

# The Economic Effects Of The U.S. 1991 Size And Weight Freeze: Case Studies

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## ABSTRACT

The Intermodal Surface Transportation Efficiency Act of 1991 enacted a fundamental change in size and weight policy in the United States of America, through what is known as the "LCV freeze." As defined in ISTEA, Longer Combination Vehicles (LCVs) are vehicle combinations having two or more trailers and weighing more than 80,000 pounds. Operation of these vehicles is now limited to those routes, configurations, and weights in "actual, lawful operation on a regular or periodic basis (including seasonal operations) in that state on or before June 1, 1991." This paper explores, through carrier case studies, potential long-term economic effects of the LCV freeze.

## INTRODUCTION

For more than 35 years, United States Federal law allowed states, shippers, and the trucking industry to explore innovations in vehicle design and configuration, routes, operating rules, and conditions which contributed to the growth of local economies. However, beginning with the 1956 Federal-Aid Highway Act, the Congress placed certain size and weight controls under the purview of the Bureau of Public Roads (later the Federal Highway Administration) to regulate limits, primarily vehicle weights, under the U.S. Federal Bridge Formula B. The 1956 Act did recognize individual states' special circumstances by granting "grandfather rights," as determined by FHWA; and a 1982 Act returned to the states the right to make their own legal determination as to those rights.

But the 1991 statutory change drastically altered the manner in which states were able to direct size and weight policy. Western states were particularly impacted since the operation of Longer Combination Vehicles had evolved there in response to local industries who were far from markets and who had few transportation alternatives.

The LCV freeze has had a negative impact on economic development efforts in Western states. The case

studies which follow illustrate the adverse policy implications of the freeze on transportation innovations as well as the effect on local economies and international trade.

## METHODOLOGY

The case studies will show how the introduction and use of Longer Combination Vehicles has enhanced regional economies in states where the producers are far from the market destination and where transportation alternatives are few. The companies selected for this study are representative of operations in the Western United States. The case studies presented involved in-depth interviews with company personnel and, in some cases, on-site visits. The interviews included an analysis of the types of configurations operated, the products hauled, market destinations, intermodal operations, equipment costs, configuration effects on infrastructure routes, and freight rates. In each case, the resulting analysis dealt with the potential long-term effects of the LCV freeze as enacted in ISTEA-1991.

## BTI

## REGULATORY OVERVIEW

The state of Wyoming was unable to prove it had "grandfather" rights at the time of the passage of the Interstate and Defense Highway Act of 1956. "Grandfather rights" are provisions in state laws which exceed the maximum limits adopted in the Federal law of 1956. The authority to issue divisible load permits for weights in excess of the maximum limit allowed in Federal law led to the development of Longer Combination Vehicles operating over 80,000 pounds gross vehicle weight in the Western States and in other forms, such as the Michigan "centipede," in other areas of the United States.

In Wyoming's case, commercial vehicle operators were limited to the maximum gross weight allowed on the Interstate Highway System under Federal law, or 80,000

pounds. The state had authorized limits of 117,000 pounds on all its Primary and Secondary highways by 1985. Carriers could use these weights only in limited circumstances since the Interstate Highway System had replaced many sections of Primary and Secondary highways in Wyoming. Interstate traffic between Wyoming and surrounding states was hampered, since all but one of the border states allowed greater than 80,000 pounds on the connecting Interstate highways (I-80, I-90 and I-25). Movement of goods on the Interstate System between Wyoming and other states was thus effectively restricted to 80,000 pounds.

In 1985, the Wyoming State Legislature passed a Joint Resolution authorizing the State Highway Department to conduct a two-year test allowing vehicle combinations to operate on the Interstate Highway System at weights above 80,000 pounds in accordance with Formula B. (Formula B is the Federal Bridge Formula computed as follows:  $W = 500 \left( \frac{LN}{N-1} \right) + 12N + 36$  Where: W = maximum weight in pounds carried on any group of two or more axles computed to the nearest 500 pounds; L = distance in feet between the extremities of any group of two or more consecutive axles; N = number of axles in the group under consideration.)

When sanctions of Federal Highway Funds were threatened, the Wyoming congressional delegation sought to redefine the project as a demonstration to be authorized under Federal law. It was adopted as a part of the DOT Appropriations Act of 1986. The resulting economic success and safety record of the demonstration insured its reauthorization and permanent adoption in ISTEA-1991.

Subsequently, the Wyoming Department of Transportation and the industry have jointly supported state legislation allowing the use of uncapped Formula B on the state's highways. The "freeze" of size and weight initiatives contained in ISTEA-1991 allows those operations to take place today only off the Interstate system of highways.

### **BTI OF RIVERTON**

In the five-year period (1989-1993), Wyoming's soda ash exports increased from 2.4 million short tons to 2.64 million short tons, or about 2% per year. It is expected that the GATT/NAFTA agreements will have a positive long-range impact on soda ash exports. BTI of Riverton (formerly Bonneville Transloaders Inc.) is a company founded in 1985 to solve a transportation problem facing trona (soda ash) producers in Southwestern Wyoming.

The five trona mines in this area are the world's only commercial producers of natural soda ash, used in the manufacture of glass, detergents, sodium chemicals, pulp paper, and other industrial products. These mines, like many natural resource producers, are located far from their markets, which are situated in the midwest, on the east coast, or overseas. The mines were, in fact, a captive

market for a single rail carrier, and transportation was a high percentage of the total soda ash costs, in some cases 50% of the delivered price of the product.

BTI's original haul in the demonstration period was from the trona mines west of Green River, Wyoming, 20 miles on I-80, then via primary highways to Bonneville, WY. The processed soda ash was trucked 200 miles to a transloading facility operated by a competing railroad. The increased transportation competition reduced freight rates by two to five dollars a ton in the first two years of operation. By 1995, freight rates into Chicago were \$10 a ton cheaper than in 1985.

In the past decade, BTI has grown to be the largest Wyoming based motor carrier, operating more than 11 million miles each year. The company employs more than 175 people in two locations. The entire fleet operation consists of Rocky Mountain Doubles combinations, i.e., Longer Combination Vehicles consisting of a tractor and two trailers, with a combined trailer length of 81 feet or less. The company plans to open a third terminal in the spring of 1995 to service a cement producer in Southeastern Wyoming.

The original equipment of choice was the Rocky Mountain Double, consisting of a 240 inch wheelbase tractor, a 39' 2" semi-trailer and a 23'4" trailer. Wyoming law allows 81 feet of combined trailer length, with no overall maximum length. The operational unit which evolved is shown in Figure 1. This 8-axle unit would accommodate a gross weight of 117,000 pounds with a payload of 81,740 pounds.

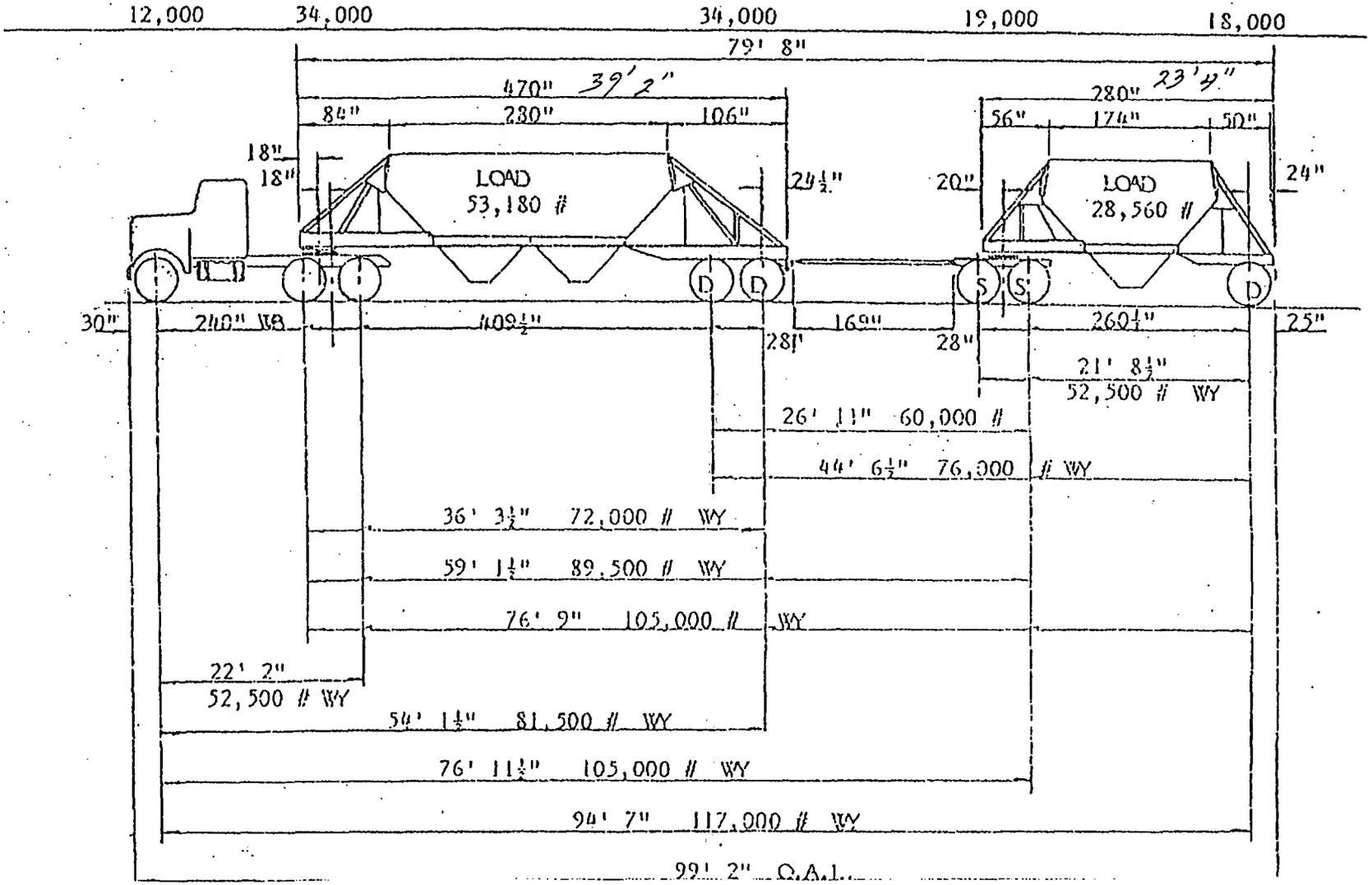
BTI now takes full advantage of the "uncapped Formula B" authorized and uses a 13-axle combination on its soda ash haul, operating at a gross weight of 146,500 pounds (see Figure 2). Payload has been increased from 81,740 pounds to 102,850 pounds.

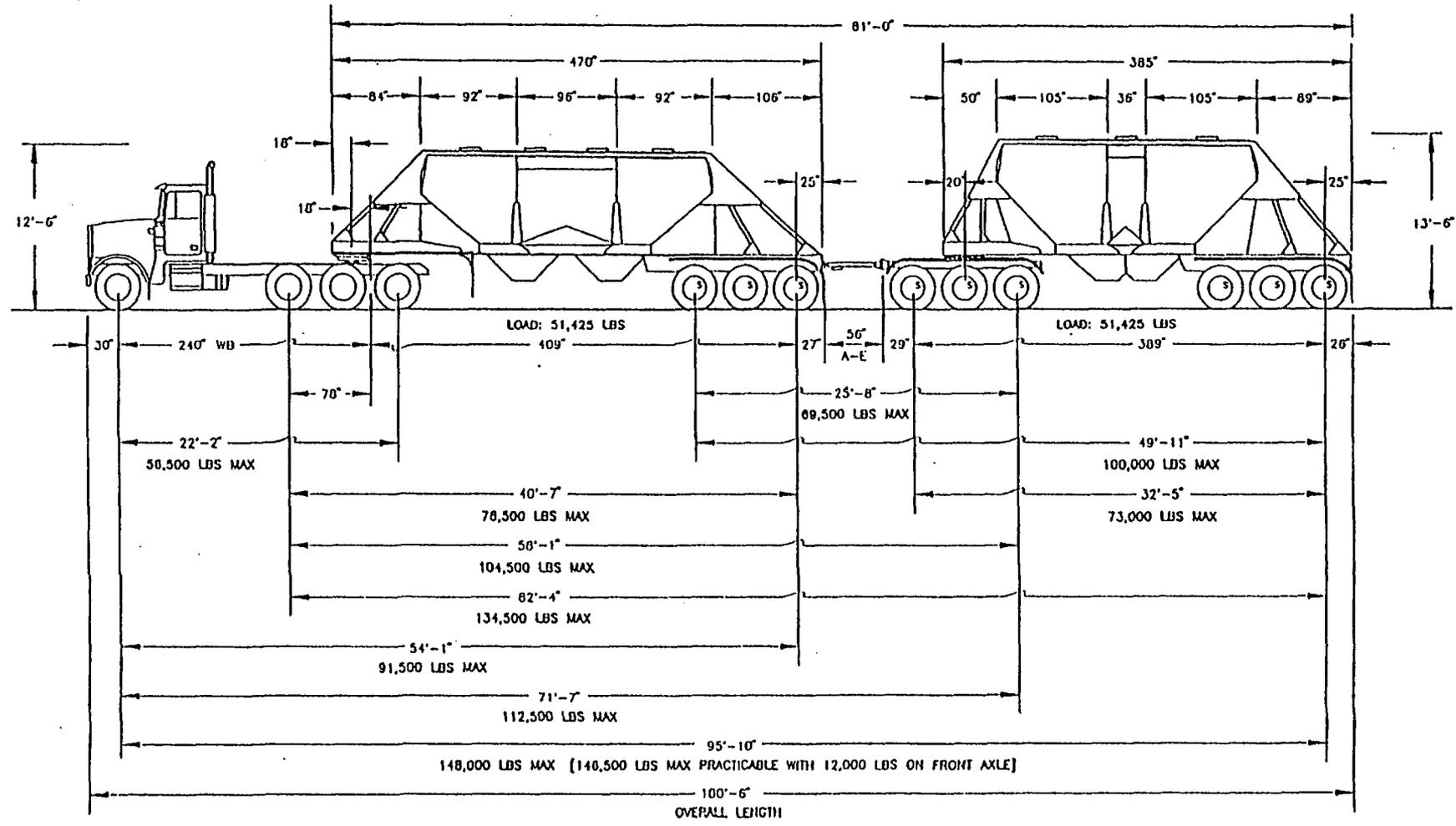
Equipment used in the soda ash haul costs in excess of \$164,000 per combination. Forty-eight tractors are currently based in the Riverton operation. In 1995, the intermodal transloading operation at Bonneville is scheduled to expand with a sulfur haul from a developing natural gas field in Central Wyoming.

### **BTI—KEMMERER**

BTI of Kemmerer, started in 1990, is located on US 30 in far Western Wyoming. It is the base for a coal haul from a coal mine to General Chemical's plant located near I-80. The coal, formerly hauled by rail, was moved to highway transport when the railroad abandoned the short haul in 1990. The 60 mile haul (one-way) is restricted to 117,000 pounds gross weight, since two miles of the haul are on I-80. Drivers make three round trips per day. Under current Wyoming law, the gross weight could increase to 146,500 pounds using uncapped Formula B. However, the equipment changeover did not materialize quickly enough and the LCV freeze precludes this productive use of the newer equipment. Currently BTI hauls 500,000 tons of coal per year from the

Figure 1





EQUIPMENT TARE WEIGHTS ARE ESTIMATED (+1 OR - 3%)

Figure 2

Pittsburg-Midway mine to the chemical plant near I-80. The increased payload opportunity provided under Formula B could decrease freight rates up to 12%.

The Kemmerer operation serves as the base of BTI's western expansion. Currently, BTI hauls sulfur to Idaho, Utah, and Nevada and has hauls of other products, such as cement and ammonium nitrate to Montana, Illinois, Nebraska, and Colorado.

BTI's range of product hauls has been expanded from the original soda ash to include coal, cement, sulfur, caustic soda, lime, and ammonium nitrate as well as its own fuel.

In its decade of operation, BTI has operated nearly 100 million miles. In the last five years, the company has averaged more than 11 million miles per year. In this decade BTI has compiled an exemplary safety record, experiencing only 14 accidents. The frequency rate of accidents for BTI is less than half of that for all commercial vehicles in Wyoming, even though the majority of its travel is on two-lane roads.

#### FREEZE IMPACT

The current Federal freeze hampers flexibility of operations as the company must load to the lowest limits available on its current routes. One current operation hauling lime into Colorado via WY 789 cannot achieve maximum efficiency because of the LCV freeze. BTI must drop its pup trailers in Baggs, Wyoming on the Colorado border and haul single trailers into its Craig, Colorado destination. The number of trips are increased, and exposure to accidents is also increased.

Maximum efficiencies in BTI's transportation of bulk commodities and the continued expansion of intermodal operations are predicated on the restoration of size and weight decisions to the states. A Federal rollback in size and weight laws to 80,000 pounds would increase freight rates by at least 30%, with a corresponding increase in equipment and labor costs. The ultimate effect of this action would be the closure of the company and the loss of transportation alternatives by the producers who have benefited from the cost-effective choices provided by LCV operations.

#### COASTAL CHEM, INC.

##### OPERATIONAL BACKGROUND

In 1986 Coastal Chem, formerly Wycon Chemical Company, a nitrogen fertilizer manufacturer, expanded its plant (\$51 million) in Wyoming to manufacture low-density ammonium nitrate destined for the explosives industry. Highway transportation to the plant was provided by access to I-80 and I-25 and by a railroad spur. At that time, Interstate highway weight limits in Wyoming were restricted to 80,000 pounds gross vehicle weight. Coastal Chem could not compete in a market, inside Wyoming, less than 400 miles away, with part of the route on I-25. Their competitors, Canadian producers, traveled across Montana, entering Wyoming

on Primary and Secondary highways at weights of 117,000 pounds (Wyoming's limit on those highways). The effect was to shut out the local producer from serving customers within its own state.

Coastal Chem has recently completed an additional expansion to its Cheyenne, Wyoming operation which will move field grade butanes to Cheyenne to be upgraded to methanol and MTBE (a gasoline additive) used to reduce air pollution in non-attainment areas. Nearly 100% of these products will move by highway.

Coastal Chem's \$190 million expansion in 1993 in Cheyenne and Nevada brings its work force in the region to 250 jobs with an \$11 million payroll and transportation expenditures of more than \$21 million annually going to western railroads and motor carriers.

#### OPERATIONAL SERVICES

Even though served by rail facilities, truck transport has typically provided a major component of the total service required. Truck movements, as illustrated in Figure 3, increased from 10,779 in 1985 with 242,423 tons shipped to 20,204 movements in 1993 with 565,712 tons shipped.

COASTAL CHEM, INC. - Cheyenne, Wyoming		
	<u>Truck Loads</u>	<u>Tons Shipped</u>
1985	10,779	242,423
1986	12,945	313,881
1987	15,339	382,576
1988	16,926	430,392
1989	17,220	443,420
1990	18,337	463,170
1991	18,950	492,700
1992	19,044	513,188
1993	20,204	565,712

Figure 3. Historical Truck Shipment Trend

What may surprise many is that introduction of the Longer Combination Vehicles at Formula B weights has created a dramatic growth in rail shipments as well as highway transport. Figure 4 documents the rail transport history.

In 1985, Coastal Chem shipped 51,915 tons of product by rail; and, in 1993, the tonnage increased to 211,100 tons annually. This increase of 159,185 tons is a 307% increase in rail shipments. There were 611 rail movements in 1985; and, by 1993, rail movements increased to 2,400—a 298% increase.

As shown in Figure 5, standard truck movements (5-axle tractor, semi-trailer at 80,000 pounds) were initially, and continue to be, a major component of the service provided. Standard truck movements increased by more than a third during the 1985-1993 period.

The use of Longer Combination Vehicles has also allowed Coastal Chem to access markets located on I-80 in Western Wyoming. Coastal Chem is now able to serve

coal mine markets in this area which previously were served only by Utah competitors who delivered products into Wyoming on secondary highways at the higher gross weights that were allowed.

COASTAL CHEM, INC. - Cheyenne, Wyoming		
	<u>Rail Cars</u>	<u>Tons Shipped</u>
1985	611	51,915
1986	1,398	119,490
1987	2,261	195,800
1988	2,136	174,776
1989	1,778	156,290
1990	2,199	190,823
1991	2,109	178,720
1992	2,291	194,735
1993	2,400	211,200

Figure 4. Historical Rail Movement Trend

COASTAL CHEM, INC. - Cheyenne, Wyoming			
	<u>LCV Truck Tons</u>	<u>Rail Tons</u>	<u>Std. Truck Tons</u>
1985	0	51,915	242,423
1986	52,596	119,490	261,285
1987	82,377	195,800	300,196
1988	99,218	174,776	331,174
1989	117,622	156,290	325,798
1990	135,241	190,823	328,929
1991	157,400	168,720	335,260
1992	171,388	197,735	342,800
1993	218,172	211,200	347,540

Figure 5. Comparison of Tonnage by Carrier

#### FREEZE IMPACT

In 1990, Coastal Chem computed the potential effect of a rollback to 80,000 pounds gross weight on the Interstate System of highways. The following actual tonnages would be shipped from surrounding states, and Canada and would be lost to the Wyoming producer:

Western Wyoming—I-80	45,000 tons
Utah and Idaho destinations	29,000 tons
Montana, South Dakota and Northern Wyoming destinations	<u>89,400 tons</u>
Total tonnage lost:	163,400 tons

Coastal Chem's experience demonstrates the need for a balanced transportation system, utilizing a variety of modes to serve different markets.

Distribution costs are the major factor in the success of United States producers in competing with imports. With the changes in the price of natural gas feed stock, the nitrogen product business is one of the most

competitive in the United States. Russia (and other Eastern bloc countries) and Canada are major suppliers of nitrogen products in the United States. Many of these countries had no profitable use for their natural gas, and nitrogen plants provided them with a salable product to generate hard currency for other requirements in their economies. Since these countries place no true value on the natural gas feed stocks, they are able to deliver nitrogen products in the United States' markets at a price far below the actual cash costs of United States producers. Over the past 20 years more than 40 of these processing plants have closed. The primary cause has been import pressures. With distribution costs the major factor in the success of US producers to compete with the imported product, the ability to use productive transportation modes becomes a major concern for companies competing in a global marketplace.

#### TRANSYSTEMS, INC.

##### OPERATIONAL BACKGROUND

Transystems, Inc., is a family-owned motor carrier based in Great Falls, Montana. The company has more than 30 years' experience operating Longer Combination Vehicles, including 27 years of Formula B LCV operation in the Rocky Mountain West. Transystems has significant design experience as the company has pioneered in the development of LCV vehicle configurations tailored to meet the customer's need.

The Wyoming and Nebraska beet producers are typically small family farm and ranch operations with sugar beets the major cash crop. Over the past three decades, Transystems has operated Longer Combination Vehicles in 11 of the Western States with sugar beets as one of the principal products transported.

The transportation and storage of sugar beets is a high risk venture with frequent losses of the beets due to freezing, and deterioration caused by poor ground condition, mud, and snow. When such conditions are present, beets must be moved to the factory immediately to avoid major sugar loss and damage to the rest of the stockpile. The cost of operating a sugar factory is approximately \$3,500 per hour. Failure to maintain a continuous supply of raw beets results in a substantial pro-rata waste associated with that cost.

##### OPERATIONAL SERVICES

The ability to use uncapped Formula B off the Interstate System in Wyoming has enabled Transystems to transport loads of 129,000 pounds, delivering a 16% rate reduction to these small businesses while reducing both miles and trips by 25% and a 25% reduction in accident exposure.

Transystems has been the contract hauler of sugar beets at the Torrington, Wyoming Holly Sugar Company factory for more than 25 years. Holly Sugar receives approximately 50% of its Torrington beets from Western Nebraska. Transystems uses a single fleet of trucks to

serve the facility because shipments alternate between Wyoming and Nebraska. Frequently, trucks will haul from both states on the same day. Transystems has successfully operated 8-, 9-, or 10-axle units at weights up to 128,000 pounds in this area for more than 25 years. Figure 6 illustrates the 8-axle configuration currently in use.

#### TYPICAL FREEZE IMPACT

Recently Transystems replaced its Wyoming fleet with the 10-axle configuration shown in Figure 7. The new equipment is designed to take advantage of the size and weight limits allowed on the Wyoming Primary system of highways.

An absurd situation caused by the ISTEA freeze exists because new equipment purchased to take advantage of the productive Wyoming limits gain no payload increase despite the increased number of axles on the Nebraska side of the line. As a result, with no productivity increase and only an increased equipment cost, freight rates actually go up in Nebraska because of a productivity increase in Wyoming in which Nebraska cannot participate.

Wyoming and Nebraska have the same axle weight and bridge laws, and both states comply with Federal law. Wyoming allows uncapped Formula B weights as long as no axle exceeds the maximum axle limit, no combination of axles exceeds the bridge formula, and total combined trailer length does not exceed 81 feet. Nebraska, in restricted circumstances, allows axles, bridge, and gross weights to be exceeded by as much as 25% and length by 10%, yet cannot allow credit for extra axles or length provided for in the Federal formula.

Nebraska has expressed a willingness to equalize its weights with those of Wyoming but is unable to do so because of the freeze. This is especially burdensome for one factory which sits only a few miles inside the Wyoming border. Since Nebraska is willing but unable to accommodate changes because of the Federal freeze, Transystems must now maintain a separate fleet of trailers with which to replace the second trailer in the Wyoming combination so that the equipment may operate in Nebraska. Units designed to operate most efficiently in Wyoming with 10 axles at 128,000 pounds gross vehicle weight cannot be operated in Nebraska because they exceed the permit length in Nebraska.

Transystems now runs the older, less desirable equipment in Nebraska, loses substantial productivity for the shipper, and engages in daily trailer changes which further erodes productivity and increases the possibility for industrial accidents. To address the Nebraska length limits, Transystems maintains a fleet of older, smaller three-axle trailers. These older trailers replace the new four-axle second trailers when the units move from hauling within Wyoming to hauling from Nebraska into the Wyoming sugar factory.

Farmers in Nebraska pay for this inefficient use of equipment. Freight costs in Wyoming decrease and

increase from Nebraska to Wyoming. The net result is that sugar beets hauled from Nebraska carry a freight premium with increases from \$.05 per ton - \$.52 per ton.

#### OTHER FREEZE IMPACTS

Since the adoption of the LCV freeze in ISTEA-1991, Transystems has encountered the following circumstances:

- North Dakota will not consider equalizing its weights with those of Montana except by a seasonal trip permit device that was in place before 1956. It cannot do so at all on the Interstate System.

- In Wyoming, a coal haul which normally would be moved on the Interstate System was forced to move to a narrow two-lane road over a high mountain pass because the economics of the freeze make this route more efficient than the use of the same vehicle on the Interstate system.

- A recent Wyoming Federal-Aid highway job was bid at 117,000 pounds instead of the preferred 129,000 pound capability under Formula B. The rate quotations increased the cost of the materials haul by 19.5% with an increased exposure rate of 15.5%.

Several years ago the Montana Governor's Transportation Advisory Committee determined that, in order for a truck to serve the same number of people in Montana as in the Northeastern United States, it had to travel 12 times as far over roads that enjoy a population per mile that is only 7% of the highways in the eastern United States. These facts underscore the need to seek innovative solutions to obtain the best value from the highway system, since there are strong indicators that the economic viability of the state of Montana will increasingly depend on truck transportation.

A follow-up analysis by the Montana Department of Transportation also demonstrated that that a rollback of weights currently allowed in Montana to 80,000 pounds would increase the cost of transportation in Montana an average of \$162 million per year.

#### LYNDEN, INC.

##### OPERATIONAL BACKGROUND

Lynden, Inc. is a family of transportation, logistics and construction companies. These subsidiaries are doing business primarily in the Pacific Northwest, Western Canada, and Alaska. The range of services includes scheduled tug and barge service, air and ocean freight forwarding, and trucking companies of various types, including sanitary liquid tank transportation and specialized bulk commodities as well as Less-than-Truckload (LTL) and truckload freight.

Lynden Tank Company is a subsidiary which designs and builds specialty truck tanks including those designed to control temperatures. For example, one haul in Washington State maintains molten sulfur at 300° F while traveling extended miles. Lynden builds edible liquid tanks for another subsidiary that are designed to

*Current Permitted*

Combo of Axles	No of Axles	Distance	Allowable Wt	Actual wt
1-3	3	15.917'	48,000	44,000
1-5	5	41.5'	74,000	73,000
1-7	7	64.5'	98,000	91,000
1-8	8	78.417'	110,500	110,500
2-5	4	29.913'	62,000	61,500
2-7	6	52.913'	86,000	79,500
2-8	7	64.83'	99,000	99,000
4-7	4	27.0'	60,000	47,000
4-8	8	40.917'	73,500	66,500
6-8	3	17.917'	49,500	37,500

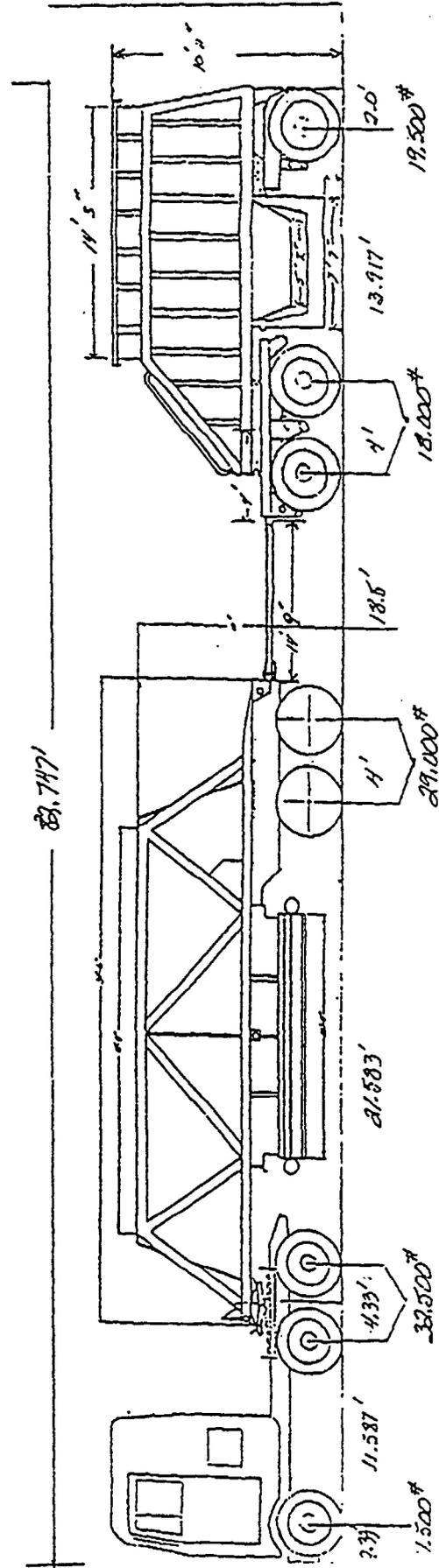


Figure 6

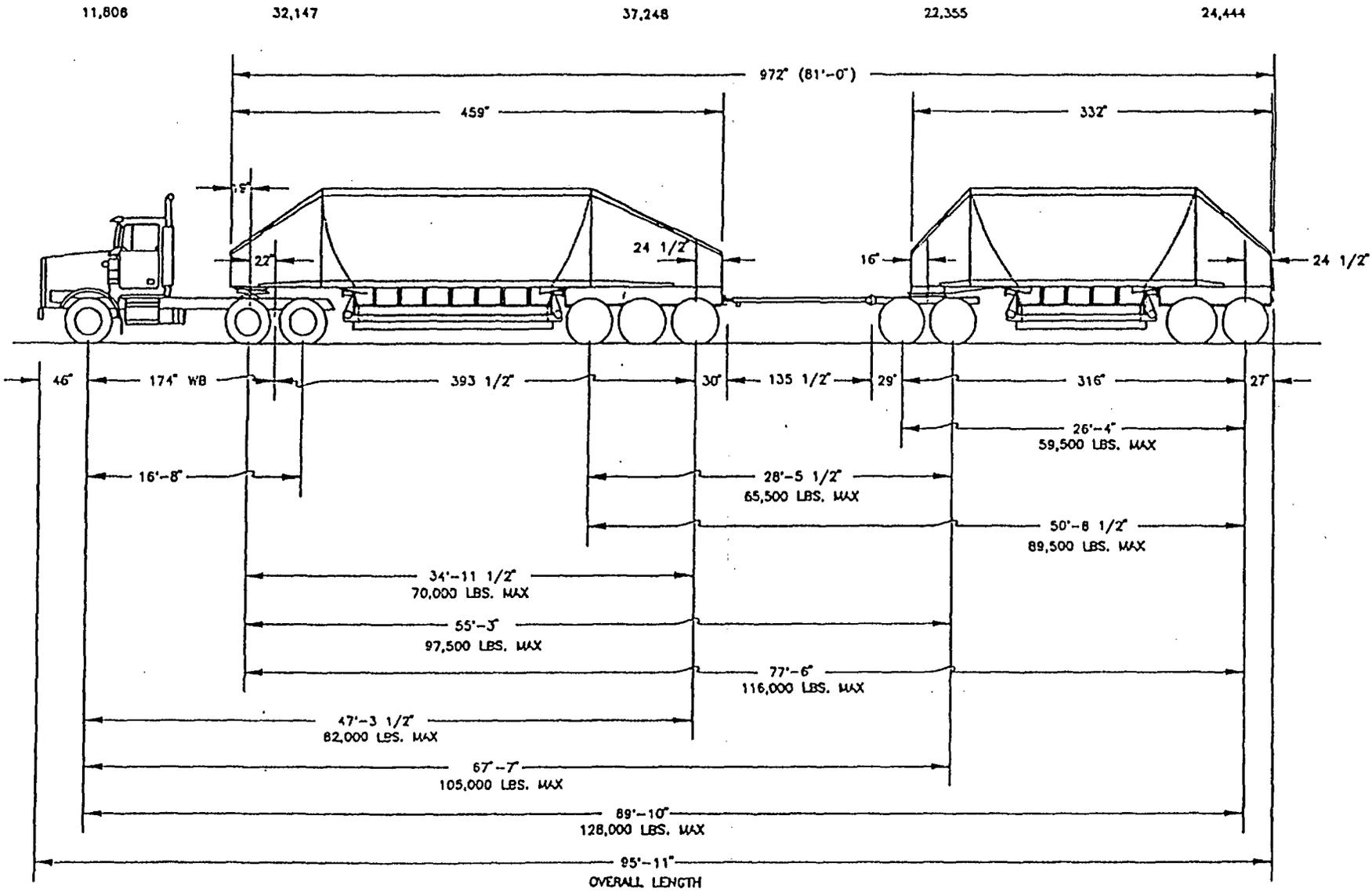


Figure 7

transport milk from the producer to processing plants. The tank company builds innovative designs to meet customer needs.

#### OPERATIONAL SERVICES

Lynden has recognized the importance of the growing trade through the major ports of the Pacific Northwest. Its analysis of size and weight laws in the region found that three states, Washington, Idaho, and Oregon, were at a competitive disadvantage with the current permitted maximum weight allowances of 105,500 pounds in effect in those jurisdictions.

As an example, Lynden operates two milk hauling companies in the Pacific Northwest: Milky Way and Dairy Express. Lynden Tank provides the cargo-carrying equipment for both companies. Currently the tank company is building 5,200 gallon tanks, targeting a payload potential of approximately 90,000 pounds. Milk weighs roughly 8.6 pounds per gallon; and, as a result, Milky Way can achieve a maximum payload of approximately 73,400 pounds in the three-state region.

Dairy Express, however, uses the same tanks, with the addition of two axles, in the state of Montana to achieve a gross weight of 116,500 pounds. The payload with this equipment is approximately 83,500 pounds.

In both the Washington and Montana combinations the overall length is 76'6" and the combined trailer length is 68 feet (see Figures 8 and 9).

On Montana restricted routes, the allowable trailer length is 75 feet. This additional length under the bridge formula allows a payload of approximately 89,000 pounds. With basically the same equipment this represents an increase in efficiency of over 21% when compared to the operation in the state of Washington. Of course, fuel efficiency per ton hauled is increased by a like amount.

The less efficient unit allowed in the Pacific Northwest tri-state area is also used in British Columbia. There, with identical equipment, the available payload is increased to 87,850 pounds, which translates to an increased payload and fuel economy of nearly 17%. British Columbia allows, with this configuration, a gross vehicle weight of 123,600 pounds and Washington allows 105,500 pounds. The province of Alberta, directly east of British Columbia, allows 138,000 pounds with this same configuration.

#### TYPICAL FREEZE IMPACT

Mullan, Idaho is located on I-90, six miles west of the Montana border. It is the site of a silver, zinc, and lead underground mine. Processing for the concentrate is done in East Helena, Montana, 232 miles to the east, on I-90. The weight limit in Idaho is 105,500 pounds; the Montana limit for the proposed configuration is 120,500 pounds (as shown in Figure 10).

The LCV freeze would not allow the state of Idaho to increase the weights for the six miles of I-90 in Idaho. Lynden was forced to bid the job by shuttling one trailer

at a time for six miles to a facility 16 miles into Montana, where the combinations would be assembled and then driven to East Helena. The proposal included the use of two-tarped, bathtub, sealed gate end-dump trailers. The full train had nine axles, and a gross vehicle weight of 120,500 pounds. The extra tractor, time, property expense, etc., added approximately 6% to the expenses, not to mention the additional fuel and vehicle maintenance costs.

#### OTHER FREEZE IMPACTS

The freeze has created hardships in the Lynden intermodal operations as well. As an illustration, the State of Washington allows 68 feet of overall trailer length, a maximum overall length of 75 feet and a maximum gross weight of 105,500 pounds. The state of Alaska operates under uncapped Formula B and allows permitted overall lengths of 85 feet (and on some routes, 95 feet). Coordination of equipment between the two states presents a challenge. The standard ISO container freight operated by Lynden's Alaska West Express is normally shipped to south central and interior Alaska via Sealand. Standard truckload and less than truckload (LTL) freight is carried by Lynden Transport on Totem Ocean Transport Express that operates roll-on, roll-off ships. Alaska Marine Lines, another Lynden subsidiary, operates a twice weekly tug and barge service between Seattle and 11 ports in Southeast Alaska. Although the highway system is limited in southeast Alaska, because there are different laws in place, it is necessary to use two different chassis to carry the same container in Alaska and Washington.

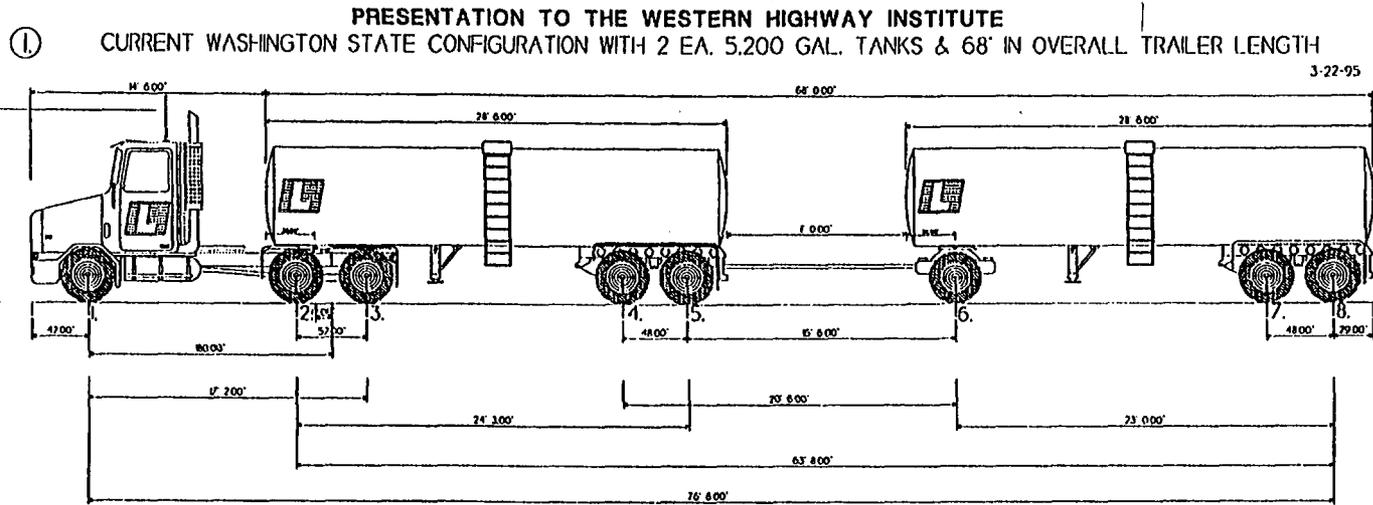
As an example, Alaska Marine Lines has a contract to haul 40-foot sealed ISO containers from a solid waste transfer facility in Ketchikan to their dock. The containers are then transported on their barges to Seattle. In Seattle, the containers are trucked 1.3 miles to a Rabanco solid waste intermodal rail facility. In Ketchikan, the company is allowed, by permit, a four-axle standard container chassis. In Seattle, AML must use a special 53' stretch chassis to haul the containers the 1.3 miles.

Lynden's philosophy is that intermodalism is a concept that links rail, air, trucks, and ocean freight into more competitive, productive shipping units. Current United States' size and weight policy discourages the opportunities for states and nations to cooperatively plan and develop transportation systems that are efficient, safe, and competitive.

#### CONCLUSION

In 1966, the Western Association of State Highway and Transportation Officials (WASHTO) established a joint committee with industry to promote uniformity and compatibility of commercial vehicle operations in the Western United States. For the past 29 years, this group has worked to develop standards and guidelines in many

Figure 8



1. MAX. W/500 lb PER INCH WIDTH OF TIRE **	14,000	28,000	20,000	22,000 ***	28,000
2. MAX. AXLE LOAD	14,000	34,000	34,000	20,000	34,000
3. ACTUAL AXLE LOADING	9,000	26,250	25,250	20,000	25,000
					TOTAL 105,500

\*\* 14" width tires  
 \*\*\* 4 ea. 11" tires

**WEIGHT ASSUMPTIONS:**

1. TRACTOR	15,000 lbs.
2. FRONT TRAILER	7,300 lbs.
3. PULL TRAILER	9,800 lbs.
4. TOTAL TARE	32,100 lbs.
5. PAYLOAD	73,400 lbs.
6. GCW	<u>105,500 LBS.</u>

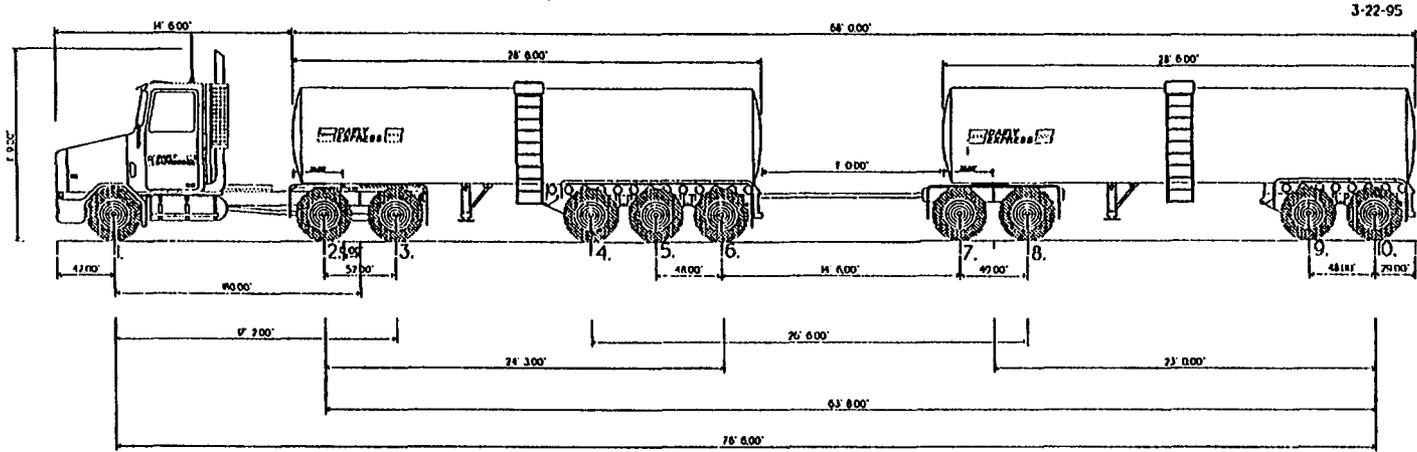
**LTI, Inc. / dba Milky Way**  
 a **LYNDEN Incorporated company**

8631 Depot Road  
 P.O. Box 433  
 Lynden, Washington 98264  
 206.354.2101 / fax 354.3571

THAC 11/19/94, GORDY WEST HWY1

Figure 9

② PRESENTATION TO THE WESTERN HIGHWAY INSTITUTE  
 CURRENT STATE OF MONTANA CONFIGURATION WITH 2 EA. 5,200 GAL. TANKS & 68' IN OVERALL TRAILER LENGTH



1. MAX. W/500 lb PER INCH WIDTH OF TIRE **	14,000	28,000	42,000	28,000	20,000
2. MAX. AXLE LOAD 14,000		34,000	42,000	34,000	34,000
3. ACTUAL AXLE LOADING 9,000		27,250	27,250	26,500	26,500
					TOTAL 16,500

\*\* 14" width tires

WEIGHT ASSUMPTIONS:	
1. TRACTOR	15,000 lbs.
2. FRONT TRAILER	7,300 lbs.
3. PULL TRAILER	11,300 lbs.
4. TOTAL TARE	32,100 lbs.
5. PAYLOAD	84,400 lbs.
6. GCWV	<u>116,500 LBS.</u>

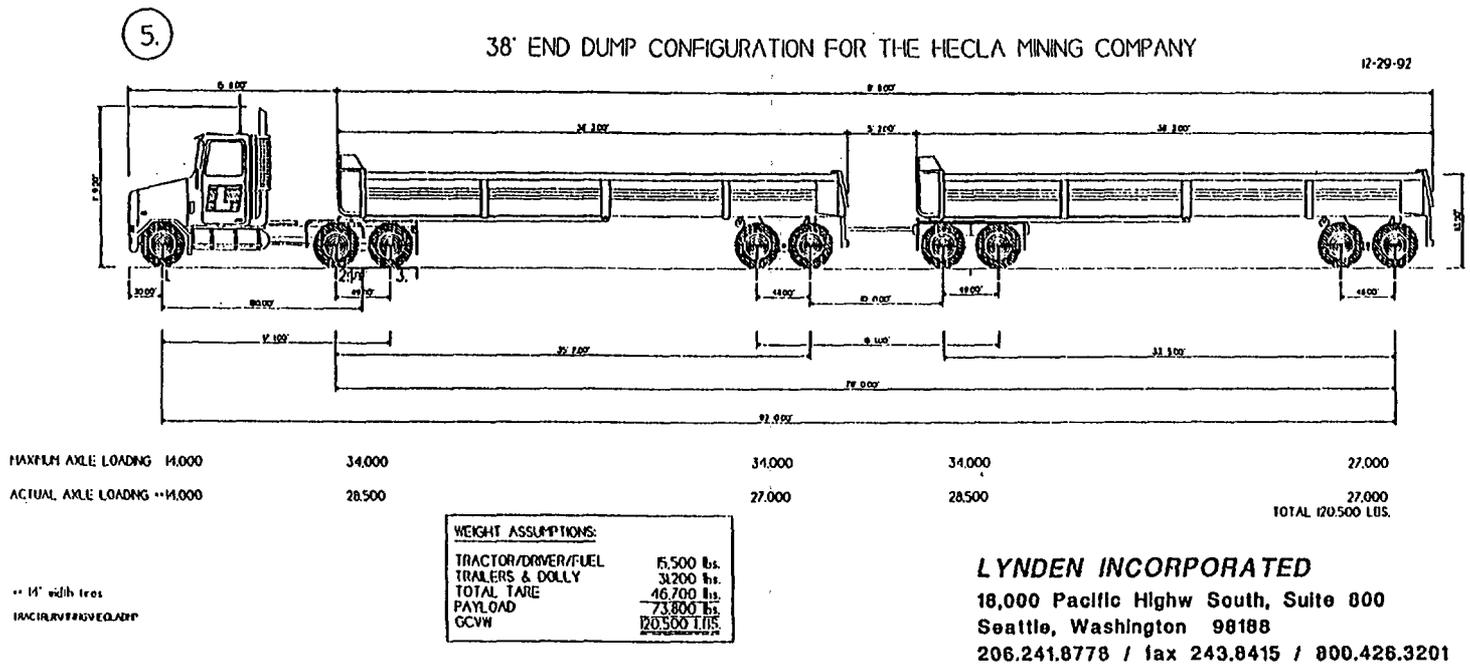
**Cascadia Transport, Inc. / dba Dairy Express**  
 a **LYNDEN Incorporated** company

12004 N.E. 95th Street, Suite 860  
 Vancouver, Washington 98682  
 206.256.2577 / fax 256.4068

ALLOWABLE GROSS WEIGHT INCREASE OVER  
 THE STATE OF WASHINGTON - 11,000 LBS.

TRAC1R1J14.000Y1W5E11M13

Figure 10



areas, including the operation of Longer Combination Vehicles and non-divisible loads. WASHTO pioneered in the development of uniform permit forms for over-dimensional loads, model rules for the operation of Longer Combination Vehicles and multistate permitting efforts. These early efforts are being emulated, to the extent allowed under the ISTEA freeze, in other parts of the country today.

WASHTO's mission statement is instructive and pertinent to the discussion of the LCV freeze:

"...it becomes evident that this nation's productivity may be our most important economic problem. As such, the productivity of our transportation system plays a large role in our economic progress."

The case studies outlined in this discussion are representative of thousands of shippers and the motor carriers who serve them. The LCV freeze contained in ISTEA-1991 has stifled the creative and innovative solutions to market access problems present in the Western states. The evolution and operation of Longer Combination Vehicles has historically taken place in a structured environment, sensitive to public concerns including the safety of the motoring public and the protection of the infrastructure investment in addition to the needs of natural-resource based industries competing in a global marketplace.

The ISTEA freeze itself violates the Declaration of Policy contained in the Act:

"It is the policy of the United States to develop a National Intermodal System that is economically efficient and environmentally sound, provides the foundation for the Nation to compete in the global economy, and will move people and goods in an energy efficient manner.

"The National Intermodal System shall consist of all forms of transportation in a unified, interconnected manner, including the transportation systems of the future, to reduce energy consumption and air pollution while promoting economic development and supporting the Nation's preeminent position in international commerce."

There is a clear need for the United States government to rethink the Federal role with respect to blanket, national constraints on the development and use of more cost-effective transportation alternatives, particularly as producers increasingly demand access to the global marketplace in an affordable fashion.

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