City of Grand Forks
Short Line Railway Business Case
Final Report
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Executive Summary

This project has been undertaken for the City of Grand Forks by a team led by Philip Davies of Davies Transportation Consulting Inc., in cooperation with Darryl Anderson of Wave Point Consulting Ltd. and Norm Hooper of Hooper Engineering. The purpose of the project is to provide advice to the City of Grand Forks on options for preserving local rail service on the Kettle Falls International Railway San Poil Subdivision. The scope of the project includes development and evaluation of Business Cases for two options: capital contributions to maintain operations, and acquisition of the line. The situation is complicated by the fact that the railway crosses the international boundary, and options available for the Canadian and U.S. sections differ based on differing statutory and regulatory provisions dealing with rail line abandonment or discontinuance of operations. The scope also includes assessment of intermodal options for local shippers in the event rail service is discontinued.

Construction of the railway between Kettle Falls and Grand Forks started in 1901 under the Great Northern Railway to serve mining and timber interests and communities in Western Washington and southern British Columbia. Through railway mergers, the line became part of the Burlington Northern Santa Fe Railway (BNSF). It was leased/sold to Omnitrax in December 2004. The lease portion is between Mile 0.0 and approximately Mile 6 and includes the giant 1219' steel cantilever through truss bridge over the Columbia River at Mile 4.76. The line crosses the US/Canada border at Mile 34.4 and terminates in Grand Forks BC.

Kettle Falls International Railway (KFR) published a notice of sale or discontinuance of service for the Canadian portion of the San Poil subdivision in the Grand Forks Gazette on September 23, 2010. The notice of abandonment was preceded by a period of negotiations between local shippers and Omnitrax, owner of KFR, over possible commercial arrangements to maintain service. These negotiations have been unsuccessful to date.

Current Status of The San Poil Subdivision

Infrastructure: The fundamental track maintenance issue on KFR is that a lack of renewal has resulted in too many defective cross-ties. Due to poor cross-tie and joint conditions, the track is operated at 10 mph; half of the US track doesn't meet minimum Federal Railroad Administration (FRA) maintenance standards. The slow train speed has a marked impact on operations in that a train crew can no longer depart Kettle Falls, service Grand Forks and return to Kettle Falls in one tour of duty (FRA limited to 12 hours). This effectively doubles the train operations cost.

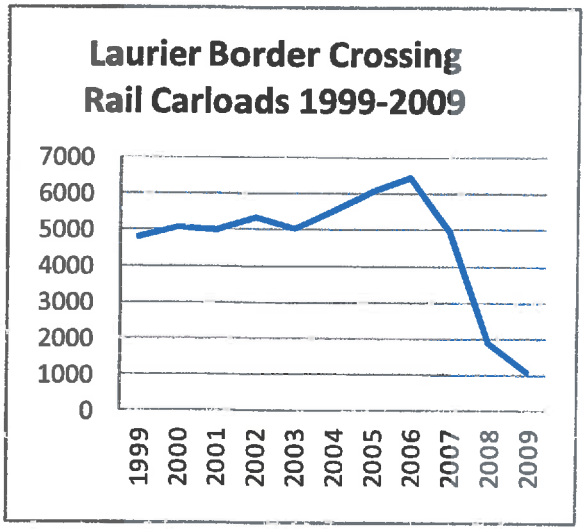
Without immediate capital improvements, the line will become inoperable. Three potential options for maintaining long term viability of operations on the line have been examined:

- Installation of at least 3,500 cross-ties and other maintenance to ensure operations for 18 months. Costs for this option are estimated at $300,000.
- Upgrading the line to return portions of the track to 25 MPH service to allow switching with a single train crew. Costs for this option are estimated at $830,000.
- Rehabilitating the line for 25 MPH service and increased tonnage. Costs for this option are estimated to be in the $5 million range.

The annual sustaining capital requirement for present operations on all of the above options is estimated at $300,000 per year over the next 10 year period. There are eight railway bridges on the line which pose an additional risk to long term sustainability of operations. Reconstruction costs for damage or destruction from a bridge deck fire would likely cause closure of the rail line.

Financial Status: The fundamental challenge in maintaining operations on the San Poil subdivision is the need for additional revenues to cover operating and maintenance costs. Under existing conditions, operations on the line are not financially sustainable.

Historical statistics on rail border traffic at the Laurier crossing indicate that traffic averaged approximately 5000 carloads per year prior to sale of the line to Omnitrax. Anticipated traffic for 2010 is only 1300 carloads, less than 20% of the peak level reached in 2006. The decline in traffic is primarily due to the collapse of the U.S. housing market, which resulted in the bankruptcy of Pope and Talbot, the dominant lumber producer in the area, and permanent closure of sawmills at Okanagan Falls and Midway and of the Canpar particle board plant in Grand Forks.



There are only three remaining shippers with direct rail service on the line: Interfor's Grand Forks sawmill, Pacific Abrasives, and the International Reload Systems lumber transload facility at Christina Lake. Based on discussion with the shippers and our assessment of the situation, we estimate that in the medium term (following recovery in the U.S. housing market) traffic may recover to a level of 3000 carloads, though the timing of this recovery is uncertain.

In addition to reduced traffic, financial viability of operations is hindered by the rate division (revenue per carload) received by KFR from BNSF for hauling traffic to the interchange point at Chewelah. The current KFR rate division is approximately $265 per carload. This is significantly below levels typical for other U.S. shortline railways.

A financial model was developed to assess the viability of ongoing operations of the San Poil subdivision. Based on this model, under current conditions a stand-alone short line railway would achieve revenue of $370,750 and costs of $1,077,170 for an annual operating loss of $706,920. The cost estimate includes maintenance costs of $6250 per mile which we believe to be sufficient to ensure ongoing operational viability of the track. Current losses incurred by the existing KFR operation of the line are probably less than the model estimates for the following reasons:

- The model is based on a stand-alone shortline railroad operating only on the San Poil subdivision. KFR probably achieves some economies in utilization of fixed assets and labour by sharing these resources with operations on the Kettle Falls subdivision.

- It appears that KFR's maintenance expenditures are significantly below those required to sustain operations on the track.

In order to achieve sufficient revenue to cover costs at the current rate division, a traffic level of approximately 5000 carloads would be required. At the anticipated achievable traffic level of 3000 carloads, a rate division of approximately $435 would be required to break even, 64% higher than estimated rate division currently in place.

Business Case 1: Capital Contributions

The results of the financial analysis suggest that in scenarios with low annual traffic volumes financial assistance in the form of debt capital contribution is not practical because the railway's operating revenue is not sufficient to cover ongoing operating and maintenance costs, let alone repay debt. A firm commitment from shippers for an annual traffic volume in the neighbourhood of 3,000 carloads per year and an increase in the rate division with BNSF (or other means of increasing revenue per carload) would need to be in place before the study team could recommend any capital contribution by the City.

A forgivable loan (i.e. mortgage) would likely be the most effective technique for preserving rail service. The size of the forgivable loan would need to be at least $300,000 to cover the cost of the track maintenance required to ensure continuing operations in the short term. A condition of the loan would be the continuation of rail service for at least two days per week.

Our assessment of the track condition indicates that the railway is operating safely but that without immediate capital improvements, the line will become inoperable. Since annual capital expenditures of $300,000 would be sufficient to maintain the track to 10 mph standards for the current traffic level, a forgivable loan of $300,000 would enable the railway to operate for another 18 months and perhaps during that time period the demand picture for US lumber imports would become more certain. Another option would be to consider granting a mortgage of $300,000 on the condition that the track maintenance would be performed. If the railway ceased operation this debt could be converted to equity and applied to the orderly liquidation value of the railway in the event the City of Grand Forks wished to acquire the right of way for corridor purposes.

Business Case 2: Acquisition of the Rail Line

Purchase as a Going Concern: The results of the demand and financial analysis indicate that a significant increase in average carload revenue and/or traffic volume would be required to support a decision to invest.

Purchase for Net Salvage Value: Based on previous determinations of Net Salvage Value by the Canadian Transportation Agency, we estimate the potential range for the value of the real estate currently occupied by the Canadian section of the line at $530,000 to $1,060,000. Taking high and low values for the salvage value of the track, the range would be $587,980 to $1,205,660.

Both Canadian and U.S. abandonment processes provide an opportunity for purchase of railway assets at Net Salvage Value by interested parties. The Canadian process provides the opportunity for federal, provincial or local governments to purchase a rail line at Net Salvage value in the event that an agreement for sale is not concluded within six months following the deadline for Expressions of Interest in the advertisement of the railway intention to abandon a line.

The U.S. process provides a number of methods whereby an interested party may purchase railway assets at the greater of Going Concern Value or Net Salvage Value. In the event the line is advertised for abandonment, the Surface Transportation Board (STB) may compel a railway to accept an Offer of Financial Assistance through purchase or subsidization of operations. Prior to advertisement for abandonment, the STB can compel sale of the line for continuing operation as a railway under the Feeder Railroad Development Program. However, this

requires that the purchaser provide evidence of sufficient capital for three years of operations in addition to Net Salvage Value and a detailed Operating Plan. Purchase under the Feeder Railroad Development Program transfers the Common Carrier obligation to the purchaser who would have to undertake an abandonment process through the STB in order to cease operations.

Options for the KFR San Poil subdivision are complicated by several factors:

- The Canadian and U.S. portions are subject to different abandonment processes and timetables. Omnitrax has not filed for abandonment on the U.S. section of the track, though they have indicated their intention to do so in the future[1]. Purchase of the Canadian portion for continuing commercial rail operations would expose the purchaser to the risk that Omnitrax would apply for abandonment of the U.S. portion. At that time the purchaser would have the option of purchasing the U.S. section at Net Salvage Value or providing sufficient funds to subsidize ongoing operations. If abandonment was approved by the STB, the link from Grand Forks to the BNSF at Chewelah would be severed and rail service would no longer be possible.

- A purchaser could buy the Canadian section for Net Salvage Value and apply to purchase the U.S. section for net salvage value under the Feeder Railroad Development Program. However this would pose a significant risk to the purchaser due to the obligation to provide continuing service on the line.

- Even if the Canadian and U.S. section of the lines were purchased, traffic would have to be hauled by KFR from Kettle Falls to Chewelah and a rate division would be required. This would require negotiations between the purchaser and BNSF (and potentially Omnitrax) to ensure that the revenue available to the purchaser at anticipated traffic levels would be sufficient for long term viability.

Due to the shortfall in operating income and these factors, purchase of the line for ongoing commercial rail operations would expose the purchaser to a very high level of risk. However, if a government or other public agency wished to purchase the corridor to maintain its availability as a recreational trail or for other public purposes, they may wish to pursue purchase of the Canadian section at Net Salvage Value or pursue the possibility of donation for tax purposes with Omnitrax. In the event that the City of Grand Forks is interested in acquisition of the U.S. section, we would recommend that legal advice from a firm experienced in STB abandonment processes be sought.

Intermodal Options

Intermodal transportation has become a common option for shippers, either to maintain access to the North American rail network following discontinuance of local service, or to access competing railways to obtain lower rates. The most common type of facility is a transload centre, which transfers bulk (grain, minerals, etc) or breakbulk (lumber, steel, etc.) commodities between truck and rail.

There are a number of existing facilities offering lumber transload services in the region, including Oroville Reman and Reload at Oroville; Columbia Gardens Reload at Columbia Gardens; Okanagan Transload Terminal in Winfield; and Inland Empire Distribution Services in Spokane.

The Teck Cominco smelter-refinery complex at Trail is served by two bulk transloads (Trimac at Waneta and Westcan Bulk Transport at Columbia Gardens).

[1] "Railway up for sale" Grand Forks Gazette Shella Gardezi September 24, 2010.

Intermodal options differ among the three remaining shippers on the San Poil subdivision.

International Reload Systems provides transload service for lumber at Christina Lake. In the event rail service is discontinued, the facility would no longer be viable.

Interfor purchased the Grand Forks mill from Pope and Talbot in 2008. In addition to existing lumber transload facilities, Interfor has the option to truck lumber from Grand Forks to their mill at Castelgar which has direct rail service from CP Rail. Estimated additional costs range from $15.30 to $23.12 per tonne, though a portion of these costs could be offset by successful negotiations with BNSF or another Class 1 railway for reduced rates. Interfor has announced they are considering an investment of $100 million to rebuild the Grand Forks mill and build a co-generation facility, and that this investment is not conditional on continuing rail service.

Pacific Abrasives is vulnerable to increases in transportation costs due to the low value of their product and intense competition from other products in end markets. Current rail costs account for almost half of the delivered value of their copper slag abrasives. There are no existing transload facilities suitable for handling the slag accessible to Pacific Abrasives in the area at this time. Initial discussions with Teck Cominco indicate that use of the Trimac and Westcan Bulk Transport transloads is not an option because they are currently operating close to capacity and limited hours of operation at the border crossing hinder the efficiency of rail service. Other possibilities exist at Oroville and Chewelah, though no commercial discussions have taken place to date. In the event that transloading services could be obtained at a typical rate of $2.50 per tonne, additional costs are likely to range from $11.83 to $15.45 per tonne. It remains to be seen whether the slag mining operation at Grand Forks can remain viable with a cost increase of this magnitude.

City of Grand Forks Short Line Railway Business Case

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1.1 Economic History of the Grand Forks Region

The influx of settlers to the Boundary Region was sparked by the discovery of gold at Rock Creek around 1860. By the 1890's several mines were in production, but the scale of operations was severely restricted by the transportation system, which consisted of wagon trails. Mining developments spurred a lively competition in railway construction to serve the mining developments. The CPR (Columbia and Western Railway) reached Phoenix, the site of the largest mine, in 1900; the Great Northern in 1904. Smelters were constructed at Grand Forks, Greenwood and Boundary Falls. The smelters were closed by 1920[2]. Some of the larger mines were worked as open pit operations from 1955 to 1978[3]. The granulated slag produced as waste from the Granby smelter at Grand Forks, which closed in 1919, is now processed and sold as an abrasive by Pacific Abrasives.

Development of the forest industry took place simultaneously with the mining expansion.[4] In 1943, Boundary Sawmills Ltd was incorporated from three companies, J. W. Sherbinin and Son (Ingram Creek), Midway Logging Co. (Boundary Creek Operation) and J. J. Sherbinin Ltd. In 1957 the company acquired Grand Forks Sawmill followed by the Fritz Sawmill in 1961. In 1966, the Boundary Company gained controlled of Olingers of Carmi, BC and the Sandner Brothers sawmill at Christina Lake. Pope and Talbot Ltd. bought the Boundary sawmills in Midway and Grand Forks in 1969. Pope and Talbot remained the dominant producer in the area until the company declared bankruptcy in 2008.

Development of agriculture followed settlement of the Doukhobors who moved westward from Saskatchewan in 1907. The Doukhobors irrigated the land and planted orchards and vineyards on the slopes and grain on the flatlands and higher elevations. Other developments included a flour mill, brick works, and packing house and cannery[5].

1.2 Railways in the Boundary Region

Growing traffic from mining operations in the boundary area attracted a number of railway ventures. The driving force was competition between the CPR, led by Thomas Shaughnessy, and the Great Northern, led by J.J. Hill. By 1916 the railway network included linkages eastward to the CP network via Castlegar and Nelson, westward to the Lower Mainland and the CP mainline at Spences Bridge via the Kettle Valley Railway, and southward to the Great Northern network at Spokane and Wenatchee. Local operations were also carried on to transport ore to the smelters. As the mining traffic waned and the highway system developed, the network was progressively dismantled:

- The section of the Kettle Valley Railway linking Hope and Princeton through the Coquihalla Pass was abandoned in 1959, severing the direct link between the Boundary region and the Lower Mainland.

- The line between Midway and Penticton was abandoned in 1972.

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[2] THE BOUNDARY MINING CAMP History of Discovery and Development 1859 –1925 G.R Peatfield, Ph.D., P.Eng, Minerals South, Oct. 2009 http://www.ekcm.org/files/ms2009/presentations/Peatfield-web.pdf

[3] Mining History of the Boundary Country The Greenwood Heritage Society http://www.greenwoodcity.com/greenwoodheritage/History-Info/mining.html

[4] Greenwood BC Forestry History The Greenwood Heritage Society http://www.greenwoodcity.com/greenwoodheritage/History-Info/forestry_history.html

[5] "The Doukhobors" http://www.jdkoftinoff.com/main/Information/About_Jeff_Koftinoff/The_Doukhobors/

- CP's Princeton subdivision linking Penticton and Okanagan Falls to the CP Mainline at Spence's Bridge via Princeton and Merritt was abandoned in 1989.

- The section of CP's Boundary subdivision linking Grand Forks to Castlegar was abandoned in 1991, leaving the BNSF line through Kettle Falls the only remaining direct rail linkage to the North American mainline rail network. The Grand Forks Railway (GFR) purchased 3.7 miles of former CP track in 1993. GFR provides local switching services to Grand Forks shippers and receives a rate division from BNSF. GFR is now owned by Interfor.

- The Oroville-Wenatchee line, built by the GN in 1914, was sold by the BNSF in 1996 and now operates as the Cascade and Columbia River Railroad (CSCD).

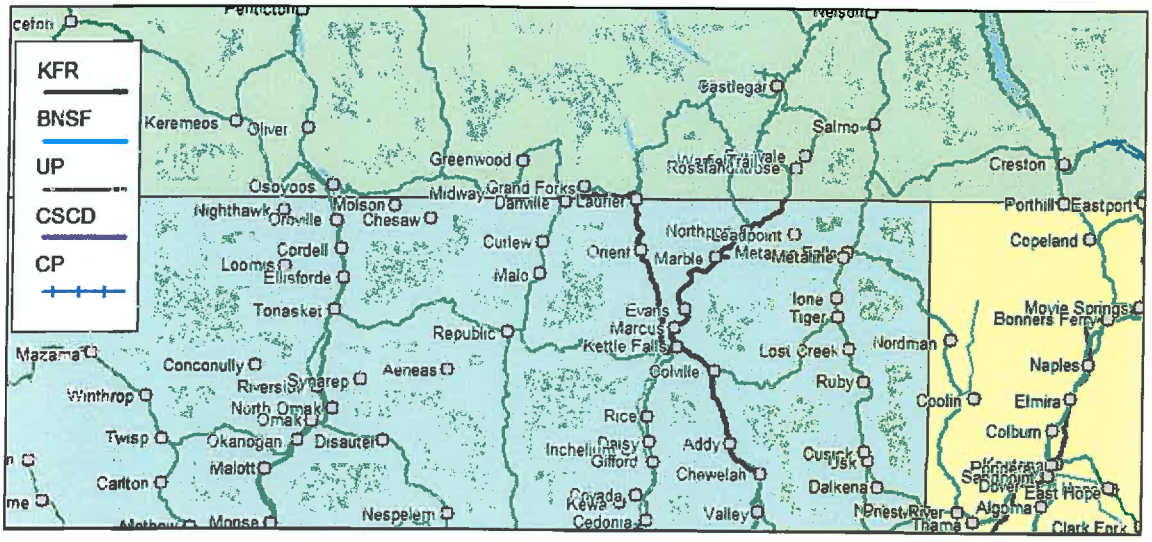
- In 2004, Omnitrax took over operation of the BNSF lines in the Grand Forks area. The section of track from West Kettle Falls to San Poil was purchased, and the section from Chewelah to Columbia Gardens via the border crossing at Boundary was leased from BNSF. Omnitrax formed a subsidiary, the Kettle Falls International Railway (KFR), to operate the lines.

- KFR was granted permission for abandonment of the section of track from Danville to San Poil (mile 49 to mile 77) in 2006.

- A section of BNSF track from Columbia Gardens to Salmo was purchased by International Rail Road Systems (IRRS) in 1998. The section from Park Siding to Salmo was abandoned in 1998. IRRS was sold to ATCO Wood Products in May 2010. ATCO will continue operating IRRS from Fruitvale to Columbia Gardens to maintain direct rail service to their panel plant in Fruitvale.

- KFR advertised their intention to sell or abandon the line from Danville to the Laurier border crossing (mile 34 to mile 47) on September 22, 2010.

Figure 1-1 Boundary Region Rail Network 2010



2 Literature Review

2.1 Summary

There has been little previous research in Canada on transportation in the Boundary region. In comparison a number of studies on the transportation system in Eastern Washington were undertaken under two major research initiatives. The first was the Eastern Washington Intermodal Transportation Study (EWITS) from 1992 through 1998. Results were summarized in The Eastern Washington Intermodal Transportation Study Final Report[6] (EWITS) in 1999. EWITS provided a comprehensive analysis of the Eastern Washington transportation system. EWITS was followed by the Strategic Freight Transportation Analysis (SFTA) study from 2001 through 2009 which extended the scope to encompass all of Washington State. Of particular relevance to this project, SFTA included a number of studies dealing directly with border crossings and short line railroads.

Additional analyses of shortline rail issues in Eastern and Central Washington were competed in support of the Washington State Department of Transportation (WSDOT) acquisition and funding of rehabilitation of the Palouse River and Coulee City Railroad. The Palouse River and Coulee City Railroad (PCC) was created in eastern Washington through the purchase of former UP and BNSF branch lines by WATCO Companies Inc. PCC operated 372 miles of light-density rail traffic in eastern Washington. Almost all of the traffic on the railroad consisted of grain and other agricultural products destined for the export ports of Portland, Kalama, and Vancouver Washington. In 2002 WATCO Companies Inc offered to sell the PCC lines to the State of Washington, with the possibility of total abandonment as the alternative. Following extensive negotiations with WATCO, the State completed the purchase of the lines in 2007.

WSDOT's PCC analysis included many issues similar to those being confronted during the present study of the Kettle Falls International Railway. For example:

- Market studies to estimate the potential additional costs to shippers of abandonment of PCC lines.
- Technical studies to estimate the value of the lines (Net Salvage Value) and costs of rehabilitation.
- Cost-benefit analyses of State investment in the PCC, taking into account benefits including cost savings to shippers, savings in highway construction and maintenance costs, preservation of existing jobs, and potential economic development benefits.
- Technical and marketing studies were undertaken to evaluate options for replacement of a bridge (the Risbeck Bridge) which was destroyed by fire in 2006.

Total Washington State expenditures to date on the PCC total US$27.7 million, including US$15.5 million for acquisition and US$12.2 million for rehabilitation, in addition to the costs of conducting the studies.

WSDOT has also been involved with the Northern Columbia Basin Railroad project for improving rail access to Moses Lake in Central Washington. Costs for this project are estimated as high as US$95 million. Benefits for the project include safety and convenience improvements through relocation of the rail line from downtown Moses Lake, and potential economic benefits through enhanced connectivity to local industrial properties. Existing traffic on this section of line is minimal. WSDOT funding on the Northern Columbia Basin Railroad to date is US$2 million.

[6] The Eastern Washington Intermodal Transportation Study Final Report Kenneth L. Casavant, Washington State University Department of Agricultural Economics, June 1999 http://ewits.wsu.edu/reports/research/err26.pdf

Implications of the Washington State Transportation Studies:

- WSDOT has indicated they have no plans to provide assistance for maintaining operations on the San Poil subdivision. WSDOT's framework for assessing the benefits of shortline rail investments includes impacts on shipper costs, highway maintenance and rehabilitation costs, employment impacts, and potential economic development benefits. Due to the absence of U.S. shippers on the line, shipper cost increases will be limited to the Canadian shippers on the line. Local employment impacts are likely to be limited to direct losses of jobs associated with the rail operations. WSDOT has analyzed the potential impacts of increased truck traffic in the event KFR ceases operations on the San Poil subdivision and concluded there will be no significant impact on the highway system due to the low volume of traffic involved[7]. There are no obvious short term potential economic development benefits for Washington State.

- WSDOT's experience with the Palouse River and Coulee City Railroad highlights the financial risks in owning light density railways. Significant expenditures have been required for rehabilitation of the lines, and it appears that traffic on the lines has not increased. Shortline traffic has been reduced due to competition from intermodal alternatives including truck-rail and truck-barge shipment of grain to port.

- Experience with the Risbeck bridge illustrates the risks associated with major structures on low density rail lines. Following destruction of the bridge by fire in 2006, costs for rebuilding the bridge and associated track upgrades were estimated at US$9.3 million. A market study concluded that reconstruction of the bridge could not be justified based on potential benefits from rejoining the lines.

- WSDOT already has heavy funding commitments based on existing projects.

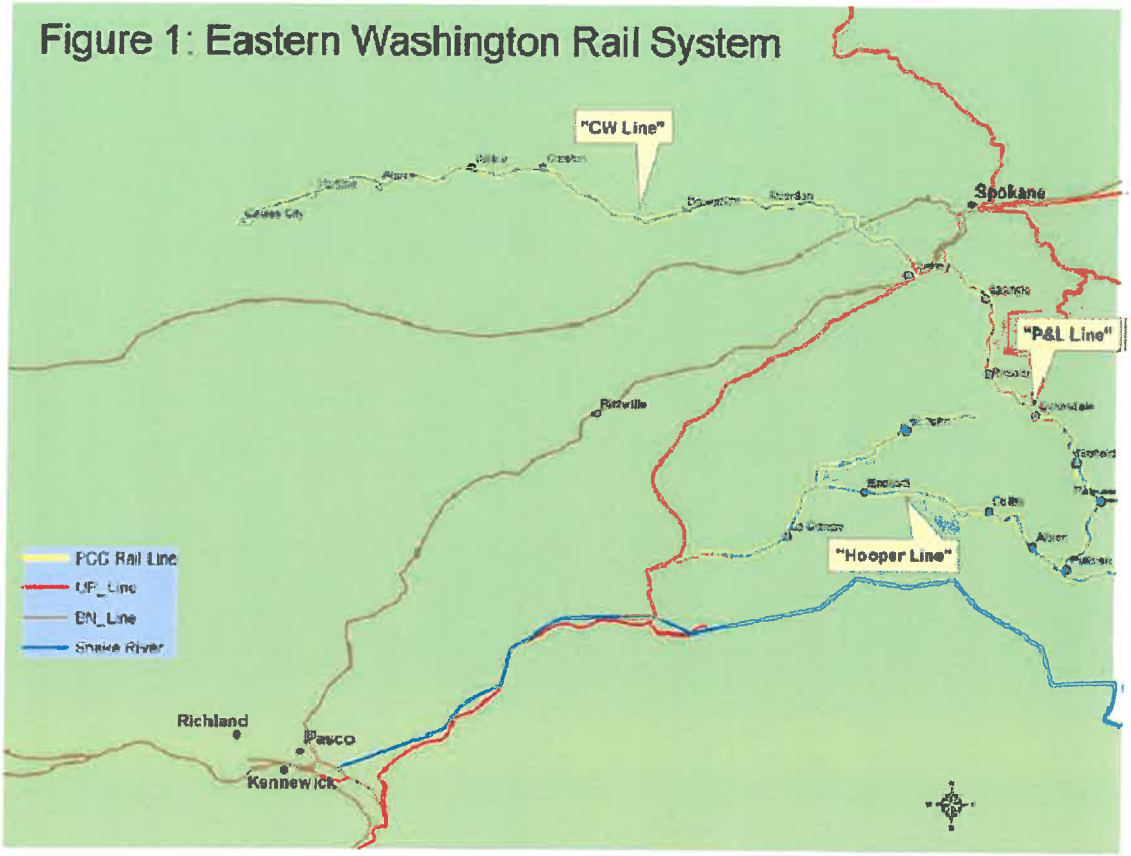
2.2 Rail Studies: Palouse River and Coulee City Railroad

The Palouse River and Coulee City Railroad (PCC) was created in eastern Washington through the purchase of former UP and BNSF branch lines by WATCO Companies Inc. of Pittsburgh Kansas. In 1992 WATCO purchased three segments from the Union Pacific Railroad: Hooper to Colfax; Winona to Thornton; and Colfax to Moscow, Idaho. In 1996 WATCO purchased three more segments from the Burlington Northern Santa Fe: Cheney to Coulee City; Marshall to Pullman; and Palouse to Harvard, Idaho. In 2002 WATCO Companies Inc offered to sell the PCC lines to the State of Washington, with the possibility of total abandonment as the alternative.[8] Following extensive negotiations with Watco, the State completed the purchase of the lines in 2007.

A map of the lines is shown below.

[7] Personal communication with Washington State Department of Transportation.
[8] Assessment of the Current Situation of the Palouse River and Coulee City Railroad and the Future Role of the Port of Whitman County SFTA Research Report # 6, Kenneth L. Casavant, Eric L. Jessup, and Joe Poire, October 2003 pp. 1-2.

Figure 2-1 Palouse River and Coulee City Rail Map[9]



Extensive studies have been carried out on these lines in the context of investments by the State of Washington to maintain service to regional shippers. Total state expenditures to date on the PCC include the following:

Figure 2-2 Washington State Expenditures on Palouse River and Coulee City Railroad[10]

Washington State Expenditures on Palouse River and Coulee City Railroad	
Funding Purpose	**US$ Millions**
Purchase of the PV Hooper and P&L Branches in 2004.	$5.8
Purchase of the entire CW Branch and additional property, and the operating rights in the other two branches in 2007.	$9.7
Fund provided in the 2007-09 biennium for immediate rehabilitation.	$3.6
Provided in the 2007-09 biennial budget; the funds were granted to the PCC Rail Authority to further rehabilitate the lines.	$8.6
Total	$27.7

[9] Source: Palouse River and Coulee City Railroad: Market Assessment Prepared for the Washington State Department of Transportation Office of Freight Strategy and Policy By Ken Casavant and Eric Jessup August 2006 p. 14.

[10] Source: Palouse River and Coulee City Rail System Washington State Department of Transportation March 2010 http://wadot.wa.gov/NR/rdonlyres/4FF9DBA1-368B-45CB-B720-E113A19499ED/0/PCC_folio_March2010.pdf

Watco has continued to operate the PV Hooper branch under a lease signed with the state in November 2004 and modified in 2007. Washington and Idaho Railway Inc., located in Marshall, Washington, was selected to operate the P&L branch beginning in June 2007, under an operating lease from the state. Eastern Washington Gateway Railroad, located in Davenport, Washington, was selected to operate the CW branch beginning in June 2007, under a state lease agreement.

Implications of Rail-line Abandonment on Shipper Costs in Eastern Washington[11] focused on potential additional costs for agricultural shippers in Eastern Washington due to abandonment of rail lines by the Palouse River and Coulee City Railroad (PCC). PCC operated 372 miles of light-density lines in eastern Washington, and the railway had raised the possibility that these lines could be abandoned in the next five years. In 2000, over 90% of the railway's traffic consisted of grain and other agricultural products. The major destinations for shipments were the export ports of Portland, Kalama, and Vancouver Washington. Three options were evaluated: direct trucking; trucking with transhipment to rail; and trucking with transhipment to barge at the river ports of Pasco or Central Ferry.

The most common configuration for hauling bulk agricultural commodities in Eastern Washington was the 7-axle Rocky Mountain Double, which consists of a tractor pulling a 48 foot trailer followed by a 28 foot "pup" trailer. The maximum allowable Gross Vehicle Weight for this configuration in Washington State is 105,500 pounds[12]; the study found an average payload of 36 tons[13] (33 tonnes).

Trucking costs for this configuration were estimated at US$1.40 per mile, and bulk transloading costs at $1.67 per ton. Current highway diesel fuel prices ranged from $1.14 to $1.25 per gallon (November 2001 through March 2002).[14] The $1.40 per mile estimate includes an adjustment for empty miles under the assumption that 50% of return miles were unloaded. Based on a comparison of estimated transhipment options to confidential rail rates, the study concluded that shipping costs would increase by US$2.1 million per year if the PCC trackage was abandoned.[15]

For purposes of comparison, the Bureau of Transportation Statistics estimated an average cost per mile for all segments of the trucking industry at $1.78 per mile in 2000; diesel fuel prices in 2000 were approximately US$1.50 per gallon.[16]

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[11] Implications of Rail-line Abandonment on Shipper Costs in Eastern Washington SFTA Research Report # 8 Denver Tolliver, Eric L. Jessup, and Kenneth L. Casavant, September 2003 http://www.sfta.wsu.edu/research/reports/pdf/Rpt_8_Increased_Shipping_Cost_Report.pdf

[12] Washington State Commercial Vehicle Guide 2004–2005 Appendix 4 Axle Weight Table, Washington State Department of Transportation http://www.wsdot.wa.gov/NR/rdonlyres/46A25D5A-FE56-46BE-AEC6-47CB4BEC072D/0/Legal_Weight.pdf

[13] SFTA Research Report # 8, p. 7.

[14] Ibid., p. 11.

[15] Ibid., p. 14.

[16] Expenses per Mile for the Motor Carrier Industry: 1990 through 2000 and Forecasts through 2005 * Bureau of Transportation Statistics.

Assessment of the Current Situation of the Palouse River and Coulee City Railroad and the Future Role of the Port of Whitman County[17] focused on the potential role of the public sector in ensuring continuing operations on the PCC. This study quotes an analysis on the viability of the PCC conducted by Dr. Denver Tolliver on the viability of short-line railroads in the Palouse and Blue Mountain regions of Washington. The set of lines or subsystems in the PCC networks that were analyzed included four lines: Cheney to Coulee City, Marshall to Pullman, the Blue Mountain Railroad North, and the Blue Mountain Railroad South. The Blue Mountain Railroad South extends from the UP mainline at Wallula Junction to Walla Walla, where it connects with another line running from Dayton, Washington to Weston, Oregon.

The methodology for estimating costs is detailed below:

> *This technical study used the Uniform Railroad Costing System (URCS), applied on a regional basis, to estimate operating costs. Normalized track maintenance costs were estimated using detailed data from extensive field studies conducted in 1998 and 1999 by Wilbur Smith Associates and track factors published by the American Railway Engineering and Maintenance of Way Association (AREMA). Track ownership costs were estimated by applying the railroad cost of capital to the net liquidation value (NLV) of each line (the amount invested by mile times the opportunity return in the market).* [18]

Based on the average rate division of $400 per carload, the cost estimates suggested that the lines would not be viable in the long run as private sector operations due to high maintenance and ownership costs.

Figure 2-3 Estimated Costs Palouse River and Coulee City Railroad 2000

Estimated Costs per Car PCC Line Segments 2000						
Line Segment	**Car and Clerical (Operating)**	**Track Maintenance Cost**	**Track Ownership Cost**	**Total Cost per Car**	**Car-Day Cost absorbed by BNSF**	**Net Total Cost**
Cheney to Coulee City	$244	$231	$53	$528	$70	$458
Marshall to Pullman	$202	$304	$207	$713	$75	$638
Blue Mountain North	$226	$233	$102	$561	$90	$471

The segment of the Blue Mountain South from Zanger Junction to Walla Walla and on to Dayton also was found to be nonviable. The full costs of maintenance, ownership and needed replacement of light rail was over $1,000 per car, net of operating expenses.[19]

A total of 7,308 carloads was handled on these lines for the various shippers in 2002[20].

A subsequent study was carried out for Washington State Department of Transportation by Railroad Industries Incorporated to estimate the value of the lines, either as a "going concern" or net salvage value. The study concluded that only one segment, the Cheney to Coulee City line, had a positive long-term value as a going

[17] Assessment of the Current Situation of the Palouse River and Coulee City Railroad and the Future Role of the Port of Whitman County SFTA Research Report # 6, Kenneth L. Casavant, Eric L. Jessup, and Joe Poire, October 2003
http://www.sfta.wsu.edu/research/reports/pdf/Rpt_6_Port_of_Whitman_County_Final_Report.pdf

[18] Ibid., p. 3.
[19] Ibid., p. 3.
[20] Ibid., p. 5.

concern. Net salvage value of all of the lines owned by Watco was estimate at US$8.4 million. The study noted that two additional studies to estimate Net Salvage Value of the lines commissioned by WSDOT were currently under way[21], as well as a technical study on costs of rehabilitation[22].

Purchase and Rehabilitation of the Palouse River and Coulee City Railroad Track: Assessment of Economic and Community Benefits[23] was published by WSDOT in 2004. The focus of the study was evaluation of a legislative proposal which included state acquisition of the lines at a cost of approximately US$8 million and rehabilitation projects totalling US$26 million. Benefits were estimated to include an annual discounted cost saving of US$1.8 to US$2.3 million for shippers, and reduced costs for highway maintenance and rehabilitation of US$4.2 to US$4.8 million per year[24]. Potential direct and indirect job losses due to abandonment were also identified.

Palouse River and Coulee City Railroad: Market Assessment[25] evaluated the existing and potential revenue from traffic on the three segments of the PCC network relative to breakeven costs. The study concluded that all three segments generated insufficient traffic to enable a rail operator to maintain the tracks to an acceptable standard; and that two of the segments were likely to require ongoing subsidization of operating costs unless significant increases in traffic could be generated. The construction of a bulk loading facility by Ritzville Warehouse Co. to load 110 car unit trains on the BNSF line at Ritzville in 2002 was identified as a factor in reduced shortline traffic and a competitive threat for future operations.

In August 2006 a bridge trestle (the Risbeck Bridge) over the Palouse River just south of Colfax burned, which severed the connection between the PV Hooper and P&L Branches. Prior to the destruction of the bridge, this connection enabled Pullman and Willson Siding near Moscow WA to be served by both the UP and BNSF[26]. An engineering report commissioned by WSDOT evaluated three options for reconnecting the lines: rebuilding the bridge, or constructing new lines on previously abandoned rail right of ways between Colfax and Pullman, or between Thornton and Rosalia.[27] The costs of these three alternatives were estimated at $9.4 million, $7.3 million, and $11.2 million respectively. A marketing analysis of potential benefits from reconnecting the two lines concluded that the potential benefits are not sufficient to justify the costs.[28]

2.3 Rail Studies: Columbia Basin Railroad Company

The Columbia Basin Railroad (CBRW) serves a number of communities in Central Washington including Moses Lake, Warden, Bruce, Schrag and Othello. In total, the line consists of 86 track miles, 73 of it owned by Columbia Basin Railroad, the other 13 on a long term lease from the BNSF. CBRW connects to the BNSF network at Connell WA to the south.

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[21] Ibid., p.5.
[22] Ibid., p. 8.
[23] Purchase and Rehabilitation of the Palouse River and Coulee City Railroad Track: Assessment of Economic and Community Benefits Washington State Department of Transportation May 2004
[24] Ibid, pp. 21-22.
[25] Palouse River and Coulee City Railroad: Market Assessment Prepared for the Washington State Department of Transportation Office of Freight Strategy and Policy By Ken Casavant and Eric Jessup August 2006.
[26] Market Analysis of the Reconnection of the PV Hooper and P&L Branches Prepared for Washington State Department of Transportation State Rail and Marine Division By Ken Casavant, Eric Jessup, and Palouse Partners Jan. 2009, p. v.
[27] Palouse River and Coulee City Railroad Bridge 3 Alternative Route Feasibility White Paper Prepared for the Washington State Department of Transportation by HDR Engineering, Inc. December 2007.
[28] Market Analysis of the Reconnection of the PV Hooper and P&L Branches p. vii.

In 2003 CBRW was considering abandonment of the section of line serving the Moses Lake area. In addition to low traffic volumes, an inefficient route through the community was creating safety concerns and inconvenience to the local population and a barrier to downtown and commercial redevelopment.[29] Moses Lake's two primary industrial areas are the Grant County International Airport industrial area, and the Wheeler corridor industrial area. Grant County International Airport is a former Air Force base with a 2,000 acre industrial park, with low cost readily available land. Communications fiber is available to the firms locating in the park and low-cost electricity and natural gas are available. The availability of rail service is seen as an asset to the attraction of new industry to this site. The Wheeler Corridor had existing rail shippers and also had industrial land zoned and ready for development. A 2003 SFTA study analyzed 7 options for realignment and rehabilitation of the CBRW track in the Moses Lake area.[30]

In 2002 the Port of Moses Lake, along with other local stakeholders, formed a task force to identify potential improvements to their freight rail service. The task force commissioned a preliminary feasibility study in July 2003. This study considered the feasibility and potential cost of implementing a number of improvements collectively termed the Northern Columbia Basin Railroad Project.[31] The Northern Columbia Basin Railroad Project included five individual line segments, including a bypass route to relocate operations outside of downtown Moses Lake, track rehabilitation, and a new connection northward to the BNSF mainline at Soap Lake.[32]

The 2005 Washington State Legislature provided the Washington State Department of Transportation (WSDOT) with $2.0 million to perform preliminary engineering and design for rehabilitation and design of a new rail line between Wheeler and Soap Lake, Washington. At the request of local decision-makers, a portion of these funds were used to perform a more detailed analysis of the proposed Northern Columbia Basin Railroad Project.

The study assessed the existing infrastructure and estimated total investment costs for long term sustainability of the line (75 years) at US$55 million. The study noted that US$400,000 had already been funded funded through the Washington State 2003 Legislative Transportation Package to improve the rail line between Warden and Wheeler to accommodate 286,000 pound railcars.[33] The total estimated cost of all five segments of the proposed Northern Columbia Basin Railroad Project ranged from US$47.5 million to US$94.5 million, depending on whether the proposed rail line extending north of the Grant County Airport connected with the BNSF main line at Soap Lake or Quincy[34].

Total traffic on the CBRW was reported as 8400 carloads per year in 2006. However, only 63 carloads were generated from the Moses Lake area north of MacDonald.[35] The study estimated that the lowest cost option, rehabilitation of the line through downtown Moses Lake, would require an increase in traffic of 2,005 cars per year with a $50 per car fee added to the transportation charge[36]. The most expensive option,

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[29] Rail Line Investment Alternatives Resulting From Abandonment: A Case Study of Moses Lake, WA SFTA Research Report #9 Eric L. Jessup and Kenneth L. Casavant July 2003 p. 1.
[30] Ibid.
[31] Northern Columbia Basin Railroad Project Feasibility Study Prepared for the Washington State Department of Transportation by HDR Engineering, Inc., Railroad Industries, Inc., The Resource Group Consultants, Inc. and Transit Safety Management, Inc. February 2006 p. 1-1.
[32] Ibid., p. 1-2.
[33] Ibid., p. 3-3.
[34] Ibid., p.viii.
[35] Ibid., p. 3-6.
[36] Ibid., p 5-16.

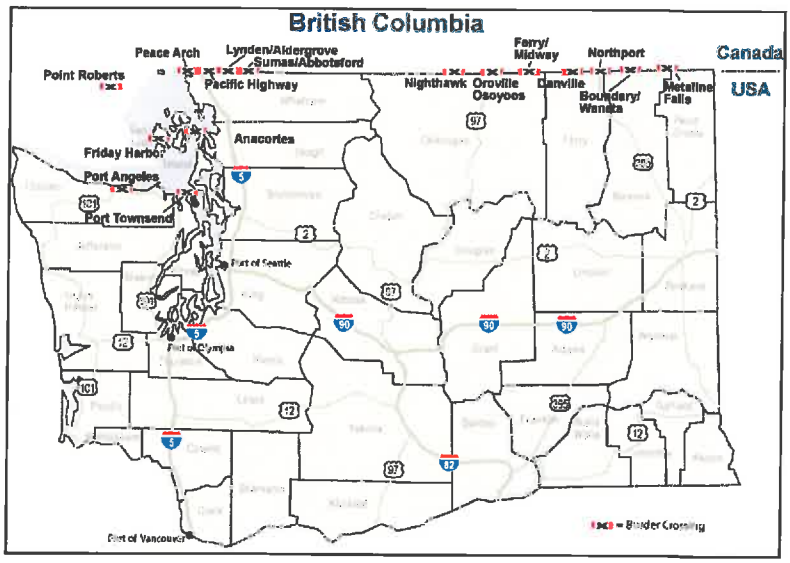
construction of a new line to connect with BNSF at Quincy, would require additional traffic of 75,511 carloads per year with an additional transportation charge of $50 per car.[37]

A Final Environmental Assessment of the project was completed in 2009 and submitted to the Surface Transportation Board in May 2010[38]. On August 24 the STB granted permission for the project to go ahead subject to certain mitigation elements. The design work for building the new Segment 2 and rehab of Segment 3 is now being completed and should be finalized in February 2010. The Port of Moses Lake will then go to bid for the work. New project funds have been approved by the state if the project receives STB approval.[39]

2.4 Border Traffic Studies

Projections of Washington-British Columbia Trade and Traffic, by Commodity, Route and Border Crossings[40]
This study analyzed data on truck transportation across the Canada-Washington border crossings gathered through roadside surveys in 2002 and 2003. Washington has twelve British Columbia border crossing locations; ordered from west to east, they are: Point Roberts/Boundary Bay, Blaine/Douglas, Lynden/Aldergrove, Sumas/Huntington, Nighthawk/Chopaka, Oroville/Osoyoos, Ferry/Midway, Danville/Carson, Laurier/Cascade, Frontier/Paterson, Boundary/Waneta, and Metaline Falls/Nelway. A map of Canada-Washington border crossings is shown below:

Figure 2-4 Canada-Washington Border Crossings[41]



[37] Ibid., p. 5-22.
[38] Final Environmental Assessment Surface Transportation Board Finance Docket No. 34936 Northern Columbia Basin Railroad Project Grant County, Washington Co-Lead Agencies Surface Transportation Board – Section of Environmental Analysis and Washington State Department of Transportation, May 2009.
[39] Rail - Port of Moses Lake/Northern Columbia Basin RR Engineering and Environmental Washington State Department of Transportation http://www.wsdot.wa.gov/projects/rail/northerncolumbiabasinrr/
[40] Projections of Washington-British Columbia Trade and Traffic, by Commodity, Route and Border Crossings SFTA Research Report #22, Hamilton Galloway, Ken Casavant and Eric Jessup, May 2007 http://www.sfta.wsu.edu/research/reports/pdf/Report22_ProjectionsTrade-Traffic.pdf
[41] Source: Washington State Department of Transportation http://www.wsdot.wa.gov/Freight/BorderCrossingsMap.htm

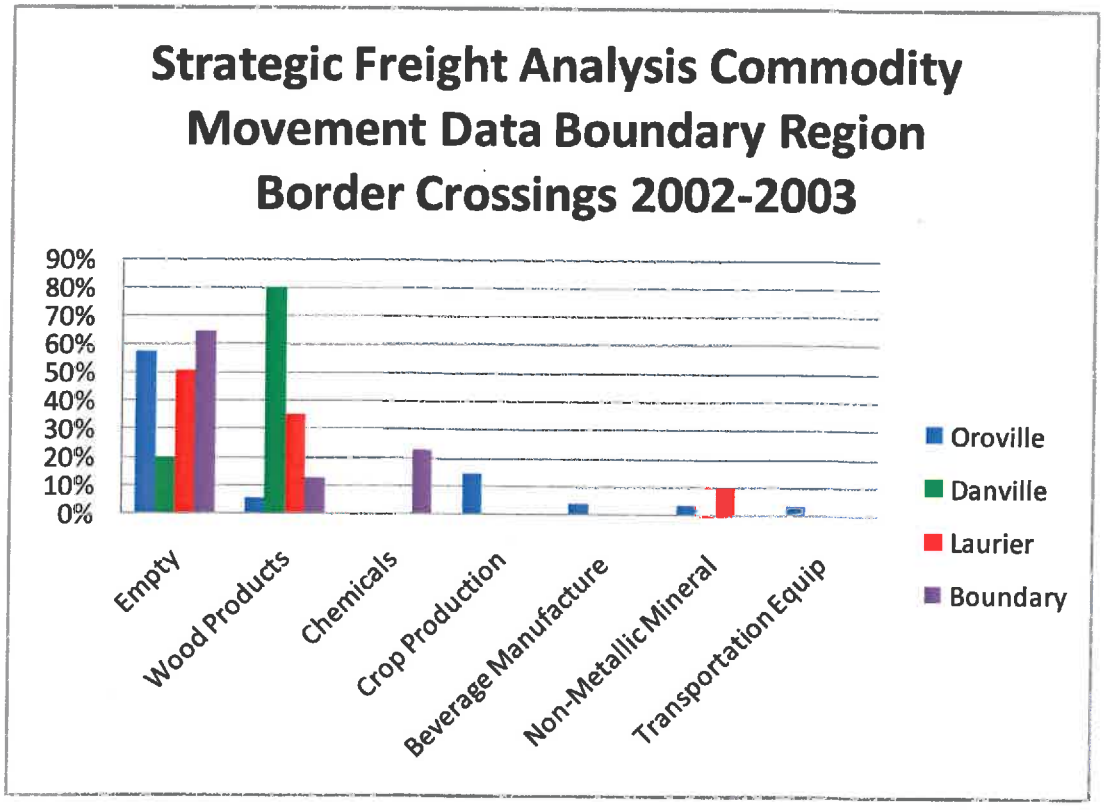
Of these Blaine (SR 543), Lynden (SR 539), Sumas (SR 9), Oroville (US 97), Laurier (US 395), Frontier (SR 25), and Danville (SR21) were the only crossings that contained enough observations to analyze at a commodity level. Annual average daily truck traffic for the four Boundary Region crossings in 2002 is shown below:

Figure 2-5 Boundary Region Border Crossings Truck Traffic 2002

Boundary Region Average Annual Daily Truck Crossings 2002		
Border Crossing	**Annual Average Daily Truck Traffic NB 2002 (Statcan)**	**Annual Average Daily Truck Traffic SB 2002 (BTS)**
Oroville	98	105
Danville	5	6
Laurier	32	26
Boundary	60	59

Data on commodity movements collected during the 2002-2003 surveys is summarized below:

Figure 2-6 Strategic Freight Transportation Analysis Commodity Data 2002-2003



The most notable feature of the data is the high proportion of empty trucks.[42] More detailed analysis of movements indicated that empty trips took place primarily in the Northbound direction, indicating a substantial imbalance in commodity movements in favour of Canadian exports to the U.S.

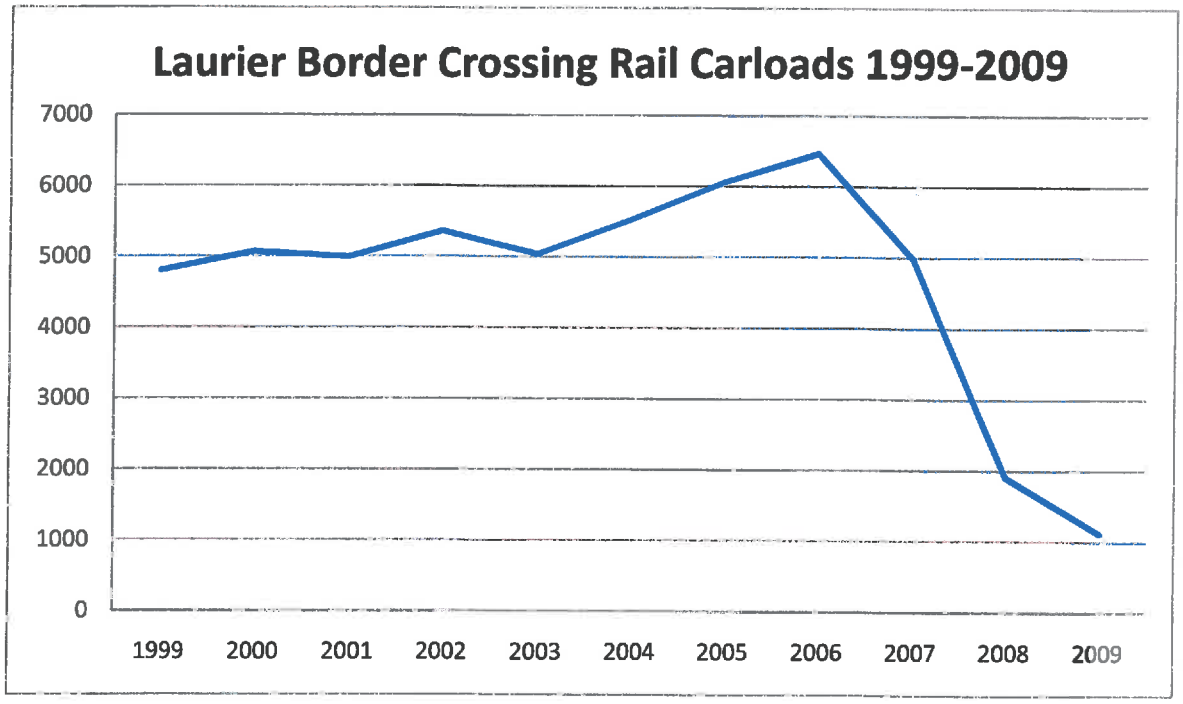
More detailed analysis of the SFTA data for the Oroville-Osoyoos crossing was conducted for the Central Okanagan Bypass Study undertaken for the City of Kelowna in 2006-2007[43]. For this crossing, 93% of trucks were loaded crossing the border southbound, but only 44% of trucks crossing northbound were loaded, indicating that freight traffic was heavily unbalanced in favour of southbound movements. The more varied composition of border traffic at Osoyoos was in part due to the export of manufactured goods originating in the Central and North Okanagan, including bathtubs, boats, truck components, fibreglass boats, and glass bottles[44].

[42] The Danville crossing data indicates that only 20% of truck trips were empty; however the data is based on a total survey population of 5 trucks.
[43] Central Okanagan Bypass Corridor Study by IBI Group for the City of Kelowna, Sep. 7, 2007.
[44] Ibid., p. 9.

3 Demand – KFR San Poil Subdivision

Statistics on rail traffic crossing the border on the San Poil subdivision are available from the US Bureau of Transportation statistics. Since there are no shippers on the US section of the line, these statistics represent total traffic on the line. Historical statistics on carloads entering the US from 1999 to 2009 are illustrated below.

Figure 3-1 KFR San Poil Subdivision Carload Traffic 1999-2009[45]

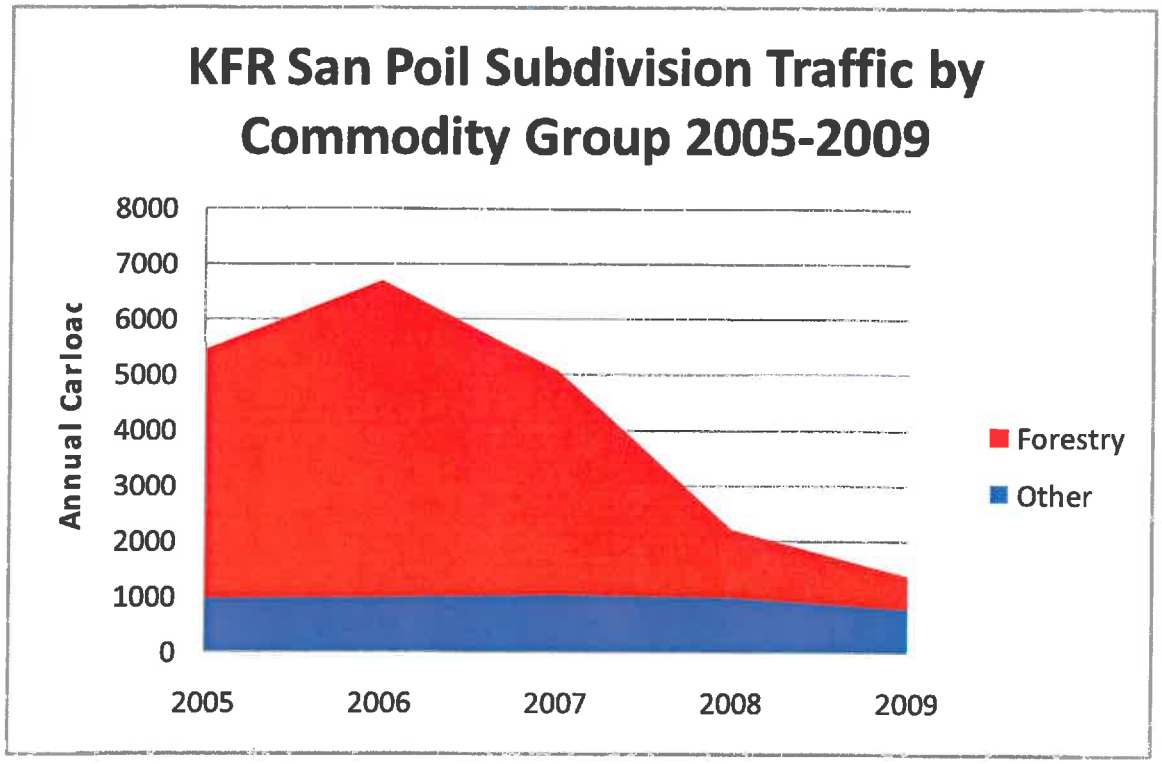


These figures closely match data obtained from shippers on their traffic levels from 2005 through 2009. Prior to the purchase of the line by Omnitrax in 2004, this line averaged around 5000 carloads per year. Traffic peaked at around 6700 carloads in 2006. The anticipated traffic level for 2010 is 1300 carloads, less than 20% of the peak level.

The figure below illustrates the composition of traffic by commodity group from 2005 to 2009, based on shipper data. Forestry products traffic accounted for both the peaking of traffic in 2006 and the substantial declines which took place beginning in 2007.

[45] Source: Bureau of Transportation Statistics.

Figure 3-2 KFR San Poil Subdivision Traffic by Commodity Group 2005-2009[46]



Rail traffic from the forestry sector consists of two categories: products loaded directly to rail at Grand Forks, and products trucked to the reload centre at Christina Lake.

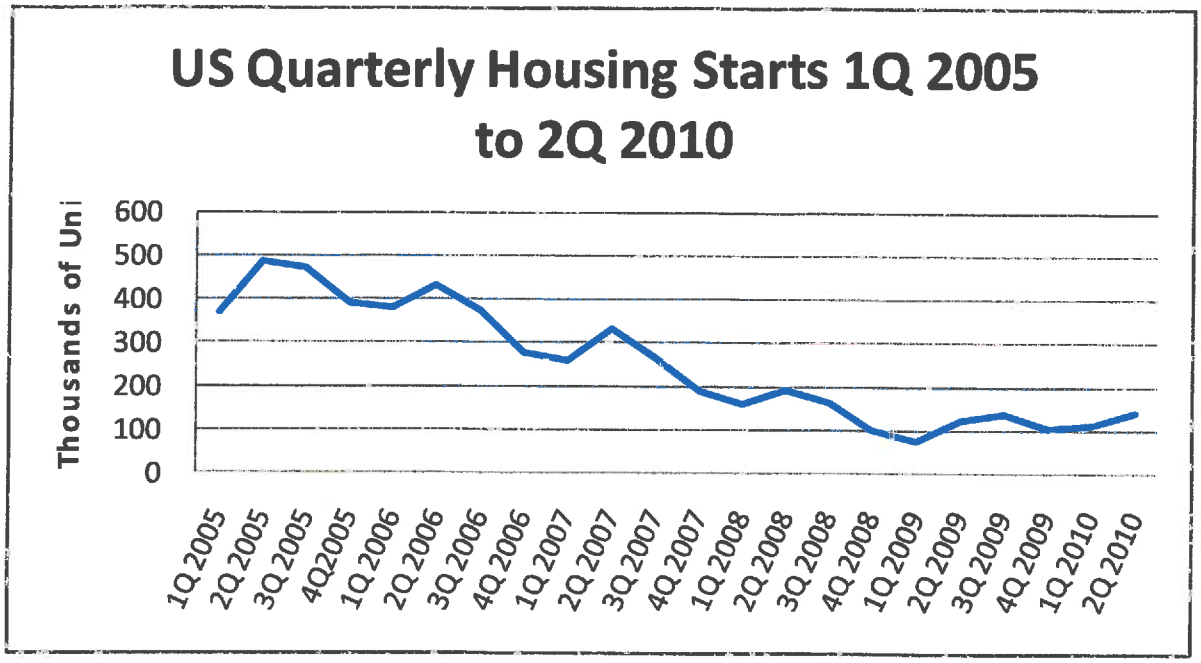
3.1 Forest Industry Traffic

Forest products traffic on the KFR is destined for the U.S. market. The BC forest industry has always been heavily dependent on the US lumber market. Exports to the U.S, accounted for an annual average of 78% of all exports from 1988 to 2006.[47] The lumber market is key to the industry because waste products from lumber milling (wood chips, sawdust and shavings) are used as inputs to other sectors of the industry including pulp mills and pellet mills.

Lumber sales in the U.S. are dependent on the housing market. The crisis in the U.S. housing market predated (and was the major cause) of the global financial crisis which took place in the fall of 2008. Housing starts in the U.S. were stimulated by the availability of credit through "sub-prime mortgages" which enabled buyers who could not meet traditional eligibility requirements to purchase homes. The BC forestry sector was a beneficiary in the resulting housing "bubble". The US subprime mortgage industry collapsed in March 2007, and by 2008 the financial crisis engulfed the global economy. The impact of the crisis on housing starts is illustrated below.

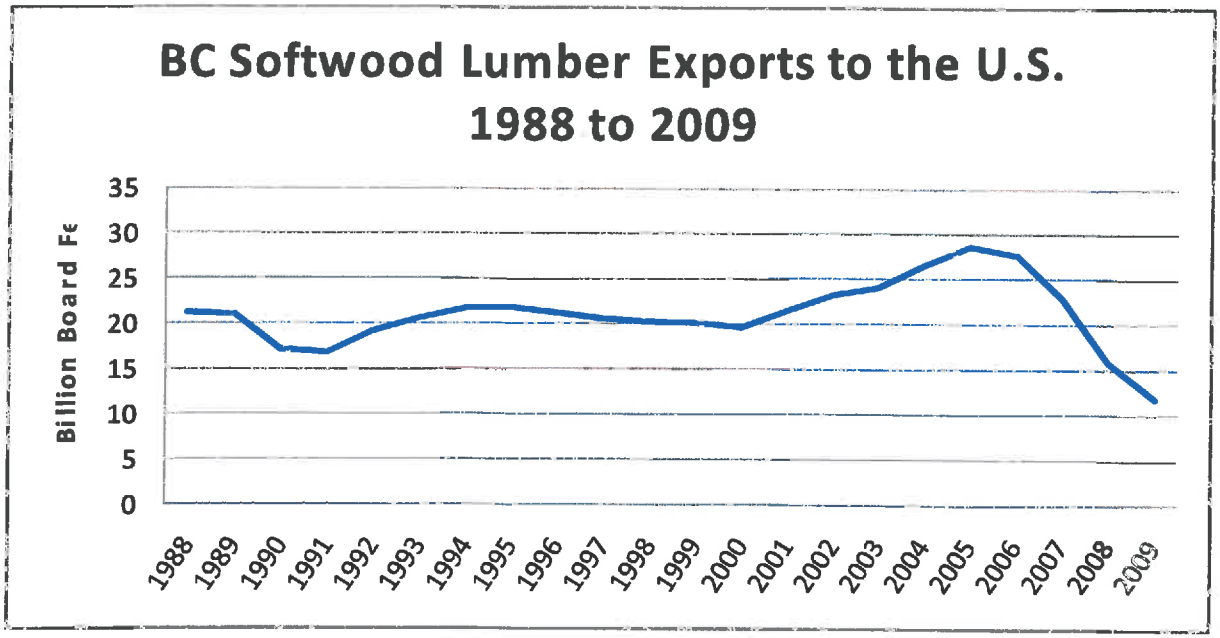
[46] Source: Shipper data.
[47] Source: BC Stats.

Figure 3-3 U.S. Housing Starts 1Q 2005 to 2Q 2010



The BC lumber industry has been devastated by the decline which began in the third quarter of 2005. BC softwood lumber exports to the U.S. in 2009 totalled only 11.9 billion board feet, a decline of almost 60% from the peak of 28.7 billion reached in 2005.

Figure 3-4 BC Softwood Lumber Exports to the U.S. 1988 to 2009

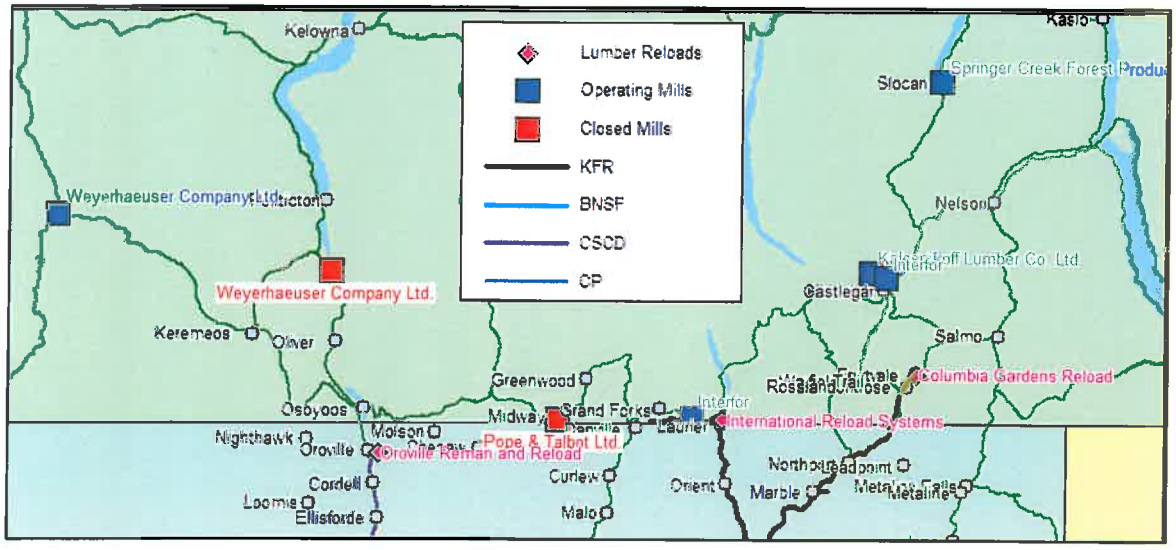


3.1.1 Boundary Region Forest Shippers

3.1.1.1 Forest Industry Background

Major forest industry shippers (sawmills and reload centres) in the Boundary area are shown below.

Figure 3-5 Boundary Region Forest Industry Shippers 2005 – 2009



The sawmills in the Boundary region were fixtures of the local economy for decades, though many changed hands as a result of the restructuring of the industry which has taken place over the last twenty years. A list of mills and estimated capacities in 1990 and 2006 is shown below.

Figure 3-6 Boundary Region Sawmill Capacities 1990 and 2006

Location	Company (2010)	Annual Capacity 1990	Annual Capacity 2006	Current Status
Grand Forks	Interfor	108	122	Operating
Castlegar	Interfor	240	245	Operating
Midway	Pope & Talbot Ltd.	136	144	Closed
Okanagan Falls	Weyerhaeuser Company Ltd.	96	161	Closed
Princeton	Weyerhaeuser Company Ltd.	108	196	Operating
Thrums	Kalesnikoff Lumber Co. Ltd.	22	122	Operating
Slocan	Springer Creek Forest Products	120	118	Operating
Westbank	Gorman Bros Lumber Ltd.	74	115	Operating
Kelowna	Tolko Industries Ltd.	137	144	Operating
	Total Capacity	1041	1367	

Pope and Talbot accounted for almost all of the fibre requirements in the Boundary Timber Supply Area from 1991 to 2006. The company operated sawmills at Grand Forks and Midway in the Boundary Timber Supply Area, and a mill at Castlegar in the Arrow Timber Supply Area.

The **Grand Forks** mill was acquired by Pope and Talbot in 1969. Based on Ministry of Forests and Range estimates, the capacity of the mill was increased by approximately 10% from 108 million board feet (MMBF) to 120 MMBF between 1990 and 2006; however Interfor estimated the mill's capacity at 197 MMBF in 2007.[48]

The **Midway** mill was also acquired by Pope and Talbot in 1969. Capacity increased from 136 MMBF in 1990 to 144 MMBF in 2006 according to MOF estimates.

The **Castlegar** mill was acquired by Pope and Talbot from Westar Resources in 1992. Based on Ministry of Forests estimates, capacity increased from 136 MMBF in 1990 to 144 MMBF in 2006. Interfor estimated the mill's capacity at 264 MMBF in 2007.[49]

Other major mills in the area included **Weyerhaeuser's** mills in **Okanagan Falls** and **Princeton, Kalesnikoff Forest Products** in Thrums, and **Springer Creek Forest Products** in Slocan. The Springer Creek mill was formerly owned by Slocan Forest Products. It was acquired by CanFor when they acquired Slocan Forest Products in 2004 and sold to Springer Creek Forest Products in 2005.

Other sources of lumber shipments included the **Gorman Brothers** sawmill in Westbank and the **Tolko** mill in Kelowna.

In addition to the sawmills listed above, **Canpar** operated a particle board plant manufacturing components for hollow core doors in Grand Forks. This plant used waste softwood sawmill residues as raw material, including chip undersize, planer shavings and sawdust, and wood from one pulp mill. Raw materials were sourced from plants within a 150 km radius of the mill.

Mercer operates a pulp mill with a capacity of 500,000 tonnes in Castlegar. This plant was purchased by Mercer in 2005 following a period of operations in receivership. The previous operator, Stone Venepal, declared bankruptcy in 1998[50].

3.1.1.2 Impact of the U.S. Housing Market Collapse

The Boundary region was hit hard by the collapse of the U.S. housing market. Weyerhaeuser permanently closed their Okanagan Falls mill in December 2007. Canpar also shut down in December 2007, and the mill equipment was auctioned in July 2008. The land and building were purchased by Roxul Inc.

Pope and Talbot, the region's dominant producer, filed for bankruptcy protection in Canada and the U.S. in November 2007. In January 2008 Interfor purchased three Pope and Talbot mills for $69 million. The sale included the mills in Castlegar and Grand Forks and associated timber tenures, and a mill in Spearfish, South Dakota which was subsequently sold for $14 million.[51]

Following the Interfor acquisition, the Grand Forks mill operated at a reduced level of production through 2008 and 2009. Operations at the Castlegar mill restarted in July 2010 at a reduced level of production. Production levels at the Grand Forks and Castlegar mills from 2002 to 2009 are shown below.

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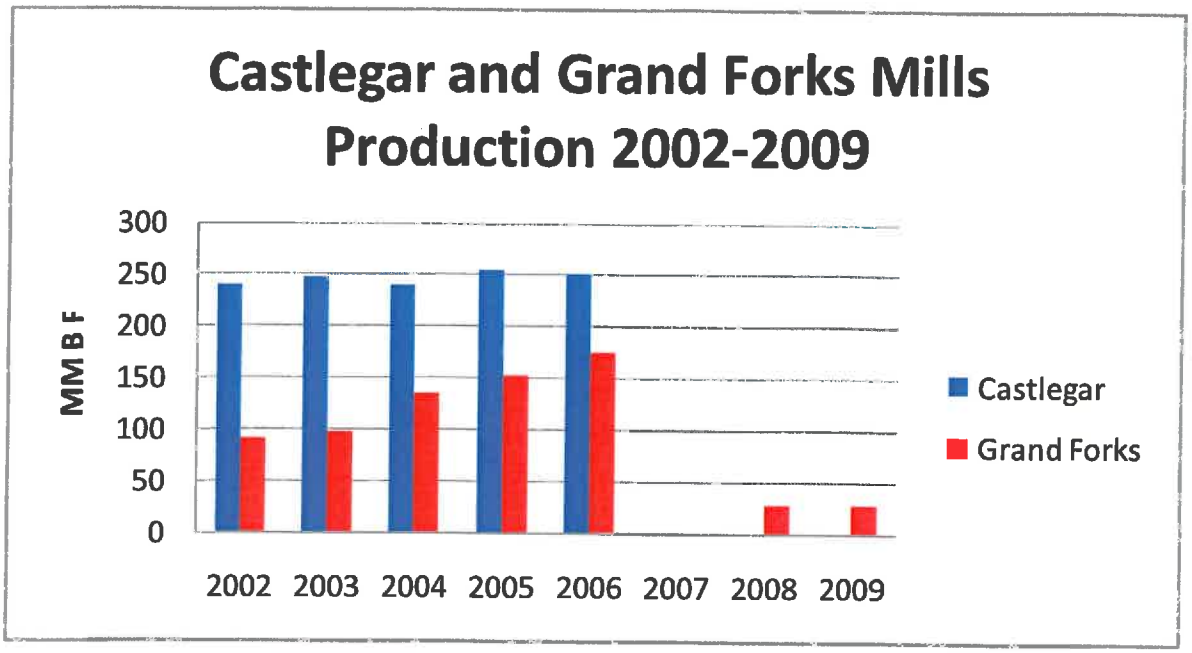
[48] "Acquisition of Three Sawmills from Pope & Talbot" Updated December 4 2007; Interfor http://www.interfor.com/pdf/Acquisition%20of%20Pope%20%20Talbot%20mills%20updated%20Dec%204.pdf

[49] Ibid.

[50] "Celgar mill in receivership" Pulp and Paper September 1998 http://findarticles.com/p/articles/mi_qa3636/is_199809/ai_n8824674/

[51] "Interfor buys Pope & Talbot mills, sells one immediately" Vancouver Sun January 8, 2008.

Figure 3-7 Castlegar and Grand Forks Mills Production 2002-2009[52]



The Midway mill was sold to Fox Lumber Sales Inc. for $750k in February 2008. An auction of the property was held in September 18, 2010 due to non-payment of taxes. No bidder was found for the mill.[53] The village of Midway purchased three parcels of land on the Midway Forest Products property for a total of $275,000, and Interfor purchased two parcels of land, one for $725,000 and another for $3,500.[54] A tentative agreement for purchase of the mill by West Boundary Communities has been concluded and regional area governments, Midway, Greenwood and area E, have contributed $260,000 to the purchase. Efforts are under way to attract investment from local residents to come up with a total of $3 to $5 million to purchase the mill and acquire timber rights. Fox Lumber Sales indicates that the agreement for sale expires on October 27, 2010 and that all offers will be considered after that time.[55]

3.2 Mineral Commodities

Mineral commodities account for all of the non-forestry related traffic on the KFR San Poil subdivision.

3.2.1 Pacific Abrasives

Non-forest products traffic consists almost exclusively of granulated slag produced by Pacific Abrasives, one of several affiliated companies engaged in the production and sale of abrasives. The company is based in Danville,

[52] Source: 2002 – 2006 data "Acquisition of Three Sawmills from Pope & Talbot" pp. 10-11; 2008 -2 2009 Interfor Annual Report 2009

[53] "Midway mill fails to sell at auction" Boundary Sentinel http://boundarysentinel.com/node/7196

[54] "Midway to make announcement about Midway Forest Products mill operation" Grand Forks Gazette http://www.bclocalnews.com/kootenay_rockies/grandforksgazette/news/104184234.html

[55] Fox Lumber Sales website http://www.foxlumber.com/

California. Affiliated companies include Grandview River Mining, Can Am Minerals, Kleen Blast Abrasives (marketing and distribution) and Kleen Industrial Services (abrasives recycling).

The slag pile which provides the raw material for the Pacific Abrasives operation is waste from the Granby smelter which closed in 1919. Sufficient reserves exit to sustain operations for approximately 30 years. The slag is crushed and transported a short distance by truck to the rail loading facility in Grand Forks where it is screened, dried and loaded to railcars.

Figure 3-8 Pacific Abrasives Slag Mining Operation Grand Forks

Total direct costs associated with Pacific Abrasives operations in the Grand Forks area from 2005 to 2009 are shown below. The slag pile is owned by the City of Grand Forks and the city receives lease revenue from the mining operation based on production levels. The City received revenue averaging $277,684 annually over this period.[56]

[56] Source: Pacific Abrasives.

Approximately 75% of sales for the copper slag abrasives produced at Grand Forks is purchased for use in sandblasting. The U.S. Navy is a major customer; a 1996 report indicated that Kleen Blast was the largest supplier of copper slag abrasives to the Navy, accounting for 37% of Navy purchases in 1992[57]. A small quantity is provided as a feedstock to the Roxul Inc. mineral wool plant in Grand Forks.

The copper slag abrasives produced at Grand Forks have a relatively low value, with a delivered price (carload quantities) of approximately US$100 per tonne. The rail share of shipments averaged 98% over the period 2005 through 2009. Pacific Abrasives maintains a private fleet of railcars for this traffic. The current fleet is approximately 80 cars, of which 60 are owned and 20 leased. The reduction of rail service to twice weekly required the company to increase its fleet in 2008 by approximately 50% due to increased cycle times.[58]

3.2.2 Roxul Inc

Roxul Inc. operates a plant producing mineral wool insulation in Grand Forks. Roxul Inc. is part of the Danish firm Rockwool International, the world's largest producer of mineral wool insulation with 23 facilities in 15 countries. Roxul purchased the Grand Forks mill in 1999 from Enertek Products International Inc. Roxul has made use of rail transportation to a limited degree; the maximum traffic level was 147 carloads in 2003. The plant shipped 15 carloads in 2008 and none in 2009. The lack of rail traffic is due to the loss of the single customer in the U.S. which was equipped to receive rail shipments[59].

Roxul has done extensive analysis of distribution options for products from the Grand Forks plant. However they have found it is not economical for the following reasons:

- A significant portion of their production is delivered directly to construction sites by truck. The delivery locations are generally not served by rail.
- The product is not suitable for transloading due to the costs from product damage (shrinkage) in transferring between modes.
- The costs of delivering to Canadian destinations vis BNSF not competitive due to interline and switching charges.
- The company has adopted a policy of holding inventory locally which reduces the potential for routine high traffic volumes to specific destinations.

Under these conditions, it appears unlikely that significant rail traffic will be generated by Roxul Inc. in the foreseeable future.

3.2.3 Potential New Mineral Developments

Discussions were held with a representative from BC Ministry of Energy, Mines & Petroleum Resources Southeast Region to assess the potential for new mining developments which might result in increased rail traffic in the short to medium term. Based on these discussions, it appears that development of a new mineral or other non-renewable resource facility requiring rail service is highly improbable in the short to medium term This conclusion is based on the profiles of the stages of exploration, the scale and type of existing production and the

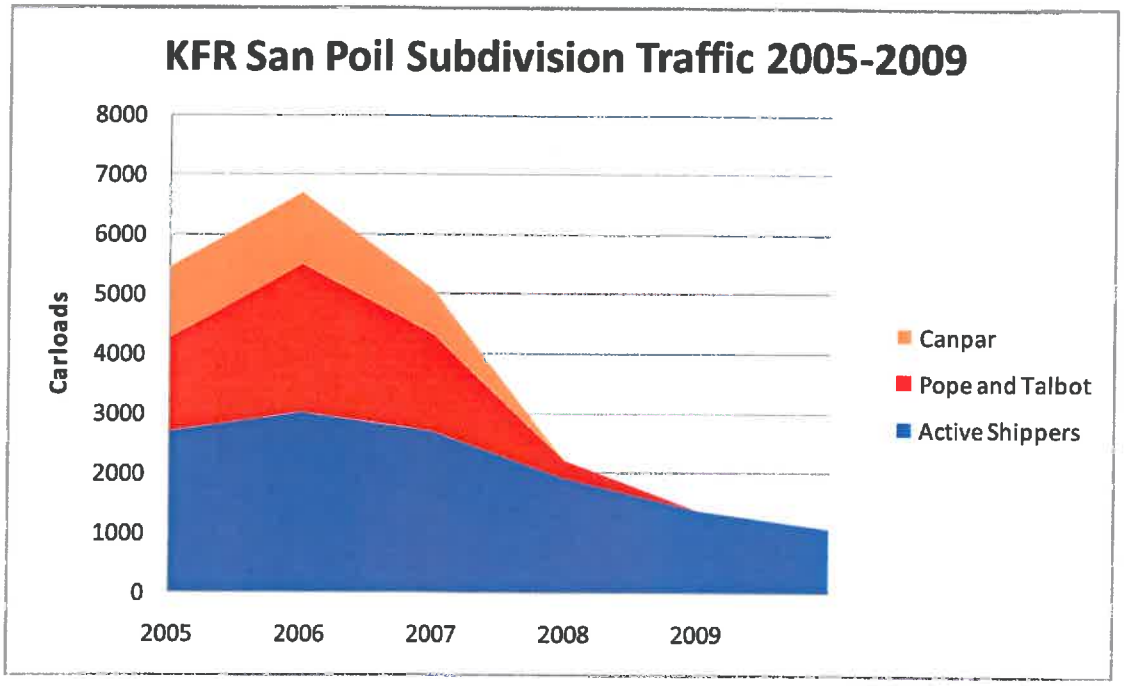
[57] Technology Transfer Report on Recycling Spent Sandblasting Grit Into Asphaltic Concrete Technical MemorandumTM-2179-ENV; NFESC Battelle for Naval Facilities Engineering Service Center, Port Hueneme, California 93043-4370, April 1996 p 1-2.
[58] Source: Pacific Abrasives.
[59] Personal communication with Roxul Inc. October 22, 2010.

location of other competing projects both in the surrounding regions that may be at a more advanced state of development.

3.3 Future Traffic Potential

Prospects for future traffic depend on volumes from traditional customers of the line, and potential new developments which could use rail transportation. Traffic volumes by shipper on the San Poil subdivision are shown below.

Figure 3-9 KFR San Poil Subdivision Traffic by Shipper 2005 – 2009



- The Canpar mill has been sold and dismantled. This operation provided a relatively stable level of traffic averaging 1178 carloads from 2000 through 2006. Opportunities for a similar operation in the future will be dependent on the availability of sufficient waste products from area mills. The proposed Interfor cogeneration plant is likely to consume a large portion of this feedstock in the event it proceeds.

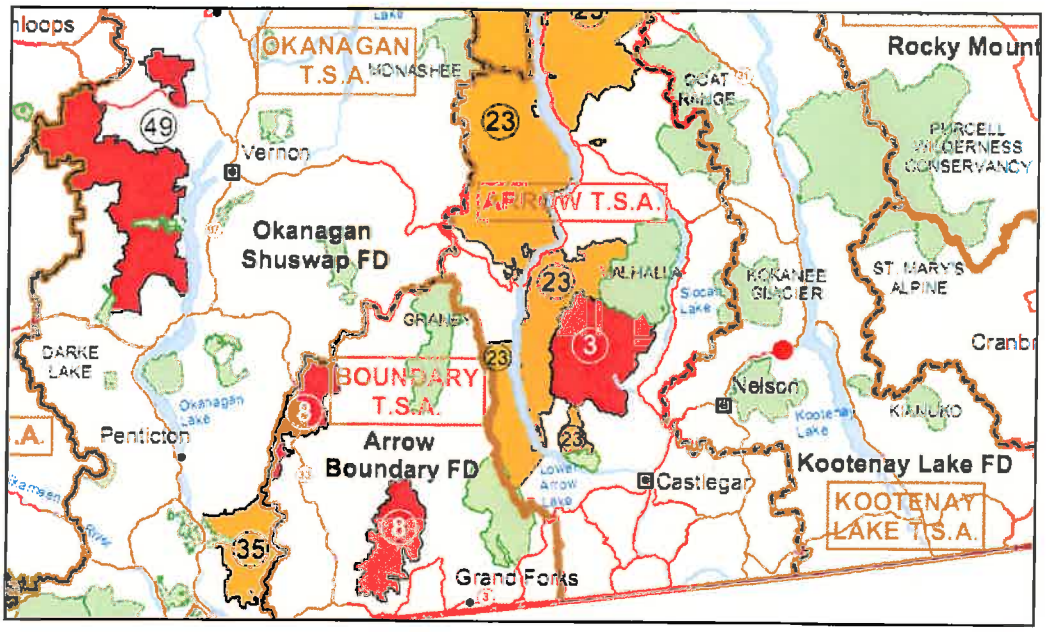
- At the peak in 2005, Pope and Talbot accounted for approximately 2500 carloads or 37% of the railway's total volume. Of this, approximately 1500 carloads was sourced directly from the Grand Forks mill and 1000 carloads was transported by truck from the Castlegar mill and reloaded at the Grand Forks mill site. Interfor estimate that their volume for the Grand Forks mill could recover to the previous level, but they have no plans to use the Grand Forks site for reloading lumber produced at Castlegar. The proposed investments in the Grand Forks mill are not anticipated to increase the rail traffic volume.

- Reload traffic at International Reload Systems has declined significantly since 2006. In addition to the impact of reduced lumber exports to the U.S., traffic has been reduced due to the loss of traffic from Weyerhaeuser's Princeton mill to the Oroville Remanufacturing and Reload following designation of the highway

from the border to Oroville as Heavy Haul route; this reduced the cost of trucking to the Oroville facility because it allowed the use of heavier trucks (138,000 lbs. Gross Vehicle Weight (GVW) compared to 105,000 lbs under normal Washington State regulations). This is discussed in more detail in section 10.

The potential for new mill construction is constrained by the availability of fibre. Major timber tenures in the area in 2007 are illustrated below. The Pope and Talbot tenures are now held by Interfor. It would be difficult for a new entrant to construct a mill of significant size in the absence of a firm timber supply.

Figure 3-10 Arrow – Boundary Timber Tenures 2007



3. Springer Creek Forest Products Ltd.
8. Pope & Talbot Ltd.
23. Pope & Talbot Ltd.
35. Weyerhaeuser Company Limited
49. Tolko Industries Ltd.

- Additional traffic from the Midway mill has not been included in estimates of future traffic due to the uncertainty regarding the future of the mill, including the availability of fibre and destination of sales.

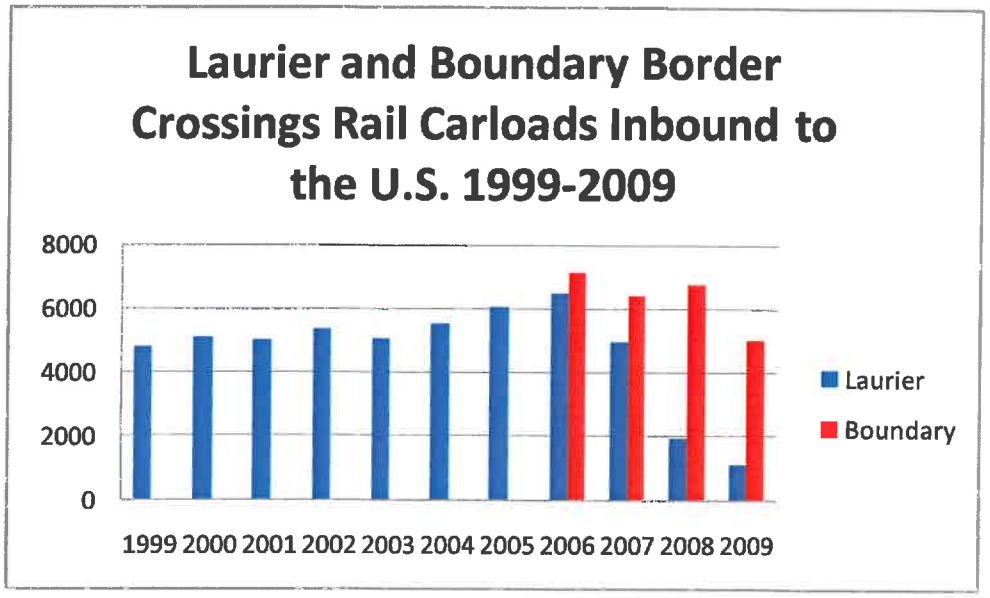
- Pacific Abrasives has traditionally provided a stable traffic volume of approximately 1000 carloads per year; it is anticipated that this will continue as long as rail service is available.

Based on this analysis, it is estimated that in the medium term (following recovery in the U.S. lumber market) demand on the San Poil subdivision may reach 3000 carloads per year.

3.4 Kettle Falls Subdivision

The viability of the KFR San Poil subdivision is dependent on continuing operations on the portion of KFR's Kettle Falls subdivision linking Kettle Falls to the BNSF rail network at Chewelah. Volume on this line includes traffic generated on the section of line between Kettle Falls and Columbia Gardens BC. Comparative cross-border traffic levels on the two lines are illustrated below.

Figure 3-91 Laurier and Boundary Border Crossings Rail Carloads 1999 – 2009



The source of this data is the U.S. Bureau of Transportation Statistics and the numbers represent loaded inbound (i.e. to the U.S.) railcars at the two crossings. Data is not available for the Boundary crossing prior to 2006. However, the available data shows that traffic at the Boundary crossing has been much more stable, with southbound traffic of over 5000 carloads in 2009.

The major shipper served by this line is Teck Cominco's lead-zinc smelter and refinery complex at Trail BC. It includes one of the world's largest fully integrated zinc and lead smelting and refining complexes and the Waneta hydroelectric dam and transmission system. The metallurgical operations produce refined zinc and lead and a variety of precious and specialty metals, chemicals and fertilizer products. In addition to southbound shipments of lead, zinc, fertilizers and chemicals, this facility generates significant northbound traffic in the form of lead-zinc concentrates to be processed. The major source of concentrates is the Red Dog mine in Alaska. Concentrate shipments from the Red Dog mine totalled approximately 1.4 million tonnes in 2009.[60] Teck Cominco indicates that 30% of Red Dog production is sold for processing at the Trail facility[61] which implies total shipments from this source of 420,000 tonnes or approximately 3800 carloads. Additional concentrates are imported from other sources. Concentrate from Red Dog is shipped via the Kinder Morgan Vancouver Wharves terminal at Port Metro

[60] Alaska's Mineral Industry 2009: A Summary Information Circular 60 by R.A. Hughes, D.J. Szumigala, and L.A. Harbo, Division of Geological & Geophysical Surveys, June 2010
http://www.dggs.alaska.gov/webpubs/dggs/ic/text/ic060.PDF
[61] Teck Annual Information Form 2010 Teck Resources Ltd. March 15, 2010 p. 7
http://www.teck.com/DocumentViewer.aspx?elementId=155506&portalName=tc

Vancouver and then interchanged by CN Rail with BNSF for shipment via KFR to a bulk reload centre at Waneta, BC. The concentrate is then trucked approximately 9 km to the trail refinery.

The reload facility for inbound concentrates is owned by Teck Cominco and operated by Trimac Transportation. Another bulk reload centre operated by Westcan Bulk Transport is used to transfer outbound chemicals and fertilizer to the KFR. Inbound and outbound rail shipments are closely balanced.

Other shippers on the Canadian side of the line include Columbia Gardens Reload centre handling lumber and pulp at Fruitvale, and ATCO Forest Products at Fruitvale. The ATCO plant is linked to the KFR by the International Rail Road Systems (IRRS). IRRS purchased the line from Columbia Gardens to Salmo in 1998. The portion of the line from Park Siding to Salmo was abandoned in 1998. In May 2010 IRRS was purchased by ATCO and continues to operate from Fruitvale to interchange with KFR.

In addition to the cross-border traffic, KFR handles additional traffic on the U.S. portion of the line from shippers including the Vaagen Brothers sawmill at Colville and Boise Cascade in Kettle Falls.

Based on available statistics and discussions with Teck Cominco, it appears that the Kettle Falls subdivision has a relatively stable traffic base in the neighbourhood of 10,000 carloads per year. This should represent sufficient traffic to guarantee sustainable operations on the line absent any catastrophic event affecting the rail infrastructure. Both Teck Cominco and BNSF have expressed confidence in the ongoing viability of this line[62].

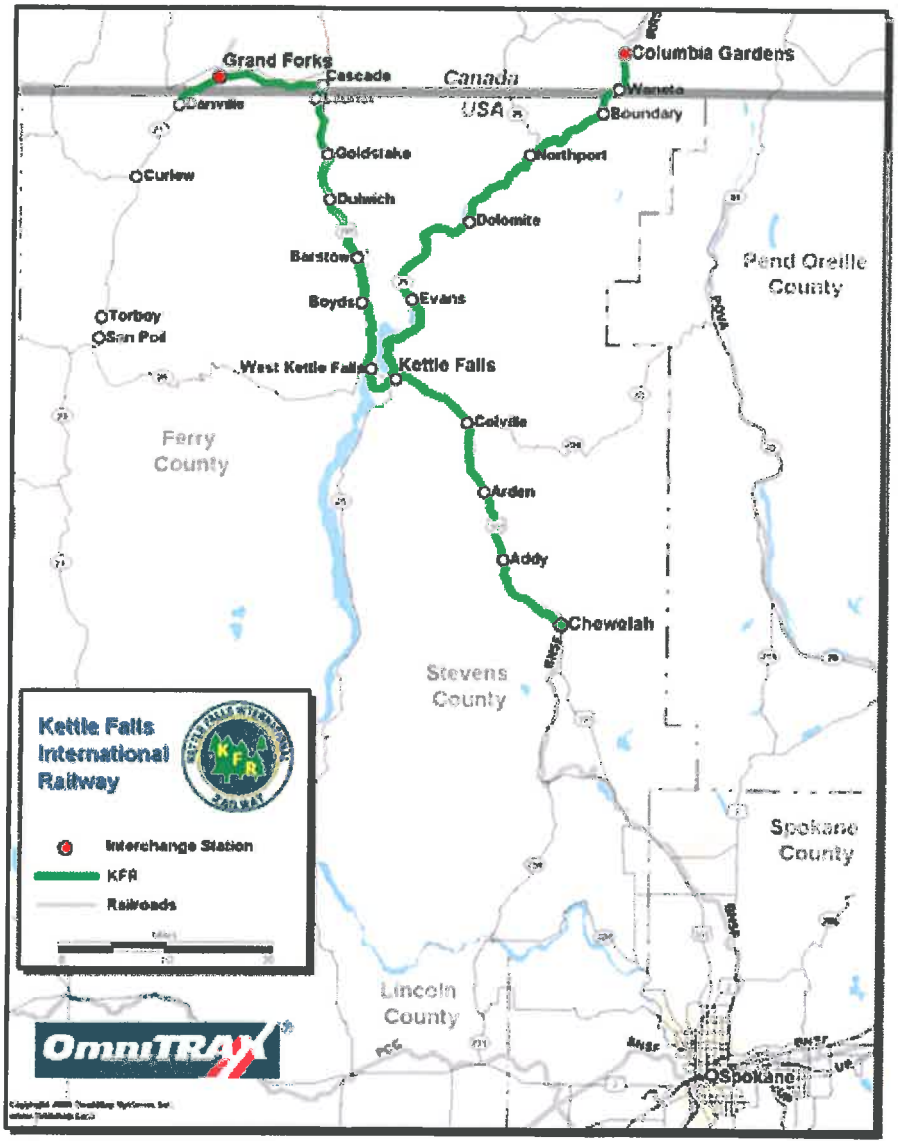
[62] Personal communications with Teck Cominco and BNSF Railroad.

4 KFR San Poil Subdivision Infrastructure Assessment

4.1 System Map

The KFR system includes two subdivisions: The Kettle Falls subdivision from Chewelah to Columbia Gardens, and the San Poil subdivision from Kettle Falls to Danville. This study addresses that portion of the Kettle Falls International Railway on the San Poil Subdivision between Mile 0.0 Kettle Falls, Mile 34.4 Laurier (U.S.A./Canada border) and Mile 48.8 Danville (U.S.A/Canada border).

Figure 4-1 KFR System Map



4.2 Summary of Track Conditions

Construction of the railway between Kettle Falls and Grand Forks started in 1901 under the Great Northern Railway to serve mining and timber interests and communities in Western Washington and southern British Columbia. Through railway mergers, the line became part of the Burlington Northern Santa Fe Railway. It was leased/sold to Omnitrax in December 2004. The lease portion is between Mile 0.0 and approximately Mile 6 and includes the giant 1219' steel cantilever through truss bridge over the Columbia River at Mile 4.76. The line crosses the US/Canada border at Mile 34.4 and terminates in Grand Forks BC.

There are eight Railway bridges on the line. The bridges appear to have been well inspected and maintained. Primary bridge costs in the next 25 years will be the maintenance replacement of timber decks on the steel structures and timber components (piles, caps, stringers, deck) in the pile trestles. The bridges are atypically large structures for a low tonnage shortline railway. Reconstruction costs for damage or destruction from a bridge deck fire would likely cause closure of the rail line.

The fundamental track maintenance issue on KFR is that a lack of renewal has resulted in too many defective cross-ties.

The last major cross-tie renewal occurred in 1989. In general, cross-tie life in tangents is between 30 and 40 years. On this subdivision, track forces were allowed some annual "maintenance cross-ties" to repair track defects. The largest amount was 3800 cross-ties in 2004 to gauge curves, but replacement generally averaged less than 2,000 cross-ties per year. Cross-tie replacements have not been at a sustaining level. As a consequence, the track structure has deteriorated. The railway has slowed operations to 10 mph and operates Mile 17.0-M.34.4 as FRA Excepted Track (not meeting minimum standards for rail and joint support). This deterioration has been well-managed in that the track is still in operation. However, without immediate capital improvements, the line will become inoperable. For purposes of this study, three options have been examined:

- Installation of at least 3,500 cross-ties and other maintenance to ensure operations for 18 months. Costs for this option are estimated at $300,000.

- Upgrading the line to return portions of the track to 25 MPH service to allow switching with a single train crew. Costs for this option are estimated at $830,000.

- Rehabilitating the line for 25 MPH service and increased tonnage. Costs for this option are estimated to be in the $5 million range.

The annual sustaining capital requirement for present operations on all of the above options is estimated at $300,000 per year over the next 10 year period.

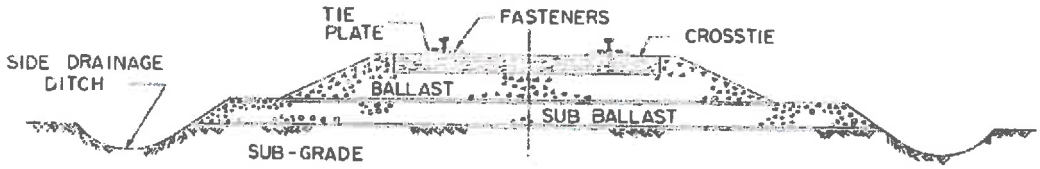
4.3 Introduction

This section will discuss the various components of the track structure and their general condition on the Kettle Falls International Railway (KFR).

The track was inspected Sept 6-7, 2010 by Norman Hooper P.Eng of Hooper Engineering. Mr. Hooper is a former Vice-President Maintenance and Chief Engineer with BC Rail with 32 years in the Railway Industry. His experience includes the construction and maintenance on a 1440km long railway that included 3 subdivisions with very similar track conditions to the KFR.

Mr. Hooper interviewed local Omnitrax personnel and inspected the line by hi-rail on September 7, 2010. Current Omnitrax maintenance personnel were employed for many years on this line by BNSF prior to the 2004 purchase and thus have extensive knowledge of the operating conditions as well as the maintenance history. Omnitrax freely shared their extensive experience, maintenance records and opinions on the current issues facing the line.

For reference, a cross-section of typical railway track is illustrated below.



Typical Track Cross Section

Track costs will be provided with respect to immediate safety requirements and options on capital requirements. These costs will be with respect to current and potential KFR operating demands.

4.4 Operating Loads

At present, KFR operates 4 axle locomotives in the 2000 hp range with a Gross Vehicle Weight (GVW) of about 260,000 lbs. The heaviest car on KFR is a 286,000 lb GVW centre-beam lumber flatcar. The other typical car in use is a 263,000 lb GVW covered hopper used to carry abrasive sand.

Typical 4-axle power on KFR seen at the main crossing in the yard at Kettle Falls.

The locomotives are yard and switching locomotives and have an age of about 40 years.

Typical 286K centrebeam flatcar used to carry dimensional lumber from the Grand Forks mill and the Christina Lake reload.

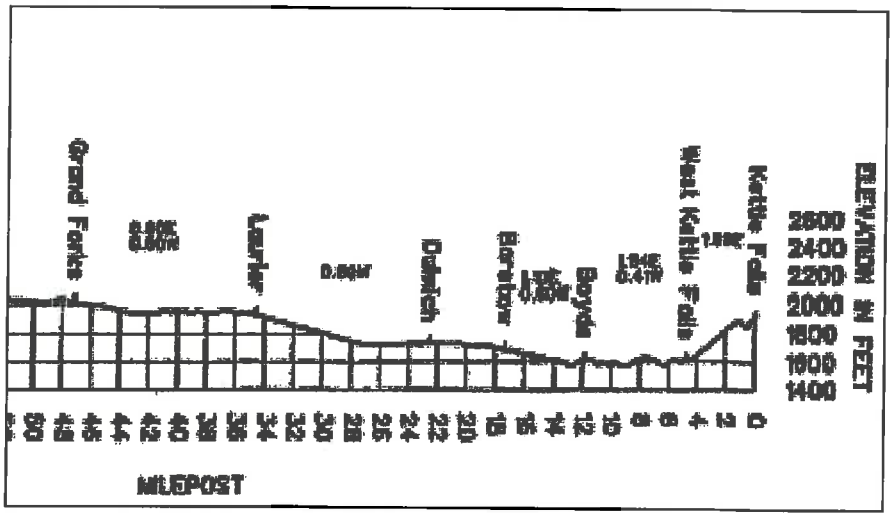
Mixed string of 263K covered hoppers being loaded in Grand Forks BC

KFR management has reported total traffic for 2010 August year to date of 900 carloads with a forecast for the year of about 1,300 carloads. This is approximately 20% of the peak level of 6700 carloads handled in 2006. The line currently has twice weekly service, down from 5 days per week. Immediate capital need assessments (Options 1 and 2) will be based on foreseeable traffic levels up to approximately 2500 carloads per year. For a 48 mile rail line, these are comparatively small volumes as many shortlines would consider 10,000 to 20,000 carloads annually as the minimum for sustaining capital and profitability. The longer term capital assessment (Option 3) is based on the assumption of an increase in traffic to a level which can support complete rehabilitation of the track.

4.5 Track Geometry

A Railway track profile is below. Loaded traffic is carried "railway eastward" towards Kettle Falls. The grade is predominately downhill and represents a savings in required fuel and locomotives to operate the line. However, the governing grade from West Kettle Falls into Kettle Falls averages 1.63%. Operations on this section require either additional locomotives on the train which are brought "on line" for the climb or hauling the heavily loaded train up the hill in sections.

Figure 4-2 KFR San Poil Subdivision Track Profile



Appendix A has a 10 page detailed Condensed Profile which gives extensive information on the Railway features.

Severe curve through a rock cut.

Note: Steel ties interspersed with the wood cross-ties to hold the rails in position.

The amount and type of curvature[63] has a direct impact on track maintenance costs and derailment potential. When trains travel around a curve, centrifugal forces are generated on the rails and cross-ties exponentially in relation to the sharpness of the curvature. Additionally, vehicle steering forces from the trucks (the assembly of steel frames and 2 wheel sets that that rotate under a railcar body) varies with the sharpness of the curve. The cost impacts of curves are:

- Rails wear more quickly and are more prone to fatigue defects that cause rail breaks
- Cross-ties have a shorter life due to mechanical wear such as cutting and loosening of fasteners. The curving forces cause the track to develop wide gauge. Gauge is the distance between the inside of the heads of the rails (4'-8 ½" nominally). Wide gauge and rail defects are the most common causes of derailments

KFR has a higher proportion of curves on their track than the typical shortline, requiring greater cross-tie replacement and other maintenance/inspection. Details are shown below:

Figure 4-3 KFR San Poil Subdivision Track Geometry

KFR San Poil Subdivision Track Geometry	
Tangents	26 miles
Mild Curves	5 miles
Medium Curves	10 miles
Severe Curves	7 miles

4.6 Maintenance Standards:

The track maintenance standards between Mile 0.0 to Mile 34.3 in the United States are governed by the US Department of Transportation Federal Railroad Administration Title 49 Part 213, Track Safety Standards[64]. The track maintenance standards between Mile 34.3 and Mile 48.8 in Canada are governed by Transport Canada TC E-31 Rules Respecting Track Safety[65].http://www.tc.gc.ca/eng/railsafety/rules-tce31-88.htm#printable_version With respect to operations on the KFR, the differences between the two standards are minimal. The standards are effectively identical in specifying tolerances for track defects and how/when the track must be inspected and the manner in which records that must be kept.

The standards specify maximum operating freight train speeds and maintenance standards by Class of track. Class 1 Track has a maximum operating speed of 10 mph; Class 2 track has a maximum operating speed of 25 mph. The higher the Class of track is, the more restrictive the standards are.

[63] Degree of curve is the angle subtended by a 100' chord in the simple portion of a curve. The higher the degree of curve - the sharper the curve; less than **2** degrees is mild; 2 to 6 degrees is medium; 6 -10 degrees and over is severe.

[64] Department of Transportation Federal Railroad Administration Title 49 Part 213, Track Safety Standards[64]. http://law.justia.com/us/cfr/title49/49cfr213_main_02.html

[65] Transport Canada TC E-31 Rules Respecting Track Safety.http://www.tc.gc.ca/eng/railsafety/rules-tce31-88.htm#printable_version

Railways are allowed to operate as Excepted Track at no more than 10 mph when maintenance tolerances are not being met. They must place restrictions on passenger trains and dangerous goods traffic. By design the operating speeds on KFR are:

Figure 4-4 KFR San Poil Subdivision Design Speeds

KFR San Poil Subdivision Design Speeds	
Line Segment	**Maximum Speed**
Mile 0 - 4.8	10 mph
Mile 4.8 – 26.3	25 mph
Mile 26.3 – 27.3	10 mph Permanent slow severe curvature
Mile 27.3 – 48.8	25 mph

The current operating speeds on KFR are:

Figure 4-5 KFR San Poil Subdivision Operating Speeds

KFR San Poil Subdivision Current Operating Speeds	
Mile 0 – 4.8	Designated as other than main track; no more than 25 mph but practically restricted to about 10 mph by having to proceed watching for opposing trains, men and equipment
Mile 4.8 – 17.0	Daily Operating Bulleting (DOB) Restrictions of 10 mph at M.8.3- 9.1, M.10.7-10.9, M.11.9-12.1, M. 14.7-15.7; the M.8.3- 9.1, M.10.7-10.9, M.11.9-12.1, M. 14.7-15.7; effect of which are to keep train speeds to 10 mph throughout
Mile 17.0-34.4	Designated as Excepted Track and restricted to 10 mph
Mile 34.3-48.8	Designated as other than Main Track and restricted to 10

The slow orders and Excepted Track are principally related to poor cross-tie and rail joint conditions. Effectively the track is operated at 10 mph; half of the US track doesn't meet minimum FRA maintenance standards and the track in Canada is only required to be inspected monthly.

The slow train speed has a marked impact on operations in that a train crew can no longer depart Kettle Falls, service Grand Forks and return to Kettle Falls in one tour of duty (FRA limited to 12 hours). This effectively doubles the train operations cost.

4.7 Track Condition

4.7.1 Cross-Ties

The fundamental track maintenance issue on KFR is that a lack of renewal has resulted in too many defective cross-ties.

A cross-tie constrains the rails in position under the repeated loading of the trains. The cross-tie holds the rails a fixed distance apart (track gauge), so that vehicle wheels track properly. The cross-ties transmit the train loads through the ballast section to the sub-grade. The cross-ties must have the bearing capacity to maintain the rails at a level "surface" to avoid vehicle rocking or instability. The ballast type, cross-tie spacing, cross-tie section sizes and cross-tie species are chosen to ensure the expected train loadings are safely supported at the lowest life-cycle cost.

As cross-ties rot, additional stress is put on adjacent cross-ties, particularly at rail joints. The eventual result is a loss of track gauge and track surface leading to slower train speeds and a higher derailment risk. A defective cross-tie is one that will not support loads on the rail/tie plate (vertically or laterally); will not hold the spikes; are broken or split through.
Under Federal Safety Regulations on a 39' rail (about 21 or 22 cross-ties)

- Class 1 track requires approximately 5 non-defective cross-ties and one good cross-tie within 24" of a joint.
- Class 2 requires approximately 8 non- defective cross-ties and one good cross-tie within 24" of a joint.

However on a practical basis, this is an insufficient amount of cross-ties on medium and severe curvature. The lateral forces would rapidly widen the gauge or roll out the rail in the sharper curves.

Near M.21

Typical defective tie cluster

Tie replacement costs could be reduced through substitution of less expensive cross-ties. Current estimated cross-tie prices per unit (delivered in truckload volumes) are shown below:

- hardwood 7"x9" x8' end plated and treated $65
- softwood 7"x9" x8' treated $44
- softwood 6"x8" x8' treated $32

For branchline loading on KFR, it is suggested that the size and species of cross-ties used for replacement be modified as follows:

- Use 8' long cross-ties rather than the 8'-6" of many of the existing cross-ties. This would reduce material costs by approximately 6% material savings and provide additional savings on ballast shoulder material.
- Use 7"x9" hardwood cross-ties only on severe curves.
- Use 7"x9" softwood cross-ties on medium curves.
- Use 6"x8" softwood cross-ties on tangents and mild curves.

Comprehensive records of prior cross-tie installations were not available. The condensed profile shows a cross-tie program in performed in 1989 that would likely have been in the 500-600 cross-ties per mile range. Maintenance cross-ties have been available to perform gauging on the curves; the last major activity was installation of 3,800 ties in 2004.

For branchline loading on KFR, it is suggested that tangent, mild and medium curve spacing could be at 22" centres or 2880 cross-ties per mile. Cross-tie spacing on severe curves should remain at 20" centres or 3168 cross-ties per mile. The cross-tie spacing would be established when replacing clusters of defective cross-ties.

The KFR Track Supervisor advised the results of their physical count for defective cross-ties performed over the entire subdivision in average defective cross-ties per mile.

Figure 4-6 KFR San Poil Subdivision Defective Tie Count

KFR San Poil Subdivision Defective Tie Count		
Line Segment	**Average defective ties per mile**	**Defect Rate**
Mile 0.0 – 5.0	656	21 per 100
Mile 5.0 – 17.0	639	20 per 100
Mile 17.0 – 34.4	986	31 per 100
Mile 34.4 – 48.8	781	25 per 100

This equates to about 39,000 defective cross-ties.

During the hi-rail inspection, a spot check of defective cross-tie counts was performed on 100 cross-tie selections at 34 locations. Defect counts ranged from 5 to 55 defective cross-ties per 100 cross-ties counted. The audit confirmed the Omnitrax average defective cross-tie per mile counts. In general, the tangents have the worst conditions. It was clear that care has been taken to ensure sufficient cross-tie replacement was performed in the curves to ensure track gauge was maintained.

There are approximately 154,000 cross-ties in 48.8 miles of main track. To keep this track on a maintenance cycle to replace rotted cross-ties, a replacement level of approximately 4000 cross-ties per year is required. There is a substantial capital deficit in cross-ties and an immediate near term investment is required to break up

clusters of rotted cross-ties and replace failed cross-ties under/near the rail joints. More critically, due to the age of the existing cross-ties, approximately 90,000 cross-ties can be expected to reach their service life due to rot in the next 20 years.

There are several approaches that can be taken to successfully address the defective cross-tie conditions varying from an increased annual replacement to a one time large scale track upgrading. The unit price economics of installing cross-ties varies greatly with the density of replacement, track time available; and the season and the preparation work performed. Our experience is that costs can range from $20 to $35 per cross-tie depending on the density of the program and the demand by railways for maintenance work. Unit costs for changeout are lower when the cross-ties to be replaced are closely spaced, because crew walking time is reduced. Omnitrax has advised that there are local contractors that perform cross-tie changeout at the low end of this cost scale.

Used cross-tie disposal must be included in the program schedule. The cause of most cross-tie removal on KFR is rot rather than mechanical wear so few of the cross-ties to be removed will be suitable for landscaping. Cross-ties are regarded as a "special waste" and are commonly used as bio-fuel in co-generation plants. Typical processing costs are $4 per cross-tie for processing and transportation. Scrap cross-ties could be stockpiled while local options are investigated.

4.7.2 Bridges

Compared to other shortlines of similar length, the KFR has some extremely large bridges. An independent detailed inspection of these bridges was outside the scope of this study. KFR has their structures inspected annually by Consultant Inspectors. The 2009 Bridge Inspection Report was performed by Osmose Railroad Services, a well regarded firm in the railway industry. Their report was reviewed and a walking inspection was done on each bridge to check on repairs and look for obvious omissions.

The 8 Railway bridges on the line appear to have been well inspected and maintained. The primary costs in the next 25 years will be the maintenance replacement of timber decks on the steel structures and timber components (piles, caps, stringers, deck) in the pile trestles.

One serious issue is the replacement cost of the bridges in case of deck fire and/or eventual replacement. For the bridges in the 100' – 300' range a price of $10,000 per foot is an order of magnitude estimate. Clearly, the cost of a bridge replacement would be beyond the financial capability of the KFR.

KFR will have the bridges evaluated again this fall. A budget of $25,000 is suggested for spot deck replacement or other emergent work.

M. 4.76 1219' Cantilever Through Truss over the Columbia River

Photo looking from the Railway East abutment

It is an enormous structure that appears in good condition

M. 4.76 1219' Cantilever Through Truss over the Columbia River

Note the typically clean condition of the rivets, paint work, etc at the floor beam, post and bottom chord connection

M. 8.43

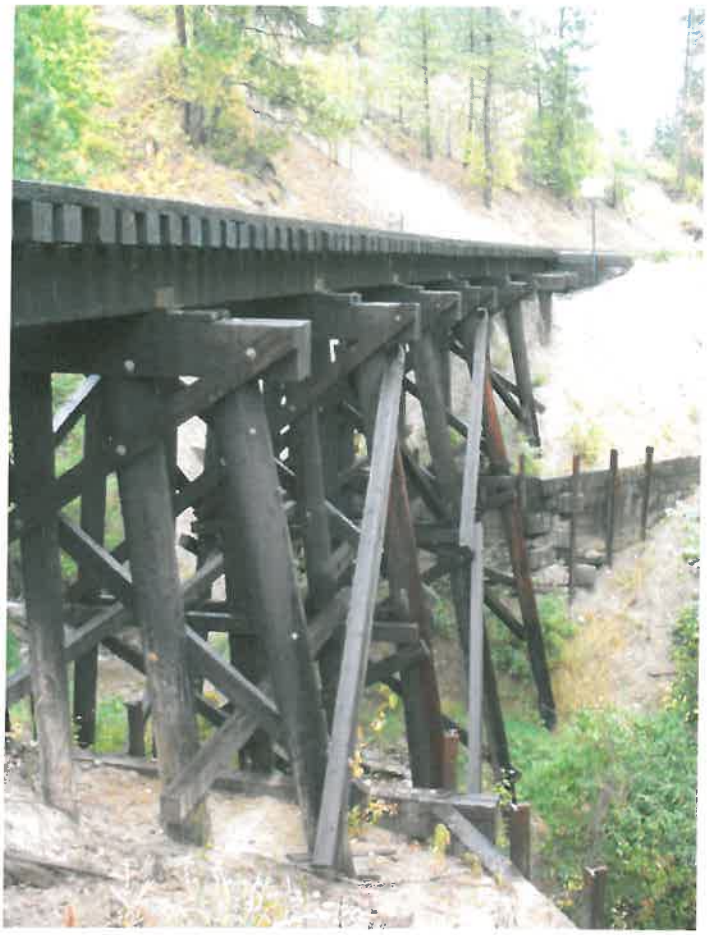
324' Combination Deck Plate Girder and Through Truss span over the Kettle River

Note condition of deteriorated deck ties identified in the Osmose Inspection Report.

Mile 10.93

487' Combination Through Truss and Pile Trestle over the Kettle River

Note failed bridge ties and splitting and rotating abutment sill



M. 15.66

98' Pile Trestle

Bridge report notes some tie and stringer conditions

M. 21.13

Crossing over HWY 395

Wide flange beams. Some minor spalling on concrete abutments

M. 21.33

201' Pile Trestle with a Deck Plate Girder central span over Boulder Creek

M. 22.62

97' Pile Trestle

M. 27.78

168' Pile Trestle

Little Boulder Creek

4.7.3 Rail and Fastenings

The rail is a mixture of material released from the BNSF main track over the years. It is a combination of bolted rail (rails of 39' and 78' lengths fastened together by joint bars) and continuous welded rail (CWR – rail pieces that have been electrically welded into long strings).

Rail is specified by a "section name" that gives the weight in pounds per yard of rail and the designer of the section. A higher number means a larger rail section. For 286K loading typical of the centrebeam lumber cars on KFR, a 115# or larger section would normally be used.

The types of rail sections on KFR in track miles are shown below:

Figure 4-7 KFR San Poil Subdivision Rail Inventory

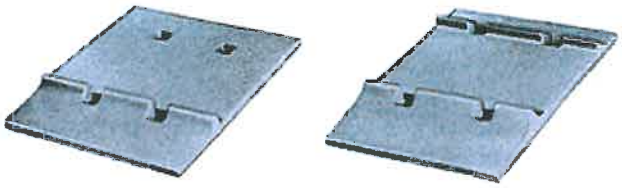
KFR San Poil Subdivision Rail Inventory	
Rail Section	**Track Miles**
90#	10.8 track miles mostly CWR
100#	4.2 track miles
110#	9.7 track miles
112#	12.4 track miles mostly CWR
115#	11.7 track miles

A compromise joint joining 100# and 115# rail together with a level running surface despite a rail height difference of 7/8"

The Great Northern had its own 90# and 100# rail sections which differed in height and base width from many other commonly used rail sections. This makes finding and fitting replacement tie plates, joint bars and rail anchors more problematic.

The rail on the US side has an annual inspection for internal fatigue defects that could develop into broken rails. The 2009 inspection between Mile 0.0 and Mile 34.4 had 13 defects all of which were repaired. The initiation of these defects was likely due to its former main track service rather than the limited tonnage that is occurring today. There is no regulatory requirement in Canada or the U.S.A. to perform a test for internal rail defects on Class 1 or Class 2 track.

Before about 1920, rail was commonly spiked directly to the cross-ties. As train weights increased, it was found that the area of the cross-tie directly under the rail wore rapidly and spikes sheared off. Canted, single shoulder tie plates were developed to provide a wear surface with a lip (shoulder) to support the rail under lateral loads. Tie plates markedly increased the life of wood cross-ties by providing a bearing/wear surface for the rail. As rail car axle loads increased again in the 50's/60's, larger area double shoulder plates were developed to supply a "seat" for the rail, improve spike life and give more bearing area.



Single Shoulder Double Shoulder

There is no doubt that wherever the older smaller style single shoulder tie plates were used on KFR, cross-tie life was reduced.

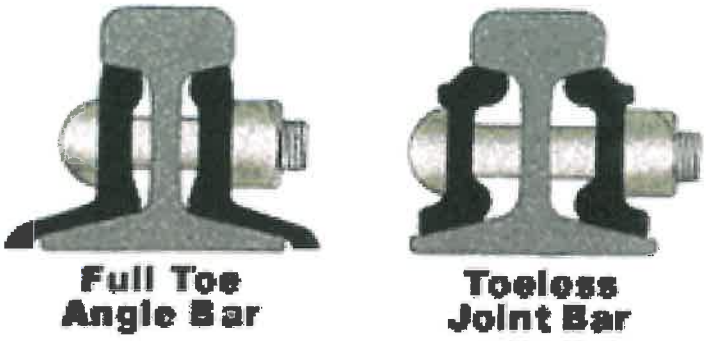
Relative size comparison of single shoulder tie plates (left) and double shoulder (right) tie plates

Wherever new cross-ties are installed, an effort should be made to purchase a larger compatible base tie plate (or at least an unbent existing style) and have new 6" long track spikes installed.

The purpose of a rail joint is to connect the rails together so that they form a "continuous girder" that deflects under load similarly to the rails it joins. A rail joint should prevent relative vertical and lateral movement of the rail ends but should allow longitudinal expansion and contraction of the joint for temperature. Joint maintenance includes regular lubrication and torquing of bolts.

The full-toe angle bar design on the jointed sections of the Great Northern rail pre-dates the use of tie plates; the bars have holes for spiking the bar directly to the cross-tie. The bars can't be used with a double shoulder tie plate. It is not uncommon that the full toe angle bars will wear in the fishing surfaces (contact zones under the head and on the rail base); no longer have a good interference fit with the standard oval neck track bolt; and,

have the bolts rusted and seized with the bars slightly loose. This leads to a pounding down of the cross-ties under the joints, accelerated cross-tie deterioration and accelerated wear on the fishing surfaces.



Two types of joint bars in service on KFR

Also, many joints are "frozen" with the bolts rusted in place. This leaves the track susceptible to buckling because the rail ends cannot slide to relieve internal temperature stresses. The poor joint conditions are a result of a lack of basic track maintenance (joint service and spot tamping) which has been unaffordable since traffic was reduced and the line was sold.

Typical low joint near Mile 19

Note that even good ties will not hold surface if the joint bars are loose

Note: loose plate and 1" gap between the rail and tie plate

A low joint results in more rapid tie deterioration due to impact.

The preferred joint would have toeless bars to allow for double shoulder tie plates under the joint. Inquiries to large track material suppliers revealed that second hand toeless bars are in short supply. The recent premium value in the steel market has resulted in the scrap disposal of much of the inventory and substantial price increases in the small remaining stock. If traffic volume increased substantially, an alternative would be to weld the existing bolted rail into CWR.

The advantage of CWR is the elimination of the maintenance of the joints bolts and rougher track surface as the joints move up and down. A disadvantage of CWR is that track is more prone to buckle (see inset) if the CWR is

not maintained in its position. Rail can move longitudinally under temperature or train forces tractive/braking forces. Normally, rail anchors (see inset) are used to prevent rail movement. Rail anchoring on KFR is inconsistent in the bolted rail sections likely due to long term deterioration of the cross-ties upon which the anchors bear.

Left -Various rail anchors styles

Right - A track buckle due to heat (Not on KFR – for illustration

When ambient temperatures are above 80°F, the KFR reduces train speeds and performs extra hi-rail patrols inspecting for incipient track buckles.

4.7.4 Right of Way

4.7.3.1 Vegetation

Control of vegetation is central to safe track. Railways must keep the right-of-way clear of vegetation ensuring safe sightline distances to road crossings and track signs. They must keep the ballast section clear of vegetation to ensure drainage. A mud-fouled, vegetation laden and water-logged ballast section will not support train loading. The effects of poor drainage include poor ride quality and accelerated deterioration of the wooden cross-ties. Over-growth of vegetation is also a fire hazard; tripping hazard and prevents inspection of track components.

Vegetation conditions are generally good on KFR. The KFR maintains an annual spraying program and by keeping the growth controlled the annual cost is reduced. Because KFR passes though farming country, there is also a requirement to control noxious weeds. There is a difference in contractors on the 2 sides of the border. The weed control appears slightly better on the US side, likely because of the use of herbicides with a local residual effect and because the ballast is less contaminated with fine particles in some locations. There are locations where high trees adjacent to the railway should be removed because of windfall hazard.

Near M.15

Note ballast section is clear of grass and weeds

Note debris ditch from recent tree fall and line of trees subject to windfall

Near M.45

Note contaminated ballast section and grasses between the rails

4.7.3.2 Rock cuts

The railway was constructed parallel to the Kettle River and required numerous rock cuts to maintain a steady uphill grade. Many of these cuts are on severe curvature limiting the view of an approaching train from any obstruction on the track. The cuts generally appear to be stable but they could use maintenance in the following areas.

- Scaling of loose blocks
- Removal of trees rooted in the rock faces that will jack rock out or become windfall.
- Cleaning of ditches to provide a catchment for fresh rock fall
- In some areas, a low ditch wall should be provided to stop rolling material

At present speeds, the derailment risk is minimal. An expenditure of $10,000 for a pass with hi-rail equipment, tree falling and the most urgent scaling is suggested.

Note: Ditches should be kept clear of rocks to provide a clear catchment area for new rock fall. Track maintenance inspectors should note areas of recent rock fall for further investigation of the stability of the slopes.

4.7.3.3 Culverts

A detailed culvert inspection was not within the scope of the work. The culvert list was reviewed. Most are less than 24" in diameter and carry only storm or melt water. According to the KFR Track Supervisor all but 2 are corrugated metal pipe and in good condition. There was no sign of any standing water or other drainage issue.

4.7.3.4 Crossings

There are approximately 50 road crossings; public and private. There were no issues other than normal replacement of rotted crossing planks when required.

Near M.45

Rotted crossing planks marked for maintenance replacement

4.8 Renewal Options

4.8.1 Option 1 – Class 1 Standard

The track does not meet safety Federal Standards and has been designated Excepted Track for 17.4 miles. The balance of the track is operated at Class 1 speed of 10 mph. The Railway is operated safely but is extremely close to being forced to cease operations, if required maintenance is not performed.

Option 1 – Class 1 Standard would return the track to compliant operation of 10 mph for an 18 month period. The cost estimate includes installation of 3500 cross-ties, 3,000 immediately to break-up clusters and support joints and 500 for spot maintenance over the balance of the 18 month period; urgent bridge tie replacements; and minor slope scaling, danger trees and ditching. The cost is estimated at $175,000 for materials and $125,000 in labour/equipment cost for a total of $300,000. Annual capital expenditures of $300,000 (approximately $6250 per mile) would be sufficient to maintain the track to 10 mph standards for the current traffic level.

4.8.2 Option 2 – Return to Class 2 Standard

The current track speed of 10 mph causes the KFR to relieve the train crew on line due to hours of service laws; this effectively doubles their operating cost of switching. Option 2 would return operating speeds to 25 mph in selected locations through partial renewal of the track between Mile 0 and 17.0; and, Mile 34.4 to M.48.8[66]. This would cut the return running time from 10 hours down to 6 to 7 hours. Costs for this program are estimated at $515,000 for materials and $315,000 for labour/equipment costs for a total of $830,000. Annual capital expenditures of $300,000 would be sufficient to maintain the track speed standards for the current traffic level.

4.8.3 Option 3 – Track Renewal for Increased Tonnage

This option funds the renewal of the track between Mile 0 and M.48.8 for a return to 25 mph track speed under the assumption of markedly increased traffic with daily switching. Total costs are estimated to be approximately $5.0 million with provisions for a substantial tie program, rail anchors, rail changeout where necessary, bridge deck rehabilitation, etc. Annual capital expenditures of $300,000 would be sufficient to maintain the track to standards for this increased traffic.

[66] Some trains would still be slowed for the gradient between Mile 0 and 5.

4.9 Material Disposal

If the line were shut down and was to be converted to hiking/biking trail, the line would have a salvage value to the owner in addition to the property value. It is assumed that the bridges would be left intact for this purpose because the effort of salvaging the bridges would not likely be cost effective.

Cost estimates are based on the assumption that the salvage work is to be done by a contractor. Scrap steel values are down nearly 50% from the peak several years ago. Current scrap prices for rail are in the $260/ton range. Small track material such as tie plates, spikes, anchors and joint bars (OTM Other Track Material than rail) have a scrap value in the $300/ton range. Some of the line may have a higher value as re-usable track material but the market is currently weak. Generally the rail on abandoned subdivisions is broken into 3 foot pieces for best salvage value from steel mills. Shipping costs to Chicago or the coast would be in the $100 per ton range. The material would have to be recovered from the right-of-way, but most of the track is readily road accessible. Arranging the work and shipping scrap material on both sides of the border would add inefficiency.

The largest single cost is dealing with the cross-ties. Reuseable ties would be recycled. The balance would be shredded for high temperature incineration. Cross-tie clean-up and material handling costs are in the range of $6 to $7 per track foot.

If Omnitrax were to salvage the line, they may get additional value through use of rail to move materials and salvaging some of the rail for their own re-use. The net proceeds on material salvage on KFR would likely be in the $200K to $500K range depending on the efficiency of the clean-up and scrap steel market.

4.10 New Track

If the track were shut down and salvaged but the bridges were retained and a continuous right-of-way preserved, the reconstruction of the line at some point remains a possibility. Current construction costs for 136# CWR using the existing ballast as a tie base are approximately $800,000 per track mile. Reconstructing the KFR in new material including one passing siding would cost approximately $40 Million.

5 Canadian and U.S. Rail Abandonment Regulations

The regulations applying to railways' abandonment or discontinuance of service vary significantly between Canada and the U.S.. This affects the options available to the City of Grand Forks with regard to efforts to maintain rail service to the community.

5.1 Canadian Abandonment Procedures

Procedures for abandonment or discontinuance of rail operations in Canada are set out in sections 142-146 of the Canada Transportation Act. Railways wishing to discontinue operations or abandon a rail line must post an advertisement including a description of the railway line and how it or the operating interest is to be transferred, whether by sale, lease or otherwise, and an outline of the steps that must be taken before the operation of the line may be discontinued, including a statement that the advertisement is directed to persons interested in buying, leasing or otherwise acquiring the railway line, or the railway company's operating interest in it, for the purpose of continuing railway operations. The deadline for written expressions of interest must also be specified, and must be at least sixty days after the first publication.

The railway has six months following the deadline for expressions of interest to conclude an agreement. In the event that no agreement is reached or consummated, the railway company must offer the line to the federal, provincial and local governments for no more than the net salvage value. If the parties cannot agree on the net salvage value, the Canadian Transportation Agency may determine the net salvage value. The deadlines for acceptance of the offer are 30 days for the federal government, an additional 30 to 60 days for the provincial government, and an additional 30 days for local governments.

Note that there is no requirement for the railway company to demonstrate that the line is not profitable nor any powers under the Act for the Agency to require continuing operation of the line.

5.2 U.S. Abandonment Procedures

Procedures for abandonment or discontinuance of service for rail operations in the U.S. are governed under 49 U.S.C. 10903, 49 CFR Parts 1105 and 1152. The process is overseen by the Surface Transportation Board, which has extensive powers to compel railways to continue service if it is determined that the public interest outweighs the negative impact on the financial health of the railway:

> *The Board must determine whether the "present or future public convenience and necessity require or permit" the abandonment. In making this determination, the Board balances two competing factors. The first is the need of local communities and shippers for continued service. That need is balanced against the broader public interest in freeing railroads from financial burdens that are a drain on their overall financial health and lessen their ability to operate economically elsewhere.*[67]

Most abandonments take place under Class or Individual Exemption processes. The Class Exemption facilitates the abandonment of rail lines which have been out of service (i.e. no commercial traffic) for two years or more. If the line has not been out-of-service for two years or more, but has seen very little use, the carrier may petition the STB for an individual exemption. Abandonment applications are filed by carriers in situations where the carrier

[67] Overview Abandonments and Alternatives to Abandonment 2008 edition Produced by Office of Public Assistance, Governmental Affairs, and Compliance Surface Transportation Board Washington, D.C. 20423 p. 4.

believes it cannot continue to operate the line profitably in spite of the fact that the line is used. The burden of proof is on the carrier to show that the line is not profitable and that evidence is subject to challenge. For both of these processes, environmental impact documents must be filed with appropriate federal, state and local agencies.

The U.S. process includes a number of alternatives to abandonment which may be imposed by the STB. Any financially responsible party seeking to continue service on a line approved for abandonment whether by full application or by class or individual exemption may compel the railroad to sell or conduct subsidized operations over the line by providing an **Offer of Financial Assistance**. A subsidy should cover the railroad's avoidable operating losses on the line, plus a reasonable return on the value of the line. An offer to purchase should equal the acquisition cost of the line (the net liquidation or going concern value of the line, whichever is higher). The **Feeder Railroad Development Program** allows rail consumers, communities or other interested parties to acquire rail lines before an abandonment application is filed. Even if a line is not shown on the carrier's system diagram map as a candidate for potential abandonment, rail users and communities may apply to the Board to compel the railroad to sell the line by proving that the "public convenience and necessity" requires or permits the sale.

The applicant must show, among other things, that it (1) can pay the net liquidation value of the line or its going concern value, whichever is greater, and (2) has the ability to provide service and cover such costs as operating expenses, rents, and taxes for at least 3 years. The applicant must provide the dates it intends to operate the line and an operating plan that identifies the proposed operator. The operating plan should be detailed, showing what customers will be served, and it should include all proposed interline connections. It should include copies of any agreement between the proposed new owner and the proposed new operator. Applicant should also provide evidence of liability insurance coverage it carries. If the application includes a request for trackage rights over the line, insurance coverage must be at a level sufficient to indemnify the owning railroad against all personal and property damage that may result from negligence on the part of the operator.

The ICC Termination Act (49 U.S.C. 10101 et. seq.) (ICCTA) and the National Rails to Trails Act (16 U.S.C.1247 (d)), along with the STB's regulations (49 CFR 1152.28 and 49 CFR 1158.29), give interested parties the opportunity to negotiate voluntary agreements to use a railroad right-of-way, that otherwise would be abandoned, for recreational or other public use, such as a commuter rail service or a highway. These methods of preserving a railroad corridor are known as "rail banking" meaning that the right-of-way is preserved for potential future use as a railroad.

All of these processes are subject to stringent deadlines for submission of documents, etc.

5.3 Kettle Falls International Railway Abandonments

KFR filed an application with the STB for abandonment of the portion of the San Poil subdivision between San Poil and Danville on June 23, 2006. The sole commercial shipper on the line was Pope and Talbot, who operated a lumber reload facility at Curlew. In October 2005 this facility ceased operations and was subsequently dismantled.[68] The application estimated KFR losses on the line in 2005 at $507,660 and opportunity costs for 2006 at $205,264 based on a net salvage value of $3 million.

[68] STB Docket No. AB-994 X Kettle Falls International Railway Abandonment Exemption in Ferry County Washington Petition for Exemption.

On June 28, 2006 Ferry County submitted an Application for Public Use to the STB. Following a number of requests for extension of time, the rail corridor was transferred to the County for use as a public trail in January 2009.

6 Grand Forks Short Line Railway Financial Analysis

A primary purpose of this report is to provide an independent analysis on the viability of the portion of the Kettle Falls International Railway (KFR) that services Grand Forks, BC. Omnitrax did not share proprietary financial information with the study team. Consequently the feasibility analysis is not based on actual financial data on KFR operations but on team members' expertise, publically available rail industry statistics, a review of previous short line business plans, stakeholder and industry interviews, field data and the KFR Timetable to develop a normalized representative financial model of short line operations.

The KFR published a notice of sale or discontinuance of rail line in the *Grand Forks Gazette* on September 23, 2010. This action implies that the KFR is not generating sufficient freight revenue from the current rail service to cover the operating expenses.

6.1 Rail Revenue

Short line revenue is mainly earned from per carload revenue (mostly from Class 1 Railway divisions), some ancillary fees, property leases and short-haul intra-line moves. For comparison purposes, recent financial data from RailAmerica, a major North American shoreline operator, has been reviewed. RailAmerica reported the following sources of revenue in 2009:

- Interchange (86%): freight transported between a customer's facility and a connection point with a Class I railroad.
- Local Freight (3%): originates and terminates on the short line.
- Bridge Freight (11%): transport from one connecting Class I railroad to another.

Typically, a short line railway will provide freight service under a contract or similar arrangement with either the customer located on short line, or the connecting Class I railroad. Contracts vary in terms of duration, pricing and volume requirements. Because a short line normally provides transportation for only a segment of a shipment's total distance (with the Class I railroad carrying the freight the majority of the distance), customers are generally billed once for the movement of their freight, typically by the Class I carrier, for the total cost of rail transport. RailAmerica reports that Class I railroads usually pay the short line operators in a timely manner upon delivery of service regardless of whether or when the Class I railroad actually receives the total payment from the customer. This industry practice was assumed for the purpose of our analysis.

In addition to providing freight services, a short line may also generate non-freight revenue from other sources such as railcar storage, demurrage, leases of equipment to other users and real estate leases and use fees. Depending on the location of the short line it may also be possible to generate right-of-way income through crossing licenses and leases with fiber optic, telecommunications, advertising, parking and municipal users. Given the location of the KFR a small amount of non-freight revenue mainly attributable to rail car storage was included in the revenue model.

A portion of short line freight revenue may be generated under contracts with either the customers served or the Class I railroads with which the lines physically connect. For example, RailAmerica reports that approximately 56% of their total freight revenue was generated under contract.

Individual short line contracts vary in terms of duration, pricing and volume requirements, but commercial arrangements between shipper and railway can generally be categorized as being one of the following:

- **Contracts directly with Class I railroads (Rate Division):** In these cases, the short line rail road acts as an agent for the connecting Class I railroad, with the Class I railroad typically maintaining a contract directly with the customer/shipper for the entire length of haul. These contracts are typically long-term in nature.

- **Contracts directly with customers/shippers:** contracts stipulate the term and pricing mechanics and often include minimum customer volume requirements and penalties payable to the short line in the event volumes fall below specified levels. In general, these contracts are one to three years in length, although in certain instances the term can be longer.

- **Published rate, no contract:** the short line would generate freight revenue using a quoted rate per carload based on the type of freight service. In all instances this revenue is generated directly from shippers. Rates can typically be adjusted as market conditions warrant although larger customers may receive a confidential rate that provides more price certainty over a longer period of time.

From information available to the study team, it appears that KFR's freight revenue is derived solely from their rate division with Burlington Northern Santa Fe (BNSF).

There is less certainty associated with other aspects of KFR's contract with BNSF. RailAmerica reports that their contracts typically stipulate either inflation-based or market-based pricing. Market based pricing is based on negotiated rates. Pricing and escalation terms for these contracts are negotiated prior to the signing or renewal of a contract. This type of pricing provides the short line the ability to price contracts at prevailing market rates. Inflation-based pricing is based on a fixed revenue per carload with inflation-based escalators. This type of pricing is common for "handling line" railroads where the contract is with an interchanging Class I railroad. These contracts are typically long-term and were often entered into at the time the short line was purchased from the Class I. The study team adopted a conservative approach in the sensitivity analysis and assumed that KFR revenue will not benefit from increased revenue from inflation-based adjustments.

In regards to possible revenue generation from fuel surcharges the study team also adopted a conservative approach since no information from Omnitrax was available to the study team. All of the Class 1 railways charge fuel surcharges to recoup additional costs during periods of high prices. Fuel surcharge programs are typically either revenue-based or mileage-based. Revenue-based programs charge a surcharge based on additional revenue per carload while mileage-based programs charge a surcharge based on miles hauled. These surcharges may represent a significant portion of shippers' rates. As an example, BNSF's fuel surcharge for November 2010 is 17% for carload rates and $.43 per mile for mileage-based rates.[69] We have assumed that none of this additional revenue is shared by BNSF with KFR.

To develop a financial model of railway operations it is necessary to anticipate the level of revenue generated from hauling freight under different scenarios of annual carload traffic volume. Given the confidential nature of contracts it was not possible for the study team to ascertain with 100% certainty the current level of revenue generation. The study team used industry statistics including data on average revenue per carload reported by RailAmerica to estimate a reasonable range of revenue per carload for modeling KFR operations. RailAmerica's average revenue per carload by commodity is shown below.

[69] "BNSF Carload Fuel Surcharge for November 2010" BNSF website September 28, 2010 http://domino.bnsf.com/website/updates.nsf/updates-pricing-industrial/291CAEF83A96CEDA862577AC0052F299?Open

Figure 6-1 RailAmerica Average Revenue per Carload 2009

RailAmerica Average Freight Revenue per Carload 2009	
Commodity	**US$ per carload**
Agricultural Products	$446
Chemicals	$582
Coal	$207
Non-Metallic Minerals and Products	$417
Pulp, Paper and Allied Products	$526
Forest Products	$570
Food or Kindred Products	$485
Metallic Ores and Metals	$573
Waste and Scrap Materials	$377
Petroleum	$463
Other	$413
Motor Vehicles	$370
Average Revenue per Carload	**$420**

The data indicates average revenue per carload of $420 for RailAmerica in 2009. Information available to the study team suggests that the current rate division (revenue per carload) paid to KFR by BNSF on the San Poil subdivision is approximately US$265 per carload.

6.2 Rail Costs

Rail system expenses include track and bridge maintenance, locomotives and equipment, rail operations staff and general administrative costs. The cost estimates in the sensitivity analysis for these items were based on team member's expertise, publically available rail industry statistics, current market data, a review of previous short line business plans, stakeholder and industry interviews and field data.

6.3 Base Line Financial Model Results Current Situation

In order to provide the most meaningful insights it is helpful to consider both the short line revenue potential and cost structure under some set of normalized operating conditions. These operating assumptions correspond to the Option 1 – Class 1 Standard identified in Section 4.7. A sensitivity analysis is performed on the model to estimate the annual rail car traffic volume and revenue that would be required to support ongoing operations.

The table below shows detailed estimates of costs and revenues under conditions approximating current circumstances of the line – annual traffic of 1300 carloads per year with a rate division of $265 per carload. Maintenance costs are estimated at $6250 per year based on the analysis in section 4.7.

The analysis estimates an annual operating loss of almost $707,000 under the assumption that sufficient maintenance expenditures are made for long term sustainability of operations. This indicates that financial viability of the line is dependent on increased revenues through higher traffic levels, a higher rate division, or both. **The fundamental challenge in maintaining operations on the San Poil subdivision is the need for sufficient additional revenues to cover operating and maintenance costs.**

Figure 6-2 Base Line Financial Model Results Current Situation

Base Line Financial Analysis Current Situation				
	Short Line Railroad Annual Operating Income Projections			
Revenue Description	Quantity	Units	Price	Income Annual
Freight Revenue	1,300	carloads	$265	$344,500
Car Storage	100	carloads	$250	$25,000
Demurrage	15	per rail car	$50	$750
		Total Revenue		$370,250
	Short Line Railroad Annual Operating Cost Projections			
Expense Description	Quantity		Price	Expenses Annual
Way & Structures				
Track Repair (ties & rails)	48	per mile/year	$6,250	$300,000
Track Repair Tools	1		$8,000	$8,000
Signal Repair	2	Per signal/year	$3,000	$6,000
Subtotal ways & structures expenses				**$314,000**
Equipment				
Locomotives (GP-35/GP-4	365	per day/per locomotiv	$450	$164,250
Locomotive Fuel	13,000	Gallons	$3.24	$42,120
Locomotive Lube Oil	12	per month	$300	$3,600
Locomotive Repair	12	per month	$2,500	$30,000
Mechanics Tools/Supplies	12	per month	$6,000	$72,000
Trackmen Vehicle Lease	12	per month	$300	$3,600
Truck/Car Fuel	12	per month	$800	$9,600
Truck/Car Maintenance	1	annual	$1,500	$1,500
Railcar Hire	12	per month	$2,000	$24,000
Subtotal equipment expenses				**$350,670**
Rail Operations				
General Manager Salary	0.75	annual	$60,000	$45,000
Trackmen Salaries	0.5	annual	$50,000	$25,000
Mechanics Salaries	0.5	annual	$55,000	$27,500
Trainmen Salaries	1.5	annual	$55,000	$82,500
Signalman Salary	0	annual	$55,000	$0
Trainmaster Salary	0.5	annual	$55,000	$27,500
Administrator	0.4	annual	$40,000	$16,000
Subtotal rail operations expenses				**$223,500**
General Overhead				
Utilities	12	per month	$600	$7,200
Office Supplies	12	per month	$400	$4,800
Office Rent	12	per month	$800	$9,600
Telecommunications	12	per month	$700	$8,400
Liability Insurance	1	annual	$35,000	$35,000
Property Taxes & Govt . Fe	1	annual	$50,000	$50,000
Marketing	1	annual	$0	$0
Miscellaneous	1	annual	$2,000	$2,000
Subtotal general overhead expenses				**$117,000**
Depreciation				
Depreciation & Amortizatio	12	per month	$6,000	**$72,000**
		Total Expenses		$1,077,170
		Profit/Loss		($706,920)

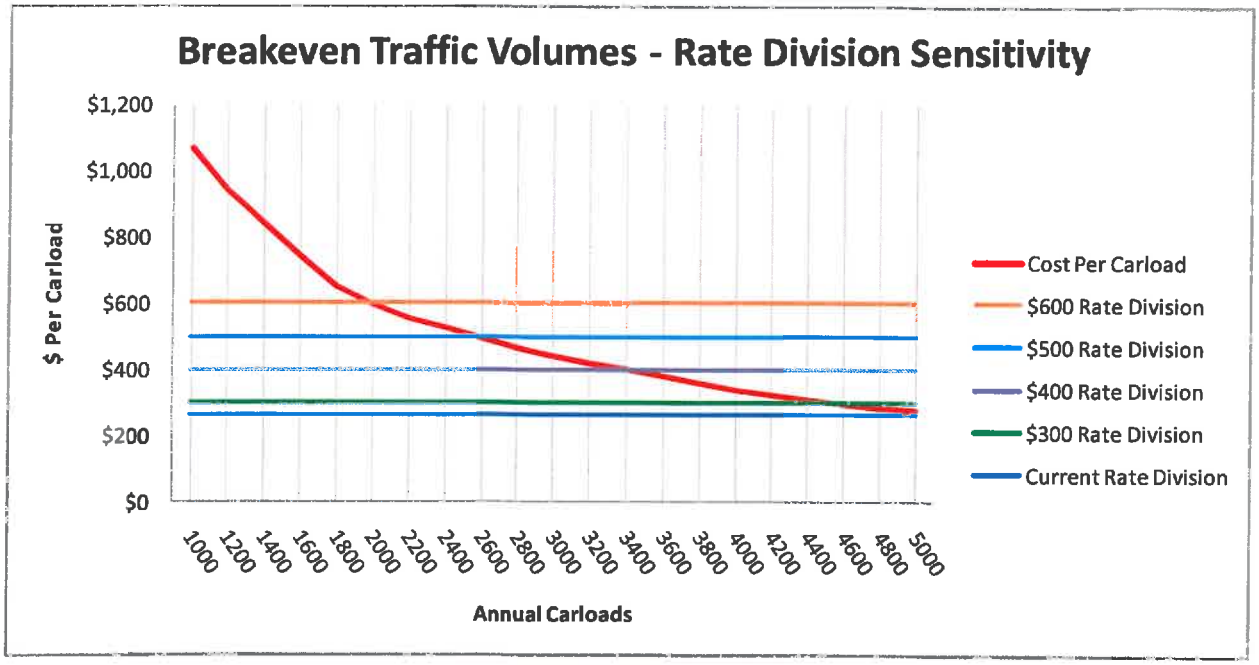
Current losses incurred by the existing KFR operation of the line are probably less than the model estimates for the following reasons:

- The model is based on a stand-alone shortline railroad operating only on the San Poil subdivision. KFR probably achieves some economies in utilization of fixed assets and labour by sharing these resources with operations on the Kettle Falls subdivision.

- It appears that KFR's maintenance expenditures are significantly below those required to sustain operations on the track.

Revenue depends critically on the rate division – the share of the rate paid by shippers to BNSF which is paid by BNSF to KFR. The existing rate division of $265 per carload is low relative to industry averages. The sensitivity of breakeven traffic volumes – the level of traffic where the cost per carload is equal to the rate division – is shown below. Costs per carload fall as traffic increases due to the significant portion of costs which are fixed.

Figure 6-3 Breakeven Traffic Volumes – Rate Division Sensitivity



Based on the existing rate division of approximately $265 per carload, traffic would have to reach a level of approximately 5000 carloads for the railway to break even. While this level was common in the past, it is significantly higher than the traffic level of 3000 carloads we have estimated may be achievable in the medium term. To break even at the 3000 carload per year level, a rate division of approximately $435 would be required. **Note that in order to induce a company to operate the line, additional traffic or revenue sufficient to generate an operating profit would be required.**

6.4 Options for Improving Financial Performance

The financial analysis indicates that under the current rate division and traffic level the line cannot generate sufficient revenue for long term sustainability of rail operations. Options for improving the financial viability of ongoing operations include:

Increasing Revenue per Carload to a level sufficient pay for capital and maintenance expenses. Under existing contractual arrangements, this would require renegotiation of the rate division between (KFR) and Burlington Northern Santa Fe (BNSF). The extent of this option is limited by the willingness of BNSF to reduce their portion of the revenue from shipments on the line and/or the level of rates shippers are willing to pay before they shift traffic to truck or cease production due to increased costs.

Increasing the Traffic Level by attracting additional inbound or outbound commodity movements. However, our analysis of existing and potential demand suggests that demand is unlikely to exceed 3000 carloads in the foreseeable future, and the timing of a recovery to this level is dependent on developments in the U.S. housing market.

Reduce Operating and Maintenance Costs by decreasing or deferring maintenance costs can enable an operator to remain profitable in the short term. However, in the long run it may result in increased operating costs and a reduction in the life of the asset. Based on our assessment of the track condition and the financial analysis in this section it appears that KFR has exercised this option as traffic volume as fallen. At this point, maintaining operations on the line requires restoration of maintenance expenditures to a sustainable level.

7 KFR San Poil Subdivision Canadian Portion Net Salvage Value

7.1 Introduction

Kettle Falls International Railway (KFR) published a notice of sale or discontinuance of service for the Canadian portion of the San Poil subdivision in the Grand Forks Gazette on September 23, 2010. The public notice was issued in accordance with Section 143(1) of the Canada Transportation Act (CTA). The rail line is available for sale or other transfer for continued operation. The proposed rail line abandonment lies within the Regional District of Kootenay Boundary and adjacent to the City of Grand Forks.

If KFR receives no expressions of interest, or if expressions of interest are received and no agreement to transfer the subject railway has been entered into within the six (6) month period after the date of November 21, 2010 the KFR may proceed with the discontinuance in accordance with the provisions of the Canada Transportation Act. The railway would be offered to the federal, provincial, regional and local governments whose territory the lines passes through for not more than the net salvage value. If no level of government expresses an interest in acquiring the line, then KFR may dispose of the rail corridor.

Subsection 145(1) of the Canadian Transportation Act states that the transfer of a railway line to a government is to be at a price "...not more than its net salvage value to be used for any purpose..." This statement implies that a government, to whom the railway line is to be transferred, is not bound to use the railway in a specific manner (No. 530-R-1998).

Under the present legislative framework the definition of net salvage value means the realizable market value of the track materials and land, less their associated dismantling, disposal and other relevant costs. These costs can include, but are not limited to, sales commissions, excavation, disposal, and environmental restoration. The 'for any purpose' criterion requires the estimation of land value to consider a wider number of potential uses for the right of way, some of which may render it more or less valuable (No.530-R-1988).

In practice the Agency determines land values on a case-by-case basis, including various costs and adjustments, for purposes of determining the net salvage value of the railway line. This is because the relevant land assets and their characteristics may vary between railway lines. In determining the net salvage value of a railway line, the CTA may apply an adjustment factor to prevailing land values depending on the specific characteristics of the right-of-way (No. 530-R-1998).

Assessment of the track condition (as presented in section 4) and estimation of the land values of the rail line are critical first steps in exploring the feasibility of options for preserving rail service. The results of the analysis will allow for informed decision-making regarding the potential purchase of the rail line (or segments), or whether further analysis regarding the feasibility of maintaining rail service is warranted

7.2 Estimation of Land Values

The estimates of land values presented in this section are based on available information on KFR landholdings and local land values. The scope of the project did not permit the analysis of specific properties based on purchased commercial real estate sales data or an external expert opinion. A more formal appraisal process would be required to support a valuation for purchase in the event the City decides to proceed.

The portion of the KFR track that is for sale can be summarized as:

MP 34.3 at or near Laurier, Washington (US/Canada border) through Grand Forks, BC at MP 47 to and including, MO 48.8 at or near Danville, WA (US/Canada border), including all yard tracks, sidings and spur track. The distance of the track is 14.5 miles. The width of the railway right of way is assumed to be a 100' right of way (50' either side of track centerline).

This section of the corridor contains approximately 176 acres.

KFR did not provide the study team with any information in regards to the type of property rights associated with the rail line. The analysis assumes that the fee simple interest in the property would be conveyed to a purchaser.

The first step on determining the appropriate land values is to develop Across the Fence values for the parcel of lands abutting or adjacent to the rail line being discontinued. In essence these land values represent the Highest and Best Use of existing properties subject to the current Official Community Plan (OCP) zoning bylaws. The value of these properties is determined by each of the corridor's real estate market demand and supply characteristics.

In September 2010 the study team completed a visual inspection of the rail line property and reviewed the OCP classifications. The study team classified sections of the rail line based on zoning, adjacent land uses and natural topography. Analysis of the rail line revealed that the railway passes through a number of distinct Official Community Plan areas with a few different land use designations adjacent to the railway: each covered by a unique local zoning by-law. The geographic area and their land use designations are as follows:

Figure 7-1 Land Use Zones and Designations

Land Use Zones & Designations		
Geographic Area	**Land Use Designation & Description**	**Area of Zone Adjacent to Track**
Kootenay Boundary Regional District Electoral Area C	Rural Industrial	53 acres approximately
Kootenay Boundary Regional District Electoral Area D	Agricultural Resource Extensive Agricultural Rural Resource	123 acres approximately
City of Grand Forks	Industrial 1 (Light) Industrial 2 (General) Industrial 3 (Value Added) Industrial 4 ((Gravel/Mineral Process) Residential 1 (Single & Two Family) Residential 2 (Small Lot)	Grand Forks Railway interchanges with the KFIR on the edge of the city and within the Kootenay Boundary Regional District thus no portion of the track subject to the discontinuance notice fall within the City of Grand Forks.

Grand Forks Railway interchanges with the KFR on the edge of the city and within the Kootenay Boundary Regional District thus no portion of the track subject to the discontinuance notice falls within the City of Grand Forks.

Given the largely rural nature of the rail line, the study team used a methodology based on a small sample of properties that corresponded to each OCP designation along the length of the rail corridor. These land value estimates were applied to the appropriate sections of the railway line to establish an estimate of the total land value of the corridor.

Based on past CTA decisions the study team relied primarily on property value information from BC Assessment Authority data provided by the Kootenay Boundary Regional District. The study team believes that the use of BC Assessment Authority data represents a reasonable compromise between the cost to collect market data on land values and the need for timeliness. Due to the rural nature of the study area, there may not be sufficient recent sales transactions on which to base estimates of current values for properties adjacent to the rail line. In addition, the cost and time required to conduct independent appraisals on each class of property may not be warranted in situations where the land values are relatively low compared to the cost of acquiring the data. The use of land assessment data to determine market value of properties is consistent with past CTA determinations.[70]

The following data elements were obtained for sample properties:

- The assessed values for land value distinct from the property and improvements
- The parcel/lot size or each for each property
- The OCP designation
- Property location.

For this study, establishing "across the fence values" (ATF) for a small sample of properties that corresponded to existing land use designations along the rail involved reviewing two main types of types of properties: light industrial and residential. Current assessed values are shown below:

Figure 7-2 Assessed Land Values

OCP Land Use Designation & Description	Land Value Per Acre
Light Industrial (Large Rural Parcel 20+ acres) RDKB Area C	$8,517
Residential (Rural 5+ acres) RDKB Area C	$19,926
Light Industrial (Small Parcel 2+ acres) RDKB Area D	$52,319
Residential (Rural 2+ acres) RDKB Area D	$23,076
Residential (Rural 8+ acres) RDKB Area D	$29,976

The second step in determining the appropriate land values is to assess whether there are any enhancement or discount factors which may affect the value of the land.

[70] Details on relevant aspects of Canadian Transportation Agency methodology for assessing Net Salvage Value are given in Appendix B.

Based on previous CTA decisions, the fact that the land can be sold as an existing continuous corridor does not automatically mean that a premium is warranted[71]. In this case, a review of potential factors (use for a utility corridor, fiber optic, telecommunications, advertising, parking and municipal users) that could lead to an assemblage premium suggested that there is a limited likelihood of such factors occurring in the short term. As such, it is our opinion that there are not any factors that would enhance the value of the rail line properties relative to assessed values.

The Regional District of Kootenay Boundary (RDKB) has passed a number of zoning by-laws may impact the value of the rail line. The line falls within Official Community Plan areas C and D of the Regional District. Electoral Area 'C" Zoning Bylaw No. 1300 adopted by the Regional District on June 28, 2007 indicates that there is a land use designation called Rail/Trail Corridor 1 Zone (RTC1). The only permitted principal uses of the property under this designation are "railways and recreational trails and corridors". The secondary uses permitted only in conjunction with the principal uses are "accessory buildings and structures". Bylaw No. 1404 (2009) deals with provisions of lot size and alterations to land as it relates to the RTC1 zoning. It indicates that if the alteration applies to land within the RTC1 zone a corridor must be maintained within that zone that is a minimum of 30 meters wide and is suitable for railway use. An additional amendment in April 2010 (Bylaw No. 1405) was passed affirming that "the Regional District supports the continued use of existing railways in the Plan area for rail transportation purposes".

Electoral Area 'D" Zoning Bylaw No. 1299 adopted by the Regional District on October 27, 2005 contains a land use designation Rail Corridor 1 Zone with the permitted uses being "railways and accessory buildings and structures". The same OCP document contains Bylaw 1406 RDKB (Rail Corridor 1 Zone). It was approved on April 29, 2010 and it indicates that if "the alteration applies to land within the 'Rail Corridor 1 (RC1) Zone', a corridor must be maintained within that zone that is a minimum of 30 metres wide and is suitable for the possible reestablishment of a railway".

These bylaws limit the use of the property to either railway operations or for recreational purposes. These restrictions would likely act to discourage adjacent landowners from acquiring the adjacent railway property and represent either a reduction in possible demand for the property or a reduced purchase price. The study team believes that these bylaws in the present circumstances would act as a discount factor when applying the across the fence land values.

The land value scenarios shown below are based on high and low discount factors determined by the Canadian Transportation Agency in previous determinations of Net Salvage Value.

[71] The CTA determined in decision (No. 530-R-1998) that the mere fact that the corridor is already assembled does not automatically mean that a premium is warranted. The Agency in this decision found that there was no evidence to indicate that the property ought to be valued based upon its sole use as a right-of-way for continued rail operations. The Agency also determined that, in this case, as an existing right-of-way that is subject to proposed transfer contemplated under sections 145 to 146 of the CTA, an assemblage premium was not applicable.

Figure 7-3 Estimate of Land Values – Scenario A

Estimate of Land Values – Scenario A						
Track Section	**Acres**	**Highest & Best Use**	**Rate/Acre**	**Value**	**Discount Rate**	**Adjusted Value**
Regional District Area D	123 acres	Light Industrial 20%	$8,517	$209,518	90%	$20,952
		Residential 80%	$26,526	$2,610,158		$261,016
Regional District Area C	53 acres	Light Industrial 10%	$53,319	$282,590	80%	$56,518
		Residential 90%	$19,926	$950,470		$190,094
Total Acres	176			$4,052,736		**$528,580**

Figure 7-4 Estimate of Land Values – Scenario B

Estimate of Land Values – Scenario B						
Regional District Area D	123 acres	Light Industrial 20%	$8,517	$209,518	80%	$41,904
		Residential 80%	$26,526	$2,610,158		$522,032
Regional District Area C	53 acres	Light Industrial 10%	$53,319	$282,590	60%	$113,036
		Residential 90%	$19,926	$950,470		$380,188
Total Acres	176			$4,052,736		**$1,057,160**

Based on the assumptions contained in this analysis the estimated range of the land value for the discontinued rail line is $530,000 to $1,060,000.

The study team has assumed there are no additional land factors that would impact the land values. The study team was not able to complete a table top due diligence review of property, environmental and engineering records for environmental issues impacting land use values because the corporate records of the KFR were not made available to the study team. The impact of any environmental issues on land values was not assessed.

7.3 Net Salvage Value Summary

Based on the analysis in Section 4.8 (Material Disposal) of the this report the study team estimates that the net proceeds on material salvage on KFR's San Poil Subdivisions would likely be in the $200K to $500K range depending on the efficiency of the clean-up and scrap steel prices. The portion of the San Poil subdivision that is

subject to the Canadian regulatory process of abandonment is 14.5 miles of the 48.8 mile total: 29.7% of the total subdivision track length. Thus, the value of the materials has been prorated to reflect the proceeds from the Canadian portion of the line.

Our estimate of the total net salvage value for the line, including all yard tracks, sidings and spur tracks, would be likely be in the range of $587,980 to $1,205,660 as indicated in the tables below:

Figure 7-5 Net Salvage Value – Scenario A

Net Salvage Value - Scenario A		
Adjusted value of land	$528,580	$528,580
Value of leasehold interests	$0	$0
Value of materials	$59,400	$148,500
Total	**$587,980**	**$677,080**

Figure 7-6 Net Salvage Value – Scenario B

Net Salvage Value - Scenario B		
Adjusted value of land	$1,057,160	$1,057,160
Value of leasehold interests	$0	$0
Value of materials	$59,400	$148,500
Total	**$1,116,560**	**$1,205,660**

The study team has assumed there are no additional land factors that would impact the land values. The study team was not able to complete a table top due diligence review of property, environmental and engineering records for environmental issues impacting land use values because the corporate records of the KFR were not made available to the study team. The impact of any environmental issues on land values was not assessed.

The range of net salvage values estimated in this report reflects the fact that sale and purchase of a railway right of way is not a common occurrence in the Kootenay Boundary Region real estate market. Thus, analyzing previous sales to determine a likely price to form a comparison for the KFR railway property is not practical. The estimates above serve as starting point for entering into discussions with the owners of the KFR should anyone wish to submit a notice of expression in acquiring the line.

These values may represent a possible purchase price for a party interested in acquiring the property for a recreational trail corridor, to preserve a green belt or some other similar public purpose. In such a situation a purchaser would be exchanging cash a rather liquid financial asset for a non-liquid real estate asset. Since these two items would represent a change to the organization's balance sheet the opportunity cost of capital is used to measure the financial impact of such a decision. For example, the difference in return between an investment one makes and another that one chose not to make. This may occur in the purchase of real estate or in other decisions. For example, if the organization has $10,000 to invest and must choose between cash and real estate, the opportunity cost is the difference in their returns. If that organization invested $10,000 in cash and received a 4.55% return while their purchase of a rail line appreciates in value very slowly (or not at all) makes a 0.5% return, the opportunity cost is 4.05%. One way of conceptualizing opportunity cost is as the amount of money one could have made by making a different investment decision. Importantly, opportunity cost is not synonymous with risk because at the time of purchasing the asset only the composition of an organization's balance sheet will change not the profit and loss statement.

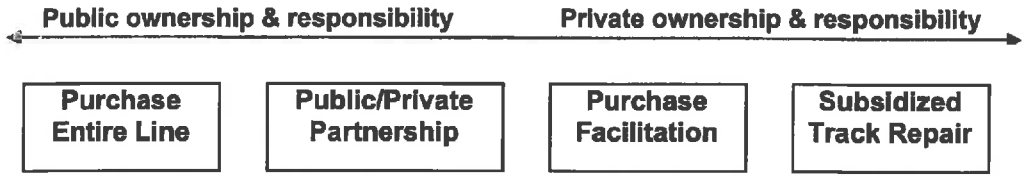
Parties wishing to acquire railway property that is being discontinued may also wish to explore the potential donation of the property with the owner. Omnitrax (the owner of KFR) could transfer the property as a public donation and qualify for tax deductions based on the valuation of the line. The value of the donation reflected in the receipt would be based on a valuation report regarding the property that was acceptable to the parties. The cost of a valuation report (produced by an independent appraiser) could be shared. At the start of the donation process it would be advisable to consult with Revenue Canada to ensure that the transaction would be compliant with the requirements of the Income Tax Act for receiving tax benefits for charitable deductions. An example of this type of transaction is the transfer by the Canadian Pacific Railway of the former CP Station in Nelson to the Nelson and District Chamber of Commerce.

8 Business Case 1: Capital Contribution for Rail Line

8.1 Introduction

Options for providing assistance to continue short line railway service extend from full public ownership and responsibility to only private sector involvement. The diagram below illustrates the four basic options available. The study team's assessment begins with exploring subsidizing track repair through a capital contribution for rail line infrastructure improvements. The more complex range of choices for public sector involvement - purchase facilitation, public/private partnership, and purchase of the entire line - are assessed in section 9.

Figure 8-1 Options for Maintaining Rail Service



This section assesses the feasibility of a capital contribution by the City of Grand Forks for maintaining operations on the San Poil subdivision.

Financing costs are important for both firms and the economy, affecting investment decisions and, ultimately economic growth in the Boundary Region. In assessing options to preserve rail service it is important to note that there are only two basic sources of capital: debt and equity.

Equity Capital: The cost of equity, which can be defined as the return expected by the firm's owners (shareholders), represents the compensation expected for providing capital and assuming the risk of waiting for a financial return. Thus, in addition to the risk-free return, the cost of equity incorporates an equity premium or the incremental payoff from holding a risky equity security.

The cost of equity is affected by the firm size, financial leverage, corporate taxes, stock liquidity and investor uncertainty regarding future returns. In addition, firms in the same industry share certain economic characteristics which affect the cost of equity. The Bank of Canada Review, Autumn 2007 reported that the median cost of capital was 11.5% for Canadian firms. Firms in the transportation, communications and utilities sector had a median cost of capital of approximately 10%.

The Canadian Transportation Agency (CTA) establishes rates for return on equity for Canadian Class 1 railways as a means of assessing costs used in determining railway inter-switching rates and the railway rate cap for the movement of western grain. The 2008 CTA approved common equity rate for CN was 10.82% and CP was 9.83%: an average rate of 10.33%. A recent study entitled Size Primia in the Canadian Equity Market revealed that the mean return for a Canadian Mid-Cap return was 12.41%, Low-Cap 15.21% and Micro –Cap 20.87%.

Debt Financing: The cost of debt financing is another important factor in assessing project feasibility. Commercial mortgage rates (fixed or variable) are typically based on the prime interest rate plus a premium depending on the level of risk and the firm's cash flow for repaying the debt. The Bank of Canada reports that the current commercial prime interest rate is 2.75%. The average over last decade was 4.95% with a low of 2.25% and a high of 7.5%. Current loan rates are low relative to historical levels. The average spread over the base of

the "plus" component has been 2.79%: a minimum 0.90% and a maximum of 5.85%. Given the fact that firms like to match the source of financing with the life of their assets the long-term cost of debt financing would be appropriate with the investment risk.

The above analysis indicates why railway owners and investors aim to minimize the level of equity required in a business in favour of debt because debt is less expensive than equity. As the level of equity decreases, the unit cost of debt increases as the debt investors take on additional risk. Thus, the debt service coverage ratio (DSCR) is an indicator for determining the type of capital contribution that would be most feasible. The DSCR is defined as the earning before interest, taxes, depreciation and amortization (EBITDA) divided by the debt service (the payment of interest and principal).

8.2 Options for Capital Contributions

Information on the Kettle Falls International Railway (KFR) debt service coverage ratio is not available to the study team. However, it is reasonably certain that this ratio will have weakened over the last two years because the number of railcars transported annually on the line has dropped significantly. As a result KFR likely has insufficient revenue from ongoing operations to finance the operation and maintenance of the rail line. It is also probable that KFR has insufficient retained earnings to finance the rehabilitation of the track. This scenario is consistent with KFR's decision to discontinue service on the line.

In light of these circumstances capital contribution strategies that governments could consider regarding the provision of debt financing are detailed below. None of the five subsidized track repair techniques involve the use of equity capital that results in any form of ownership in a short-line railway by a public entity. However, under most scenarios with low annual traffic volumes, financial assistance in the form of debt is not a practical option, because revenue is insufficient to cover operations and maintenance costs let alone repay debt.

Extending the debt term: Government could offer to provide sufficient financing to replace existing debt commitments by the existing rail operator but offer the railway company a longer time period to repay the loan. This would result in a lower payment thereby increasing DSCR because it reduces cash flow requirement for debt serving freeing up cash flow to support maintenance. Longer-term debt comes with higher interest rate so the net effect is higher total debt service costs and a lower return on equity. Extending the term of the debt also shifts more risks onto lenders.

This tool is not likely to be effective at solving longer-term deferred capital maintenance since a large infusion of capital may not be supported by the level of revenue generated by the rail traffic. It is most suitable for helping to manage the cash flow of a railway once the track is rehabilitated to a condition that meets the level of service required by shippers.

Deferring principal payments: Governments could offer debt financing that defers the timing of principal repayment. The use of this technique increases the minimum DSCR required from railway operations and creates a need for higher interest rates. It also shifts more risk onto lenders. For example, a short line rail would be incurring the cost of upgrading the track to meet the new customer requirements before revenue was generated. Thus, creating the need to defer principal repayment. This tool is not likely to be effective at solving longer-term deferred capital maintenance unless there was some high degree of certainty that additional rail traffic would materialize and thereby substantial increase revenue generated from railway operations.

Providing a government guarantee on a portion of the debt: Governments could offer to provide a loan repayment guarantee on a portion of the debt. This would reduce interest rate on any debt but increases

government's contingent liabilities. Since debt is relatively less expensive than equity the amount of extra cash flow that could be generated through the use of this technique may not be sufficient to address deferred maintenance issues. This technique would be most suitable in circumstances where the track and equipment were in sufficient condition to meet shipper's level of service requirements but additional cash flow from operations was need to ensure that track maintenance levels were maintained to protect the conditions of the railway track.

Forgivable loan/mortgage: The government could provide a forgivable loan to a railway operator. Depending on how the loan was structured it could increases the minimum DSCR required from operations and create the need for higher interest rates. The use of this technique would shift more risk onto lenders. The amount of a forgivable loan would in the long-run decrease the amount of other types of financing required. A forgivable loan would be most effective in those circumstances where there was some certainty about shipper's willingness to commitment to long term shipping volumes on the short line railway. Long term shipping commitments would allow decision-makers to make an informed choice about the public and private benefits of continued rail service. It would also permit the rail operator to improve the level of certainty associated with annual cash flow projections and the level of the firm's DSCR that would be supported by other forms of commercial finance. The structure of a forgivable loan (interest rate, term, amount to be forgiven, and other conditions) would require that the short line rail operator be willing to fully disclosure all the material conditions that would impact the continued operations of the rail service.

When making a decision to grant a forgivable loan it is also important to link the amount of the loan to the length of time the short line rail operator would need to continue to provide the service. For example, if a relatively large loan were granted to rehabilitate a track that has suffered from deferred maintenance it would be important to have conditions that required the railway operator to provide service that corresponded to the life of the assets that were repaired and/or upgraded. This would prevent a railway company from receiving public monies and then a short time later deciding to discontinue service and then tacking items such as ties and railway ballasts to a new location or selling them.

A forgivable loan structure as a mortgage would provide additional security to the lender since they would have a priority charge on the railway property to help protect their interests.

Grant: A government could decide to issue a grant to a short-line railway operator to rehabilitate the tracks and continue providing local rail service. A grant reduces the need for and the amount of debt financing and thereby increases the DSCR. A grant shifts the risk to the grant provider so many of the observations made to other types of debt financing may apply depending in the individual circumstances.

In reviewing the types of capital contribution tools available to governments it is important to note that the options listed above are not necessarily mutually exclusive. However, the more complex the financial arrangements the more time and effort is usually required to structure a deal. The table below summarizes the benefits and weaknesses associated with the use of these tools along with the primary risk management techniques.

Figure 8-2 Options for Preserving Short Line Railway Service

Options for Preserving Short Line Railway Service			
Description	**Benefits**	**Weaknesses**	**Risk Management**
Subsidized Track Repair Assistance Through a Contribution of Capital **(low interest, forgivable loans & loan guarantee & grants)**	Ensures the line is available for businesses that find it economic to use local rail service to reach markets. Subsidizing repairs to the line would allow the contributor of capital to influence the use of the rail line & perhaps decisions about future abandonment. Subsidizing repair funding would make it more attractive for a short line operator. By providing only capital contribution liabilities related to ownership are not transferred.	Under the scenario of higher traffic volume there is direct revenue generated by the use of the asset to the provider of the capital contribution. The provider of the capital contribution would need to demonstrate that the use of the funds met a strong public interest test & that any monies provided where not provided based on partisan, or political favours. If the amount or timing of capital contribution was greater than one public organization's ability to finance then additional funding partners would need to secured.	Developing specific contractual terms to deal with how a grant may be used. Low interest & forgivable loans for track repair & upgrade would be structured as a mortgage. A mortgage is a debt instrument by which the borrower gives the lender a Lien on the property as security for the repayment of the loan. Development of a business case & an open, transparent process for allocating funding. Provide capital contribution to firm's with strong community & stakeholder reputation for highly ethical business conduct & free from current litigation, or public controversy.

8.2 Assessment of Options for the City of Grand Forks

The Kettle Falls International Railway (KFR) debt service coverage ratio was not available to the study team. However, it is reasonably certain that this ratio will have weakened over the last two years because the number of railcars transported annually on the line has dropped significantly. As a result KFR likely has insufficient revenue from ongoing operations to finance the operation and maintenance of the rail line. It is also probable that KFR has insufficient retained earnings to finance the rehabilitation of the track. The results of the financial analysis in Section 5 suggest that in scenarios with low annual traffic volumes financial assistance in the form of debt capital contribution technique is not a practical option, because the railway's operating revenue is not sufficient to cover ongoing operating and maintenance costs, let alone repay debt.

A firm commitment from shippers for an annual traffic volume in the neighbourhood of 3,000 carloads per year and an increase in the rate division with BNSF (or other means of increasing revenue per carload) would need to be in place before the study team could recommend the use of any of the capital contribution techniques outlined. A forgivable loan (i.e. mortgage) would likely be the most effective technique for preserving rail service since the 3,000 annual carload volume represents the upper bounds of the demand that is likely to be achievable in the short to medium term. The size of the forgivable loan would need to be at least $300,000 to cover the cost of the track maintenance required to ensure continuing operations in the short term. A condition of the loan would be the continuation of rail service for at least two days per week. Our assessment of the track condition indicates that

the railway is operating safely but that without immediate capital improvements, the line will become inoperable. Since annual capital expenditures of $300,000 would be sufficient to maintain the track to 10 mph standards for the current traffic level, a forgivable loan of $300,000 would enable the railway to operate for another 18 months and perhaps during that time period the demand picture for US lumber imports would become more certain. Another option would be to consider granting a mortgage of $300,000 on the condition that the track maintenance would be performed. If the railway ceased operation this debt could be converted to equity and applied to the orderly liquidation value of the railway if the City of Grand Forks wished to acquire the right of way for corridor purposes.

9 Business Case 2: Acquisition and Rehabilitation of the KFR San Poil Subdivision

9.1 Options for Acquisition and Rehabilitation

There are three primary options (purchase entire line, public/private partnership & purchase facilitation) available to the City of Grand Forks to consider regarding the acquisition and rehabilitation of a short-line railway. However, the business decision for a public entity to become involved is more complex question than a decision regarding a capital contribution and thus requires a more robust level of analysis.

A useful starting point is to first develop a more detailed understanding of the risk and rewards that might apply to the specific circumstances of the Kettle Falls International Railway. The second step in the analysis will be to evaluate the techniques that can be used to enhance the financial feasibility of ongoing rail operations.

The table below is a summary of the types of risks involved in making a purchase and rehabilitation decision. It also indicates which parties are the primary and secondary risk takers.

Figure 9-1 Risk Allocation for Acquisition of the Rail Line

Risk Allocation For Acquisition of the Rail Line					
Risk Category	**Public Sector**	**Contractor**	**Railway Operator**	**Private Lender**	**Private Owners &/or Shippers**
Purchase Due Diligence	X		X	O	X
Design	O	X	O	O	X
Construction		X	O	O	
Operation			X	O	X
Maintenance		O	X		X
Inflation				O	X
Interest Rate				O	X
Currency				O	X
Revenue	O		O	O	X
Usage	O		X	O	X
Taxation			X		X
Environmental	O	O	X		O
Regulatory/Political	X			O	X
Injury/Damage	O	O	X		X
Residual Value	O		O	O	X
Technology Obsolescence	O		O		X
Past (latent defects)	O	O	O	O	X
X Principal risk taker			**O Secondary risk taker**		

Since government support typically results from negotiations about the risks and benefits around a specific project there is no one correct approach. Rather, the key to structuring a deal is to ensure that the allocation of risk appropriately reflects the level of government support and that the government achieves value for money.
The three primary options for acquiring ownership and rehabilitating the rail line are summarized in a series of tables on the following pages.

9.1.1 Purchase or Lease of Rail Line by a Single Government Entity

The first option involves preserving the rail service by either purchase or lease of the rail line by a single government entity.

Figure 9-2 Purchase or Lease of Rail Line by a Single Government Entity

Purchase or Lease Rail Line by Single Government Entity			
Description	**Benefits**	**Weaknesses**	**Risk Management**
Purchase or Lease Entire Line	Purchasing the line would transfer both the legal and beneficial ownership. It allows the owner to control the use of the rail line. Owner of the line would be in a position to generate revenue from the use of the asset. Leasing the rail line would transfer the beneficial ownership of the track.	Purchaser must consider both their ability to access capital & the opportunity cost of capital of purchasing & maintaining the assets. Reputational risk amongst customers & stakeholders. Contractual or labour relations issues. Liabilities from owning and occupying railway property: (a) occupiers liability, (b) exposure to environmental liabilities.	NPV calculation, sensitivity analysis & financing strategy. Select & design business model based on core competency & recourse provisions in agreement. Communications strategy. Cleanup of the property before conveyance of property. Environmental exposure insurance.

The mechanisms available to the single government entity would include the following choices:

Purchase-lease back: the railways assets are sold to a government controlled entity and then leased back under an operating lease. Grand Forks could purchase the rail line from Omnitrax and have a contact with Omnitrax to provide rail service and maintenance. The owner of the railway would be responsible for the capital required to keep the assets in good condition.

Purchase: the owner of the railway assets sells them to the government entity. The government could choose to operate the railway, or enter into an operating contract with a railway company to provide service. Under the **Operation & Maintenance Contract** the private company would operate the publicly owned asset for a specified term. Ownership of the asset would remain with the public entity.

9.1.2 Public-Private Partnership

The second option involves preserving the rail service by either purchasing or leasing the rail line by both private and public entities together in a partnership.

Figure 9-3 Public Private Partnership

Options for Preserving Short Line Railway Service Partnership			
Description	**Benefits**	**Weaknesses**	**Risk Management**
Partnership **Purchase or Lease**	The creation of a public private partnership with a short-line operator ensures that the parties to the agreement control & influence the future of the rail line.	Reaching an agreement that would be acceptable to multiple stakeholders may be time consuming & difficult to achieve. Using public money to cover part of the purchase & track upgrade costs could result in political pressure in the event that commercial traffic on the line does not support the long term viability of the rail service. It may be difficult to secure funding support from senior levels of government in a timely manner due to the nature of their decision-making process & timelines. The 3P would face liabilities & risks associated with owning & operating rail assets.	Amount of influence & control is determined by the partnership agreement. NPV calculation, sensitivity analysis & financing strategy. Select & design business model based on core competency & recourse provisions in agreement. Due diligence on private sector partner. Communications strategy. Cleanup of the property before conveyance of property. Environmental exposure insurance.

The mechanisms available to the public and private partnership would include the choices outlined in the previous example. However, the risk and benefits would be shared by more than just the government entity. The use of this option primarily comes down to a decision about how to best finance and maintain the track versus the best way to provide rail service.

The amount of deferred maintenance and the ability of rail traffic to cover ongoing maintenance costs are also important determinants associated with the risks and benefits of a partnership model.

Re-Build-Finance: the partnership would be responsible for financing and undertaking the construction necessary to rehabilitate the railway infrastructure. The partnership would own or lease the rail line but would not operate the rail service. A railway operator would be responsible for long-term maintenance. This option would be most applicable in circumstances where the level of deferred maintenance was clearly defined in advance of the partnership being created and required an immediate infusion of capital to improve the tracks. The amount of capital required to rehabilitate the railway tracks would represent a one time cash infusion because the existing or anticipated level of rail traffic is sufficient to generate revenue to meet the level of maintenance required to keep the new infrastructure in good condition.

Re-Build-Finance-Operate-Maintain: the partnership would be responsible for financing and undertaking the construction necessary to rehabilitate the railway infrastructure. The partnership would own or lease the rail line

and also operate the rail service. It would be responsible for long-term maintenance. This option would be most applicable in circumstances where the partnership had the necessary management experience and expertise required to operate and maintain the railway.

Re-Build-Finance-Maintain: the partnership would be responsible financing and undertaking the construction necessary to rehabilitate the railway infrastructure. The partnership would own or lease the rail line but not operate the rail service. It would be responsible for long-term maintenance. This option would be most applicable in circumstances where the level of deferred maintenance could be completed in phases and thus requires less initial capital from the respective partners but additional capital at a later time period. It would also be the model to use when the partnership did not have the management expertise or human resources to operate a railway service.

9.1.3 Purchase Facilitation

The third option involves preserving the rail service by engaging in actions that would facilitate the subsequent purchase of the railway assets by a private sector operator willing to provide railway service.

Figure 9-4 Purchase Facilitation

Purchase Facilitation			
Description	**Benefits**	**Weaknesses**	**Risk Management**
Purchase Facilitation	Use regulatory process to secure ownership of rail line at a cost (net salvage value of line) that is potentially less that a market based commercial transaction with the intent to immediately transfer ownership to a private firm. By facilitating a purchase by the private sector long-term liabilities related to ownership are not transferred.	No certainty that the results of the regulatory process will result in a ownership outcome that will preserve short line rail service both in the short & long run. Time, effort & money required to line-up an alternative short-line rail operator in advance in a situation with an uncertain outcome.	NPV calculation, sensitivity analysis & financing strategy. Select & design business model based on core competency & recourse provisions in agreement. Due diligence on private sector partner. Communications strategy. Cleanup of the property before conveyance of property. Environmental exposure insurance.

The tactic of purchase facilitation may have intuitive appeal at first glance. However, it is important to note that our analysis indicates that annual maintenance expenditures of $300,000 are required to maintain operations on the track. If the existing private sector operator has not been able to cover these costs it is unlikely that another operator would be any more successful under the existing traffic levels and rate division. If there is strong evidence to suggest that traffic levels and revenue per carload can be increased a government entity could choose to facilitate the purchase of the rail assets by a third party. The option would be most applicable in circumstances where the level of deferred maintenance is relatively low and the incumbent rail owner needs a quick asset sale. The public sector could purchase the assets on an interim basis. Without a binding contract in place with a new private sector railway operator, the government entity would be at significant risk by trying to

purchase assets on a temporary basis. The government would lose negotiating power if it purchased the assets and then sought a private sector partner.

9.2 Assessment for the City of Grand Forks

9.2.1 Purchase as a Going Concern

The amount an equity investor would be willing to pay for a railway depends on the level of stabilized operating income. The results of the sensitivity analysis indicate that if the average revenue per railcar was in the range of $450 and the annual volume of traffic was approximately 3,000 carloads the line might generate approximately $50,000 in annual operating income.

Analysts explore the relationship between the level of operating income and an investor's desired rate of return on an investment (capitalization rate) to determine an appropriate purchase price for a business. This basic technique is based on the assumption that the operating income would be generated on an ongoing basis and hence it is similar to an annuity.

Stabilized operating income divided by the investor's required rate of return (capitalization rate) will yield the estimate of value:

Operating Income	$50,000	$500,000
[72]Capitalization Rate (10%)	10%	Value to Potential Investor as a Going Concern

The example below shows that if the operating income is reduced from $50,000 to $40,000 (and the equity investor's cap rate remains the same) the amount an investor would be willing to pay to purchase the railway would need to be lower: it would drop from $500,000 to $400,000.

Operating Income	$40,000	$400,000
Capitalization Rate 10%	10%	Value to Potential Investor as a Going Concern

If the operating income becomes zero or negative the railway has no value to the investor as an ongoing concern,

Operating Income	$0	No Value to Potential Investor as a
Capitalization Rate 10%	10%	Going Concern

A value of $500,000 appears to be the upper bounds of the stabilized operating income that might be generated under the highest cargo demand scenario. Since the sensitivity analysis indicated that a negative operating income would be the most likely operating result under the most reasonably foreseeable set of circumstances it would be difficult to justify recommending that the rail line be purchased as a going concern.

[72] The 10% rate of return in this example is used for illustrative purposes only. Equity investors would need to determine their own level of expectation of investment return based on the relative risk of the investment and their own investment criteria and portfolio.

An increase in average carload revenue and/or traffic volume would be required to support a decision to invest. Since a low traffic scenario would likely preclude the use of debt financing, (cash flow would be insufficient to service the debt) an investor would need to make the purchase entirely with equity capital. The amount of equity that would be at risk would be the funds required to subsidize operating losses, and potential capital losses in the event the railway ceased operations.

9.2.2 Purchase for Net Salvage Value

Both Canadian and U.S. abandonment processes provide an opportunity for purchase of railway assets at Net Salvage Value by interested parties. The Canadian process provides the opportunity for federal, provincial or local governments at Net Salvage value in the event that an agreement for sale is not concluded within six months following the deadline for Expressions of Interest.

The U.S. process provides a number of methods whereby an interested party may purchase railway assets at the greater of Going Concern Value or Net Salvage Value. In the event the line is advertised for abandonment, the Surface Transportation Board may compel a railway to accept an Offer of Financial Assistance through purchase or subsidization of operations. Prior to advertisement for abandonment, the STB can compel sale of the line for continuing operation as a railway under the Feeder Railroad Development Program. However, this requires that the purchaser provide evidence of sufficient capital for three years of operations in addition to Net Salvage Value and a detailed Operating Plan. Purchase under the Feeder Railroad Development Program transfers the Common Carrier obligation to the purchaser who would have to undertake an abandonment process through the STB in order to cease operations.

Options for the KFR San Poil subdivision are complicated by several factors:

- The Canadian and U.S. portions are subject to different abandonment processes and timetables. Omnitrax has not filed for abandonment on the U.S. section of the track, though they have indicated their intention to do so in the future[73]. Purchase of the Canadian portion for continuing rail operations at Net Salvage Value would expose the purchaser to the risk that Omnitrax would apply for abandonment of the U.S. portion. At that time the purchaser would have the option of purchasing the U.S. section at Net Salvage Value or providing sufficient funds to subsidize ongoing operations. If abandonment was approved by the STB, the linkage of the Canadian section to BNSF would be severed and rail service would no longer be possible.

- A purchaser could buy the Canadian section for Net Salvage Value and apply to purchase the U.S. section for net salvage value under the Feeder Railroad Development Program. However this would pose a significant risk to the purchaser due to the obligation to provide continuing service on the line.

- Even if the Canadian and U.S. section of the lines were purchased, traffic would have to be hauled by KFR from Kettle Falls to Chewelah and a rate division would be required. This would require negotiations between the purchaser, and BNSF (and potentially Omnitrax) to ensure that the revenue available to the purchaser at anticipated traffic levels would be sufficient for long term viability.

Due to the shortfall in operating income and these factors, purchase of the line for ongoing rail operations would expose the purchaser to a very high level of risk. However, if a government or other public agency wished to purchase the corridor to maintain its availability as a recreational trail or for other public purposes, they may wish

[73] "Railway up for sale" Grand Forks Gazette Shella Gardezi September 24, 2010.

to pursue purchase of the Canadian section at Net Salvage Value or pursue the possibility of donation for tax purposes with Omnitrax.

10 Intermodal Options

Intermodal transportation has become a common option for shippers, either to maintain access to the North American rail network following discontinuance of local service, or to access competing railways to obtain lower rates. The most common type of facility is a transload centre, which transfers bulk (grain, minerals, etc) or breakbulk (lumber, steel, etc.) between truck and rail. Transloading has become a common strategy for the forest products and it is common for mills to continue to operate following the loss of local rail service. As an example, sawmills in Princeton and Merritt have been operating without rail service since the abandonment of CP's Princeton subdivision in 1989. BNSF contributed to the growth of transloading in the forest industry starting in the 1980's through rate concessions for lumber hauled directly to a reload centre on their tracks. This provided benefits to shippers including lower overall costs and the ability to negotiate better rates with the railway providing direct service to their mills. In spite of the low rates, transloading increased BNSF revenue because they were no longer paying a rate division to the originating railway.

Transloading has also become a common strategy for the movement of bulk materials, though for low value commodities the additional costs of trucking and reloading may be too great to enable the producer to remain competitive in destination markets.

The border serves as an economic obstacle to efficient long haul trucking due to the lower allowable vehicle weights in Washington State. The typical truck configuration use for hauling of heavy commodities in BC is the 8 axle Super-B train, a tractor pulling two 28 foot trailers with a maximum allowable Gross Vehicle Weight (GVW) of 63,500 kg (approximately 138,000 lbs) and an overall length of 25 m (82 feet). This configuration carries a payload of approximately 45 tonnes.

Based on the Washington State rail studies, the typical truck configuration for heavy bulk commodities (grain) within Eastern Washington State is a 7-axle Rocky Mountain Double, which consists of a tractor pulling a 48 foot trailer followed by a 28 foot "pup" trailer. The maximum allowable GVW for this configuration in Washington State is 105,500 pounds[74] and the overall length is approximately 95 feet. The average payload is 36 tons[75] (33 tonnes).

The discrepancy in allowable weights means that transloading options which require trucks to travel on the Washington State highway system incur substantially higher trucking costs. The Rocky Mountain double configuration is not legal in BC because it exceeds the allowable vehicle length. The Super B train is legal in Washington State as long as the GVW does not exceed 105,500 kbs. A Super B train loaded to Washington State allowable weight is commonly termed a "maxi-double". The "rule of thumb" for lumber is that two Super B train loads will fill a railcar, but three "maxi-double" loads are required. This increases trucking costs for crossborder trips by approximately 50%. For this reason, lumber transload facilities tend to be located on the Canadian side of the border.

[74] Washington State Commercial Vehicle Guide 2004–2005 Appendix 4 Axle Weight Table, Washington State Department of Transportation http://www.wsdot.wa.gov/NR/rdonlyres/46A25D5A-FE56-46BE-AEC6-47CB4BEC072D/0/Legal_Weight.pdf

[75] SFTA Research Report # 8, p. 7.

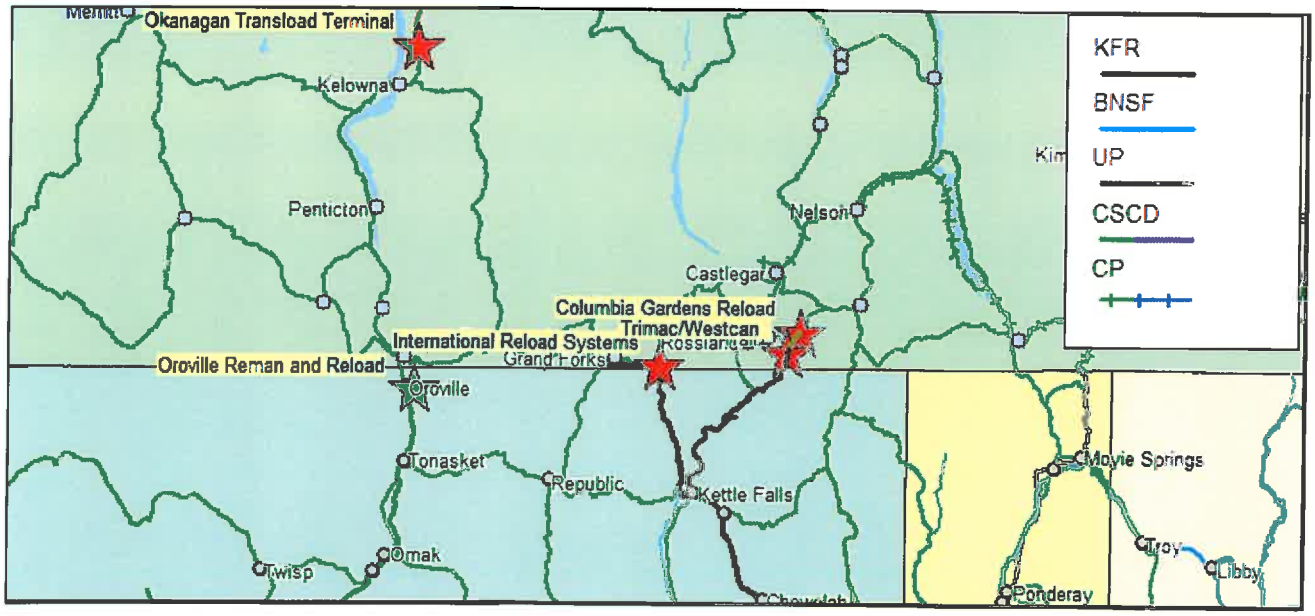
10.1 Existing Transload Facilities

Existing transload facilities in proximity to the Boundary region are profiled below.

Figure 10-1 Boundary Area Transload Facilities

Transload Name	Location	Rail Service	Major Products	Highway Distance from Grand Forks (km)
International Reload Systems	Christina Lake	KFR San Poil - BNSF	Lumber	22
Oroville Reman and Reload	Oroville	CSCD - BNSF	Lumber, Wood pellets	135
Columbia Gardens Reload	Columbia Gardens	KFR Kettle Falls - BNSF	Lumber, Pulp	134
Inland Empire Distribution Services	Spokane	BNSF and UP	Multiple	203
Okanagan Transload Terminal	Winfield	KPR - CN	Lumber, Wood pellets, Fly ash	216
Trimac	Waneta	KFR Kettle Falls - BNSF	Concentrates, lead, zinc, slag	134
Westcan Bulk Transport	Columbia Gardens	KFR Kettle Falls - BNSF	Fertilizer, chemicals	134

Figure 10-2 Boundary Area Transload Facilities Map



10.1.1 Oroville Reman and Reload

Oroville Reman & Reload division of Gorman Bros. Lumber Ltd., a Canadian company with a major sawmill in Westbank which specializes in production of 1-inch Spruce and Lodgepole Pine boards. The Oroville facility began operating in 1964 as a result of the U.S. government putting a duty on pre-assembled fruit boxes being manufactured in Westbank. While the lumber components continued to be produced in British Columbia, the

assembly was moved to Oroville. Operations at the site include value-added remanufacturing of lumber products as well as transloading[76].

The facility is located approximately 6 miles from the Canada-U.S. border crossing at Osoyoos. The site occupies approximately 20 acres and has 3 rail spur lines served by the Cascade and Columbia Railroad, which connects to BNSF approximately 140 miles south at Wenatchee. There are two box car loading areas and three 73 foot and 81 foot center beam loading areas.[77]

Figure 10-3 Oroville Reman and Reload

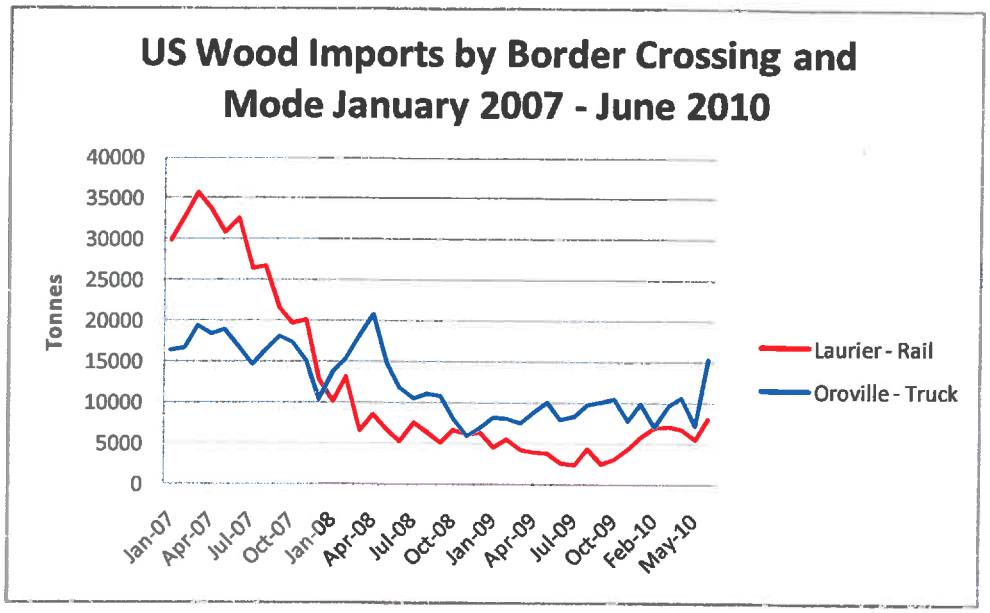
Products handled at the site include lumber and wood pellets. Traffic in 2005 included more than 200 rail boxcars containing wood pellets and 500 carloads of lumber.[78]

In 2008, following extensive lobbying, Washington State legislation designated US Highway 97 between the Canadian border and the City of Oroville a heavy haul industrial corridor. The legislation authorizes vehicle weight limits to reflect Canadian weight limits for divisible loads. The heavier weight limits are authorized through a

[76] "Gorman Bros. Success Reaches From Westbank To Oroville" Softwood Forest Products Buyer Wayne Miller, http://www.millerpublishing.com/FullFeatureStory.asp?ID=222&Publication=3
[77] "Oroville Reman and Reload Welcomes The New Heavy Haul Industrial Corridor on Highway US-97" http://orovilleremanandreload.com/
[78] "Gorman Bros. Success Reaches From Westbank To Oroville"

permit issued by WSDOT Commercial Vehicle Services (CVS).[79] This enables use of fully loaded B trains to access the Oroville Reman and Reload from the border. The company reported that the heavy haul corridor enabled them to attract three new clients, including the Weyerhaeuser mill in Princeton, Robertson and Dybdahl International, and Downie/Selkirk Lumber.[80] Based on U.S. import data, introduction of the heavy haul corridor does appear to have moderated the decline in lumber shipments at the Osoyoos border crossing relative to KFR rail shipments at Laurier.

Figure 10-4 US Wood Imports Laurier and Osoyoos May 2007 – June 2010[81]

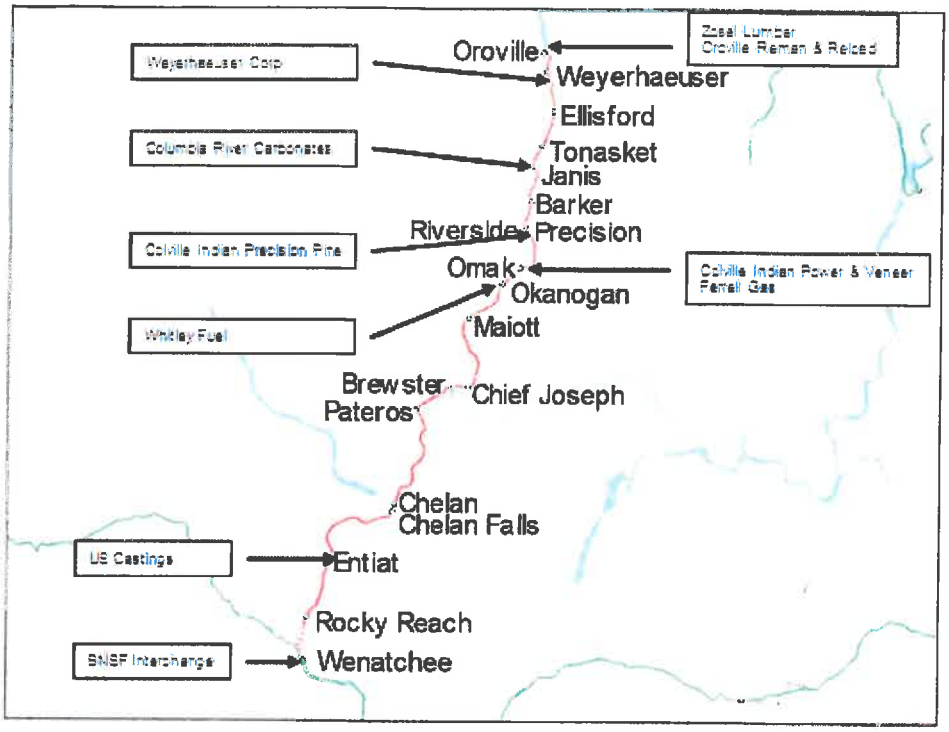


Rail service to the site is provided by the Cascade and Columbia River Railroad (CSCD), a subsidiary of RailAmerica, a major North American shortline rail operator. CSCD has operated on the 148 mile former BNSF Oroville – Wenatchee line since 1996.

Traffic on the line averaged around 8500 carloads in 2005 and 2006, before falling to 6600 carloads in 2007 and approximately 4000 carloads in 2008[82]. The company notes that 90% of their business is located in the Oroville area. Major shippers in addition to Oroville Reman and Reload include a Weyerhaeuser wood chip loading facility south of Oroville and Columbia River Carbonates in Woodland.

[79] "US 97 Heavy Haul Industrial Corridor" http://www.sustainableoroville.com/uploads/4/2/3/4/4234371/us97_heavy_haul_corridor.pdf
[80] "Heavy haul corridor results in more jobs in Oroville" Okanogan Valley Gazette-Tribune Gary Devon August 2009.
[81] Source: U.S. Bureau of Transportation Statistics.
[82] "Cascade and Columbia River Railroad" Presentation in support of Heavy Haul Corridor. p. 4. http://www.economic-alliance.com/documents/CascadeandColumbiaRiverRailroad.pdf

Figure 10-5 Cascade and Columbia River Railroad Shippers[83]



The line is not compliant for 286,000 lb cars for the last several miles; this increases rail costs because cars cannot be loaded to higher limits (limited to 100 tons (91 tonnes) rather than 111 tons (100 tonnes)).

Discussions were held with CSCD to obtain updated information on rail operations. CSCD declined to divulge current traffic levels, but indicated that regular service has been reduced to twice weekly due to lower traffic volumes.[84]

10.1.2 Columbia Gardens Reload

Columbia Gardens Reload operates a transloading facility served by KFR on their Kettle Falls subdivision at Columbia Gardens BC. Operations began in 2004. The site occupies 10 acres, though it is not currently fully utilized. Facilities include 7 boxcar spots plus an additional 3 centrebeam car spots and a 5000 square foot warehouse used for storing pulp. Traffic consists primarily of pulp from the Mercer pulp mill in Castlegar and lumber.

10.1.3 Inland Empire Distribution Systems Inc.

Inland Empire Distribution Systems Inc. operates a transload facility in Spokane, Washington which is served daily by the BNSF and UP railways. This site was previously leased by Pope and Talbot for reloading lumber from

[83] Ibid.
[84] Personal communication with CSCD September 30, 2010.

their mills[85]. IEDS provides logistics and warehousing services for the consumer, forest, chemical and industrial industries. The facility has 30 acres of outside storage space and the company occupies 400,000 to 600,000 square feet of warehouse space[86].

The major strategic advantage to using IEDS for Boundary area shippers is the access to two competing U.S. Class 1 railways, which provides opportunities for negotiating lower rates to destination. This is may be offset by higher trucking costs due to the Washington State load restrictions.

10.1.4 Okanagan Transload Terminal

The Okanagan Transload Terminal was established on a 4 acre site at Winfield on the KPR with financial assistance from CN in 2002. Operations were contracted to Timber Trax. In 2009 KPR took over operation of the facility. Currently the site has 6 centrebeam car spots and 4 boxcar (outdoor side ramp); plus 3 bulk spots. Equipment at the facility includes two small and one large forklifts, and a Super B train truck which allows them to provide pickup and delivery service. LaFarge owns a covered mobile conveyor for handling fly ash on site. They receive about 250 cars per year of fly ash for LaFarge at Winfield.

In addition to the LaFarge traffic, traffic includes wood products from Gorman Brothers in Westbank and Weyerhaeuser in Princeton, and wood pellets (bagged) from a plant in Westbank outbound; and building supplies and steel inbound. Total throughput in 2009 was approximately 800 carloads, a 300% increase over the previous year.

Figure 10-6 Okanagan Transload Terminal Winfield

[85] Disclosure Schedule to Asset Purchase Agreement by and Among Pope and Talbot Inc. ...and International Forest Products Price Waterhouse Cooper November 19, 2007 http://www.pwc.com/en_CA/ca/car/poptal/assets/poptal-066_121907.pdf

[86] Inland Empire Distribution Services Inc. website http://ieds.net/industry_served.asp

10.1.5 Teck Cominco Bulk Transload Facilities

There are two bulk transload facilities serving Teck Cominco on the Canadian section of the KFR Kettle Falls subdivision: a facility operated by Trimac at Waneta, and a facility operated by Westcan Bulk Transport at Columbia Gardens. The land for both is owned by Teck Cominco.

In 1999 Trimac signed a 10 year agreement with BNSF to provide highway transportation and transload services to the BNSF for the movement of ore concentrates for Cominco Ltd's Trail, BC smelter. The value of this contract over the duration of the ten year period was estimated at $36 million. In conjunction with this contract, Trimac announced the expansion of the Waneta transload facility to increase storage capacity to 60,000 tonnes (60,000 square feet) and expand rail unloading facilities. This was designed to increase the annual throughput design capacity of ore concentrates to 600,000 tonnes. The facility also handles lead, zinc and slag products[87]. Westcan Bulk Transport has leased the property adjacent to the Quirk Siding close to the Trimac facility since 1991. Major products handled at the facility include chemicals and fertilizers (ammonium sulphate) produced at the Teck Cominco complex.

Teck Cominco advises that these facilities are currently facing capacity constraints and do not have the ability to handle additional traffic. In particular, the KFR crews have difficulty completing the turn from Kettle falls to Waneta/Quirk and back and still having enough time to cross through customs. US customs at Waneta is only open from 8 AM to 4 PM. Teck Cominco has made efforts to persuade US Customs and Border Protection to increase the hours of service, but has been unsuccessful[88].

10.2 Intermodal Options

It must be emphasized that the viability of reload options for individual shippers depends entirely on the competitiveness of the rail rates offered by the Class 1 railway which serves the rail origin point. In general rates for destinations served directly by the originating carrier are lower than for those served by a second rail carrier due to interline and switching costs.

10.2.1 Forest Products

In the event that rail service on the KFR San Poil subdivision is discontinued, transload operations at IRS will no longer be viable. Interfor will still require options for accessing the U.S. market from the Grand forks mill for up to 1500 carloads of lumber. Interfor has carried out extensive analysis of options including use of existing reload facilities at Oroville, Spokane and Winfield. In addition Interfor has the option of trucking the Grand Forks lumber to their mill at Castlegar which has direct rail service by CP with interline arrangements to US destinations via UP, Norfolk Southern or CSX[89]. Detailed cost information for these options was not shared wth the consulting team. Based on research carried out by the consulting team for the City of Vernon earlier this year, current costs for transloading options include:

- Average trucking costs of $105 per hour for Super B train operations.

[87] "Trimac Transportation Signs 10 Year Transport Contract with the BNSF, Opens Expanded Trail, BC Trans-Load Facility" Trimac Press Release September 21, 1999 http://www.fhdlaw.com/html/UTU_News_Digest-Commuters_may_never_recoup_lost_time.htm
[88] Personal communication with Teck Cominco, October 2010.
[89] Personal communication with Interfor, September 14, 2010.

- Lumber reload costs of $600 per carload ($6.67 per tonne assuming an average car loading of 90 tonnes).

Based on these costs, estimated incremental costs for transloading from the Grand Forks mill are shown below.

Figure 10-7 Intermodal Options Lumber Transload

Intermodal Options Lumber Transload							
Destination	Km	Driving Time (hours)	Trip Cost (distance)	Loading Unloading Cost	Trucking Cost	Reload Cost per tonne	Cost per Tonne
Oroville	118	2.0	$210.00	$210.00	$420.00	$6.67	$16.00
Columbia Gardens	134	2.3	$241.50	$210.00	$451.50	$6.67	$16.70
Spokane	203	2.7	$283.50	$210.00	$493.50	$6.67	$23.12
Winfield	216	2.7	$283.50	$210.00	$493.50	$6.67	$17.64
Castlegar	95	1.7	$178.50	$210.00	$388.50	$6.67	$15.30

Note that the costs per tonne of transloading in Spokane are significantly higher than Winfield in spite of similar driving distances; this due to the lower Washington State weight limits. Border crossing delays could increase costs. This may still be a viable option if BNSF or UP offers more competitive rates from this location. Castlegar provides the lowest cost option, and if reloading at the mill is cheaper than at a commercial reload facility this advantage may be greater.

As a guide to the relative magnitude of rail rates for lumber, the BNSF published rate for lumber from Oroville to Chicago is US$5331 for a centrebeam lumber car with internal length greater than 74 ft. and a gross weight greater than 205,000 lbs. With the current 17% fuel surcharge this would amount to approximately $69.30 per tonne. Most shippers negotiate individual rates under confidential contracts which may be significantly lower than published rates.

Interfor has indicated that trucking to a transload location from the Grand Forks mill is a viable option, and potential investments in the mill are not conditional on the availability of direct rail service.

10.2.2 Pacific Abrasives

Trucking of slag to a transload facility is practically feasible but the additional costs may make it unprofitable to continue operations in Grand Forks. Trucking costs are assumed to be similar to the estimates for trucking of lumber products. Transloading costs are estimated at $2.50 per tonne based on information from Pacific Abrasives on current rates for this service at other locations.

Figure 10-8 Intermodal Options Slag Transload

Intermodal Options Slag Transload							
Destination	Km	Driving Time (hours)	Trip Cost (distance)	Loading Unloading Cost	Trucking Cost	Reload Cost per tonne	Cost per Tonne
Oroville	118	2.0	$210.00	$210.00	$420.00	$2.50	$11.83
Columbia Gardens	134	2.3	$241.50	$210.00	$451.50	$2.50	$12.53
Chewelah	124	1.5	$157.50	$210.00	$367.50	$2.50	$14.75
Valley WA	128	1.7	$178.50	$210.00	$388.50	$2.50	$15.45

In the event acceptable commercial arrangements could be reached between the parties, transloading at Oroville Reman and Reload would require some investment in equipment in the form of a loading pit and conveyor.

Existing equipment at the Teck Cominco transload facilities would probably be suitable for handling the traffic, however Teck has indicated that high capacity utilization due to the volume of existing traffic may preclude the use of these facilities for Pacific Abrasives slag.

Valley Washington is listed as a potential site due to the presence of an existing silica production facility which may have the ability to transload bulk commodities. The facility is approximately 4 km south of Chewelah. One advantage of this option is the fact that the traffic would be loaded directly to BNSF so no rate division for a shortline would be required.

It remains to be seen whether the slag mining operation at Grand Forks can remain viable with a cost increase of this magnitude.

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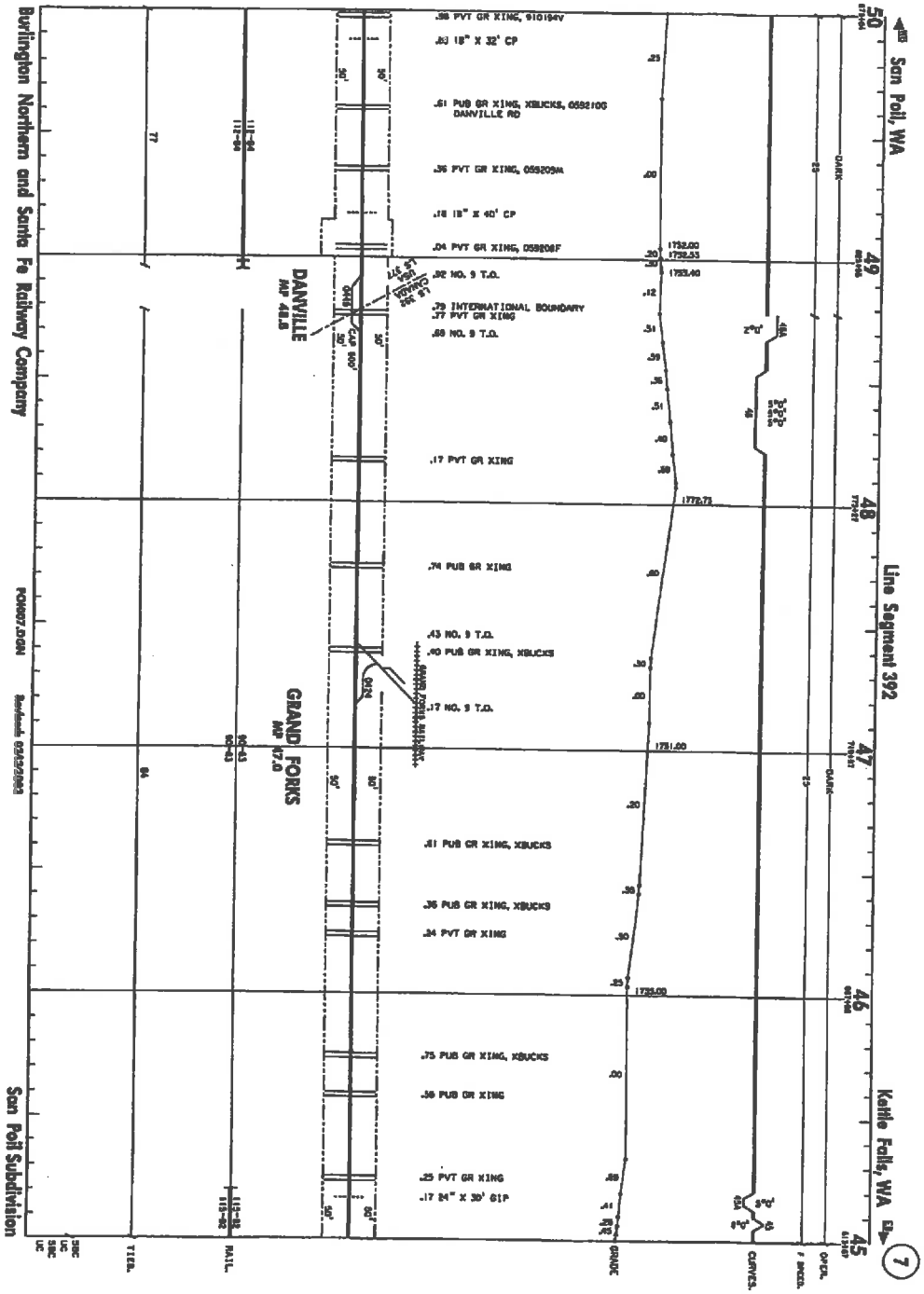
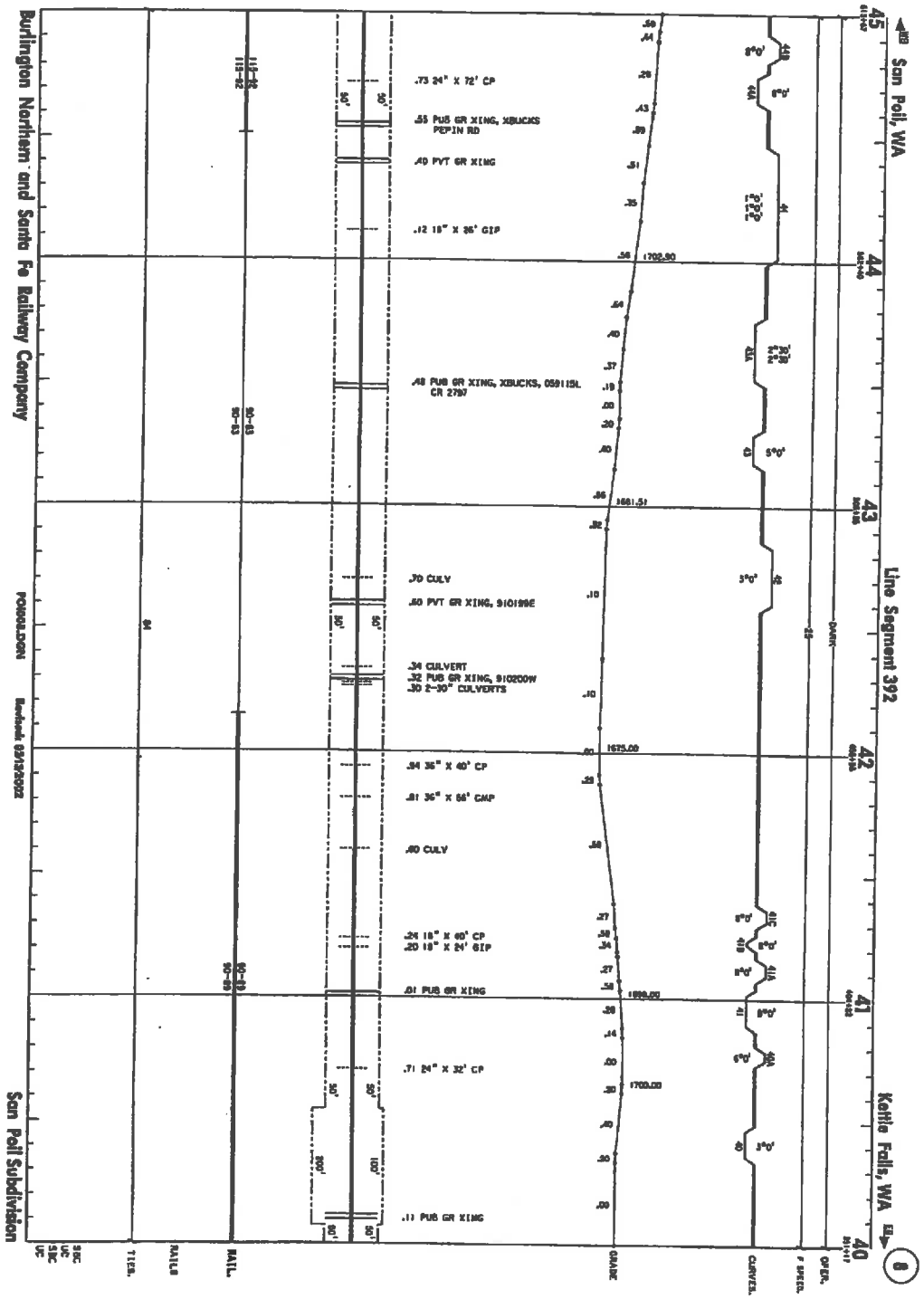
12 Appendix B KFR San Poil Condensed Profiles

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San Poil Subdivision
Line Segment 392
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Kettle Falls, WA
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.40 PVT GR XING
.12 18" X 36' CIP
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.20 CULV
.60 PVT GR XING, 910199E
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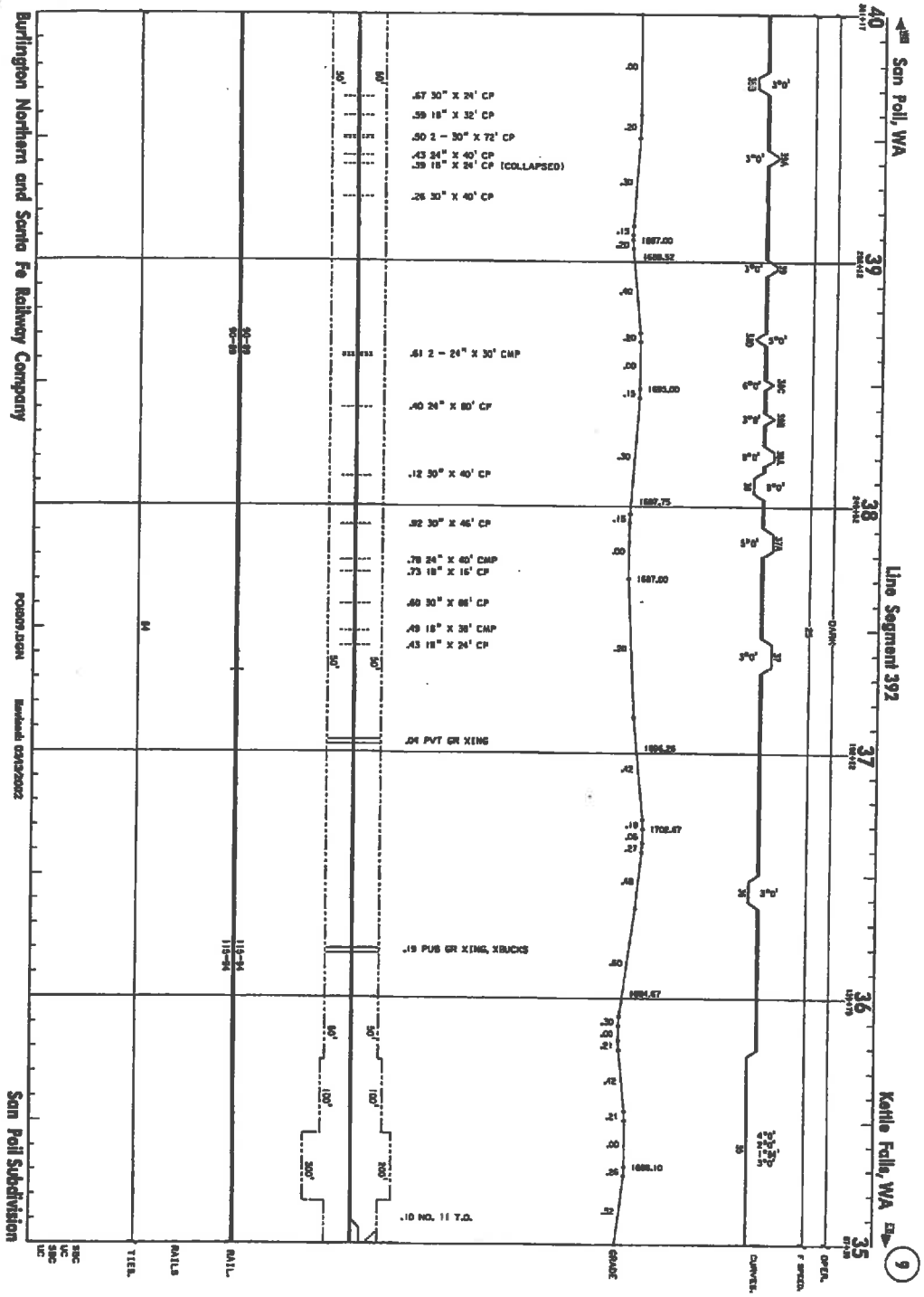
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San Poil Subdivision
Line Segment 392
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Kettle Falls, WA
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.40 24" X 80' CP
.12 30" X 40' CP
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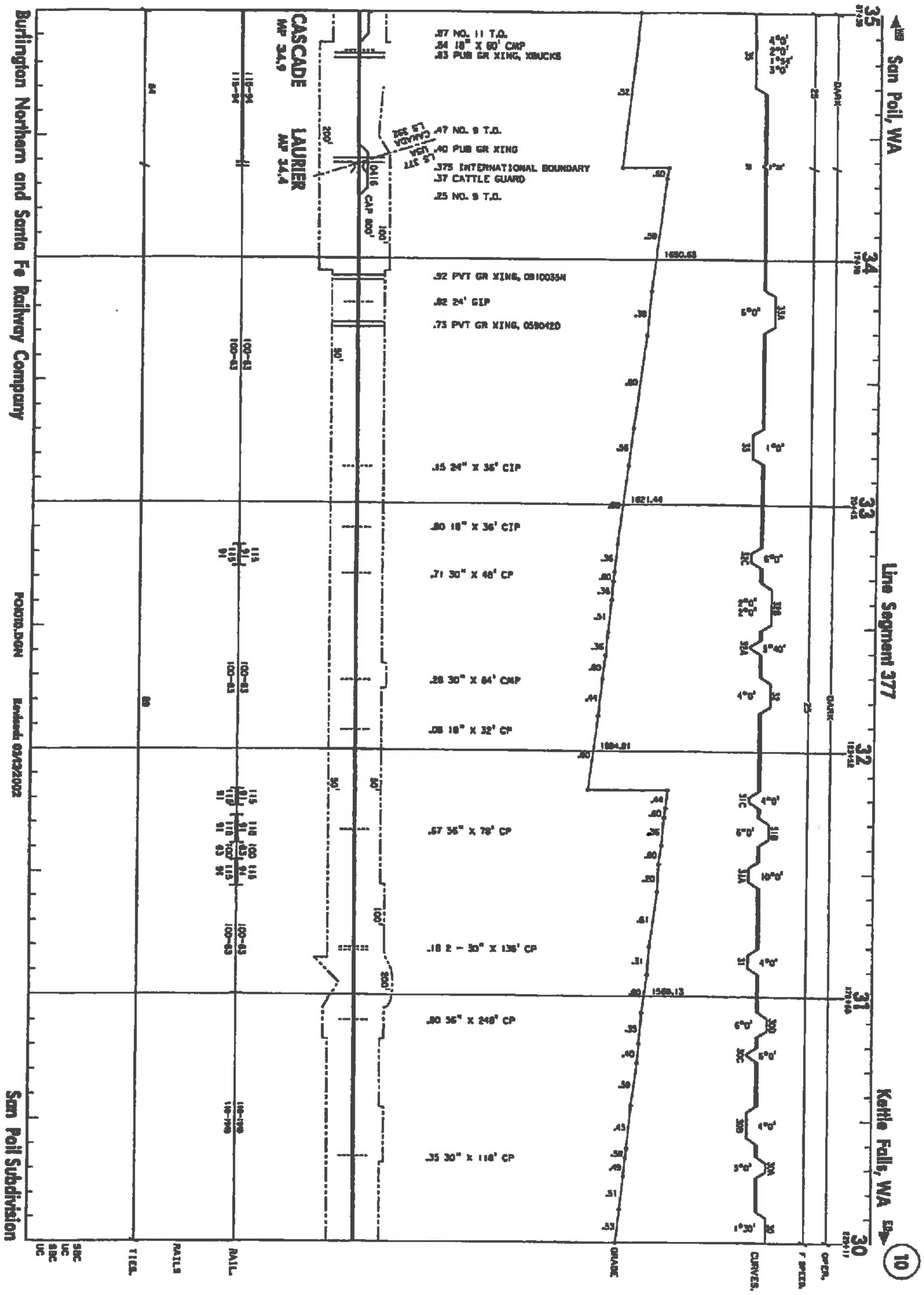
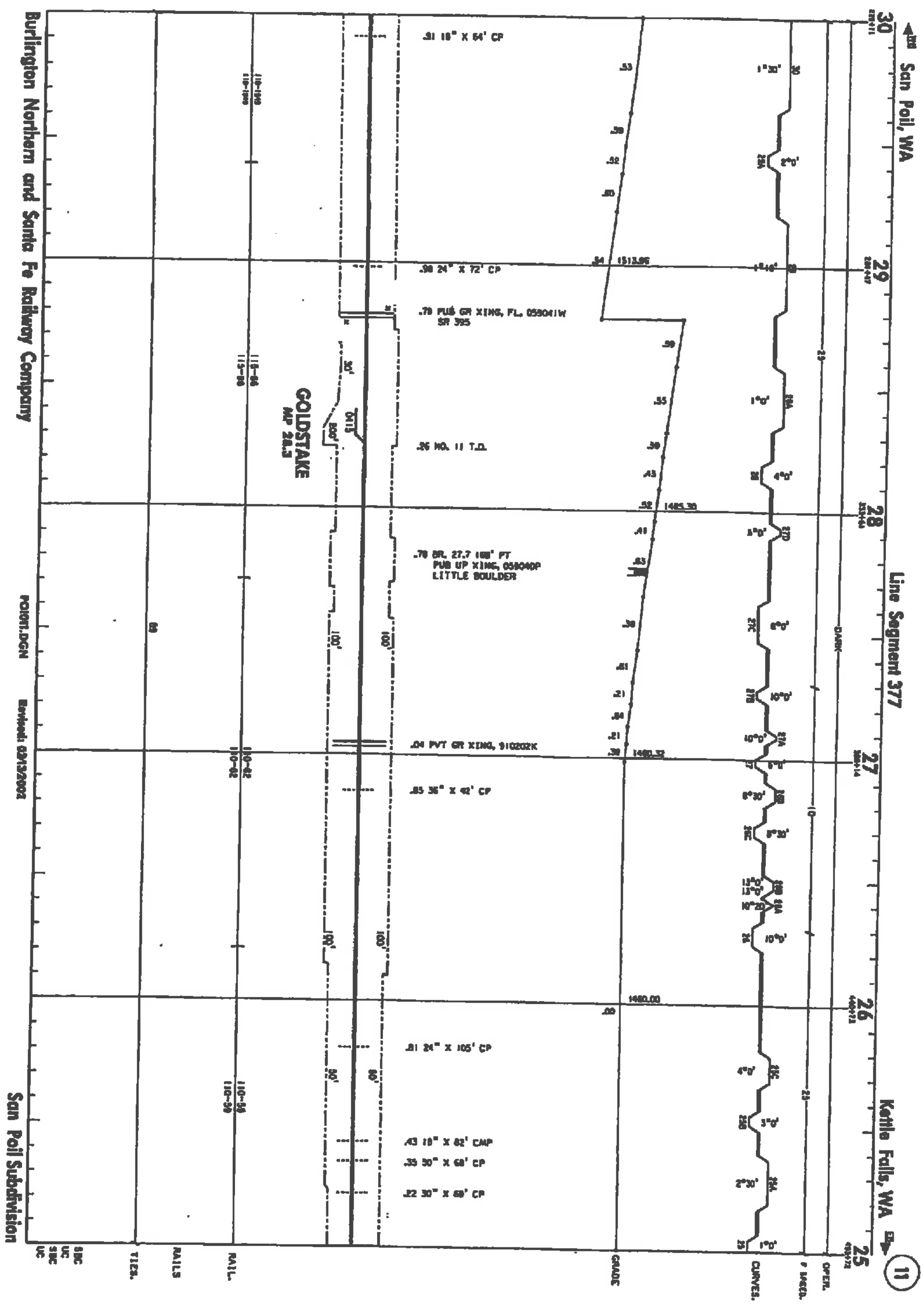

San Poil, WA
Line Segment 377
Kettle Falls, WA
Burlington Northern and Santa Fe Railway Company
San Poil Subdivision
CASCADE
LAUIRER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Kettle Falls, WA
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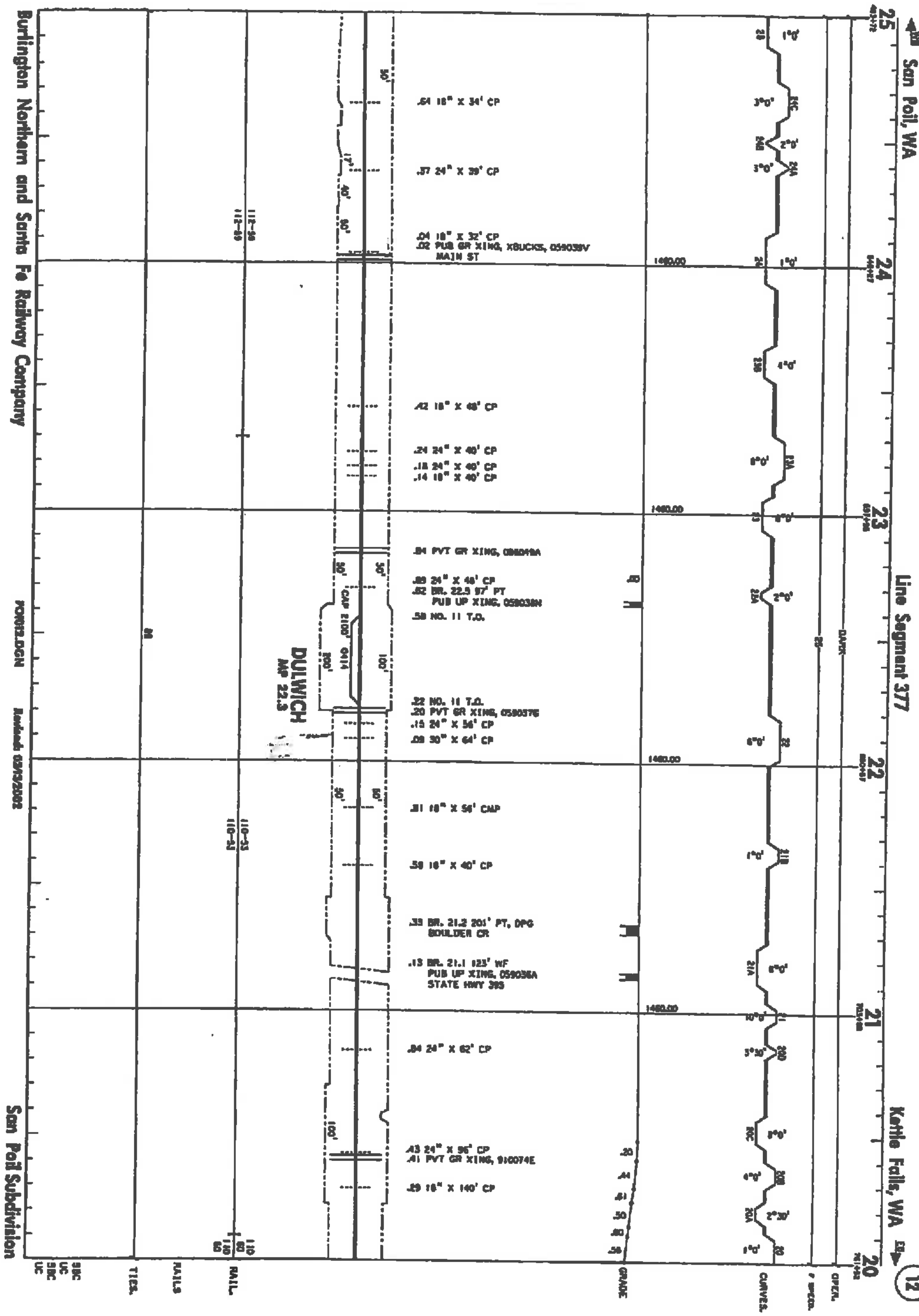
MP 28.3
Burlington Northern and Santa Fe Railway Company
San Poil Subdivision
11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Burlington Northern and Santa Fe Railway Company
San Poil Subdivision
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24
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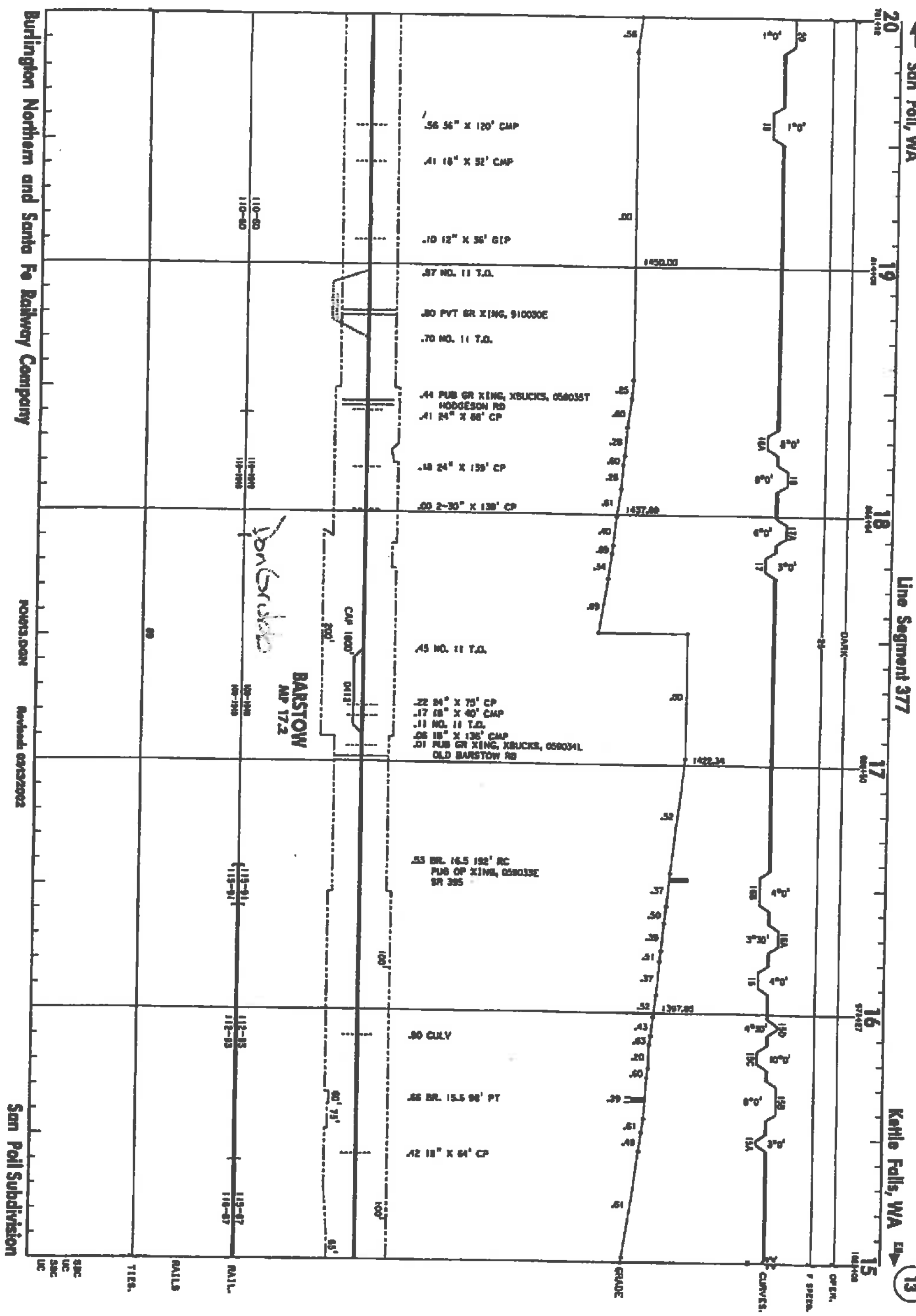
12
GRADE
CURVES
RAIL
RAILS
TIES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MP 17.2
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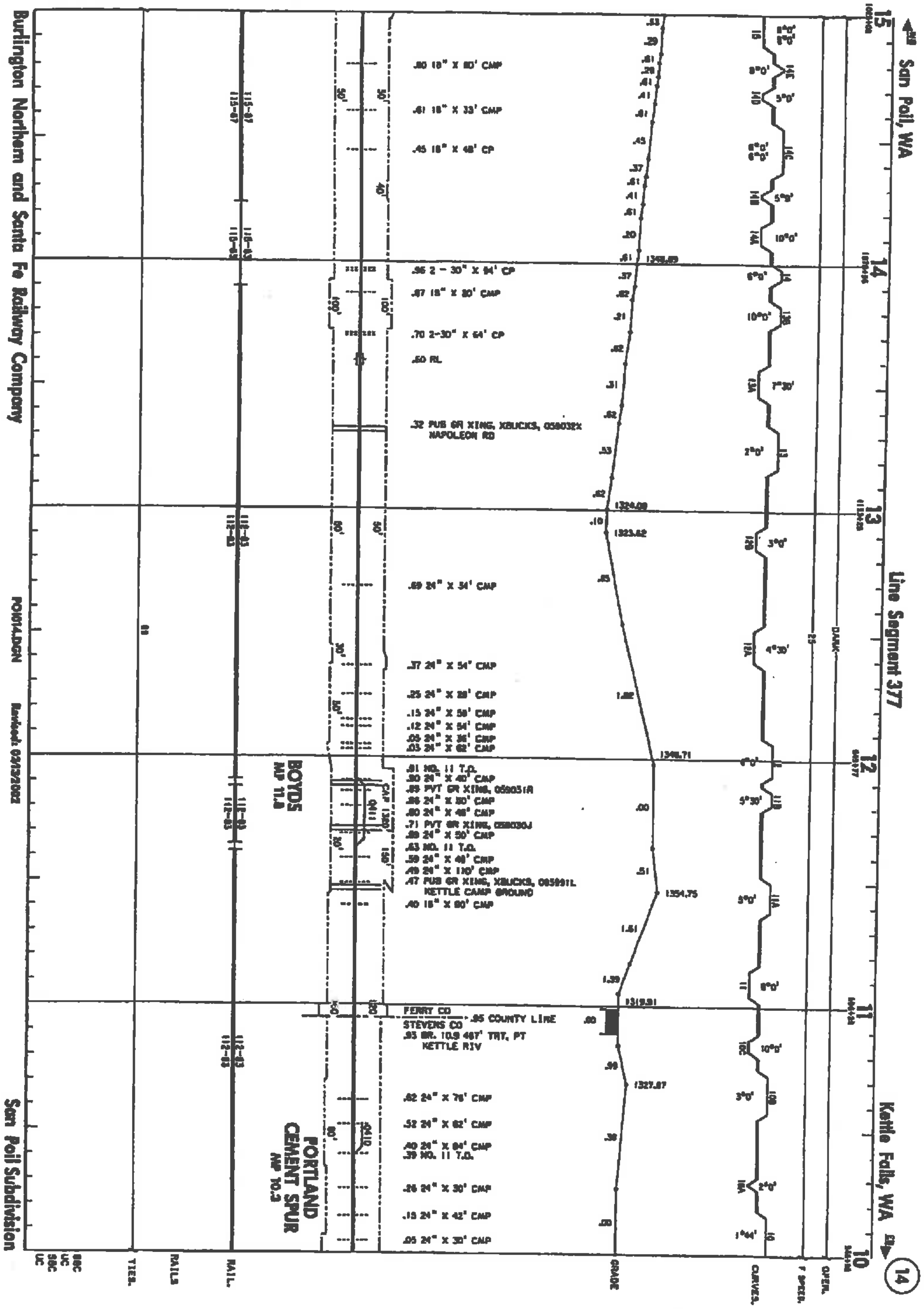
San Poil Subdivision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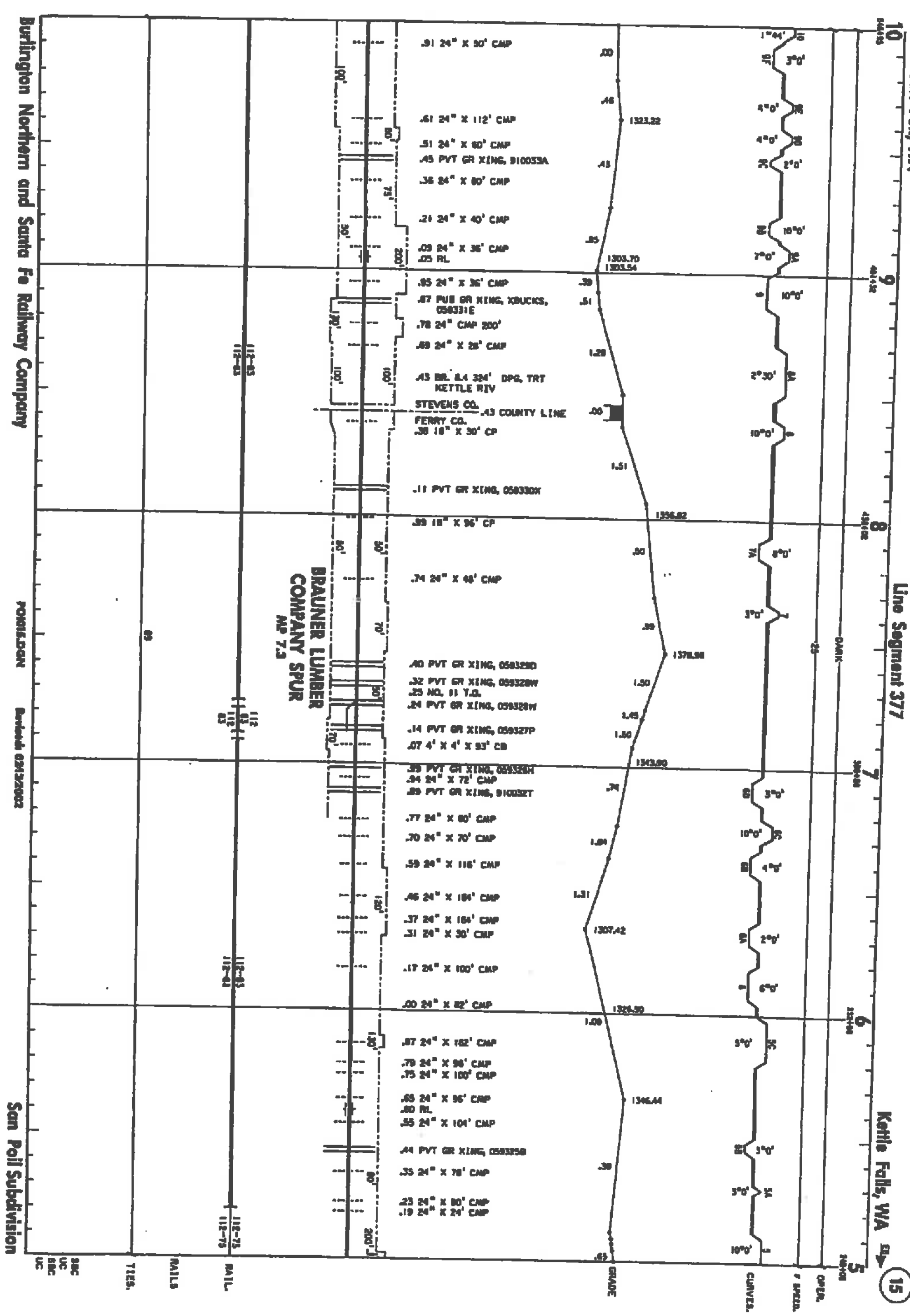
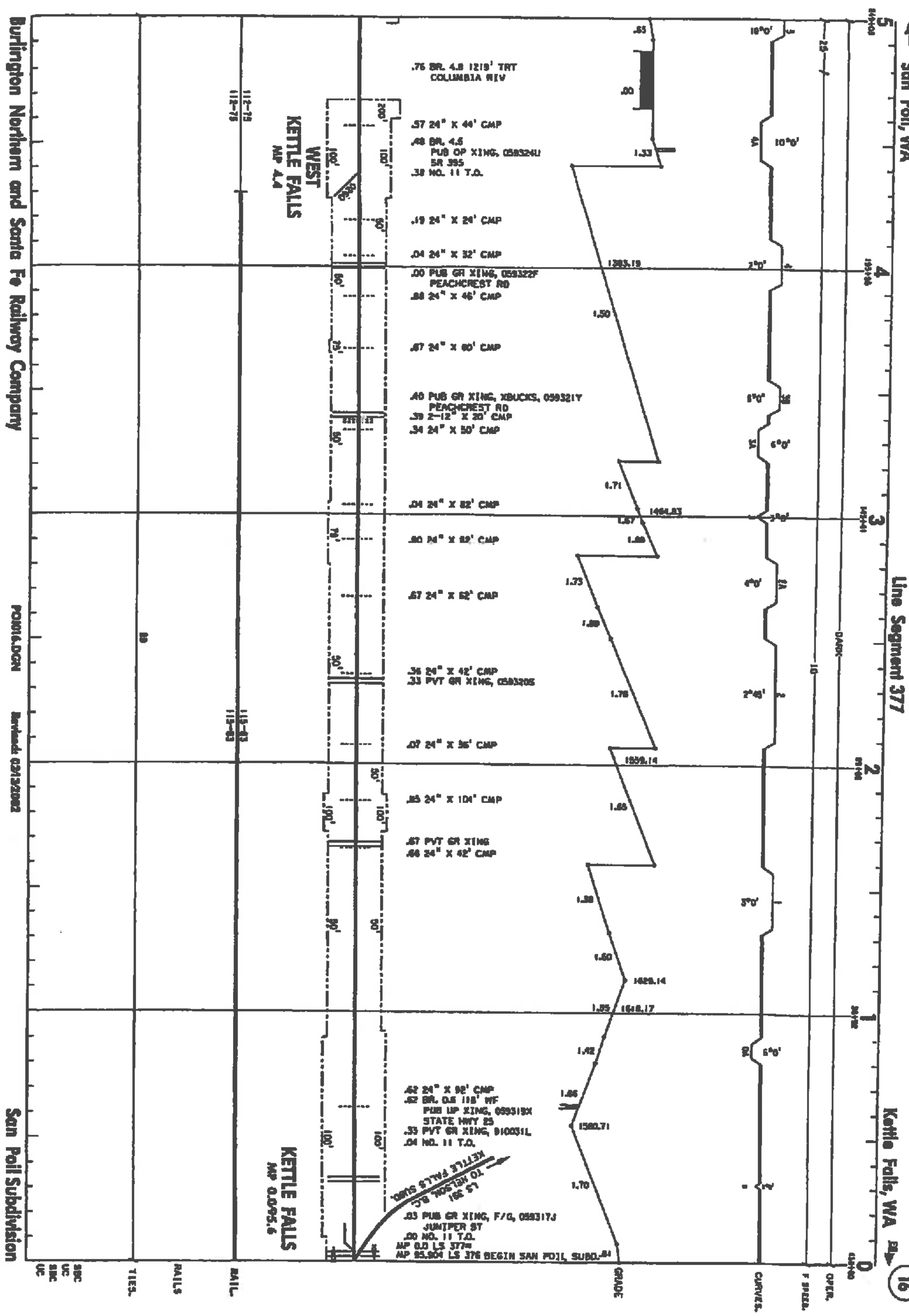
Kettle Falls, WA
San Poil Subdivision
BOYDS
MP 11.8
PORTLAND
CEMENT SPUR
MP 10.3
FERRY CO
STEVENS CO
.95 COUNTY LINE
GRADE
CURVES
RAIL
TIES


San Poil, WA
Line Segment 377
Kettle Falls, WA
15
BRAUNER LUMBER COMPANY SPUR
MP 7.3
Burlington Northern and Santa Fe Railway Company
San Poil Subdivision
STEVENS CO.
FERRY CO.
.43 COUNTY LINE
GRADE
CURVES
RAIL
TIES


San Poil, WA
Line Segment 377
Kettle Falls, WA
WEST KETTLE FALLS
MP 4.4
KETTLE FALLS
MP 0.0/95.6
Burlington Northern and Santa Fe Railway Company
San Poil Subdivision
16

13 Appendix C: Canadian Transportation Agency Methodology for Determining Net Salvage Value

Subsection 145(1) of the *Canadian Transportation Act* states that the transfer of a railway line to a government is to be "**...not more than its net salvage value to be used for any purpose...**" This statement implies that a government, to whom the railway line is to be transferred, is not bound to use the railway in a specific manner (No. 530-R-1998).

Under the present legislative framework the definition of net salvage value means the realizable market value of the track materials and land, less their associated dismantling, disposal and other relevant costs. These costs can include, but are not limited to, sales commissions, excavation, disposal, and environmental restoration. The 'for any purpose' criterion requires the estimation of land value to consider a wider number of potential uses for the right of way, some of which may render it more or less valuable (No.530-R-1988).

The Canadian Transportation Agency performs an administrative law function. Thus, guidance in determining important criteria that would impact the definition of land value can be obtained by reviewing past Agency decisions. It is the practice of the Agency makes a determine of land values, on a case-by-case basis, including the various costs and adjustments, if any used in determining the net salvage value of all the relevant components of the railway line. This is because the relevant land assets and their characteristics vary between railway lines subject to net salvage value determination. In determining the net salvage value of a railway line, the CTA may or may no apply an adjustment factor to the land depending on the specific characteristics of the right-of-way (No. 530-R-1998).

Estimation of Land Value – Determination of any Assemblage Premium for Corridor

The CTA determined in decision (No. 530-R-1998) that the mere fact that the corridor is already assembled does not automatically mean that a premium is warranted. The Agency in this decision found that there was no evidence to indicate that the property ought to be valued based upon its sole use as a right-of-way for continued rail operations. The Agency also determined that, in this case, as an existing right-of-way that is subject to proposed transfer contemplated under sections 145 to 146 of the CTA, an assemblage premium was not applicable.

Estimation of Land Value - Determination of any Discount Factors

In CTA decision No.530-R-1998 the Agency reaffirmed their mandate under section 145 of the *Canada Transportation Act.* It required an examination of asset value for any purpose. This may mean, in any given situation, an assessment of land values based on sales of disassembled parcels, likely to be adjoining owners for non-railway purposes or to no one at all if there is no such market.

The CTA determined (No.530-R-1998) the application of an adjustment factor, either positive or negative, by individual block is both reasonable and appropriate as it more accurately captures the net salvage value of the railway line to be transferred. In an article entitled, *Rail Corridor Markets and Sales Factors: Revisited* the author stated,

If, however, the land is to be sold for other purposes, it is probable that only the parcels to which the railroad has fee simple title can be sold. This is usually referred to as liquidation...If liquidation had been determined to be the highest and best use of the corridor, the appraiser summarizes the Across the Fence (ATF) prices of the section

to which the railroad has fee simple title to estimate the ATF prices of these sections. If liquidation of the fee-owned sections is considered to be the highest and best use of the corridor, the estimated total ATF prices of these sections are reduced by the estimated cost of the sales, the time involved, an allowance for those parcels not sold, and a profit for the purchaser if all sections are sold to one buyer...

In decision No. 530-R-1998 the Agency was of the opinion that there was evidence of examples of discounting rail lands. There were many examples in which corridors, or parts thereof, have been sold at a discount to their across the fence value. The Agency considered the nature of the abutting property, the relative willingness of the abutting property owners to purchase additional lands, the probability of delays and difficulties in selling the line and the functional obsolescence in determining whether a discount factor was warranted.

In decision No.530-R-1998 the Agency examined all aspects of the specific property and in doing so concluded that it was appropriate to apply four different discount rates range from 0% to 85% depending on the nature of the block. Since land is not a uniform commodity and the Agency determined that it cannot be valued as such. Thus, the rate per acres and discount rate varied, even with respect to land with the same highest and best use. Land having the same highest and best use may have different rate(s) per acre and/or discount rates due to size, location, potential for development and various other considerations. Essential the discount factor of 58% in decision No. 530-R-1998 was a weighted average based on following factors: the acres, highest and best use, rate/acre value, discount rate to equal the adjusted value. The discount factors used by the Agency ranged from O%, 25%, 75% and 85%. In CTA decision No. 542-R-200 the Agency determined that the discount factor to use in the specific case involving a rural railway line in Saskatchewan was 89%.

Comparison of Values of Other Rail Corridor Properties

In CTA decision No. 542-R-200 the Agency examined seven sales and concluded that the ATF value was discounted between 65.5% and 90.5%. The Agency considered such factors as parcel size and other land characteristics compared to other subdivisions that had been discontinued before making a determination based on the specific facts. In decision No. 530-R-1998 the Agency concluded that the sale of other corridor lands in other areas is not necessarily useful in applying a rate per acre/mile due primarily to location, size and abutting uses which differ, and especially without knowing the details of each sale.

Agency Determination of Net Salvage Value for Land

In decision No. 530-R-1998 the Agency evaluated each submission as the value for each block. When considered appropriate in order to reflect market dynamics, the Agency made adjustments to the values for each block and also determined the discount rate for each block. The discount rate varied based on the probability of the adjoining land-owners purchasing the block. In some cases, no discount was applied. For example, a discount for the parkland and wetlands was not applied as the size of the block is so small that would not be appropriate as the purchasing authorities would not likely require a discount based on the small size of the purchase. In other blocks, land may have been discounted due to location and size considerations and/or the use of the land for industrial or commercial purposes. In some cases the Agency used a higher discount rate. This was in cases where the abutting land was already under utilized and the likelihood of the abutting land-owner purchasing the subject property would be slim since it would offer no additional benefit.

14 Appendix D: Municipal Experience with Rail Line Acquisition and Service Delivery in Canada

The Research and Traffic Group (2001) report entitled *Sustaining Capital Requirements for the Short Line Railway Industry* noted at the time of the last *Canada Transportation Act* (CTA) Review a number of short line railways were owned with municipal governments participation. The authors of this report observed that the common themes with civic government ownership involvement appears to be that the traffic base/volume of cargo offers insufficient revenue to attract a commercial operator that can cover the necessary expenses.

A decade has almost past since the Research and Traffic Group report was prepared for the CTA Review Panel. At the time of the report in Ontario, the Research and Traffic Group identified five railways with municipal involvement: (a) Arnprior and Neapean, (b) Barrie-Collingwood, (c) Guelph Junction, (d) Orangeville and Brampton, (e) Port Colborne Harbour Railways. Across Canada there was also municipal participation in two other railways the: (f) Red Coat Road & Rail (g) Cdf de la Gaspesie. The commercial and economic environment has experienced significant changes since early 2000s.[90] Therefore, the present study team believed that it would be informative to provide an update on these railways and evaluate their experience.

The purpose of the study team's review was to ascertain whether these same companies were still operating, to determine the nature of municipal involvement and to gather insights from secondary data sources and key officials to try and identify the factors that contribute to successful ongoing short line operations. The study team also tried to indentify the extent of any recent federal or provincial government funding to these railway companies. The results of this review are contained in the following paragraphs. The study team's analysis for this report indicates that all of the above railways have continued operations since 2001.

(a) ***Arnprior and Neapean Railway***: In 2007 the Ontario government reported that the Arnprior-Nepean Railway Co. Inc. (operator: Ottawa Central Railway OCR) still operated the Arnprior Nepean Railway. The Arnprior-Nepean Railway Company Inc Act, 1992 created the company.

The Ottawa Central Railway is a Canadian short line railway subsidiary of the Canadian National Railway. It consisted of former CN subdivisions, and operated between Coteau-du-Lac, Quebec, at an interchange with the CN Montreal-Toronto main line, to Ottawa and Pembroke, Ontario. The OCRR consisted of 198 km (123 mi) of track and spurs: 156 km (97 mi) of main line between Ottawa and Pembroke, and 42 km (26 mi) of the former Ontario L'Orignal Railway (OLO) between Glen Robertson and Hawkesbury. It also had 138 km (86 mi) of running rights between Ottawa and Coteau on track owned by VIA Rail. Major commodities carried by the OCRR included newsprint, salt, medium-density fibreboard, linerboard, forest products, pulp, gasoline, lumber and board, wire rod, billets and scrap.

(b) ***Barrie-Collingwood Railway*** **(BCRY)**: is a partnership of municipalities, shippers and its owner, Cando Contracting. The City of Barrie and the Town of Collingwood purchased the rail property and its 71 miles of track. It has been operated since January 1998 by BCRY. The company's nine employees also provide traffic loading and switching services, and offer a connection with CP, interchanging grain and lumber products, clays, chemicals and industrial products. The short line's right-of-way was used to install a municipal water line between Collingwood and Alliston. Its owner, Cando Contracting, operates the Orangeville-Brampton Railway, a unique

[90] Railway Association of Canada http://www.railcan.ca/

partnership between the Province of Ontario, the local Towns and municipalities, the local rail customers, CPR and Cando Contracting Ltd. In a 2005 Business Edge article entitled 'short line operators fulfill a it was reported that "Funding track maintenance and capital maintenance programs are the biggest challenges, says Steve Gallagher, operations manager for the Barrie Collingwood Railway (BCRY.) "We can't do as much as we'd really love to do. Instead of upgrading the line and improving it, we keep it safe."[91]

Mr. Doug Peter, Vice President Industrial Rail Services for Cando Contracting Ltd shared the following perspective municipal involvement with short line railways with the current study team:

Cando provides rail services across Canada and operates several shortline railways, including two community-owned railways in Ontario: Barrie-Collingwood Railway (BCRY) and the Orangeville-Brampton Railway (OBRY).

Municipal Involvement: Municipal involvement is critical to the long-term success and viability of most SL railways, which are normally on the market because the revenue from freight service does not make the property economically viable. Properties of both our community-owned railways are owned by the local towns. The SL's are operated by Cando under term (5-year) operating agreements. The towns, and/or customers, also contribute funds for the annual capital works (non-routine maintenance). To be successful, the towns need to look at the SL as part of their local transportation system and recognize that retention of direct rail service provides a competitive advantage for their local industries.

Critical Success Factors for Shortline Railways[92]:

- Long-term commitment from local towns and municipalities,
- Long-term commitment from freight customers,
- Potential to grow the rail business as service and economy improves,
- Adequate revenue/funding to maintain infrastructure, to enhance operating efficiencies and preserve asset value,
- Competitive switch/service fee, relative to trucking/transload options, to allow rail business to grow,
- Collaborative Class I railway with reasonable/competitive interchange agreement and marketing support,
- Capable short line railway operator and long-term agreement with towns/customers that provide reasonable risk/reward balance through revenue threshold/profit sharing agreement.

Government Funding: Both of Cando Contracting's community-owned railways received government assistance to purchase the short line properties. In most cases, short line funding support comes from provincial governments, although some provinces (PQ and ON) have negotiated matching federal support. Support of the local MLA is normally critical here.

(c) ***Guelph Junction Railway*** **(GJR)**: is still in operations. The company operates 24 miles of track between Guelph and Campbellville, Ontario on behalf of the City of Guleph. OSR also provides connections with both major railways and provides common use track for rail to trans-loading for its customers.[93]

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[91] Business Edge, 'Short-line rail operators fulfill vital role', Published: 11/24/2005 - Vol. 1, No. 23'. http://www.businessedge.ca/archives/article.cfm/short-line-rail-operators-fulfil-vital-role-11279

[92] Personal correspondence with Mr. Doug Peter, Vice President - Industrial Rail Services for Cando Contracting Ltd. September 1, 2010

[93] Guelph Junction Railway http://www.osrinc.ca/update/Operations/guelph.htm

(d) ***Orangeville Brampton Railway*** **(OBRY)**: Cando Contracting is still operating the Orangeville-Brampton Railway. It is a unique partnership between the Province of Ontario, the local Towns and municipalities, the local rail customers, CPR and Cando Contracting Ltd. The Orangeville Railway Development Corporation, a business corporation incorporated by the Town, purchased the 55-km Section of the Owen Sound Subdivision that connects Orangeville to the Canadian Pacific Railway (CPR) in Streetsville/Mississauga. The local customers have established the Orangeville-Brampton Rail Access Group (OBRAG) to support maintenance of the track to enhance the safety and operating efficiency of the railway. OBRAG members include Geon Canada Inc., The Clorox Co. of Canada Ltd., Symplastics Ltd., Performance Packaging Inc., Vulsay Ltd., and Holmes Agro Ltd. CPR retains the local rail customers and the long-haul freight revenues. Cando Contracting Ltd (Cando) currently operates the railway on a 2-day per week basis (Tuesdays and Thursdays) delivering resource materials to local manufacturers. Cando is a Manitoba-based rail services company with Ontario operations in St Thomas, Hamilton, Kingston, and the Barrie-Collingwood corridor. For critical success factors see comments Cando Contracting's comments under the BCRY Section.[94]

(e) ***Port Colborne Harbour Railway*** **(PCHR)**: The City of Port Colborne short line railway is still operating. It originally consisted of 7.2 miles of track purchased by the City of Port Colborne in June of 1997 from Canadian National. PCHR a division of the Trillium Railway Co. Ltd. undertook a long-term lease agreement with the City of Port Colborne and Canadian National to manage and operate the original 7.2 miles. In September of 1999 Trillium and Canadian National negotiated a expansion of this operation to include the "West Welland Feeder Lines" which consisted of the former CN Cayuga Sub, CN Canal Spur, CN Thorold Spur and the former CN/ NS&T Grantham Spur, Lakeshore Spur, Townline Spur and Fonthill Spur's for a total of approximately 40 mile of track. PCHR owns and operates a new rail scale at our Feeder Yard. There is also a privately owned and operated trans-load site on the PCHR. The PCHR, with its routes in the Niagara Region, provides railway service to customers in Port Colborne, Welland, Thorold and St. Catharines, Ontario. Through interchange with Canadian National Railway (CN) and Canadian Pacific Railway (CPR), customers are connected to the vast North American railway network and marketplace. Commodities on the short line include food products (corn syrup), grain products including wheat, mustard seed, gluten meal/feed, chemicals, recycled metals, recycled paper products, and high value dimensional shipments of industrial furnaces, generators and transformers.[95] In 2007 the Ontario government reported that the City of Port Colborne and Trillium Railway Co. Ltd were license holders for the following railways: Port Colborne Harbour Railway, St. Thomas and Eastern Railway and Caledonia and Hamilton Southern Railway Co Ltd.[96] In regards to infrastructure renewal a 2005 Business Edge article entitled 'short line operators fulfill a it was reported "One way is to earn so much profit that you've got excess money to put into the capital infrastructure," says Wayne Ettinger, president and CEO of the Trillium Railway Co., which operates the Port Colbourne Harbour Railway (PCHR) in the Niagara Region and the St. Thomas & Eastern Railway between St. Thomas and Delhi. But, he says, short lines have to spend more than 90 cents to earn a dollar of revenue. "We don't make enough money to reinvest in new sidings and that sort of thing."

(f) ***Great Western Railway Ltd.*** **(GWR)**: GWR is a still operating a short line railway. The firm's head office is located in Shaunavon, Saskatchewan. This shortline operates over 438 miles of track including the Shaunavon, Vanguard, Altawan, Notukeu subdivision, Fife Lake Railway and the Red Coat Road and Rail. Cars are

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[94] Orangeville Brampton Railway http://www.obryrr.com/

[95] Port Colborne Harbour Railway
http://cnplus.cn.ca/it/Shortlines/SL_Static.nsf/shortlines/B559F890F0D9B5608525675B0060BD11?opendocument
http://www.trilliumrailway.com/pchr.asp

[96] 'Submission To *Railway Safety Act* Review Panel', From the Ontario Ministry of Transportation (August 17, 2007)

interchanged with CP Rail at Assiniboia and Swift Current. In November of 2004 the rail was purchased by a large group of interested parties and now GWR is locally owned. January 2006, GWR became a part owner/shareholder of the Fife Lake Railway Ltd., with operating authority from Assiniboia to Coronach, SK.In March 2007, GWR obtained a service agreement with Red Coat Road and Rail and an operating authority from Assiniboia to Pangman, SK. The railway is presently owned by farmers and local investors from the area. The company has a board of 11 directors. [97]

The business is operated by 3 individuals supporting the work of general management, 2 people in the locomotive department, 5 in the transportation and 6 people in the maintenance of the way department. The short line moves approximately 3,320 carloads, mostly grain each year. It also provides car storage.

(g) ***Chemin de fer de la Gaspesie*** **(SFG)**: The Société du chemin de fer de la Gaspésie (SFG) owns the rail line between Gaspé and Matapédia where it interconnects with CN. The society was created in 2007 as a result of Bill 210 in the National Assembly of Quebec. The original society was created by letters patent in 1996. There are four municipal level governments that appoint directors and a representative from a municipal association. SFG's Cascapédia Subdivision extends over 98 miles, from Matapédia to New Carlisle, while its Chandler Subdivision runs over 104.2 miles, from New Carlisle to Gaspé. Previously CN operated SFG's network, but SFG took charge as of April 1, 2010. Although operation of this railway is under provincial jurisdiction, VIA's Chaleur train makes three round trips per week, thus subjecting the railway to Railway Safety Act standards. On June 30, 2010 the company RailTerm announced that the Société du Chemin de fer de la Gaspésie has chosen them as their independent railway operator. RailTerm will be responsible for managing and overseeing all operational activities of the short line that operates 202 miles of track in Quebec SFG ships freight, mainly wood chips and lumber some 1,700 cars per year and approximately 300 other diverse products in addition to passenger traffic. On May 15, 2009 the federal government through the Canada Economic Development for Quebec Region made a contribution of $3,000,000 becoming non-repayable on a total investment of the same amount for the purchase of the Chandler-Gaspé railway line from Canadian National Railways (CN). This project was also aimed at reaching subcontracting agreements with Via Rail Canada to maintain passenger transport service and with *Chemins de fer du Québec* (CFQ) for the development of freight services. Today, the *Corporation du chemin de fer de la Gaspésie* employs 15 people in full-time positions. The federal government has provided funding in the past to the organization $1 million in May 2000 and $3 million in March 1997.[98]

Mr. François Prénovost, Partner & Executive Vice President RailTerm informed the present study team that his company's arrangements with the SFG are for the provision of expertise in running and maintaining the railway.[99] The SFG provides the operating locomotives, other equipment and the employees. RailTerm service contract with the SFG includes the supervision of SFG employees. The SFG presently receives up to $5 million in annual funding for the maintenance of the track. The Quebec and Federal governments have a five-year cost sharing agreement to provide the annual maintenance funding.

Mr. Prénovost also noted that there is a limited insurance market for short line railways. The most active market players have been Zurick, Chartis and Lloyd's. Insurance costs for a General Liability policy of $25 million could

[97] Great Western Railway Operations http://www.greatwesternrail.com/

[98] Canada Economic Development For Quebec Region
http://www.dec-ced.gc.ca/eng/media-room/news-releases/2009/05/1984/11.html

[99] Personal correspondence with Mr. François Prénovost, Partner & Executive Vice President RailTerm. September 2, 2010
http://www.railterm.com/news_rail_scfg.php

have an annual cost of between $250,000 to $300,000. A critical success factor for a short line operator's involvement with a municipal government would be the sharing and allocation of risk. In circumstances where rail operations were being provided as a public service there would be less interest in a railway operator taking significant risks associated with their involvement. Risk could be associated with the responsibility of supply railway locomotives and equipment to service contracts that were of a short-term nature.

The feasibility analysis demonstrates the relationship between the key risks for the railway associated with maintaining existing traffic volume, diverting traffic from trucks and developing new revenue opportunities. The chart below summarizes the individual risks so that the risk can be matched where possible with the appropriate risk management technique.

Figure 14-1 Categorization of Risk

Categorization of Risk	
Type & Definition	**Risk Management Technique**
Competition risk: potential for new or substitute services to entry the market.	Supply and demand analysis in substitute transport markets.
Counterparty credit risk: is associated with the other parties to the agreement being unable to meet their contractual obligations.	Due diligence review of credit rating and where required obtaining performance support (such as bond or letter of credit), or establish a reserve fund.
Rebuild & construction risks: failure to meet specified requirements and cost and time overruns.	Performance bond.
Environmental risks:	Environmental insurance & strict adherence to legislation and regulations.
Market (demand) risk: relates to the demand for the service to be provided.	Supply and demand analysis. Private sector investors may request certain conditions such as automatic rate increases under certain conditions &/or take-of-pay provisions.
Operating & maintenance risk: applies to the various resources that are important for the operation.	Implementing employee-friendly labour policies, long-term labour contracts, long-term fixed supply contracts, proper insurance & strict adherence to all regulations.
Revenue risks: this relates to the combination of pricing on top of market demand risk.	Don't restrict the private sector's ability to control pricing.
Third party liability risk: arises from the liability to third parties as the result of accidents.	Insurance and safe operating practices.

15 Appendix E: Glossary and Acronyms

Backhaul: The return trip of a truck, transporting cargo or freight, especially when carrying goods back over all or part of the same route.

BNSF (Burlington Northern Santa Fe Railway): The second largest North American Class 1 railway, providing service to the Western and Midwestern U.S.. BNSF provides service to Boundary area shippers via shortline railways KFR at Grand Forks and Waneta and CSCD at Oroville Washington.

Breakbulk Cargo: This category encompasses a variety of goods that must be loaded individually, and not in intermodal containers nor in bulk as with oil or grain. Common commodities transloaded in the Okanagan include lumber, panel products, and steel.

Bulk Cargo: Commodity cargo that is transported unpackaged in large quantities. Examples of bulk cargo in the Boundary region include copper slag processed by Pacific Abrasives.

Canadian Transportation Agency: Federal agency overseeing rail abandonment and discontinuance of service in Canada

Cascade and Columbia River Railroad (CSCD): A shortline railroad that interchanges with the BNSF in Wenatchee, WA and runs north to Oroville.

Centerbeam: Specialized railcar for transportation of lumber products.

Federal Railroad Administration (FRA): Agency of the U.S. federal government responsible for regulating rail safety.

KFR (Kettle Falls International Railway): The subsidiary of Omnitrax which owns and operates over 160 miles of former BNSF trackage in Northeastern Washington State and Southeastern British Columbia. KFR operates from the BNSF interchange at Chewalah, Washington to Columbia Gardens, British Columbia. A second line operates from Kettle Falls, Washington to Grand Forks, British Columbia, before crossing the border again to reach San Poil, Washington.

KPR (Kelowna Pacific Railway): Shortline railway operating over CN track from Kamloops to Kelowna, and on 14.5 mile spur line to Lumby.

OCP (Official Community Plan): Under the BC Local Government Act section 875, an OCP is a statement of objectives and policies to guide decisions on planning and land use management, within the area covered by the plan, respecting the purposes of local government. An Official Community Plan (OCP) can be developed by both municipalities and regional districts. The OCP provides the longer term vision for the community.

Reload Facility: Transload facility dedicated primarily to reloading of cargo from truck to rail.

Rocky Mountain Double: Truck configuration consisting of a tractor hauling a 48 foot trailer and 28 foot truck trailer with an allowable Gross Vehicle Weight in Washington State of 105,500 lbs. This configuration is not legal in BC because the overall length exceeds provincial limits.

Super B Train: Truck configuration consisting of a tractor hauling two 28 foot trailers with a typical maximum allowable Gross Vehicle Weight in Canada of 138,000 lbs.

Tridem Trailer: Truck trailer with three axles, primarily used for transporting heavy commodities.

Transload: facility for transferring bulk or breakbulk commodities between rail and truck freight. Common transload freight includes lumber, steel, bulk liquids (oil, fuel, etc.) and solids (cement, grain, fly ash, etc.).