The CANAMEX Trade Corridor

A Building Block to Western Prosperity

The New Economy

Improved transportation services are required to meet the demands of just-in-time manufacturing, retailing, and e-business. What does the "2" in B2B (Business to Business) and B2C (Business to Customer) stand for? The "2" stands for transportation of goods, services and information between businesses and consumers.

The Economy, Trade and Transportation

A successful economy requires fast, flexible and efficient transportation services to support expanding industries, as well as to attract new businesses. Under NAFTA, international trade has grown rapidly, placing increased demands on transportation carriers and infrastructure to reach new markets in Mexico, US and Canada.

Highway Investment

Funding for highways is limited and, as a result, Departments of Transportation must look for alternatives other than solely building more infrastructure to accommodate the growth in demand. Changing regulations to improve highway efficiencies could delay capital investments and generate immediate benefits for users.

Transport Efficiencies

To meet the new competitive forces under NAFTA and the globalization of trade, transport carriers have had to significantly improve their efficiency. One of the major sources of efficiency comes from economies of scale:

- airlines are using larger planes
- railways are lengthening trains (10,000 ft.) and double-stacking
- pipelines are increasing diameters
- ships are increasing in capacity (post-Panamax vessels carrying up to 8,000 TEUs)
- telecommunication firms are broadening bandwidth.

Efficiencies reduce transport unit costs and raise service levels, which allow exporters to be more competitive in existing markets, expand to new markets, and in turn, pass on savings to consumers.

Truck Transport

The trucking industry has not been able to maximize efficiencies because truck weights and dimensions have been frozen in the US for over 20 years. Although trucking volumes continue to grow, the regulatory cap on trucking productivity restricts the growth capacity in trade amongst Mexico, US and Canada.

The new economy, with more value-added shipments and time-sensitive goods, requires significant efficiency improvements to truck transport. Adding more trucks and widening highways are not the only answers: Truck size economies are necessary to satisfy the future needs of manufacturers, shippers and consumers.

Truck Efficiency Benefits

Size economies result in significant trucking savings and in fewer trucks on the road, reduced collision rates, less cumulative damage to highways, less pollution and fewer bottlenecks, particularly at border crossings.

US Trade Corridors

The US Interstate System has a patchwork quilt of truck weights and dimensions which form barriers to efficient trade, particularly the priority trade corridors that run north–south. In many US states, including the CANAMEX Trade Corridor, maximum truck weights are set well below the capacity of the Interstate Highway System—129,000 pounds (permitted in several states). To meet the growing needs of shippers/receivers and consumers, US priority trade corridors need to harmonize and increase truck weights and dimensions to maximum allowable levels.

Maximizing Return on Corridor Investments

Increasing truck weights to 129,000 lbs. (the design standard) will maximize the returns on the significant investment by users of the US Interstate Highway System. Not using the full potential of the Interstate System is both a wasted investment and a significant cost to manufacturers and consumers.

CANAMEX Trade Corridor

It is proposed that maximum weights along the CANAMEX Trade Corridor be set at 129,000 pounds and that Rocky Mountain Doubles (102 feet) operate under permit. This proposal will benefit all shippers and consumers in every state and promote and facilitate trade amongst Mexico, US and Canada.

What is CANAMEX?

The term "CANAMEX" is drawn from the NAFTA country names: CANada, AMerica and MEXico. The CANAMEX Trade Corridor links the three countries and stretches 3,800 miles or 6,000 km from Anchorage, Alaska to Mexico City, D.F., linking all of western North America (Figure 1). The Corridor, a truly Pan-American route, parallels Interstate Route 15 in the United States and serves Alberta, northwestern Canada and Alaska at the north end, the States of Montana, Idaho, Utah, Nevada and Arizona, plus the western Mexican States, including Sonora, Sinaloa, Nayarit, Jalisco, Guanjuato, Queretero, Estado de Mexico and the Federal District.

Although the CANAMEX Trade Corridor along I-15 will remain a focus, the Camino Real Trade corridor will be considered as a complementary route to Mexico. The Camino Real Corridor, which runs along I-25, has been categorized by the Federal Highway Administration as a high-priority corridor (Figure 2). Alberta will continue to work with Montana on trade corridors.

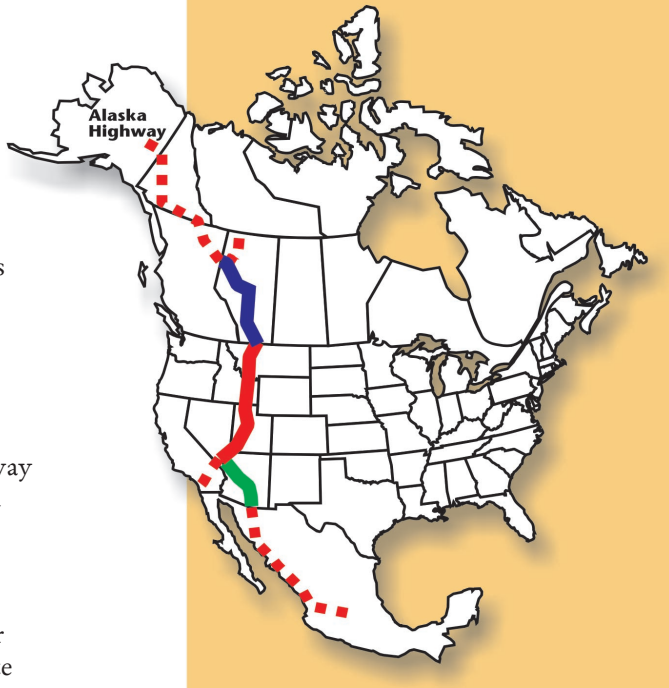
The goals of the CANAMEX Trade Corridor are to:

- improve access for the north–south flow of goods, people and information;
- increase transport productivity and reduce transport costs;
- promote a seamless and efficient intermodal transport system; and
- reduce administration and enforcement costs through harmonized regulations.

Together these goals will facilitate the growth of trade and subsequently promote economic development in all the communities along the Corridor. Consumers will also benefit from lower prices.

The CANAMEX Trade Corridor

CANAMEX was one of the first north–south corridors designated as a High Priority Corridor under the National Highway Systems Designation Act. Alberta initiated CANAMEX in the early 1990s and has continued to seek US cooperation on harmonization of regulations.



Legend

- CANAMEX Corridor LCV
  - Interstate 15
- CANAMEX Corridor Non-LCV
  - US 93
  - Interstate 10, 19
- CANAMEX Corridor Alberta
  - Alberta 34, 43, 2, 3, 4
- CANAMEX Extensions

Alaska 2	(Non-LCV)
Yukon 1	(Non-LCV)
Alberta 2, 35	(Non-LCV)
Interstate 15	(Non-LCV)
Mexico 15	(Non-LCV)

Figure 1

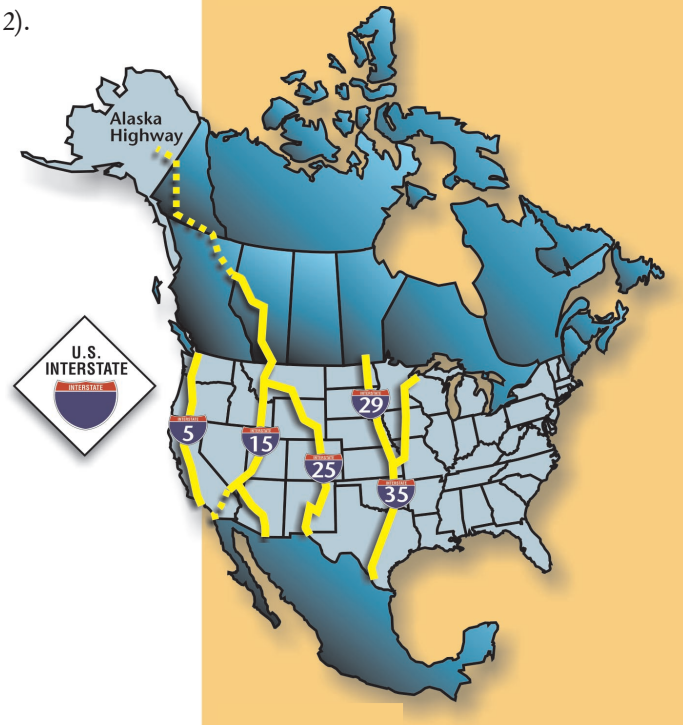


Figure 2

Figure 3

The CANAMEX Trade Corridor will have a trailblazer sign to identify the route.

To maximize returns on the substantial investment in existing Corridor infrastructure and to facilitate trade, there are several initiatives required:

- use of Intelligent Transportation Systems to facilitate trade and traffic flows;
- install telecom and fibre optics (truck permitting, tourism, customs and immigration);
- harmonization of trucking regulations and coordinated permitting;
- new border facilities and regulatory efficiencies; and
- where needed, improvements to the infrastructure.

NAFTA Trade

Over $2 billion in trade is transported across the Canada/US border every day. Across Western Canada there are approximately 6,000 north-south truck trips per day.

Alberta is Western Canada's largest economy and transports over 80% of its exports to the US. From Alberta, truck exports to the US and Mexico amount to about $8 billion annually and $5 billion in imports from the US and Mexico. At the Coutts/Sweetgrass border crossing on the CANAMEX Trade Corridor (Figure 4), truck volumes have increased, on average, 9.1% per annum during the last decade.

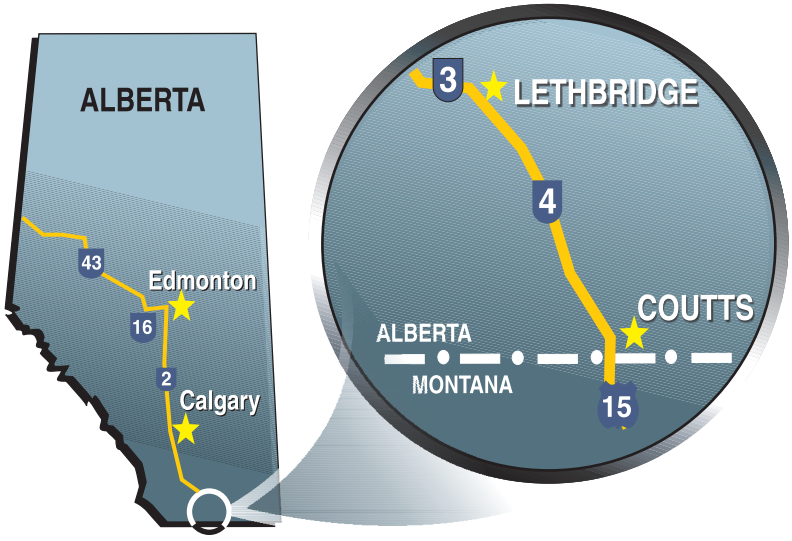


Figure 4

Alberta is Investing in CANAMEX

The Province of Alberta is spending up to $1 billion (with no federal contribution) to twin the remaining portions of the highways that make up the CANAMEX Trade Corridor. The upgrading of Highway 4 to the Canada/US border will be completed by 2002 (figure 4). This will create a 375-mile (600 km) 4-lane divided route from the border to the north of Edmonton. The entire Corridor (727 miles or 1170 km) will be completed up to the Alberta/BC border and the start of the Alaska Highway by 2007.

Enhancing Competitiveness

The trucking industry's ability to respond to the demands of the new economy is severely restricted by the freeze on truck weights and dimensions. The result of the freeze is a patchwork quilt of regulations (see Table 1) which means that interregional trade must be conducted at the lowest common denominator, i.e., 80,000-lb. trucks. Thus, freight is not being transported with maximum efficiency.

Truck transport costs and service levels are not able to respond to the demands generated by the opening of new markets, just-in-time manufacturing and retailing, and e-business.

Table 1 Variations in Truck Weights and Dimensions

Jurisdiction	Maximum Vehicle Weight	Maximum Length
Alberta	137,500 lbs.	102 ft.
Montana	129,000 lbs.	100 ft.
Idaho	105,500 lbs.	105 ft.
Utah	129,000 lbs.	110 ft.
Arizona (I-15 only)	129,000 lbs.	110 ft.
Nevada	129,000 lbs.	105 ft.
California	80,000 lbs.	Not Specified

* Allows 129,00 lb. on GVWs on some state highways and has requested a 129,000-lb. exemption for some interstate highways.

Stable Economies: Montana Example

The State of Montana conducted a study to determine the impact to their economy of rolling back truck weights from the current limit of 118,000 lb. to 80,000 lb. The cost would be considerable: Gross State Product (GSP Value Added) was found to be consistently 0.4 percent below that achieved under existing GVW regulations. Consequently, Montana would experience a significant and continual decline in GSP over the duration of the roll-back of truck weights. In the first year GSP would drop $20 million, $50 million in year 5, and $120 million annually by year 20. For the State of Montana this represents substantial reductions in economic growth and job losses.

By extension, those states that have frozen truck weights below the maximum design standard of the Interstate System are severely restricting the growth of their state economies by up to 0.5 percent per annum!

A Win-Win Proposal

Highway authorities can reduce shipping costs, decrease truck traffic, improve motorist safety, increase economic competitiveness, protect highway infrastructure and achieve environmental benefits without substantial new capital investments in roads.

The Alberta proposal is based on two principles:

1. safety will be the highest priority; and
2. existing infrastructure will be protected.

The Alberta CANAMEX proposal is to:

- harmonize maximum gross vehicle weights at 129,000 lb. along CANAMEX Trade Corridor;
- permit Rocky Mountain Doubles (102 ft.) with specified routes, driver qualifications, vehicle configuration and operating times; and
- run a pilot project for 3 years and monitor impacts on safety and infrastructure plus economic benefits.

The higher vehicle weights reduce unit costs for heavier goods while increased length helps those goods that have volume constraints.

Several US jurisdictions already permit these limits on Interstate Highways, and Idaho now permits 129,000 lb. on some state highways. This proposal should have minimal additional impacts on highway safety or highway infrastructure. Widening highways and adding more trucks are not the only responses to improve highway transport efficiencies.

Cost Savings are Considerable

Based on case studies, a gross vehicle weight (GVW) at 129,000 lb. could reduce truck transport costs by 20–35%:

Case One: A truck shipment of fertilizer from Pocatello, Idaho to Calgary, Alberta is currently limited to Idaho's maximum GVW of 105,000-lb. The transport cost is $42.69 per ton for this 750-mile trip. If hauled instead by a 129,000-lb. vehicle, the cost would be $34.32 per ton. The saving is around 20%. The same savings would be available to any shipper for a similar length trip within the CANAMEX states or to neighbouring states. In addition to reduced transport costs, unit handling costs would be lower as potentially would be inventory costs.

Case Two: A truck shipment of processed beef from Calgary to Barstow, California is currently limited to California's 80,000-lb. GVW. The transport cost per ton is $122.45. If this load is hauled by a 129,000-lb. vehicle, the cost is reduced to $81.33 for a saving of almost 34%. Some of these savings will be passed on to the consumer.
About two-thirds of I-15 traffic has an origin, destination, or both in the Corridor, thus a substantial portion of trade could benefit from harmonizing trucking regulations.

Safety Performance

A safety performance study of commercial trucking, conducted over 4 years in Alberta from 1995—1998, demonstrated that LCVs were involved in very few collisions and that LCVs had the lowest collision rate of all commercial vehicles (even lower than personal vehicles). In all fatal and major injury collisions, LCVs were found not at fault. Amongst LCVs, the lowest collision rate was achieved by Rocky Mountain Doubles, the shortest LCV (102 ft. or 31 m) which is proposed for the CANAMEX Trade Corridor pilot project.

Infrastructure Capacity Benefits

Highway and border crossing capacities would be increased if larger trucks were permitted. Using larger trucks reduces the number on the road, as is the experience in Alberta. Furthermore, bottlenecks at border crossings would be reduced as there would be fewer trucks to inspect and more freight would be processed per vehicle check. Such reductions represent savings by delaying infrastructure expansions and by requiring fewer staff.

Highway Safety

For over 30 years, Long Combination Vehicles (LCVs) have been operating in Alberta primarily on 4-lane provincial highways. LCVs operate under permit with strict safety requirements: better skilled drivers, more experienced drivers, defined truck configurations and operational restrictions as to appropriate travel times by day or week and weather conditions. Like the US, Alberta highways are designed to accommodate large commercial vehicles and the 4-lane divided highways allow for simple passing manoeuvres.

In Alberta, LCVs constitute, on average, one in every 100 vehicles on the highway. Based on a one-year study of driver performance, LCVs were found to: travel mostly at off-peak times, at significantly slower speeds (below posted limit) and with the longest gap between it and the preceding vehicle (compared to other vehicles).

Table 2 Annual Alberta Truck Collision Rates

Vehicle Type	Vehicles in Collisions	Distance (1000M) Km	Collision Rate
Unit Truck	179	0.9	187
Semi	230	2.9	80
LCV	9	0.6	16

Source: See Website

There is no evidence that LCVs increase the risk of collisions or are more prone to collisions. The combination of fewer trips for a given volume of goods by LCVs and their low collision rate has the potential to decrease collision risk by 8 times compared with a semi-trailer.

Protecting & Maximizing the Return on Highway Investment

The highways that make up the Corridor have been designed and built to provide high-capacity traffic flows and accommodate larger and heavier vehicles. The minimum standard is a 4-lane divided highway. In Alberta the maximum gross vehicle weight (GVW) is 63,500 kg or 140,000 lb. that applies to all commercial vehicles, regardless of length. For the US Interstate System, the maximum GVW by design standard using Bridge Formula B is 129,000 lbs. In both countries, the higher GVWs are achieved by adding axles with the maximum axle weight the same for small trucks as for larger trucks.

The following table illustrates the relative damage done to a highway by 3-, 5- and 8-axle trucks to move one million tons, using Alberta GVWs.

Table 3 Highway Impact of Larger vs Smaller Trucks Delivering 1 Million Tons

Truck Size	ESALs	Truck Trips	ESAL Impact	Damage Index
3-Axle	2.830	86,382	244,461	1.00
5-Axle	4.470	35,710	159,624	0.65
8-Axle	5.876	21,292	125,112	0.51

ESAL: Equivalent Single Axle Loading that measure wear and tear on highway
Source: See website

The 8-axle LCV does less cumulative damage to a highway because it requires significantly fewer trips to move a given volume of freight. Compared to a 5-axle truck, the 8-axle does about 22% less damage. Fewer trips also mean fewer trucks on the highway, freeing up valuable space for motorists and reducing motorists' exposure to the larger vehicle.

Environmental Benefits

Environmental benefits accrue from using larger trucks. Take the example of moving 100,000 tons of freight over 1,000 miles: a 3-axle truck would use 14.8 million gallons of fuel; a 5-axle, 6.5 million; and an 8-axle, 3.2 million. The larger 8-axle truck would reduce pollutant emissions by over 30% compared to a 5-axle truck. An additional environmental advantage of the CANAMEX Trade Corridor could be realized through strategically staged alternative refueling infrastructure. This "green corridor" concept for freight movement with alternative fuels is already commercially viable through recognized engine manufacturers and low emission fuels such as liquefied natural gas.

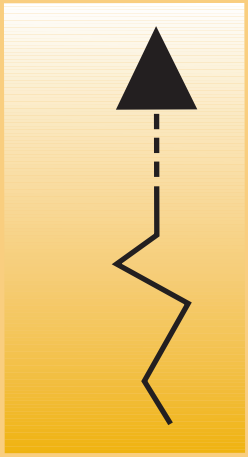
Impact on Railway Industry

The objective of the CANAMEX Trade Corridor is to ensure cost-effective services in all transport modes to facilitate trade and regional economic growth. Since governments/taxpayers must pay to maintain highways, there is no desire to see any unnecessary migration of freight from rail to trucks.

Trucks and railways have different yet complementary strengths that can serve a wide variety of shipper needs. Heavy bulk commodities that are hauled long distances tend to rely on railways. Commodities such as coal, chemicals, lumber, grain and sulphur are transported by rail. Truck freight is higher-value goods, including perishables (foodstuffs) or time-sensitive deliveries — just-in-time and e-commerce.

Rail and truck are truly complementary, with very little volume up for competition (less than 10%). For example: grain goes from the farm to elevator by truck (the larger the truck, the lower the unit cost) and then by rail to tidewater; and containers travel from port to major markets by rail and local/regional delivery is by truck.

The railway industry in the US has experienced a near doubling in productivity since 1988, in part due to longer trains and double-stacking containers, i.e., size economies. To strengthen the complementarity of the two modes, trucks must achieve similar scale economies through increased weight and length. Efficient rail and truck transport together along the entire supply chain is the only way to provide the lowest shipping costs and consumer prices.



Impact on Highways: Montana Example

Montana State University conducted a study to determine the impact of rolling back GVWs from the current 118,000 lb. to 80,000 lb. trucks on two—dairy and retail fuel. From an infrastructure perspective, the reduced GVW caused an increase in pavement damage of over 60%. When these results are extrapolated to the entire trucking industry, the increased road damage is substantial when GVW's are reduced.

Building on Current Successes

CANAMEX builds on the solid success of beneficial agreements between Montana and Alberta.

An agreement reached in 1991 allows Alberta Rocky Mountain Doubles (102 feet) up to 137,500 lb. to travel on Interstate 15, between the intermodal rail distribution centre at Shelby, Montana and the international border. In return, Montana truck configurations have access to most of Alberta's petrochemical and fertilizer plants as far north as Edmonton/Redwater. Everybody wins—rail, truck, shipper and consumer.

Montana and Alberta operate a joint vehicle inspection station at Coutts that reduces state and provincial capital and operating costs. Truckers have been able to reduce down time by stopping only once.

In cooperation with Montana and Alberta, the US and Canadian federal governments are designing a joint customs and immigration facility at the international boundary to accommodate the growing traffic and facilitate the seamless flow of traffic.

So What's Left To Do?

To promote trade it is first necessary to eliminate any barriers, be they infrastructure, services or regulations. Regulatory barriers exist in trucking with a patchwork quilt of weights and dimensions along the CANAMEX Trade Corridor. Only governments can change regulations.

- Governments need to focus on improving productivity within the trucking industry to increase economic efficiencies for shippers and consumers. One way to accomplish this is to commit to harmonizing truck weights and dimensions and implement a 3-year pilot project. The pilot will develop permitting procedures and measure the impacts in terms of safety, infrastructure and economics.

- As reauthorization of TEA-21 is expected to occur in 2002, the timing is appropriate to review trucking regulations. Reauthorization presents an opportunity for states to:

  (1) harmonize regulations and
  (2) support intermodal access to the highway network

- The CANAMEX Coalition of US states is encouraged to champion the need for harmonized regulations as one of the key components in their plan to the US federal government.
- Canadian, Mexican and US producers, manufacturers and shippers need to clearly indicate their support for more efficient transport services in the CANAMEX Trade Corridor.

Through cooperation, we can realize the full potential of the CANAMEX Trade Corridor and the significant benefits it's capable of delivering.

Alberta
TRANSPORTATION

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