Business Case

Alberni Connector
Highway 19 to Highway 4

5 June, 2013

Apex Engineering Limited

Executive Summary

The Alberni Connector[1] business case report was initiated at the request of the Alberni-Clayoquot Transportation Committee[2] to assess the benefit/cost ratio of constructing a new highway linking Port Alberni to Highway 19. This analysis focuses on the Lacey Lake option, one of three options previously evaluated. The report is funded by the Port Alberni Port Authority to assist regional leaders in assessing the benefits of improved highway infrastructure, and to assist the Port in developing the inter-modal linkages necessary to the long term success of the Port.

The proposed 20+ km 2-lane Alberni Connector is located between Highway 4 near Port Alberni and Highway 19 north of Parksville. The connector would serve as an alternate route to Highway 4 which carries an estimated 9,424 SADT and 7,842 AADT (average annual daily traffic) near the Alberni Summit and is subject to frequent closures. The connector also serves as a shortcut for North Island traffic, reducing the travel distance to Port Alberni by 20 km. The connector would be used by North Island traffic bound for Port Alberni or the west coast and by resources and forestry products bound for Port Alberni or other ports. The study area lies in rolling to mountainous terrain around Horne Lake and traverses over the Beaufort Range.

Cost is in the order of $50 million and the project returns a B/C Ratio = 1.4.

The analysis assumes 10% of the traffic on Highway 4 is from North Island, all of which would use the connector. A further 10% of South Island traffic is also assumed to use the connector in spite of the further travel distance because of potential delays encountered in peak summer periods on Highway 4. In addition, 150 trucks/day (75 round trips) are assumed to use the connector in conjunction with potential resource traffic. The total connector traffic is estimated to be 1,600 vehicles/day. With the reduced travel distance, the connector returns large benefits in time, vehicle operating cost savings and saving 2 to 3 collisions per year. There is also an estimated $2.3 million benefit from providing an alternate route during delays caused by highway closures.

There is a broader economic argument supporting the connector which serves as a catalyst for resource exports by way of Port Alberni, promoting economic development in the Alberni-Clayoquot region and Canadian exports as a whole.

Greenhouse gas savings related to the connector are an estimated 2,790 tonnes/year.

[1] Also known as the Horne Lake Connector
[2] previously the Alberni Valley Regional Transportation Committee

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Alberni Connector
Highway 19 to Highway 4

1 Background

1.1 Functional Role

The proposed Alberni Connector is a new link from Highway 19 to Highway 4 and Port Alberni. Highway 4 is a designated feeder route[1] of the National Highway System and the only road connection to Port Alberni, Uclulet and Tofino linking to the Provincial System at Highway 19 in Parksville.

Exhibit 1-1 General Location

[1]Feeder Routes are described in the National Highway System as "Key linkages to Core Routes from other provincial and regional population and economic centres (including links to intermodal facilities and imp ort ant b ord er crossing s)"

Highway 4 serves a combination of industrial, commuter and seasonal tourist and recreational traffic. Highway volumes range from about 7,800 to 12,000 AADT through the study area with summer volumes about 20% higher. The highway is primarily a 2 lane cross section characterized by mountainous terrain, limited passing opportunity and delays due to weather, motor vehicle collisions, tree falls, tourist attractions and maintenance.

The proposed Alberni Connector would provide an alternate route linking Port Alberni to the Provincial Highway System during periods of closure on Highway 4 and it creates a shorter route linking Alberni and the Coast to the North Island. The shorter link to North Island in turn creates economic opportunities for Port Alberni as a gateway port for resource traffic.

1.2 Scope of the Project

Three options were originally presented for the proposed connector (Exhibit 1-2). All options link to Highway 19 at the Horne Lake Intersection. The scope includes:

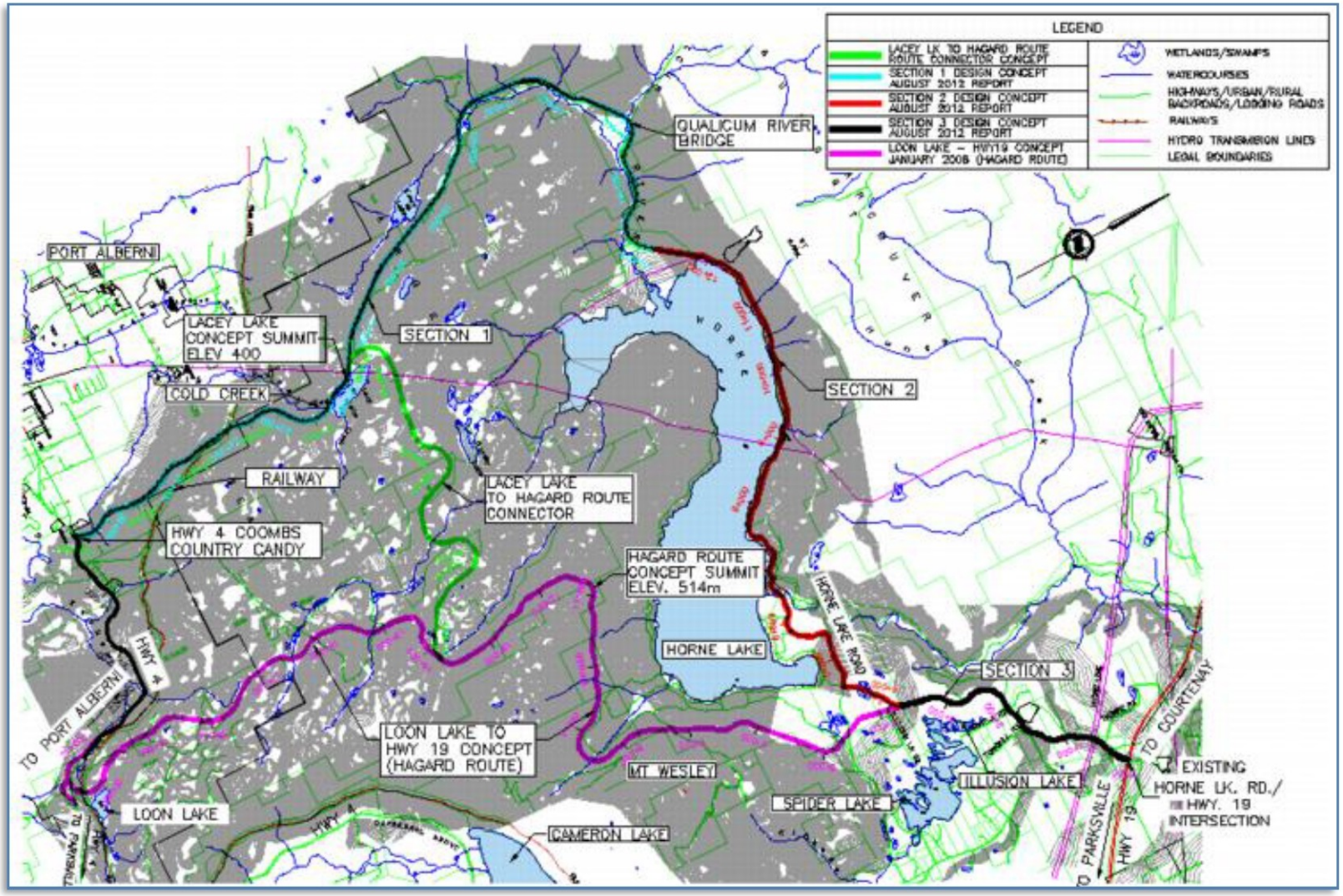
Haggard Route – Starts at the Horne Lake intersection on Highway 19 and includes upgrading existing secondary road between Highway 19 and Horne Lake and then following new alignment south of Horne Lake across the Alberni Summit climbing to 514 m asl before linking back to Highway 4 near Port Alberni. The proposed link is an 80 km/hr design, 20.2 km long and generally follows existing forest service roads.

Lacey Lake Route – Follows the same secondary route to Horne Lake and then diverges to the north of the lake along existing forest service road, then turns south to link climbing to 400 m before descending to Highway 4 at Port Alberni - 80 km/hr design, length 27.3 km

Haggard/Lacey Hybrid – Follows the Haggard route south of Horne Lake then diverges to the west linking to the Lacey Lake Route - 80 km/hr design, length 25.1 km.

This report presents the evaluation of the Lacey Lake option.

Exhibit 1-2 Alberni Connector Options

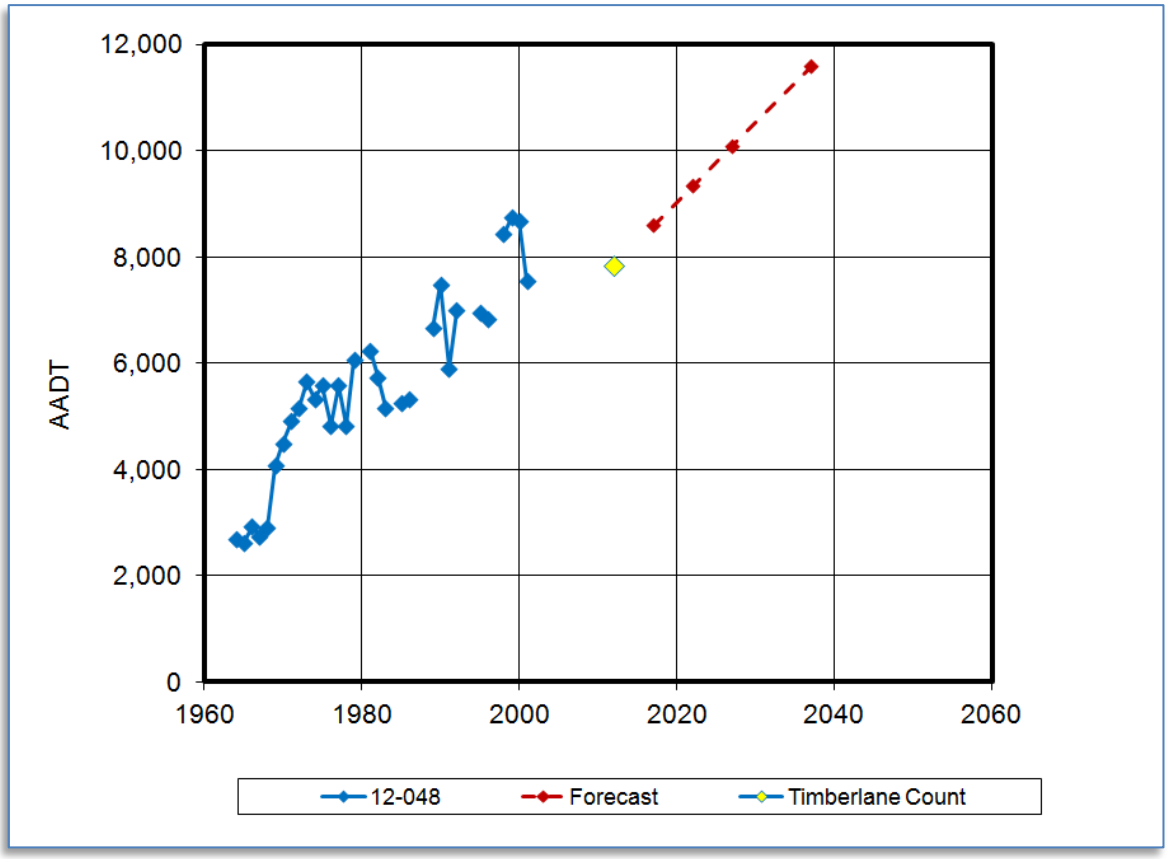


2 Traffic Demand

2.1 Highway 4 Demand

The historical and projected growth is presented in Exhibit 2-1. Counter 12-048 located near the east limit of Port Alberni has a long period or record showing the overall trend. The last MoTH count was in 2001, has been supplemented by two 12 hour counts conducted by the Region[2] in 2012. Traffic on Highway 4 grew steadily from 1964 to 1975 at about 328 AADT/yr. Since 1975 the pace has slowed to an average 123 ADT/yr or about 2.5% of current AADT per annum. For analysis purposes AADT is forecast to continue to grow at 150 AADT per annum reflecting strong growth in through traffic as west coast tourism demand continues to grow. Summer (SADT) traffic is about 20% higher than the average annual daily traffic (AADT).

Exhibit 2-1 Historical and Projected Demand



[2] Wed. 29 Aug and Thurs. 30 Aug, 2012 at the Timberlodge, Segment 2355, km 30.81 at the east limit of Port Alberni

Counter Locations	Segment 2355 LKI
Short Count 12-048	29.67
Connector Intersection	30.2
Timberlane Count	30.8

For analysis purposes the 2012 demand on Highway 4 is estimated to be 7,842 AADT and 9,424 SADT.

Exhibit 2-2 Traffic Demand

Est'd AADT 2012		7,842
Est'd SADT 2012		9,424
Annual Growth		
Historical (AADT/yr)		
	1964 - 1975	328
	1975 - 2012	123
Projected (AADT/yr)		150
Linear %		1.9%
% Trucks		9%
Level of Service		
	2012	D
	2036	E

2.1 Alberni Connector Traffic Assumptions

Traffic using the new connector would likely be a mix of traffic from North and South Island. Currently, North Island traffic travels south on Highway 19 exiting at Highway 4 onto the Alberni Highway to get to Port Alberni and the west coast. With the new connector, North Island traffic would exit at Horne Lake Road onto the new connector shortening travel distance by over 20 km and 19 minutes. South Island traffic using the connector would have to travel further but would experience shorter travel times particularly during peak summer periods when Highway 4 is congested.

Traffic demand on the connector is based on the assumptions in Exhibit 2-3. Existing demand on Highway 4 is estimated to be 9,424 SADT based on the Timberlodge count and factored to 7,842 AADT based on the typical pattern of demand over the year. The analysis assumes traffic on Highway 4 is composed of:

- 5% local traffic – none would use the connector
- 85% South Island traffic, of which 5% to 10% would use the connector
- 10% North Island traffic, all of which would use the connector

10% of Highway 4 traffic from North Island is 784 vehicles/day. In addition, the analysis assumes another 150 veh/day (75 round trips) of truck traffic from potential resource activity North of Horne Lake, making a total of 934 veh/day from North Island.

The connector would be a longer route for South Island traffic. The amount of south traffic using the connector depends on the level of congestion on Highway 4. Tourist demand on Highway 4 around Cathedral Grove, Cameron Lake and Angel Rock causes significant congestion leading to stop and go traffic flow during peak periods. The analysis assumes that over the course of the year, 10% of South Island traffic on Highway 4 between Highway 19 and Loon Lake will travel at an average speed of 65 km/hr and would use the connector in options 1 and 3. 10% of south Island traffic is assumed to use the new connector.

The combined North and South Island traffic totals 1,601 AADT.

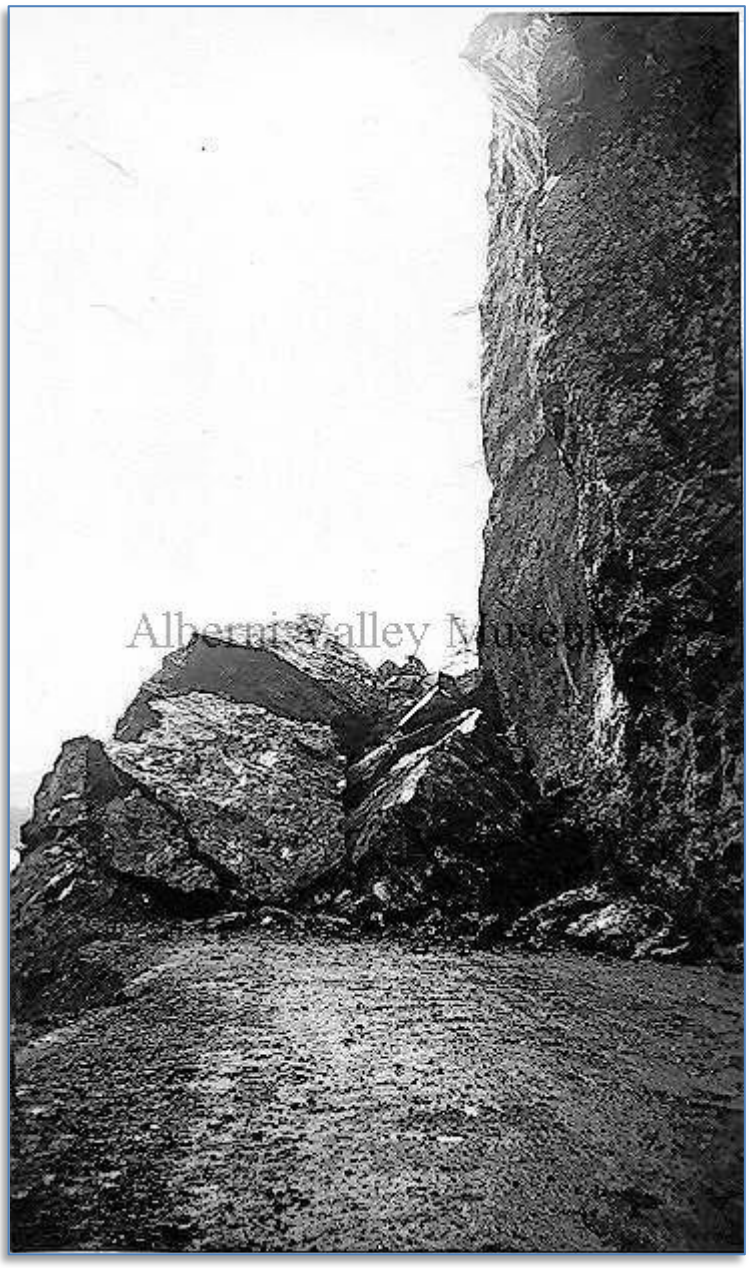
Exhibit 2-3 Alberni Connector Traffic Assumptions

	Base Case	Lacey Lake Route
Est. 2012 AADT at Summit	**7,842**	
Traffic Split		
% Local Traffic	5%	
% North Island	10%	
% South Island	85%	
Total	100%	
Capture Rate %		
Local Traffic	100%	0%
North Island	100%	100%
South Island	100%	5%
AADT x %Split x %Capture		
Local Traffic	392	0
North Island	784	784
South Island	6,666	333
Mine Traffic	0	150
Total	7,842	1,267

3 Problem Definition

3.1 Reliability

This is delay caused by scheduled or unscheduled incidents which result in a highway closure. Within the 47 km study area of Highway 4, closure data recorded by the Provincial Highway Condition Reporting Center over the last 7 years (approximately) included 24 closures generally due to collisions, tree falls or weather. Anecdotally, the number of closures appears to be under-reported so if anything, the official data is conservative. The official data is presented in Appendix A and summarized in Exhibit 3-1.



Rock fall at Angel Rock near Cameron Lake courtesy Alberni Valley Museum

Exhibit 3-1 Summary of Highway Closures

Number in 81 months	24
Total Hours	82.75
Average Hours/closure	3.45
Closures/year	3.6
Hours/year	12.26

With an average closure time of 3.45 hours per incident, then the average vehicle delay is about 2 hours (closure time x 1/2 + average queue clearing time say 15

minutes). With a flow rate of 1,000 veh/hr and 3.6 closures per year, the vehicle delay is 1,000 veh/hr x 2 hr/veh x 3.6 closures/yr = 7,300 veh-hrs/year.

A new route could potentially reduce this by 50%, saving 3,650 veh-hrs/yr worth $160,000/year or a present value over 25 years of $2.3 million including both passenger and commercial vehicle time.

3.1 Mobility

Exhibit 3-2 and Exhibit 3-3 present the assumptions used for estimating travel distance and time savings. North Island traffic would save 20 km on the Lacey Lake connector compared to the existing route south on Highway 19 and west on Highway 4 at Parksville. Time savings are estimated to be 17 minutes depending on traffic conditions on Highway 4. South Island Traffic would travel 9 km further but still save 1 to 3 minutes due to higher travel speeds on Highway 19 and the connector.

Highway 4 presently operates at LOS D during normal peak periods and will decline to E over the forecast period.

During peak season, Highway 4 is subject to delays by traffic accessing the highway at uncontrolled accesses at Cathedral Grove, Cameron Lake and Angel Rock. This leads to stop and go traffic at times.

Exhibit 3-2 Mobility Assumptions – North Island Traffic

North Island Traffic	Existing	Lacey Lake Route
	Travelled Distance (km)	
Rte 19 from Horne Lk I/S to Route 4	14.4	n/a
Rte 4 from Rte 19 to Loon Lake	28.3	n/a
Rte 4 from Loon Lake to Port Alberni	4.57	n/a
New Connector	n/a	27.3
Total Length (km)	47.3	27.3
Reduction (km)		20.0
	Peak Period Travel Speed (km/hr)	
Hwy 19 from Horne Lake I/S to Hwy 4 I/S	108	n/a
Rte 4 from Rte 19 to Loon Lk.	65.0	n/a
Rte 4 from Loon Lake to Port Alberni	80.0	80.0
New Connector	n/a	80
Rte Avg	71.9	80
	Peak Period Travel Time (minutes)	
Hwy 19 from Horne Lake I/S to Hwy 4 I/S	8.0	n/a
Rte 4 from Rte 19 to Loon Lk.	26.1	n/a
Rte 4 from Loon Lake to Port Alberni	3.4	n/a
New Connector	n/a	20.5
Total	37.5	20.5
Reduction (min/veh)		17.1

Exhibit 3-3 Mobility Assumptions – South Island Traffic

South Island Traffic	Base Case	Lacey Lake Route
	Travelled Distance (km)	
Rte 4 from Rte 19 to Loon Lake	28.3	n/a
Rte 4 from Loon Lake to Port Alberni	4.57	n/a
Rte 19 from Rte 4 to Horne Lake I/S	n/a	14.40
New Connector	n/a	27.3
Total Length (km)	**32.82**	**41.67**
Increase (km)		8.9
	Peak Period Travel Speed (km/hr)	
Hwy 4 (Hwy 19 to Loon Lk)	65.0	n/a
Hwy 4 (Loon Lk to P. Alberni)	80.0	n/a
Hwy 19	n/a	108
New Connector	n/a	80
Rte Avg	66.7	87.9
	Peak Period Travel Time (minutes)	
Rte 4 from Rte 19 to Loon Lk.	26.1	n/a
Rte 4 from Loon Lake to Port Alberni	3.4	n/a
Rte 19 from Rte 4 to Horne Lake I/S	n/a	8.0
New Connector	n/a	20.5
Total	29.5	28.5
Reduction (min/veh)		1.1

3.1 Safety Performance

Over the 5 years from 2007 to 2011 inclusive, there were 265 collisions on Highway 4, down from 310 in the previous 5 yr period. These included 9 fatal collisions. The historical collision rate is 0.58 coll/mvk which is above the Provincial average RAU2 rate 0.48 coll/mvk (for AADT 5,000 to 10,000). The collisions are also more severe with 3.4% fatal collisions, compared to the average 2.6% fatal for rural 2 lane highways in BC.

Collisions 2001 - 2010	265
Length (km)	32.8
Average AADT 2001-2010	7,692
Years	5
Exposure (mvk)	461
Observed Rate (coll/vk)	0.58
Provincial Avg. Rate (coll/mvk)	0.61
Critical Rate (coll/mvk)	0.67
Observed Collision Severity Index	8.17
Provincial Avg. Index	6.24

$$\text{Critical Rate} = \text{Prov.Avg.} + 1.645 \times (\text{Prov.Avg/mvk})^{0.5} + 1/(2 \times \text{mvk})$$

$$\text{Severity Index} = \%\text{Fatal} \times 100 + \%\text{Injury} \times 10 + \%\text{PDO} \times 1$$

Exhibit 3-4 shows the 5 year collision histogram. Collision clustering is evident around:

- Highway 4A intersection.
- Hilliers Road
- Whisky Creek
- Rest areas around Cameron Lake and Angel Rock
- Km 18 west of Cathedral Grove Information Center
- East Side of Alberni Summit

The first three clusters reflect the normal collision clustering that happens at higher volume intersections and the higher access density at Whisky Creek. Km 18, about 1 km west of the Cathedral Grove information center is a 60 km/hr curve with large trees immediately adjacent to the highway and is shown in the Google image, Exhibit 3-5. There were 2 fatal collisions here in the last 5 years. Collisions at the information center itself do not appear to be over-represented in spite of the frequent uncontrolled access. Collisions on the east side of Alberni Summit include the Arrowsmith/Loon Lake Main intersection, km 26.6 and the a 50 km/hr curve at the Niagara Culvert. There is no obvious reason for the collisions at km 26.6.

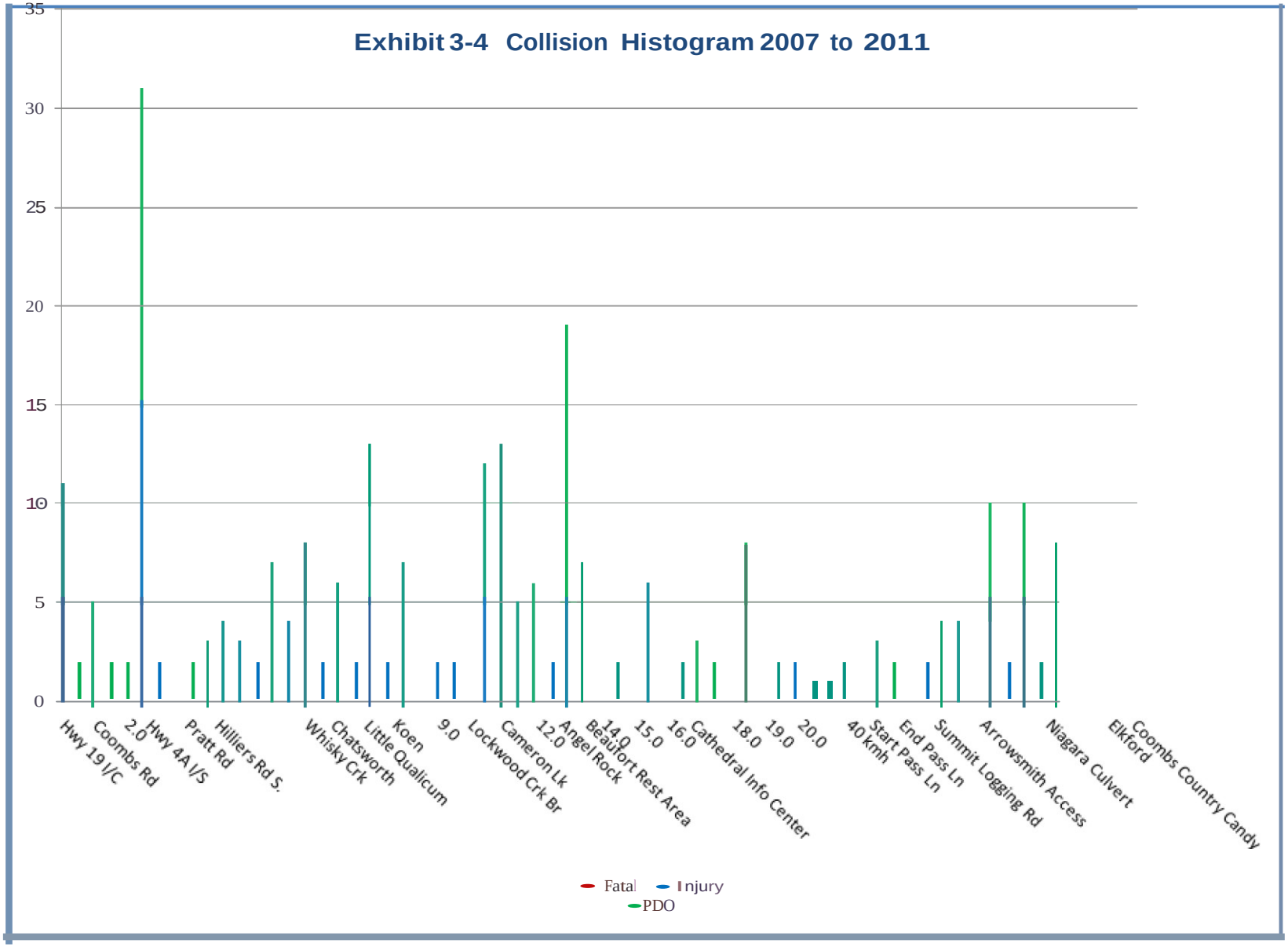
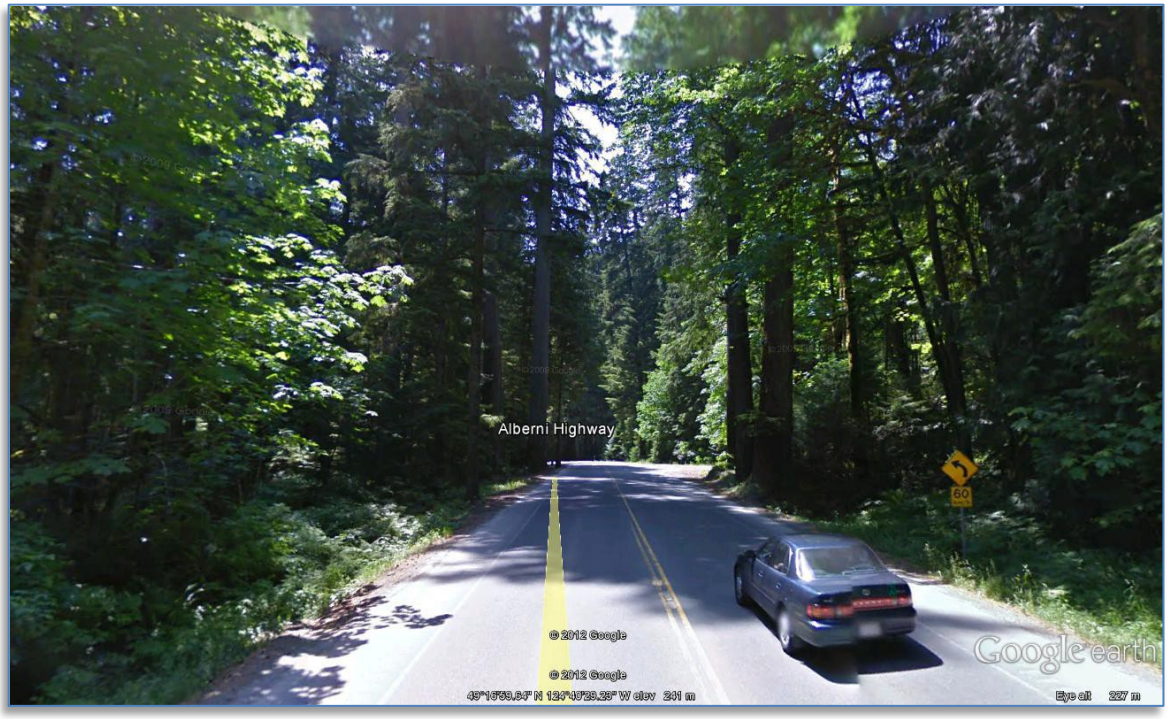


Exhibit 3-4 Collision Histogram 2007 to 2011
35
30
25
20
15
10
5
0
Hwy 19 I/C
Coombs Rd
2.0
Hwy 4A I/S
Pratt Rd
Hilliers Rd S.
Whisky Crk
Chatsworth
Little Qualicum
Koen
9.0
Lockwood Crk Br
Cameron Lk
12.0
Angel Rock
Beaufort Rest Area
14.0
15.0
16.0
Cathedral Info Center
18.0
19.0
20.0
40 kmh
Start Pass Ln
End Pass Ln
Summit Logging Rd
Arrowsmith Access
Niagara Culvert
Elkford
Coombs Country Candy
Fatal
Injury
PDO

Exhibit 3-5 Highway 4 NB at km 18 West of Cathedral Grove Information Center



The collision rates used for analysis are detailed in Exhibit 3-6 and Exhibit 3-7. Exhibit 3-6 presents the rates expressed in collisions per million vehicle kilometers of travel (coll/mvk) on Highway 4, Highway 19 and the proposed connector. The collision rate on the new connector is not likely to be lower than Highway 4 but will likely have lower proportion of fatal collisions. The severity on Highway 4 appears to be relatively high with 3.4% fatal collisions compared to Provincial average of 2.3%.

Exhibit 3-6 Safety Performance

Highway 4 Collision Rate	2007 to 2011			
Segment	2356			
Start LKI	0.00			
Finish LKI	2.62			
Segment	2355.00			
Start LKI	0.00			
Finish LKI	30.20			
Length (km)	32.82			
Service Class	RAU2			
AADT 5 yr Average	7,692			
Years	5			
Exposure (mvk)	461			
Collisions in 10 years	Fat	Inj	PDO	All
Observed Collisions (5 years)	9	112	144	265
Collision Severity	3.4%	42.3%	54.3%	100%
Base Case Collision Rate (coll/mvk)	**0.020**	**0.24**	**0.31**	**0.58**

Highway 19 Collision Rate	2007 to 2011			
Segment	2353, 2354			
Start LKI	0.00			
Finish LKI	14.44			
Length (km)	14.44			
Service Class	RAU4			
AADT 5 yr Average	9,400			
Years	5			
Exposure (mvk)	247.7			
Collisions in 10 years	Fat	Inj	PDO	All
Observed Collisions (5 years)	1	27	49	77
Collision Severity	1.3%	35.1%	63.6%	100%
Base Case Collision Rate (coll/mvk)	**0.004**	**0.11**	**0.20**	**0.31**

Connector Collision Rate	Fat	Inj	PDO	All
Severity	2.31%	40.2%	57.5%	100%
Rate (coll/mvk)	0.014	0.24	0.34	0.59

Exhibit 3-7 presents the aggregate collision rates for the base case and each option taking into account the amount of travel on each route for each option.

The collision rates are not likely to go down on the new connector but the overall number of collisions will decline by 2 to 3 collisions per year due to the reduced amount of travel associated with the shorter connector route.

Exhibit 3-7 Annual Collision Reduction

	Base	Lacey Lake Route
Diverted Traffic (veh/day)		
South Island		333
North Island		934
Mine Traffic		150
Travelled Distance (km)		
South Island	32.8	41.7
North Island	47.3	27.3
Collision Rate (coll/mvk)		
South Island	0.58	0.49
North Island	0.49	0.59
Annual Collision Reduction		
South Island		-0.21
North Island		2.88
Total Annual Reduction		**2.7**

4 Benefit Cost Analysis

4.1 General Approach

The proposed project is evaluated in a Benefit Cost Framework. The Costs and benefits are characterized as the Financial and Customer Service accounts and are evaluated as a life cycle cost:

- Financial – engineering, construction, maintenance and rehabilitation
- Customer Service – time, accident and vehicle operating cost savings

The analysis also touches on the broader economic impacts of the project beyond just the direct benefits to highway users.

There has not been any detailed social or environmental assessment at this point.

The financial and customer service accounts are quantified in dollar terms. Incremental benefits and costs are calculated over a 25 year planning period and discounted at 6% to calculate the benefit cost ratio and net present value.

Costs include design and construction, plus incremental maintenance and rehabilitation costs plus a recoverable residual value at the end of the planning period.

4.1 Financial Account

Exhibit 4-1 presents the preliminary estimates used for the analysis.

Exhibit 4-1 Project Costs Used for Analysis

	Lacey Lake Route ($Millions)
Property	$1.5
Engineering	$7.5
Construction	$41.0
Total	$50.0

The analysis also assumes there will be some incremental maintenance at $5,000/Ln-km and resurfacing costs at $75,000/Ln-km associated with the additional lanes.

4.2 Customer Service Account

Safety – The safety performance assessed in Section 3.1 suggests collision reduction of about 3 collisions per year due to the shorter travelled distance for diverting traffic. Collision severity is also lower with fewer fatal collisions.

Mobility – The new route reduces travelled distance for north Island traffic by over 20 km saving 17 to 19 minutes depending on the option and traffic conditions. There is no saving to South Island Traffic.

Vehicle Operating Costs – In any project, VOC is a large cost but there is generally very little net difference between the base and proposed case, unless there is a reduction in travelled distance. In this case, the 20 km reduction for North Island traffic returns savings of about $2.2 million/year on vehicle operating costs and a 2,800 tonnes/yr reduction in greenhouse gases (Exhibit 4-2). South Island traffic travels further, with and increase in VOC of $0.4 million/yr.

Exhibit 4-2 Greenhouse Gas Reduction

	Lacey Lake Route
Carbon Dioxide	2214
Nitrogen Oxide	143
Hydrocarbons	110
Annual Saving (tonnes/yr)	2467

4.3 Economic Account

Exhibit 4-3 identifies the multiplier effects on economic output and employment[3]. The impact is evaluated as a multiplier of the investment cost.

Exhibit 4-3 Economic Impact and Multipliers

Economic Impacts ($Million)	Coefficient	Lacey Lake Route
Direct	1.00	$50
Indirect	0.50	$25
Induced	0.40	$20
Open-Model Output Multiplier	1.9	$95
Employment Impacts (Person Years)	Coefficient (PY/$M)	Lacey Lake Route
Direct	8.48	424
Indirect	4.03	201
Induced	3.87	193
Open-Model Output Multiplier	16.38	818

In addition to the standard multiplier effects, research shows there is a positive correlation between infrastructure spending and economic output and productivity of a region[4]. Some of the effects are transfers of activity from other regions, while others are true efficiency gains. Impacts vary widely depending on the context but are strongest in the case of under-developed highway networks.

In this case, the connector can have broader impacts, potentially leveraging larger economic benefits for the region. In particular, the connector supports both Port Alberni and surrounding resource interests in the context of Pacific Rim trade. In global supply chains, small changes in logistics costs associated with reduced transit time or improved reliability can trigger much larger changes in routing and origins of trade. In this case, more economic and reliable access this deep water port contributes to the viability of both the port and regionsl resource interests as an international trade route to Asia.

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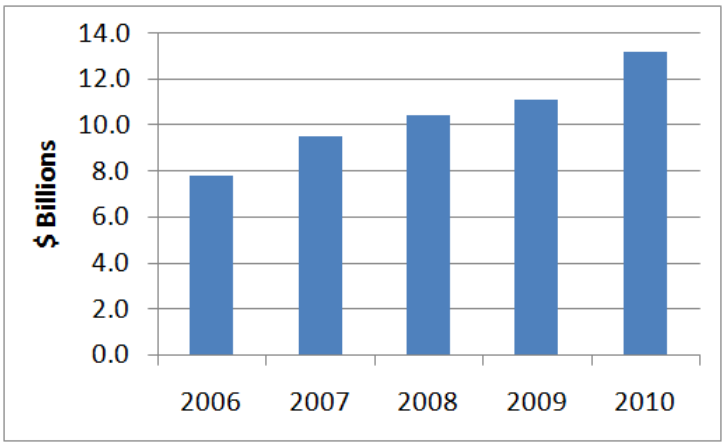
[3] *Source: Gary Horne,"[1999] Provincial Economic Multipliers and How to Use Them", BC STATS, Ministry of Management Services, April 2003, 1999 BCIOM Industry -Medium Aggregation- 75% Recycling Rate (Appendix B, Industry = Construction)*

[4] Shatz, H.J., et al, "Highway Infrastructure and the Economy – Implications for Federal Policy", Rand Corporation, 2011

British Columbia Ports in general, offer a competitive advantage for international trade as they lie on the shortest great circle route between Pacific Rim destinations and Canada and Midwest US origins.

Exhibit 4-4 Exports to China

Exhibit 4-4 shows the increasing value of Canadian exports to China. With over $13 billion in exports, this generates in the order of $33 billion in economic activity in BC and Canada.



Source: Statistics Canada, Canadian Trade by Industry (NAICS Codes)

Increased natural resource development, including mining and forestry, place additional demands from industrial traffic on the existing transportation infrastructure. Supporting this demand and ensuring roads remain suitable for all users, requires additional investments in affected road networks to maintain a safe, reliable system.

4.4 Benefit Cost Analysis

Exhibit 4-5 summarizes the results using dollar values for the Financial, Customer Service and Economic Accounts only. The environmental and Social Accounts have not yet been evaluated.

The dollar values are the present value of stream of benefits or costs discounted at 6% per annum over a 25 year analysis period to a present value.

The Economic Account presents the multiplier effect in the economy of direct benefits generated by this project.

The benefit cost ratio is the ratio of direct benefits to highway users and direct costs to infrastructure providers. In this case, benefits are driven primarily by the reduction travelled distance for North Island users. A reduction in travelled distance of about 20 km yields large benefits to diverted traffic, saving time, collisions and vehicle operating costs.

With costs of $42 million and Benefits of $59 million, the Lacey Lake Route returns a B/C = 1.4. The largest benefits stem from the reduction in vehicle operating costs, followed by travel time and safety benefits.

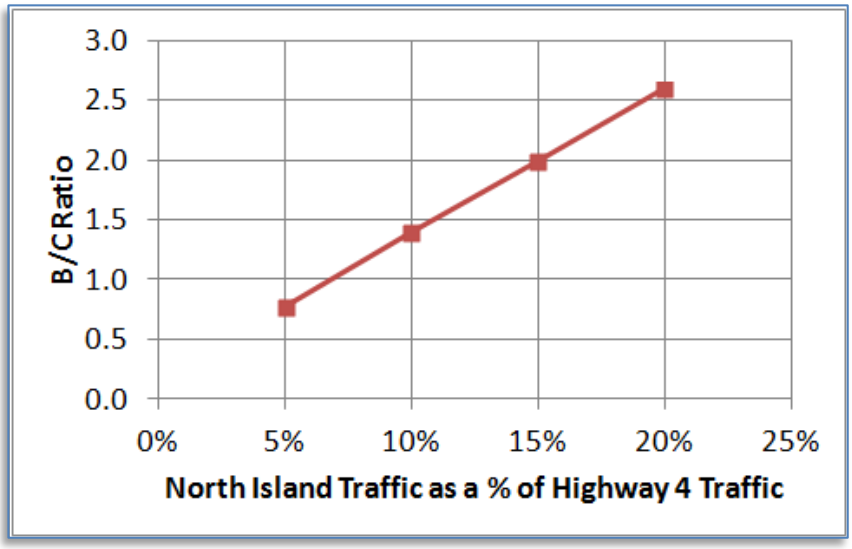
There is a large reduction of about 2,500 tonnes/year in GHG. This stems from the reduced fuel consumption associated with the shorter travelled distance, particularly for heavy trucks.

Exhibit 4-5 MAE – Alberni Connector

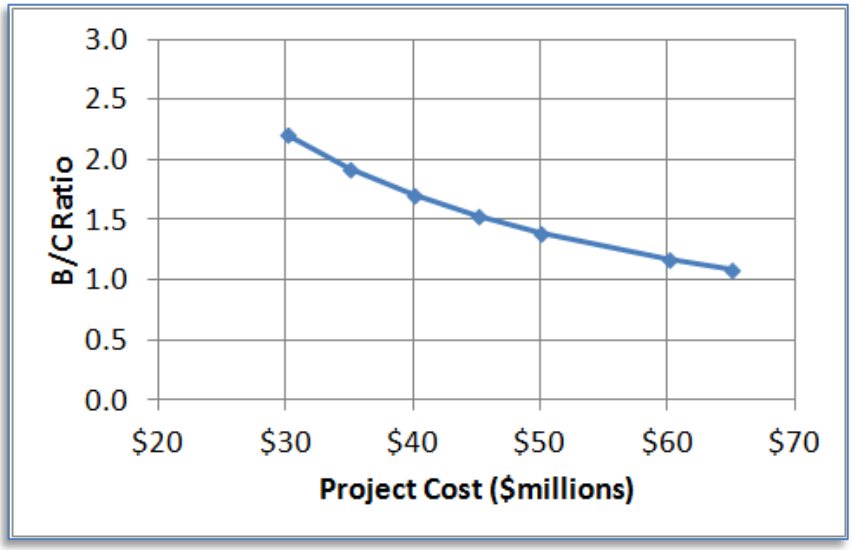
		Lacey Lake Route
FINANCIAL		2012 Millions $
	Discounted Cost	$47.1
+	Maintenance & Rehab	$3.32
-	Salvage	$8.1
=	Present Value (6%, 25 yrs)	$42.4
CUSTOMER SERVICE		2012 Millions $
	Time Savings	$21.7
	Accident Savings	$12.2
	Vehicle Operating Cost Savings	$25.1
	Incident Delay	$2.4
	Present Value	$59.0
	Benefit/Cost Ratio	1.4
	NPV	$16.6
	GHG Reduction (tonnes/yr)	2467
ECONOMIC		
	Multiplier Effects ($millions)	$95
	Employment (PY's)	
	Direct	424
	Indirect and induced	395
	Total	818

5 Sensitivity Analysis

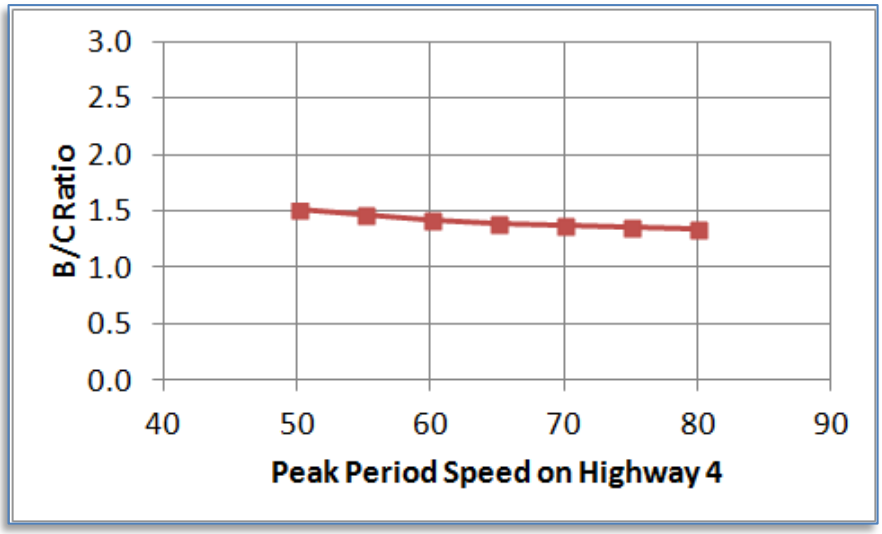
Sensitivity analysis shows the impact of project assumptions on the results of the analysis. The analysis is sensitive to the North Island traffic diversion from Highway 4, the cost of the project and the average speed during congested conditions on Highway 4.



The baseline analysis assumes 10% of traffic on Highway 4 originates from North Island. Benefits increase linearly with diversion.



Increasing project cost reduces the potential benefit cost ratio.



The assumed speed on Highway 4 does not greatly impact the results. The main factor is shorter travel distance, not speed.

6 Advancement of Federal and Provincial Transportation Strategies

Advancement of Federal and Provincial policies or programs may contribute to the viability of projects. Federal Policies and Programs include:

Federal Strategy	Alberni Connector
• Canada Strategic Infrastructure Plan - $4.3 billion for "large-scale infrastructure projects in support of sustaining the economic growth and enhancing the quality of life for Canadians".	• Highway improvements including Highway 2 are eligible for cost sharing under this fund. This project specifically supports development in the oil and gas industry.
• Asia Pacific Gateway Initiative	• Links the potential mine resources north of Horne Lake to the deep water port of Port Alberni.

Linkages to Provincial objectives include:

Provincial Strategy	Alberni Connector
• Mobility	• Reduces travelled distance by 20 km
• Safety	• Saves 3 collisions per year
• BC Jobs Plan	• The investment generates 319 person years of direct employment and 296 PY's of indirect and induced employment
• Asia Pacific Gateway	• Links the potential mine resources north of Horne Lake to the deep water port of Port Alberni.

Appendix A

Highway Closure Data

Duration (hrs)	Date & Time	Type	Cause	Location
		6 June, 2005 to 14 March, 2007		
0.64	Nov/14/2006 17:35	Planned	Maintenance	Cathedral Grove
3.63	Nov/14/2006 18:57	Planned	Maintenance	Cathedral Grove
8.37	Jun/20/2005 20:48	Incident	Collision	Ramps to and from Route 19, West of Parksville
6.8	Nov/29/2005 10:05	Incident	Collision	Junction with Highway 4A
3.32	Feb/21/2006 6:19	Incident	Collision	Junction with Highway 19
0	Apr/13/2006 17:50	Incident	Livestock on Road	Cathedral Grove
2.5	Nov/4/2006 20:27	Incident	Collision	Cathedral Grove
7.55	Nov/15/2006 17:59	Incident	Debris on Road	Junction with Highway 4A
8.9	Dec/12/2006 0:34	Incident	Heavy Rain and Wind	Port Alberni
8.34	Dec/12/2006 0:43	Incident	Tree on Road	Port Alberni
3.05	Feb/28/2007 18:27	Incident	Collision	Cathedral Grove
0.33	Jul/14/2006 22:33	Incident	Collision	Coombs
		September 2007 to August 2012		
1.22	Dec 12 2008 11:04	Planned	Vehicle Recovery	Port Alberni
0.22	Dec 04 2007 01:09	Incident	Tree on Road	Port Alberni
1.52	Dec 22 2007 08:53	Road Condition	Winter Driving Conditions	Sutton Pass Summit
7.92	Jun 07 2008 05:09	Incident	Collision	Port Alberni
2.10	Dec 29 2008 04:29	Incident	Collision	Junction with Highway 19
5.17	Dec 29 2008 18:04	Incident	Tree on Road	Cathedral Grove
1.57	Nov 16 2009 07:19	Incident	Hydro Lines Down	Port Alberni
1.35	Feb 17 2011 15:45	Incident	Vehicle Incident	Port Alberni
3.15	Feb 21 2011 20:04	Incident	Vehicle Incident	Junction with Highway 4A
1.08	Feb 17 2011 14:23	Incident	Vehicle Incident	Sutton Pass Summit
0.77	Jan 13 2011 07:55	Road Condition	Traffic Congestion	Port Alberni
3.27	Jan 13 2011 07:55	Incident	Vehicle Incident	Junction with 4A

Appendix B

ALBERNI CLAYOQUOT
TRANSPORTATION COMMITTEE

TERMS OF REFERENCE

Purpose:	To work cooperatively with key partners to advance new highway construction, transportation upgrades and highway maintenance to benefit access to and within the Alberni Valley
Membership:	Port Alberni Port Authority, Alberni-Clayoquot Regional District, City of Port Alberni, Alberni Valley Chamber of Commerce, Port Alberni Labour Council, MLA, MP
Observers:	Hupacasath First Nation, Tseshaht First Nation,
Ex Officio Members:	Western Forest Products, Catalyst Paper, Island Timberlands and Ministry of Transportation and Infrastructure
Co-Chairs:	Darren DeLuca, Port Alberni Port Authority Jack McLeman, Alberni-Clayoquot Regional District
Meetings:	At times and places determined by the Co-Chairs
Scope:	Primary purpose: • A new Alberni Valley to Highway 19 connector highway • A new ring road from Highway 4 to Ship Creek Road Other interests including: • Maintenance and upgrades to the existing Highway 4 corridor from Highway 19 to Port Alberni • Development of the Harbour Road industrial road
Resources:	Agenda's, minutes, venue and administrative support provided by the ACRD, meetings to be attended by the CAO/CEO or designate of each organization and the City's Economic Development Manager.
Funding:	Port Alberni Port Authority/ Alberni Clayoquot Regional District - $7,500 each in 2013