

Urban Transportation in Canada: Needs and Opportunities



Urban Transportation Task Force

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Margaret Grant-McGivney, Chair
New Brunswick Department of Transportation

Sarah Wells, Secretary
Secretariat, Council of Deputy Ministers Responsible for Transportation and Highway Safety

Fatima Abdulrasul
Ontario Ministry of Transportation

Sherry Appleby
Newfoundland and Labrador Department of Transportation and Works

Miranda Carlberg
Saskatchewan Highways and Transportation

Amar Chadha
Manitoba Transportation and Government Services

Roberta Coleman
Manitoba Transportation and Government Services

Évangéline Lévesque
Ministère des Transports du Québec

David McKay
Alberta Infrastructure and Transportation

Robert Patry
Ministère des Transports du Québec

Jacques Rochon
Transport Canada

Kirk Rockerbie
British Columbia Ministry of Transportation

Amelia Shaw
Transport Canada

Alan Stillar
Ontario Ministry of Transportation

Bernie Swan
Nova Scotia Transportation and Public Works

Greg Tokarz
Ontario Ministry of Transportation

Alec Waters
Alberta Infrastructure and Transportation

Foreword

In September 2003, the Council of Deputy Ministers Responsible for Transportation and Highway Safety established an Urban Transportation Task Force comprised of representatives from provincial and territorial jurisdictions and the federal government. The goal of the Task Force is to explore urban transportation issues of common interest with a view to recommending actions to the Council, including initiatives, priorities and criteria for urban transportation investment in the context of potential partnerships between federal, provincial, territorial governments and municipalities.

Through its regular meetings, the Task Force has been a forum for the sharing of information and approaches to urban transportation issues. The Task Force supplemented those discussions with information collected through two surveys on the urban transportation needs and priorities within the provincial, territorial and federal jurisdictions. The material compiled through those meetings and surveys provided insightful information that is presented in the report that follows. In particular, the report highlights the investment needs for public transit and urban roads over the next ten years. It finds that the needs are significant and shows that investing in transportation (in addition to other kinds of infrastructure) is critical to supporting economic and job growth, environmental sustainability, and quality of life in Canada's cities.

The report makes several recommendations in the context of an anticipated "New Deal" for cities and communities. The recommendations encourage the federal government to provide sustainable, predictable, long-term funding to support urban transportation investment. While respecting provincial and territorial jurisdiction and planning priorities, the recommendations also call upon all orders of government to recognize the importance of sustainable urban transportation, to take action and to find ways to work together more effectively to improve transportation and mobility in urban areas.

The recommendations contained within this report were endorsed by the Council of Ministers Responsible for Transportation and Highway Safety in September 2004. We hope the report will be useful to individuals and agencies with an interest in the important role that public transit and good roads play in the fabric of Canada's cities.



Louis Ranger
Deputy Minister of Transport
Government of Canada



Jay Ramotar
Deputy Minister of Infrastructure
and Transportation
Government of Alberta

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Urban Transportation in Canada: Needs and Opportunities

Executive Summary

In recent years, the urban agenda has risen steadily as a priority interest for all orders of government. There is growing recognition of the importance of our cities to our national and regional economies and to the quality of our individual lives. At the same time, there is a growing understanding that a gap exists between the need and the ability to provide infrastructure and deliver services within cities. Combined, these factors have created pressure on all governments to provide support to address urban issues, close the infrastructure gap and ensure the viability and prosperity of Canada's urban centres.

In this context, this document was prepared by the Urban Transportation Task Force of the Council of Deputy Ministers Responsible for Transportation and Highway Safety to provide an overview of urban transportation in Canada and offer arguments in favour of investing in urban transportation infrastructure. The paper presents the results of two Task Force surveys that highlight urban transportation needs and priorities identified by the provinces and territories. The paper also aims to provide the provincial/territorial perspective on principles for effective partnerships among the various orders of government on urban transportation matters.

Canada's cities are the economic engines of the country and investing in our cities will benefit all Canadians. Within cities, much of the need is in transportation and much of the investment should consequently be targeted at transportation infrastructure. Transportation is an enabling sector – often lost to issues deemed more critical. However, transportation touches Canadians' lives every day through access to work, education, health care facilities, and accessible goods. Fundamentally, transportation enables economic wealth and the tax base to pay for what is important to Canadians. Consider the following:

- Canada's \$157.3 billion in publicly-owned infrastructure – roads, mass transit, water supplies, wastewater treatment facilities, etc. – has a tangible impact on the productivity and economic performance of the Canadian business sector. Public infrastructure, or “public capital,” lowers the costs of producing a given level of output in virtually every Canadian industry within the business sector. (Harchaoui, Tarkhani and Warren, 2003)
- A large infrastructure gap has emerged between the current fiscal capacity and the needs of citizens for core services. (Federation of Canadian Municipalities, 2004)
- The potential long-term costs of failing to address the infrastructure issues are numerous, and include higher government operating costs, negative impacts on the environment and threats to public health and safety. (Vander Ploeg, 2003)
- A study by the Canada West Foundation (Vander Ploeg, 2003) found that for most western cities, the largest portion of the infrastructure deficit resides in transportation –

roads, traffic control, bridges, interchanges, and public transit. It seems likely that this is the case for most cities across Canada.

- Urban congestion has significant economic costs and affects the competitiveness of Canada's economic centres. Congestion means delay – lost time and productivity, wages foregone and extra fuel costs. Access to airports and ports, freight pick-up and delivery, just-in-time delivery schedules, and business activities are all compromised by congestion. It results in greater fuel consumption and additional emissions of air pollutants and greenhouse gases. Congestion also reduces the effectiveness of our national transportation system by constraining the movements of goods and passengers within and through major urban centres. (Transport Canada, 2003)
- Within cities, transit is a key component of a multi-modal urban transportation system. Transit's economic benefits are many and include its role in providing transportation alternatives, reducing congestion in crowded cities, reducing air pollution, and providing a safer mode of personal travel than automobiles. (Canadian Urban Transit Association, 2003)

It is clear from the work of the Task Force and others that the transportation infrastructure need in urban areas is very large. In fact, the need is estimated to be in excess of \$85 billion over the next ten years. It should be emphasized that governments have invested and will continue to invest in urban areas and some of the \$85 billion need will be met by current and planned expenditures. However, the need exceeds the funding capacity of the traditional partners – the users, the municipalities and provincial governments. Additional new investment is critical to support cities and communities in pursuit of economic, social and environmental goals.

The federal government has committed to provide new funding through its “New Deal” for cities and communities, funded in part by sharing federal gas taxes. It is an important principle from the federal perspective that provincial/territorial governments not reduce their funding to municipalities as a consequence of that federal investment. It is recognized that funding decisions for the “New Deal” will be the product of an intergovernmental negotiation that involves many ministries and departments at both the provincial and federal levels. The emphasis, regardless of mechanism, must be on securing reliable, long-term, net new revenue sources adequate to meet the growing needs in urban areas. That funding must be:

- Long-term, stable and sustainable. These characteristics are necessary to allow jurisdictions to undertake longer term planning and strategic investment in urban areas.
- Equitable, flexible and balanced. Funding should account for local needs and priorities and new funding should not be at the expense of investment in rural areas.
- Combined with good governance. Funding should be complemented by a governance structure that ensures coordinated planning with a responsible, accountable, transparent framework for all levels of government and independent transportation authorities.

In addition to new investment, there is an array of other measures that governments have at their disposal which could support and promote urban transportation. There is great potential for collaboration amongst orders of government on such approaches, which should be explored in more detail.

The challenges faced by urban areas will require not only new funding but also a new partnership amongst orders of governments. Principles that could underlie an effective partnership unanimously supported by provincial respondents to a Task Force survey include:

- Federal programs should respect provincial and territorial jurisdiction and planning priorities.
- Federal funding programs should not be contingent upon matching funding from provinces and territories.
- There should be flexibility in program designs to accommodate programs that meet the needs of the jurisdictions.

Five recommendations emerge from the needs, priorities and principles discussed herein. They are:

- 1. Recognizing the importance of urban areas, the federal government should provide sustainable, predictable, long-term funding to support urban transportation investment.**
- 2. All orders of government must recognize that amongst competing urban infrastructure needs, the specific needs of transportation, including transit, are significant and merit a proportional share of new investment.**
- 3. Governments must take action to improve transportation and travel time for freight and passengers in urban areas through increased investment, transportation demand management, improved planning processes and the use of advanced technology.**
- 4. While respecting provincial and territorial jurisdiction and planning priorities, all orders of government must find ways to work together more effectively to improve transportation and mobility in urban areas. Opportunities for collaboration beyond funding partnerships should be explored.**
- 5. All governments should pursue opportunities to promote awareness of the importance of sustainable urban transportation and transportation choices to the economy, the environment and social lives of Canadians.**

Introduction

In recent years, the urban agenda has risen steadily as a priority interest for all orders of government. There is growing recognition of the importance of our cities to our national and regional economies and to the quality of our individual lives. At the same time, there is a growing understanding that a gap exists between the need and the ability to provide infrastructure and deliver services within cities. Combined, these factors have created pressure on all governments to provide support to address urban issues, close the infrastructure gap and ensure the viability and prosperity of Canada's urban centres.

Individually and collectively, Deputy Ministers of Transportation have elevated urban transportation as an important issue to discuss with a view to finding solutions to urban transportation problems while strengthening federal/provincial/territorial cooperation in this domain. The Council of Deputy Ministers Responsible for Transportation and Highway Safety directed the establishment of a Task Force to explore urban transportation issues and exchange information on urban transportation policy matters. This document has been prepared by the Urban Transportation Task Force to summarize its findings and present the results of two surveys of its members it conducted on urban transportation.

The paper provides an overview of urban transportation in Canada and offers arguments in favour of investing in urban transportation infrastructure. The results of the Task Force surveys are presented, highlighting urban transportation needs and priorities identified by the provinces and territories and offering insights to areas of commonality amongst those jurisdictions. The paper also aims to provide the provincial/territorial perspective on principles for effective partnerships among the various orders of government on urban transportation matters. Finally, in the context of an anticipated "New Deal" for cities and communities, the Task Force developed recommendations which were offered for consideration by the Councils of Ministers and Deputy Ministers Responsible for Transportation and Highway Safety. The recommendations were approved in September 2004 and are presented herein.

Urban Transportation in Canada – Current Context

Canada has become one of the most urbanized countries in the world, with the majority of its population located in urban areas. The population is also becoming increasingly metropolitan, with much of the population, employment and economic activity located in the very largest cities. Canadians are highly mobile, with 13 million traveling to and from work each day, making six trillion trips each year and as many trips again for recreational purposes (Parsons, 2003). In this dense and busy urban landscape, several dominant trends impact transportation.

Globalization and North American integration: In a context of globalization and North American integration, the country's economic growth and maintenance of the competitiveness of Canadian companies require efficient and competitive transportation networks and systems.

Urbanization: Over 80% of Canadians live in urban centres and 67% of our total employment is located in 25 census metropolitan areas. Furthermore, half of the urban dwellers, or 40% of

the Canadian population, live in one of the six biggest urban areas (Toronto, Montréal, Vancouver, Ottawa-Gatineau, Calgary and Edmonton) where nearly 50% of the total employment is located. This concentration of population and economic activity creates strong pressure on urban transportation networks and systems.

Urban sprawl: Lower density land use and the sprawl of residential zones and places of employment fosters increased automobile use, complicates management of public transit services, accentuates infrastructure needs and limits the potential of certain alternative modes, such as walking and cycling. Sustainable land-use planning and development approaches could limit sprawl and its effect on urban areas.

Automobile ownership: The increased motorization of households combined with changes in land use patterns and travel structure (increase in triangular trips such as home to daycare to work) mean that urban populations are increasingly reliant on the automobile. While automotive technology and fuel is becoming cleaner, technological advances are largely negated because of choices Canadians make about location and travel behaviour.

Aging population: The aging of the population has a significant impact on public transit ridership and accessibility needs. In the past, the aging of the population has led to decreased transit use. In the future, baby-boomer aging could increase transit use as they pass retirement age.

Climatic changes and environmental issues: Greenhouse gas (GHG) emissions are generally concentrated in urban environments and transport activities are a major source of atmospheric pollution. The achievement of Canada's objectives for greenhouse gas reduction will require a significant reduction in GHG emitted in urban centres.

In a landscape characterized by the above trends, the challenges faced by municipalities are many. While the nature and extent of the challenges may vary with the size of the population served, jurisdictions nonetheless commonly report economic, environmental and social issues as follows:

Aging infrastructure and equipment: Much of Canada's road infrastructure was built in the 1950s and 60s and was generally well maintained through the 1970s. Beyond the 1970s, for a variety of reasons, a backlog began to grow in maintenance and replacement work for civil infrastructure systems including roads and bridges. The result is a physical infrastructure system that has aged and is now approaching the end of its useful service life. On the public transit side, the vehicle fleet in Canada averages 11 years old, compared to the Canadian Urban Transit Association's (CUTA) recommended average fleet age of 6 to 9 years. At the extreme, in some cases buses are pressed into service at 25 years of age and subway cars in Montréal and Toronto have been in service since the 60s. The delivery of transit services in a reliable, efficient and effective manner, which is necessary to ensure they are a viable alternative to the automobile, is greatly challenged by the age of the system.

Congestion: Large urban centres experience major congestion and gridlock, causing delay, increased energy consumption and air pollution. The economic and environmental consequences of congestion are high, estimated at several hundred million dollars to \$2 billion

annually in some urban centres. Furthermore, the modern economy relies on its workforce and on “just-in-time” production. Urban congestion has a substantial negative impact on the competitiveness of Canadian urban centres and Canada as a whole.

Pollution: Clean air is important to all Canadians. Transportation, particularly private automobile use, in urban centres is one of the leading sources of noise, visual and atmospheric pollution. Although pollution is not always locally generated, the deterioration of air quality is generally associated with an increase in health problems and health care costs.

Decline in the modal share of public transit and non-motorized modes: While public transit ridership has increased in the past few years, the market share of total trips represented by public transit, as well as walking, continues to diminish. Urban sprawl, policies favourable to use of the automobile and population aging are all trends which exacerbate this challenge for urban areas.

Decreasing population in smaller urban centres: Declining populations affect ridership and revenue of public transit systems. The limited pool of riders and, more generally, the low land use density in smaller urban areas, significantly increases the operating costs of public transit services, given the distances to travel and the lower volume of passengers transported.

Maintaining Canada’s Economic Competitiveness: The Importance of Investing in Urban Transportation

Canada’s cities are the economic engines of the country and investing in our cities will benefit all Canadians. Within cities, much of the need is in transportation and much of the investment should consequently be targeted at transportation infrastructure. Transportation is an enabling sector – often lost to issues deemed more critical. However, transportation touches Canadians’ lives every day through access to work, education, health care facilities, and accessible goods. Fundamentally, transportation enables economic wealth and the tax base to pay for what is important to Canadians. (Western Transportation Advisory Council, 2002) Consider the following:

- Canada’s \$157.3 billion in publicly-owned infrastructure – roads, mass transit, water supplies, wastewater treatment facilities, etc. – has a tangible impact on the productivity and economic performance of the Canadian business sector. Public infrastructure, or “public capital,” lowers the costs of producing a given level of output in virtually every Canadian industry within the business sector. (Harchaoui, Tarkhani and Warren, 2003)
- More than 80% of foreign multinational executives surveyed indicated that the poor state of business infrastructure adversely affected Canada as a destination for foreign direct investment. One of the key concerns is the state of the country’s physical infrastructure (The Canadian Council for Public-Private Partnerships, 1998).
- A large infrastructure gap has emerged between the current fiscal capacity and the needs of citizens for core services. (Federation of Canadian Municipalities, 2004)

- The potential long-term costs of failing to address the infrastructure issues are numerous, and include higher government operating costs, negative impacts on the environment and threats to public health and safety. (Vander Ploeg, 2003)
- Deferring maintenance of aging infrastructure will mean higher costs down the road when infrastructure will need to be replaced because inadequate maintenance has ended useful service life more quickly than necessary. The Law of Fives suggests that the cost of an infrequent maintenance activity is five times the cost of good practice. Moreover, if delays in maintenance are too long, then repairs are required, costing yet five times more. If repairs are also neglected, then the infrastructure will require renovation (replacement) at a cost of 125 times good maintenance practice. (Kennedy and Adams, 2004)
- A study by the Canada West Foundation (Vander Ploeg, 2003) found that for most western cities, the largest portion of the infrastructure deficit resides in transportation – roads, traffic control, bridges, interchanges, and public transit. It seems likely this could be the case for most cities across Canada.
- The economic artery that is Canada's transportation system is a key reason that Canadians enjoy the quality of life they do. However, a large and growing number of barriers threaten the continued health of the transportation system. Deferring decisions on investment and other regulatory changes required to maintain productivity improvement incurs costs that are growing and threaten the foundation of our economy and society. (Parsons, 2003)
- The movement of Canadians into large cities is creating special challenges for transportation industries. Metropolitan areas have become the origins and destinations for most freight movements and transshipment points. The concentration of people into cities has brought with it major development issues for those providing the transportation system. (Parsons, 2003)
- Urban congestion has significant economic costs and affects the competitiveness of Canada's economic centres. Congestion means delay – lost time and productivity, wages foregone and extra fuel costs. Access to airports and ports, freight pick-up and delivery, just-in-time delivery schedules, and business activities are all compromised by congestion. It results in greater fuel consumption and additional emissions of air pollutants and greenhouse gases. Congestion also reduces the effectiveness of our national transportation system by constraining the movements of goods and passengers within and through major urban centres (Transport Canada, 2003)
- Within cities, transit is a key component of a multi-modal urban transportation system. Transit's economic benefits are many and include its role in providing transportation alternatives, reducing congestion in crowded cities, reducing air pollution, and providing a safer mode of personal travel than automobiles. Transit has the lowest fatality rate of any urban transportation mode. Without transit, there would be 150

more transportation fatalities per year, increasing health costs by more than \$1.1 billion annually. (Canadian Urban Transit Association, 2003)

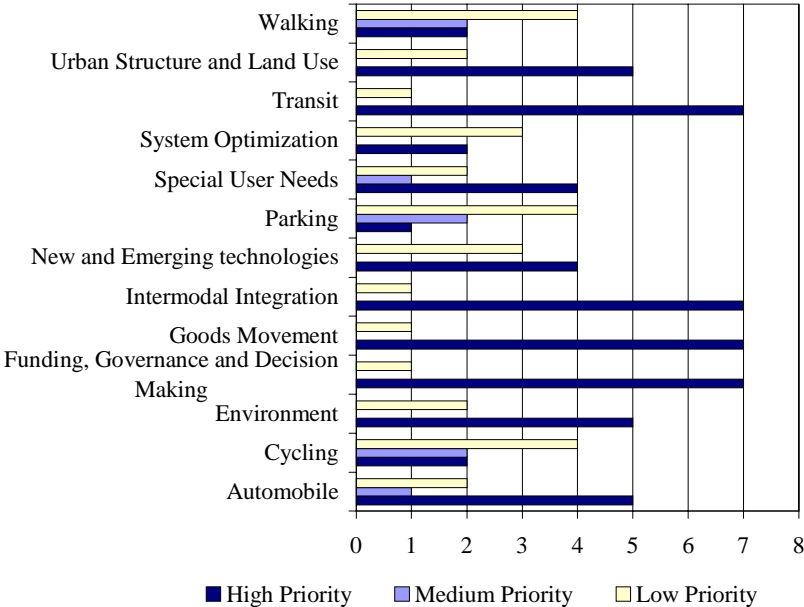
Urban Transportation Priorities

Understanding the importance of urban transportation to the viability of urban centres, the prosperity of our economy and our environmental and social well-being, communities across Canada are working to deliver the best transportation system possible, in often highly constrained circumstances. Common visions for urban transportation expressed in a 2003 survey of the Task Force include:

- Providing safe, efficient, effective transportation systems, for goods and people, in an integrated and multi-modal network.
- Promoting mobility and reasonable access to transportation for all Canadians.
- Improving transportation and trade corridors.
- Improving transit services.

Through the work of the Urban Transportation Task Force, and particularly the survey it conducted in 2003, provincial and territorial jurisdictions have identified other thematic priorities for urban transportation as depicted in Figure 1. Notably, seven of eight respondents to the survey identified transit, goods movement, modal integration and funding, governance and decision-making as high priorities for urban areas. These are described below.

Figure 1: Urban Transportation Priorities Identified in Task Force Survey



The provision of effective transit services is viewed as an important element of sustainable transportation within urban centres and transit is expected to be key to remedying the problems facing urban communities. Investing in transit systems to deliver higher quality (more

efficient, effective, reliable) transit services will increase its attractiveness relative to the private automobile, thereby reducing automobile use and reducing gridlock and traffic congestion. This should improve the efficiency of goods movement in support of trade and the economy, reduce air pollution and environmental impacts and improve the quality of life and the social well being of Canadians living in urban areas. Public transit also serves a social mission: for people who do not have a car, it is often the only means of access to employment, health care, schools and other important activities.

National and international trade is vital to the economy and more efficient transportation resulting in more efficient goods movement means more competitiveness. Within cities, goods movement must compete with commuters, recreational and tourist travelers for space on the transportation system. To and from cities, adequate provincial highway and arterial capacity and effective and efficient links to national trade corridors are also necessary. Concerns about trade congestion in those corridors were cited in the Task Force survey. The daily value of two-way trade between Canada and the US is \$1.5 billion. The costs of transportation inefficiency for goods movement in, to and from urban centres can be enormous with significant impacts on the Canadian economy.

Modal integration is considered key to the efficient movement of goods and people. More often than not, transportation requires the use of more than one mode and provincial respondents to the Task Force survey noted that a coordinated approach to interface and integrate different modes is a high priority.

Addressing funding, governance and decision-making for urban transportation is a high priority for provincial respondents to the Task Force survey. The financial needs to maintain the existing equipment and infrastructure and to improve the quality of public transit services are enormous. Establishing effective, long-term, stable funding solutions, which will allow better planning, is key. Furthermore, in many jurisdictions, the fragmentation of transportation funding and decision-making responsibilities among several authorities and among different forms of transportation makes it difficult to implement an integrated urban strategy throughout the urban centre. A new partnership amongst all levels of government, one that is built upon consultation and collaboration and that respects jurisdictions' responsibilities, is necessary in establishing future governance models.

Other transportation issues of varying degrees of priority that were cited in the Task Force survey included urban structure and land use, special user needs, the environment, the automobile, new and emerging technologies, walking, cycling, parking and system optimization.

Infrastructure Investment Needs

The need for investment in infrastructure in Canada, and particularly in Canadian cities, is widely accepted to be significant, critical and growing. To estimate the extent of the investment that would be required over the next ten years, the Task Force conducted a survey

of provincial and territorial jurisdictions on urban transportation needs. Submissions were received from ten jurisdictions; key results are summarized below.

Reporting on transit systems in 160 cities across Canada, the survey indicates an investment of nearly \$23 billion will be required over the next ten years. This total includes investments necessary for system maintenance and renewal as well as system expansion for conventional transit infrastructure, fleet vehicles and technology. It does not include costs that would be incurred by municipalities establishing new transit systems where none currently exist or for specialized transit. Furthermore, the total does not include transit needs in Saskatchewan, Prince Edward Island, the Northwest Territories or Nunavut as those jurisdictions did not provide an estimate for the Task Force survey. A breakdown of the \$23 billion total is provided in Table 1 and is depicted graphically in Figure 2.

Respondents to the Task Force survey also attempted to identify investment needs for roads and bridges in their municipalities. Although all respondents offered submissions on this component, most did so with caution, noting the greater difficulty experienced in acquiring the data from municipal sources. Furthermore, there was considerable variability in the approaches to estimating the investment needs in each jurisdiction, particularly with regard to what constitutes an urban centre. Those issues were left to the discretion of the responding agencies and the submitted data points to a needed investment in roads and bridges (whether municipally or provincially owned) in excess of \$66 billion in the next ten years. A breakdown of this total is provided in Table 2 and Figure 2.

**Figure 2: Investment Needs (2004 - 2013)
Identified in Task Force Survey**

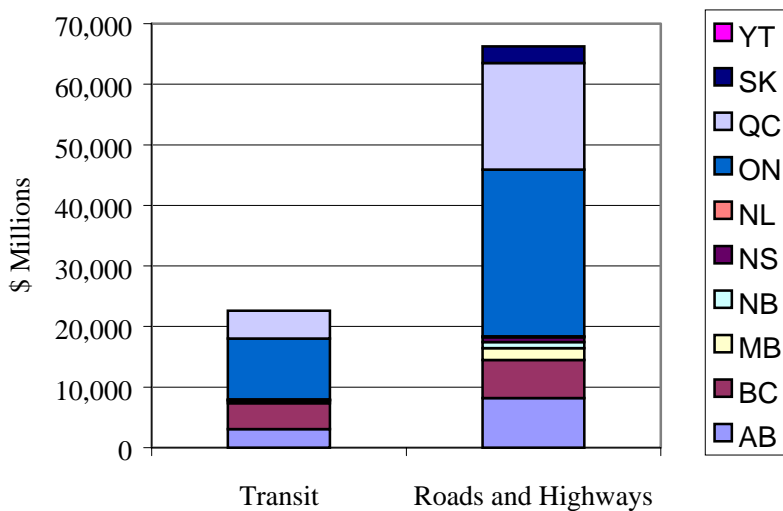


Table 1: Transit Investment Needs* (2004 – 2013) Identified in Task Force Survey

	Infrastructure		Fleet		Technology		Total (\$ millions)
	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	
BC	+	2,400.0	1,400.0+	420.0+	+	20.0	4,240.0+
AB	557.0	1,205.0	500.0	755.0	31.0	41.0	3,089.0
SK	Data not available						
MB¹	30.0		180.0		6.0	10.0	226.0
ON²	1,526.8	4,836.3	2,238.9	1,066.4		346.4	10,014.8
QC	1,788.0	327.8	2,311.0	+	172.2	+	4,599.0+
NB	5.5	2.5	21.4	7.0	2.0	0.3	38.7
NS	5.1	27.0	100.5	45.0	3.0	5.0	185.6
PE	Data not available						
NL	0.2 ³		10.0 ⁴		2.0 ⁴		12.2
YT	3.0	1.0	4.5	1.0	0.2	0.1	9.8
NT	Data not available						
NU	Data not available						
Sub-Total	3,915.6 +	8,799.6	6,766.3+	2,294.4+	216.4+	422.8+	22,415.1+
Total M&R	10,898.3 +						
Total Exp.	11,516.8+						
Total	22,415.1+						

* Values reported in constant dollars.

+ Additional amounts not yet determined.

¹ Data provided for Winnipeg.

² ON data to 2008 only.

³ Data provided for Corner Brook. The St. John's Transportation Commission is currently reviewing the infrastructure investment needs.

⁴ Data provided for St. John's. Transit service in Corner Brook is contracted.

Table 2: Road and Highway Investment Needs* (2004 – 2013) Identified in Task Force Survey

	Municipal Roads		Municipal Bridges		Provincial Roads		Provincial Bridges		Total (\$ millions)
	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	Maintenance & Renewal (\$ millions)	Expansion (\$ millions)	
BC ¹	1,678.5	54.0		600.0	600.0	242.0	120.0		6,294.5 ²
AB	2,536.0	2,350.0	310.0	51.0	100.0	2,300.0	30.0	500.0	8,177.0
SK									2,730.0 ³
MB	1,005.0	186.2	165.0	40.0	75.0	457.5	24.2	4.6	1,957.5
ON		8,400.0 ⁴		1,600.0 ⁴	5,200.0	10,500.0 ⁵	1,800.0		27,500.0
QC	3,280.0 ⁶	2,670.0 ⁶	490.0 ⁷	Data not available	2,527.0	4,753.5	2,234.0	1,670.0	17,624.5
NB ⁸	620.0	234.0	0.0	0.0	70.0	20.0	28.0	23.0	995.0
NS ⁹	297.0	100.0	35.0	0.0	69.0	185.0	121.4	0.0	807.4
PE	Data not available								
NL ¹⁰	92.2		8.2		52.0		5.0		157.4
YT	10.0	5.0	1.0	10.0					26.0
NT	Data not available								
NU	Data not available								
Sub-Total	9,518.7 ⁶	13,999.2 ^{4,6}	1,009.2	2,301.0	8,693.0	18,458.0	4,362.6	2,197.6	66,269.3
Total M&R	23,583.5								
Total Exp.	36,955.8								
Total	66,269.3 ^{2,3}								

* Values reported in constant dollars.

¹ Data provided only for infrastructure administered by the Greater Vancouver Transportation Authority (GVTA) within its service region (lower mainland).

² Includes additional \$3 billion for the Lower Mainland Gateway Program not identified in other categories.

³ Target annualized rehabilitation, replacement and expansion requirements for Saskatchewan cities is \$273 million; \$2.73 billion over a ten-year period.

⁴ Figures based on partial data provided by Ontario municipalities and roads associations. Figures include projected capital expenses for system renewal and expansion. There is insufficient data to provide a breakdown between renewal and expansion.

⁵ Figure includes estimated expansion costs for provincially owned bridges, as projections cannot be readily broken down between roads and bridges. Figure includes projected capital, property acquisition, design and environmental assessment costs.

⁶ Estimate for QC municipal roads is based on spending in the last 10 years. Also includes usual spending for maintenance for bridges.

⁷ Estimate for the renewal of bridges. Does not include needs for the biggest cities.

⁸ Data provided for eight NB municipalities.

⁹ Data provided for three NS municipalities.

¹⁰ Data provided for Mount Pearl, Corner Brook and St. John's, NL.

The tables reveal considerable differences in the scale of the investment needed in different jurisdictions. It is apparent that in the jurisdictions with the largest cities the investment required is much larger than in jurisdictions with smaller cities. For example, in Ontario, investment required in just the next four years to maintain, renew and expand transit infrastructure, rolling stock and technology will exceed \$10 billion. In New Brunswick, investment needed in transit is estimated to be nearly \$39 million over the next ten years. There, the primary investment needs are replacement of buses and maintenance of transit infrastructure such as garages and bus stop locations with some additional funding required for advanced technology traveler information systems. While there is an order of magnitude difference in dollar value, in proportion to the current resources of the jurisdictions, the needs are similarly significant. Furthermore, the impact of the investment is expected to be important from an economic support and development perspective, regardless of the size of the need or the jurisdiction.

The values included in Tables 1 and 2 are investment needs forecast for the next ten years; it should be emphasized that the tables do not identify planned expenditures. Governments have invested and will continue to invest in urban areas and some of the identified need will be met by current and expected budgets. However, there is an expected shortfall or deficit in infrastructure funding as the need exceeds current funding capacity. Various sources have attempted to quantify the extent of the deficit, and despite differences in approaches, without exception, the value of the estimated deficit is substantial. Key studies and the infrastructure deficit estimates they offer are highlighted below.

Arguably the most frequently cited report regarding the infrastructure deficit, the *Report on the State of Municipal Infrastructure in Canada* (Federation of Canadian Municipalities and McGill University, 1996), presents information collected by survey on the state of Canadian municipal infrastructure (including transportation, water and wastewater systems and community social service facilities). Based on responses from municipalities, the cost to bring infrastructure to an acceptable level was estimated to be nearly \$44 billion for the whole country. The study estimated the transportation (transit, roads, bridges, sidewalks, curbs) deficit represents 33% of the total, or \$14.4 billion for Canada.

Forecasting from the 1996 FCM/McGill study, the *Civil Infrastructure Systems Technology Road Map* (Canadian Society for Civil Engineering, 2003) estimates that the investment currently required to rehabilitate municipal infrastructure is \$57 billion, which if left unchecked could rise to more than \$110 billion by 2027.

A Capital Question – Infrastructure in Western Canada’s Big Six (Vander Ploeg, 2003) attempted to determine how realistic other estimates of infrastructure deficits might be. This study examined the degree to which spending on public capital has fallen based on an historical review of local government capital flows (1961-2000). The study concluded that “many of the measures of reduced capital spending by local governments do not appear to be completely at odds with estimates of the municipal infrastructure debt, which depend on the time they were made and range anywhere from \$40 to \$60 billion. While the estimates are somewhat higher, they are not completely out of the ballpark.”

In a comprehensive 2003 survey of its transit system members, CUTA collected detailed estimates of capital infrastructure needs for the next five years. The survey, summarized in *Report on a Survey of Transit Infrastructure Needs for the Period 2004 – 2008* (CUTA, 2004), found an estimated \$21 billion will be required for transit infrastructure, including rolling stock, between 2004 and 2008. Of that total, just over \$12 billion was reported as part of the transit systems' current plans, and nearly \$9 billion was identified as only possible with new, external sources of funding.

Funding and Governance for Urban Transportation in Canada

It is abundantly clear from the work of the Task Force and many others that the infrastructure needs in urban areas are very large. Urban areas are important and meeting those needs through new investment, especially in urban transportation, is critical to support cities and communities in pursuit of economic, social and environmental goals. However, the infrastructure needs exceed the funding capacity of traditional partners – the users, the municipalities and provincial governments. New sources of funding and innovative funding arrangements must be found in order to address the substantial needs within urban areas. The federal government has committed to a “New Deal” for cities and communities that would include new funding and a new partnership with provincial and territorial governments in collaboration with municipal governments. While the details of the deal have yet to be revealed, the Task Force has identified two key considerations that must be resolved in the establishment of a “New Deal”. These are funding arrangements and governance matters.

Current Models

Current governance models and sources of funding for urban road infrastructure and transit were identified in the second survey conducted by the Task Force. The survey results are based on information for 2002-03. Summary information is offered below.

Funding for urban road infrastructure in municipal areas varies by jurisdiction. For the most part, the major sources of revenue are municipal and provincial governments, with contributions provided by the federal government in only some cases. Some jurisdictions are examining the potential of private sector investment and public-private partnerships to fund and operate new infrastructure. User fees, or tolling, are also being adopted in some jurisdictions to pay for needed new infrastructure. In Alberta, funding assistance equivalent to 5 cents per litre of gas sold is allocated for transportation capital projects in Edmonton and Calgary; the cities are responsible for establishing priorities relative to roads and transit.

Funding for urban transit also varies greatly from one province to another, as depicted in Table 3. In some provinces, urban transit is the exclusive responsibility of municipalities and fare revenues and municipal funding are the sole sources of transit funding. In other provinces, government support directly targets capital expenditures and operation of services while in other cases the provinces do not systematically pay direct subsidies for capital or operating expenditures, favouring other modes of financing such as unconditional grant allocations. Some provinces also assume direct responsibilities for services. This is the case in Ontario

where the provincial government recently took back responsibility for GO (Government of Ontario) Transit. Four provinces (British Columbia, Alberta, Ontario, Québec) have established financing formulae that involve the collection of motorists' fees or fuel taxes that are then dedicated to public transit and transportation. In BC, a dedicated tax of 11.5 cents per litre on fuel sold within the Greater Vancouver Regional District is directed toward transportation. In October 2004, Ontario began transferring one cent per litre of its provincial gas tax for transit capital projects across the province. This transfer will increase to one and a half cents per litre in October 2005 and two cents per litre in October 2006. This will impact the provincial funding share for public transit in Ontario.

Table 3. Current Shares (2002-03) of Public Transit Funding (Operating and Capital) Identified in Task Force Survey

	Current Percentage Share			
	Fare Revenue	Municipal Funding	Provincial Funding	Federal Funding
BC	39.0	See note below ¹		0.0
AB	0.0 / 50.0 ²	30.0 / 50.0 ²	70.0 ³ / 0.0 ²	0.0
SK ⁴	32.5	56.5	3.8	0.0
MB ⁵	22.4	42.4	35.1	0.0
ON ⁶	54.0	31.0	12.0	3.0
QC	40.0	37.0	23.0 ⁷	0.0
NB ⁸	55.0	45.0	See note below ⁹	0.0
NS	58.0	42.0	0.0	0.0
PE	Data not available			
NL ¹⁰	50.0 / 60.0	50.0 / 40.0	0.0	0.0
YT	25.0	75.0	0.0	0.0
NT	Data not available			

¹ The range of funding sources available to the Greater Vancouver Transportation Authority is the broadest of any of the major urban regions in the country. Existing sources currently used include transit fares, fuel taxes, sales tax on paid parking, residential/commercial property taxes and BC Hydro levy. Existing sources not currently used but authorized by statute include project tolls, benefiting area taxes, motor vehicle or commuter levies, parking stall taxes.

² Shares of revenue reported for capital / operating.

³ Provincial funding derived from fuel tax share.

⁴ Information (from 2003) is for the cities of Regina and Saskatoon combined. Other revenue (advertising, charters, etc.) of 3.9% is reported. Provincial funding is dedicated to special needs transit.

⁵ Information is for the cities of Brandon, Thompson and Flin Flon combined. In Winnipeg, fare revenue supports approximately 60% of annual operating costs. The City funds the majority (78.4%) of bus replacements. The Province contributes (21.6%) to annual bus replacement costs and an operating grant in the order of \$17.0 million per year.

⁶ Total shares of operating and capital expenditures on transit systems including GO Transit, for which the province funds 100 per cent of base capital and operating subsidy. This data does not reflect the impact of the Ontario Government's commitment to make two cents per litre of the existing provincial gas tax available for public transit. This began with one cent per litre in October 2004, increasing to one and a half cents per litre in October 2005 and two cents per litre in October 2006. Federal government funding of \$62 million was provided to the Toronto Transit Commission in 2002 under the Canada-Ontario Infrastructure Program. Additional funding commitments to transit were made in 2003 and 2004.

⁷ Includes provincial contribution of 15.0% and motorists' contribution of 8.1% (tax on vehicle license at \$30/plate).

⁸ Shares vary by municipality.

⁹ Provincial funding is provided indirectly through the unconditional grant formula to municipalities.

¹⁰ Shares vary by municipality. Data reported for St. John's / Corner Brook.

Several jurisdictions have created, or are beginning to consider the creation of, local transportation authorities to provide public transportation services within major municipalities. For example, in British Columbia there are two agencies that are charged with providing transit services. BC Transit is the provincial Crown Corporation charged with providing public transportation throughout the province outside of Greater Vancouver. In addition to managing and operating the Victoria Regional Transit System, BC Transit plans, funds, manages, markets and contracts for transit systems in 50 BC municipalities. Within the Greater Vancouver region, transportation is the responsibility of the Greater Vancouver Transportation Authority, known as TransLink. TransLink was established in 1999 to champion improvements to the Greater Vancouver regional transportation network. To accomplish this, TransLink has not only improved transit services, but also provided improvements to the entire transportation network through major roadway improvements, signal and intersection upgrades, and pedestrian and bicycle facilities. Transit services provided by TransLink include not only bus service but also SkyTrain, SeaBus and West Coast express commuter rail. TransLink also operates the AirCare emission testing for the lower mainland and supports transportation demand management for the region.

Ontario will be establishing a Greater Toronto Transportation Authority (GTTA) to bring a region-wide approach to identify and meet transit needs in the Greater Toronto Area, the most populous urban region in Canada.

In Nova Scotia, the provincial government and the Halifax Regional Municipality have initiated discussions regarding the establishment of a Capital Transportation Authority to help resolve the growing traffic/transportation related problems resulting from the growing urban population.

New Opportunities

The federal government has proposed a “New Deal” for cities and communities, which would include sharing a portion of federal gas taxes with provinces and municipalities for investment in urban transportation and other infrastructure. In a survey, provinces and territories said that any federal funding must be:

- New to urban areas. The capacity of the traditional funding partners has been exceeded and a net new revenue source for urban infrastructure is critical. These funds would be a new source of funding for provincial and municipal governments. It is an important principle from the federal perspective that provincial/territorial governments not reduce their funding to municipalities as a consequence of new federal investment.
- Long-term, stable and sustainable. These characteristics are necessary to allow jurisdictions to undertake longer term planning and strategic investment in urban areas.
- Equitable, flexible and balanced. Funding should account for local needs and priorities and new funding should not be at the expense of investment in rural areas.

- Combined with good governance. Funding should be complemented by a governance structure that ensures coordinated planning with a responsible, accountable, transparent framework for all levels of government and independent transportation authorities.

An obvious potential new source of funding would be a share of the federal fuel excise tax. The provincial and territorial governments have long argued that a portion of this tax should be returned to them for investment in the national highway system. It would be a logical extension to direct a share of the tax to urban infrastructure, primarily for investment in transportation and transit.

The federal government has already committed to a rebate on the goods and services tax for municipalities and this represents another means to reduce the burden on municipal governments and allow room for new investment in urban infrastructure.

Existing capital funding program partnerships should be continued and new ones should also be established. Even with tax rebates and revenue sharing, there will continue to be tremendous need for investment and there will always be strategic projects where additional federal investment will be essential.

Various possible sources of revenue and innovative mechanisms to support urban transportation infrastructure investment needs should be investigated, including, but not limited to:

- Program spending
- Fuel tax sharing
- Dedicated taxes
- User charges
- Public-private partnerships

As well, financial tools, such as tax breaks (for example, tax exemptions for employer-provided transit benefits), can encourage sustainable transportation infrastructure.

Finally, in making its 2004 pre-budget submission, the Federation of Canadian Municipalities noted that the focus should remain on outcomes, not mechanisms for funding urban infrastructure. It is recognized that the funding decision will be the product of an intergovernmental negotiation that involves many ministries and departments at both the provincial and federal levels. The emphasis, regardless of mechanism, must be on securing reliable, long-term, net new revenue sources adequate to meet the growing needs in urban areas.

Other Opportunities for Collaboration

In addition to investing in transit and the urban road system, there is an array of other measures beyond investment that all orders of government have at their disposal (either individually or in partnership), which could support and promote sustainable urban transportation. These include, but are not limited to:

- implementing supportive measures/tools for both freight and passenger transportation, such as transportation demand management (TDM) and intelligent transportation system (ITS) technologies to optimize system capacity,
- implementing and where possible integrating sustainable regional land use and transportation planning strategies,
- adopting policies to reduce single occupant vehicle use,
- pursuing enabling measures, in support of sustainable urban transportation, such as knowledge and capacity building, data gathering and information dissemination, legislation/bylaws, regulations, standards, location of government employees and other “employer” considerations, and fiscal measures,
- improving modal integration (passenger and freight) to provide seamless transitions between modes and improve the sustainability, efficiency and effectiveness of the entire transportation system.

Jurisdictions responding to the task force survey provided information on innovative practices including approaches to planning, governance, service delivery, procurement, and accrual accounting. There is great potential for collaboration amongst orders of government on such approaches, which should be explored in more detail.

Key Principles for Effective Partnership

The challenges faced by urban areas call for new funding and better ways to collaborate amongst orders of governments. In the document *Partnering for the Future – A Transportation Vision for Canada* (2002), the provinces and territories emphasized the importance of working in partnership with the federal government, with the collaboration of municipal and private sector partners to build the best possible transportation system that:

- Supports economic and social growth and competitiveness.
- Is accessible, integrated, efficient and affordable.
- Offers maximum flexibility of choice.
- Is safe and secure and sensitive to our environment.

In the context of addressing urban transportation issues, the Task Force has debated a series of principles that should guide an effective partnership amongst orders of government. These are stated below with comments reflecting the support expressed by seven provincial respondents (Alberta, British Columbia, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario and Saskatchewan) and the federal representative on the Task Force.

Unanimous Agreement

- Federal programs should respect provincial and territorial jurisdiction and planning priorities.
 - Unanimously agreed by provincial respondents.
 - Transport Canada noted that the federal government has indicated a “New Deal” for communities would require provincial and territorial acceptance.

- Federal funding programs should not be contingent upon matching funding from provinces and territories.
 - Unanimously agreed by provincial respondents.
 - Transport Canada could not comment whether future federal funding programs would be contingent upon matching funding.

- There should be flexibility in program designs to allow for tri-partite (federal-provincial/territorial – municipal), bilateral (federal-provincial/territorial), and direct programs (federal-municipal) based on the needs of the individual provinces and territories.
 - Unanimously agreed.
 - One respondent remarked that in complex, larger urban environments direct federal-municipal agreements may not be appropriate.
 - One respondent recommended that a formal committee be established to ensure coherent guidelines and framework.

General Agreement

- The federal government should commit to long-term funding of urban transportation infrastructure in Canada.
 - Generally agreed.
 - One respondent suggested the statement should refer to all, not only urban, transportation.
 - One respondent observed that the federal government should approach such a commitment with caution. While urban infrastructure is currently a pressing issue, other priorities will emerge.

- All provinces and territories should negotiate a national urban transportation infrastructure program with the federal government, with jurisdiction-specific agreements negotiated bilaterally.
 - Generally agreed.
 - One respondent noted that it may be difficult to negotiate a federal/provincial-territorial framework agreement and that bilateral agreements may be more achievable.

- Allocation of funding among provinces and territories should meet national objectives such as economic competitiveness, trade expansion, and environmental sustainability.
 - Generally agreed.
 - Provincial respondents remarked this statement could be supported as long as the national objectives are sufficiently broad in scope and are consistent with provincial objectives.
 - Respondents recommend the words “and provincial” or “and regional” be added after the word “national” in the statement.

- Urban transportation funding should be directed to priorities identified in provincial and territorial infrastructure plans and strategies.

- Generally agreed by provincial respondents.
- In at least one jurisdiction, cities set their own priorities.
- One respondent added that intergovernmental negotiation and cooperation involving urban municipal representatives is possible although it may be necessary to sign agreements only between the federal and provincial/territorial governments.
- One respondent recommended the statement be changed to read “Urban transportation funding should be directed to priorities identified in a tri-partite or bilateral (provincial-municipal) process.”
- Transport Canada remarked that federal funding for urban transportation should support national objectives and complement provincial/territorial, regional and municipal plans reflecting agreed sustainable parameters.

Mixed Views

- Provinces and territories should have the flexibility to reallocate urban transportation funding to areas not covered under any new transportation infrastructure program.
 - Generally agreed.
 - One respondent disagreed.
 - One respondent added that provinces and territories should have the flexibility to identify urban transportation projects servicing inter-urban routes including provincial transportation infrastructure within or leading to urban centres.
 - One respondent recommended that each provincial and territorial government should determine the detailed program design and mix best suited to its own needs and circumstances to meet agreed objectives. A provincial/territorial government, which does not require the total transfer to fulfill the agreed objectives, should be able to reinvest additional funds in the same or a related priority area.
 - Transport Canada commented that projects would be expected to comply with established parameters of funding programs.

- Allocation of funding among provinces and territories should be equitable and based on a per capita formula.
 - Generally agreed although there was some disagreement with using a per capita funding formula.
 - One respondent recommended that funding be allocated based on a relative portion of the gas tax collected from each province.
 - One respondent noted that a per capita formula is a good start but it may be in the national interest to make additional strategic investments in regions that make a disproportionate contribution to Canada’s gross domestic product.
 - One respondent remarked that the allocation must ensure that smaller urban centres receive their fair share of funding to invest in strategic transportation projects.

- The federal government should financially support urban transportation infrastructure to meet economic, social, and environmental goals in large urban centres and the essentially social mission of transportation in smaller cities.
 - General agreement although four respondents disagreed with the notion that transportation in smaller centres is essentially for social missions and recommended the statement be changed to read, “the federal government should financially support urban transportation infrastructure to meet economic, social, and environmental goals in all urban centres.”
 - One respondent recommended that the federal and provincial governments should influence the investment so that federal and provincial visions for economic growth, social programs, and environmental targets are considered and incorporated.

- The largest portion of federal gas tax revenues should be reallocated specifically to projects improving urban transportation.
 - Five of eight provincial respondents disagreed with this statement.
 - It was remarked that dollars should be allocated to areas of the greatest strategic importance or where there is a demonstrable need to remedy deficiencies.
 - One respondent recommended a balance between large urban centres, small urban centres and the provincial transportation network, suggesting the largest portion of federal fuel tax should be directed towards highways.
 - One respondent urged the federal government to vacate the federal fuel tax since it has no jurisdiction over municipal infrastructure.
 - Transport Canada indicated that the means to provide federal funding remains to be determined; it is the purview of the Department of Finance.

Recommendations

Emerging from the needs, priorities and principles discussed above, the Task Force has identified a set of recommendations that should be considered by all governments. The recommendations received the endorsement of the Council of Ministers Responsible for Transportation and Highway Safety in September 2004.

- 1. Recognizing the importance of urban areas, the federal government should provide sustainable, predictable, long-term funding to support urban transportation investment.**

- 2. All orders of government must recognize that amongst competing urban infrastructure needs, the specific needs of transportation, including transit, are significant and merit a proportional share of new investment.**

- 3. Governments must take action to improve transportation and travel time for freight and passengers in urban areas through increased investment, transportation demand management, improved planning processes and the use of advanced technology.**

- 4. While respecting provincial and territorial jurisdiction and planning priorities, all orders of government must find ways to work together more effectively to improve transportation and mobility in urban areas. Opportunities for collaboration beyond funding partnerships should be explored.**
- 5. All governments should pursue opportunities to promote awareness of the importance of sustainable urban transportation and transportation choices to the economy, the environment and social lives of Canadians.**

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