ROADS AND HIGHWAYS:
CRITICAL TO CANADA'S COMPETITIVENESS

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Highlights
ROADS AND HIGHWAYS: CRITICAL TO CANADA'S COMPETITIVENESS

This document demonstrates why the federal government needs to take a leadership role in establishing a consistent national vision for road and highway quality and safety and in ensuring sustained funding for the improvement and expansion of the nation's road system. Minister of Finance James Flaherty acknowledged this need on September 28, 2006 in a speech to Queen's University when he stated, "The solution will require a significant amount of time and a significant amount of commitment in spending. This speaks clearly here, now, to a core responsibility of the federal government. That's why we have no choice but to adopt a long-term funding framework for infrastructure."

THE ISSUE AT A GLANCE

Canadians face an estimated $22 billion deficit in our National Highway System. The inevitable by-product of this deficit is ever increasing congestion for our international and domestic trade, our tourists and our commuters. Our busiest border crossings to the US currently impede the free flow of goods and tourists, thus eroding our ability to compete and making worse the already difficult set of circumstances faced by our travel industry. Our commuters spend an average of 63 minutes per day getting to and from their places of work, up 17 per cent from 13 years ago, the equivalent of one extra work week per year, further undermining our ability to compete.

The United States is our major trading partner. Its businesses compete head-to-head with our own in world markets. The US federal government recently committed to investing almost $48 billion dollars per year (in Canadian dollars) over a six-year period, or $286 billion in total, to improve and expand its highways, highway safety and public transportation. If we are to retain our competitive position with the US our federal government needs to spend at least $4.8 billion per year on our highways, highway safety and transit. The Council of the Federation estimates our federal government is spending, at best, only $441 million per year on these critical assets, less than one-tenth the amount required.

> Roads and highways – and the cars, trucks and buses that use them – are the core of Canada's transportation system and likely to remain so for the foreseeable future. In a country with Canada's dimensions and dispersal of activities, aircraft, urban transit, trains and ships play critical roles in carrying passengers and freight, but roads and highways continue to carry most of the traffic. Most passenger travel is entirely by road, using private vehicles, or, much less frequently, bus service (urban transit, school, chartered or scheduled intercity buses). Of all freight traffic, something approaching half makes its entire journey by truck. Most of the remainder that is hauled by train, ship or aircraft relies on trucks at one or both ends of its trip.[1]

Census data for 2001 reveal that almost 81 per cent of all Canadians who work get to their job each day either by driving their own vehicle or riding as a passenger in a vehicle driven by someone else. As well, Canadians rely mainly on personal vehicles and on Canada's extensive road network to get them to school, to the mall and to their social and recreational activities.

[1] *Vision and Balance*, Report of the Canada Transportation Act Review Panel, June 2001, page 175.

The maintenance and expansion of Canada's road and highway network, therefore, is a key element in sustaining and improving our productivity levels, in ensuring our ability to compete globally, and in sustaining and enhancing our standard of living.

One of the many ways that societies achieve productivity growth is through agglomeration. Metropolitan areas exist because of the enormous efficiencies they afford. Collectively Canada's four major metropolitan areas (Toronto, Montréal, Vancouver and Calgary) accounted for only 36 per cent of all the people in Canada in 1995, but they accounted for more than 65 per cent of Canada's population growth since that year.

A common characteristic among these four metropolitan areas is that each is connected by major highways and border crossings in Canada to the vast US Interstate Highway system, and therefore to the huge and fast growing markets throughout the US. These connections have facilitated the urbanization of Canada and have been essential to the achievement of our productivity growth and our standard of living.

Highways and roads are also essential to get tourists into rural and northern areas, and to get agricultural, forestry and mining products out of them. Canada's national road and highway network therefore must be maintained and sustained to keep Canada's urban and rural areas connected. In the aftermath of decades of remote rail line and airport closures, Canada's road and highway network is the only transportation connection many northern and rural communities have with the rest of the world.

WHAT NEEDS TO BE DONE

The Government of Canada should develop a National Highway Policy in conjunction with the provinces. It should support this policy with sustainable, long-term financing by dedicating, as suggested by the Council of the Federation, the unallocated funds from federal fuel excise taxes to a Strategic Transportation Infrastructure Fund. There is a strong case to be made that the funding should be even greater than this. The Federal Government should provide, in conjunction with the provinces, the enabling legislation required to facilitate the promotion of Private Public Partnerships in the area of highway, bridge and tunnel construction and maintenance throughout the country in order to tap into the enormous pension funds seeking participation in such projects. It should support research into highway safety and ITS technology and facilitate the establishment of national highway safety and quality standards.

The Canadian people and Canada's businesses are tired of the intergovernmental feuding and lack of accountability surrounding this issue. The people, the businesses, the provincial governments and the municipal governments in this country all want the Government of Canada to assume *the* leadership role on this issue. We need the Government of Canada to facilitate the elimination of the nation's transportation infrastructure gap so that we can sustain and enhance our competitive position in the global arena and thus ensure a continued increase in our standard of living.

ROADS AND HIGHWAYS:
CRITICAL TO CANADA'S COMPETITIVENESS

ABOUT THIS REPORT

Without our national system of roads and highways Canadians could not produce and trade with the United States as many goods and services as we do now. We could not move our people to the places they work, study, shop and play. In short, we could not sustain or improve our quality of life or our standard of living.

Despite the critical role played by roads and highways in helping Canadians to pursue their economic and social activities, the quality and safety of our national road and highway system is uneven from one part of Canada to the next. Surveys show that Canadians increasingly feel our roads and highways are deteriorating over time. Canadians also say that improving our road and highway system should be one of the country's highest priorities. Since 1994 the provinces and territories have been urging the federal government to take a leadership role in this area by implementing a federal-provincial-territorial National Highway Policy. Their call for leadership has been repeated numerous times in the intervening years.

Meanwhile, Canada's trade with the rest of the world, especially with the United States, continues to grow, and forecasters see international trade as critical to the nation's potential for growth in the decades ahead. Truck traffic, therefore, will continue to grow, and Canada's need for safer, better roads and highways and for more efficient border transfer points will only mount.

Recent reports show that Canada's commuters are traveling longer distances to work each year, that it is taking more and more of their time each year to get to work and back. Surveys reveal that for trips of equal distance, getting to and from work eats up considerably more time for transit users than it does for those using their own cars. The continued concentration of population and economic growth in Canada's urban centres in the decades ahead raises concerns that traffic congestion and commuter frustration will only get worse.

Canada's people and businesses want action on this issue. But the federal government continues to turn a deaf ear, refusing to accept the leadership role and offering only a small share of the huge revenues it generates through taxes on gasoline. The health and safety of the traveling public is a primary consideration when it comes to investing in our roads and highways. A national vision for road quality and safety is required, and only the federal government is in a position to ensure that this happens.

The competitive position of Canadian business should also be a primary consideration when it comes to investing in our roads and highways. A first class network of roads and highways provides numerous direct and indirect benefits to its people. The country and its people suffer when transportation infrastructure is underfunded. Productivity declines, trade opportunities evaporate, tourists stay away, mobility suffers, and jobs are lost. The federal government has a direct interest in ensuring stable, predictable, and long-term funding for the nation's key road links. A federal commitment to provide or facilitate the provision of major funding in this strategic asset would yield numerous benefits. Capacity increases would lead to more trade and tourism, higher productivity and reduced emissions. Improvements in safety would reduce healthcare costs.

Canada's future quality of life and economic competitiveness both depend on safe, efficient, and durable roads and highways infrastructure. This document demonstrates why the federal government needs to take a leadership role in establishing a consistent national vision for road quality and safety and in ensuring sustained funding for the improvement and expansion of the nation's road and highway system.

THE DIRECT ECONOMIC IMPACTS OF ROADS AND HIGHWAYS

Without Canada's system of almost 1 million kilometres of roads and highways the movement of its people and goods would be severely limited. Our ability to socialize with friends and relatives, and our ability to trade with each other and with people in other lands, would be impeded.

Boats brought Canada's earliest settlers to North America half a millenium ago. Railroads expanded Canada to the Pacific more than a century ago. But mass production of the automobile changed everything for Canada in the early 1900s. In 2006, following on decade after decade of automobile-facilitated economic development and population settlement, it is hard to imagine a Canada without roads.

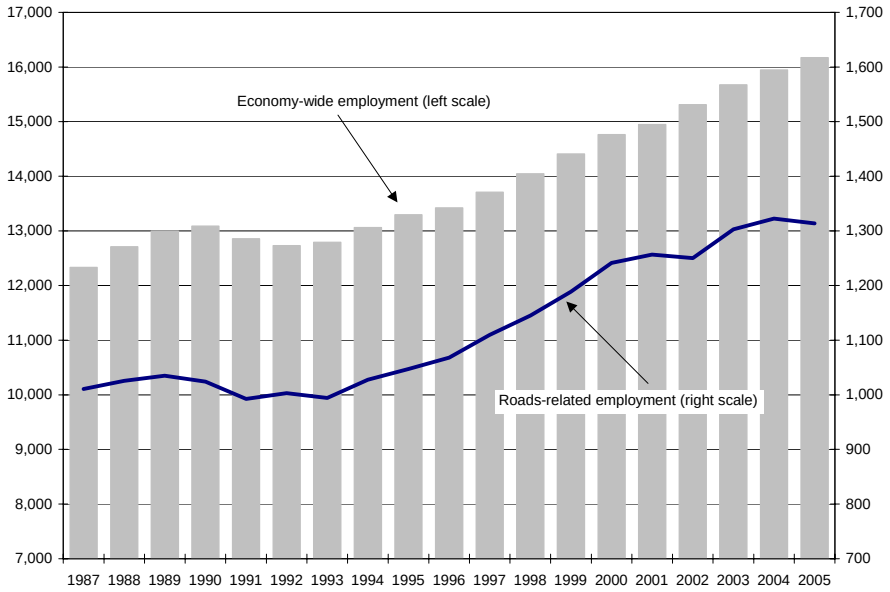
Roads and highways today directly account for at least 8 per cent of all the jobs held by Canadians, a share that has persisted for at least two decades (Charts 1 and 2). But the benefits of roads extend well beyond the direct impacts. Roads facilitate the production and distribution of virtually all economic and social activities in one way or another. Without roads most economic activity and social interaction would cease. Without the mobility facilitated by roads we could never have achieved the quality of life and standard of living we now experience.

In this section we identify the various means by which roads and highways directly create economic activity in Canada. Throughout the remainder of the report we discuss the multitude of benefits derived from the existence of Canada's road network and the need for federal leadership in the preservation and creation of a national system.

Drawing on detailed data from Statistics Canada's Labour Force Survey for 2005 we estimate the following:

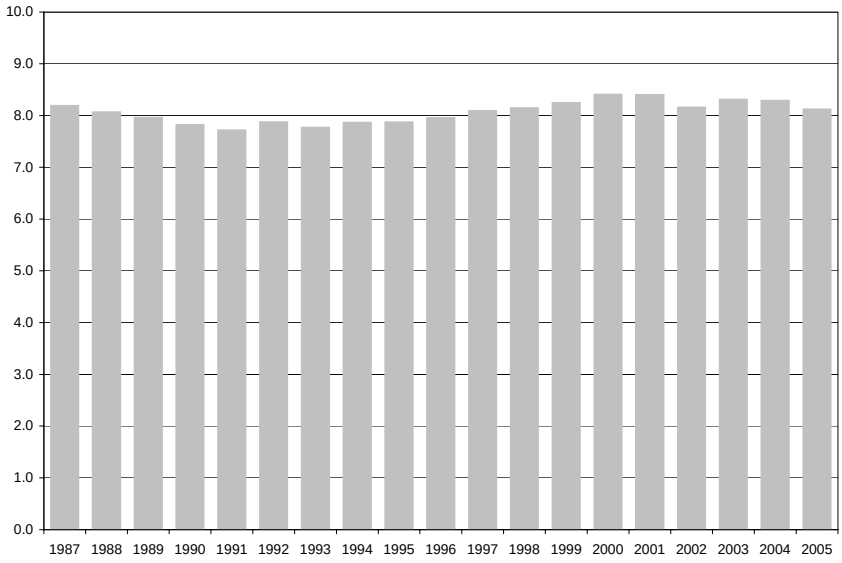
- Some 1.3 million out of a total of 16.1 million jobs in Canada in 2005 (or 8.1 per cent of the total) are directly attributable to the existence of roads and highways.
- This total includes 427,400 jobs (or 32.5 per cent of all roads-related jobs; see Chart 3) in the transportation industry itself, including 272,600 in trucking, 43,200 in urban transit (most of which operates on roads), 38,300 in taxi and limousine services, 30,100 in school and employee busing, 25,500 in support activities for road transportation, and 17,700 in interurban, rural and charter busing or other transit and ground transportation.
- It includes 273,200 jobs (or 20.8 per cent; Chart 3) in related retail activities (including automobile dealerships 150,600 jobs; gasoline stations 75,000; automotive parts, accessories and tire stores 33,800; and other motor vehicle dealers 13,800).
- It includes 231,900 jobs (or 17.7 per cent) in the manufacturing of motor vehicles, bodies, trailers and motor vehicle parts.

Chart 1
Total Employment and Roads-Related Employment in Canada
Thousands of Persons from 1987 to 2005



Source: Statistics Canada, The Labour Force Survey and the Centre for Spatial Economics

Chart 2
Roads-Related Employment as a Per cent Share of Total Employment in Canada
Per cent Share from 1987 to 2005



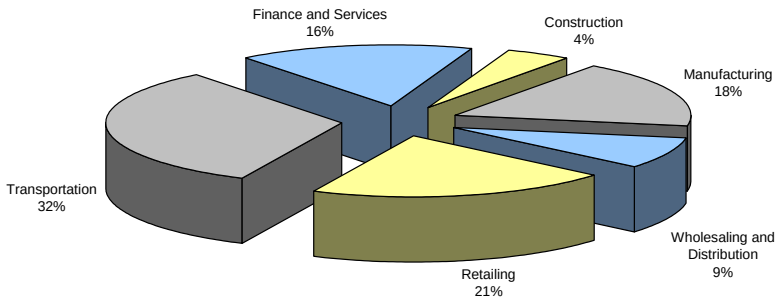
Source: Statistics Canada, The Labour Force Survey and the Centre for Spatial Economics

- It includes 210,600 jobs (16.0 per cent) in related services (145,900 in automotive repairs and maintenance; 30,300 in freight transportation arrangement; 18,200 in automotive equipment rental and leasing; and 16,200 in recreational vehicle parks and recreation camps).
- It includes 111,900 jobs (8.5 per cent) in the wholesaling and distribution of vehicles, parts, accessories and petroleum products.
- And, finally, it includes 58,700 (4.5 per cent) in highway, street and bridge construction.

Note that the above figures do not reflect the thousands of people who provide transportation services within individual firms. Nor does it include those employed in the provision of vehicle insurance services, nor those employed by the federal, provincial and local governments throughout the country who plan the road network, oversee its creation and maintenance, and regulate and administer related activities. In other words, roads-related employment as a share of all jobs in Canada exceeds the 8 per cent share identified here.

We know that the jobs in many of these sectors achieve higher rates of output per worker (productivity) than those in most other industries. Regrettably, Statistics Canada's Gross Domestic Product data are not sufficiently detailed to allow us to calculate roads-related GDP as a share of total GDP. Recent estimates in Europe, however, suggest roads-related GDP as a share of total GDP is more than double roads-related employment's share of total employment.[2] So roads-related GDP in Canada is likely at least 16 per cent of total GDP.

Chart 3
Road-Related Jobs by Industry in Canada in 2005
As a Per cent Share of Total Roads-Related Jobs



Source: Statistics Canada, The Labour Force Survey and the Centre for Spatial Economics

[2] *The Socio-Economic Benefits of Roads in Europe*, European Union Road Federation, March 2006.

CANADA'S ROAD AND HIGHWAY SYSTEM

Canada's public access road and highway system extends almost 950,000 kilometres.

The coast-to-coast National Highway System (NHS) is the backbone of Canada's transportation system. The NHS carries the majority of the intercity, interprovincial and international vehicle travel in Canada. Although it accounts for just 4.2 per cent of Canada's 950,000 km of interconnected roads and highways it carries 30 per cent of our traffic.

Provincial and local governments are responsible for the construction and maintenance of almost all of Canada's roads. The provinces are responsible for the Trans-Canada Highway's 7,500 kilometres. The Trans-Canada Highway was designated and upgraded by the federal government right after World War II, but the provincial governments now own, operate and maintain that system. Provincial governments are also responsible for the 231,000 kilometres of higher capacity primary and secondary highways, including segments of major highways (such as the 401) that run through major urban areas. Provincial governments are responsible for the construction and maintenance of about one-quarter of the nation's road and highway system.

Municipalities in Canada collectively are responsible for the construction and maintenance of 32,000 kilometres of limited access highways. Local governments are also responsible for the construction and maintenance of 655,000 kilometres of streets and arterials throughout the nation's cities and towns, including the nation's sub-network of rural access roads.

In addition to the above there are about 344 kilometres of toll roads and highways in Canada.

Table 1
Canada's Road and Highway System by Ownership, Type and Extent in Kilometres

Total network	all roads	940,844
Federal ownership	minor roads in parks, on other government property	15,000
Provincial ownership	Trans Canada Highway designated, upgraded by federal government in 1949	7,500
	higher capacity primary and secondary highways including segments of major highways running through urban areas	231,000
Municipal ownership	streets and arterials in towns and cities sub-network of rural access roads	655,000
	limited access highways including rural freeways and urban expressways	32,000
Other ownership	Toll roads	344

Source: *Vision and Balance*, Report of the Canada Transportation Act Review Panel, June 2001.

According to the United States Federal Highway Administration (FHA) roads are far more extensive in Canada (there are almost 32 kilometres of road for every one thousand persons here) than in the United States (24 km per thousand), both of which are well ahead of other major industrialized nations such as Sweden and France (both at more than 15 km per thousand), Japan (just over 9 km per thousand), Germany (about 7 km per thousand) and the United Kingdom (about 6 km per thousand).[3] Because Canada is so big, because our people and economic activities are so far flung, a higher than average roads per-capita-ratio is critical to the retention of our connectedness and competitiveness.

Canada's size poses a major challenge. As a result it is clearly in the interests of the country as a whole – in the interests of the federal government – to take an active role in the establishment of national road safety and quality standards and in ensuring sustained funding for the improvement and expansion of a National Highway System. As we will demonstrate later in this report, the federal government derives far more revenues from road and highway activities than it spends on road construction or maintenance, a situation that cannot be tolerated given the strategic importance of the nation's road and highway system to its economic and social well-being.

WHO USES ROADS AND HIGHWAYS, AND WHY?

Canada's earliest economic development and settlement was concentrated in Atlantic Canada and along the St. Lawrence River and the Great Lakes system. It began more than five centuries ago and was facilitated mostly by water-related transportation. Canada's expansion westward to the Pacific coast in the 1860s and 1870s was spurred by the establishment of railway facilities. Today, however, roads and highways account for most of the movement of people and goods throughout the country.

Canada's Transport Minister in 2000 established the Canada Transportation Act Review Panel to review all areas of transportation covered by the Canada Transportation Act. Roads and highways were not an explicit part of the Panel's terms of reference since they are largely outside of federal jurisdiction. Nevertheless the panel noted in its final report of June 2001:

> Roads – and the cars, trucks and buses that use them – are the core of the transportation system and likely to remain so for the foreseeable future. In a country with Canada's dimensions and dispersal of activities, aircraft, urban transit, trains and ships play critical roles in carrying passengers and freight, but roads continue to carry most of the traffic. Most passenger travel is entirely by road, using private vehicles, or, much less frequently, bus service (urban transit, school, chartered or scheduled intercity buses). Of all freight traffic, something approaching half makes its entire journey by truck, and most of the remainder that is hauled by train, ship or aircraft relies on truck transport at one or both ends of its trip.[4]

In view of the above the panel devoted an entire chapter of its report to the subject of roads.

[3] See the FHA web-site at http://www.fhwa.dot.gov/ohim/hs97/in2.pdf.

[4] *Vision and Balance*, Report of the Canada Transportation Act Review Panel, June 2001, page 175.

The panel's report draws attention to some very important characteristics of Canada's road and highway network[5]:

- The Prairie provinces together account for more than half the country's roads.
- About 65 per cent of Canada's roads are unpaved and in rural areas.
- Road traffic totals 270 billion kilometres each year.
- 75 per cent of this traffic occurs on just 25 per cent of the network.
- 40 per cent occurs on just 5 per cent of the network.
- Highway 401 through Toronto handles 350,000 vehicles each day making it one of the busiest roads in the world.
- Most of the provincial highway network, including the Trans-Canada Highway, sees fewer than 3,000 vehicles per day.
- Most traffic is passenger travel in cars and light trucks which has expanded at a faster rate than population or national output.
- Over many recent decades truck traffic grew at a rate similar to or slightly less than national output (as should be expected in an economy expanding increasingly into services). But during the 1990s truck traffic grew faster than output due to innovations in logistics management and to the onset of North American free trade.
- Traffic has grown faster than the road network, and faster in particular than the capacity of arterial and expressway systems around major cities.
- Traffic congestion has become a serious problem in major metropolitan areas.
- The underlying trends suggest traffic will continue to expand rapidly in the future.

HOW DO PEOPLE USE THE ROADS AND HIGHWAYS?

Census data for 2001 reveal that almost 81 per cent of all Canadians who work get to their job each day either by driving their own vehicle or riding as a passenger in a vehicle driven by someone else.

This ratio holds true in nearly every province (Chart 4) and is exceeded in several, most notably in Prince Edward Island and New Brunswick. Only in the Northwest Territories and Nunavut does the ratio fall significantly below the national average.

The Transportation for Tomorrow Survey (TTS)[6] in 2001 covered not just work-related but all trips taken on a daily basis by the residents of Ontario's Golden Horseshoe. The day-to-day trip habits of these people for purposes other than going to work likely reflect the daily trip patterns taken by Canadians throughout the country.

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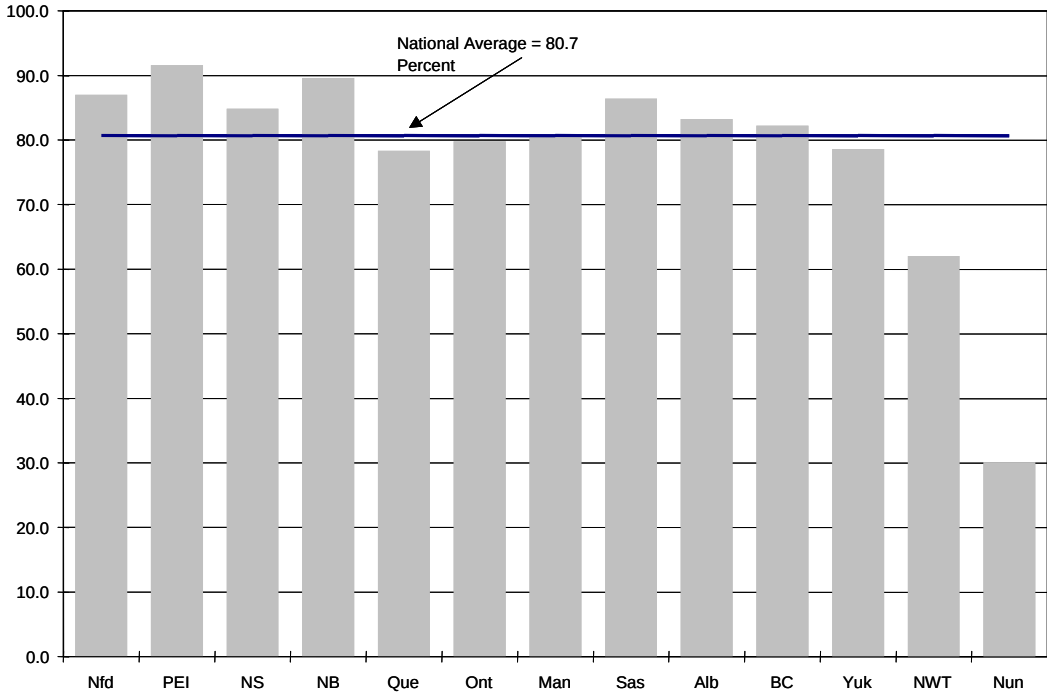
[5] *Vision and Balance*, Report of the Canada Transportation Act Review Panel, June 2001, pages 176 to 178.

[6] *Transportation for Tomorrow Survey 2001*, Joint Program in Transportation, University of Toronto, Data Management Group. See https://www.jpint.utoronto.ca.

Chart 4
Employed Labour Force by Mode of Transportation by Province and Territory in 2001
Per cent Share of All Employed Persons



Source: Statistics Canada, 2001 Census

In 2001 there were 6.5 million people living in the communities covered by the survey. On average each person made 2.5 trips per day generating 14 million trips over each 24 hour period. The destinations involved break down as follows:

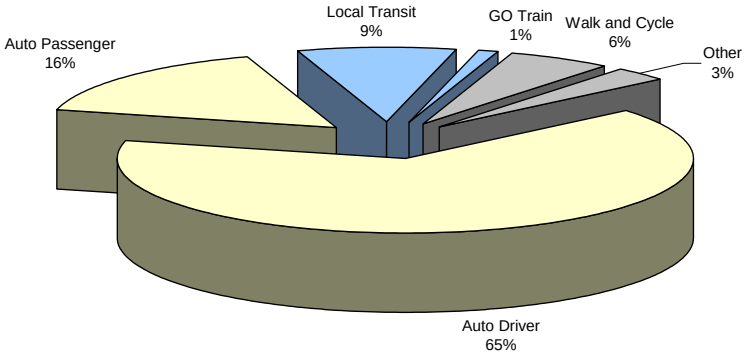
- Home 42 per cent
- Other (shopping, leisure, etc.) 33 per cent
- Work 18 per cent
- School 6 per cent

In other words trips to work accounted for less than 1 out of 5 of all the trips taken each day.

By mode of transportation (Chart 5) the 14 million trips break down as follows:

- Auto driver 65 per cent
- Auto passenger 16 per cent
- Local transit 9 per cent

Chart 5
Daily Personal Trips in the Golden Horseshoe by Mode



Source: Transportation for Tomorrow Survey 2001

- GO train 1 per cent
- Walking, cycling 6 per cent
- Other 3 per cent

In other words 81 per cent of all the trips involved an individual driving a car or riding in one as a passenger, 10 per cent involved public transit. Walking, cycling, etc. accounted for the remaining 9 per cent. Chart 5 (above) illustrates these shares.

Of the 14 million plus trips, 3.2 million occurred during the rush-hour period (between 6 and 9 am). The destinations involved at rush hour break down as follows:

- Work 55 per cent
- School 23 per cent
- Other (shopping, leisure, etc.) 17 per cent
- Home 5 per cent

So during the rush hour, not surprisingly, trips to work dominate.

By mode of transportation the rush hour trips break down as follows:

- Auto driver 61 per cent
- Auto passenger 12 per cent
- Local transit 12 per cent
- GO train 2 per cent
- Walking, cycling 9 per cent
- Other 5 per cent

Again, auto use dominates during the rush hour (accounting for 73 per cent of all rush hour trips).

The Golden Horseshoe, especially the Greater Toronto Area and Hamilton, is better endowed with inter-city and local transit services than most other parts of Canada. So its transit use rates are likely to be higher than in most other communities. Despite the relative availability of transit in the area, however, the use of personal vehicles – and therefore the road and highway system – dominates. In other words, auto usage rates for non-work-related trip purposes are likely to be higher elsewhere in Canada than in the Golden Horseshoe because transit is less readily available (with the exception of the Montréal, Vancouver and Ottawa areas). The Census and TTS results together reveal that Canadians rely mainly on personal vehicles and on Canada's extensive road and highway system to get them to work, to school, to the mall and to their social and recreational activities.

WHAT GOODS ARE TRANSPORTED, AND WHERE?

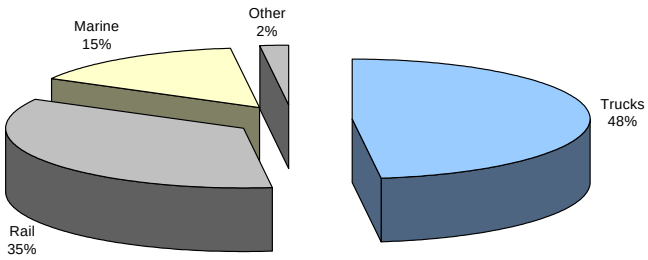
According to Transport Canada's Annual Report 2005[7] the value of goods traded at the domestic level by all modes was $581 billion in 2003, with $449 billion traded intraprovincially and $132 billion traded interprovincially. Canadian for-hire trucks carried 64 per cent of the tonnage shipped intraprovincially and 28 per cent of that shipped interprovincially, or 48 per cent of domestic shipments overall in 2003. Comparable figures for rail tonnage were 18 per cent intraprovincially, 60 per cent interprovincially and 35 per cent overall; and for marine 18 per cent intraprovincially, 11 per cent interprovincially and 15 per cent overall. Air freight accounted for less than 0.1 per cent of all domestic shipments. At least 50 per cent of domestic trade activity is related to trucks since the traffic of private carriers, small for-hire carriers and owner-operators is not currently measured.

It is worth recalling that a truck trip is typically involved at both ends of each international, interprovincial or intraprovincial movement of goods by rail, air or boat.

Domestic trade shipments (Chart 6) mainly involved construction materials (24 per cent) and agricultural products (17 per cent) – with these flows largely representing intraprovincial movements – followed by primary metals, metal and mineral products (9 per cent) and energy products (9 per cent). The main interprovincial trucking flow was the Québec-Ontario route in both directions which accounted for 30 per cent of all interprovincial trade in Canada, and the Ontario-Alberta route ranking second and accounting for 12 per cent.

[7] See http://www.tc.gc.ca/pol/en/Report/anre2005/toc_e.htm.

Chart 6
Domestic Shipments by Volume by Mode of Transportation in 2003



Source: Transport Canada

At the international level[8] (Chart 7) Canada's trade turnover (the sum of exports plus imports) with the rest of the world totaled more than $800 billion in 2005. Trade with the US accounted for 71 per cent of that total, or $580 billion. The US accounted for 84 per cent of Canada's total exports last year. In value terms, 60 per cent of Canada-US trade moved by truck. Trucking was the dominant mode of Canada's trade with the US for both exports (50 per cent) and imports (77 per cent). In volume terms the mode split for trade with the US in 2005 was as follows: pipelines (33 per cent, mainly exports), trucks (29 per cent), rail (18 per cent) and marine (20 per cent).

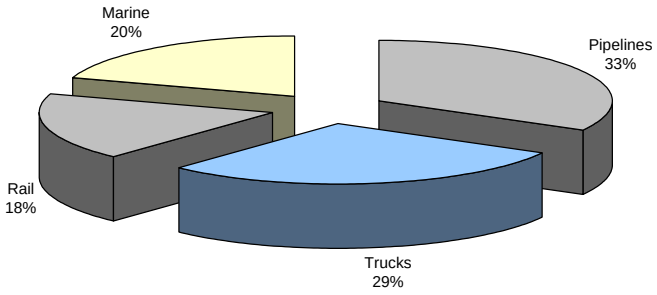
Five commodity groups accounted for 80 per cent of total exports by trucks in 2004, including automobiles and transportation equipment, machinery and electrical equipment, other manufactured products, plastic and chemical products, and base metals/articles of base metals. The same five groups dominated truck-related imports, but machinery and electrical equipment ranked first followed by automobiles and transportation equipment, etc.

Transport Canada[9] notes that in 2005 six border points accounted for more than 68 per cent of cross-border truck movements and for more than 75 per cent of the value of Canada-US trade carried by trucks. The six include (per cent share of total truck movements indicated in brackets) Windsor – Ambassador Bridge (26 per cent); Sarnia – Blue Water Bridge (13 per cent); Fort Erie – Peace Bridge (9 per cent); Niagara Falls – Queenston-Lewiston Bridge (7 per cent); Lacolle, Québec (6 per cent) and Pacific Highway/Douglas, British Columbia (6 per cent). The border crossings at Windsor, Ontario and St. Stephen, New Brunswick are particularly problematic and in need of federal government attention.

[8] From the Canadian Trucking Alliance at http://www.cantruck.com/industry/stat.php.

[9] See http://www.tc.gc.ca/pol/en/Report/anre2005/toc_e.htm.

Chart 7
Canada-US Trade Turnover by Volume by Mode of Transportation in 2005



Source: Transport Canada

ROADS AND HIGHWAYS AND TOURISM

Tourism demand in Canada in 2005 totaled $62.7 billion of which $45.2 billion represented spending by Canadians and the remaining $17.5 billion mostly by US travelers to Canada.

Canadians traveling by car that year accounted for 94 per cent of overnight travelers within their own province, 65 per cent of overnight travelers to another province and 56 per cent of overnight travelers to the United States. Of US travelers to Canada, more than 90 per cent on a same-day visit traveled by car while more than 60 per cent staying one or more nights traveled by car.

The recent appreciation of the exchange rate between Canada and the United States, coupled with border security concerns since 9/11 and various health scares, prevented non-Canadian tourism spending in Canada from growing by very much this decade. Nevertheless, oversees demand for tourism in Canada at $17.5 billion in 2005 is still big business, and most of those visitors tour Canada in automobiles. In contrast, spending by Canadian travelers in Canada continues to grow, reaching $45.2 billion in 2005 up from $35.9 billion in 2000. And most Canadians traveling to Canadian destinations get there by car.

In other words, roads are of critical importance to Canada's travel industries. Enhancement of the National Highway System would improve safety and capacity and reduce congestion, thus increasing the tourism experience offered by Canada to its millions of visitors each year.
An emerging key issue at Canada's major border points with the United States is the delay faced by travelers as they compete for bridge and tunnel capacity with rapidly growing truck traffic. The federal government's role in facilitating the movement of goods and people through Canada-US border points is paramount.

ROADS AND HIGHWAYS, PRODUCTIVITY AND OUR STANDARD OF LIVING

The Association of Consulting Engineers of Canada (ACEC) in October 2005[10] drew attention to a 2003 Statistics Canada study which concluded that for every 1 dollar invested in public capital, private sector savings averaging 17 cents were generated each year.

The ACEC brief suggests, therefore, that the estimated highway funding shortfall of $22 billion could be costing Canadian businesses and individuals $3.7 billion per year in the form of slowed shipping, extra labour and fuel costs because of long drives on congested roads, and vehicle wear and tear. The ACEC points out that these extra costs are more heavily borne by the sectors most dependent on highway and road infrastructure, such as transportation services, retail trade and tourism. As we will demonstrate later, there is reason to believe the shortfall is even greater.

Bank of Canada Governor David Dodge recently pointed out[11] that a key element in achieving higher overall levels of output per worker in Canada:

> ... is the construction and operation of the physical infrastructure that we need for economic growth and development... infrastructure plays a key role in creating an efficient, productive economy. But today there are clear signs of a public infrastructure deficit in Canada. And there is a growing concern that this deficit could harm Canada's productivity growth and standard of living, unless we take steps to correct it. In Canada, we currently see three conditions that present us with a vital opportunity. We have governments that are committed to investing in infrastructure, a private market with an appetite for long-term financial assets, and a pent up need for those investments in Canada. If we get this right, we can enhance Canada's productivity in two ways. First, the improved infrastructure can help to boost the productive capacity of the private sector and help to achieve more efficient resource allocation. Second, better infrastructure is a key component in attracting the companies and the people who spearhead continuous innovation.

While Governor Dodge did not limit his infrastructure remarks to roads and highways alone he illustrated many of his remarks with transportation sector examples.

These comments from the Association of Consulting Engineers of Canada and from Governor Dodge underline several critical points. The maintenance and expansion of Canada's road and highway network is a key element:

- In sustaining and improving our productivity levels,
- In ensuring our ability to compete globally, and
- In sustaining and enhancing our standard of living.

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[10] *Building Reliable Infrastructure for Canada and the Global Economy,* Association of Consulting Engineers of Canada, October 2005 (see http://www.acec.ca).

[11] Remarks by David Dodge, Governor of the Bank of Canada, to the Canadian Council for Public-Private Partnerships , November 28, 2005.

ROADS AND HIGHWAYS AND LAND USE PATTERNS [12]

Economic growth occurs in two ways: through increasing the quantity of inputs used in the production process[13] and through increasing the quantity of output obtained per unit of input (productivity growth[14]). Canada's economy has grown in the past both because the inputs have grown and because productivity has grown. Productivity growth is important because it leads to rising real incomes per worker and per business owner. Productivity growth, in other words, provides the wherewithal for society to increase its standard of living.

One of the many ways that societies achieve productivity growth is through agglomeration. Metropolitan areas exist because of the enormous efficiencies they afford: businesses can access suppliers and skill sets more easily, as well as market and distribute their products and services in a more cost effective manner; consumers can more readily obtain the products and services they want; and governments can provide public services in a more efficient and cost effective manner. When metropolitan areas reach a critical mass they are able to support even higher levels of private and public offerings (regional shopping centres, performing arts venues, major league sports teams, etc.). Urban areas attract people pursuing higher paying jobs, and they attract businesses seeking bigger markets and a larger pool of suppliers and employees.

Population and employment growth in Canada in recent years has been concentrated in only a few of its major metropolitan areas. Nationwide Canada's population grew overall at an average annual rate of 297,000 people over the last decade.

- The Greater Toronto Area grew at an annual rate of 106,000 accounting for almost 34 per cent of the national total, a huge share considering that in 1995 the GTA accounted for only 16 per cent of Canada's total population.

- The Vancouver metropolitan area grew at an annual rate averaging just over 36,000, accounting for more than 12 per cent of Canada's growth, double its 6 per cent share of Canada's total population in 1995.

- From 1995 to 2005 the Calgary area grew by 24,000 per year accounting for 8 per cent of Canada's total growth. By comparison Calgary accounted for less than 3 per cent of Canada's total population in 1995.

- Over that period the Montréal metropolitan area grew a bit faster than Calgary (at about 27,000 new inhabitants per year) and accounted for about 9 per cent of Canada's overall population growth over that period. But in 1995 Montréal accounted for about 12 per cent of Canada's total population; so while Montréal grew by more per year than Calgary over the past decade, its population share of Canada's total declined slightly.

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[12] The discussion in this section is based on recent research and analysis carried out on behalf of a number of clients by the Centre for Spatial Economics.

[13] Land, labour and capital.

[14] Through the use of more and better technology, educated workers, organizational structures and management practices, etc.

Collectively these four metropolitan areas grew at an average annual rate of almost 194,000 people. Though together they accounted for only 36 per cent of all the people in Canada in 1995, they accounted for more than 65 per cent of Canada's population growth since that year. These trends are summarized in Table 2.

Table 2
Population and Population Growth in Canada by Major Metropolitan Area 1995 to 2005

	1995	% Share 1995	2005	% Share 2005	Change 95-05	% Share Change
Canada	29,302,000	100.0	32,271,000	100.0	296,900	100.0
Greater Toronto Area	4,581,000	15.6	5,643,000	17.5	106,200	35.8
Vancouver	1,845,000	6.3	2,208,000	6.8	36,300	12.2
Calgary	823,000	2.8	1,062,000	3.3	23,900	8.0
Montreal	3,363,000	11.5	3,636,000	11.3	27,300	9.2
Other Canada	18,690,000	63.8	19,722,000	61.1	103,200	34.8

Source: Statistics Canada Post-Censal Population Estimates

A common characteristic among these four metropolitan areas is that each is connected by major highways and border crossings in Canada to the vast US Interstate Highway system, and therefore to the huge and fast growing markets throughout the US. All four are also connected to cities throughout the world via major airport facilities. Vancouver, Toronto and Montréal have the added advantage of being further connected to global commerce through significant marine port facilities. And Calgary is booming as the head office location for Alberta's extensive oil and gas industry which, in turn, is connected by pipelines to the major markets of eastern Canada and the US mid-west and south-west. The extensive transportation infrastructure in these four metropolitan areas has helped them to reach their dominant positions and ensures that they will remain Canada's engines of growth in the decades ahead. The federal government raises a disproportionate share of its net revenues (personal and corporate income taxes, sales taxes, etc.) from these metropolitan areas. It is in its interest, therefore, to facilitate this growth by assuming the leadership role called for at various points throughout this report.

Regarding the rest of Canada several general observations can be made:

- The populations of the rural areas of every province are in a holding pattern or in decline reflecting the relative demise of the primary sector as a focus for job growth. Agriculture, mining and forestry output is still growing, but employment in these sectors is not because these industries are all achieving large productivity gains.

- Slow employment growth in these parts of Canada, however, is inducing a slowdown in population growth.

- The populations of the major metropolitan areas in every province tend to be growing even in those provinces where the population generally is not.

This shifting of populations away from rural areas toward metropolitan regions throughout Canada has been facilitated by the fact that they are all well connected by the nation's highway system to markets throughout Canada and the United States.

ROADS AND HIGHWAYS IN RURAL AREAS [15]

The major uses of land in the past in Canada's northern and rural communities for industrial purposes related to agriculture, mining, and forestry and associated manufacturing processes. The major uses of land for commercial purposes related to supporting tourism (retail, accommodation, food, recreation) or to providing the commercial services needed by the residents of every community throughout the country (retail, food, financial, schools, etc.).

Canada's northern and rural communities currently face a future that entails declines in the amount of land used for industrial purposes. Agriculture, mining, forestry and related manufacturing processes as industries are still growing, but not as quickly as in the past, and they are becoming more and more productive with the application of new technologies. The amount of land used for these purposes is, at best, in a holding pattern, and the number of people needed to get the job done in these sectors is in decline (as noted above). As a result, most northern and rural communities face gradual declines in their populations in the decades ahead.

The residents of communities in the northern and rural areas need the same goods and services as residents throughout the rest of the country, and the new ways of distributing products and services – big box stores, power centres, internet merchandising, etc. – are sweeping these areas, too. The impact in many cases is devastating to their downtowns since, in the absence of population growth, new capacity is not needed. The new, more efficient ways of distribution tend to win out.

To get tourists into these areas, and to get agricultural, forestry and mining products out of them, Canada's national road and highway network must be maintained and sustained. In the aftermath of decades of remote rail line and airport closures, Canada's road network is the only transportation connection many northern and rural communities have with the rest of the world. These areas need to know that the roads and highways they have will be maintained, and that they will be made safe.

[15] The discussion in this section is based on recent research and analysis carried out on behalf of a number of clients by the Centre for Spatial Economics.

THE FISCAL IMPACT OF ROAD AND HIGHWAY TRANSPORT [16]

The Canada Transportation Act Review Panel in 2001 noted the following:

- Governments in 1998-1999 spent about $11.6 billion a year on roads and highways. The inclusion of private toll facilities brings the total to $12 billion per year. This total includes most construction and maintenance and much of the spending on enforcement, safety and policy activity.
- The most common way to pay for roads and highways is through general tax revenues at the federal and provincial level, and through property taxes at the local level. The dedication of road-related taxes or fees to road uses is rare in Canada. In the late 1990s users paid about $6.8 billion annually in provincial and territorial special motor fuel taxes, $4 billion in federal excise taxes on road fuels, $3.1 billion in vehicle registration and driver licence fees, and about $0.4 billion in tolls.
- Road and highway related fees collected from users, therefore, totaled $14.3 billion annually in the late 1990s compared to annual expenditures on roads of $12 billion.

In other words, the three orders of government collected $2.3 billion per year more from road and highway users than they spent directly on roads, highways and related services. The Panel goes on to say:

- The federal government in the late 1990s was collecting about $4 billion annually in road and highway related fees while spending only $200-$300 million annually on roads and highways. Thus the federal government was running a surplus relative to roads and highways in the neighbourhood of $3.7 to $3.8 billion per year.
- The provincial and local governments, on the other hand, were collecting only about $10 billion annually in road and highway related fees while spending almost $11.7 to $11.8 billion annually, thus together running a deficit approaching $2 billion per year in relation to roads and highways.

The situation portrayed above has improved slightly in recent years, but a significant imbalance remains nevertheless. Despite the 2006 federal budget commitment of $2.4 billion over five years for the Highways and Border Infrastructure Fund, much more needs to be done. The Council of the Federation recently noted that the federal government now collects more than $5.1 billion in fuel taxes but its spending on roads and highways amounts to just $441 million. Thus the federal government's spending on roads and highways amounts to only 9 per cent of its fuel tax revenues. The Council notes that "since 2003-04 the federal government has made significant advances in providing funding for transportation and other purposes from its fuel tax revenues. More needs to be done. The federal government must provide an adequate, long-term stable funding stream for transportation infrastructure."[17]

[16] *Vision and Balance*, Report of the Canada Transportation Act Review Panel, June 2001, pages 178-179.

[17] *Looking to the Future: A Plan for Investing in Canada's Transportation System*, The Council of the Federation , December 2005, pages 7-8.

The Canadian Taxpayers Federation (CTF) has consistently drawn attention to the need for federal action with respect to roads and highways. In a recent brief the CTF pointed out that in 2005-06 the federal government collected $5.2 billion in federal gasoline taxes but transferred only $882 million to the provinces that year for road and highway development. The CTF notes that past approaches such as the federal government's Canada Infrastructure Works (CIW) program have been problematic and political. The CTF also observed that the New Deal for Cities and Communities announced in 2005, did not allow municipalities larger than 500 000 to spend their transfers on roads, highways, and bridges. "It is time to develop a comprehensive, national transportation strategy and bring honesty and fairness back to the levying of gasoline taxes."[18] In that same brief the CTF calls on the federal government to transfer and dedicate 50 per cent of federal gasoline tax revenues to municipalities for roadway development.

In a September 2006 submission to the federal government the Federation of Canadian Municipalities (FCM) made the following observation:

> Even investing at a sufficient level to maintain our current capital stock and accommodate future population growth will not meet the [infrastructure] challenge. In the absence of a national plan to address the municipal infrastructure deficit, municipal governments will continue to use most of their revenue to meet their operating expenditures, investing the remainder in capital improvements. Given current projections of municipal revenue growth, this approach will not reduce the infrastructure deficit or meet current and future needs. The municipal sector's tight fiscal circumstances and its limited access to adequate revenue means significant financial support from the federal and provincial/territorial governments, as well as additional municipal revenues, will be required for full financing and elimination of the infrastructure deficit.[19]

In this, as in many other areas, the United States is way ahead of Canada. In 2005 the US federal government enacted the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA – LU) that will over the next six years provide more than $286 billion in funding (measured in Canadian dollars, or an average of almost $48 billion per year) for the purposes of investment in highways, highway safety and public transportation. This program represents the largest investment in surface transportation investment in the nation's history and is designed "to maintain and grow [the nation's] vital transportation infrastructure".[20]

Given that safe and well maintained roads and highways are essential both to the health of travelers and to the productive efficiency of the nation the federal government needs to recognize their critical importance by taking a strong leadership role in establishing national standards, in ensuring that those standards are maintained and in providing for, or facilitating, their ongoing funding.

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[18] Gas Taxes: Promises Made, Promises Unkept, Canadian Taxpayers Federation, 2006, page 20.

[19] Immediate and Long-Term Federal Funding Support for Infrastructure, Federation of Canadian Municipalities, September 8, 2006, pages 13-14.

[20] See the FHA web-site at http://www.fhwa.dot.gov/safetealu/summary.htm.

ROADS AND HIGHWAYS AND ACCESS TO WORK

Over the last ten years the number of employed people in Canada grew by almost 3 million, meaning that 3 million more trips to and from work occurred each day throughout the country in 2005 than had been the case in 1995, bringing the total number of trips per day for work purposes to more than 16 million (Table 3).

Major increases in work-related trips were generated in the areas of retail and wholesale trade (up 497,100), health care and social assistance (346,000), accommodation and food services (188,400), educational services (177,800) and information, culture and recreation (167,400), all of which are industries that mainly support the needs of local residents. Such jobs tend to follow people to where they live, so most of them end up in suburban locations throughout the nation. They are not necessarily filled by people living in the immediate community, however, and they often entail hours of work outside of the "normal" 9 am to 5 pm window. Local transit rarely accommodates trips between immediately adjacent communities; it either moves people around within a given community, or it moves them from far flung suburban municipalities to major employment nodes. And transit service drops significantly outside of normal work hours. These trends in employment by industry will continue into the future, we project, and will result in an increased use of personal vehicles and the nation's road system for work trip purposes.

Table 3
Employment by Major Industry in Canada 1995 and 2005

	1995	2005	Change 95-05	Change Rank
Total employed	13,295,400	16,169,700	2,874,300	
Agriculture	419,300	343,700	-75,600	16
Forestry, fishing, mining, oil and gas	294,800	306,400	11,600	14
Utilities	123,500	125,300	1,800	15
Construction	726,400	1,019,500	293,100	5
Manufacturing	1,903,800	2,207,400	303,600	4
Trade	2,077,500	2,574,600	497,100	1
Transportation and warehousing	660,800	793,600	132,800	11
Finance, insurance, real estate and leasing	846,100	987,800	141,700	10
Professional, scientific and technical services	674,300	1,050,000	375,700	2
Business, building and other support services	402,500	654,400	251,900	6
Educational services	928,300	1,106,100	177,800	8
Health care and social assistance	1,388,600	1,734,600	346,000	3
Information, culture and recreation	567,700	735,100	167,400	9
Accommodation and food services	816,100	1,004,500	188,400	7
Other services	647,100	693,600	46,500	12
Public administration	818,600	833,100	14,500	13

Source: Statistics Canada, Labour Force Survey 2005

ROADS AND HIGHWAYS AND ACCESS TO HEALTH CARE

The ongoing urbanization-suburbanization of Canadian society has meant that an increasing share of its population has ready access to health care since most health care delivery in Canada is concentrated in the major urban centres. The ongoing suburbanization of Canadian society within these urban areas, however, has meant health care accessibility increasingly depends on the nation's road and highway network.

Health care services have been cut back in most of Canada's rural and northern areas for budget reasons and due to the challenge of attracting health care workers, especially physicians, to remote communities. Except in emergency situations people can access the health care system only via the roads and highways that connect them to the next closest urban centre. The road and highway system is crucial to the health care accessibility of northern and rural populations.

ROADS AND HIGHWAYS AS A NATION BUILDER

The first gasoline powered automobile was brought to Canada in 1898. Henry Ford pioneered the assembly-line production technique in 1908 which allowed him to sell his stripped down Model T for only $290 (or about $5,000 in current values). As a result he sold millions. In 1903 there were only 178 vehicles registered in Canada. By 1914 the number had grown to 74,000, and by 1918 it had grown to 350,000.[21] Today more than 18 million vehicles are registered in Canada. There are 1.15 vehicles in Canada for every person who is employed, and 1.51 vehicles for every household. By 2031 we project there will be more than 23 million vehicles registered in Canada.

Throughout the 1900s many visionaries called for the creation of a highway that could take Canadians from one end of the country to the other. The federal government made many promises in this direction at various points before World War II but never delivered on this issue until 1949 following a federal election campaign in which all parties came out in favour of a Trans-Canada Highway. At that time Robert Winters, the Minister of Reconstruction and Supply, said in the House of Commons that the Trans-Canada Highway "would help to weld the country more closely together... to contribute to national growth and development just as the railways did in the nineteenth century."[22] But as Globe and Mail columnist Jeffrey Simpson recently pointed out:

> Like the country it purports to knit together, the Trans-Canada Highway is a curious creature. The name Trans-Canada Highway is a misnomer. It's Highway 1 in the West, but then becomes provincial Highway 17 at the Ontario border. Stretches of divided four-lane highway give way to two-lane road, only to return again to four, then shrink again to two. Anyone who drives the highway – or a portion of it, say from Alberta to Ottawa – knows it isn't really national. Rather, the so-called Trans-Canada, completed in 1965, represents a series of provincial roads stitched together piecemeal [...] The speed limit is 110 kilometres per hour in Saskatchewan, but 90 in Ontario [...] One recently paved section – from Kenora to Sault Ste. Marie – gives way to axle-banging parts from there to Ottawa [...] Ring roads bypass some cities [...] but, elsewhere, the so-called national highway inches through suburbs.[23]

There really is no national highway plan. There is no consistent vision, no sustained funding and no national standards for Canada's roads and highways.

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[21] *Building Canada: People and Projects that Shaped the Nation*, Jonathan F. Vance (Penguin Canada, 2006), page 33.

[22] Ibid., page 46.

[23] *Not the Autobahn: Goin' down the Trans Canada*, Jeffrey Simpson , The Globe and Mail, July 9, 2005. It should be noted that this editorial refers to polling results from surveys carried out for and published by the Canadian Automobile Association.

DECLINING ROAD AND HIGHWAY INVESTMENT AND MAINTENANCE

It has long been appreciated that a significant deficit exists within Canada with respect to the nation's funding of transportation infrastructure. The Council of the Federation notes[24] that:

> A comprehensive estimate of the need for investment in Canada's entire transportation infrastructure in the medium or long term has yet to be determined. High level estimates for some key parts of the system are available and they indicate a need for investment that far outstrips current or projected spending by governments.
>
> Canada's cities are economic engines and account for significant investment needs. To ensure a good state of repair and expansion of existing systems in areas having large populations and economic growth, significant investments are needed in urban roads and transit systems.
>
> In 2005 a federal/provincial/territorial task force on urban transportation estimated that infrastructure investment needs for transit in cities across Canada amounts to at least $23 billion over the next few years. Investment needs for urban roads and bridges is much higher -- $66 billion over 10 years.
>
> As far back as 1998, the Council of Ministers of Transportation estimated that investment needs in the National Highway System were over $17 billion. Since that time, the NHS has expanded and costs have increased... provinces and territories have identified approximately $97 billion is required for capital investment in transportation infrastructure priorities over the next 10 years.

THE NUMBER OF VEHICLES ON THE ROADS AND HIGHWAYS WILL INCREASE

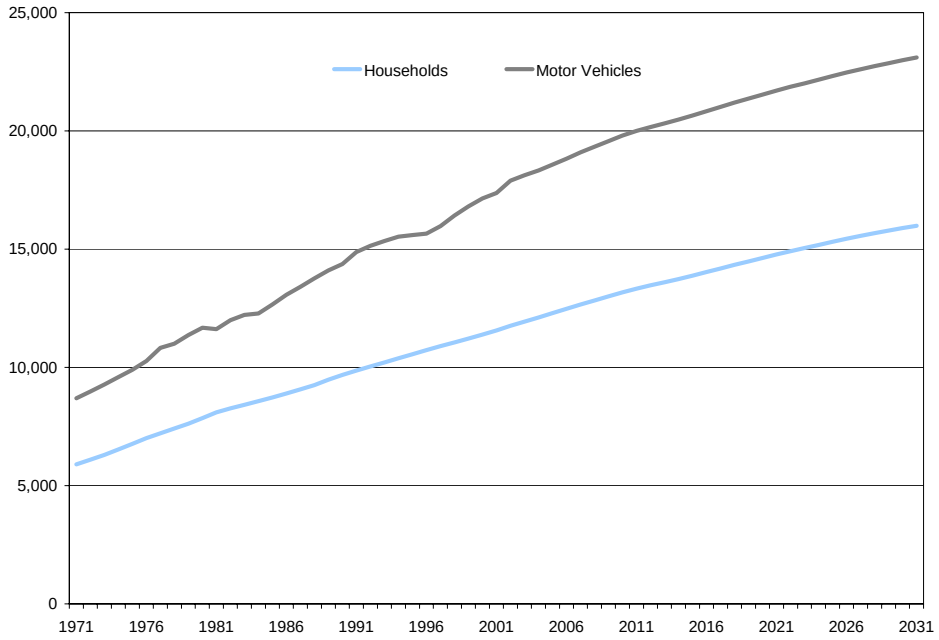
Our projections foresee a continued increase in the number of vehicles in operation in Canada in the decades ahead, both for personal and commercial use (Chart 8). Over the last two decades the introduction of new motor vehicle products (such as vans, sport utility vehicles, light trucks, etc.) that appealed both to household and to commercial users, coupled with the widespread growth of the working-at-home phenomena, have blurred the lines making it difficult to identify which vehicles were purchased for personal use and which were for commercial use over that period.

Our own analysis suggests that the number of personal use motor vehicles per household has been fairly steady in Canada since the early 1980s (averaging 1.48 over the last 25 years) but that it will likely decline slightly in the future due to the aging of the population (reaching 1.45 in 2031). Nevertheless, the total number of personal use vehicles will increase from 18.6 million in 2005 to 20.6 million in 2015 and to 23.0 million by 2030.

Because most of the population growth over this period will be concentrated in Canada's major metropolitan areas, the number of vehicles on the road will increase more in Toronto, Vancouver, Montréal and Calgary than anywhere else in the country. The need for new and better roads and highways, therefore, will be heavily concentrated in these metropolitan areas. Highways that connect into these metropolitan areas will be required as well.

[24] *Looking to the Future: A Plan for Investing in Canada's Transportation System*, The Council of the Federation, December 2005, pages 6-7.

Chart 8
Motor Vehicles for Personal Use and Households in Canada 1971 to 2031 (000s)



Source: Statistics Canada and the Centre for Spatial Economics

Our projections also call for the continued growth of international trade, a further concentration of our trade with the United States, and for a considerable growth in the number of commercial motor vehicles required. Again, because most of the export growth will be generated by the major metropolitan areas, and because most of the import growth will be consumed in those areas, most of the growth in commercial vehicle movements will occur in those metropolitan areas and on the roads and highways that connect them to the United States.

The projections, therefore, foresee personal and commercial vehicle use both leading to more congestion on the roads and highways servicing Canada's major metropolitan areas.

POINT TO POINT CONNECTION

The working and commuting patterns of Canadians are changing dramatically. According to recent research from Statistics Canada[25], job growth is occurring at a much faster pace in the suburbs of Canada's census metropolitan areas (CMAs) than it is in the city core areas:

- The number of jobs within 5 km of the city centres of Canada's CMAs increased by 156,000 between 1996 and 2001. The number of jobs outside 5 km increased by 733,200, or 4 times faster than those in the city core. As a result more and more people are commuting cross-town to their jobs.

[25] *Work and Commuting in Urban Centres*, Statistics Canada, June 2005.

- In most cases cross-town commuters have been driving to work rather than taking transit.
- Public transit use is highest in the city core where it is readily available. Public transit ridership increased between 1996 and 2001 because the number of jobs in the core increased.
- But cars are far more frequently used for jobs located in the suburbs. Since such jobs increased by more than those in the core, getting to work by car is increasing.

The relative expansion of employment into the nation's suburbs is likely to continue. Transit works best when it connects city centres to city centres or major suburban nodes to city centres. It is unlikely that a transit system can ever be established that can handle the varied combinations of suburban to suburban trips emerging throughout the country at this time. More and better roads and highways will be required to handle employment growth in the future, not less.

JOURNEY TIME

The time it is taking Canadians to get to and from work each day is on the increase. A July 2006 study released by Statistics Canada [26] using data for 1992, 1998 and 2005 from its General Social Survey draws attention to some important aspects of the time it takes to commute:

- In 2005 commuters in Canada on average spent 63 minutes each day on the round trip between their place of residence and their place of work. That is up from 54 minutes in 1992 and from 59 minutes in 1998. Thus the average Canadian today is spending 17 per cent more time each day commuting, the equivalent of one extra work week every year, than was the case 13 years ago.
- The time increase between 1992 and 2005 varies across the country, but increases are noted in just about every region except British Columbia. Outside of BC the gains were 12 minutes on average for both Atlantic Canada and on the Prairies, 11 minutes for Québec and 9 minutes for Ontario.
- On a CMA basis the 1992 to 2005 increases were most noteworthy in Montréal and Calgary (14 minutes each), Edmonton (12 minutes), Toronto (11 minutes) and Ottawa-Gatineau (8 minutes). The average time spent commuting actually fell 3 minutes over the period for the average commuter in Vancouver. Across all other metropolitan areas the time spent increased 9 minutes while for non-metropolitan areas and for rural areas the increase was 10 minutes.
- The average time spent commuting increased for both transit users and automobile users. Those traveling by car saw their time increase from an average of 51 minutes in 1992 to 59 minutes in 2005, a gain of 8 minutes. Those traveling by transit saw an increase from 94 minutes to 106 minutes, a gain of 12 minutes.
- The share of people traveling by car was steady across the period at 86 per cent in each of 1992, 1998 and 2005, as was the share of transit users at 12 per cent.
- Transit use is greater in Canada's largest urban areas and held at 20 per cent across the three survey years.

[26] *The Time It Takes to Get to Work and Back*, Statistics Canada, July 2006.

Table 4
Average Commute Times in Canada by Region and CMA 1992, 1998 and 2005

	1992	1998	2005	Change 92-98	Change 98-05	Change 92-05
Canada	54	59	63	5	4	9
Regions						
Atlantic	39	50	51	11	1	12
Quebec	52	57	63	5	6	11
Ontario	59	63	68	4	5	9
Prairies	45	53	57	8	4	12
British Columbia	59	61	60	2	-1	1
Census Metropolitan Areas						
Toronto	68	76	79	8	3	11
Montreal	62	65	76	3	11	14
Vancouver	70	68	67	-2	-1	-3
Ottawa-Gatineau	57	62	65	5	3	8
Calgary	52	64	66	12	2	14
Edmonton	50	58	62	8	4	12
Other CMA/CA	44	50	53	6	3	9
Non CMA/Rural	44	50	54	6	4	10

Source: Statistics Canada

The StatCan study draws a number of important conclusions from the survey results:

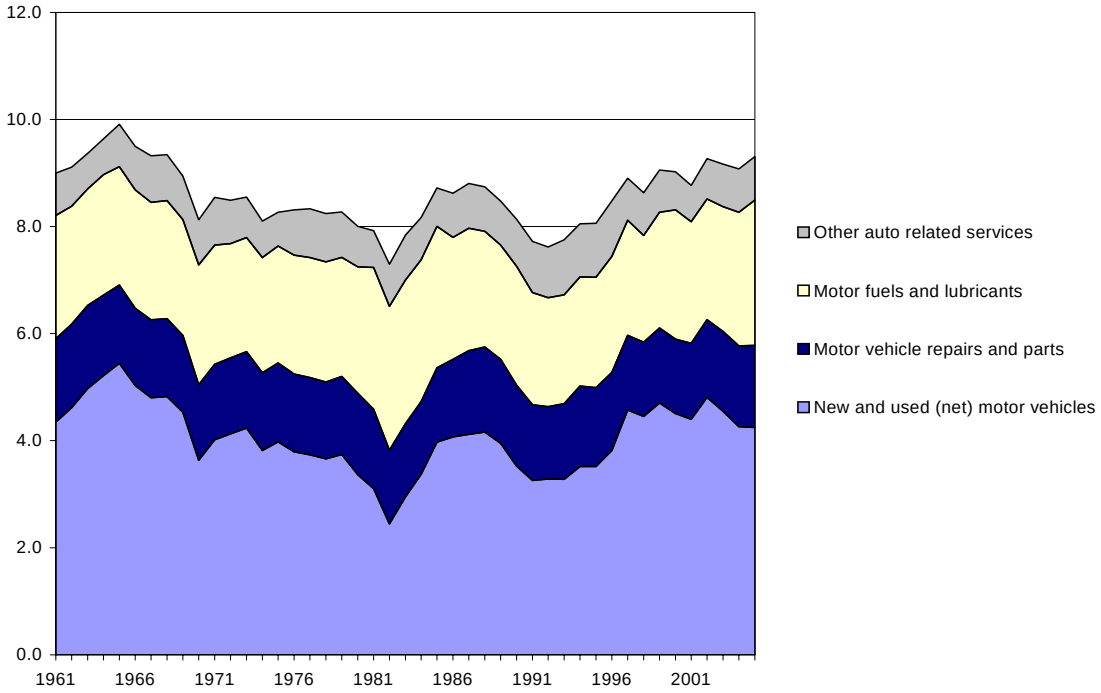
- All other things being equal (travel distance) it takes transit users 41 more minutes daily to get to and from work than it does for someone using an automobile. It takes someone using a combination of both transit and car 41 minutes more to get to and from work than it takes someone using only an automobile.
- Despite traffic congestion it is, in most cases, faster to use a car or other private vehicle to get to and from work than to use public transit. Despite higher fuel costs and environmental concerns most workers continue to use mainly their automobile to get to and from work.

Following the release of these results serious questions have been raised about the effectiveness of building new transit to alleviate congestion. Most people are not prepared to spend 41 minutes per day – which translates into more than three hours per week – taking transit.

THE COST EFFICIENCY OF PERSONAL AUTOMOBILE USE

Since 1961 households in Canada have spent an average of 8.6 per cent of their personal incomes on automobiles and the costs related to their operation (Chart 9). The share increases to above this average when times are good, and falls below when times are not so good, reflecting the ability of households to postpone discretionary personal vehicle travel when the household budget shrinks. Over the last ten years the share has averaged 9.0 per cent.

Chart 9
Costs of Personal Vehicle Use as a Per cent Share of Personal Income 1961 to 2005



Source: Statistics Canada, National Income and Expenditure Accounts

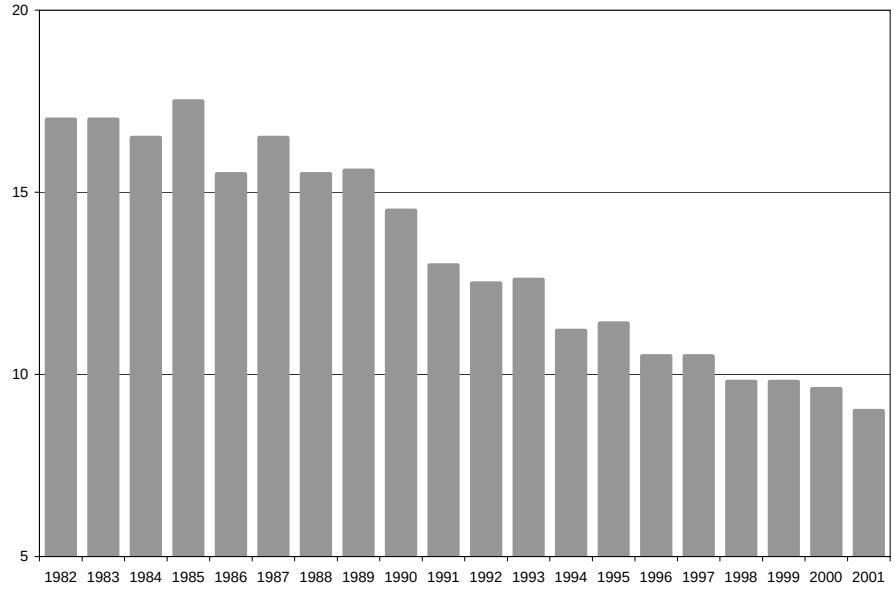
The persistent dedication by households over time of such a significant portion of the family budget for the purpose of having access to and operating a personal vehicle is testimony to the economic and social advantages perceived by householders in doing so. Householders must perceive that the benefits of personal vehicle use far outweigh the associated costs or the share of this item in the household budget would be declining.

TRAFFIC SAFETY

Traffic related fatalities will always be regarded as a tragedy of the modern age. In Canada significant advances in vehicle and road safety have been made such that the traffic related fatality rate has fallen over the last two decades from around 17 per 100,000 people to only about 9, almost a 50 per cent reduction (Chart 10).

This reduction occurred even though the number of vehicles on the roads and highways and the number of licensed drivers increased over the same period. Legislation mandating seat belt use and child restraints, more stringent drinking and driving sanctions, public education and enforcement campaigns, safer vehicles and some modest road infrastructure enhancements have all contributed to the increased safety of road users. Improvements in emergency medical response and trauma care have also helped to reduce fatalities.

Chart 10
Traffic Deaths per 100,000 Population 1982 to 2001



Source: Transport Canada

Canada has set a target for a 30 per cent reduction in the average number of traffic related fatalities or serious injuries during the period 2008-2010 relative to the 1996-2001 period. However, OECD countries have set similar or more ambitious targets and are performing better than Canada in this regard.

The Council of Ministers Responsible for Transportation and Highway safety estimated in 1998 that reduced congestion and improved highway standards could reduce the number of fatalities on the National Highway System by almost 250 each year, and the number of serious injuries by up to 16,000 each year.

THE POTENTIAL OFFERED BY ITS AND SATELLITE NAVIGATION SYSTEMS

Intelligent Transportation Systems (ITS) use information technology to better coordinate road transport (flow, speed limits, etc.) and assist motorists in making informed route choices, thereby increasing the capacity of the existing system.

The Province of Manitoba released an Intelligent Transportation Systems Strategic Plan in November 2003[27] which identified a number of opportunities in the ITS field that could be implemented within a period of zero to three years (to which it refers as the early winners). This group included opportunities related to the following:

[27] *Manitoba Intelligent Transportation Systems Strategic Plan*, Province of Manitoba, November 2003.

- Traveler Information
- Traffic Control
- Environmental Conditions Management
- Operations and Maintenance
- Automated Dynamic Warning and Enforcement
- Public Transport Management
- Electronic Payment Services
- Commercial Vehicle Electronic Clearance
- Commercial Vehicle Administrative Processes
- Infrastructure-Based Collision Avoidance
- Weather and Environmental Data Management

The plan also identified a number of opportunities that should be considered for the medium terms (for implementation in three to seven years). These opportunities related to the following:

- Incident Management
- Automated Roadside Safety Inspection
- Hazardous Material Planning and Incident Response
- Emergency Vehicle Management
- Archived Data Management

ITS measures such as those identified above can reduce the number of road fatalities, provide the data to help better manage congestion and make the transportation system a more reliable system. Technology is critical to improving the surface transportation system, especially when it comes to enhancing safety, reducing congestion, saving fuel and reducing emissions. The federal government could show that it is serious about improving traffic flow throughout Canada and between Canada and the United States by enhancing its funding for ITS research.

TRANSPORTATION INFRASTRUCTURE FUNDING

In the past, the federal and provincial governments have dealt with infrastructure funding in a variety of ways. Our national railway system – the Canadian Pacific Railway – was built by the private sector encouraged by governments to do so through a system of incentives that included land grants, monopoly rights and subsidies. In the case of the railway, the private sector assumed the associated financial risks of front-end financing and building of the required infrastructure in exchange for the expectation of future profits. In other cases, the government itself or its agencies funded, built and operated needed infrastructure (for example, the highway and road network). Other infrastructure (for example the cable television system) was built and operated entirely by private companies under the umbrella of a legal/regulatory framework that protects both the private sector's investment and the consumer.

More recently, alternate arrangements, tagged Public-Private Partnerships ("PPPs") have been developed as a means of leveraging private sector money and expertise to fund, build and operate public sector infrastructure. PPPs take many forms but they all employ a mix of public and private funding, with operation and maintenance performed by private enterprise on behalf of the government. As recently pointed out by Bank of Canada Governor, David Dodge, other countries such as the United Kingdom and Australia boast numerous examples of successful PPPs whereas Canada has yet to establish the well-developed legal and regulatory framework for PPP investment found in those other countries:

> Pension and endowment funds are now allocating an increasing share of their portfolio assets to infrastructure investments. These funds are increasingly looking for longer-term assets that provide a better match to their liabilities. So far much of this investment has gone to projects in other countries. This is partly because the domestic markets for PPPs in these countries are more developed than ours. [28]

Despite the fact that funds are clearly available for this purpose from public and private sources, a logjam of inter-governmental wrangling over responsibilities and financing strategies, combined with a complex regulatory approvals process, holds up infrastructure projects crucial to the achievement of our economic potential. This situation is unacceptable, particularly in light of the public's and business community's desire to see concrete progress regarding such issues as gridlock. The federal and provincial governments need to establish the legal and regulatory framework required to make PPPs a feasible alternative to the conventional methods of financing, constructing and operating public infrastructure.

A CALL FOR FEDERAL ACTION

This document has demonstrated in a number of ways that the federal government should take a leadership role in establishing a consistent national vision for road quality and safety and in ensuring sustained funding for the improvement and expansion of the nation's road and highway system. The report shows that there really is no national highway plan in Canada: there is no consistent vision, no sustained funding and no national standard for our roads and highways.

Calls for a national leadership role in the provision of roads and highways go back as far as the introduction of the automobile itself. The Canadian Highway Association (CHA) was established in 1911 and its dominion charter stated explicitly the association's intention "to promote and encourage the establishment and construction of a continuous first-class trunk highway, to be known as the 'Canadian Highway,' from Alberni, British Columbia to Halifax, Nova Scotia."[29]

This report points out that many visionaries in the first half of the last century from time to time called for the creation of a highway that could take Canadians from one end of the country to the other. It notes that the federal government made many promises in this direction at various points prior to World War II, but that it never delivered on this issue until 1949 when it facilitated the creation of the provincially owned Trans-Canada Highway.

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[28] Remarks by David Dodge, Governor of the Bank of Canada, to the Canadian Council for Public-Private Partnerships , November 28, 2005.

[29] *Building Canada: People and Projects that Shaped the Nation*, Jonathan F. Vance (Penguin Canada, 2006), page 34.

Since 1994 the provinces and territories have urged the federal government to take a leadership role in this area by implementing a federal-provincial-territorial National Highway Policy. Their call for leadership has been repeated many times in the intervening years, most notably in 1995 and 1996 by the provincial Premiers, in 1998 by the Council of Ministers Responsible for Transportation and Highway Safety, repeated by that Council in 2000, and repeated again in 2005 by the Council of the Federation. The report shows that many organizations support this view.

As a nation we face an estimated $22 billion deficit in our National Highway System. The inevitable by-product of this deficit is ever increasing congestion for our international and domestic trade, our tourists and our commuters. Our busiest border crossings to the US currently impede the free flow of goods and tourists, thus eroding our ability to compete and making worse the already difficult set of circumstances faced by our travel industry. Our commuters spend an average of 63 minutes per day getting to and from their places of work, up 17 per cent from 13 years ago, the equivalent of one extra work week per year, further undermining our ability to compete.

The United States is our major trading partner. Its businesses compete head-to-head with our own in world markets. The US federal government recently committed to investing almost $48 billion dollars per year (in Canadian dollars) over a six-year period, or $286 billion in total, to improve and expand its highways, highway safety and public transportation. If we are to retain our competitive position with the US our federal government needs to spend at least $4.8 billion per year on our highways, highway safety and transit. But the Council of the Federation estimates our federal government is spending, at best, only $441 million per year on these critical assets, less than one-tenth the amount required.

The Government of Canada should develop a National Highway Policy in conjunction with the provinces. It should support this policy with sustainable, long-term financing by dedicating, as suggested by the Council of the Federation the unallocated funds from federal fuel excise taxes to a Strategic Transportation Infrastructure Fund. There is a strong case to be made that the funding should be even greater than this. It should provide, in conjunction with the provinces, the enabling legislation required to facilitate the promotion of Private Public Partnerships in the area of highway, bridge and tunnel construction and maintenance throughout the country in order to tap into the enormous pension funds seeking participation in such projects. It should support research into highway safety and ITS technology and facilitate the establishment of national highway safety and quality standards.

The Canadian people and Canada’s businesses are tired of the intergovernmental feuding and lack of accountability surrounding this issue. The people, the businesses, the provincial governments and the municipal governments in this country all want the Government of Canada to assume *the* leadership role on this issue. We need the Government of Canada to facilitate the elimination of the nation’s transportation infrastructure gap so that we can sustain and enhance our competitive position in the global arena and thus ensure a continued increase in our standard of living.

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