

BUILDING 
CANADA

Stronger, safer, better

BUILDING CANADA
Modern Infrastructure for a Strong Canada





Building Canada: Modern Infrastructure for a Strong Canada

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Minister's Message



"Our Government will announce an infrastructure program, the Building Canada Plan, to support our long-term growth... The result will be safer roads and bridges, shorter commutes, more competitive business, improved cultural infrastructure and a better quality of life for all Canadians."

*Speech from the Throne
October 16, 2007*


Since Confederation, national governments have built infrastructure to allow Canadians to travel, communicate and do business across our vast country. Government investments in infrastructure created Canada's early canals, national railway, the telegraph system, the St. Lawrence Seaway, ports, airports and the Trans-Canada Highway – the very foundations for building a nation and helping it grow and prosper.

It is as true today as it was when Canada was built – strong infrastructure makes a nation strong. Canada's Government recognizes, through the 2007 Speech from the Throne, that the time has come to exercise leadership by working more effectively with provinces, territories and communities to build a modern Canada founded upon world-class public infrastructure.

Infrastructure drives productivity, supports trade and fuels economic growth. It is critical to achieving our environmental goals and vital to building strong, competitive communities. But much of our public infrastructure is nearing the end of its expected lifespan and needs upgrading or replacing. Without significant investment in the country's critical physical assets, there is a risk that Canada will fall behind in the global economy and face challenges in maintaining a high quality of life for all Canadians.

Canada's Government has a long-term economic plan called Advantage Canada. This plan outlines several priority areas the government will focus on in the years ahead, including: a Tax Advantage (lower, more competitive rates); a Fiscal Advantage (reduce and eliminate debt); an Entrepreneurial Advantage (lower taxes, less red tape); a Knowledge Advantage (highly-educated and trained knowledge workforce); and finally, an Infrastructure Advantage – to ensure the seamless flow of people, goods and services.

To realize this Infrastructure Advantage, Canada's Government is making an historic infrastructure investment of \$33 billion under the new *Building Canada* plan. *Building Canada* will invest in infrastructure that will support a stronger economy, a cleaner environment and more prosperous communities. In short – a stronger, safer, and better Canada.



This comprehensive long-term infrastructure plan provides a framework for the federal government to collaborate with provinces, territories and municipalities to take action that is going to make a real difference in the everyday lives of Canadians. Infrastructure matters to Canadians – whether it is safer roads, shorter commutes to work, or cleaner water and air to help keep families healthy.

The *Building Canada* plan will provide tangible benefits to improve the lives of Canadians, while supporting the nation's most important economic and environmental goals.

It will provide a long-term structure and funding for governments to plan and deliver results that matter to Canadians: clean air and water, safer roads, shorter commutes, and prosperous, liveable communities.

Building Canada is an unprecedented plan to address the challenges of funding public infrastructure and help ensure Canada is strongly positioned for prosperity, global competitiveness and a sustainable, healthy society well into the 21st century.

I am pleased to provide you with a summary of *Building Canada*, the Government of Canada's new long-term infrastructure plan.



Lawrence Cannon
Minister of Transport, Infrastructure and Communities

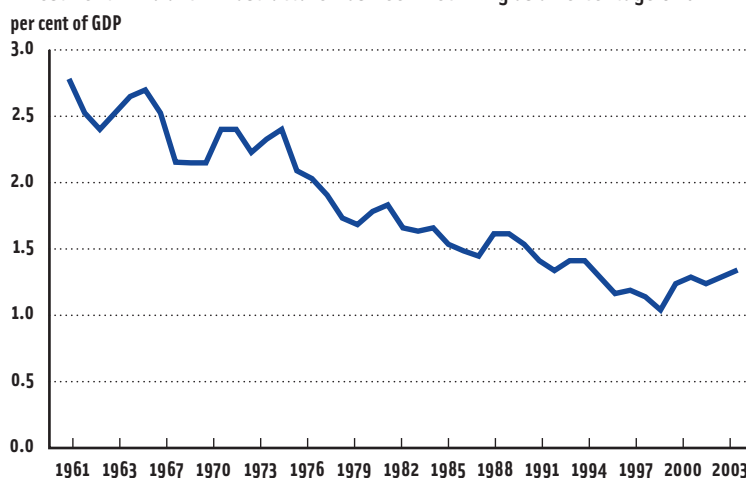
“Everything we do is designed to deliver practical, tangible benefits to Canadians. And everything we do serves our ultimate goal: a stronger, safer, better Canada.”

Prime Minister Harper
February 6, 2007

Modern Infrastructure for a Strong Canada

Total Investments by All Orders of Government

Investment in Public Infrastructure Has Been Declining as a Percentage of GDP



Note: Infrastructure is defined as fixed non-residential building and engineering of federal, provincial, territorial and local public administrations.

Source: Department of Finance Canada.

Failure to make significant progress towards bridging the infrastructure gap could prove costly in terms of congestion, unreliable supply lines, blunted competitiveness, and growing environmental problems, with all the implications for living standards and quality of life.

Organisation for Economic Co-operation and Development, Infrastructure to 2030: Main Findings and Policy Recommendations, Multi-Disciplinary Issues, April 2007

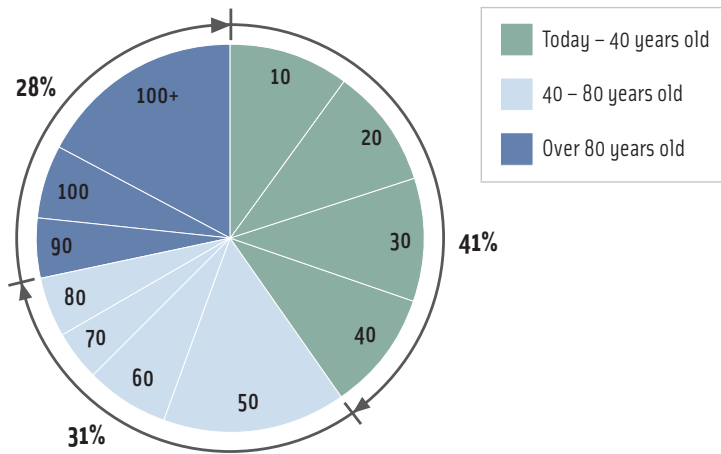
But population and economic growth are combining to increasingly overburden Canada's public infrastructure. The requirement to upgrade and replace public infrastructure stock is growing urgent.

Canadians look to their governments to provide safe and efficient infrastructure. They rightly expect all orders of government to collaborate to fulfill this fundamental responsibility. This is precisely what *Building Canada* is meant to do. The plan will guide the country through strategic, smartly-funded and executed infrastructure investments that will drive economic growth, enhance the quality of the environment and strengthen communities across the country.

Building Canada is the blueprint for building a modern and prosperous Canada – a Canada equipped to meet the challenges of the 21st century. The *Building Canada* plan is a vision for a stronger, safer and better Canada built upon a foundation of modern, world-class public infrastructure, focused on national goals for a stronger economy, a cleaner environment and better communities.

Building Canada provides for a federal investment of \$33 billion over seven years through to 2014 – the largest single federal commitment to public infrastructure of this type. This historic initiative will support the quality and level of public infrastructure that Canada requires to keep pace with the demands of a changing world – a world of competitive global trade, increasing urbanization and pronounced environmental realities. Strong and modern infrastructure is an essential building block for Canada's competitiveness and long-term prosperity for Canadians, whether they live in large cities or small communities.

Age of Infrastructure (years)

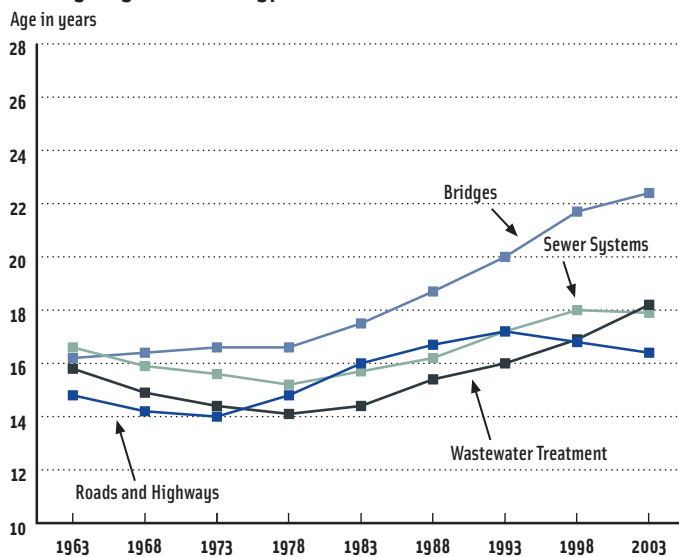


Source: Civil Infrastructure Systems, Technology Road Map 2003-2013, June 2003, available at <http://engineerscanada.ca/e/files/TRMReporteng.pdf>.

There is broad agreement that a large (infrastructure) debt exists, that it is growing, and that traditional approaches to infrastructure financing, funding and delivery are incapable of addressing it. It has also been argued that the infrastructure debt threatens Canada's future economic prosperity and quality of life.

Canada West Foundation, Foundations for Prosperity: Creating a Sustainable Municipal-Provincial Partnership to Meet the Infrastructure Challenge of Alberta's 2nd Century, 2004

Average Age of Asset Types



Source: Statistics Canada. Special tabulation, Investment and Capital Stock Division.

By 2003, the roads and highways network already had over 50 percent of its useful life behind it, and federal and provincial bridges had passed the halfway mark of their useful life. In contrast, municipal bridges were younger, and had only 41 percent of their useful lives behind them.

Statistics Canada, The Daily, January 30, 2006

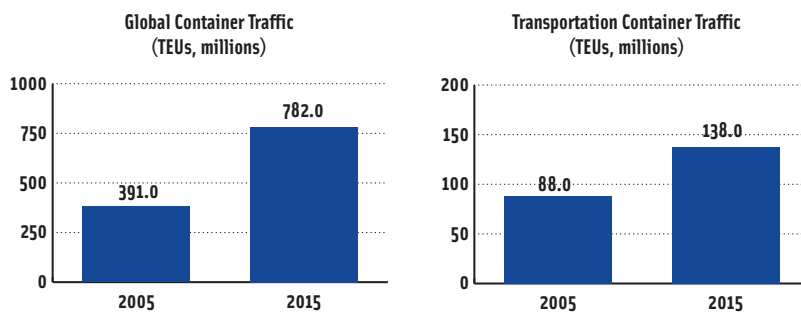
Infrastructure and the Economy

Canada's economy is already strong, with growth rates that surpass those of all other G7 nations. However, if Canada is to continue to live up to its potential in a global economy characterized by emerging economic superpowers, international "just-in-time" supply chains and fierce competition, modern, efficient and reliable infrastructure is essential to the country's prosperity today and for the long-term.

Canada, which is the most trade-dependent nation among the G7, exported goods and services accounting for 38 percent of its Gross Domestic Product (GDP) in 2005. More than \$1.8 billion in trade crosses the Canada-US border alone each day. This bilateral trading relationship is one of the largest economic relationships in the world and, in the last decade, growth in trade with the United States has averaged almost 6 percent annually.¹ This sharp and sustained rise in trade and traffic puts relentless pressure on major corridors and border crossings, creating bottlenecks and impeding the flow of goods and people. This is jeopardizing the very economic livelihood upon which Canada depends.

The ports that link Canadians to their world customers – major border crossings between Canada and the United States, the highways, rail lines, and waterways that connect all points of the transportation system – are all key assets that must meet current and future demands. However many of these assets are already strained, and the economic importance of boosting their capacity cannot be overstated, especially given that Canada's international trade continues to grow at impressive rates.²

Transpacific Container Traffic Forecast 2005-2015



Source: InterVISTAS Consulting, *Canada's Asia-Pacific Gateway and Corridor: A Strategic Context for Competitive Advantage*, March 2007

1 Connect 2 Canada, available at <http://www.connect2canada.com/getthefacttrade/>

2 The Conference Board of Canada, *Mission Possible: Sustainable Prosperity for Canada*, February 2007.

Every year, there are roughly 10 million truck trips across the Canada-US border, with the value of goods carried totaling approximately \$400 billion.

Transport Canada, Canada's Transportation System, available at <http://www.tc.gc.ca/pol/en/report/brochure/default.htm>

Canada's growing trade with emerging economies, particularly in Asia, is also straining the transportation system. From 1999 to 2004, Canada's merchandise exports to China grew, on average, by 20 percent a year.³ The potential for future growth in commerce between North America and Asia is tremendous. There is also growing demand for exports of bulk commodities and increased use of containers for imports. Against this backdrop, having the infrastructure in place that allows the transportation system to move people and goods – quickly and reliably – is crucial to Canada's competitiveness.

Inadequate infrastructure can deter foreign investors. Research shows that inadequate public infrastructure tends to drive away foreign investment more so than quality infrastructure attracts private investment. This, in turn, suggests that public infrastructure is taken "as a given" – something that must be present. In fact, 80 percent of multinational executives believe that poor infrastructure quality affects Canada as an investment destination.⁴ Public infrastructure is also related to productivity. Congestion, for example, takes a major economic toll – it slows movement of goods and impacts productivity. Transport Canada estimates the total annual cost of congestion in terms of lost time and fuel consumption to be between \$2.3 billion and \$3.7 billion (in 2002 dollars) for Canada's nine major urban areas.⁵

Modern infrastructure also creates employment opportunities and attracts skilled knowledge workers, particularly in Canada's urban centres, increasing the cities' growth and competitiveness. Canada's three largest cities (Toronto, Montreal and Vancouver) generate 35 percent of the country's GDP, a major factor in the broader Canadian economy.

It has been estimated that a \$1 increase in the net stock of publicly owned infrastructure capital will generate 17 cents of "cost savings" to private producers per year.

Statistics Canada, Public Capital and its Contribution to the Productivity Performance of the Canadian Business Sector, November 2003

3 Quoted in Department of Finance, *A Plan for Growth and Prosperity*, November 2005.

4 Industry Canada, *Canada's Economic Prosperity: Challenge and Opportunities*, June 2006.

5 Transport Canada, *The Cost of Urban Congestion in Canada*, March 2006.

Infrastructure and the Environment

Maintaining a healthy and sustainable environment is directly related to the health and prosperity of Canadians, and the federal government has set the protection and promotion of a clean environment as a paramount national objective. Infrastructure investments can be a powerful tool for achieving environmental goals. Better infrastructure planning and construction can reduce the impact of human activity, and help protect and improve the environment.

Air pollution is estimated to cause at least 5,000 premature deaths each year in Canada,⁶ with personal transportation being among the main causes of air pollution. Shifting a larger portion of this traffic to public transit can improve air quality by providing an alternative to driving that is energy efficient and lower in emissions. A transit rider creates 65 percent lower greenhouse gas emissions than an auto user for the same trip, and commuters who take transit just twice a week can reduce their emissions by 25 percent.⁷

Energy generation is another major contributor to air pollution in many areas of the country. In general, Canada has one of the most diversified electricity generation bases in the world. Sources include natural gas, oil, coal, nuclear power, and hydro-electricity and other renewable energy. However, there is an increasing need to make Canada's energy supplies and technologies cleaner and more efficient.

Canada, because of its northern climate and dispersed geography, relies heavily on energy to heat and light homes and buildings, as well as for transporting people and goods. Historically, a large portion of this has been secured through fossil fuels. As a result, Canada is one of the largest per-capita emitters of greenhouse gases in the world. And this reliance on fossil fuels also has serious consequences for the air we breathe. We will also be required to assess the impacts of future climate change on our nation's infrastructure.

A 1997 report compiled for the National Air Issues Coordinating Committee estimated that reducing SO₂ (sulphur dioxide) emissions by 50 percent in eastern Canada (approximately 1 million tonnes) would avoid 950 premature deaths, 1,530 emergency room visits, and 209,350 asthma symptom-days.

Quoted in Options for a Clean Environment and Healthy Canadian Economy, 1997, available at <http://www.canren.gc.ca/app/filerepository/lirec.pdf>

⁶ Health Canada, *Estimated Number of Excess Deaths in Canada Due To Air Pollution*, April 2005.

⁷ Canadian Urban Transit Association, *Public Transit: A Climate Change Solution*, Issue Paper 16, December 2005.

Studies show that new rapid transit investments have the potential to significantly increase transit ridership and – importantly – attract new transit users away from their cars. For example, the introduction of the 98-B Bus Rapid Transit (BRT) line in Vancouver in 2003, along with accompanying transportation demand management measures, induced a 23 percent mode shift from auto to transit on the corridor, resulting in a net increase of 1.2 million passengers per year. In addition, in a 2004 survey, 42% of Vancouver SkyTrain riders reported that they were former auto users.

Transport Canada, Cost and Impacts of Transit Investments, January 2005



Translink Buses, Vancouver, B.C.

Water pollution is another major environmental challenge and municipal wastewater effluents are one of the largest sources of pollution to Canadian waters.⁸ Although 84 percent of inland municipal populations in Canada that are served by sewers receive secondary or tertiary wastewater treatment, only a minority of coastal communities served by sewers have secondary treatment, with most having only primary or no treatment at all.⁹ In addition, the cost of treating health problems related to water pollution is estimated at about \$300 million per year.¹⁰ Again, effective modern infrastructure is needed to ensure sufficient processing and purification of wastewater, both for the protection of human health and to ensure the long-term viability of Canada's aquatic environments.

8 Environment Canada, *Water Pollution*, available at http://www.ec.gc.ca/water/en/manage/poll/e_poll.htm

9 Environment Canada, *Environmental Signals: National Indicator Series 2003*, 2003.

10 Environment Canada, *Water: Quick Facts*, available at http://www.ec.gc.ca/water/en/e_quickfacts.htm

Infrastructure and Communities

A successful redevelopment project in Calgary turned a former brownfield into a new vibrant, compact and mixed-use inner-city neighbourhood. It has prompted new redevelopments in the surroundings, and proved to be a financial success – the \$100 million public investments leveraged \$400 million by the private sector.

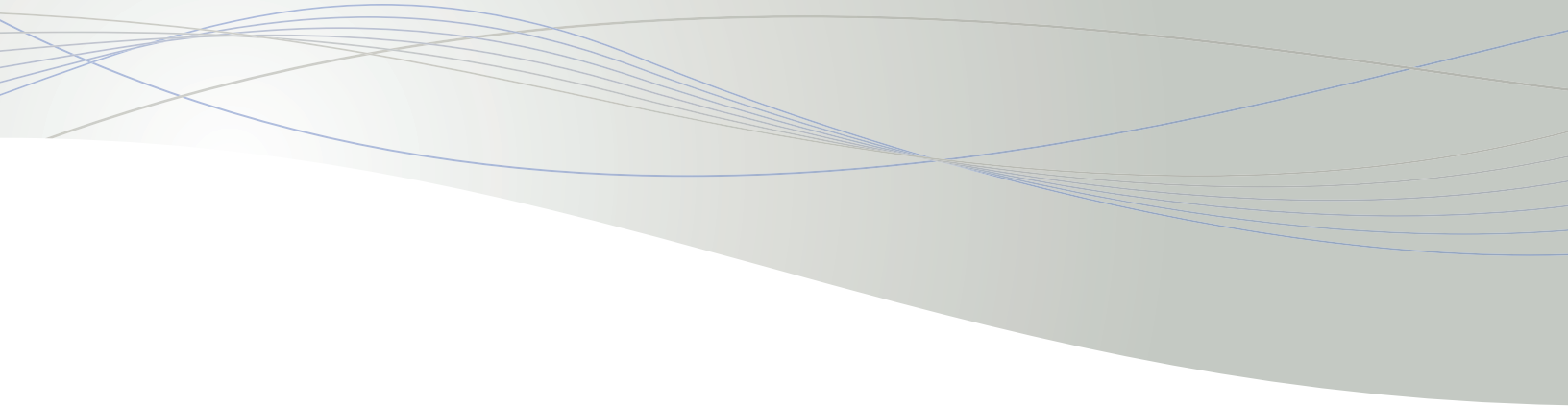
A presentation of the Garrison Woods redevelopment is available at <http://www.garrisonwoods.com>

Canada's national strengths are a function of the strengths of its communities, whether large or small, urban or rural. Livable and prosperous communities of all sizes define Canadians' standard of living, quality of life and overall well-being. And these communities must continually adapt to increasingly rapid change, and provide the infrastructure to maintain and improve residents' quality of life.

In the integrated global economy, Canada's large cities must compete with other global cities for private-sector capital investment and a skilled workforce. Today's skilled knowledge workers have high job mobility, picking and choosing the community where they will apply their skills. Cities and communities that provide a high quality of life are therefore able to attract, retain and create the required human capital to remain economically competitive. Talented professionals and investors are attracted to healthy, prosperous, vibrant and safe communities supported by public infrastructure such as public transit, sports facilities, green spaces, and arts and cultural institutions. Although many of Canada's largest cities consistently rank highly on global quality of life surveys¹¹, they face constant pressure to maintain this standing.

Smaller communities also have unique challenges. They must build and maintain the full range of municipal infrastructure regardless of their population size. A lack of reliable and affordable transportation is seen as an obstacle to community development, reducing citizens' mobility and creating barriers and costs for community and rural businesses. In remote communities, the lack of broadband communications service is another significant deterrent to growth and residents' quality of life.

¹¹ 2007 World-wide Quality of Life Survey, Mercer Human Resource Consulting, <http://www.mercer.com/referencecontent.jhtml?idContent=1173105>



An important determinant of a community's livability is the safety and reliability of its drinking water – an infrastructure issue of growing concern in communities across the country. Drinking water quality can be an issue for any city or community, but is most prevalent in smaller and rural communities. Every year in Canada, more than 700 boil-water orders are issued.¹²

In addition to other issues facing cities and communities, decades of expansion and industrial development have contributed to a prevalence of “brownfield” sites across Canada. These are contaminated, abandoned, or underutilized commercial or industrial sites within cities and communities. There are approximately 30,000 brownfield sites in Canada. The National Round Table on the Environment and the Economy estimates that redevelopment of these sites has the potential to generate up to \$7 billion a year in public benefits through the increased economic productivity of surrounding land, increased tax revenues, lower municipal infrastructure costs, reduced health risks, preservation of agricultural land, less air pollution and improved neighbourhoods.¹³

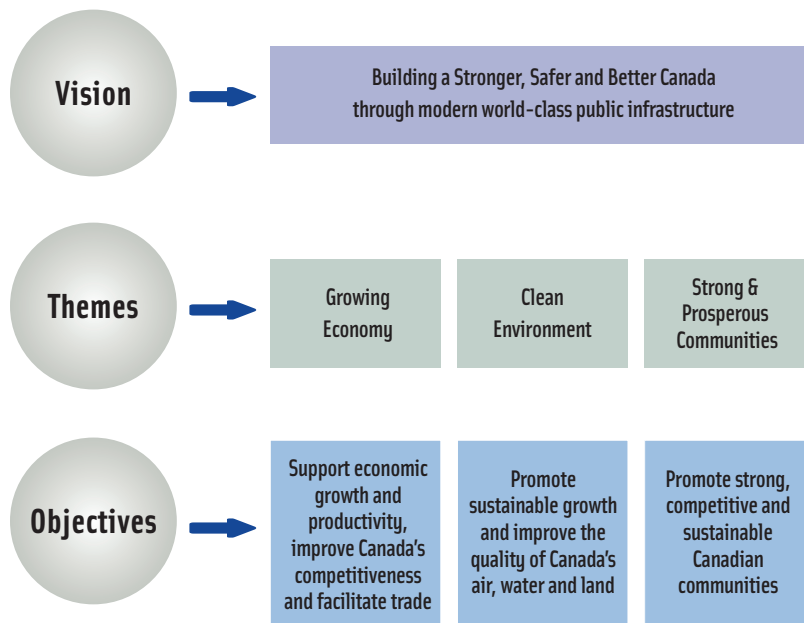
¹² The Water Chronicles, available at <http://water.ca/index.asp>

¹³ National Round Table on the Environment and the Economy, *Cleaning Up the Past, Building the Future – A National Brownfield Redevelopment Strategy for Canada*, 2003.

Building Canada: the Plan

*B*uilding Canada will fund strategic investments in projects designed to produce results in three areas of national importance: a **growing economy**; a **clean environment**; and **strong and prosperous communities**. Through this plan, all orders of government will work together to plan and build a modern Canada ready to compete with the best in the world. And the investments will deliver tangible results in areas that matter to Canadians—safer roads, faster commutes, cleaner water and air, and vibrant and healthy cities, towns and rural areas.

The Building Canada Plan



Building a Stronger Economy

*B*uilding Canada will help build a stronger Canadian economy by investing in infrastructure projects that contribute to increased trade, efficient movement of goods and people, and economic growth.

Gateways and Border Crossings

Given the critical role that trade plays in Canada's economy, upgrading and expanding gateway and border crossing infrastructure, and their key inter-modal linkages, is a major national priority. Many of these vital links are already strained in the face of current demands, and investments are required to ensure these assets are reliable and efficient, with the capacity to accommodate future trade needs.

The federal government's new *National Policy Framework for Strategic Gateways and Trade Corridors* will help guide federal investment decisions on gateway and border crossing projects. This framework builds on Canada's Asia-Pacific Gateway and Corridor Initiative and identifies two priorities for new gateway and corridor strategies in central and eastern Canada.

On July 30, 2007, the Government of Canada signed a Memorandum of Understanding (MOU) with the Provinces of Ontario and Quebec which establishes the framework for

federal-provincial collaboration to develop the Ontario-Quebec Continental Gateway and Trade Corridor in partnership with the private and public sectors. The work carried out pursuant to this MOU will help guide investments along this Corridor.

Investments in trade-related infrastructure will be designed to:

- Improve the efficiency and safety of gateways and trade corridors, eliminating bottlenecks and reducing congestion, to enhance Canada's economic competitiveness and productivity and facilitate inter-provincial and international commerce;
- Optimize the use of all transportation modes and improve the integration of inter-modal connections;
- Advance knowledge of the transportation system to improve long-term planning, guide investment decisions, and promote innovative technologies and financing mechanisms;
- Minimize environmental impacts.

Highways

The need to modernize and expand capacity for all modes of transportation in Canada is considerable, most acutely on the National Highway System (NHS). And this pressure is only going to increase with truck freight traffic projected to grow significantly over the next 20 years. Key components of the NHS also need to connect to inter-modal facilities and international gateways to meet the demands of global supply chains. Failure to keep pace would have severe economic and safety impacts.

In urban centres, congestion not only impedes the flow of people and goods but harms the environment by increasing air pollution. Rural and remote highways are also in immediate need of repair in many regions across Canada. These non-core components of the NHS play an important economic role in connecting smaller, more remote communities to the larger economic centres.



Reducing border congestion, improving safety.



"We're investing in our future by upgrading our National Highway System, unblocking our border crossings and improving our gateway facilities on the Pacific and Atlantic coasts. Our goal is to ensure that every part of the country has the chance to benefit from the enormous economic opportunities that lie before Canada."

Prime Minister Harper, June 25, 2007, Fredericton, New Brunswick

Building Canada will focus on highway infrastructure projects designed to:

- Improve the safety and efficiency of Canada's transportation system, with an emphasis on the core *National Highway System*;
- Improve the state of good repair of these infrastructure assets;
- Improve mobility by reducing bottlenecks and congestion;
- Minimize negative environmental impacts.

Short-line Rail and Short-sea Shipping

As an exporting nation, Canada needs an integrated and efficient national transportation system. To remain competitive, Canada must ensure seamless connections between the modes. This can be accomplished through targeted investments in short-line railways and short-sea shipping facilities, increasingly important infrastructure in high-traffic areas such as major market hubs and coastal waterways.

Renewed and upgraded short-line railway infrastructure will provide better connections to mainline corridors, improve market access for rural shippers, strengthen rural economies and employment opportunities, and reduce stress on regional road infrastructure caused by truck transportation.

It is also important to stimulate investments in short-sea shipping facilities as Canada's trade and population continue to grow. Ports are an important inter-modal hub where a variety of transportation modes – trucks, trains and ships – converge. Capital investments will improve Canada's waterway capacity and usage, facilitate cross-border trade and help reduce congestion on road and rail networks.



Building Canada offers long-term funding for short-line and short-sea infrastructure designed to:

- Enhance Canada's economic competitiveness and productivity by improving the efficiency and integration of the country's transportation systems;
- Reduce bottlenecks and the growth of congestion;
- Minimize negative environmental impacts by making the best use of all available modes and existing infrastructure.

Regional and Local Airports

Many regional and local airports play a significant role in the communities they serve. They link smaller communities to larger national airports and to domestic and international markets. These airports deliver vital emergency services to small and remote communities.

Airports require significant infrastructure, which may be beyond the means of some communities to provide. *Building Canada* investments will be directed towards projects in communities that can:

- Improve the efficiency and accessibility of regional and local airports;
- Improve or maintain high levels of safety and security.

Connectivity and Broadband

Technology that connects rural and remote communities to other parts of the country is very important in a country as vast as Canada. And Canadians increasingly recognize that broadband is not simply a "nice to have" technology. It is a fundamental requirement for many smaller communities and the prosperity of Canada as a whole.

Smaller and remote centres need broadband technology to provide their citizens with improved access to government and health services, jobs, business opportunities, education and training. Having broadband access can also reduce the need to travel to larger urban centres, producing environmental benefits.



Broadband and connectivity in Nunavut

A lot of progress has been made in the expansion of broadband infrastructure, but significant gaps remain. Businesses are reluctant to bring broadband Internet services to communities with small populations and lower levels of income and business activity. Some 2,000 communities will still not have high-speed access by 2008 including, most notably, many aboriginal communities.¹⁴

Building Canada promotes investments in connectivity infrastructure designed to:

- Improve the delivery of public services, such as government services, education and health;
- Improve quality of life, social development, reduce travel requirements, and increase the potential for innovation and economic development by connecting Canadians – particularly in rural and remote communities.

Tourism

Tourism and business travel are important parts of Canada's economy. They create jobs and provide foreign exchange and revenues. Tourism contributed more than \$26 billion to the Canadian economy in 2005.¹⁵

The private sector plays a major role in tourism and meeting infrastructure as well as attractions across Canada. However, public sector investments can also play a role and *Building Canada* will focus on one such area: investments in convention centres and exhibition spaces. These facilities help strengthen the reputation of Canadian cities as world-class convention destinations, while contributing to Canada's brand and profile in the international community.

Building Canada encourages investments in infrastructure that can achieve significant economic and/or regional impact through the construction or improvement of convention centres or exhibition hall-type facilities.

¹⁴ Canadian Radio-television and Telecommunications Commission, *CRTC Telecommunications Monitoring Report: Status of Competition in Canadian Telecommunications Markets*, July 2007.

¹⁵ Canadian Tourism Commission, *Tourism Snapshot: 2005 Year Review*, Volume V, Issue I, 2005.

In Montreal, transit contributes almost \$1 billion in added value to the economy each year and enables Montreal households to save \$570 million annually.

Board of Trade of Metropolitan Montreal, Public Transit: A powerful economic development engine for the metropolitan Montreal region, December 2004

Building a Cleaner Environment

Building Canada will focus on infrastructure investments that contribute to cleaner air, water and land.

Wastewater

The quality of wastewater effluent can have a direct impact on human health. Yet, in too many cities and communities across Canada, treatment of wastewater is either insufficient or non-existent. Fifteen percent of inland communities undertake only primary level wastewater treatment.¹⁶ Advanced treatment facilities provide additional layers of protection with secondary and tertiary treatment.

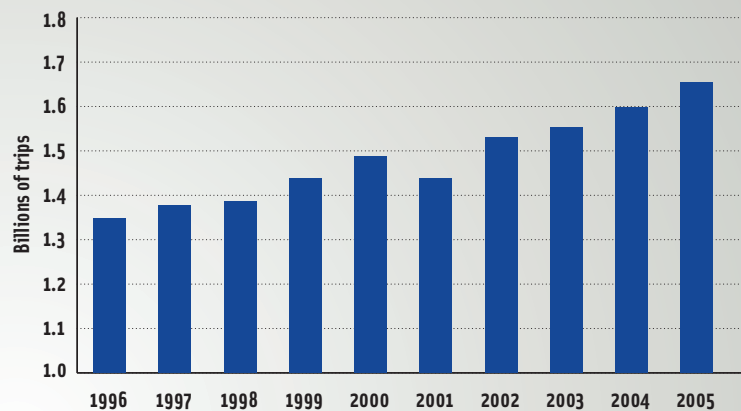
Although some communities have advanced wastewater treatment plants, many others are dumping untreated or poorly treated liquid waste into natural water systems. Coastal communities face the greatest challenges, with the majority having only primary treatment, and some, no treatment at all. And even when there is adequate wastewater treatment, stormwater can cause the sewer system to overflow, allowing raw sewage to spill directly into our rivers, lakes, and oceans. This is a situation that all levels of government must work hard to correct.

Building Canada will encourage investments in wastewater infrastructure designed to:

- Reduce the negative impacts of municipal wastewater effluent or storm-water effluent on human health and the environment;
- Improve the management of wastewater sludge;
- Improve the management and efficiency of municipal wastewater infrastructure or storm-water infrastructure;
- Improve the quality of treated municipal wastewater effluent and storm-water discharged into the environment.

¹⁶ Environment Canada, *Environmental Signals: National Indicator Series 2003*, 2003.

Transit ridership in Canada



Source: Canadian Urban Transit Association

"Federal investment in transit would support the growth and development of more compact cities and support more transit connections between cities and growth areas."

*Federation of Canadian Municipalities,
Towards a National Transit Strategy –
Issue Briefings, 2006*

Public Transit

Public transit is a key part of urban transportation infrastructure. Sound investments in public transit can improve mobility and help get people out of their cars, which reduces traffic congestion, greenhouse gas (GHG) emissions and air pollution. In addition to the environmental value, these investments benefit the economy and quality of life in cities. Well-planned public transit systems that are integrated into the urban form can provide a fast, effective and economical transportation option for city residents, as well as broader access to jobs, education, health care facilities and recreational facilities. And for many users, public transit is often the only affordable option.

As reported by the Canadian Urban Transit Association, transit ridership in Canadian cities reached an all time high in 2006, and has grown by 16 percent over the past five years.¹⁷ However, the modal share accounted for by transit has not increased at the same rate. *Building Canada* aims to support the increased use of transit, as well as increased transit modal share, and help Canada's cities and communities meet future public transit demand. Funding of these projects will complement other federal initiatives such as the transit pass tax deduction and the Public Transit Fund.

Building Canada will promote public transit infrastructure investments designed to:

- Improve mobility, reduce travel times and increase safety and efficiency;
- Expand public access and ridership;
- Reduce the growth of GHG and other emissions;
- Contribute to sustainable municipal development and land-use planning.

"Between 1990 and 2004, road vehicles contributed to 86 percent of the growth in emissions from transportation. In 2004, transportation also consumed nearly one third of all energy used in Canada. If the trend continues over the next 25 years, a 40 percent growth in fossil fuel consumption will be needed to support current patterns of transportation."

National Round Table on the Environment and the Economy, State of the Debate: The Road to Sustainable Transportation in Canada, 2007

¹⁷ Canadian Urban Transit Association, *Canadian Transit Ridership Breaks All-Time Record Again in 2006*, available at <http://www.cutaactu.on.ca/en/node/1539>



Green Energy

Canada relies heavily on fossil fuels for heat and electricity. Air quality is particularly affected by conventional fossil fuel burning technologies used in electricity generation and transportation. Coal fired generating stations, for example, are a significant source of air pollution and GHG emissions. Canada needs new, cleaner and more efficient energy infrastructure to meet its expanding demand.

Building Canada will stimulate investments in sustainable energy infrastructure that contribute to:

- Increased availability and/or security of Canada's clean energy supply;
- Increased availability of renewable energy;
- Improved air quality;
- Reduced GHG emissions.

Solid Waste Management

As the population grows and Canadians' standard of living improves, dealing with solid waste becomes a growing challenge. As Canadians consume more, they produce more solid waste for disposal. The amount of garbage Canadians produce, particularly in large cities, can generate conflict and disagreement over disposal locations, and solid waste in landfills, regardless of location, poses numerous environmental threats. Poorly managed landfills can contain high levels of toxic chemicals that may leak into surrounding environments. Landfills are also a source of methane gas – a greenhouse gas – and other types of air pollutants.

Wind turbines in Southern Alberta

Nanaimo – From sewage to electricity

With the help of the federal Gas Tax Fund, the Regional District of Nanaimo in British Columbia is upgrading its sewage treatment plants and adding a co-generation facility to convert biogas from sludge into electricity. By turning sewage waste into electrical energy, the region will generate energy equivalent to the amount used by 250 homes.

The Province, "Nanaimo to create electricity with sewage," July 17, 2007, page A18

Effective infrastructure solutions can help reduce the quantity of waste going to landfills as well as its potential harm to the environment. This includes innovative processes that can transform waste into useful products, including energy.

Building Canada will promote investments in solid-waste processing infrastructure that can reduce the environmental impacts resulting from municipal solid waste management.

Building Better Communities

Building Canada will promote strong, sustainable, competitive and livable Canadian communities through investments in critical infrastructure.

Drinking Water

Canada has more than one-quarter of the world's freshwater reserves, but even in a country as "water-rich" as Canada, there are challenges associated with the quality and supply of water. Many urban centres and rural areas need more and better water treatment systems so they can provide safe drinking water to their citizens. Rapidly growing cities face increasing pressure on their potable water sources, and many rural and remote areas that rely on wells have water quality problems.

Water conservation is also a problem, as many areas in Canada now experience seasonal water shortages. Still, Canadians pay some of the lowest water rates in the world and are amongst the highest water users. Investments in water infrastructure, supported by improved metering and effective pricing, will help reduce water consumption and protect fresh water supplies.

Building Canada promotes long-term funding for water infrastructure projects designed to:

- Improve the safety, management, reliability and efficiency of Canada's drinking water treatment and distribution systems;
- Increase the number of households with access to safe drinking water that meets or exceeds the *Guidelines for Canadian Drinking Water Quality*;
- Improve protection and management of drinking water sources;
- Improve conservation of water.



Water treatment plant

In August 2005, the Greater Toronto Area was hit with the most expensive natural catastrophe in Ontario history, the second most costly ever for the country. Heavy rains breaching the 100-year-event level washed away infrastructure, flooded basements, and damaged cars with falling trees and rising flood waters. Also two tornadoes set down in the Salem/Fergus, Ontario area, damaging several properties. All in all, the event caused more than \$500 million in insured losses.

Disaster Management, Vol. 1, Issue 2, summer 2007

Disaster Mitigation

One-third of Canadians live in areas likely to experience natural disasters, ranging from floods and earthquakes, to hail and landslides.¹⁸ And these can have an immediate and widespread impact on transportation systems, electricity and telecommunications networks, water treatment systems and critical public facilities such as hospitals.

Climate change is expected to increase the frequency and magnitude of many of these natural disasters, and this will inevitably affect Canada's infrastructure. It could also necessitate the need to design, build and maintain our infrastructure differently to adapt to future changes. The country has already experienced a rise in mean temperature, heavier rainfalls and more severe winter storms. And these changes are all projected to accelerate over time. Canada needs to protect its critical infrastructure assets from adverse climate change and ensure communities continue to provide vital services when natural disasters occur.

Building Canada investments will be directed towards projects that will reduce the vulnerability of a community or public infrastructure to the negative impacts of extreme natural events, including adverse events related to climate change.

Canada needs to protect its critical infrastructure assets from adverse climate change and ensure communities continue to provide vital services when natural disasters occur.

Brownfield Redevelopment

The redevelopment of brownfields—abandoned, or underutilized commercial or industrial sites—offers many potential community benefits, including affordable housing and new sources of economic activity. Redevelopment of these sites into higher-density, livable spaces can also provide an alternative to urban sprawl.

There are, however, barriers to brownfield redevelopment. One key challenge is that it is difficult for would-be developers to gain access to capital in the early stages due to environmental liability risks. Public investments in brownfields can help address such barriers.

“Left idle and unmanaged, brownfields represent a significant loss of economic opportunity. They adversely impact a neighbourhood's image and quality of life, and in some cases pose risks to human health and the environment. Brownfields also represent an untapped opportunity to revitalize older neighbourhoods and generate wealth for communities.”

National Roundtable on the Environment and the Economy, Cleaning Up the Past, Building the Future: A National Brownfield Redevelopment Strategy for Canada, February 2003

¹⁸ Public Safety Canada, *Keeping Canadians Safe*, available at <http://ps-sp.gc.ca/prg/em/ndms/aboutsnac-en.asp>

Dockside Green (Victoria B.C.) – From brownfield to a green community

The Dockside Green project has already won numerous awards in the fields of architecture, brownfield redevelopment and urban design. The project, which includes federal financial support through the Federation of Canadian Municipalities' Green Municipal Fund, will reclaim and redevelop a 12-acre former industrial waterfront property on land previously owned by the City of Victoria, situated in the heart of the city. Development will include light industrial, commercial (office and retail) and residential spaces, to be built between 2006 and 2014. Beyond mixed land uses, the project seeks to achieve social diversity (including social housing and housing for seniors) and to build an ecological community – one that uses biomass energy co-generation and which is greenhouse gas neutral. In fact, developers have a goal to create "North America's greenest community".

Building Canada investments will be directed towards projects designed to contribute to:

- The removal or neutralization of the negative effects of brownfields on communities and the environment by remediating and redeveloping these properties in a sustainable manner;
- More intense land use within cities and communities.

Roads and Bridges

Many municipal roads and bridges are in need of repair and, left unattended, this could compromise safety and efficiency. Older bridges, in particular, raise serious safety concerns and require prompt attention. Additionally, where municipal roads and regional highways are poorly designed, traffic congestion and longer travel times are likely.

Building Canada will support investments in road and bridge infrastructure projects that:

- Improve transportation safety and efficiency;
- Improve mobility through removal of bottlenecks and reduced congestion;
- Minimize environmental impacts.



British Columbia Ministry of Transportation

Kicking Horse Canyon Project, B.C

Sports and Culture

Many of Canada's sports facilities were built decades ago and are in need of repair or replacement. As populations grow, key regional communities face a shortage of sports venues. New or improved sports infrastructure will enhance access and promote sport and physical activity. Moreover, Canada can further promote healthy lifestyles by developing policies that encourage active modes of transportation and healthy community and infrastructure design.

Culture creates dynamic cities and communities and helps promote and sustain Canada's rich multicultural heritage. Cultural infrastructure, such as museums, theatres and art galleries, provides the venues for citizen engagement and participation in artistic and cultural activities that help define a community. Cultural industries also generate economic activity and attract skilled workers and tourists to a community. In 2004, the cultural sector was estimated to comprise 3.1 percent of the total labour force in Canada.¹⁹ Moreover, the contribution of cultural industries to provincial GDPs and employment is significant in Ontario and Quebec, and it is growing rapidly in British Columbia and Alberta.²⁰

Building Canada offers support for sports and culture infrastructure projects providing significant regional or economic benefit that can:

- Provide increased opportunities for sport activities that can improve the health of Canadians and strengthen Canadian communities;
- Provide increased opportunities for the development of Canadian athletes and/or the hosting of major amateur athletic events;
- Support arts and/or heritage facilities;
- Help communities express, preserve, develop and promote their culture and/or heritage within Canada.



*Canadian Opera Company –
Four Seasons Centre, Ontario.*

¹⁹ Culture Human Resources Council, *Canada's Cultural Sector Labour Force*, 2004.

²⁰ Statistics Canada, *Economic Contribution of the Culture Sector in Canada : A Provincial Perspective*, December 2004.

Building Canada: A New Approach

The tools of the *Building Canada* plan include a number of flexible initiatives and targeted programs that balance regional needs with national priorities. Sustained base funding will allow governments to plan for the longer-term and provide flexibility, while distributed program and nationally-targeted funding balance national, regional and local infrastructure priorities.

Base Funding for Municipalities

\$33B Building Canada Plan 2007-2014

Municipal GST Rebate	\$5.8B
Gas Tax Fund	\$11.8B
Building Canada Fund	\$8.8B
Public-Private Partnerships Fund	\$1.25B
Gateways and Border Crossings Fund	\$2.1B
Asia-Pacific Gateway and Corridor Initiative	\$1.0B
Provincial-Territorial Base Funding	\$2.275B
Total	\$33.0B

Over half of the funding under the *Building Canada* plan will be provided as base funding for municipalities. In total, over \$17.6 billion will be provided over seven years through the Gas Tax Fund (GTF) and the Goods and Services Tax (GST) Rebate. This funding is stable, predictable and flexible. It allows Canadian municipalities to plan for the longer-term, using a dedicated source of funds to address their ongoing infrastructure needs.

Gas Tax Fund

Budget 2007 extended the *Gas Tax Fund* (GTF) from 2010 to 2014 at \$2 billion per year. As a result, over the next seven years, municipalities will receive \$11.8 billion through this mechanism. Municipalities can pool, bank and borrow against this funding, providing significant additional financial flexibility.

The GTF supports environmentally sustainable municipal infrastructure that contributes to cleaner air, cleaner water and reduced GHG emissions. Eligible categories of investment include public transit, water and wastewater infrastructure, community energy systems, the management of solid waste, and local roads and bridges that enhance sustainability outcomes. The GTF also provides funding to increase the capacity of communities to undertake long-term planning. Funding for planning capacity is complemented by a requirement for communities to develop *Integrated Community Sustainability Plans*, which are long-term plans aimed at improving sustainability outcomes in Canada's communities. To ensure accountability to Canadians, communities report on their use of the funds on an annual basis.



Goods and Services Tax Rebate

The GTF is complemented by the GST Rebate, which is a 100 percent rebate of the GST paid by municipalities. Over the next seven years, the maintenance of the increase in this rebate from 57 percent to 100 percent is expected to provide communities with over \$5.8 billion in additional flexible funding to address their highest priorities, from new infrastructure assets to the maintenance and operation of existing public infrastructure and facilities. Municipalities are accountable directly to their municipal taxpayers in respect of this funding and separate reporting is not required by the Government of Canada.

Base Funding for Provinces and Territories

Building Canada also provides \$25 million annually to each province and territory over seven years, for a total of \$175 million for each jurisdiction. This represents an expenditure of \$2.275 billion over the full period. This Provincial-Territorial Base Funding will support all of the categories noted below under the *Building Canada Fund* (BCF), as well as non-core National Highway System infrastructure and the safety-related rehabilitation of infrastructure in all BCF-eligible categories. Federal funding will be cost-shared with provinces and territories to maximize investment by all orders of government, but, similar to the GTF, federal funding will be provided up-front and on a regular basis, and does not have to be utilized in the year in which it was provided. This ensures additional financial flexibility to provinces and territories as part of *Building Canada*. All provinces and territories will benefit from this investment in modern public infrastructure, but most especially smaller jurisdictions, which generally have lower population densities.

Balancing Needs and Priorities

The *Building Canada* plan also includes three new national infrastructure programs. The *Gateways and Border Crossings Fund* and the *Public-Private Partnerships Fund* (P3 Fund) are targeted investment programs, focused on addressing specific national priorities. The third new program, the *Building Canada Fund*, is the new flagship infrastructure program of the Government of Canada. It complements the other funding programs by providing a balanced response to addressing local and regional infrastructure needs, while always advancing national priorities that are important to all Canadians.

Gateways and Border Crossings Fund

The *National Policy Framework for Strategic Gateways and Trade Corridors* will guide the development of a limited number of new gateway and corridor strategies and will help determine the projects to be funded by the *Gateways and Border Crossings Fund*. This \$2.1 billion fund will focus on strategic trade corridors linking to international gateways. Eligible projects will include core National Highway System (NHS) facilities impacted by increased trade flows, inter-modal connectors and facilities, international bridges and tunnels, rail/road grade separations, short-line rail, short-sea shipping and intelligent transportation systems. At least \$400 million from this fund will be devoted to the construction of an access road for the new Windsor-Detroit crossing – the busiest border point for Canada-United States trade – and one of the most significant commercial trade corridors in the world. Projects will be assessed on the basis of merit. Federal funding will be cost-shared to generate additional investment in this critical infrastructure.

The activities under the *Gateways and Borders Crossing Fund* build on the *Asia-Pacific Gateway and Corridor Initiative*, which was significantly enriched through the *Building Canada* plan. Investments from this \$1 billion initiative are already producing results on policy, governance and operational issues, including strategic infrastructure projects to enhance marine, rail and road connections, and system capacity.

Public-Private Partnerships

Private capital and expertise can make a significant contribution to building infrastructure projects faster and at a lower cost to taxpayers. The private sector is also often better placed to assume many of the risks associated with the construction, financing, and operation of infrastructure projects. As a result, the use of public-private partnerships (P3s) around the world has been expanding rapidly, with many countries taking practical steps toward the development of programs aimed at fostering stronger P3 markets. While Canada has made some progress in the use of P3s with the development of some high profile projects (including the Confederation Bridge linking Prince Edward Island and New Brunswick, and the Canada Line transit project in British Columbia), when measured against comparable western jurisdictions such as the United Kingdom or Australia, Canada generally lags behind in the use of P3s. In fact, Canadian pension funds are often investing in public infrastructure projects in other countries as a result of a lack of P3 opportunities to be found within Canada.

The Government of Canada will take a leadership role in developing P3 opportunities within Canada through two initiatives. The first is the \$1.25 billion *Public Private Partnerships Fund*. This program will support innovative projects that provide an alternative

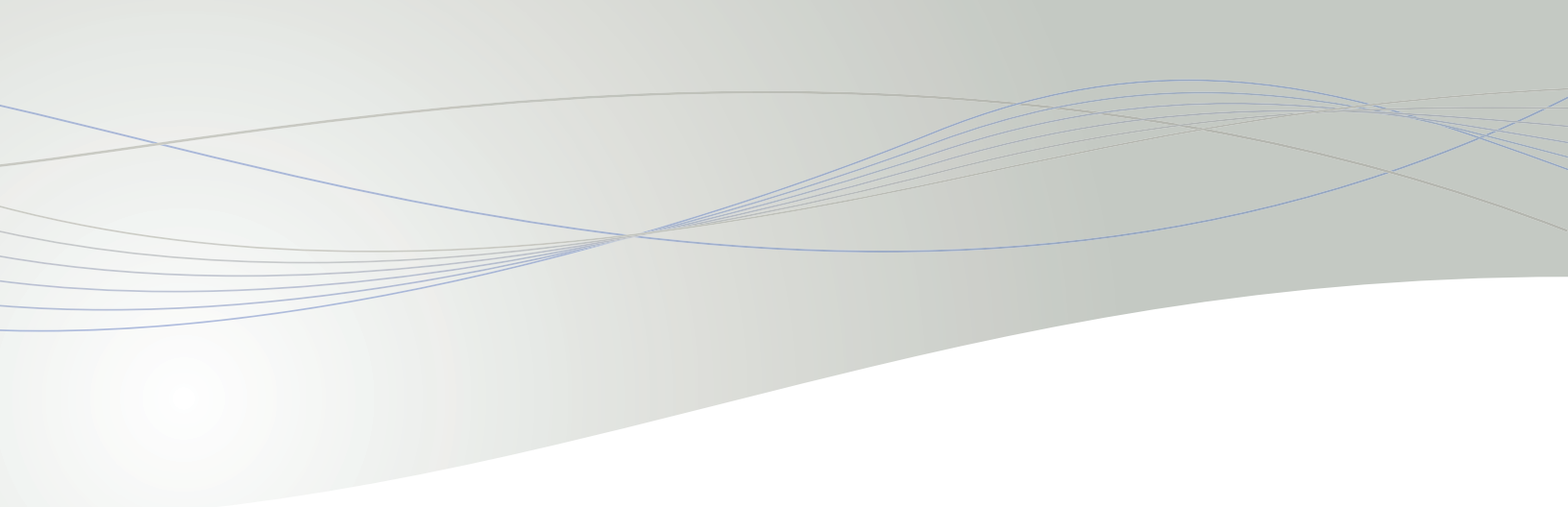
to traditional government infrastructure procurement. The *P3 Fund* will help expand infrastructure financing alternatives in Canada, provide incentives to attract investments from the private sector, and increase knowledge and expertise in alternative financing.

In addition, the Government of Canada is committing \$25 million over five years to establish a federal P3 Office. The P3 Office will facilitate a broader use of P3s in Canadian infrastructure projects, including through the identification of P3 opportunities at the federal level. The *Building Canada* plan also encourages the development and use of P3 best practices by requiring that P3s be given consideration in larger infrastructure projects funded through the *Gateways and Border Crossings Fund* and by the *Building Canada Fund*. Specifically, all projects seeking \$50 million or more in federal contributions will be required to assess and consider the viability of a P3 option.

Building Canada Fund

The Building Canada Fund (BCF) will total \$8.8 billion over seven years. The BCF will focus on projects that deliver economic, environmental and social benefits to all Canadians. The priority funding categories for the fund will be Core National Highway System (NHS) Routes, Drinking Water, Wastewater, Public Transit and Green Energy. Other eligible investment priority areas include environmental projects (Solid Waste Management), projects that support economic growth and development (Short-line Rail and Short-sea Shipping, Connectivity and Broadband, Tourism, and Regional and Local Airports), as well as projects that contribute to the ongoing development of safe and strong communities (Disaster Mitigation, Culture, Sport, Local Roads and Bridges, and Brownfield Redevelopment). Funding will be used to support public infrastructure owned by provincial, territorial and municipal governments and entities, as well as private industry, in certain cases.

Funding will be allocated for projects in the various provinces and territories based on their population (as of the 2006 Census). The program will operate through two components: the Major Infrastructure Component (MIC) and the Communities Component. All projects will be cost shared, with the maximum federal contribution to any single project being 50 percent. However, generally speaking, municipal infrastructure projects will be cost-shared on a one-third basis. For projects where the asset is owned by a private entity, the maximum federal contribution will be 25 percent.



The MIC will target larger, strategic projects of national and regional significance. Under the MIC, two-thirds of funding, on a national basis, will be directed to the above-mentioned National Priorities. Projects under the MIC will be selected on the basis of merit through a federal-provincial/territorial negotiation process and all projects will be required to meet criteria targeting environmental, economic and quality of life objectives – regardless of the category. Innovative technologies and partnerships will also be emphasized.

The Communities Component is focused on projects in communities with populations of fewer than 100,000. Projects will be selected through an application-based process and, like projects under the MIC, will be evaluated on the extent to which they meet environmental, economic and quality of life objectives. This will significantly help smaller communities address their infrastructure pressures and serve as a complementary instrument to GTF funding.

A New Approach

The *Building Canada* plan is about more than just funding. Through *Building Canada*, the Government of Canada will work with its partners to promote knowledge, research, best practices, long-term planning and capacity building. Capital infrastructure funding will therefore be complemented by support for research, planning and capacity building. Up to 1 percent of funding under the Major Infrastructure Component and the Communities Component of the *Building Canada Fund* in each jurisdiction can be used for cost-shared projects in these areas. In addition, a separate \$45 million program to support research, planning and feasibility studies will be implemented at the national level. These investments will help support provinces, territories, communities and the Government of Canada, to increase the knowledge base available to support policy development and decision making. Better knowledge will help us reduce the cost of future infrastructure capital investments across Canada, and this is often one of the most cost effective ways of dealing with future infrastructure challenges.



In addition, the *Building Canada* plan will also create a new framework for different orders of government to come together to assess infrastructure needs and priorities on a regular basis and to plan investments to meet these needs. Through Framework Agreements signed with each province and territory, the Government of Canada will work in partnership to address infrastructure issues in a consistent and coherent manner, which takes into account long-term planning. As a result, not only will we address our immediate needs, but we will also ensure that we are looking towards our long-term priorities and objectives in a coherent and systematic way.

Stronger, Safer, Better

Building Canada is an historic and unprecedented Government of Canada initiative, an ambitious but essential plan that harnesses the power of infrastructure to advance the nation's most important goals. *Building Canada* will strengthen the country's physical, economic and social backbone. It will deliver real and tangible results for Canadians. It will help Canadian businesses sell their products around the world. It will help cut travel times within and between communities. It will provide Canadians with cleaner and safer drinking water and a healthier environment. And it will help revitalize communities, large and small. It is 21st century nation-building.

For the first time in modern history, the Government of Canada has produced a comprehensive plan for infrastructure in order to work in partnership with Canada's provinces, territories and municipalities. For the first time in modern history, the Government of Canada has articulated a concrete vision to guide infrastructure investments within a coherent strategic framework. For the first time in modern history, the Government of Canada will use a comprehensive suite of policy, program and base funding instruments to work in concert towards a common infrastructure goal. For the first time in modern history, the Government of Canada will systematically utilize infrastructure spending to build a stronger, safer and better Canada.

For more information on *Building Canada*, please visit: www.buildingcanada.gc.ca.

Building a Better Canada

Growing Economy

- Gateways and Borders
- Core National Highway System
- Short-line Rail/Short-sea Shipping
- Connectivity and Broadband
- Tourism
- Regional/Local Airports

Clean Environment

- Wastewater Treatment
- Public Transit
- Green Energy
- Solid Waste Management



Stronger Communities

- Clean Drinking Water
- Disaster Mitigation
- Brownfield Redevelopment
- Culture and Sports
- Feeder and Remote National Highways
- Local Roads and Bridges