Appendix E
Freight Diversion Potential

Memorandum

TO: Eleni Churchill, Chittenden County MPO

FROM: Andreas Aeppli, Nathan Higgins, and Chris Porter, Cambridge Systematics

DATE: June 17, 2009

RE: Vermont Western Corridor Transportation Management Study – Freight Diversion Case Studies

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Introduction

PB Americas and Cambridge Systematics are conducting a study for the Chittenden County metropolitan planning organization (MPO) and Vermont Western Corridor stakeholders to develop a Transportation Management Plan for Vermont's Western Corridor. The general goals of this effort are to:

- Maximize highway system efficiencies and increase safety in Vermont's Western Corridor;
- Improve freight movements in the Western Corridor;
- Increase public transportation use and enhance regional connectivity for passenger travel;
- Support corridor investments that promote economic vitality in the region; and
- Preserve the quality of life of communities along the Western Corridor.

Expanding the use of rail carload and intermodal goods movement by area shippers is one potential strategy that may help achieve at least four of these five goals. By increasing the use of the Western Corridor rail system, the growth in truck traffic along the Corridor might be reduced, and with it, the associated community, environmental and safety impacts. However, significant gains will not occur without improvements to the existing rail service. Most potential shippers do not have direct access to the rail network, and the service offerings often do not meet their requirements, even where the shipment characteristics are rather suitable for transportation by rail. Strategies such as adding direct carload service to a customer's siding, building conveniently-located transload facilities, providing more frequent and/or reliable rail service, and offering incentives to shippers, could facilitate shifting some Western Corridor freight traffic from truck to rail.

In this memorandum, the issues and opportunities for diverting freight traffic from highway to rail are examined through a series of interviews with area industries whose logistics

requirements are potentially appropriate for the carload rail service that is available along the corridor. A summary of findings is presented in this memorandum, with detailed findings for each firm interviewed provided in Attachment A. (Attachment A is provided under separate cover, as in its current form it should be a considered a draft for internal use only, pending validation of information and approval of its public use by the firms interviewed.) The interviews sought information that could be used to:

1. Assess the potential for managing/reducing the growth in truck traffic along the corridor by increasing rail shipments;
2. Recognize impediments to this potential diversion; and
3. Identify potential policy responses that could facilitate diversion from truck to rail.

While freight predominantly travels over the region's highways, the entire corridor is served by rail, with the Vermont Railway System operating over state-owned tracks all the way from Bennington to Burlington, and the New England Central north to the Canadian border near St. Albans. Prior to the present dominance of highway-based freight logistics, these rail lines once were the principal arteries by which freight entered and exited the Western Corridor region, and even distributed freight within the region. Starting in the late 1920s, a lengthy evolution in supply chain logistics that was brought on by dramatic changes in transportation and sourcing options ultimately made rail service attractive to only a small subset of shippers. Those that presently use rail have a supply chain that is suitable to rail service characteristics – typically bulk commodities moving in high volumes. They are likely to be long-term users of rail and thus understand its idiosyncrasies, which are truly foreign to the vast majority that ship by truck.

The degree to which a shipper may select rail for transporting goods depends on four elements:

- *Shipment characteristics*: volume, frequency, nature of commodity;
- *Access to rail network*: either directly with plant siding, or indirectly via transload or intermodal terminal;
- *Service Requirements*: travel time, reliability, frequency; and
- *Cost*: transport cost, along with related charges such as equipment, transloading, warehousing and administration.

These attributes all sum up to a total logistics cost, i.e. the overall cost, direct and indirect, to ship a commodity. The total logistics costs vary for each modal alternative and each shipment. Bulk goods, such as cement or petroleum products, are particularly suitable for transport by rail. Highly efficient specialized rolling stock (such as cement hoppers, petroleum tank cars, etc.) and high-capacity loading and unloading equipment, combined with lower rates versus truck, generally provide a significant cost advantage to rail over truck for these types of commodities, even after offsetting for the longer and less reliable travel times. This cost advantage is particularly strong for heavy, high volume goods hauled 750 miles or more; for shorter hauls it is considerably diminished, but cost savings may still be present in some instances, particularly when operational requirements are simple and available volumes are high.

For manufactured goods, potential advantages from using rail are less clear-cut, as more extensive adaptation of supply chain logistics to the characteristics of rail service is required. Differences in travel time and reliability and the limited reach of the rail network figure more prominently into the decision process of manufacturers. Furthermore, with higher valued goods, shipment size becomes a critical consideration. With a standard railcar handling the equivalent of two to three highway trailerloads of goods, its available capacity is often far in excess of what a receiver is willing to accept. While this can sometimes be addressed by staging shipments through a distribution center, it introduces inventory requirements and additional handling that is not necessary for truck.

The declining reach of the nationwide rail network, combined with the dispersion of freight-handling businesses away from rail lines, complicates the shipping of carload freight directly to a receiver. The availability of transloading and intermodal facilities can ameliorate these barriers to varying degrees. Transloading facilities permit the shifting of goods between highway and rail vehicles through the physical transfer of the transported commodity. Although relatively simple to establish, transloading does introduce additional costs, travel delays, and complexity and raises the risk of damage and inventory loss. Bulk goods are well suited for transloading, as the process of transferring between modes is generally uncomplicated and of modest cost. Intermodal service avoids the en-route transferring of goods between different modal vehicles, and thus can substitute directly for an all-truck move. However, it still is more complex and generally slower than an all-highway move, since the trailer or container must be handed off between modes.

While both carload service and transloading are available to Western Corridor firms, Vermont does not presently have an intermodal terminal. For southern Vermont, the nearest terminals are located around Albany, NY and Springfield, MA, while for northern Vermont, terminals located in Montreal are closest. Intermodal service that is truck competitive and economically efficient requires traffic volumes that do not currently exist along the Western Corridor, nor are likely to occur over the next five to ten years.

Given the characteristics of today's rail and truck service offerings, it is difficult to argue that a substantial portion of present goods movement occurring along the Western Corridor could readily be transitioned to rail. Most freight along the corridor is not suitable for rail haulage, being generally characterized by short hauls, small volumes, and distribution in locations where rail service is not available. However, a new generation of larger shippers, along with the potential for some innovative service offerings, does offer some opportunities to increase rail volumes along the corridor over time. This could achieve both a reduction in the growth of truck traffic, while also improving the competitive position of these firms and the economic viability of the railways serving the region. These issues are explored through the case studies discussed in the following sections.

Approach

To accomplish the goals set forth above, the consultant undertook a limited survey of freight shippers and receivers along the Western Corridor. These interviews were conducted both

through field visits and via phone, using an interview guide that sought out qualitative and quantitative information (see Attachment B). The questions sought in-depth information on the logistics practices of each of these firms, and their potential adaptability to using rail for inbound and/or outbound shipments through direct carload or transload service. In addition, respondents were queried about more general issues of freight transportation in Vermont, including facility conditions, regulatory and border crossing experience.

The study focused on firms that handle a considerable amount of freight that is suitable for rail shipment. An initial list of potential respondents was drawn from a variety of sources including Dun and Bradstreet, the Study Advisory Committee, and prior consultant contacts. These respondents were selected based on their geographic location along the corridor, the type of goods handled, volumes shipped, and whether they currently receive and/or ship goods by rail, have used rail in the past, or have expressed prior interest in using rail. An effort was made to achieve geographic representation along the entire corridor, and inclusion of the sectors most dependent on inter-state freight shipping in the region, i.e., manufacturing, dairy, feed, and petroleum fuels.

In March and April, 2009 the consultant contacted approximately 20 firms, of which nine agreed to participate. Facility locations covered the full range of the corridor and all five counties. Excepting Franklin County, each county was represented by at least two respondent firms. The firms for which interviews were completed are shown in Table 1.

Table 1 Western Corridor Firms Interviewed

Firm	Location(s)	Business Activity
Bennington Iron Works	Bennington	Structural steel manufacturing
Blue Seal Feeds, Inc.	Brandon	Animal feeds
Carris Reels	Rutland	Cable reels
Champlain Oil Company	Burlington	Distillates and gasoline
DR Power Equipment	Vergennes, Shelburne	Lawn and garden equipment
J. P. Carrara & Sons	Middlebury	Pre-cast concrete and ready mix
NSK Steering Systems, Inc.	Bennington	Automotive steering columns
St. Albans Cooperative Creamery	St. Albans	Dairy products
Ultramar/Valero Oil	Burlington, Rutland, Middlebury	Distillates and gasoline

Results from each of the interviews were compiled and are provided in Attachment A. These reports represent a "snapshot" in time, and specifically reflect the supply chain logistics that existed at the time of the interviews. These firms and the markets they serve are very dynamic: the sourcing of inbound materials may change, functions within a facility might be relocated or eliminated, or a firm enters or withdraws from a geographic and/or product market. In all cases, respondents were happy to provide an overview of their firm's supply chain and logistics strategies, and offered many useful insights and perspectives.

Findings and Conclusions

Results and findings on the core questions regarding potential increased use of rail can be summarized as follows:

- Potentially diverted traffic is assumed to be carried in carload service, either directly from customer sidings, or transload facilities. In some instances, intermodal service was found to be more suitable – and indeed some of our respondents currently use it - but with terminals located outside of the region, intermodal shipments will not reduce truck traffic on Vermont's Western Corridor, and could even potentially increase it. Encouraging shippers that do not have carload-suitable traffic to use intermodal nevertheless is sensible from a policy standpoint. Once this traffic is built up to a sufficiently high level (at least 10,000-15,000 trailers/containers annually), then an intermodal terminal located within Vermont may become economically viable. Several of the respondents have followed the Norfolk Southern (NS)/Pan Am Railways venture, which will create a more seamless service to the Southeastern U.S., and are aware of plans to build a new intermodal terminal at Mechanicville, NY.
- The potential diversion of traffic from truck to rail carload along the Western Corridor from the nine respondents ranges from 5,000 to 6,000 annual truckloads,[1] or about 13 percent of the respondents' total volume of inbound and outbound shipments, based on conditions at the time of the interviews.[2]
- Most of the potentially divertible truck flows are for inbound commodity flows that are typical rail-oriented bulk products such as grain feeds, cement, and petroleum fuels and some manufactured goods (e.g., structural steel). As previously discussed, bulk products are generally quite suitable for carload rail shipping, and thus are more likely to be diverted than manufactured products. The results are summarized by Vermont destination county, origin city, state, or region, loading type and commodity in Table 2.

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[1] This estimate would be reduced to 4,000 to 5,000 annual truckloads, considering expected changes to the logistics supply chain of one interviewed company that were not anticipated at the time the interviews were conducted. This firm will be moving production for one of their products to a plant located in another state, reducing the potential for diverting shipments to rail at the Vermont facility.

[2] For comparison, a previous analysis conducted for the Western Corridor study used aggregate commodity flow data to estimate the potential for diversion from truck to rail, based simply on shipment distance (over 250 miles) and commodity type (those with demonstrated propensity to use rail, based on national data). This analysis estimated a potential reduction on the order of 40,000 to 45,000 annual truckloads in the Western Corridor, or about 4 percent of total truck traffic ("Western Corridor Mode Shift and Truck Trip Reduction Analysis," memorandum from Chris Porter and Andreas Aeppli of Cambridge Systematics, Inc., to Eleni Churchill, CCMPO, December 23, 2008). While it is likely that other firms not interviewed would also have the potential to divert some goods from truck to rail, the fact that the case study divertible volume is only about 12-15 percent of the previous estimate confirms that the previous estimate probably represents an upper bound on the volume of realistically divertible shipments.

- The potential for significant outbound traffic is more limited, as most of these products are manufactured goods. Although some could be handled in carload service, more generally they are better suited for intermodal container or trailer service that is not presently available in Vermont. Potential outbound traffic is entirely manufacturing-based, as is summarized in Table 3.
- Few respondents mentioned the lack of transload facilities as an impediment to using rail per se. However, in order to facilitate use of rail service, convenient access to the network is obviously necessary. In one example, a respondent indicated that locating a transload facility along the planned Omya Middlebury Spur would greatly increase their likelihood of using rail than if they had to drive to Middlebury or another line-side town. In another example, limited storage capacity of a line-side facility has diminished the maximum potential rail usage.

Table 2 Potential Inbound Divertible Shipments to Interviewed Firms in Western Corridor (Annual Truckloads)

			Commodity Type					
Destination County	Origin	Loading Type	Grains	Mfg. Goods	Metal products	Minerals (incl. Cement)	Wood and paper products	Grand Total
Addison	Catskill, NY	Transload				550		550
	Montreal	Transload				500		500
Bennington	Connecticut	Carload			400			400
	Texas	Transload		540				540
	Mid-West	Transload		1,040				1,040
	Port of NY	Transload		312				312
Rutland	Albany, NY	Carload	1,000					1,000
	Connecticut	Carload					36	36
	Pennsylvania	Carload					36	36
	Port of NY	Carload					240	240
Grand Total			**1,000**	**1,892**	**400**	**1,050**	**312**	**4,654**

Table 3 Potential Outbound Divertible Shipments from Interviewed Firms in Western Corridor (Annual Truckloads)

			Commodity Type	
Origin County	Destination	Loading Type	Mfg. Goods	Grand Total
Bennington	Southeast	Transload	728	728
Rutland	Mid-West	Carload	150	150
Grand Total			**878**	**878**

- The Albany, NY and the Montréal, QC regions are important sources for high-volume bulk goods such as cement and petroleum fuels. While rail is used in some instances, there appears to be an opportunity to expand volumes from these regions through improvements in rail service and transload facilities. Shipments from these locations involve at least two

railroads, including a Class I carrier for whom this short-haul traffic is not very attractive. As a result, the quality of service has been indifferent at best. One means to potentially improve this service would be for Vermont's two major carriers to negotiate trackage rights agreements with the owning carriers that would allow them to operate into these markets with their own equipment and train crews. The outcome would be far better single-line service, similar to what has been successfully accomplished in other locations on both NS and CSX.

- Many respondents expressed interest in expanding their use of rail for their inbound and/or outbound logistics, and had generally realistic perceptions of the advantages and limitations of shipping by rail. A few have tried to increase their use of rail in recent years, of which one respondent had been successful and the others not, for a variety of reasons.
- Major impediments to rail, where shipment characteristics otherwise may be suitable, are as follows:
  - Short haulage distance;
  - Can't get there from here;
  - Complex logistics when compared to truck; and,
  - Poor and unreliable travel times when compared to truck.

Policy Implications

Even with the small sample size, respondents were clear and fairly consistent in discussing the challenges associated with increasing rail system usage along the Western Corridor. They further provided valuable feedback on many of the policy options that have been discussed earlier in this study, and surfaced at least one potentially promising option that had not previously been identified. The primary takeaways from the standpoint of potential policy actions are as follows:

- Investment and siting assistance for transload facilities may be helpful, but there is no need for a proliferation of them. For most shippers, the difference in trucking 15 versus 40 miles to the nearest facility is far less important than having consistent, quality rail service.
- Administrative and financial incentives to expand lineside bulk storage facilities would provide a boost for some traffic. Several respondents noted that existing bulk storage facilities were too small to effectively handle the demands of modern logistics, which has reduced their ability to use rail.
- Expanding market reach for Vermont's rail operators to the nearby Montreal and Albany regions is institutionally complex, but could provide substantial benefits to Vermont shippers at little or no direct cost. Although the State of Vermont wields no direct influence on the commercial relationships among carriers, the State could initiate a discussion with the affected carriers, and perhaps facilitate the negotiation of agreements.

- Other incentives to use rail, such as short-term subsidies for new shippers, did not generate much of a response from this group. However, with shippers being very cost sensitive, this option should be further examined.
- Maintaining a rail alternative along the U.S. 7 corridor requires continued investment in the infrastructure of both the private and state-owned rail systems. This includes not just capital investment to bring the property to a state of good repair, but also to adapt it to meet modern business requirements. For example, one respondent mentioned congestion in the Rutland yard as being the cause of delays to their service.
- Access to suitable rolling stock was not cited as a concern, perhaps because most rail-divertible traffic would be inbound rather than outbound. Given the current availability of equipment from third parties, this should not pose an issue, at least in the present economic climate.
- Finally, perhaps the greatest opportunity to divert traffic from highway to rail is the Omya spur near Middlebury. Completion of this spur will not only permit shifting quarry traffic to rail, but will also open up access to another nearby major bulk shipper.

Attachment A Findings by Firm

Champlain Oil – Chittenden County

354 Dorset St.
So. Burlington, VT 05403
Keith White, Transportation Manager
802 864-5380 x228; www.champlainoil.com

Industry Type	Fuel Oil
Current Rail Access	Transload Outbound
Current Rail Use	Transload Outbound
Establishment Size (employment/revenue)	Small (40)/$26.3 million[1]
Western Corridor Shipper Volumes (truckloads)	Large (6,000-8,500)

Company Profile

Corporate Structure, History, and Plant Location – Champlain Oil is an independently owned and operated petroleum products wholesaler firm (NAICS 424720) in South Burlington that was established in 1933. Its primary business is supplying and selling transportation fuels at its own 40 Jiffy Mart gas station and convenience store locations and supplying other independently owned gas stations. The company also provides heating oil to a small number of customers. Demand for petroleum products has been down in recent months as a result of the recession.

Trucks, Trains, and Logistics – Champlain Oil leases seven tractors from Ryder and owns specialized trailers. The company manages logistics in-house. Champlain Oil delivers product 24 hours a day and seven days a week. They employ two drivers for each truck who drive a combined 600,000-700,000 miles over the three year lease. The deliveries are day trips with an out and back pattern. Each truck can hold between 8,500 and 9,000 gallons of petroleum product.

[1] D&B Million Dollar Database

Modal Selection Strategies - Champlain Oil picks up the petroleum product at bulk terminal facilities throughout the northeast and delivers the product to about 180 customers in eastern New York, Vermont, and western New Hampshire. The company's logistics are a perfect match for truck carriage. The company pulls large volumes of petroleum product from multiple storage terminals and delivers small batches of about 4,000 gallons (half of a truckload) to many customers. This type of origin-destination and volume mix is best suited for truck.

Traffic

Inbound

Champlain Oil does not truly have any inbound traffic because they do not have a production plant nor do they operate a secondary storage facility. They are the final link in the oil supply chain before the product is sold to the individual consumer at a gas station.

Outbound

Champlain oil sources petroleum products at various secondary storage terminals in Portland, ME; Burlington; Revere, MA; Albany, NY; Walpole, NH; or Portland, ME. They deliver petroleum products to 180 customers throughout eastern New York, Vermont, and Western New Hampshire including their own Jiffy Mart locations, various independently owned locations, and several municipalities.

Terminal origins that are relevant to Vermont's western corridor include the Global and Ultramar/Valero terminals in Burlington; the Global Albany terminal, and the Ultramar/Valero Montreal terminal. Figure 1 is a map that shows the location of the terminals in orange, the distribution area in grey, and the company headquarters in black. Table 1 describes Champlain Oil's shipping volumes from the petroleum terminals to the final customer.

Table A-1 – Champlain Oil Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Petroleum Products	Burlington, VT (Global) : Customer	3,640 – 5,460 (10-15 trucks per day)	None	0%
Petroleum Products	Burlington, VT (Ultramar) : Customer	1,092 (3 trucks per day)	None	0%
Petroleum Products	Albany, NY (Ultramar): Customer	N/A	None	0%
Petroleum Products	Montreal, (Ultramar) : Customer	1,456 – 1,820 (4-5 trucks per day)	None	0%

Potential for Rail

Champlain Oil will not shift its traffic to rail. There is potential, however, for a shift in traffic patterns. If the Ultramar/Valero terminal in Burlington were expanded, Champlain Oil could

draw a larger volume of petroleum products from Burlington in lieu of making the trip to Montreal for product pickup. This would not reduce the overall trip distance along the Western Corridor because the deliveries are out-and-back day trips with customers in northern Vermont. Shifting the traffic to Burlington would essentially flip the travel patterns, creating a load, drive, deliver, home pattern as opposed to the current drive, load, deliver, home pattern.

Infrastructure and Other Notes

- Champlain Oil feels that the available transportation infrastructure is adequate;
- While there was no specific issue with the infrastructure, there was a general feeling that there were just too many people on the roads for the truckers to operate efficiently;
- Champlain Oil spends about $1,000 per driver in license fees, endorsements, etc. to legally cross the border into Canada;
- The company drivers use the Highgate (primary) and Champlain (secondary) as their border crossings;
- The Champlain crossing has FastPass installed, but queues are 40 deep as a rule;
- The Highgate crossing does not have FastPass installed.

Ultramar/Valero Marketing and Supply (M&S) – Chittenden, Addison, and Rutland Counties

19 Homer Ave Ste 2, Queensbury, NY, USA 12804-2039
www.valero.com/www.ultramar.ca

Industry Type	Fuel Oil Distribution
Current Rail Access	Siding Outbound
Current Rail Use	Siding Outbound
Establishment Size (employment/revenue)	Large (36)/$2.7 million[2]
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Ultramar/Valero M&S is an oil distributor (NAICS 541611) located in Queensbury, NY and headquartered in Montreal, Quebec that is a fully owned subsidiary of Valero Energy Corporation, headquartered in San Antonio, TX. The

[2] D&B Million Dollar Database

Queensbury location manages supply to customers throughout New England with fuel oil from two main terminals, a Montreal secondary storage facility and Quebec City Refinery in Saint-Romuald, Québec. Albany, NY, is an alternate Valero supply source for the Western Corridor, is supplied by barge from New York, but is not managed by the Queensbury group. Demand for petroleum products has been down in recent months as a result of the recession. Expectations are that petroleum demand will continue to decline over the next year.

Trucks, Trains, and Logistics – Ultramar/Valero M&S uses independent carriers for trucking into Vermont and Canadian National (CN), New England Central Railroad (NECR), and Vermont Railway Incorporated (VTR) for railing into the secondary storage facilities in Rutland, Burlington, and Middlebury. The company manages logistics in-house.

Modal Selection Strategies - Ultramar/Valero M&S has two major supply points – Montreal, Quebec and Quebec Saint-Romuald. The Montreal supply point is supplied by rail and vessel from the Quebec City Refinery. The Albany alternative supply point is supplied by barge via New York Harbor. Gasoline and distillate products from Montreal are delivered to customers throughout New England by truck. Ultramar/Valero M&S uses three secondary bulk storage facilities in Vermont – Burlington, Rutland, and Middlebury. Gasoline and distillate products are supplied by rail from the Quebec City Refinery to the secondary Vermont terminals and are delivered to customers throughout Vermont by truck.

Traffic

Inbound

Ultramar/Valero M&S sources crude oil from foreign sources for its Quebec City Refinery. The Montreal bulk storage facility and the Vermont secondary storage facilities are supplied by the Quebec City Refinery. Refined product for the Albany bulk storage facility from the Gulf Coast via New York.

Table A-2 – Ultramar/Valero M&S Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Petroleum Products	Gulf Coast via New York Harbor : Albany	N/A	N/A	0%
Crude Oil	Foreign Sources : Quebec City	N/A	N/A	0%
Petroleum Products	Quebec City : Montreal	N/A	N/A	0%
Petroleum Products	Quebec City : Rutland, Middlebury, Burlington	5,000 – 6,000	N/A	0%

Outbound

The Montreal bulk storage facility supplies two separate customers north of Middlebury in Vermont – petroleum wholesalers and other direct Ultramar/Valero M&S customers. The Albany bulk storage facility supply customers south of Middlebury.

Table A-3 – Ultramar/Valero M&S Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Petroleum Products	Montreal : Customers in Middlebury and North	N/A	None	0%
Petroleum Products	Montreal : Secondary Storage	None	N/A	0%
Petroleum Products	Albany : Customer	N/A	None	0%

Potential for Rail

There are two possibilities for Ultramar/Valero M&S to increase rail use. If the Burlington Airport were to add a rail siding and large storage facilities, Ultramar/Valero M&S could rail petroleum products instead of trucking them. If the Ultramar/Valero M&S terminal in Burlington were expanded, local petroleum product wholesalers could source petroleum product from Burlington instead of sourcing in Montreal. This would not, however, reduce the overall trip distance along the Western Corridor because the deliveries are out-and-back day trips with customers in northern Vermont. Shifting the traffic to Burlington would essentially flip the travel patterns, creating a load, drive, deliver, home pattern as opposed to the current drive, load, deliver, home pattern.

Infrastructure and Other Notes

- CN and NECR are acceptable carriers but VTR is excellent;
- There were no specific issues with the infrastructure;
- It might help to increase the speed limit from 50 mph to 55 mph;
- Common carriers have large trailers but are not able to use them on Vermont roads due to oversize, overweight issues – this is a burden;
- The company drivers use the Highgate, Derby Line, and Champlain, Vermont gateways to cross the border into Canada; and
- The railroads own the Vermont secondary storage facilities.

Blue Seal Feeds, Inc. – Rutland County

PO Box 8000, Londonderry, NH 03053
Bill Whitney, Transportation Manager
800-225-7917 x108; www.blueseal.com

Industry Type	Dairy Feed Mill
Current Rail Access	Siding Inbound Siding Outbound
Current Rail Use	Siding Inbound
Establishment Size (employment/revenue)	Small (25)/$19.1million[3]
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Blue Seal Feeds, Inc. is a Farm Supplies Merchant Wholesaler (NAICS 424910) selling dairy feed based in Brandon. The company has locations in Richford; New York; and Maryland that specialize in different animals feeds such as pet, alpaca, emu, and horse feed. A fully owned subsidiary of Muscatine Foods Corp., based in Muscatine, IA, company headquarters are located in Londonderry, NH. The Brandon location was originally a store, but as markets shifted, it has expanded to a functional grain mill. The market for dairy feed has been in severe decline as a result of the recession.

Trucks, Trains, and Logistics – Blue Seal Feeds, Inc. logistics are handled out of the Londonderry, NH headquarters. Inbound grain is carried in private rail cars owned by the seller (e.g. Cargill), rail cars leased by Blue Seal Feeds (from Chicago and Southern Illinois Rail Car), trucks operated by the seller (e.g. Horizon Milling), or trucks hauled by small independent carriers (e.g. Hewitt Trucking). They own a fleet of trucks and employ drivers for outbound feed.

Modal Selection Strategies - Blue Seal Feeds, Inc. uses rail for shipping whenever possible. Inbound grain, shipped over long distances, is an ideal commodity for rail – heavy and inexpensive. There are some grain sources, however, that do not provide a good rail market pair with the Brandon plant; these are shipped by truck (e.g. New York and eastern Canada). Outbound traffic is shipped exclusively by truck. Customers are located within 100 miles of the Brandon mill, with each receiving a blend of feed designed specifically for their specific dairy cattle; rail is not an option for this delivery type.

[3] D&B Million Dollar Database

Traffic

Inbound

Blue Seal Feeds' Brandon location sources corn from New York, Ontario, or Michigan depending on the time of year; soybeans from the Midwest; distiller grains from Indiana; canola meal from Quebec; wheat middlings from New York;, and milling residue from Massachusetts. Grains sourced in Michigan are subject to an 'alphabet soup' of railroad interchanges, each of which add time and expense to a trip and makes it more likely to be shipped by truck. The shipping distances between Canada or New York and Brandon are too short to make rail viable. Grain shipped from the Midwest and Indiana is an ideal rail commodity carried over ideal rail distances; as such, these products are carried by rail. The sources of the grains, however, are dynamic. For example, the company is working to procure wheat middlings from Buffalo, NY that can be delivered by rail rather than from Albany by truck even while the east controls the middling market. Also, the corn is now sourced from Albany, NY because the region's farmers lost a bet (they grew a lot of corn with the expectation that a corn ethanol plant would be built, but it never opened) and were left with a surplus of corn to be sold.

Table A-4 – Blue Seal Feeds, Inc. Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Corn Distillates	Mid-West : Brandon, VT	N/A	N/A	0%
Corn and Wheat Middlins	Albany, NY : Brandon, VT	1,000	N/A	100%
Corn	Ontario : Brandon, VT	N/A	N/A	0%
Corn	Quebec : Brandon, VT	N/A	N/A	0%

Outbound

Blue Seal Feeds, Inc. delivers dairy feed to farms within a 100 mile radius of the Brandon facility. Farms have been consolidating as fewer farmers own more land and process more milk on more land. Each farm has unique conditions and requires unique blends of dairy feed. The mill at Brandon creates unique blends of dairy feed for each of these farms and delivers the product in company owned trucks; a shipping pattern ideal for trucks.

Table A-5 – Blue Seal Feeds, Inc. Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Dairy Feed	Brandon, VT : Farms within 100 mile radius	N/A	None	0%

Potential for Rail

Blue Seal Feeds uses trucks to ship corn from Albany, NY to Brandon. If Vermont Railway were granted trackage rights to Albany the total number of railroad exchanges would drop, the shipments would become less expensive, and the travel time would be reduced. This would make rail from Albany to Brandon more likely and could shift approximately 1,000 trucks in the western corridor of Vermont to rail.

Infrastructure and Other Notes

- "Once upon a time, you could set your watch by the railroad. If a car came into Whitehall before 1 am, you know you were going to have it that same day at the plant. Now, if a car comes into Whitehall, it could be a couple of days until you get it into the plant."
- Getting by fine without a switch at the north end of the siding.
- No issues with western corridor roadway infrastructure.
- Experience congestion in Middlebury for '15 minute rush' every day.
- Find Vermont flexible with oversize and overweight permits.

Carris Reel – Rutland County

439 West St., Rutland, VT 05701
Mike Curran, President and CEO
(802) 773-9111

Industry Type	Manufacturing
Current Rail Access	Siding Inbound Siding Outbound
Current Rail Use	Siding Inbound
Establishment Size (employment/revenue)	Small (30)/$0.5
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Carris Reel is an independently owned and operated plastic, plywood, and lumber spool manufacturing company headquartered in Rutland, Vermont established in 1951 with six manufacturing locations in the U.S. and one in Canada. The market outlook is stable with no significant prospects for growth. Carris Reel makes spools for wire and cable manufacturers.

Trucks, Trains, and Logistics – Carris Reel handles logistics in-house. Most inbound and outbound materials are shipped in nine company owned and operated trucks. JB Hunt or

another third party carrier carries long haul outbound trips. The company buys trucks new or slightly used and operates them until the mileage reaches 800,000 miles. Rail shipments of domestic plywood come in shipper owned cars.

Modal Selection Strategies - Carris Reel uses truck almost exclusively for inbound and outbound traffic for two reasons: the feeling that trucking firm customer service is far better than that of rail and the fact that the outbound product is delivered just-in-time (e.g. product made in Rutland on a Tuesday at 3 pm is delivered to Southern New Jersey on Wednesday morning). There are occasions when traffic is carried by boxcar on rail - inbound plywood from the southeast U.S. is carried by rail because of the distance, weight, and volume of the material.

Traffic

Inbound

Carris Reel currently sources plywood from the southeast U.S. by rail and uses a carload per day. Plywood from the southeast is the only commodity, inbound or outbound, that is shipped by rail. Inbound Russian plywood is imported into the Port of New York and picked up on backhaul trips by truck when the price of Russian plywood is lower than domestic materials. The company receives three truckloads each of steel from Connecticut and paper core products from Pennsylvania. They source the plastic pellets for plastic reels from sellers around New England.

Table A-6 – Carris Reel Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Plywood	Russia : Rutland, VT via Port of NY	240	Siding	100%
Plywood	Southeast US : Rutland, VT	None	N/A	N/A
Steel	CT : Rutland, VT	36	Siding	100%
Paper Core	PA :Rutland, VT	36	Siding	100%

Outbound

Carris Reel ships seven truckloads of finished product to customers located along the east coast, along I-81 from Baltimore, MD to the Canadian border (with most customers located in Massachusetts and Connecticut areas) and one truckload as far west as the Mississippi River. The company ships to East Coast customers using its fleet of trucks and drivers and uses large transportation companies such as JB Hunt to ship to their Michigan distribution center. It should be noted that JB Hunt, for example, provides a service and might use intermodal rail to meet service requirements.

Table A-7 – Carris Reel Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential	Percent

			Rail Access	to Rail
Plastic Reels	Rutland, VT: Everywhere	N/A	None	0%
Wooden Reels	Rutland, VT : Michigan	150	Siding/ IMX	100%
Wooden Reels	Rutland, VT: Mid-Atlantic and Northeast	950	None	0%

Potential for Rail

There is potential for Carris Reel to shift the future inbound Russian plywood traffic from the Port of New York if Vermont Railway were given trackage rights to access the port. The company could shift inbound steel products to rail by consolidating shipments with Bennington Iron Works, which also gets their inbound steel from Connecticut. Carris Reel has potential to use intermodal for outbound traffic to the Midwest but the intermodal terminals are not well located at the manufacturing plant (the closest intermodal terminal is in Syracuse, NY) or the destination warehouse and distribution center in Michigan (the closest intermodal terminal is in Chicago, IL). However, if Vermont were to construct an intermodal terminal then the Vermont to Chicago intermodal move would become far less onerous. Approximately 426 trucks per year would be removed from Vermont's western corridor if Carris Reel could shift the inbound and outbound traffic to rail.

Infrastructure and Other Notes

- The lack of roads in Vermont is not going to make any company move. Conversely, the lack of roads will not bring any new company into Vermont.
- Vermont Railway treats Carris Reel well.
- Canadian buyers pick up products and handle border crossings.

JP Carrara and Sons – Addison County

2464 Case St., Middlebury, VT 05753
PJ Carrara, General Manager
802-388-6363 x229; pj@jpcarrara.com

Industry Type	Precast/Ready-Mix Concrete/Aggregates
Current Rail Access	None

Current Rail Use	None
Establishment Size (employment/revenue)	Medium (100)/$13.9[4]
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – JP Carrara and Sons is an independently owned and operated ready-mix and pre-cast concrete manufacturing plant (NAICS 3273) located in Middlebury since the 1960s. The company has headquarters in Rutland and plants in Crown Point, NY and at the headquarters in Rutland. The Middlebury plant is the largest of the three, absorbing 60 percent of the inbound cement.

Trucks, Trains, and Logistics – JP Carrara and Sons handles logistics in-house and owns a fleet of 15 tractors and trailers. The trucks main objective is to haul precast concrete. Between the three plant locations in Vermont, there are 24 trucks designed to haul ready-mix concrete. If the company successfully negotiates a shift to rail, they would rent rail cars.

Modal Selection Strategies - JP Carrara and Sons uses trucks for inbound and traffic exclusively because there are no rail transload facilities nearby. The logistics people have a desire to use rail for inbound cement movements and have been investigating locations for transload facilities and negotiating transload options with their suppliers. They have three storage containers on site to hold the concrete; a 120,000 lb. container for flyash and 160,000 lb. containers for both type 2 and type 3 concrete. They supply the storage containers on a daily basis.

Traffic

Inbound

JP Carrara sources approximately 500 annual truckloads of inbound cement from Montreal, Canada and 550 annual truckloads of cement from Catskill, NY. They source 260 truckloads of flyash from Fall River, MA.

Table A-8 – JP Carrara and Sons Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Cement	Montreal, Canada : Middlebury, VT	500	Transload	100%
Cement	Catskill, NY :	550	Transload	100%

[4] D&B Million Dollar Database

	Middlebury, VT			
Fly Ash	Fall River, MA : Middlebury, VT	260	Transload	0%

Outbound

JP Carrara and Sons delivers outbound ready-mix products in company trucks to specific locations within 25 miles of the Middlebury plant. They deliver 2,400 annual truckloads of outbound pre-cast concrete to specific job sites in New England and Eastern New York. Pre-cast outbound traffic is lumpy – there are either 30 outbound truckloads in a day or zero.

TableA-9 – JP Carrara and Sons Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Hollow Core	Middlebury, VT : Various	330 trucks per job (included in 2,400)	Transload / IMX	0%
Pre Cast Concrete	Middlebury, VT : New England and Eastern New York	2,400	None	0%
Ready Mix	Middlebury, VT : 20-25 mile radius	N/A	None	0%

Potential for Rail

There is potential for a portion of JP Carrara's inbound and outbound traffic to shift to rail. Inbound cement is an ideal candidate for making a shift to rail; it is heavy, bulk-style, and does not require just-in-time delivery. This shift can occur if JP Carrara is either granted access to an existing or planned rail siding and transload facility, such as OMYA's siding, or if they are granted access to their own transload facility. If the cement plant in Catskill begins using their rail siding and JP Carrara is granted access to a transload facility then they could shift 550 annual truckloads to rail. The Canadian cement supplier already ships by rail. If JP Carrara were granted access to a transload facility then they could shift 500 annual truckloads from truck to rail. With access to a transload facility, there is potential for some of the outbound hollow core concrete shipments to go by rail. These shipments are large and are shipped in large quantities to specific job sites. If there were rail unloading facilities near the destination then access to a transload facility at the origin would allow some portion of the annual deliveries to be shipped via rail.

Infrastructure and Other Notes

- PJ Carrara feels that border crossing is fairly easy while his staff feel that certification for crossing is becoming onerous
- His drivers experience no delay at crossing
- Champlain is the primary border crossing

- Certain stretches of roadway are good but others do not have shoulders and are not good at all
- Use 116 as a bypass around Middlebury but need to use the one-lane bridge
- 125 westbound is in poor condition
- Middlebury can get pretty congested

Country Home Products /DR Power Equipment –Addison and Chittenden Counties

127 Meigs Rd., Vergennes, VT 05491 and 6221 Shelburne Rd., Shelburne, VT 05482-7101
Steve Charles, Logistics Manager
802-877-1200 x1171

Industry Type	Manufacturing
Current Rail Access	Siding
Current Rail Use	None
Establishment Size (employment/revenue)	Large (150)/$100-150
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Country Home Products is an independently owned and operated umbrella company over DR Power Equipment and Neuton Lawn Mower Co.. Country Home Products headquarters is located in Vergennes with major manufacturing operations (90 percent of total manufacturing) in Shelburne. DR Power outsources 10 percent of its manufacturing to manufacturing partners in Indiana, and Pennsylvania, for example.

Trucks, Trains, and Logistics – ABF Trucking, is their largest carrier of inbound parts and outbound orders to customers outside of New England- about 80% of their overall shipments. DR Power uses Land Air (10 percent), New England Motor Freight and three others (10 percent) for inbound parts and outbound customer shipments within New England and the US east coast. They ship inbound and outbound products in less-than-truckload (LTL) amounts. They own one 28' straight truck and use that to shuttle parts between the factory and the warehouse. They ship 35,000-40,000 pieces of freight per year.

Modal Selection Strategies:

Country Home Products strives to minimize the inventory of parts and finished product. They used to use milk runs for picking up inbound parts but found that became a lot of work for the truck scheduler and that it required them to carry a lot of inventory. The manufacturing plant

produces 90 percent of products, on-demand, for mail-order customers (mainly homeowners) throughout the U.S. They attempt to minimize production unless they have been ordered, which reduces total inventory and reduces the risk that the parts will not be used. Customers want reliable service but do not require JIT or fast delivery service. They choose the lowest cost transportation so that they can maximize their profits on a per-shipment basis.

Country Home Products is starting to sell a larger percentage of their cordless, electric lawnmower product line to major US retailers- a switch from their traditional direct marketing to consumer approach. In some cases, these retailers control the LTL carrier selection and do require JIT delivery.

Traffic

Inbound

Country Home Products receives inbound shipments of parts from multiple locations in Asia and many states in the U.S. The parts arrive on pallets in 4-5 less-than-truckload trucks per week from anywhere east of the Mississippi river and less than container load quantities from international locations. They source five to ten 40' containers a week of finished Neuton cordless,electric lawn mowers from February through May. The containers originate in Taiwan and arrive at the Port of New Jersey where they are are then railed to Montreal, picked up by truck, and transported to their warehouse in Essex, VT. They also import containers of finished products via Portland, Or. for west coast customers.

Table A-10 – Country Home Products Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Machine Parts/Finished Goods	Every State : Shelburne, VT	1,040	None	0%
Lawn Mowers	Asia :Essex, VT via Port of NJ and MTL	200	None	0%

Outbound

Country Home Products ships finished products to the entire U.S. They have three primary shipping locations- Shelburne, Essex and Vergennes. In Shelburne, they have a small dock, only able to fit two-three trucks at a time. This requires them to turnover trucks at least twice a day, sending out less-than-truckload (LTL) shipments to destinations that vary day by day. ABF collects the finished products after delivery of inbound parts and line-hauls the goods to their Williston, VT terminal, then dispatches their trucks to various ABF depots where they repackage trucks for final delivery to customer or hold the shipments for pickups by customers.

Table A-11 – Country Home Products Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential	Percent

			Rail Access	to Rail
Variety of Outdoor Power Equipment	Shelburne, VT: US	832	Transload / IMX	25%
Lawn Mowers	Williston, VT: US	208	Transload / IMX	0%

Potential for Rail

Country Home Products has some potential to shift to rail if they change the way they do business. If they were willing and able to carry larger inventory of goods, then they could consolidate orders of finished products, pack it in a rail car, and deliver to a regional US warehouses for local delivery to customers by LTL carriers or cartage companies. In today's economic climate, this is not possible. Challenges to using rail include: their customer base which is primarily residential homeowners, located in rural USA, more handling of the product and fitting a wide variety of their product line into containers or boxcars. If the State of Vermont were to subsidize storage space, Country Home Products could hold more trucks on dock for longer at which point they could build weekly loads outbound to key markets. This would also create a potential for intermodal service to markets such as Chicago. The existing rail siding in S. Burlington (VTR) would require considerable upgrading.

Infrastructure and Other Notes

- Country Home Products picks up inbound containers by truck in Montreal to avoid reporting the harmonized tariff code and the harbor maintenance fee. It costs $600 to pick up a container in Montreal and $1,000 in Boston, MA.
- It is faster to ship a container into Newark than into Montreal Port.
- They have found that the rail link on CN/CP from Vancouver to Montreal during their primary import season was very unreliable. They advertise 32-38 day transit time from Taiwan but are actually getting 40-50 days transit time. Bad winter weather, inconsistent service from the Canadian railways and congestion at the Port of Vancouver caused delays to their supply chain.
- Country Home Products is considering a switch of inbound container to the Port of Boston in 2010.

St. Albans Cooperative Creamery – Franklin County

140 Federal St., St. Albans VT 05478
Rob Hirss, Operations Manager
802.524.6581 xt. 219; Rob_Hirss@stalbanscooperative.com; www.stalbanscooperative.com

Industry Type	Dairy
Current Rail Access	Siding
Current Rail Use	None
Establishment Size (employment/revenue)	Medium (67)/$275.5[5]
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Saint Albans Cooperative Creamery is a fluid milk and dry, condensed, and evaporated dairy product manufacturer (NAICS 311511 and 311514) owned by a cooperative of about 500 dairy farmers throughout northern Vermont and northeastern New York. The Creamery is headquartered in Saint Albans. The farmers' cooperative was established in 1919. In the 1960's Whiting Milk went bankrupt and the farmers purchased the creamery. The trend in the dairy business is that there are fewer farms but that they are getting larger.

Trucks, Trains, and Logistics – The Coop plans their own logistics and leases insulated tankers with one exception: a third of the inbound fluid milk into the Creamery is from non-member farmers. In this case, the farmers and trucking companies handles the logistics. Fluid milk trucks can hold between 50,000 and 60,000 pounds of milk. The milk is cooled at the farm and delivered within hours in the insulated tanker trucks. Inbound and outbound traffic is contract to independent trucking companies such as (McDermott's for farm pickup and Richard Green or P&C for the Creamery's outbound shipments). They work with other cooperatives to gain efficiencies. That is, they might pick up non-cooperative farms along the way if it this improves overall system efficiency. Canadian shipments are handled by Canadian trucking companies or the purchasing customer.

Modal Selection Strategies - When fluid milk is picked up at the 500 farms located throughout northern Vermont and northeastern New York, it is delivered to either the creamery in Saint Albans or directly to the customer, generally dairy product producers like cheese or ice cream. This many-to-one or many-to-many shipping pattern with short distances and low volume is an ideal match for truck movements. Most milk products produced at the Creamery such as cream, condensed, and powdered milks are shipped via truck to a few large customers on a regular basis. These shipments are made via truck because there is no rail siding on the receiving end.

Traffic

Inbound

[5] D&B Million Dollar Database

The Creamery Coop sources about 13,000 annual truckloads of fluid milk (based on half of 650 million pounds of fluid milk per year and 50,000 – 60,000 pounds per truckload) from dairy farms in northern Vermont and northeastern New York. They source this milk from the farms both Cooperative members and non-members. The fluid milk is picked up by truck and delivered to the Creamery seven days a week.

Table A-12 – Saint Albans Cooperative Creamery Equipment Inbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Fluid Milk	500 dairy farms and other dairy farms : St. Albans	13,000	None	0%

Outbound

The Creamery Coop sources about 13,000 annual truckloads of fluid milk (based on 55 million pounds of fluid milk per month and 50,000 – 60,000 pounds per truckload) from dairy farms in northern Vermont and northeastern New York for direct customer delivery. The fluid milk is picked up by truck and delivered directly to the Dean Foods in Lynn and Franklin, MA, and to Via Cheese in Swanton seven days a week. They source 1,200 annual truckloads of fluid milk from their farmers for direct customer delivery to other customers like Cabot in Middlebury, Sharon, MA, and Hood in Concord, NH and between 260 and 1,560 truckloads destined for Canadian cheese makers.

The Creamery processes 13,000 truckloads of fluid milk from which they produce cream, condensed milk, and powdered milk that is shipped out to the same markets as the fresh milk (e.g. Dean Foods, Via Cheese) and to Canada cheese makers (based on between 5-6 and 20-30 loads per week).

Table A-13 – Saint Albans Cooperative Creamery Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Fluid Milk	500 dairy farms : Dean Foods in Lynn, MA	7,200	None	0%
Fluid Milk	500 dairy farms : Dean Foods in Franklin, MA	3,600	None	0%
Fluid Milk	500 dairy farms : Via Cheese in Swanton, VT	2,400	None	0%
Fluid Milk	500 dairy farms : Other customers	1,200	None	0%
Powder, Cream, Condensed Milk	St. Albans : Dean Foods in Lynn and Franklin, MA	N/A	None	0%
Powder, Cream, Condensed Milk	St. Albans : Ben and Jerry's	N/A	None	0%
Powder, Cream, Condensed Milk	St. Albans : Dean Foods	N/A	None	0%
Fluid Milk	500 dairy farms : Canada	260 – 1,560	NA	0%

Potential for Rail

If there were rail sidings on both ends of the market pair, timing would become an issue – the milk will only stay cold for two days in the hottest months of the year. If rail reliability and travel times were improved rail would likely become a more competitive option for the large market pair shipping.

Infrastructure and Other Notes

- There are significant oversize/overweight issues in New Hampshire, but it is the responsibility of the individual trucker to handle those issues.
- Within Vermont, there is an issue with local rules and conditions in a few localities. On Hinesburg Rd., for example, weight restrictions on bridges cause the drivers to drive around to get to the customer.
- Canadian trucking companies come and pick up milk and handle border crossing issues.

NSK Steering Systems, Inc. –Bennington County

110 Shields Dr., Bennington, VT 05201
802-442-5448

Industry Type	Manufacturing
Current Rail Access	N/A
Current Rail Use	N/A
Establishment Size (employment/revenue)	Medium (300-100)/$NA
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile & Traffic

Corporate Structure, History, and Plant Location – NSK Steering Systems is a steering column manufacturer located in Bennington. The company has 15 locations and is headquartered in Ann Arbor, MI. The Bennington manufacturing plant was established in 1988. The plant is located in Bennington because of tax credits and proximity to former owners.

NSK's shipping patterns are changing significantly since the firm was interviewed, due to a plant location to another state anticipated later in 2009. Findings from the interviews regarding logistics and potential modal diversion are not reported here due to company concerns that they do not reflect future conditions.

Infrastructure and Other Notes

- Shipping is a huge cost because trucking companies cannot get back hauls from Vermont so they charge a premium.
- Drivers hate US-9 because of Woodford mountain.
- Bennington roads are too narrow to make corners for 53' trailers.
- Congestion in Bennington is bad.

Bennington Iron Works – Bennington County

458 Morse Rd., Bennington, VT 05201-1660
Curt Morin, President and CEO
(802) 442-3145

Industry Type	Manufacturing
Current Rail Access	None

Current Rail Use	None
Establishment Size (employment/revenue)	Medium (65)[6]/$20
Western Corridor Shipper Volumes (truckloads)	Large (N/A)

Company Profile

Corporate Structure, History, Plant Location – Bennington Iron Works is a privately held and independently owned and operated fabricated structural metal and miscellaneous metals manufacturing (NAICS 332312 and 332323) located in Bennington. They make structural steel for industrial, commercial, and residential buildings. The facility was started in 1968 in Bennington because the founder lived in Bennington and owned real estate in the area. They are experiencing a downturn due to the economic recession. It is unclear whether the market will turn around by next year.

Trucks, Trains, and Logistics – Bennington Iron Works owns two tractors, one driver, and 24 trailers. The shippers of the inbound traffic handle shipping and logistics. The company trucks generally haul about 50 percent of the total outbound traffic. Small independent carriers like Carlos Trucking out of Pittsfield, MA haul the remainder of the outbound traffic. The demand for Bennington Iron Works products is defined by the outdoor building season in New England and New York as builders want to enclose buildings for work through the winter. Generally, the manufacturing facility is busy early summer and demand builds through the fall.

Modal Selection Strategies - Bennington Iron Works produces structural steel on-demand for specific job sites throughout New England and New York. The company has used rail for inbound traffic in the past, when there was a public rail siding north of Bennington, but the heavy materials and lack of on-site equipment made the process cumbersome and expensive. The company uses trucks to handle outbound traffic because it goes to specific locations that are different for each order.

Traffic

Inbound

Bennington Iron Works sources its inbound goods from two steel mills in Connecticut – Infra Metals in Bridgeport, CT and Bushwick Metals in Wallingford, CT. It receives 160 to 187 annual truckloads from Wallingford (based on 40 percent of 6,000-7,000 tons of inbound traffic) and 240 to 280 annual truckloads from Bridgeport (based on 60 percent of 6,000-7,000 tons of inbound traffic).

Table A-14 – Bennington Iron Works Inbound Traffic Patterns

[6] D&B Million Dollar Database

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Steel	Wallingford, CT : Bennington, VT	160 – 187 40% of 6,000 – 7,000 tons	Siding	100%
Steel	Bridgeport, CT : Bennington, VT	240 – 280 60% of 6,000 – 7,000 tons	Siding	100%

Outbound

Bennington Iron Works ships between 400 and 467 annual truckloads (based on 6,000 – 7,000 annual outbound tons) finished structural steel product to specific job sites in a 175-mile radius (about a days drive) within New England and New York with most of the customers located in Massachusetts and New Hampshire.

Table A-15 – Bennington Iron Works Outbound Traffic Patterns

Commodity	Origin : Destination	Annual Truckloads	Potential Rail Access	Percent to Rail
Structural Steel	Bennington, VT: Various job sites in New England, NY.	400 – 467	None	0%

Potential for Rail

There is some potential for some of Bennington Iron Works inbound or outbound traffic to ship by rail. If there were a transload facility nearby where there were specialized loading and unloading equipment, the steel could be shipped by rail. In addition, if there were a job site that happened to be close to a rail terminal, improved access near Bennington Iron Works would allow for shipping on rail to the final destination. If inbound traffic from Connecticut were shifted to rail, this would remove 400 – 467 annual truckloads from Vermont's western corridor.

Infrastructure and Other Notes

- Working out of Bennington is difficult – it is an hour drive to the NY Thruway to the west via US-9 and requires a mountain pass, which is difficult in the winter time.
- Traffic flow on US-7 is generally OK.
- Most of customers are in NH and MA so they use US-9 for normal operations.

Attachment B Shipper Discussion Guide

PB/Cambridge Systematics is conducting a study on behalf of the VT US-7 Corridor Study Group to develop a Western Corridor Transportation Management Plan. The general goals of this effort are to:

- Maximize highway system efficiencies and increase safety in Vermont's Western Corridor;
- Improve freight movements in the Western Corridor;
- Increase public transportation use and enhance regional connectivity for passenger travel;
- Support corridor investments that promote economic vitality in the region; and
- Preserve the quality of life of communities along the Western Corridor.

One element that we are examining is the potential for shifting freight traffic that is currently moving within the US-7 corridor by truck to rail. Such a shift could occur through the implementation of direct carload service to a customer's siding or a transload operation, whereby rail provides the long-haul service, and customer pickup and/or delivery occurs via highway. This would require a transloading operation at one or both ends of the shipment, where goods are switched between modes. Two rail lines, the Vermont Rail System (VRS) from Burlington south to Bennington, and the New England Central between Burlington (Essex Junction) and the Canadian border serve the US-7 corridor. Both offer direct carload service to lineside industries as well as through transloading, but neither have intermodal terminals in Vermont.

To better understand the potential for increasing use of the rail lines along the US-7 corridor, the consultant is conducting interviews with a select group of freight shippers and receivers in the region. This group has been selected on the basis of the type of goods handled, volumes shipped, and whether they currently receive and/or ship goods by rail, have used rail in the past, or have expressed prior interest in using it. We are seeking in-depth information on the logistics practices of each of these firms, and their potential adaptability to using rail for inbound and/or outbound shipments through direct carload or transload service.

The result of these interviews will be a series of case studies that describe different types of shippers and their traffic, their suitability to using rail, how it might be accomplished, and the impacts on the US-7 corridor if such a shift were to occur. Furthermore, it will help identify what, if any, policy actions might facilitate such a shift. We are looking for your creative ideas and input. All of the discussions will be held in confidence, unless a respondent firm has given their approval to reveal their identity.

100 CambridgePark Drive, Suite 400
Cambridge, MA 02140
tel 617 354 0167 www.camsys.com **fax** 617 354 1542

1) Business:
   - Nature and size of business conducted at this site
     - Headquarters location
   - Company structure: independent, division or facility within a larger company
   - Respondent's position
   - Types of customers served
   - Range of products
   - Longevity in this facility and reasons for location
   - Competitive geography
     - Territory served, limitations to territory, and location of competitors
   - Anticipated changes: facility expansion/contraction, production shifts, relocation, etc.

2) Traffic Patterns:
   - *Inbound*: products, tonnage, usage of commercial modes (TL, LTL, small package, rail intermodal, rail carload, air), control (freight purchasing by respondent or supplier), seasonality
     - Numbers of trucks, types (vans, reefers, tanks, etc.), sizes (tractor/trailer, straight truck, step van, etc), typical payload, private vs. for-hire
     - Origins: a) within VT Western Corridor, rest of Vermont, New England region, domestic elsewhere, Canada cross-border, outside North America; b) volume distribution (e.g. tons/unit from each); c) main modes; d) local facilities (airports, transloading terminals)
   - *Outbound*: products, tonnage, usage of commercial modes (TL, LTL, small package, rail intermodal, rail carload, air), control (freight purchased by respondent or receiver), seasonality
     - Numbers of trucks, types (vans, reefers, tanks, etc.), sizes (tractor/trailer, straight truck, step van, etc), typical payload, private vs. for-hire
     - Destinations: a) within VT Western Corridor, rest of Vermont, New England region, domestic elsewhere, Canada cross-border, outside North America; b) volume distribution (e.g. tons/units to each); c) main modes; d) local facilities (airports, transloading terminals)

- Private truck fleet, if any: number and type of trucks, volume, range of operation (or average length of haul), role (e.g. brings in product from warehouse, or used for customer deliveries), why used

- Expected change: growth, modal usage, shifts in sourcing or market areas (major origins/destinations), export/import activity and ports

- *Specific characteristics* of top/relevant traffic that may be suitable for handling by rail:

Inbound Traffic

	Commodity	Origin	Mode (TL, LTL, PVT etc.)	Annual Volume	Shipment Frequency	Shipper rail served?
Ex.	*Bulk cement*	*Albany, NY*	*TL – bulk carrier*	*5,000 tons*	*250 /yr., approx. 1/day*	*Yes, CSX*
1						
2						
3						
4						
5						

Outbound Traffic

	Commodity	Destination	Mode (TL, LTL, PVT etc.)	Annual Volume	Shipment Frequency	Consignee rail served?
Ex.	*Cheese*	*White River Junction, VT*	*PVT – Reefer*	*1,000 tons*	*50 /yr., approx. 1/wk.*	*No*
1						
2						
3						
4						
5						

3) Operating Conditions

- Facility

  - Access: road conditions, turning, signage, clearance, truck restrictions, weather

  - Transloading point (port, airport, rail yard) access

  - Rail spur or rail yard access

  - Capacity to hold/store inbound or outbound product(s)

- U.S. 7 Corridor in Vermont
  - Major routes used by the respondent, and their conditions
  - Service disruptions and delays
    (1) Cost and difficulty imposed (e.g. asset utilization, driver compensation and retention)
    (2) Limited access: key places whose improvement/development would help carrier operations

4) Service Requirements

- Inbound and outbound: transit expectations, importance of reliability, usage and precision of appointments (e.g. fixed time appointment and late after 15 minutes), equipment supply, visibility
- Rationale: e.g. customer requirements, low inventory logistics, limited dock space, etc.
- Effects of service failure
- Adequacy of service, and its effects
  - Comparison of levels of service to other regions
  - Constraints imposed on business
- Influence on carrier and modal usage
  - Use of different modes (truck, rail, air, water)
  - Technology and visibility requirements
  - Perception and prior experience with rail

- Has use of rail been considered? If so, how was it examined?

5) Supply Chain Structure

- Position of facility within flow of goods from basic inputs to final product delivery to consumer.
- Staging and consolidation of goods
- Modal usage across chain
- Inventory points, levels, practices
- Logistics strategy and anticipated changes