



VISION for the **FUTURE**
of the
GREATER VANCOUVER GATEWAY

Transportation for Liveable Communities in a Global Economy



Vision for the Future of the Greater Vancouver Gateway

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Transportation for Sustainable Communities in a Global Economy

**Vision for the Future
of the
Greater Vancouver Gateway**



Globally competitive and able to accommodate projected growth in trade and travel between North America and the Asia Pacific economies, the Greater Vancouver Gateway will be recognised for its positive contributions to the Region's reputation as one of the most liveable places in the world.

Built on three pillars of sustainability, economic, environmental and social, the Gateway will operate in a manner reflective of community needs, and generate employment for upwards of 250,000 people in the Region and across Canada.

Greater Vancouver Gateway Council

Introduction



As world trade expands, Canada's future prosperity will be increasingly affected by how efficiently cargo and people can move through the Greater Vancouver Gateway.

Greater Vancouver is by history and geography a Gateway - linking Canada and the Asia Pacific economies. Tens of thousands of people make the Gateway work. As the companies they work for buy services, and as Gateway employees spend wages in their communities, more jobs are generated for a total employment impact of 139,000 jobs representing over 13% of the total employment in this region.

In fact Gateway business has become the mainspring of the regional economy. Today the Gateway moves 115 million tones of cargo and 16.9 million air passengers and is Canada's Gateway to the Asia Pacific, the fastest growing economies in the world. The Region's success is evidenced by significant population growth, by 2030 over three million people will call Greater Vancouver home. Population growth and the expansion of international trade and travel are increasing pressure on the Region's road, transit, marine and rail networks. There are more cars, buses and trucks on the roads, and more trains on the railways today than ever before.

Yet land available to accommodate growth is constrained by the Pacific Ocean to the West, mountains to the North and East, and the Canada / US border to the South. This has caused real estate costs for housing, businesses, industries and expanding Gateway operations to rise dramatically over the last decade, driving more and more people to live further and further away from their workplaces. This forces more travel on the roads between municipalities, which in turn slows the movement of goods and passengers on which the Region's economy depends. Traffic congestion is the number one local issue.

Overlaying these realities is the imperative to address the issue of climate change and cut greenhouse gas emissions. Forty percent of all greenhouse gas emissions in British Columbia come from transportation, and fully two thirds of the Province's transportation emissions are generated by road transportation.

Looking ahead to 2030, the Gateway Council envisions cargo and passenger volumes doubling. This would provide tremendous economic opportunities for the Region. Total Gateway employment could reach 250,000 under this scenario.

The main challenges facing the Region are therefore how to handle projected growth and realize the Region's gateway potential (on which the Region's economy depends) in the context of an expanding population, increasing real estate prices, and increasing demands for urban transportation, while at the same time making deep cuts to emissions.

The Gateway Council believes that there is no single solution to these complex challenges. Rather a portfolio of approaches will be needed to accomplish a variety of objectives.

Introduction continued....

These objectives include reducing the growth of vehicular traffic, improving the efficiency of individual vehicles, shifting to greener / cleaner fuels, greater use of lower energy modes for local transportation (e.g. rail and waterborne transportation) and improving the efficiency of the road system itself.

No one set of stakeholders can do it alone. The Gateway Council has therefore undertaken to define this Vision for the Future of the Gateway as the transportation industry's contribution to the broader question of how a truly sustainable Gateway Region can be realized.

Central to our vision is a Major Commercial Transportation System (MCTS) to accommodate future growth in goods, services and international passenger movements. It comprises a designated road network, increased road and rail system capacity, short sea shipping and transit system expansion (the road system component is clearly defined in the Province's Pacific Gateway Strategy). The Government of Canada, Province of British Columbia, TransLink and the membership of the Greater Vancouver Gateway Council are agreed on the need for a comprehensive program of investments in transit, road, marine and rail infrastructure. These would balance the needs of Greater Vancouver as a liveable region with its responsibilities as the primary international Gateway for Canada's Pacific trade.

Four conditions must be met to realize the Gateway Council's Vision:

- **GATEWAY TRANSPORTATION INVESTMENTS...**
Massive investments are needed in both transportation infrastructure and public transit to ensure the Gateway can handle projected expansion in transportation demands for local and international movements of passengers, goods and services.
- **ROOM TO GROW...**
To handle growth in Pacific trade and travel and the high-wage permanent jobs that would be generated, requires sufficient available industrial lands to be set aside for Gateway developments, and that residential and commercial developments be concentrated along major transportation corridors.
- **SUFFICIENT SKILLED LABOUR...**
Rapid gateway growth is occurring at a time of high economic activity in Western Canada. Ways and means must be found to ensure adequate numbers of skilled employees over the coming decades.
- **POLICY, TAXATION AND REGULATORY FRAMEWORK...**
Changes in a range of policy, taxation and regulatory approaches are needed to allow the Gateway to compete effectively in the global marketplace and make the necessary investments in new technologies to ensure a sustainable future.

As the Region's gateway business expands, high-value logistics services like trade financing, insurance, logistics management and marketing, will locate here, as will new, knowledge based industries that rely on efficient international connections to compete effectively. Success will mean a sustainable, prosperous future for this Region playing its full role as Canada's Gateway to the Pacific. The way ahead will be through partnerships of governments and gateway industries working together.

Greater Vancouver's Gateway Role



Greater Vancouver's vibrant, cosmopolitan nature is based on its role as Canada's Gateway to the Pacific. Embracing that role is essential for the future prosperity of Canada and the Region.

As residents and visitors move around our Region, they are reminded continually of Greater Vancouver's gateway role. Air and cruise ship travelers from distant countries gazing at the natural beauty of our mountains and waterways, ships from around the world in our harbours, barges carrying construction materials, the hustle and bustle of rail operations at dockside and a continual stream of trucks, buses, skytrains and taxicabs. In many ways the Gateway defines Greater Vancouver's character as vibrant, cosmopolitan and prosperous.

The Gateway is also the largest industry cluster in the Region, generating 75,000 jobs directly and contributing \$1.9 billion in taxes to three levels of government. As Gateway industries buy goods and services and their employees spend wages in our communities another 64,000 jobs are generated. In total the Gateway supports one in every eight jobs in the Region (13% of the workforce).

A Bright Future

115 million tonnes of cargo and 16.9 million air passengers move through the Gateway. Cargo and passenger volumes, and the jobs and taxes they generate, are projected to double by 2030. As the Region's gateway business expands, high-value logistics services like trade financing, insurance, logistics management and marketing, will locate here, as will new, knowledge based industries that rely on efficient international connections to compete effectively.

These are exciting times for the Region. Yet there are significant challenges ahead.

CONGESTION

Population growth and expansion of international trade and travel are increasing pressure on the region's road, transit, marine and rail networks - slowing the movement of people and impeding trade. Traffic is increasing. There are more cars, buses and trucks on the roads and more trains on the railways. The cost of congestion for the region's economy is estimated at \$1.3 billion annually.

INDUSTRIAL LANDS

Competition for available industrial lands is also increasing because of a constrained land base and rising property values. Gateway operations require room to expand and accommodate projected growth. However, if current trends continue all industrial lands in the Region will be used by 2020.

INFRASTRUCTURE INVESTMENT

Although we know that we cannot build our way out of grid-lock, nevertheless there has been no significant infrastructure improvement since the 1980's. Meanwhile, the Region's population has expanded by 750,000 and is forecast to grow by another one million by 2030.

Partnerships - the Way Ahead

The transportation industry cannot do it alone. The way ahead will be through partnerships of governments and gateway industries working together to build needed infrastructure and ensure adequate, affordable industrial land is available for Gateway growth.

Success will mean a sustainable, prosperous future for this Region playing its full role as Canada's Gateway to the Pacific.

Asia Pacific Trade and Travel



Steady growth in the Asia Pacific economies is increasing Greater Vancouver's strategic importance to Canada's international trade. Handling growth, while enhancing liveability in the Region is a primary challenge for the Gateway.

The Greater Vancouver Gateway is Canada's main strategic link to the Asia Pacific economies. In 2004, some \$30 billion of Canada's total two way trade with the Asia Pacific economies moved through the Gateway's seaports.

International travel through Vancouver International Airport to and from the Asia Pacific economies is projected to increase by 4 to 5% a year on average into the foreseeable future.

The importance of the Gateway to Canada's international trade and travel will increase as the Asia Pacific economies expand their shares of world trade. In 2004, the value of Canada's trade with the world was \$735 billion, and although the United States dominates, trade with the Asia Pacific region is expanding rapidly. If present trends continue, that region would account for more than 20% of Canada's total by 2030.

This shift in world trade is underlined by developments in China¹. It is the world's largest recipient of foreign investment (\$53 billion in 2003); 400 of the global top 500 companies have investments in China. It has become the world's third largest exporter after Japan and the world's second largest importer of oil. It has the world's largest foreign currency reserves and, by purchasing power parity, China's economy is surpassed only by the U.S.



1 - Average annual growth 2001 to 2005
2 - Mexico and other Latin American countries

The Challenge Ahead

Greater Vancouver, the nation's third largest urban centre, is Canada's trade and tourism gateway to the Asia Pacific economies. It is renowned as one of Canada's most liveable places and is home to over half of British Columbia's workforce. The region is projected to grow to more than three million people by 2030 because of its geographic position, economic potential and its desirability as a place to live, work and visit.

Expanding the Gateway's capacity to handle Canada's expanding trade and travel with the Asia Pacific, while maintaining and enhancing the liveability of the region, is a primary challenge facing the Greater Vancouver Gateway.

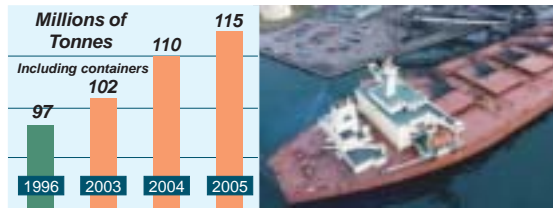
The System Today



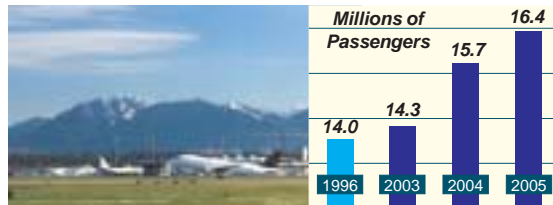
Increasing international trade and travel has expanded all sectors of the Gateway's business over the last decade. In 2005, 115 million tonnes of cargo and 16 million air passengers moved through the Gateway generating 13% of Greater Vancouver's total employment.

The Greater Vancouver Gateway is defined by people, infrastructure and services that move international cargo and passengers to their destinations.

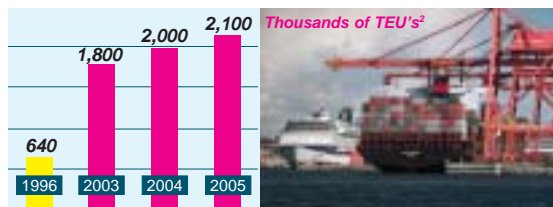
Millions of Tonnes of Cargo through the Gateway Seaports



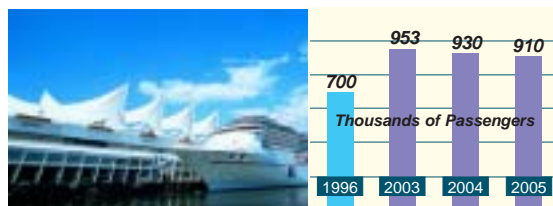
Millions of Air Passengers through Vancouver International Airport



Gateway Container Volumes



Cruiseship Passengers



People and Services

Tens of thousands of people make the Gateway work. As the companies they work for buy services, indirect jobs are generated, and, as Gateway employees spend wages in their communities, 17,200 additional jobs are induced for a total employment impact of 139,000 jobs. By way of comparison, total Greater Vancouver employment was 1,076,000 in 2002.

Gateway Maritime Industry

Employment¹: 33,500 Direct, 23,100 Indirect

- Ships Captains
- Pilots
- Ships Crew
- Terminal Operators - Stevedores
- Pipeline Companies' Staff
- Longshore and Warehouse
- Grain Handlers
- Waterfront Foremen
- Maritime Employers
- Port Authorities
- Safety and Security Staff
- Ships Chandlers
- Tug and Barge Operators
- Shipyards and Maintenance Staff
- Harbour Maintenance and Dredger Operators
- Shipping Agents
- Grain Clearance Staff
- Customs Brokers
- Freight Forwarders
- Ship Inspectors
- Coast Guard Staff
- Customs Agents
- Caterers and Cruise Ship Suppliers

1 - Employment figures based on Gateway Council 2003 MCTS Economic Impact report

2 - TEU = Twenty Foot Equivalent Unit

The System Today



Direct Gateway employment exceeds BC's wholesale sector and is comparable to the forest industries (forestry and forest products). Gateway jobs are good jobs, with wages 37% higher than the BC average.

Gateway Air Industry

Employment: 23,400 Direct , 12,800 Indirect

- Pilots
- Air Crew
- Ground Crew
- Caterers
- Baggage Handlers
- Cleaners and Groomers
- Air Traffic Controllers
- Airport Authority Staff
- Airport Terminal Operators
- Aircraft Maintenance Personnel
- Bowser Drivers and Refuelers
- Safety and Security Staff
- Customs Brokers
- Freight Forwarders
- Customs Agents
- Taxis and Limos
- Airport Restaurant and Retail

Gateway Trucking Industry

Employment: 14,200 Direct, 7,700 Indirect

- Truck Drivers
- Dispatchers
- Vehicle Mechanics and Maintenance Staff
- Customs Brokers
- Freight Forwarders
- Equipment and Parts Suppliers

Gateway Rail Industry

Employment: 4,000 Direct, 3,400 Indirect

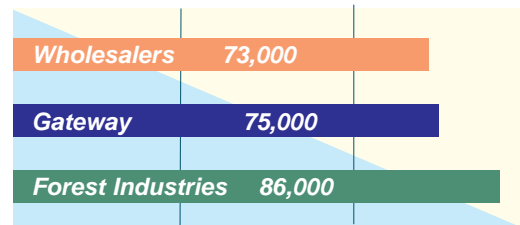
- Locomotive Engineers
- Railyard Maintenance
- Marshalling and Switching Staff
- Engineering and Support Staff
- Intermodal Haulage Operations Employees

Jobs, Payroll & Taxes

Over 75,000 direct jobs were generated by the Gateway in 2002¹:

Maritime Transport	=	33,500
Air Transport	=	23,400
Truck Transport	=	14,200
Rail Transport	=	4,000
Total Direct Jobs	=	75,100

Gateway Employment exceeds² BC's wholesale sector and is comparable to total forestry industry employment.



The Gateway payroll = \$3.6 billion.

Average wages from Gateway employment are 37% higher than the BC average. In the export cargo sector of the Gateway's business wages are 64% higher.

Taxes Paid = \$1.9 billion

42% of the Gateway's Gross Domestic Product accrues to governments in tax revenues either directly or indirectly. Gateway enterprises are some of the more significant tax payers in their communities. The Airport, for example, paid \$680 million of taxes in 2005 to three levels of government.

1 - Employment figures based on Gateway Council 2003 MCTS Economic Impact report
 2 - StatsCan and BC Stats data

The System Today



Increasing Gateway trade and travel is generating employment and the population is growing. The Gateway transportation system must accommodate these pressures to remain competitive.

Tourism and Travel

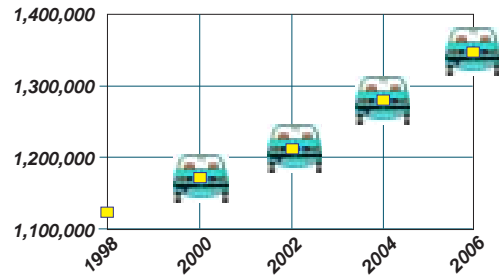
The Gateway transportation system is essential to tourism and business travel. 16.9 million air passengers and nearly one million cruise ship passengers rely on the Gateway for access to their chosen destinations. Greater Vancouver is itself a tourism and travel destination. Over 2.6 million people from the U.S. and countries in the Asia Pacific and Europe visit the region each year. Whether they were traveling to and from the airport to the downtown hotels, the Burrard Inlet cruise ship terminals or destinations outside Vancouver, the Gateway was their point of entry. And as Vancouver/Whistler gear up for, and host, the 2010 Winter Games, hundreds of thousands of additional travelers will use the Gateway transportation system, generating between \$2.0 and \$4.2 billion incremental GDP¹.

Congestion

The Region's success both as a Gateway to the Pacific and as a tourism destination creates jobs and attracts new residents. By 2030 the population of Greater Vancouver is projected to exceed three million with an attendant demand for new residential and commercial construction in a constrained land base.

The population is growing and so too are the numbers of vehicles on the road, which increases the transit time for international cargo and passengers traveling in and through the Gateway. Concentration of residential and commercial development along transportation corridors together with expanded public transit could alleviate this situation.

Numbers of Vehicles Registered in Greater Vancouver

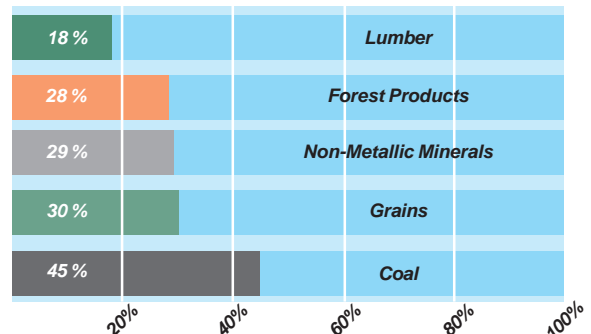


Numbers of vehicles on the Region's roads are increasing by ~ 28,000 per year. If nothing is done, this will further increase congestion for Gateway traffic and local businesses.

Trade Competitiveness

The Gateway handles approximately \$16 billion of Canada's exports², the largest segment of which is sixty million tonnes of Western Canada's bulk commodities. Transportation accounts for between 18% and 45% of the total cost of these export commodities in world markets. Exports currently account for one third of Canada's GDP, and as Canada's and British Columbia's international trade expands, the Gateway's importance as a facilitator of international trade will grow.

Transportation Costs as a Percentage of Key Export Commodities



1 - The Economic Impact of the 2010 Winter Olympic and Paralympic Games - 2002
 2 - Pacific Gateway Strategy Action Plan - 2006

Seaports and Airport Growth



Investments of \$3.1 to 4.6 billion at the seaports and airport will handle increased Gateway trade and travel¹

Bulk cargo - 27% increase over 2005 to 2020

Containers - 200% increase to 2020

Air Passengers - 120% increase to 2027

Air Cargo - 260% increase to 2027

Deep-sea terminals in the Burrard Inlet, on the Fraser River and at Roberts Bank, and passenger and cargo terminals at the Vancouver International Airport handle transfers of cargo and passengers to and from ships and airplanes and the Gateway road, rail and transit systems. Massive investments are underway at the terminals to handle expanding trade and travel.

Commodities

Twenty three bulk and break bulk terminals moved 65 million tonnes of commodities in 2005 and have the capacity² to handle 87 million tonnes. By 2030³ volumes are expected to grow to between 76 and 84 million tonnes. \$430 million to \$1 billion⁴ of capital improvements are planned to 2020 to enhance competitiveness of the seaport terminals. The vast majority of bulk and break bulk is carried by rail to and from the seaports.

Containers

Four major container terminals handled 2.1 million TEU's of containers in 2005 (17 million tonnes). \$1.3 to \$2.2 billion of capital investment is expected to increase capacity sufficient to handle 7 to 10 million TEU's by 2030³. Some 65% of containers move by rail. 35% moves by truck, mostly to destinations within the Gateway region where they are re-distributed by road or rail to other destinations.

Bulk commodities include;

coal, grains, potash, sulphur and petroleum.

Break bulk commodities include;

forest products, steel, automobiles and machinery.

Air Passengers

Vancouver International Airport terminals moved 16.9 million travelers to their destinations in 2006. By 2030³ that figure is expected to increase to 36 million. A five year, \$1.4 billion capital program is underway to build the necessary capacity. This includes the Airport's portion of the Canada Line rapid transit project connecting the Airport to downtown Vancouver and to the cruise ship terminals.

Cruise Passengers

Nearly one million cruise passengers transited the Gateway in 2005. Vancouver's advantages as a cruise ship terminus are projected to expand business to 1.6 million passengers over the next twenty years.

Air Cargo

High value, time sensitive cargo volumes at the Airport may grow from 223 thousand tonnes in 2006 to 600 thousand or more tonnes by 2030³, requiring significant new investments in cargo handling facilities.

Domestic Bulk Cargo

As the Greater Vancouver Region grows, demand for construction materials will expand. In 2005 over 33 million tonnes of aggregate, cement, limestone and steel and forest products from the Region's heavy industries moved by tug and barge to rail and road connections. Short sea shipping of heavy goods reduces road congestion and road maintenance costs.

1 - Published forecasts

2 - Pacific Gateway Strategy Action Plan 2006

3 - Projections based on linear extrapolations of published forecasts

4 - National Economic Impacts of the Pacific Gateway study 2006

The System in 2030



Gateway business is projected to more than double by 2030. The economic benefits of this growth will translate into tens of thousands more good jobs, improved competitiveness for the Region's major businesses and a stronger municipal tax base.

Looking ahead to 2030, the Gateway Council envisions cargo and passenger volumes doubling. This would provide tremendous economic opportunities for the Region. Under this scenario total Gateway employment could reach 250,000.

It is estimated that by 2030 (compared to 2005) there will be:

- 0.8 to 1.3 million more container truck trips
- 19.5 million more people accessing the airport
- 39,000 more rail cars on the rail system
- 0.9 - 1.0 million more vehicles on the roads

To handle this growth and realize the Region's gateway potential, requires an efficient, multi-modal transportation system involving major investments in roads, rail and water-routes.

A Commercial Transportation System for 2030

The Gateway Council envisages a Major Commercial Transportation System (MCTS) to accommodate future growth in goods, services and international passenger movements. It would comprise a designated road network, increased road and rail system capacity, short sea shipping and transit system expansion.

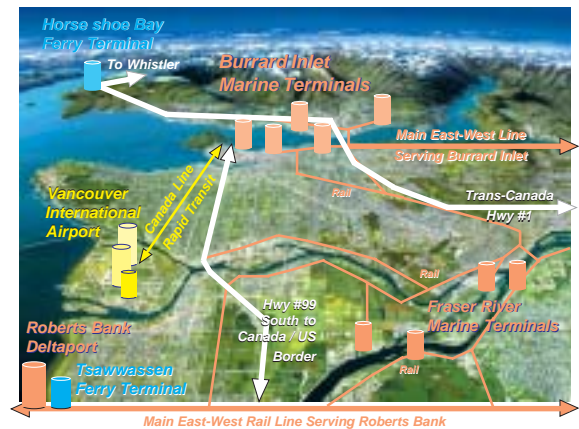
**Planes Land, Ships Dock
People Work...**

In 2005 the Gateway moved 115 million tonnes of marine cargo, 16.4 million air passengers and nearly one million cruise passengers generating 139,000 jobs in the Region. By 2030 total Gateway employment could reach 250,000 or more jobs...

	2005	2030	
		Low	High
Containers (TEU's)	2.1	7.1	9.9
Bulk	55.6	75.6	84.4
Break bulk	10.0	9.2	9.8
Domestic cargo <small>Note</small>	33.2	45.6	45.6
Total Marine Cargo <small>(millions tonnes)</small>	115	195	230
Air Passengers <small>(millions)</small>	16.4		35.9
Cruise Passengers	0.9		1.6
Air Cargo <small>('000's tonnes)</small>	222		600

Note: Short Sea Shipping and Ferry cargo not included

A vibrant regional economy will attract new businesses to locate here and expand local demand for Gateway services: imports, exports, travel and tourism. As Gateway business expands and the Region's population grows, pressure will increase on the Gateway road and rail systems.



The System in 2030 - Roads



Some \$3.4 billion of road infrastructure projects are scheduled for completion over the next decade. With other identified investments, travel time savings are estimated at 40 million hours in 2021.

Major Commercial Transportation System

The Gateway Council envisions a Major Commercial Transportation System (MCTS) in 2030 that would:

- *Be a continuous network for efficient commercial vehicle operations in the region*
- *Accommodate future growth in goods, services and international passenger movements*
- *Enable 24-Hour unrestricted flow of commercial vehicles*
- *Provide rail movements operating free of road intersection constraints*
- *Enhance connectivity to north-south and east-west trade corridors*

MCTS Road Network

The MCTS road network is defined as 38 road segments that are critical to commercial vehicle operations in the Gateway. Each segment either links the main business and industrial centres in the Region to the sea-ports, airport or Canada / US border, or it provides a key arterial linkage between major truck routes. Detailed assessment of current and projected traffic flows and trip times over these road segments led to the definition of essential major road improvement projects and new infrastructure investments.

With the exceptions of the Massey Tunnel, Blundell connection to Highway 99 and improvement to Highway 17 from the

Tsawwassen Ferry Terminal to Highway 99, identified MCTS road investments have been incorporated into the Province of British Columbia's Gateway Program and/or TransLink's Major Road Network projects over the next decade:

MCTS Road Network Improvements

Gateway Road Investments (\$ millions)	
Port Mann Bridge & Highway # 1	\$1,400
Pitt River Bridge	\$150
South Fraser Perimeter Road	\$800
Golden Ears Bridge	\$600
North Fraser Perimeter Road	\$60
Highway 15 and Highway 99 Border Crossings	\$100
Highway 99 - Sea to Sky	\$600
MCTS Major Road Improvement Projects	\$270
Total	\$3,380

Economic Benefits to the Region

Using a computer model of the entire Regional road system, the Gateway Council estimated total travel time savings on a complete MCTS road system at 40 million hours per year in 2021¹, generating:

- *GDP increase: \$414 million - \$1.05 billion / year*
- *Employee time savings of \$392 million / year*
- *Business congestion cost saving of \$281 million / year*

The System in 2030 - Rail



Rail operations in the Gateway require significant infrastructure investments to handle increasing volumes of cargo. The Gateway Council has identified a set of priority investments necessary for future growth.

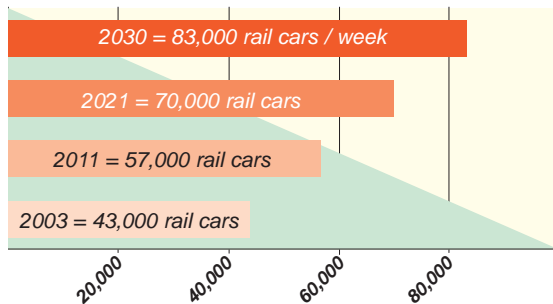
Rail System

Three class 1 rail carriers link the Gateway to North American destinations: Canadian Pacific(CPR), Canadian National (CNR) and Burlington Northern Sante Fe (BNSF). Together with shortline carrier, Southern Railway of BC, they are the backbone of the freight rail system feeding the Gateway seaports and operate on three main corridors:

- A** CPR mainline to Burrard Inlet East / West
- B** Roberts Bank / Deltaport East / West
- C** Burrard Inlet to the Canada / US border

Spurred by forecast growth in freight rail traffic and increasing demands for passenger rail service on the network, the Gateway Council carried out a detailed assessment of rail capacity in the Region¹.

Forecast Numbers of Railcars per Week on the Gateway Rail Network



The study identified a set of priority infrastructure investments to ensure adequate rail capacity for future growth in both cargo and passenger volumes. Many of these priorities have now moved to the engineering design phase. The largest single investments identified were replacements for the New Westminster and Pitt River rail bridges.

MCTS Rail Network Improvements

New Westminster Rail Bridge replacement

Est. cost¹ ~ \$110 million. The New Westminster Rail bridge was constructed in 1904. It carries some 30 million tonnes of cargo to and from the Burrard Inlet in addition to AMTRAK, VIA Rail and Rocky Mountaineer services.

The New Westminster Rail Bridge is a swing bridge that carries ~ 46 trains per day, when it is not open for marine traffic. Its capacity is estimated to be about 60 trains per day at current levels of marine traffic; which require the bridge to be open ~ 5 hours per day. Forecasted growth in marine traffic would require it to remain open ~ 7 hours per day by 2030. Consequently it must be replaced long before then to handle increasing rail freight and passenger services (see page 12).



New Westminster Rail Bridge - 1904

Pitt River Rail Bridge replacement

The Pitt River Bridge on the CPR main line carries East - West cargo to and from the seaports in addition to the West Coast Express commuter service. A preliminary estimate² for its replacement is ~ \$250 million.

Rail Corridor Improvements

Est. cost¹ ~ \$127 million. Double tracking, sidings, and grade separations for rail and road traffic at a number of locations on the three main rail corridors.

78 million tonnes of cargo carried by Gateway rail is the equivalent of 11 million truck moves on the Gateway road system per year

1 - Lower Mainland Rail Infrastructure Study 2004 - Gateway Council
 2 - MCTS Economic Impact Study 2003

The System in 2030 - Rail



Co-production, inter-modal operations and increasing passenger rail are providing better service to shippers, passengers and businesses in the Region and reducing vehicles on the road.

Making the best use of existing infrastructure is essential to Gateway competitiveness. A variety of innovative approaches are being used in the Gateway, including:

Rail Co-Production

Co-production agreements are commercial arrangements that allow railways to better coordinate train movements. This increases capacity on key sections of track and improves the fluidity of rail operations. Co-production agreements between CNR and CPR and between CNR and BNSF to serve the terminals in the Burrard Inlet, and directional running on CPR and CNR tracks through the Fraser Canyon are significantly improving service levels to the marine terminals.

Inter-modal Operations

Moving containerized goods by rail to and from the seaports and to inter-modal yards East of the Port Mann bridge reduces truck traffic on the roads in the densely populated urban core and provides better service for shippers.

Multi-modal Operations

Co-location of container import and export operations reduces or eliminates drayage³ costs on empty container movements and takes thousands of trucks off the road. Multi-modal operations, such as Modalink, are served by road, rail and waterborne transportation.

Passenger Rail

Presently there are four passenger rail services operating up to 76 trains per week on the Gateway freight rail network. Some 2.3 million passengers were carried on the Gateway rail system in 2004. Although passenger

West Coast Express

10 trains per day, year round. Mission / Vancouver. 2.0 million passengers were carried in 2004¹.

AMTRAK

2 trains per day, year round, between Seattle and Vancouver. 129,000 passengers were carried in 2004.

VIA Rail Canada

6 trains per week, year round transcontinental service.

Rocky Mountaineer Raitours

6 trains per week during the period from May through October, and on an occasional basis over the balance of the year. 78,000 passengers were carried in 2004.



trains represent a small fraction of the overall Gateway rail traffic (22,400 freight trains in 2003), they make up a significant proportion of trains over key rail bottlenecks. For example, the New Westminister Rail Bridge (NWRB)², when open to rail traffic, carries ~ 46 freight trains / day with an estimated capacity of ~ 60 trains / day. Scheduled passenger service however requires a window of operation over the bridge that effectively closes it to other traffic for a much longer period than the actual train crossing. While the Gateway Council supports expansion of AMTRAK service to 6 trains per day, steps must be taken to ensure cargo service to the Burrard Inlet over the NWRB is unaffected.

1 - Transport Canada Pacific Region reports

2 - The New Westminister Rail Bridge is a swing bridge. It opens to marine traffic for approximately 5 hours / day

3 - Charge for the pick up from or delivery to an ocean container.

The System in 2030 - Water Routes

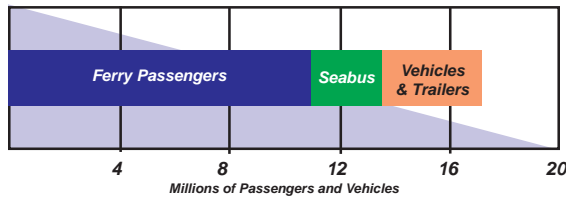


Expansion of short sea shipping in the Region has the potential to significantly reduce truck traffic on the roads. Availability of industrial waterfront lands is critical to realize the economic and environmental benefits of this mode of transportation.

Waterborne transportation is an essential component of the Gateway domestic logistics system. In addition to 33 million tonnes of bulk cargo moved by tug and barge on the Fraser River, 13.5 million passengers and 3.6 million vehicles are moved (2004) by:

- *BC Ferries connecting the Gateway to Vancouver Island:*
11 million passengers and 3.5 million vehicles (automobiles, buses and trucks)
- *Containerized cargo services (short sea shipping) between the seaports and inter-modal facilities:*
up to 100,000 TEU's (trailers and railcars)
- *TransLink Seabus service in Burrard Inlet:*
2.5 million passengers

17.1 million passengers and vehicles moved on Gateway Water Routes in 2004



Short Sea Shipping

Short Sea Shipping (SSS) refers to the movement of containerized freight on coastal and inland waterways. Coastal SSS includes both the movement of truck trailer combinations by BC Ferry Services and trailers and railcars by Seaspan Coastal Intermodal ferries between Greater Vancouver and Vancouver Island. Container traffic to Vancouver Island (typically traveling via drop trailer), is expected to grow as overseas container movements through the Vancouver Gateway increase, and as the population of Vancouver Island expands.



SSS on inland waterways would move containers by barge between deep-sea terminals and large freight forwarders, third party logistics providers, import distribution companies and export consolidators. Presently 35% of Gateway container traffic moves by heavy truck on an increasingly congested urban road system. Recent studies¹ indicate that a significant proportion of this traffic could be shifted economically to SSS routes, provided traffic densities could be increased sufficiently and other issues, such as property taxation on gateway facilities and the availability and cost of industrial lands, are resolved.

Container Operations Centres

By combining an efficient short-sea transfer and storage terminal operation with efficient barge service to the deep-sea terminals; and a rail inter-modal yard capable of transferring domestic and marine containers directly to/from railcars, sufficient economies of scale could be realized to allow commercially viable SSS operations. The availability of industrial waterfront lands is a critical factor for the growth of SSS shipping in the Gateway.

33 million tonnes of cargo carried on Gateway Water routes is equivalent to 5 million truck moves on the Gateway road system per year

Four Conditions to Build the System for 2030

1 Gateway Transportation Investments

Massive investments are needed in both transportation infrastructure and public transit to ensure the Gateway can handle projected expansion in transportation demands for local and international movements of passengers, goods and services. The core of the Gateway Council's vision for infrastructure investment is the Major Commercial Transportation System.

2 Room to Grow - Sufficient Industrial Lands

To handle growth in Pacific trade and travel and the high-wage permanent jobs that would be generated, requires that sufficient available industrial lands be set aside for Gateway developments, and that residential and commercial developments be concentrated along transportation corridors that are readily serviceable by public transit.

3 Sufficient Skilled Labour

Rapid gateway growth is occurring at a time of high economic activity in Western Canada. The situation in the Gateway is compounded by the high cost of housing and an aging workforce. Ways and means must be found to ensure the availability of adequate numbers of skilled employees to meet Gateway needs over the coming decades.

4 Policy, Taxation & Regulatory Framework

Changes in a range of policy, taxation and regulatory approaches are needed to allow the Gateway to compete effectively in the global marketplace and encourage Gateway industries to make the necessary capital investments in plant, equipment and technologies and so help ensure a sustainable future.

Building the System for 2030

1 Gateway Transportation Investments

The scale of investment needed for Gateway infrastructure is in the tens of billions of dollars over the short and medium terms. Nevertheless, these investments must be made to handle projected growth and improve the competitiveness of Canada's international trade and tourism industries and industrial productivity. Additionally, major investments are needed in public transit.

Infrastructure and Transit

The Gateway Council believes that investments in transportation infrastructure and public transit must go hand in hand to realize our vision. Infrastructure investments are essential to accommodate growth in Gateway transportation on which the Region's economy depends, while transit investments are necessary to curb growth in the numbers of automobiles on the road as the Region's population expands. Both are needed to reduce road congestion and fuel consumption and cut emissions.

Where will the Money Come From?

The Gateway Council proposes a number of approaches to raise the necessary capital based on successful experiences elsewhere, including:

Agency Investments

The Federal and Provincial Governments, TransLink and the Members of the Greater Vancouver Gateway Council have recognized and agreed upon the need for a comprehensive infrastructure investment program for this Gateway. Our Airport, Sea Ports, Railways and Terminal Operators have committed hundreds of millions of dollars toward capacity expansions and are prepared to make additional investments in infrastructure to meet projected growth.

It is essential that both levels of Senior Government also recognize the need for and commit to a long-term funding program to ensure that this Gateway will be able to meet the growing demands as Canada's Gateway to the Asia Pacific.

Tax Exempt Bond Financing

Tax exempt bond financing is used successfully in the US for transportation infrastructure financing. It provides access to new pools of private capital and can be achieved in Canada by minor changes to the Tax Act.

Public Private Partnerships (P3's)

The Gateway Council endorses the use of P3's wherever reasonable and feasible, such as those employed for the Canada Line rapid transit route and the Golden Ears Bridge.

Tolling

The Gateway Council is supportive of tolling and TDM measures where the additional costs to commercial carriers are offset by travel time savings.

Managing Demand

Consistent with the Gateway Council's view that "we cannot build our way out of congestion," the Council believes that the proposed MCTS infrastructure investments can meet the Region's future transportation needs, when coupled with a number of aggressive demand management measures and tolling such as:

- Discouraging Single Occupancy Vehicle use
- Providing High Occupancy Vehicle (HOV) lanes
- Prohibiting Parking on MCTS routes
- Critical Incident Management
- Residential and Commercial densification along rapid transit lines
- Industrial land reserves

Building the System for 2030

2 Room to Grow - Sufficient Industrial Lands

As competition for available industrial lands intensifies, fresh approaches are needed to ensure that municipal land use planning, zoning and valuation take full account of the Region's economic interests in a healthy, growing and sustainable Gateway.

Supply and pricing of industrial lands for Gateway operations

The GVRD's land area comprises¹:

- *72 % Green Zone and other non-urban uses, of which 54,000 hectares (135,000 acres) is included in the Agricultural Land reserve.*
- *20% Urban uses (residential, commercial and industrial) of which 10,500 hectares (26,000 acres²) is industrial*
- *8% Vacant urban land*

74% of industrial lands are developed, 26% are vacant. 80% of vacant lands are located South of the Fraser River. In 2005, average waterfront industrial land values in the Region were as high as \$5 million per hectare in the densely populated urban cores like Burrard Inlet.

Fragmented Land-Use Planning

Local municipal issues combined with the commercial realities of the real estate market, overlay a long term Regional growth strategy focused on environmental issues. This situation generates a patchwork of land-use policies across 21 municipalities, each driven by the need to optimize property taxation and zoning by-laws for budgetary purposes. Neither Regional economic benefits nor Gateway business figure prominently in this milieu.

Pressures to rezone higher value waterfront lands for residential use are intense. Yet residential developments in close proximity to 24 hour per day gateway operations inevitably lead to noise and other liveability issues for residents. As land values and property taxes rise, businesses and households are migrating to lower cost areas in the Region. Fragmented zoning policies drive businesses from higher cost urban cores to locate on lower cost industrial lands, where limited or no public transit services are available. This increases competition for available industrial lands and road congestion. If current trends continue it is estimated that all industrial lands will be developed by 2020².

Densification

To help address these issues and, at the same time, encourage expanded use of public transit, residential and commercial developments must be concentrated along transportation corridors throughout the Region, taking due account of noise and community concerns. The MCTS³ defines transportation corridors along which urban and commercial densification could occur.

Land-use Policies for the Gateway

- *Establishment of Gateway Lands Reserve to ensure adequate, reasonably priced land for Gateway operations and growth.*
- *Densification of residential and commercial development along transport corridors*
- *Provide suitable "buffer-zones" between 24 hour per day Gateway operations and residential developments*

1 - Greater Vancouver Liveable Region Strategic Plan

2 - Industrial Lands Inventory for Greater Vancouver, 2005

3 - MCTS: Major Commercial Transportation System - See pages 9 to 13

Building the System for 2030

3 Sufficient Skilled Labour

Gateway growth is taking place at a time of record activity in BC. There is over \$100 billion of capital projects underway or planned. Increasing import and export trade, tourism and business travel are also increasing demand for skilled workers. This situation is also occurring in other parts of the country. Canada is facing a national shortage of skilled labour.

The situation in our Gateway region is compounded by the high cost of housing and an aging workforce. Availability of affordable housing within reasonable commuting distance of peoples' workplaces and the need to replace a large segment of the Gateway workforce due to retire over the next decade

are major challenges for the Gateway's future operations. Furthermore, new technologies and increasing complexity of international logistics (for example: security requirements) require higher levels of training than ever before.

A comprehensive review and forecast of skills requirements for specific occupations is a necessary first step. However, two main challenges will remain; labour supply and training.

Ways and means must be found to provide an adequate intake of new trainees together with sufficient budget and trainers, in addition to skills upgrading for existing employees.

4 Capital Recovery Costs and Local Taxation Policy, Taxation & Regulatory Framework

A comprehensive action program is necessary to redress the competitive imbalance in capital recovery costs and local taxation between the Gateway and its US competitors.

Local Taxation

*Ensure municipal **taxation levels are competitive and predictable.***

*Establish **Region-wide approaches to industrial water front land valuation for port terminals based on port land rent.** The Province of British Columbia acted on this recommendation on a trial basis to 2008. It is essential that this become a permanent principle.*

*Establish clear **linkages between municipal economic benefits and Gateway operations in municipal tax and land use policies.***

Profit Insensitive Taxation

*Conduct a **comprehensive review of profit insensitive taxes** on transportation and reduce their impacts on Gateway competitiveness.*

Tax Exempt Bond Financing

Define and implement a tax exempt bond financing mechanism for Gateway infrastructure on the basis of national strategic priorities that creates no precedent for broader application.

Capital Cost Allowance

*Change rules for railways and trucking companies in Canada to **provide parity with the US.***

Fees for Government Services

Improvements in government services and fees to more closely match user requirements and cost structures.

Building the System for 2030

Air

4 Policy, Taxation & Regulatory Framework

Capitalizing on opportunities for new business is essential to realize the Gateway Council's vision. However, the extent to which new services can be developed is generally subject to governmental policies and regulation, which in Canada are less conducive to growth and improvement than in the US. Policies that foster new connections, encourage service improvements and investments in new Gateway facilities and equipment are needed for Gateway airports, seaports and carriers.

International Air Policy

On November 27, 2006, the Government of Canada announced a new international air policy called "Blue Sky." Under this policy, Canada will seek to negotiate reciprocal "Open Skies" type agreements for international scheduled air transportation with its trading partners. Open Skies agreements include unlimited bilateral market access, no limits on the frequency of service or number of carriers permitted to operate and unrestricted services to and from third-countries (fifth freedom rights).

Airport Security

Security and the facilitation of passenger movements through the airport are critical to its growth plans. Security systems and border measures must be effective and efficient while promoting the easy transfer of passengers and goods through the airport.

Domestic Air Policy

Changes in domestic aviation policy involving the Right of Establishment and limits on foreign ownership of Canadian carriers are

necessary to improve competitiveness. The Canadian aviation sector also faces federal taxes and fees¹ which are high relative to other Canadian transport modes and industry sectors as well as its international competitors.

Action Program

Rapidly Implement the New Blue Sky Policy and seek to negotiate Open Skies agreements with key Asian markets including Singapore, Taiwan, South Korea, Philippines and Malaysia.

International Transfer/Departure Facilities must be reinstated to allow the merger of departing International and connecting intransit passenger streams in a secure facility.

NEXUS and CANPASS-AIR

Market NEXUS and ongoing CANPASS-AIR automated border inspection programs to **increase participation dramatically** and facilitate legitimate travel to Canada and the U.S. This would allow border agencies to focus efforts and resources on higher risk travelers.

Transit Without Visa

Expand Transit Without Visa programs to key markets enabling improved access from Asia and Europe through Canada en route to the US.

Reform Tax and Fee structures

to ensure that the air transportation industry is taxed on a **level playing field** with other Canadian transportation modes and the U.S. aviation sector.

Implement Right of Establishment

that would allow a foreign carrier to establish a Canadian subsidiary for domestic services. This would provide foreign carriers with access beyond the gateway market and would provide added capacity and choice for smaller market areas.

Limits on Foreign Ownership

in Canadian Carriers should be increased from the current level of 25% and so improve access to capital to take advantage of growth opportunities.

¹ - C.D. Howe Institute Commentary, No. 242, February 2007, *Excess Baggage: Measuring Air Transportation's Fiscal Burden*, ISSN 0824-8001.

Building the System for 2030

Marine

4 Policy, Taxation & Regulatory Framework

The Gateway seaports are national strategic assets that must be kept strong, growing and competitive to facilitate Canada’s economic and trade development agenda.

Changes to Federal Policies

To achieve this, the *Canada Marine Act* must provide Canadian Port Authorities¹ with the tools they require to access the capital necessary for land and infrastructure development, to lower the cost of capital borrowing and to optimize the efficiency of port management.

Security

Seaport security is a critical national issue. New procedures, new equipment and training are providing a secure operating environment for Canada’s Gateway trade. Smooth flows of cargo to and from the seaports across national borders is essential for competitive Gateway operations. Practical approaches to meet evolving border security requirements require the full engagement of Federal resources to implement in a timely and effective manner.

Local Property Taxation

Both Federal and Provincial Governments must address the funding needs of Municipalities to assist them in addressing increased costs associated with aging infrastructure, population growth and congestion. The Gateway Council is supportive of exploring possible mechanisms, other than property taxation, that would provide municipalities with a share of increased tax revenues attributable to expansion of existing transportation facilities. We believe that detailed research and analysis should be undertaken in an effort to define

	Taxes Collected	PILT	Taxes Paid	Net Impact
<i>Vancouver</i>	0	\$5	\$50	-\$55
<i>Seattle</i>	\$53.60	0	\$27	\$26.60
<i>Tacoma</i>	\$11.10	0	\$8.60	\$2.50

PILT- Payments in-lieu of taxes

alternative approaches to transportation taxation that would provide municipalities with a direct stake in Gateway success.

Action Program

Public Investment in Canada’s Ports

Remove prohibition of public investment in Canada’s ports.

Proceeds of the Sales of PortLands

To be **held by Port Authorities in trust** for future investment in facilities and infrastructure.

Tax Exempt Bond Financing

Allow the **issuance of tax exempt bonds by transportation authorities** such as seaports, airports, BC Ferries, and TransLink.

Dredging

Provide sustained, predictable annual funding for dredging the Fraser River.

Payments in Lieu of Municipal Taxes

Establish **limits for payments in lieu of taxes** to foster reasonable municipal tax rates and land valuations.

Local Property Taxation

Examine **alternative approaches** to transportation taxation that would provide **municipalities with a direct stake** in Gateway success.

Environmental Reviews

Develop and implement a **more timely Federal environmental review and approval process** for port expansions: new and existing facilities.

Building the System for 2030

Energy and Environment

4 Policy, Taxation & Regulatory Framework

Gateway industries are keenly aware of the need to cut energy use and greenhouse gas emissions. More efficient infrastructure, expanded public transit, a more energy efficient vehicle fleet and a shift to cleaner / greener fuels will cut fuel consumption and emissions. We can also make better use of our waterways (short sea shipping) and rail-lines for internal Gateway cargo movement. This would also help cut emissions and reduce:

- *road congestion*
- *road maintenance costs*
- *road accidents*
- *noise*

Cutting Fuel Consumption

Gateway industries are implementing an impressive array of emissions reduction projects to reduce engine fuel consumption for ships, trains, trucks and airplanes in the Gateway. For examples; engine idling time reduction programs, improved container truck reservation systems, the use of shore power for ships at berth so their diesel engines can be shut down, and supply chain optimization to reduce overall fuel use. Together these measures are already making significant cuts to Gateway emissions.

New Technology Adoption

There is a wide range of new technologies available to reduce fuel consumption and cut emissions, including new clean diesel technologies, hybrid vehicles and alternate fuels like bio-diesel and ethanol. However, in order to operationalize these technologies in the near term requires favourable tax treatment and new partnerships among Gateway industries, governments and technology developers.

Partnerships - The Way Forward

Major investments are needed in efficient infrastructure, and greener / cleaner plant and equipment. However, the public benefits of such investments (e.g. reduced emissions) cannot be internalized by Gateway industries. Approaches to force mandatory compliance to arbitrary standards do nothing to alter this. New policies are needed. Shifting from “end-of-pipe” solutions to partnerships for a cleaner, greener Gateway, would accelerate the adoption of new technologies and the installation of needed infrastructure to realize the environmental benefits.

The International Dimension

It is important to remember that a majority of the ships and planes that call here are subject to international competition and regulations. Participation in international efforts to cut emissions is therefore an important part of the Gateway’s efforts to do its part to address climate change. For example the Port of Vancouver is part of a bi-national West Coast seaports initiative to reduce emissions.

Environmental Regulation

Development of new Gateway facilities essential for the Region and Canada can be accomplished with minimum environmental impact and with longer term benefits. However, the current approach of environmental regulatory and permitting bodies must be changed to a partnership role that considers social and economic consequences of delaying and / or not proceeding with new developments on the same basis as the short term environmental impacts of proceeding.

The Greater Vancouver Gateway Council

The Greater Vancouver Gateway Council was formed in 1994 to pursue a vision for Greater Vancouver as the Gateway of Choice for North America, able to capitalize on opportunities from expanding world trade and tourism. The Gateway Council comprises senior executives from industry, government and academia. Canada's Minister for International Trade and Minister for the Pacific Gateway and the Vancouver-Whistler Olympics is the Honourary Chair.

Voting Members

BC Maritime Employers Association
BC Trucking Association
BC Wharf Operators Association
British Columbia Ferry Services Inc.
Burlington Northern & Santa Fe Railway Company
Canadian National Railways
Canadian Pacific Railway
Fraser River Port Authority
North Fraser Port Authority
Railway Association of Canada
Sauder School of Business - University of British Columbia
Southern Railway of British Columbia
TransLink
Vancouver International Airport Authority
Vancouver Port Authority

Resource Members

Asia Pacific Foundation of Canada
Business Council of British Columbia
Canadian Manufacturers and Exporters Association
Greater Vancouver Chambers' (of Commerce) Transportation Advisory Panel
Greater Vancouver Regional District
Province of Alberta
Province of British Columbia
Province of Manitoba
Province of Saskatchewan
Transport Canada - Pacific Region
Vancouver Board of Trade
WESTAC
Western Economic Diversification Canada

800 Robson Street, Vancouver, B.C., V6Z 3B7
Telephone 604 / 682-5330 Facsimile 604 / 822-8423
web site: www.gvvc.org

Gateway Road and Rail Systems

The Greater Vancouver Gateway Council envisages extensive capacity improvements to the Region's road and rail systems that would reduce congestion and improve competitiveness, together with an array of other initiatives designed to curb growth in road traffic and cut emissions.



Greater Vancouver Gateway Council



Vision for the Future of the Greater Vancouver Gateway

The Greater Vancouver Gateway Council

*Telephone: 604 / 682-5330
Web site: www.gvgc.org*