an equivalent public transit bonus	100					
Conducting an in-depth review of parking benefits given to municipal workers	<i>To be determined</i>					
Beginning to create carshare parking in 2008	50	100			100	
Creating carpool parking	50					
Creating parking for fuel-efficient vehicles and micro-cars	50		100		100	
Developing a park-and-ride network	200	25,000			25,000	
Promoting use of parking facilities at shopping centres and institutions	250					
Eliminating illegal parking lots and illegal practices	250					
Simplifying on-street parking signs	100					
Displaying available parking locations		1,000			1,000	
TOTAL	1,550	26,100	100		26,200	

TABLE A.7 | Cost of Projects Promoting Safe Travel and Quality of Life (in thousands of \$)

	NON-RECURRING COST	CAPITAL COST				ANNUAL OPERATING COST
		0-5 Years	5-10 Years	Over 10 years	TOTAL	
Creating green neighbourhoods	<i>To be determined</i>					
Modifying street designs	5,200	30,000	30,000		60,000	450
Changing behaviour	700					200
Setting up the <i>bureau de la sécurité des déplacements</i> [office of travel safety]						1,450
TOTAL	5,900	30,000	30,000		60,000	2,100

APPENDIX 2 | *Plan de transport intégré du Mont-Royal (Integrated Transportation Plan for Mount Royal)*



MOUNT ROYAL, A PLACE OF RELAXATION, RECREATION AND NATURE APPRECIATION, SHOULD BE ACCESSIBLE AND ACCOMMODATING. THE *PLAN DE TRANSPORT INTÉGRÉ DU MONT-ROYAL* [INTEGRATED TRANSPORTATION PLAN FOR MOUNT ROYAL] PROPOSES A SET OF PROJECTS AND INITIATIVES TO IMPROVE ACCESS, RETURN THE MOUNTAIN TO ITS USERS AND MAKE THE JOURNEY PLEASANT, SAFE AND ALLURING.

ASSESSMENT

Because the mountain is located in the centre of the island, it can be accessed by many forms of transportation including walking, cars, bicycles and public transit. Various problems and deficiencies arise, however, with respect to pedestrian access, through traffic over the mountain, user safety, parking, public transit coverage and signage. This Plan's main finding is that disproportionate space is set aside for cars and sweeping change is required to strike a balance between the needs of mobility and those of environmental protection.

DIFFICULT PEDESTRIAN ACCESS

Pedestrian access to and within Mount Royal Park, other than along *Chemin Olmsted* is challenging, as is the case with walking in from *Chemin de la Côte-des-Neiges*, *Avenue des Pins* and the Remembrance/Côte-des-Neiges intersection.

PROBLEMS WITH THROUGH TRAFFIC

The *Transportation Plan* clearly articulates a desire of ensuring mobility for Montréalers, while reducing their reliance on car and supporting increased use of public transit and active forms of transportation. Given the high levels of automobile traffic recorded on *Chemin Remembrance* and *Voie Camilien-Houde*, particularly during rush hour periods, measures must be taken to reduce such through traffic and provide visitors to the park with peace and quiet.

URGENT CONSIDERATION OF THE NEEDS OF PEDESTRIANS AND BICYCLISTS

The existing layouts of certain roads in various parts of the island create conflicts between different forms of transportation. This situation is very much the case on *Voie Camilien-Houde* and *Chemin Remembrance*. The situation is also difficult and hazardous for pedestrians and bicyclists when they try to enter Mount Royal Park through the Remembrance/Côte-des-Neiges overpass.

REVIEW OF PARKING AVAILABILITY

Mount Royal Park's parking lots are also a source of problems. Primarily located near the top of the mountain, these asphalt lots take up substantial space in a manner inconsistent with the park's

function. Both because of their size and the manner in which they are designed, they do little to make these entryways to the park more attractive, while increasing the urban heat island effect and permitting easier access by car than by public transit or active transportation. To make matters worse, these lots are only occasionally used to full capacity. Any reduction in parking space, however, must be accompanied by increased public transit service.

PUBLIC TRANSIT SERVICE TO BE IMPROVED

No subway station provides direct service to Mount Royal Park. Different bus lines connect to subway stations and serve its periphery. These lines are most plentiful along the eastern (Le Plateau-Mont-Royal) and western (Côte-des-Neiges/Notre-Dame-de-Grâce) slopes of the mountain and pass frequently. Only the Montagne line (11) travels directly to the top of Mont-Royal, by *Voie Camilien-Houde* and *Chemin Remembrance*. This line, which joins the mountain's two slopes, only passes occasionally and is not synchronized with the park's hours of operation.

INADEQUATE DIRECTIONAL SIGNS

Directional signs to and within Mount Royal Park are generally inadequate. They are obscured by plant life, far from path entry points, faded by weathering, and so forth. In particular, there are no signs offering directions to park visitors (for example, from Mount Royal Park to Summit Park).

STRATEGIC ORIENTATIONS

The issues set out in the *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal] assume multiple dimensions under these circumstances. They are to give public transit preferred access to the park, enhance the bike path network and improve pedestrian access, reduce the prevalence of cars on the mountain, particularly by cutting back on parking, reducing through traffic, focusing on the needs of pedestrians and bicyclists in road design and improving directional signs so that users can find suitable and safe ways to get to and get about within the park.

PROPOSED ACTIONS

The following figures list all of the projects and plans described in the *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal] for the *Arrondissement historique et naturel du Mont-Royal* (AHNMR) [historic and natural borough of Mont-Royal].

STARTING IN 2008:

- development of a bike path (running along *Avenue du Parc*, *Chemin de la Côte Ste-Catherine*, *Avenue Vincent-d'Indy* and *Boulevard Édouard-Montpetit*);
- creation of segments 2 and 3 of the beltway, a multifunctional route linking the park's internal pathways to the mountain's own road system;
- redesign of the Peel pedestrian entrance and installing bike racks, in line with bicyclist needs;
- longer operating hours of the Montagne (11) bus line to match park operations and provide adequate service to the mountain;



- improved safety measures for the Côte-des-Neiges/Remembrance overpass;
- assessment and review of parking availability;
- final layout of the new du Parc/des Pins intersection.

IN 2009-2010:

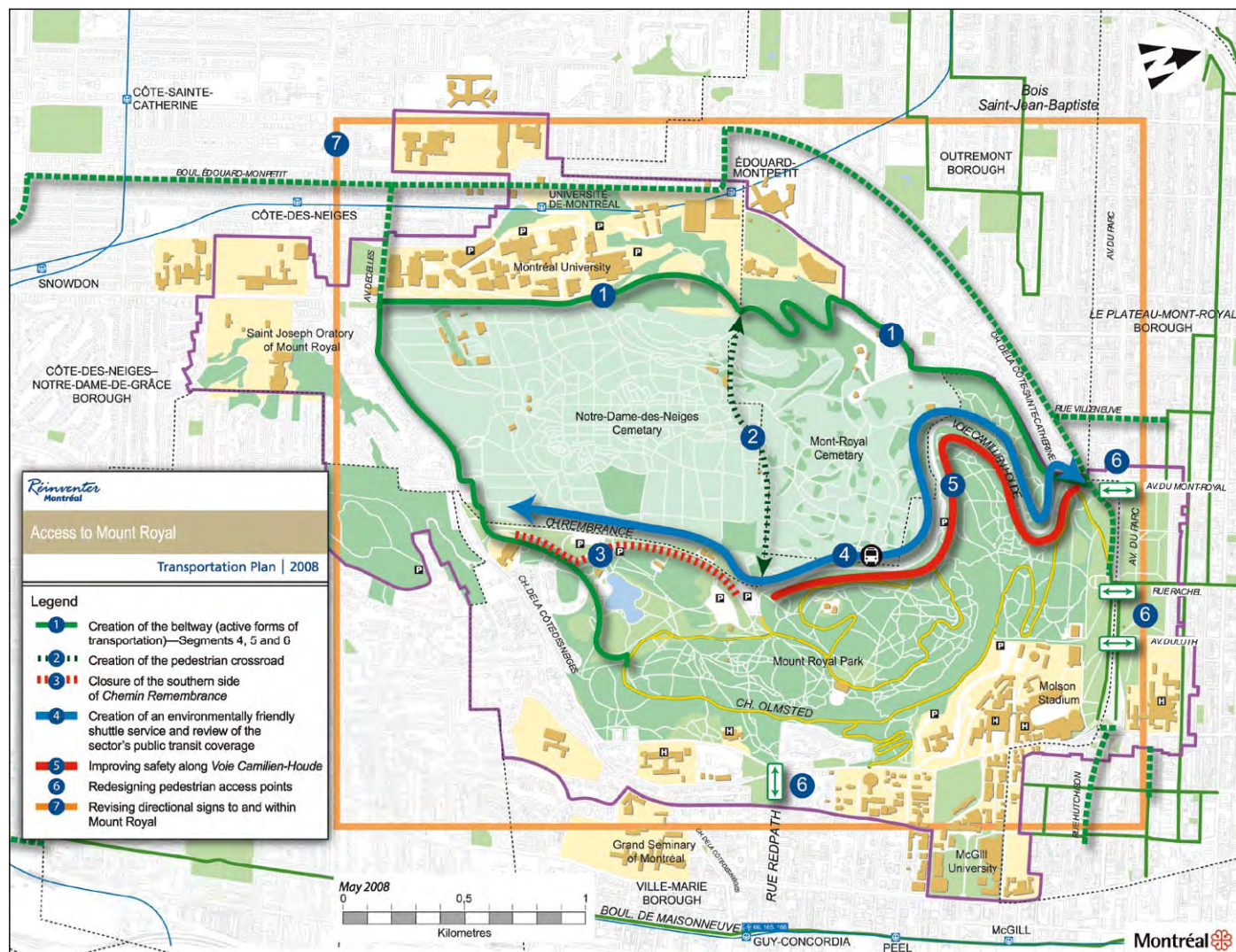
- continued development of the bike network;
- enhancement of the beltway by creating segments 4, 5 and 6;
- creation of a crossroad to provide a north-south link to the park;
- redesign of various pedestrian access points, such as at *Avenue du Parc* and *Avenue des Pins*, based on bicyclist needs and by installing bike racks;
- creation of an environmentally friendly bike rack-equipped shuttle running along *Voie Camilien-Houde* and *Chemin Remembrance*;
- comprehensive review of the sector's public transit coverage;
- closure to motor vehicle traffic of the southern side of *Chemin Remembrance*, which will be reserved exclusively for active forms of transportation;

- modification of and safety measures (road markings, signage, etc.) for *Voie Camilien-Houde*, aimed at channelling traffic, reducing speed and promoting adequate sharing of the roadway;
- modification of directional signs to and within Mount Royal Park.

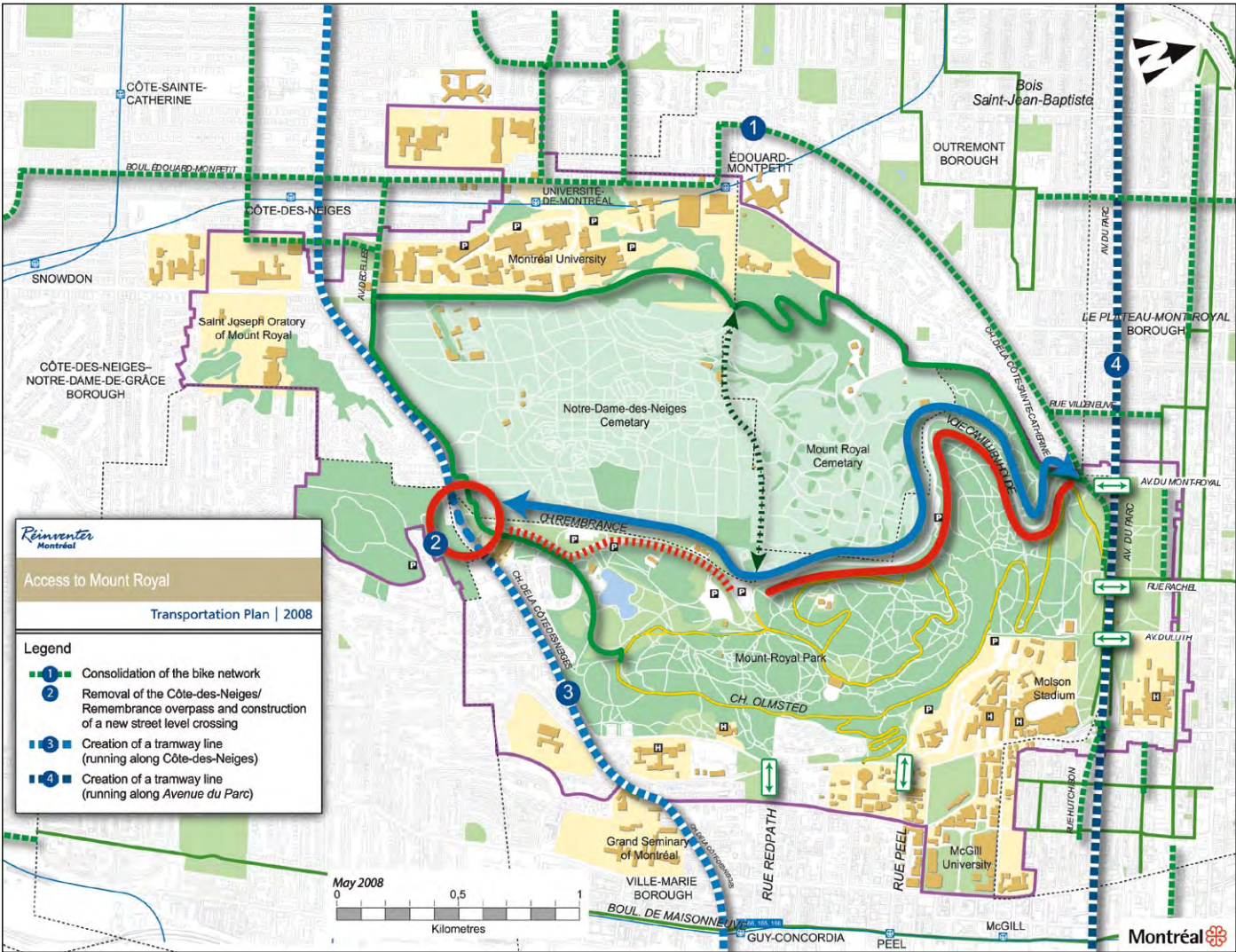
OVER THE MEDIUM AND LONG TERMS:

- consolidation of the bike path network;
- removal of the Côte-des-Neiges/Remembrance overpass and construction of a new street level crossing, emphasizing the safety needs of pedestrians and bicyclists, and incorporating the reserved lane on Côte-des-Neiges;
- creating tramway lines on *Chemin de la Côte-des-Neiges* and *Avenue du Parc*, linking the mountain to the tramway planned for downtown Montréal.

APPENDIX 2 | Projects Planned for 2009-2010



APPENDIX 2 | Projects Planned for the Medium and Long Terms



APPENDIX 3 | *Plan de transport intégré du Vieux-Montréal* (Integrated Transportation Plan for Old Montréal)



DEVELOPMENT OF THE OLD MONTRÉAL/OLD PORT TOURIST HUB IS NOW PAYING OFF: THE POPULATION, INCLUDING RESIDENTS OF THE FAUBOURG QUÉBEC AND THE FAUBOURG DES RÉCOLLETS, HAS GROWN TO 4,500. THE NUMBER OF HOTEL ROOMS STANDS AT 1,600. THE NUMBER OF WORKERS IS ABOUT 35,000. THE NUMBER OF ANNUAL VISITORS IS STILL SOMEWHERE BETWEEN 13 AND 15 MILLION. THE *PLAN DE TRANSPORT INTÉGRÉ DU VIEUX-MONTRÉAL* [INTEGRATED TRANSPORTATION PLAN FOR OLD MONTRÉAL] SEEKS TO FACILITATE ACCESS TO THIS HISTORIC DISTRICT TO ENSURE ITS NEIGHBOURHOOD LIFE AND ECONOMIC VITALITY THROUGH VARIOUS INITIATIVES CORRESPONDING WITH THE *TRANSPORTATION PLAN*'S STRATEGIC ORIENTATIONS. THESE PRINCIPLES PROMOTE ALTERNATIVES TO THE CAR, WALKING, BICYCLING AND PUBLIC TRANSIT, WHILE MINIMIZING RELIANCE ON THE AUTOMOBILE. IT IS TIME TO MAKE CHOICES AND TO BUILD CONSENSUS WITHIN THE COMMUNITY TO MAKE OLD MONTRÉAL A GREEN, WELCOMING AND SAFE HISTORIC DISTRICT.

Montréal's Executive Committee agreed in principle to the various components of the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal] in March 2008. The city administration asked the *Service de la mise en valeur du territoire et du patrimoine*, in conjunction with the *Service*

des infrastructures, transport et environnement, to undertake consultations with the community in view of improving and fine-tuning the project before its implementation in 2008. Implementation and scheduling of the proposed actions are currently being revised, following the public consultation sessions.

ASSESSMENT

Old Montréal is located between the St Lawrence River and downtown Montréal. The district's summertime popularity continues to rise. Its narrow streets were not designed to accommodate large groups of people constantly placed in conflict with vehicles and bicycles (particularly along peripheral

routes), to handle through or tour bus traffic or to meet parking needs. The district is literally sealed off during special events, placing it at risk in an emergency. Residents accordingly face constraints on their mobility.

Public transit service should be increased and peripheral parking facilities publicized. Major change is required to limit space dedicated to the car and to re-endow this district with a pleasant, safe and welcoming atmosphere for visitors.

URGENCY OF GIVING PEDESTRIANS THE RIGHT OF WAY

Except on peripheral streets (de la Commune, McGill and Saint-Antoine) where they have been widened, sidewalks within the district are not broad enough to accommodate large clusters of people. The favourite pedestrian gateway to Old Montréal and the Old Port is the *Place-d'Armes* subway station and the corridor running along *Côte de la Place-d'Armes/Place-d'Armes/Rue Saint-Sulpice* (or the alternate choice of Saint-François-Xavier/*Place d'Armes*). Because of the large tourist presence at the Notre-Dame Basilica, frequent conflicts arise between pedestrians and vehicles around *Place d'Armes*. Sizeable groups also invade *Rue Saint-Paul*, the district's most picturesque commercial street, which hosts about 1,500 pedestrians per hour, compared with 1,500 vehicles per day. Pedestrian density is even higher at *Place Jacques-Cartier*.

LACK OF SIGNS FOR OFF-STREET PARKING

Old Montréal as often perceived as lacking in parking space. Space is almost always available, however, even during peak periods, at all off-street parking facilities of the Old Port, at tourist attractions and at office buildings (totalling 80 spaces), located nearby and

within reasonable walking distance. The motorist habit of cruising up and down little streets to find a parking space must be changed, because it generates large volumes of through traffic, congestion and greenhouse gases, accompanied by conflicts with pedestrians and bicycles and diminished access for residents.

PUBLIC TRANSIT SERVICE TO BE IMPROVED

The western section of Old Montréal, with its concentrations of residents and workers, is served by subway stations at Square Victoria and *Place d'Armes*. Coverage to the most popular tourist sites, including *Place Jacques-Cartier*, *Rue Saint-Paul* and the Old Port, is provided by the Champ-de-Mars station, which is itself hemmed in by the Ville-Marie Expressway. The pedestrian tunnel and street crossing are both hazardous for pedestrians. There is little ridership on the occasional buses that turn around on *Rue Notre-Dame* at the ends of their lines. Public transit service should be enhanced and prioritized if there is to be a real modal shift among the district's workers, tourists and residents.

POOR RESIDENT ACCESS DURING SPECIAL EVENTS

Access by residents and the emergency services is limited by the district's many summer events. Transportation management plans confining tourist vehicles to the edges of Old Montréal must be drawn up in light of these needs. Car-reliant habits tend to be reinforced by the absence of any campaigns promoting public transit and bicycling.

PRESENCE OF TOUR BUSES

Many tour buses make their ways through Old Montréal's tight streets to restaurants and major attractions. The greatest concentrations of such vehicles converge on the Notre-Dame Basilica and the Old Port and drive around *Place d'Armes*, on *Rue Notre-Dame* and down *Rue de la Commune*. Their repeated stops with their engines idling opposite *Place Jacques-Cartier* are a significant source of nuisance to other street users, such as pedestrians and bicyclists. Furthermore, none of the off-street parking facilities, which can hold 30 to 40 vehicles, offer rates for short stays or are open at night. Such facilities should provide services (rest and washrooms) and a high level of security.

ISSUES RELATING TO THROUGH AND DESTINATION TRAFFIC

The *Transportation Plan* clearly expresses the desire of ensuring mobility for Montréalers, while reducing dependence on the car and relying on increased use of public transit and active forms of transportation. Through and destination traffic rises significantly in Old Montréal during the summer, triggering traffic jams particularly along the de la Commune, Saint-Laurent, Notre-Dame, Berri and Saint-Paul corridors. Measures must be taken to reduce this through traffic and ensure the peace, quiet and safety for all users.

CHANNELLING BICYCLISTS

Old Montréal and the Old Port are certainly popular destinations for bicyclists. Bike lanes were installed along the periphery of this district in 2007 on *Rue Viger*, *Rue Saint-Antoine* and *Rue McGill* to facilitate through bicycle traffic toward the western part of the district and the Lachine Canal. The bike path protected by a concrete median on *Rue Berri* remains the key route for families or recreational bicyclists heading to the Old Port.

STRATEGIC ORIENTATIONS

Given these facts, the stakes involved in the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal] are many: making public transit the preferred means of getting to Old Montréal, making walking the favourite way of exploring the district, giving residents and emergency vehicles priority access to the district in the summer (and particularly during special events), restricting through traffic, boosting the visibility of off-street parking and promoting its use, revising on-street parking availability and optimizing the peripheral bike network.

A TIME TO MAKE DECISIONS

Visitors must be properly accommodated in keeping with the district's distinctive atmosphere, while maintaining constant access for residents. To meet this goal, the *Société de développement commercial du Vieux Montréal* has, on behalf of its members, expressed three expectations for transportation in Old Montréal: favouring active transportation, while ensuring access over time by consolidating public transit services for the various groups using the district and maintaining and improving car access through such means as maximizing the use of current parking spaces.

PROPOSED ACTIONS IN 2008

The figure on the following page illustrates all of the projects and actions proposed within the historic district of Old Montréal under the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal].

REAL-TIME DISPLAYS OF OFF-STREET PARKING AVAILABILITY

- The *Société en commandite Stationnement de Montréal* suggests connecting the 8,000 spaces in 14 indoor parking lots, most of which are located in the Old Port and adjacent to Old Montréal, to a real-time display notifying motorists where space is available and how to get there. Dynamic and static displays will provide such information, in conjunction with the tourist signs that already greet visitors on such arterial roads as *Rue Saint-Antoine*, *Rue McGill*, *Rue Viger*, *Rue Saint-Urbain*, as well as *Boulevard Saint-Laurent* and *Boulevard René-Lévesque*.

A NEW STM BUS LINE AND TRAVEL BY BICYCLE AND HORSE-DRAWN CARRIAGE

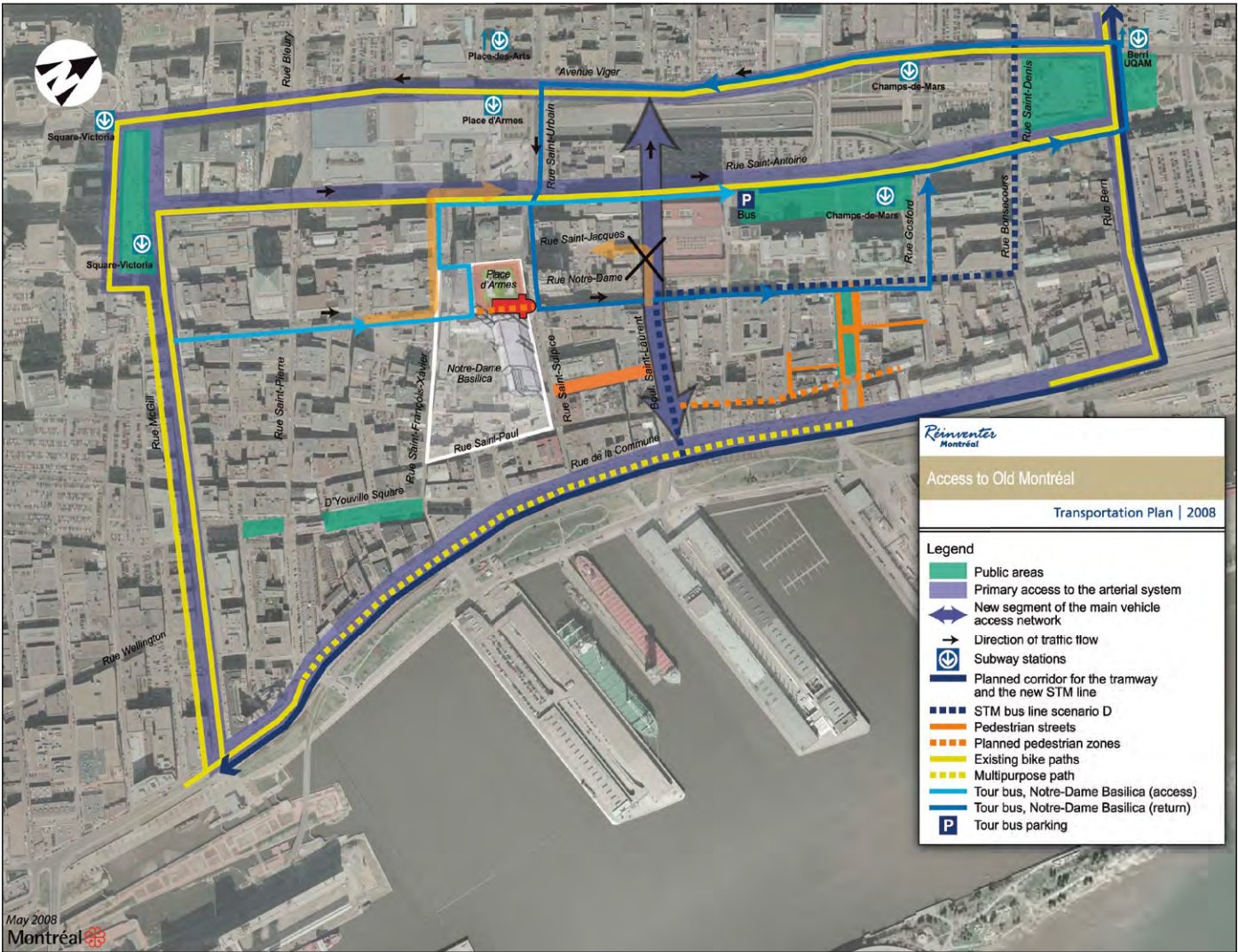
- A new STM bus has been proposed to begin service in June 2008 between downtown Montréal and the Old Port, to develop and retain riders for the future tramway that is planned for this same trajectory. The two-way route that has been proposed will serve *Rue Peel*, *Rue de la Commune*, the Berri-UQAM subway station, *Boulevard René-Lévesque* and Dorchester Square, which is the site of a *Centre Infotouriste* [tourist information centre]. To ensure reliable service, a reserved lane will be installed on the eastbound (south) side of *Rue de la Commune*. This new line will reduce congestion on the subway's Orange and Green lines during rush hours and give riders direct access to the following tourist centres: the *Quartier des spectacles*, Old Montréal/ Old Port, and employment and educational centres such as the *École des technologies supérieures*, UQAM and the *Cité Multimédia*;

- A new route for horse-drawn carriages compatible with this additional bus line will be the subject of a consensus building process within the community prior to its initiation;
- Creation of the bus lane on the south side of *Rue de la Commune* will require a change in the bike path along this street. A bike path with a dedicated right-of-way will be installed on the south side of *Rue de la Commune* between *Rue Mill* and *Rue McGill*. From *Rue McGill* to *Boulevard Saint-Laurent*, bicyclists can travel along a dedicated right-of-way that is shared with pedestrians, as is currently the case. Furthermore, bicyclists will travel in both directions on a road shared with all vehicles from the east side of *Boulevard Saint-Laurent* to *Rue Berri*. Only authorized vehicles will be able to share the roadway with buses and bicycles to the east;
- The Ville-Marie borough will install additional bike racks.

GIVING PEDESTRIANS THE RIGHT OF WAY: PILOT PEDESTRIANIZATION PROJECT

- Seasonable pedestrianization of the plaza facing the Notre-Dame Basilica will be designed to create a secure public square capable of accommodating thousands of visitors and residents during the peak summer season. A pilot project scheduled for this year will seek to determine if this action is appropriate, prior to the scheduled 2009 reconstruction of *Place d'Armes*. The original Notre-Dame church is to be marked out on the pedestrian portion of the street; Horse-drawn carriages and vehicles involved in religious ceremonies will be able to use these streets at any time;

APPENDIX 3 | Projects and Proposed Actions



- Converting a segment of *Rue Saint-Paul*, between *Rue du Marché-Bonsecours* and *Boulevard Saint-Laurent* to a pedestrian street on a seasonal basis has a dual goal: increasing pedestrian comfort and safety and spotlighting this picturesque street as a commercially important destination in Montréal. The proposed pilot project would give residents access at all times and permit short-term parking. The proposed period of pedestrianization is from June 15 to September 15, from 11:00 a.m. to 6:00 a.m. Any other schedule that better meets resident needs could, however, be implemented. Deliveries and street cleaning would be performed between 6:00 a.m. and 11:00 a.m. Assessment of the project will help to enhance its pedestrianization formula and ultimately, to better develop with the community an appropriate layout and function for the entire street.

A NEW ACCESS PLAN

- Use of peripheral streets (*de la Commune*, *McGill*, *Saint-Antoine* and *Viger*) to cut down on through traffic in Old Montréal;
- Seasonable pedestrianization of *Rue Notre-Dame* in front of the *Notre-Dame Basilica*, except for horse-drawn carriages. This effort will require motorists to go north along *Rue Saint-François-Xavier*, while permitting access to *500, Place d'Armes*. Such a closure could be easily reversed for *Basilica* needs (funerals, marriages, etc.). Additional studies will be conducted to relocate tour buses, if possible;
- Reduced congestion on *Rue Notre-Dame*, between *Rue Saint-Sulpice* and *Boulevard Saint-Laurent*;

- Relocation of a horse-drawn carriage stand on *Rue Notre-Dame* to the west, in front of *500, Place d'Armes*;
- Relocation of a taxi stand on *Rue Saint-Jacques* to the west, in front of *500, Place d'Armes*;
- Making *Boulevard Saint-Laurent* a two-way street, between *Rue Viger* and *Rue Notre-Dame*, would serve as a junction for travel to the east and west of Old Montréal;
- Access to *Rue Saint-Jacques*, from *Boulevard Saint-Laurent*, will now be from the north by *Rue Saint-Antoine* and not from the south by *Rue Notre-Dame*;
- Through traffic that connects with *Rue Notre-Dame Est*, starting from *Rue McGill*, would instead bypass Old Montréal by taking *Rue Saint-Antoine* and entering by *Boulevard Saint-Laurent*;
- Making *Boulevard Saint-Laurent* a two-way street would now provide direct access to the Old Port from *Rue Saint-Antoine* and *Rue Viger*.

TOUR BUSES: OFF-STREET PARKING AND A PASSENGER DROP-OFF AREA BY MARCHÉ BONSECOURS, ON RUE DE LA COMMUNE

- In view of the success in creating areas to provide tour buses with passenger drop-off and pick-up areas at *Place d'Armes*, similar areas could be created by *Marché Bonsecours* and on *Rue de la Commune* and a ban placed on passenger drop-offs and pick-ups by such vehicles in any other public area between

Boulevard Saint-Laurent and *Rue Berri*. The sidewalk can accommodate hundreds of people at a time, who could enter the market to take refuge from the elements or use the washrooms. *Marché Bonsecours* management has said that it is favourable to the idea. This project is consistent with other measures in the Plan.

A TRANSPORTATION MANAGEMENT PLAN FOR MAJOR EVENTS

- A transportation management plan will be developed and disseminated as part of various communications efforts to ensure its effectiveness in providing access for emergency services and residents during major events, like the fireworks and the *Fête de l'histoire*.

APPENDIX 4 | Highlights of Changes to the Plan

THIS APPENDIX PROVIDES A SUMMARY OF THE PRINCIPAL CHANGES MADE TO THE *TRANSPORTATION PLAN*'S WORKING PAPER FOLLOWING THE PUBLIC CONSULTATION SESSIONS HELD IN THE FALL OF 2007.

General

INTRODUCTION

New messages from the Mayor of Montréal, the Member of the Executive Committee responsible for Urban Planning and Public Transit and the President of the *Société de transport de Montréal* (STM).

TRANSPORTATION VISION

Modification of the Vision to include the transportation modes favoured by the *Plan*. The Vision states that Montréal wants it to be regionally adopted and be supported by the higher levels of government.

21 DEVELOPMENT PROGRAMS FOR *REINVENTING MONTRÉAL* WITHIN 10 YEARS!

- Modification of the introduction to the 21 Development Programs;
- Modification of Development Program No. 3 on upgrading the subway system to include equipment and stations as well;
- Revision of Development Program No. 6 on shared car uses including carpooling, carsharing, taxis and *centres de gestion des déplacements* [commuter management centres] (CGD);

- Revision of sections on governance (Development Program No. 20) and funding (Development Program No. 21);
- Creation of a partnership committee to implement the 21 Development Programs;
- Stronger affirmation of the universal access principle, particularly by including it in the strategic objective entitled: "Provide optimal transportation conditions in terms of time, comfort, accessibility, safety and cost";
- *Transportation Plan* initiatives and achievements;
- Review of the *Transportation Plan's* achievements and initiatives over the past year.

PLANNING LOCAL TRANSPORTATION

LOCAL TRANSPORTATION PLANS

- Clarifications to the *Consistency of Initiatives* on the production by the municipalities and boroughs of local transportation plans and priority action plans, particularly to improve transportation safety;
- Note that local transportation plans are under development in the Plateau-Mont-Royal, Saint-Laurent and Ahuntsic boroughs;
- Clarifications on green neighbourhoods: implementation criteria, rules of harmonization, distribution of responsibilities, support and coordination tools, etc.

PLAN DE TRANSPORT INTÉGRÉ DU MONT-ROYAL [INTEGRATED TRANSPORTATION PLAN FOR MOUNT ROYAL]

- Reference made to the *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal] in the section *Cohérence avec les plans de la ville – Cohérence des interventions* [Consistency with the City's plans—Consistency of initiatives] and in public transit chapter and addition of an appendix providing a general outline of this Plan.

PLAN DE TRANSPORT INTÉGRÉ DU VIEUX-MONTRÉAL [INTEGRATED TRANSPORTATION PLAN FOR OLD MONTRÉAL]

- Reference made to the *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal] in the *Consistency with the City's Plans—Consistency of initiatives* section and addition of an appendix providing a general outline of this Plan.

PUBLIC TRANSIT

STRATEGIC ORIENTATIONS

- Reference made to the need to introduce universal access gradually throughout the entire public transit system, particularly in the subway system and on commuter lines;
- Commitment by Montréal and the STM to keep fares affordable; fares should evolve at the same pace as inflation;
- Search for greater fare diversification to meet the needs of different riders and to forge partnerships between the STM and other organizations.

SUBWAY SYSTEM

- Importance of completely upgrading the subway system (stations, infrastructure and equipment) and not just the rolling stock;
- Confirmation of the underground extension of the subway's Blue Line to Anjou, in a second phase following the first phase to *Boulevard Pie-IX*;
- Addition of a new project to increase the range of commercial services offered in the vicinity of subway stations.

BUS SYSTEM

- Reference made to the fact that the larger bus fleet provides an opportunity for revising the interior design and certain technical features of the vehicles, such as comfort and universal access, while also making it possible to diversify the bus fleet in terms of size and type of engine;
- Clarifications to the project entitled *Assessment of the Opportunity to Introduce More Suitable Modes* to explain that this project will now pertain to sectors with special functions, such as Old Montréal, and not just residential sectors with narrow streets through which little traffic passes;
- Addition of two new projects concerning the bus system: revising interior bus design based on the needs of young families; increased late evening and night bus service.

PARATRANSIT

- Introduction of a new section on paratransit describing current and anticipated measures for improving this service.

METROPOLITAN PUBLIC TRANSIT

EAST END COMMUTER LINE

- Placement of the East End commuter line in service in 2010 rather than in 2011.

RAIL SHUTTLE

- Update to the planned shuttle between Montréal-Trudeau International Airport and downtown Montréal, by scheduling the start of operations for 2014 rather than 2012 and making reference to Montréal's desire that this project have a minimal environmental impact and stand out in terms of its design, in tribute to the City's status as a UNESCO recognized City of Design.

ACTIVE FORMS OF TRANSPORTATION

WALKING

- Inclusion of the *Pedestrian Charter* in the *Transportation Plan*.
- Addition of the following elements:
 - Traffic safety measures in the area immediately around a healthcare institution;
 - Not only making it physically easier to walk, but making it a more agreeable experience, through adjustments to heritage, architecture, design, street furniture, artwork and plantings;
 - General improvement in the quality of the Indoor Pedestrian Network, particularly in terms of signage and universal access.

BICYCLING

- Clarifications to the planned changes to regulations concerning the requirement that parking lot owners set aside space for bike parking;
- Reference made that Montréal will conduct a communications campaign focusing on civic spirit and better coexistence among different road users.

SHARED CAR USE

- With respect to demand management, reference made that Montréal is receptive to requests by different organizations to expand the coverage of existing CGDs, without excluding the possibility of creating new CGDs if required;
- Addition of a "green taxi" project allowing environmentally concerned riders to opt for clean vehicles and reference made that the possibility of paying for taxi rides with credit and debit cards will be discussed within the *Table de concertation de l'industrie du taxi à Montréal*.

ROAD SYSTEM

- Addition of a paragraph on the targeted 15% reduction by 2021 (compared with present forecasts) of rush hour travel;
- Reference made that Montréal is not seeking any increased road access to the island;
- Reference made of recent public consultation sessions on urban integration and enhancement of the plan to rebuild *Rue Notre-Dame*, particularly by connecting its bus lane to that of *Boulevard Pie-IX*, by the creation of a carpool lane, and the possibility of covering some open

segments of the trench highway;

- Reference made of the Côte-des-Neiges/Remembrance intersection reconstruction project in the *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal];
- Addition of the Rockland overpass upgrade project;
- Change to the Cavendish project: the first phase will be carried out within five years and efforts to carry out the second phase will begin in 2008;
- Addition to the plan to extend *Boulevard Rodolphe-Forget* of the possibility of providing access to *Rue Notre-Dame* from *Rue Lakefield*;
- Inclusion of a note in the planned extension of *Boulevard Cavendish* to *Boulevard Henri-Bourassa*, along *Rue Toupin*, stating that the selected concept will minimize through traffic along *Rue Toupin* and adjacent residential neighbourhoods;
- Updated cost for the Turcot complex redevelopment project.

PARKING

- Reference made that Montréal will continue its efforts with the *Agence métropolitaine de transport* (AMT) to expand the off-island park and ride system;
- Reference made of how parking lots affect the environment, particularly by helping to amplify the artificial urban heat island effect. Recommendations on reducing such impacts will be included in the parking policy.

SAFETY AND QUALITY OF LIFE

SAFETY

- Updates following adoption of the *Bill to amend the Code de la sécurité routière* [Highway Safety Code] (photo radar and cellphone use while driving).

ECONOMIC TRAVEL

- Importance of increasing knowledge on freight distribution movements, particularly through the use of origin-destination surveys;
- Importance to Montréal of having freight shipment considered on a metropolitan (*Communauté métropolitaine de Montréal* [CMM]) and even provincial (*ministère des Transports du Québec* [MTQ]) level;
- Emphasis on partnership with industry representatives, through the *Comité interrégional pour le transport des marchandises* [interregional committee for freight shipment] (CITM), an existing consensus-building forum;
- Modification of the project pertaining to possible inclusion of intermodal freight centres outside the island in a project on the study of new distribution mechanisms and opportunities for optimizing urban truck traffic;
- Clarifications on monitoring and surveillance activities by *Société de l'assurance automobile du Québec* (SAAQ) highway controllers and existing and planned monitoring stations;
- Reference made on continued effort with the higher levels of government to reduce nuisances associated with rail transportation, in view of its peaceful coexistence with urban activities;

- Montréal's support at different levels of government for updating feasibility studies for a high-speed train between Québec City and Windsor;
- More complete description of the plan to rebuild *Rue Notre-Dame*, particularly in terms of improving access to the port.

INNOVATION

- Addition of a project on Montréal's contribution to the creation of the *Observatoire scientifique*, the *Forum québécois de la mobilité durable* [Québec forum on sustainable mobility] and of a project to think ahead about a possible oil shortage.

METROPOLITAN GOVERNANCE

- Restructuring of the governing section in the chapter on positioning in three components pertaining to the evolution, regional stakes and priorities of public transit governance, along with Montréal's proposals for a new governance structure.

FUNDING

- Significant changes in the text to explain the issue of transportation funding, the beginnings of long-term solutions involving changes in government programs and the particular funding strategy of the *Transportation Plan* based on the positive impact of the user fee concept (tolls);
- Proposal to set up a regional toll system that would generate revenue to be shared among the municipalities to serve as a source of funds used for the development of local and regional projects, for public transit operations and for active transportation.

APPENDIX 5 | Review of the Past Year's Initiatives and Achievements

ONE YEAR HAS ALREADY PASSED SINCE THE PUBLICATION OF THE PUBLIC CONSULTATION VERSION OF THE *TRANSPORTATION PLAN*. MANY PROJECTS HAVE BEEN CARRIED OUT WHILE WORK ON THE PLAN'S CONSULTATION AND ADOPTION PROCESSES CONTINUED. MONTRÉAL AND ITS PARTNERS HAVE ALSO LAUNCHED OR PLANNED OTHER PROJECTS.

TRANSPORTATION PLANNING

LOCAL TRANSPORTATION PLANS

Various local transportation plans are being prepared in the Plateau-Mont-Royal, Saint-Laurent and Ahuntsic-Cartierville boroughs.

Two outstanding initiatives in the area of local transportation planning have also been released. The *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal] and the *Plan de transport intégré du Mont-Royal* [integrated transportation plan for Mount Royal] have been formulated in view of a near-term implementation.

PUBLIC TRANSIT

2008 MONTRÉAL AGGLOMERATION COUNCIL BUDGET

The 2008 Agglomeration Council Budget clearly demonstrates Montréal's desire to support public transit through a one-time contribution of \$110 million. The annual municipal contribution to public transit has, accordingly, been upped to \$23.7 million, for a total of \$301.7 million in 2008. Of that amount, \$5.7 million has been earmarked for the service upgrade program. Montréal has also paid its \$50.3 million share to SOFIL for the 2005-2008 period. A special contribution of \$29 million has been allocated to counterbalance the *Société de transport de Montréal* (STM)'s past financial situation. Montréal has also set aside a \$7 million reserve for SOFIL.

SERVICE UPGRADE PROGRAM

The STM launched Development Program No. 5 with the implementation of a five-year service upgrade program. In January 2008, the STM increased subway service 17% by boosting train frequency during off-peak periods and weekends. Significant enhancements had already been made to the bus system in 2007 by extending the operating periods of various Island of Montréal lines. Coverage of developing sectors was improved by placing new routes in service. Improvements to express bus service (*Métrobus, Express*) began in 2007 and will conclude in the fall of 2008. Crowding will be reduced by shorter waits for buses on certain key lines beginning in September of 2008.

Better service means new equipment. That is why the STM has purchased 120 additional buses for delivery in 2008 and 2009. It also

purchased 202 articulated city buses, the first of which will be delivered in late 2009. In fact, trials of articulated city bus prototypes started in March of 2008 on three lines of the STM.

UPGRADING THE SUBWAY SYSTEM

Upgrades to Montréal's subway system continue under Development Program No. 3. The process of replacing MR-63 subway cars has begun, with the STM preparing the tender document. The number of cars to be ordered will be reassessed based on expected ridership.

The process of renovating and redesigning the interiors of the MR-73 subway cars is to be completed in 2009. The station upgrade program (*Réno-Stations, Phase II*) and the work on *Réno-Systèmes II* will continue.

SUBWAY EXTENSIONS

Calls for tender for project proposals for extensions to the Blue (to *Boulevard Pie-IX*) and Orange (to Bois-Franc) lines will begin soon. The extension to *Boulevard Pie-IX* constitutes a Development Program under the *Transportation Plan*.

In the field of public transit, recall that the year 2007 was marked by the opening of three new subway stations in Laval. Ridership has significantly surpassed expectations.

TRAMWAY SYSTEM

To enhance and develop its public transit system, Montréal has decided to create intermediate capacity transit systems, such as tramway and bus rapid transit (BRT) services.

Preparations for setting up a project office, requests for analytic studies of the tramway system and the preliminary proposal for the first line have begun with respect to the tramway scheduled for the central portion of the agglomeration (Development Program No. 1). The near-term creation of a reserved lane will make it possible for a bus line to serve the planned tramway loop through downtown Montréal.

A land use study of *Rue de la Commune* and *Rue Berri* at the Mill Bridge provides for the creation of a tramway running along the *Rue de la Commune* corridor. Griffintown's *programme particulier d'urbanisme* [special planning program] also envisions the creation of a tramway in this neighbourhood.

BUS RAPID TRANSIT (BRT) SERVICES

Feasibility and design studies for the Pie-IX line (Development Program No. 8) began in the summer of 2007. This route represents the first bus rapid transit service planned for the island. The STM's public transit service scenario would have the *Boulevard Pie-IX* bus rapid transit line continue and join the reserved bus lane on *Rue Notre-Dame* to provide residents of several East End boroughs with a direct link to downtown Montréal.

PRIORITY MEASURES

Bus priority measures will be gradually deployed on some 240 kilometres of arterial roads (Development Program No. 9) to boost bus speeds, increase efficiency and improve transit service quality throughout the island. Priority measures will soon be launched on *Boulevard Saint-Michel*'s traffic signals to test this concept.

PROPULSION METHODS AND SUSTAINABLE DEVELOPMENT

Following its success with the *Biobus* project, involving 155 buses from 2002 to 2003, the STM has selected biodiesel to support its commitment to sustainable development. The STM will undertake the necessary measures in 2008 to introduce the use of biofuel for its entire bus fleet gradually.

Since the spring of 2008, the STM has also placed eight hybrid biodiesel-electric buses in service. This effort falls under Transport Canada's Urban Transport Showcase Program, with the financial participation of the *ministère des Transports du Québec* (MTQ). The performance of these vehicles will be compared with that of standard propulsion buses of the same generation. The goal of this exercise is to cut GHG emissions and fuel consumption.

OPUS SMARTCARD

The April 2008 launch of the OPUS smartcard is designed to make it easier for riders to purchase their fare and use public transit. Some 1 million Québec residents should be using the OPUS smartcard by the summer of 2009.

METROPOLITAN PUBLIC TRANSIT

The AMT recently purchased 160 new train cars (30 double-deckers) at a cost of \$386 million. This project represents the largest investment in the history of Québec's commuter train service. This acquisition will boost commuter train capacities by 70% in rush hours throughout the system (with nearly 43,000 additional daily trips). It will also serve to renew a portion of the existing commuter train fleet and to add new trains.

EAST END COMMUTER LINE

The East End commuter line project (Development Program No. 12) will considerably enhance access to and from the East End, as well as the metropolitan region's north-eastern municipalities. Construction of commuter stations on the island is at the preliminary proposal stage. A series of consultation sessions, jointly coordinated by the City and the AMT, will be carried out by the summer of 2008 to let the public know that the project is being carried out and particularly on station layouts and locations.

The AMT's recent acquisition of 160 new commuter cars will partly meet the new line's needs. The process of awarding a contract to manufacture dual-powered locomotives is underway. Service on the East End commuter line is currently scheduled to commence in the fall of 2010.

CHAMPLAIN/BONAVENTURE CORRIDOR

A bus rapid transit (BRT) system (Development Program No. 7) has been proposed to improve public transit in the Champlain Bridge/Bonaventure Highway corridor. The AMT is currently conducting a study on transportation and traffic to plan for the infrastructure and systems needed for this corridor. In 2008, the AMT plans to produce a final preliminary proposal on creating a reserved lane along a critical segment between the Bonaventure Expressway and the Champlain Bridge.

Temporary additional platforms will be created in 2008 at the downtown Montréal terminus to increase ridership capacity.

In April 2007, the *Société du Havre* released a major redevelopment project for the Bonaventure Expressway. Six studies pertaining to the opportunity for and feasibility of the project were carried out. They concerned the development concept, verification of construction costs, real-estate potential, economic benefits, transportation and traffic and environmental issues.

RAIL SHUTTLE

The planned rail shuttle linking Montréal-Trudeau International Airport to downtown Montréal is one of the Development Programs listed in the *Transportation Plan*. In 2007, Montréal made a commitment, in conjunction with *Aéroports de Montréal* (ADM), the AMT, the CMM, the MTQ and Transport Canada, to carry out preliminary studies prior to the construction of the project. In October 2007, three contracts were awarded pertaining to the evaluation of prior studies, to strategic and financial advice and to the consultation process. A fourth contract to produce a project prefeasibility study should serve to evaluate potential routes and operating features, along with related costs. The study will be completed in the fall of 2008. A transportation study to assess potential ridership is also underway. Determination of the ideal rail solution and environmental impact studies will be completed in 2009.

ACTIVE TRANSPORTATION

WALKING

The traffic signal upgrade program is now being accompanied by a reassessment of pedestrian needs. Standard pedestrian crossing lights are being systematically replaced with

digital countdown signals. Cycle length is also recalculated to take the needs of pedestrians into greater consideration. Pedestrian crossing lights are added where necessary at conventional intersections. Furthermore, creation of the bike path on *Boulevard De Maisonneuve* has resulted in the installation of digital countdown signals at some 30 intersections in downtown Montréal.

Montréal's boroughs are preparing a number of pedestrianization projects that will be submitted to public consultation sessions. The *Plan de transport intégré du Vieux-Montréal* [integrated transportation plan for Old Montréal], which has been presented at such sessions, provides for pedestrianization of a segment of *Rue Saint-Paul*. In the summer of 2008, *Rue Sainte-Catherine* will be closed to cars from *Rue Berri* to *Rue Papineau*.

BIKE PATH NETWORK

Montréal is committed to doubling its bike path network with an additional 400 kilometres of routes. As of 2007, 18 kilometres of new pathways had been created. Four kilometres of these paths were built along *Boulevard De Maisonneuve*, three on *Rue Viger* and *Rue Saint-Antoine*, three on *16^e Avenue* (Rosemont) and four in Outremont. Five kilometres of the existing system were rebuilt or upgraded, and 20 km of bike paths were repaired. Montréal's first *White Network*, a 29-km all-season network allowing riders to use their bicycles even in the winter, began operating in 2007-2008.

Furthermore, 2015 bike racks were installed over this period. Preparatory studies for setting up a self-service bike system have also been launched.

The *Boulevard De Maisonneuve* bike path is an excellent example of how the needs of pedestrians and bicyclists can be combined and best safety practices observed. Safety measures have in fact been introduced at no less than 36 intersections in the course of this project alone.

SHARED CAR USE

CARPPOOLING

The AMT is conducting a study of opportunities for public transit priority measures (buses, carpools and taxis) on the metropolitan region's highways and bridges, in conjunction with the MTQ. The outcome of this effort will be used in defining a metropolitan action strategy, which will be followed by feasibility studies. The MTQ has also announced the creation of a reserved carpool lane in the plan to rebuild *Rue Notre-Dame*.

CARSHARING

Carshare services continued to expand in 2007, particularly with the tripling of parking space offered in the Plateau-Mont-Royal borough to *Communauto* carshare vehicle (11 new spaces, including five on-street spaces and six reserved spaces in a municipal lot).

The STM and *Communauto* signed a partnership agreement in January 2008. Under that agreement, the \$535 *Communauto* fee is waived for riders who buy 12 consecutive STM monthly passes. Such riders can make use of the carshare service for just \$5 over the monthly pass price.

In May 2008, *Communauto* members will be eligible for discounts on the purchase of taxi coupons, so that they can take advantage of both transportation modes.

DEMAND MANAGEMENT

New city requirements regarding transportation impact studies have applied to all public and private project developers since January 2008. The City will now require developers to show that their projects promote the use of public transit, active transportation and limit the use of single-occupancy cars.

ROAD SYSTEM

TRAFFIC MANAGEMENT

Nearly 200 traffic signals were brought up to standard in 2007.

IMPROVED SAFETY MEASURES FOR RUE NOTRE-DAME

All geometric work east of *Rue Dickson* has been completed. These safety measures are permanent and will not be affected by the plan to rebuild *Rue Notre-Dame*.

RECONSTRUCTION OF RUE NOTRE-DAME

This long-awaited project falls under the Development Program No. 11 of the *Transportation Plan*. Public consultation sessions on the urban integration aspect of this Plan that were organized in the past few months resulted in the presentation of 55 written submissions and illustrated the concerns of residents and groups involved in this matter. These sessions served to

improve the *Rue Notre-Dame* project, particularly through the creation of a bus lane on *Boulevard Pie-IX* and the addition of a carpool lane on *Rue Notre-Dame*, as well as a feasibility study on covering over the Ville-Marie Expressway.

The reconstruction of *Rue Notre-Dame* will take place in different phases, some of which will be carried out simultaneously. The work will be carried out over six years, starting in the fall of 2008. During the first phase of the project in 2008, some preparatory work is planned in the Sainte-Marie and Hochelaga-Maisonneuve sectors. This work will involve localized archaeological digs and work on the old *Tonnellerie* building. Work in the Souigny sector will be more extensive, involving construction of the north lane of *Rue Souigny*, from Highway 25 to *Rue Dickson*.

SAFETY

SPEED LIMIT

In 2007, Montréal and the Government of Québec agreed in principle on setting the basic speed limit for the island's local road system at 40 km/h. Discussions are currently underway on how to define methods for applying this new speed limit, particularly with respect to regulations and signage.

Speed limits will at the same time be maintained at 30 km/h in sensitive sectors, and particularly school and park zones. The *bureau de la sécurité des déplacements* [office of travel safety], in close conjunction with the municipalities and boroughs, is responsible for identifying these particularly sensitive sectors.

OTHER SAFETY MEASURES

Last February, Montréal launched the *Réaménagement des intersections, votre sécurité réinventée* [redeveloping intersections and reinventing your safety], to significantly reduce the number of road accidents, and particularly those involving pedestrians.

A legislative framework has recently been formulated for some of the safety measures supported by the *Transportation Plan*. An Act to amend the *Code de la sécurité routière* [Highway Safety Code] was adopted, for example, in December 2007. Hands-on cell phone use while operating a motor vehicle has been banned since April 1, 2008 and the law now provides stricter penalties for excessive speeding. Legislative changes also permit the installation of photo radar systems and red light cameras as a pilot project at Montréal's intersections.

TRANSPORTATION IN SUPPORT OF THE ECONOMY

SHIPMENT OF FREIGHT

Work with the boroughs to expand the trucking network throughout the agglomeration will be completed, allowing the creation of various information products, including a network map, in the fall of 2008.

The Ontario-Québec Continental Gateway project is underway. This project is aimed at enhancing trade by improving infrastructure and regulations in the St Lawrence River/Great Lakes

regions. It seeks the participation by the CITM in the latter's role as an island-wide working group.

Québec's Minister of Transport also asked the CITM to coordinate a study on the practices and traffic flows at the metropolitan area's leading intermodal facilities.

INTERCITY HUMAN TRANSPORTATION

The governments of Canada, Québec and Ontario have concluded an agreement on updating feasibility studies for a high-speed train between Québec City and Windsor.

APPENDIX 6 | Terminology

THE TERMS OF THIS TERMINOLOGY GUIDE CORRESPOND WITH THEIR USAGE IN MONTRÉAL.

ADMINISTRATIVE TERMS

■ Agglomeration

The 16 municipalities on the Island of Montréal (or simply, the Island of Montréal).

■ Boroughs

The *Ville de Montréal's* 19 political and administrative units, which offer local services in accordance with the areas of responsibility, set out in the *Charte de la Ville de Montréal* [Charter of the City of Montréal], including maintenance and repair of the local road system.

■ Island of Montréal

Geographic entity in which the agglomeration is located.

■ Montréal

In terms of the *Transportation Plan*, this term corresponds with all of the 16 municipalities that make up the agglomeration of Montréal.

■ Reconstituted municipalities

The 15 boroughs of the Island of Montréal, which regained their municipal status as at January 1, 2006.

■ Related municipalities

The 16 municipalities that make up the Island of Montréal (the 15 reconstituted municipalities in 2006 following their merger in 2002, and the *Ville de Montréal*) and which sit on the Agglomeration Council.

GENERAL■ **Active transportation**

Any form of transportation where energy is provided by a human being.

■ **Intermodality**

System involving the combined use of different forms of transportation.

■ **Modal share**

Proportion of trips that use a specific form of transportation throughout the transportation market.

■ **Origin-Destination Survey**

Periodic study (performed every five years in Greater Montréal) analyzing resident transportation habits.

■ **Person with reduced mobility**

Individual with permanent or temporary functional limitations associated with a motor, auditory, visual or cognitive impairment.

■ **Results indicator**

Measures of the changes in the travel habits of Montréalers and other social and environmental factors, with respect to transportation, based on changes to the transportation system.

■ **Street furniture**

All amenities installed along the roadway and in public places to benefit users by providing comfort, beauty or security.

■ **Supply indicator**

Measure of the scope of modifications made to the transportation system and used as a decision-making tool.

■ **Universal access**

Concept that promotes similar access by all users, including persons with functional limits, to the opportunities afforded by a building, an urban space, a program or communications.

PUBLIC TRANSIT■ **Articulated bus**

Bus with two linked body sections, allowing passengers to circulate freely between both.

■ **Bimodal transportation**

Transportation involving the sequential use of two different modes of transportation, such as the train and subway system, car and bus, etc.

■ **Biodiesel**

Fuel consisting of a mix of diesel and oil generated by a chemical transformation of biomass.

■ **Bus priority measures**

Measures aimed at giving public transit priority on the road system, such as reserved lanes, priority traffic signals, road markings, reserved lanes, etc.

■ **Bus rapid transit (BRT) services**

Bus service running on reserved lanes and offering a superior quality of service. BRT lines enjoy a distinctive design that is comfortable and user-friendly.

■ **Bus shelter**

Passenger shelter at a bus stop.

■ **Exclusive lane**

Reserved lane for the exclusive use of one kind of vehicle.

■ **Express bus (express service)**

Bus providing rapid service and/or serving only certain stops. The STM operates different kinds of express lines: *Métrobus*, *Trainbus*, *R-Bus* and *Express*.

■ **Feeder lines**

Bus itineraries designed to facilitate transfers with faster forms of transportation (subways and trains).

■ **Paratransit**

Door-to-door transportation service for riders with reduced mobility, with no fixed itinerary or planned schedule.

■ **Pre-emption (traffic signals)**

Traffic signal phase giving priority to a certain type of vehicle.

■ **R-Bus**

Bus providing rapid service in reserved lanes.

■ **Reserved lane**

Lane of a public roadway that is reserved all or part of the time for one or more categories of vehicles. May be physically separated from the rest of the roadway.

■ **Residual capacity**

Unused and available public transit ridership capacity.

■ **Shared taxi (taxibus)**

Form of public transit employing taxicabs, which are well suited to neighbourhoods in which the use of regular bus service is not economically justified.

■ **Smartcard**

Fare card equipped with an electronic memory.

■ Subway entrance shelter

Simple structure providing sheltered access to a subway station.

■ Tramway

Urban rail line, with rails laid flush along the road surface.

■ Trolleybus

Electrically powered public transit vehicle that runs on wheels and draws power from overhead wires with trolley poles.

FREIGHT SHIPMENT

■ Containerized traffic

Quantity of freight shipped in containers.

■ Hazardous materials

Materials that, because of their properties, pose a risk to health, safety, property or the environment and that are explosive, gaseous, flammable, toxic, radioactive, corrosive, combustive or leachable.

■ Hub

Site that is neither an origin or destination and that concentrates transportation activities involving the transshipment of freight or passenger transfers.

■ Intercity service

Transportation service linking separate urban centres.

■ Intermodal freight centre

Facilities used to tranship freight from one form of transportation to another. Distribution and consolidation activities are possible.

■ Logistics

Organization and synchronization of a company's operations aimed at the management of supplies and deliveries.

■ Oversized vehicle

Vehicle with dimension or weight exceeding existing standards.

■ Rail spur

Rail line of lesser importance providing local service.

■ Supply chain

Set of physical flows of goods, information, skills and financial flows linking customers and suppliers from the processing of raw materials to the end use of products.

■ Trucking plan

Municipal regulatory tool aimed at providing a framework for heavy vehicle use in an urban setting.

BICYCLES

■ Beltway

Bike path ringing the Island of Montréal.

■ Self-service bike system

Bike rental system allowing a user to rent a bike at a modest cost for a set period and return it to any of the many docking bays located in the area.

■ Véloroute bikeway

Intermediate or long-distance bike route directly linking one or more major centres of interest.

■ White Network

Network of bike paths offering year-round operation, including maintenance and snow removal.

WALKING

■ Picturesque street

Street that provides a comfortable, satisfying and stimulating atmosphere to pedestrians, who have the right-of-way on it.

PARKING

■ Illegal parking

- parking lot operated (even temporarily) without authorization;
- parking lot non-compliant with operating permit conditions;
- parking lot with an expired operating permit;
- parking lot non-compliant with legal number of spaces (illegal use of "valet service" to move vehicles).

■ Off-street commercial parking

Parking lot operated by a private firm or by the *Société en commandite Stationnement de Montréal*.

■ Park and ride facility

Parking lot designed to allow motorists to leave their cars near public transit facilities, usually at no charge, so they can continue on to their destinations by commuter train, bus or subway.

■ Parking Cash-Out

Money paid to an employee by the employer as a substitute for the indirect benefit of a free or subsidized parking place provided by the employer at the workplace.

■ Reserved resident street parking

On-street parking area reserved exclusively for residents with a parking sticker placed on their vehicle, and generally located in densely occupied sectors.

■ Shop and ride

Incentive parking lot located in a shopping centre, with users billed a monthly fee that can be redeemed at the end of each month in participating stores.

SHARED CAR USE

■ Carpooling

Method of travel in which more than one person uses the same vehicle for the same (or nearly the same) trajectory, serving to save money and the environment.

■ Carsharing

System whereby a corporation, a public agency, a cooperative or an association lets members share a fleet of vehicles.

SAFETY

■ Green neighbourhood

Sector designated by signs and a redevelopment of public land to give priority to active and public forms of transportation, thereby limiting traffic volumes and the speeds of private cars and trucks.

■ Countdown pedestrian signals

Illuminated signal for pedestrians indicating time remaining to cross the road.

■ Photo radar

Device used to record vehicle speed and control excess speeding.

ROAD SYSTEM

■ Arterial system

System made up of higher capacity roads, such as boulevards and highway service roads under the authority of the agglomeration.

■ Local road system

System made up of roads of lesser capacity, such as collector roads and local roads that can be residential, commercial or industrial and are not included in the arterial system. The local road system falls under the authority of the boroughs and the reconstituted municipalities.

■ Local traffic

Traffic of vehicles with an origin or destination in the sector.

■ Municipal road system

Road system made up of all roads, except for highways, and that fall under the authority of a municipality.

■ Primary road system

Highway system falling under provincial or federal authority.

■ Through traffic

Travel by a vehicle through a sector that is neither its origin nor its destination.

DEMAND MANAGEMENT

■ *Centre de gestion des déplacements* [Commuter management centre]

Organization that assists businesses and individuals seeking to set up alternatives to single-occupancy vehicle.

■ Demand management

Set of measures designed to promote alternatives to the single-occupancy vehicle.

INNOVATION

■ Advanced land transportation industrial cluster

Set of businesses that develop innovative technologies with a high potential for growth in various sectors of activity, by relying on sustained and multidisciplinary research and development efforts.

■ Fuel-efficient vehicle

Automobile with lower fuel consumption (hybrid, microcar, etc.).

■ Intelligent transportation system

Wide range of technologies applied to transportation to make systems more secure, efficient, reliable and ecological, without changing the existing infrastructure.

■ Microcar

Vehicle with smaller size, lower performance and reduced fuel consumption.

■ Wi-Fi

Wireless computer network set up to operate an internal network and provide access to high-speed Internet service.

APPENDIX 7 | Acronyms and Abbreviations

- | | | |
|---|---|---|
| ■ ADM
<i>Aéroports de Montréal</i> | ■ AOT
Autorité organisatrice de transport
[transit authority] | ■ CEVEQ
<i>Centre d'expérimentation
des véhicules électriques du Québec</i> |
| ■ AHNMR
<i>Arrondissement historique
et naturel du Mont-Royal</i>
[historic and natural borough of Mont-Royal] | ■ BRT
Bus rapid transit system | ■ CHUM
<i>Centre hospitalier de l'Université de Montréal</i>
[Montréal's University Hospital centre] |
| ■ AMT
<i>Agence métropolitaine de transport</i> | ■ BTR
<i>Bureau du taxi et du remorquage</i> | ■ CITM
<i>Comité interrégional pour le transport
des marchandises</i> [interregional committee
for freight shipment] |
| | ■ CDEC
<i>Corporation de développement économique
communautaire</i> [Community economic
development corporation] | |

- **CMHC**
Canada Mortgage and Housing Corporation
- **CMM**
Communauté métropolitaine de Montréal
- **CMTC**
Conseil métropolitain de transport en commun
- **CN**
Canadian National
- **CP**
Canadian Pacific Railway
- **CQIP**
Canada-Québec Infrastructure Program
- **CST**
Centre for sustainable transportation
- **DSP**
Direction de santé publique de Montréal
- **GHG**
Greenhouse gas
- **GPS**
Global Positioning System
- **GST**
Goods and services tax
- **HOV LANE**
High occupancy vehicle lane
- **ITS**
Intelligent transportation systems
- **IUPT**
International Union of Public Transport
- **LRS**
Light rail system
- **MAMR**
Ministère des Affaires municipales et des Régions
- **MCMA**
Montréal Census Metropolitan Area
- **MTQ**
Ministère des transports du Québec
- **OECD**
Organisation for Economic Co-operation and Development
- **SAAQ**
Société de l'assurance automobile du Québec
- **SOFIL**
Société de financement des infrastructures locales du Québec
- **SPVM**
Service de police de la Ville de Montréal
[City of Montréal Police Department]
- **STM**
Société de transport de Montréal
- **UMQ**
Union des municipalités du Québec
- **UQAM**
Université du Québec à Montréal
- **UTSP**
Urban Transport Showcase Program
- **Wi-Fi**
"Wireless Fidelity"

APPENDIX 8 | Acknowledgements

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- Vision Montréal
- Vivre Saint-Michel en santé
- St Lawrence Seaway

APPENDIX 9 | End Notes

- 1** The *Montréal living environments* charter is included in the *Master Plan*.
- 2** The year 2021 is a target date for creating housing on the Island of Montréal, based on a growth objective and a capacity defined in the *Master Plan*.
- 3** These figures are based on the regional *Origin-Destination* survey produced by the *Agence métropolitaine de transport* and its partners. This survey collects information on daily travel by Greater Montréal's residents. It excludes interregional travel of people and commercial travel (trucking, delivery, service vehicles, etc.), which may be estimated at some 30% of all daily travel within Greater Montréal.
- 4** Forecasts of increased travel demand are based on the assumption that per capita mobility will remain stable.
- 5** The results of this section are taken from *Urban Transportation Indicators*, Third Edition, 2005, Transportation Association of Canada. These data, which use 1995 as their reference year, come from the International Association of Public Transport (UITP) and pertain to some 60 cities, grouped as follows:

Canada: Calgary, Montréal, Ottawa, Toronto and Vancouver; United States: Atlanta, Chicago, Denver, Houston, Los Angeles, New York, Phoenix, San Diego, San Francisco and Washington; Western Europe: Amsterdam, Athens, Barcelona, Berlin, Bern, Bologna, Brussels, Copenhagen, Dusseldorf, Frankfurt, Geneva, Glasgow, Graz, Hamburg, Helsinki, London, Lyon, Madrid, Manchester, Marseille, Milan, Munich, Nantes, Newcastle, Oslo, Paris, Rome, Ruhr, Stockholm, Stuttgart, Vienne and Zurich; Oceania: Brisbane, Melbourne, Perth, Sydney and Wellington; Asia: Hong Kong, Osaka, Sapporo, Singapore and Tokyo.

- 6 OECD Territorial Reviews: Montréal, Canada 2004.
- 7 Board of Trade of Metropolitan Montréal, *Public Transit, A powerful economic development engine for the metropolitan Montréal region*, December 2004.
- 8 In absolute terms, this represents an additional 84,000 trips, or some 1.55% per year from 2006 through 2021. This increase is the same as that forecast in the *Politique québécoise du transport collectif* [Québec Public Transit Policy].
- 9 Preliminary assessment based on the actual costs of extending the subway system to Laval.
- 10 Based on a review of international tramway projects, production costs can be budgeted at \$40 million per kilometre. These costs do not include those relating to urban redevelopment.
- 11 Unit cost of \$5 million per kilometre.
- 12 Montréal is pursuing efforts to implement its request to add an eighth station in the City, with respect to the proposed plan of seven stations.
- 13 Source: 2003 *Origin-Destination Survey*
- 14 <http://www.statcan.gc.ca/pub/11-008-x/2008001/article/10503-eng.pdf>
- 15 *Québec en Forme* seeks to support communities that are committed to the development of a shared vision and in the implementation of long-term actions aimed at promoting healthy and active lives for 4 to 12-year old children, and particularly those from disadvantaged environments, primarily through physical activities and sports.
- 16 Geographic distribution of road injuries on the Island of Montréal (1999-2003).
- 17 Yves Bussière, Paul Lewis, Marie-Hélène Vandersmissen and Paul-Y. Villeneuve, *Transport collectif et gestion de la demande : examen de l'impact sur la mobilité entre Montréal et la Rive-Sud*, 2002, 122 pages.
- 18 The trade in goods has grown 2.5 times faster than production everywhere in the world since 1990.
- 19 Project presented in the section on the road system.
- 20 Project presented in the section on public transit.
- 21 Project presented in the section on the road system.
- 22 Ministère des Transports du Québec, *Les déplacements interurbains de véhicules lourds au Québec, Enquête sur le camionnage de 1999*, April 2003.
- 23 Project presented in the section on the road system.
- 24 Ministère des Transports du Québec, *Les déplacements interurbains de véhicules lourds au Québec, Enquête sur le camionnage de 1999*, April 2003.
- 25 Ministère des Transports du Québec, *Accidents impliquant un camion transportant des matières dangereuses – Document de travail présenté au Comité sur le transport des matières dangereuses de la Ville de Montréal*, June 2004.
- 26 Study conducted in 2006 by the City's *Centre de sécurité civile* as part of the work of its committee on the transportation of hazardous materials.
- 27 HAZMAT team of the *Service de sécurité incendie de Montréal* [City of Montréal Fire Department].
- 28 From the Transport Canada Web site at: www.its-sti.gc.ca/fr/qu'est-ce_que_ces_sti.htm
- 29 From the Web site of the *ministère des Transports du Québec*: www.mtq.gouv.qc.ca/fr/modes/sti.asp
- 30 The concept of advanced transportation pertains to alternative travel and propulsion systems helping to reduce pollution (from noise and GHGs) and congestion, and contributing to a better quality of life and energy savings. (Source: *Centre d'expérimentation des véhicules électriques du Québec* [CEVEQ]).
- 31 Currently, 50% of Canada's taxes are collected by the federal government, 42% by provincial governments and just 8% by the municipalities.

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