Western Provincial Transportation Ministers Council





Executive Briefing

Western Canada Transportation Infrastructure Strategy for an Economic Network

A Time for Vision and Leadership

March 2005





About the Western Transportation Ministers Council

British Columbia, Alberta, Saskatchewan and Manitoba formed the **Western Transportation Ministers Council** (WTM) to improve coordination in areas of provincial responsibility. The four western ministers signed a memorandum of understanding in Vancouver, B.C. on November 18, 2002 to establish the Council.

WTM seeks to develop a consistent regional approach to transportation policy, planning and regulatory harmonization. The Council is intended to provide a common front in working with the federal government on inter-provincial matters.

Vision

A leadership role in articulating the infrastructure and policy needs for an efficient, integrated, safe and equitable western Canadian transportation system.









Executive Briefing

Western Canada Transportation Infrastructure Strategy for an Economic Network

he Western Transportation Ministers
Council (WTM) prepared this briefing
because a new strategy to revitalize
Canada's deteriorating transportation
infrastructure, particularly roads, is long overdue.
The vast majority of roads in this country fall
under provincial and municipal jurisdiction. These
governments on their own, however, lack the
financial resources needed to reinvest in the
network to meet the increasing demands of
population and trade growth.

The reality is that governments at all levels are under serious financial pressure while being expected to increase programs and services. Transportation projects must compete with many other programs and initiatives for limited funds.

There is broad agreement that our transportation system will not be capable of meeting the needs of citizens, communities and businesses in future unless significant changes are made. The consequences of deferring infrastructure renewal are becoming more serious: lower economic growth; highway safety concerns; less competitive cities; traffic congestion and pollution.

Bottlenecks on key access roads to airports, ports and border crossings that cause inefficiencies and erode our competitive position. The need to access remote/northern areas and make better use of underutilized routes. It begs the questions: what kind of system is needed and how are we going to pay for it?

WTM is taking up the challenge with a renewed spirit of cooperation. The complexity and magnitude of the challenges ahead demand an unprecedented degree of coordination among all levels of government and the private sector. But the western provinces can't go it alone.

A Western Canada Transportation Infrastructure Strategy for an Economic Network is intended to challenge the federal government and other leaders to make transportation infrastructure reinvestment a top priority.

This briefing represents WTM's initial framework for a more coordinated approach to infrastructure renewal by providing an integrated western development plan as a template. More specifically, its objectives are:

- ☐ To identify *strategic* transportation infrastructure development objectives in western Canada;
- ☐ To outline a more integrated multi-modal planning approach to avoid perpetuating inefficiencies in the existing system; and
- ☐ To create an environment where transportation receives the long-term investment funding it deserves.

This briefing is also intended to inform Cabinet members and provincial finance officials about the critical need for transportation reinvestment. Canada's economic wealth depends on trade. Failure to support the very system that makes trade possible jeopardizes the future standard of living for all Canadians.

URGENT NEED FOR A FRESH STRATEGY

From the beginning, transportation has united this vast country. The benefits of that early vision and subsequent investments in roads, railways, airports and ports are readily apparent today. Efficient transportation systems provide ready access to global markets, link communities together and enable our economic wealth. Transportation critically impacts the productivity and success of most businesses.

The U.S. and other competing nations view transportation as essential to their trade competitiveness and have focused plans to improve their national transportation networks. A transportation strategy is lacking and urgently needed for Canada given that our economy is nearly five times more dependent on trade than the U.S. The backlog of infrastructure investments and long lead-time to implement projects means we must act now.

We face several complex challenges: a combination of economic, environmental, security and technological changes. Governments are under pressure to eliminate debt, lower taxes and increase services. Important social programs consume the majority of government spending. Transportation projects must compete with many other municipal projects for limited infrastructure funds.

Each province faces unique challenges and develops their own detailed transportation plans. However, a region-wide strategy is also needed to address common challenges and opportunities and to transform the existing transportation system to better meet the changing economic and social needs of Canadians in the 21st Century. Better regional collaboration can also pave the way for a new era of inter-governmental and private sector partnerships to help create more sustainable cities and revitalize rural Canada.

A LARGE-SCALE CHALLENGE . . .

Canada has a massive infrastructure challenge ahead of it. The total municipal infrastructure shortfall alone is estimated at \$57 billion.² Failure to deal with this *debt* could easily double the figure within two decades because deferring maintenance shortens asset lifespan. In western Canada, about **40-45 per cent of the unfunded infrastructure needs are in transportation**—roads, bridges, interchanges, traffic control devices and public transit.³

The extensive network (*Exhibit 1*) is costly to preserve and many roads are sub-standard. In some western provinces as much as one-fifth of their National Highway System (NHS) roads are in poor condition and in need of major rehabilitation. This is particularly significant given that the NHS handles more than one-quarter of all traffic in the region and is one of Canada's most important trade and tourism arteries.

Exhibit 1: Major Western Transportation Assets

ROADS: 780 000 km

55% of all roads in Canada with an estimated replacement value of \$156 billion

RAIL: 26 000 km

56% of all rail lines in Canada

PORTS: 7 CPA ports; 17 public harbours (BC) Canada's only arctic-based international seaport (MB)

50% of Canada's marine exports are generated in the west, 85% of which flow through west coast ports

AIRPORTS: 9 NAS airports; 33 regional/local airports; 3 NAV Canada Area Control Centres

40% of Canada's revenue-passenger traffic

Sources: Transport Canada, provincial transportation departments.

¹ Source: Statistics Canada; exports represent about 45% of the Canadian economy compared with 10% for the U.S.

² Source: "A Capital Question", Canada West Foundation, October 2003 and Canadian Society for Civil Engineering. Infrastructure is the basic support structure for communities and includes roads, public transit, bridges, traffic signals, sewers, public buildings, water supply/treatment plants, etc. ³ Based on the Association of Consulting Engineers of Canada and a derivation from CWF's "A Capital Question."

WHAT CHANGES ARE NEEDED?

The federal and provincial governments have already identified some principles for the future transportation system that are generally accepted—*Straight Ahead* (federal vision) and *Partnering for the Future* (provincial vision).

Exhibit 2: Shared Vision Principles



Canada's transportation system should support *economic growth* and *strengthen society* through:

- **▶ competition and market forces** to achieve efficiency
- ▶ an integrated, multi-modal system to support trade
- ▶ high safety & security standards to protect travelers and communities
- preservation of the **environment**
- ▶ providing citizens in urban, rural and remote regions access to the transportation system

Partnering for the Future
- A Transportation Vision for Canada

These visions are important building blocks. But we need to go a lot further to work out the details. What should be the priority investments? How can national, provincial and local policies be coordinated to create more competitive cities? How can rural and remote communities best be served? How do we optimize use of the existing system before simply building more infrastructure?

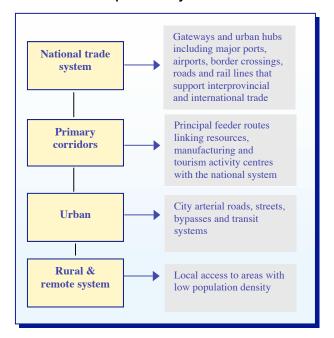
A MORE STRATEGIC APPROACH

Public infrastructure renewal on the scale required is a tall order because it has been deferred for so long. Provincial and local governments have an extensive backlog of capital projects, including many non-transportation projects. Financial constraints dictate a sharper focus, but what is really meant by strategic? What criteria should be used to identify the optimal projects?

WTM's image of "strategic" is consistent with the broad vision principles and recognizes three important tiers within the overall transportation system (*Exhibit 3*).

The strategic transportation network consists of the first two tiers—the **national trade system and primary, or feeder corridors.** This network supports the wealth-creating economic activities that are the backbone of an export-driven economy. It handles the vast majority of trade and passenger travel. The competitiveness and viability of the trade network critically impacts our financial capacity to service and support the third tier, rural/remote areas. The significance of this approach is that each tier of the system has different policy challenges and funding solutions: one size does not fit all.

Exhibit 3: Transportation System Tiers



The provinces recognize the need for urban transit infrastructure. Projects such as the Richmond-Airport-Vancouver (RAV) rapid transit project provide opportunities to reduce congestion on strategic highways in urban areas. However, these projects are more local in nature and do not meet the criteria for inclusion in the strategic network.

In rural areas, on the other hand, the focus could be developing effective feeder systems. Here, the funding options may involve economic development or natural resource development instruments that fall outside the scope of transportation agencies.

Strategic Network Criteria

WTM believes that the western regional network must **complement and support national transportation principles** such as safety/security, economic growth, improving productivity and competitive position, and respecting the environment. It is important to define a strategic network in order to support:

- **Exports as the primary engine** of growth and prosperity;
- □ Continued growth of **value-added** manufacturing activities;
- Multi-modal integration and continued regional economic growth and opportunity;
- ☐ The changing needs of travelers, shippers and western communities.

Some preliminary criteria were developed for the purpose of defining the strategic western transportation system (*Exhibit 4*). These criteria should be refined through industry consultations.

Exhibit 4: Preliminary Strategic System Criteria

Airport	▶ major regional airport (300,000+				
	passengers/year				
	▶ located in provincial/territorial capital				
Port	▶ more than 25% of port volume				
	originates in other provinces				
	▶ handles majority of an export				
	commodity group				
	provides alternative international				
	gateway				
Rail	▶ core inter-regional line				
	▶ non-core line to US or alternate export				
	port				
Road	▶ primary inter-provincial or north-south				
	corridor route				
	route to existing or proven industrial/				
	resource or tourism, recreation area				
	▶ local access to strategic port, airport,				
	intermodal facility				

Exhibit 5 provides a visual representation of the strategic western transportation system based on the application of these criteria (see also Appendix A for more details). Based on these criteria, the strategic road network in western Canada is 14,100 km and the rail network is 11,500 km.

REGIONAL DEVELOPMENT OBJECTIVES

Infrastructure Objectives

Commonly accepted regional development objectives will help target investments in an environment of scarce resources. The objectives presented herein, however, are not intended as a ranking of priorities. This requires detailed planning between various levels of government and industry, as well as consultations to identify the costs, benefits and trade-offs associated with different alternatives.

WTM also recognizes that development objectives should be identified in other regions across Canada and, where relevant, integrated with western regional objectives. This document may provide a template in this regard.

The proposed draft long-term development objectives are contained in *Exhibit 6* based on the following guiding principle and investment criteria.

Principle: Strategic transportation infrastructure investments are those that provide tangible *economic* and *social* benefits to the western region.

Investment Criteria:*

- 1. Benefit more than one western province
- 2. Optimize use of existing infrastructure
- 3. Target key bottlenecks
- 4. Improve relative competitive position vs. U.S. or others
- 5. Expand existing trade/capture new markets
- 6. Enhance intermodal connections and the mobility of people/goods

^{*} see Exhibit 6 for application of these criteria

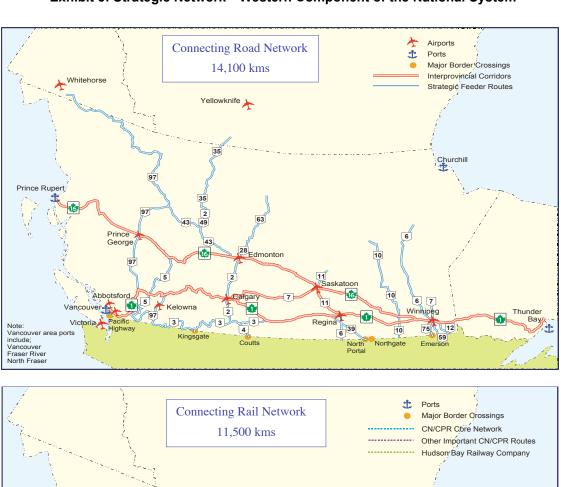


Exhibit 5: Strategic Network—Western Component of the National System

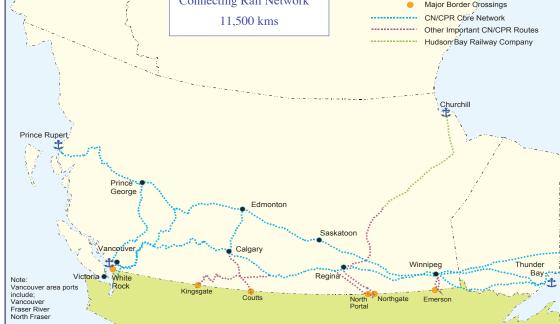


Exhibit 6: Draft System Development Objectives and Estimated Costs

RAIL		Cost: \$1.3 billion		
Project	Criteria	0-5 yrs	6-10 yrs	11-20 yrs
British Columbia:	(per Exhibit 4)			
- Replace New Westminster railway bridge)	-		
- Increase capacity at Roberts Bank/Prince Rupert to support				
container terminal expansion plans				
- Increase CPR main line capacity between Revelstoke and	1, 3, 4, 5, 6		_	
Nepa				
- Modify bridges and tunnels from Prince Rupert to Tete Jaune				
Cache to accommodate double-stack trains				
Manitoba:				
- Hudson Bay Railway upgrades	1, 2, 4, 5, 6			
- Central and Southern Manitoba Railway upgrades	2, 5			
PORTS		Cost: \$1.7 billion		
Project	Criteria	0-5 yrs	6-10 yrs	11-20 yrs
British Columbia:	`			
- Fraser Port, Deltaport, Burrard Inlet container terminal				
expansions and new terminal at Roberts Bank	1 , 4, 5, 6			
- Prince Rupert container terminal conversion				
Manitoba:				
- Port of Churchill infrastructure development	1, 2, 4, 5, 6			
AIRPORTS		Cost: \$1.0 billion		
Project	Criteria	0-5 yrs	6-10 yrs	11-20 yrs
- Increase terminal capacity at Edmonton International)		-	_
- New terminal and runway at Calgary International	1, 5, 6			
- Upgrade Regina terminal	1, 3, 0			
- New terminal building at Winnipeg International	J			

Exhibit 6: Draft System Development Objectives and Estimated Costs (continued)

ROADS		Cost: \$11.7 billion		
Project	Criteria	0-5 yrs	6-10 yrs	11-20 yrs
British Columbia:	(per Exhibit 4)			-
Trans-Canada Highway:				
- Kicking Horse Pass, Revelstoke, Golden bridge replacement/upgrades				
- Four-laning through Kicking Horse Canyon	1, 3, 4, 5, 6			
- Four-laning from Revestoke to Kamloops				
- Construct South Fraser Perimeter Road (supports port terminal expansions)			1	
- Port Mann Bridge/Hwy. 1 Vancouver to Langley			_	
Alberta:			<u>İ</u>	
Twin Canamex corridor from Grande Prairie to US border	5, 6			
Construct Calgary and Edmonton ring roads	3, 6			
Complete Hwy. 2, Calgary-Edm. to full freeway standard	3, 6	•		
Saskatchewan:				
Twin Trans-Canada Highway:				
Twin Yellowhead Hwy.:	1, 3, 4, 5, 6			
- Saskatoon to Alberta border				
- Manitoba border to Saskatoon				
Twin Hwy. 11 from Saskatoon to Prince Albert	5, 6			
Construct urban bypasses around Regina and Saskatoon	3, 6			
Manitoba:				
Trans-Canada Highway:				
- Twin (4-lane divided)	1, 3, 4, 5, 6			
- Maintain expressway standards		-		
Twin Yellowhead Highway		-		
Complete Hwy. 75 to expressway standard (including bypasses around Morris,				
St. Norbert)	> 5, 6	-	•	
Twin Hwy. 59 south to Hwy. 52				
Complete twinning of North East Perimeter Hwy. 101				
TOTAL ALL MODES			\$15.7 billion	

Source: Rail and ports - B.C. Ports Strategy and the Greater Vancouver Gateway Council; road and airports - provincial transport departments.

Policy Objectives

Western infrastructure challenges should not be divorced from the policy arena. Policy reforms are required to support trade growth and optimize the use of existing infrastructure and modes. The overarching policy objective should be that travelers and shippers have effective, competitive options based on the principle of free market forces. In cases of market failure, legislative measures should be considered.

Exhibit 7 summarizes the main policy priorities but is not intended as a comprehensive listing, or to replace previous detailed submissions made by any of the western provincial governments.

Exhibit 7: Policy Priorities

Air	• general focus on reducing \$ taken out of				
	the system by the federal government				
	(NAS rents, fuel taxes, aviation fees)				
	• seek permanent and equitable rent relief for				
	NAS airports				
	▶ funding assistance for small airports (i.e.,				
	return portion of aviation fuel tax)				
	▶ liberalize international air policy (open				
	skies)				
Port	▶ remove borrowing limits for CPA ports				
	and develop innovative financing tools				
	▶ promote federal participation in port				
	investments of national significance				
	• grant ports wider powers to manage assets;				
	recognize regional growth strategies				
Rail	▶ a legislative and policy framework that				
	balances the interests of rail users with the				
	national rail carriers				
	continue to work with the industry on				
	initiatives to increase capacity				
	▶ address competitive inequities between				
	U.S./Canada				
Road	▶ federal infrastructure investment more in				
	line with federal fuel tax revenues (or				
	transfer the fuel tax room)				
	▶ dedicated and predictable federal funding				
	support, not ad hoc programs				
	▶ federal highway program that recognizes				
	rehabilitation and resurfacing costs as well				
	as new capital expansion				

THE FUNDING CRUNCH

Exhibit 6 identifies more than \$15 billion worth of projects needed to improve and expand the strategic transportation network in western Canada. Strategic highway improvements account for \$11.7 billion of this required investment.

The provinces have other transportation responsibilities outside the strategic highway network (which represents less than one-fifth of the highway system in western Canada). Currently, more than \$1.1 billion per year is invested by the provinces in preserving the entire system. Yet, current investment levels are inadequate to maintain the highway system, of which the strategic network is a subset, in good condition. This results in a backlog of rehabilitation projects.

The challenge is therefore twofold:

- ☐ Finding stable funding to maintain existing roads at an acceptable standard; and
- Paying for the additional \$11.7 billion in road improvements to meet system development objectives.

Similarly, other modes of transportation faces policy impediments that restrict the flow of private capital for infrastructure projects that will provide major benefits for the west and Canada. For example, the *Canada Marine Act* imposes borrowing limits on Canada Port authorities that limit their ability to access capital on the scale required to finance major port infrastructure developments.

... BUT WE'RE GOING THE WRONG WAY, INVESTING LESS IN TRANSPORTATION

Unfortunately, relatively less is being spent by government on capital projects in general. In western Canada, if federal, provincial and municipal government investment had "stayed at the 1961-2002 average, another \$68 billion in capital spending would have occurred from 1990 to 2002." ⁴

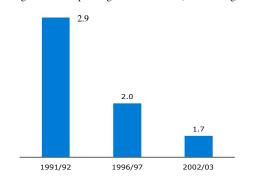
In transportation, the picture is just as bleak (see charts at right). First, total government spending as a proportion of GDP has dropped from 2.9% to 1.7%. Second, provincial and local governments have been forced to pick up an increasing share of transportation investment and, in fact, nominal spending has become stagnant. Third, the **gap between required** investment needed to keep up with demand and actual investment is widening. For example, in Alberta the 5-year investment requirement for highways, local roads and transit is \$6.3 billion—\$2.4 billion, or 40% of this is unfunded.

In the meantime, the disparity between federal revenues derived from transportation and the money put back into transportation continues to grow (i.e., increasing federal surplus). Real federal government revenues cumulatively exceeded real gross spending by \$14 billion from 1992/1993 to 2000/2001.

Reforms in road financing are desperately needed because the present system of paying for infrastructure out of general revenues will mean a legacy of recurring infrastructure problems. This conclusion is supported by two major reviews.⁵

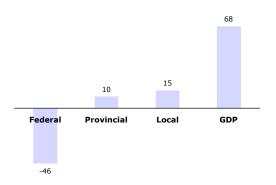
Transportation investment is declining . . .

Total government spending as a % of GDP (3 levels of government)



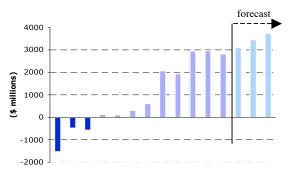
Local, provincial governments are paying a greater share but growth is outpacing investment...

% change in transport spending & economic growth 1991/92 to 2002/03



... and the federal surplus continues to grow.

Federal government transportation surplus (deficit) 1989/90 to 2003/04



Source: University of Manitoba Transport Institute, March 2003

⁴ Canada West Foundation, A Capital Question.

⁵ The Royal Commission on National Passenger Transportation (1992) and the Canada Transportation Act Review (2001).

Funding Options

Funding solutions are urgently required. More work is needed to develop creative solutions that recognize the financial limitations of all governments and suitability for different parts of the transportation system. The basic methods of funding infrastructure are:

- ▶ introduce **operational changes** that reduce the funding requirement (i.e., move more freight on rail to take pressure off the road system)
- **▶** direct private investment
- ▶ direct government investment
- public-private partnerships, including the use of toll roads

Different options will need to be applied in different circumstances.

CONCLUSIONS AND ACTION PRIORITIES

The strategic transportation system presented in this document is WTM's attempt at identifying a regionally significant network. It represents the western portion of the larger national transportation system and is based on the key trading system because of the region's heavy reliance on exports as the basis for its economic well-being.

This network makes possible for western Canada, annual trade with the US of about \$125 billion and international trade of about \$50 billion.⁶ It also supports a population base of 9 million, or 30% of Canada's population.

A strategic transportation system was defined in order to:

provide a common basis for determining long-term system development objectives through a more integrated multi-modal approach aimed at improving the efficiency and mobility of people and freight;

- help focus investment decisions on a core network that is significant to the west;
- present a preliminary case for greater federal financial support of this core network.

Those parts of the system that are not deemed to be "strategic" are not considered less important.

Rather, they will likely have different development objectives (e.g., equitable access for remote communities) and have different funding rationales (e.g., economic development).

WTM wishes to foster a new spirit of cooperation and collaboration between the private sector, provinces, cities and the federal government. Investing in the strategic system will help meet local, regional and national trade objectives and sustain growth. Moreover, enhancing the external trading system provides the dual benefit of improving intra-regional mobility.

Some of the key reforms needed to achieve the two key challenges—infrastructure renewal and development and funding—are highlighted in *Exhibit* 8.

⁶ Source: Transport Canada.

⁷ The specifics of cost sharing arrangements and funding formula, including allocation mechanisms is not part of this document and would require further discussion.

Exhibit 8: Western Canada Transportation Strategy Highlights

Infrastructure Renewal/Development

Goal: a transportation system that provides an equitable, cost-effective and reliable means of moving people and goods.

Strategies:

- 1. Confirm the multi-modal strategic transportation system (and criteria) presented in this document through joint government-industry planning sessions and/or a symposium to forge agreement on region-wide transportation investment priorities.
- 2. Work with stakeholders to ensure that infrastructure planning and development promotes economic development and improved intermodal connectivity, flexibility and timeliness.
- 3. Collaborate with relevant stakeholders to implement technologies that improve efficiency and system reliability. *
- 4. Consider alternative approaches to transportation system management and governance.
- Develop accessibility criteria and standards for rural and remote communities to guide investment levels and expectations regarding level of service.

Funding

Goal: a stable framework for the long-term financing of investment in transportation infrastructure.

Strategies:

- Develop a framework for financing sustained investment in transportation infrastructure. This should include reviewing the role/responsibility of each level of government, identifying practical funding alternatives and maximizing the efficiency of existing infrastructure as a first priority.
- 2. Promote private sector partnerships where relevant.
- 3. Promote multi-jurisdictional financing of intermodal facilities, including public and private transport infrastructure.

^{*} scope should include traffic/demand management, safety and infrastructure utilization

Appendix A Western Strategic Road Network

	Route	Km
вс	Trans-Canada Hwy.: Victoria to Alberta border	889
	Yellowhead Hwy.: Prince Rupert to Alberta border	1,083
	Hwy. 99: Whistler to Horseshoe Bay and Vancouver to US border	149
	Hwy. 97: US border to Salmon Arm and Cache Creek to	
	Alaska Hwy. (km 133)	1,205
	Hwy. 97C: Merrit to Peachland	105
	Hwy. 5: Hope to Tete Jaune Cache	537
	Hwy. 3: Hope to Alberta Border	846
	Highway 17: Victoria to Hwy. 99	42
	Hwy. 2: Dawson Creek to Alberta border	44
	Strategic local connectors:	
	South Fraser Perimeter Road	40
	SUB-TOTAL British Columbia	4,940
		450
AB	Trans-Canada Hwy.: BC border to Saskatchewan border	453
	Yellowhead Hwy.: BC border to Saskatchewan border	558 573
	Hwy. 2: Fort Macleod to Edmonton and Donnelly to North of Grimshaw Hwy. 3: Medicine Hat to BC border	373
	Hwy. 4: U.S. border to Lethbridge	104
	Hwy. 9: Calgary to Saskatchewan Border	327
	Hwy. 35: North of Grimshaw to NWT border	466
	Hwy. 43: Edmonton (Hwy 16) to BC border	499
	Hwy. 49: Donnelly to Valleyview	77
	Hwy. 28A, 28, 63: Edmonton to Fort McMurray region	476
	Strategic local connectors:	
	Calgary:	
	96 Ave. NE, links Hwy 2 to International Airport	
	Barlow Trail, 114 Avenue SE, 52 Street SE, links Hwy. 2 to CP Intermodal	2
	Barlow Trail, links Hwy. 2 to CN Intermodal	3
	Edmonton:	1
	184 Street, links Yellowhead Trail to CN Intermodal	1

	Route	Km
SK	Trans-Canada Hwy.: Alberta border to Manitoba border	652
	Yellowhead Hwy.: Alberta border to Manitoba border	690
	Hwy. 11 & 2: Regina to Prince Albert	389
	Hwy. 39: US border to south of Regina:	183
	Hwy. 6: US border to Regina	163
	Hwy. 7: Saskatoon to Alberta border	262
	Strategic local connectors:	
	Intermodal connections in Saskatoon and Regina from	
	National Highway System to intermodal rail terminals	9
	SUB-TOTAL Saskatchewan	2,348
MB	Trans-Canada Hwy.: Saskatchewan border to Ontario border	505
MID	Yellowhead Hwy.	267
	Hwy. 10: US border to Yellowhead Hwy (near Minnedosa) and from	207
	Hwy. 5 near Dauphin to Flin Flon	666
	Hwy. 6: Winnipeg to Thompson	740
	Hwy. 7: Winnipeg to Arborg	104
	Hwy. 75: US border to Hwy. 100	94
	Hwy. 12: US border to Trans-Canada Hwy.	148
	Hwy. 5:	157
	Hwy. 59:	98
	Hwy. 101: Trans-Canada Hwy. east junction to west junction	49
	Strategic local connectors:	
	Various local roads in Winnipeg providing links to intermodal	
	rail terminals and to the Winnipeg airport	82
	Various local roads in Brandon to intermodal rail facilities	30
	SUB-TOTAL Manitoba	2,940
	TOTAL = 14,092 km	