



**Benefit Cost Analysis
Proposed Highway 103 -
St. Margaret's Bay
Connector Road Options**

**Part B
Socioeconomic Analysis**

Presented To:

Nova Scotia Department of Transportation
and Infrastructure Renewal

May 2011

Project No. D10637

**Benefit Cost Analysis of
Proposed Highway 103 St. Margaret's Bay
Connector Road Options**

Socioeconomic Components

Final Report

Presented to:

Nova Scotia Department of Transportation and Infrastructure Renewal
Highway Engineering Services

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1. INTRODUCTION

This report relates to analysis carried out on assessing the socio-economic components of the proposed Nova Scotia Department of Infrastructure Renewal project for the twinning of Highway 103, and construction of a new interchange with consideration for a connector through to St. Margaret's Bay Road. This analysis includes research on understanding the characteristics of the existing community within the study area. This has involved analysis of the population, employment, and economic activity and tourism recreational activities.

The analysis also carried out consultation to gather information on qualitative components relating to different sectors of the community. This involved consultation with stakeholders and randomly selected businesses and residents within the study area. Further, an Open House was held in March 2011 where residents had the opportunity to provide further input. Comments obtained have been incorporated into this report. The report concludes with a financial analysis of the project and different connector options with a final summary on the pros and cons of each of the options.

2. POPULATION, EMPLOYMENT AND ECONOMIC ACTIVITY

In order to evaluate the socioeconomic impact of the St. Margaret's Bay Interchange and Connector Project, a profile of the population, employment and economic activity has been developed for the study area. Generally, data from the 2006 Statistics Canada Census has been used to develop the profile. Data is presented for the St. Margaret's Bay region, the Census Metropolitan Area (CMA) of Halifax, in which the study area is located, as well as for the province of Nova Scotia.

Data from six dissemination areas have been used to achieve the profile of the study area. Table 2.1 presents the dissemination area reference numbers as well as their geographical reference in the study area. Dissemination Area Reference Maps are presented in Appendix A.

Table 2.1 Geographical Reference of the Dissemination Areas in the Study Area

Dissemination Area (DA)	Geographic Zone in the Study Area ¹
090669	St. Margaret's Bay
090672	Tantallon
090674	Boutilier's Point East
090675	Boutilier's Point South
090676	Boutilier's Point West
090677	Hubbards Sector
090678	Highway 103 North

¹ Non-official reference: DA territories do not correspond to the locality territories

2.1 Population

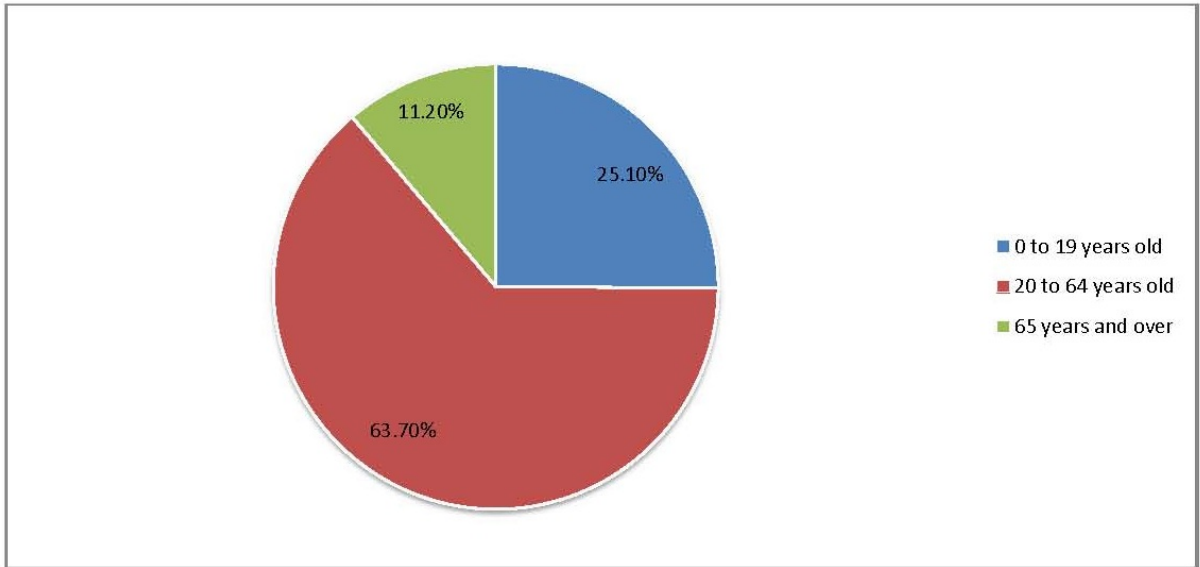
In 2006, the population of the study area was 5,205, which is approximately 1.4% of the CMA of Halifax. The study area has a younger population than the CMA of Halifax and the province of Nova Scotia, with a population between 0 and 19 years old representing 25.1% of the total population compared to 22.7% and 22.8% respectively (table 2.2).

Table 2.2 Population in Study Area, 2006

Population	Study Area	%	Halifax (CMA)	%	Nova Scotia	%
0 to 19 years old	1,305	25.1%	84,570	22.7%	207,870	22.8%
20 to 64 years old	3,315	63.7%	243,325	65.3%	567,370	62.1%
65 years and over	585	11.2%	44,965	12.1%	138,210	15.1%
Total	5,205	100.0%	372,860	100.0%	913,450	100.0%

Source: Statistics Canada, 2006 Census of Canada

Population in Study Area, 2006



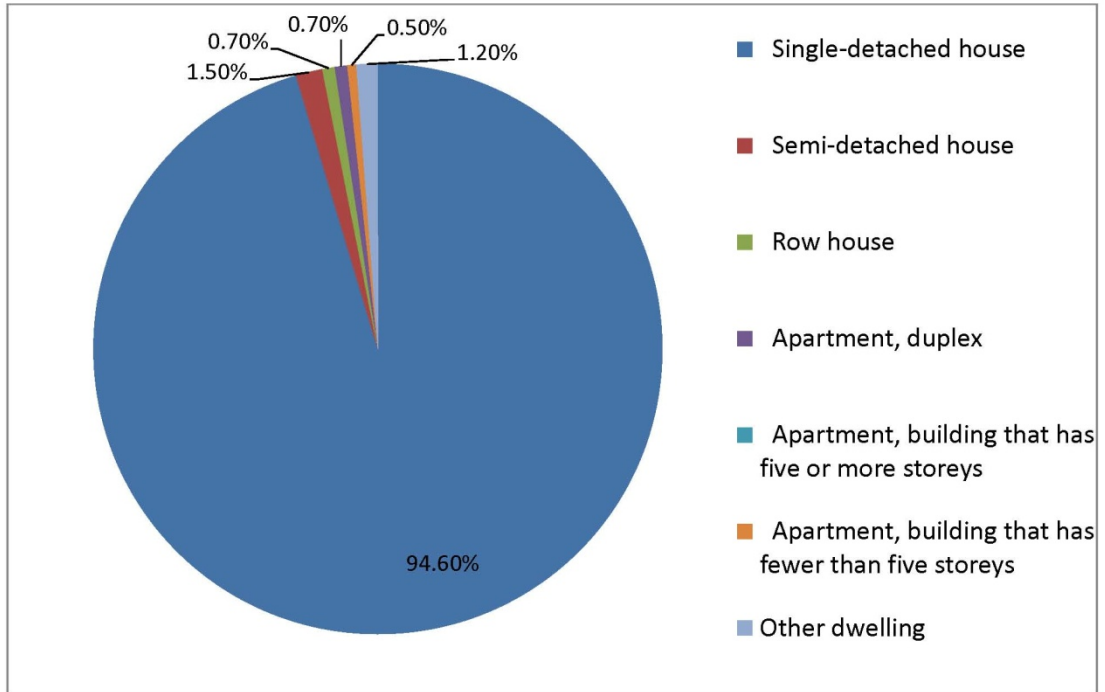
Furthermore, 2,050 private dwellings are located in the study area, of which 94.6% are single-detached house. This is an important difference with the CMA of Halifax and the province of Nova Scotia, for which single-detached houses represent 51.6% and 67.3% respectively. The difference is mainly due to the very small proportion of apartment buildings in the study area. In addition, 88.3% of the occupied private dwellings in the study area are owned, compared to 64.0% and 72.3% respectively in the CMA of Halifax and in the province of Nova Scotia (table 2.3).

Table 2.3 Private Dwellings Statistics in the Study Area, 2006

Private Dwellings Statistics	Study Area	%	Halifax (CMA) %	Nova Scotia %
<i>Number of occupied private dwellings by structural type of dwelling</i>	2,050	100.0%	100.0%	100.0%
Single-detached house	1,940	94.6%	51.6%	67.3%
Semi-detached house	30	1.5%	6.9%	5.0%
Row house	15	0.7%	3.5%	2.1%
Apartment, duplex	15	0.7%	4.0%	3.1%
Apartment, building that has five or more storeys	0	0.0%	22.1%	14.5%
Apartment, building that has fewer than five storeys	10	0.5%	4.0%	4.0%
Other dwelling	25	1.2%	2.4%	3.9%
<i>Number of occupied private dwellings by housing tenure</i>				
Owned		88.3%	64.0%	72.3%
Rented		11.4%	36.0%	27.7%

Source: Statistics Canada, 2006 Census of Canada

Private Dwellings Statistics in the Study Area, 2006



Moreover, the average number of persons in private households is 2.5 in the study area, which is similar to the CMA of Halifax and the province of Nova Scotia (table 2.4).

Table 2.4 Households Statistics in the Study Area, 2006

Household Statistics	Study Area	Halifax (CMA)	Nova Scotia
Average number of persons in private households	2.5	2.4	2.4

Source: Statistics Canada, 2006 Census of Canada

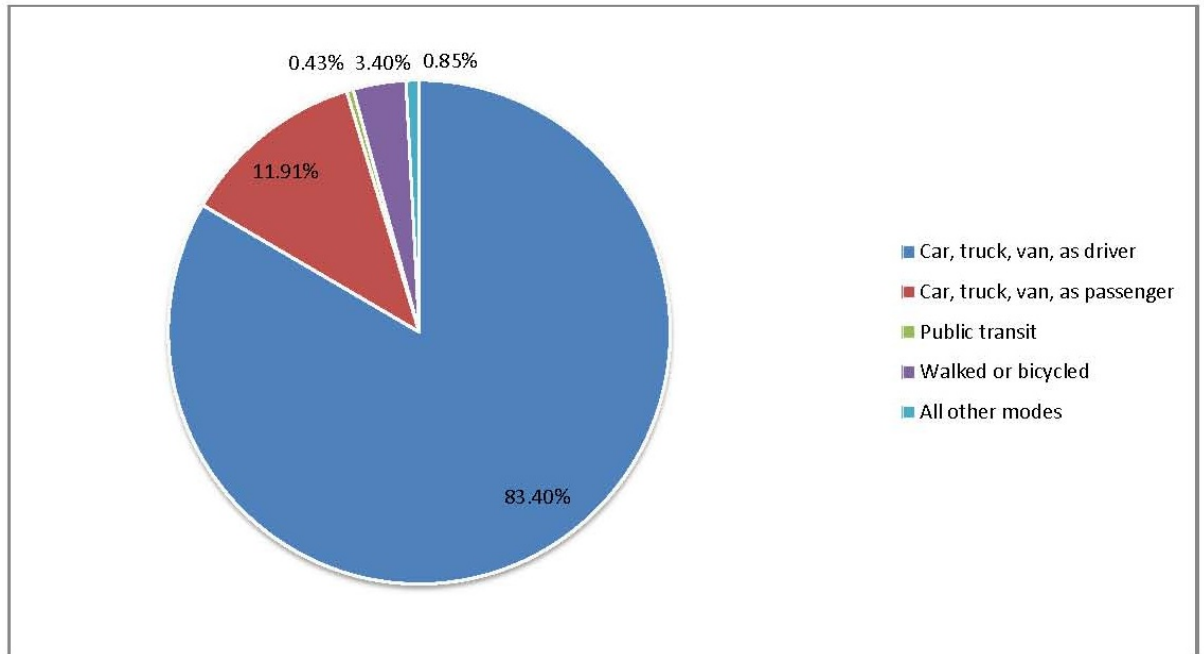
The preferred mode of transportation of employed labor in the study area is private passenger vehicle. More than 95% of the population uses a car, as a driver or a passenger, to travel to their job. This is an important difference with the CMA of Halifax, which is due to the importance of public transit and people walking or bicycling to their job (table 2.5). This situation may help to understand the need for the interchange and connector project in the study area, as the new infrastructures could facilitate transportation for employees going to work.

Table 2.5 Mode of Transportation of Employed Labor with Usual Place of Work or no Fixed Workplace Address

Mode of transportation	Study Area	%	Halifax (CMA) %	Nova Scotia %
Car, truck, van, as driver	1,960	83.4%	65.1%	72.8%
Car, truck, van, as passenger	280	11.9%	10.6%	10.8%
Public transit	10	0.4%	11.9%	5.9%
Walked or bicycled	80	3.4%	11.1%	8.8%
All other modes	20	0.9%	1.3%	1.6%
Total - employed labour with usual place of work or no fixed workplace address	2,350	100.0%	100.0%	100.0%

Source: Statistics Canada, 2006 Census of Canada

Mode of Transportation of Employed Labor with Usual Place of Work or no Fixed Workplace Address



2.2. Employment

The employment is dynamic in the study area. The unemployment rate is generally 0.5 and 3.3 percentage points respectively lower in the study area than in the CMA of Halifax and the province of Nova Scotia. However, the participation and employment rates are slightly lower than in the CMA of Halifax (table 2.6).

Table 2.6 Labor Force Statistics in the Study Area, 2006

Labor Force Statistics	Study Area	Halifax (CMA)	Nova Scotia
Total population 15 years and over	4,200	309,270	756,595
Participation rate (%)	66.9	68.9	62.9
Employment rate (%)	62.8	64.5	57.2
Unemployment rate (%)	5.8	6.3	9.1

Source: Statistics Canada, 2006 Census of Canada

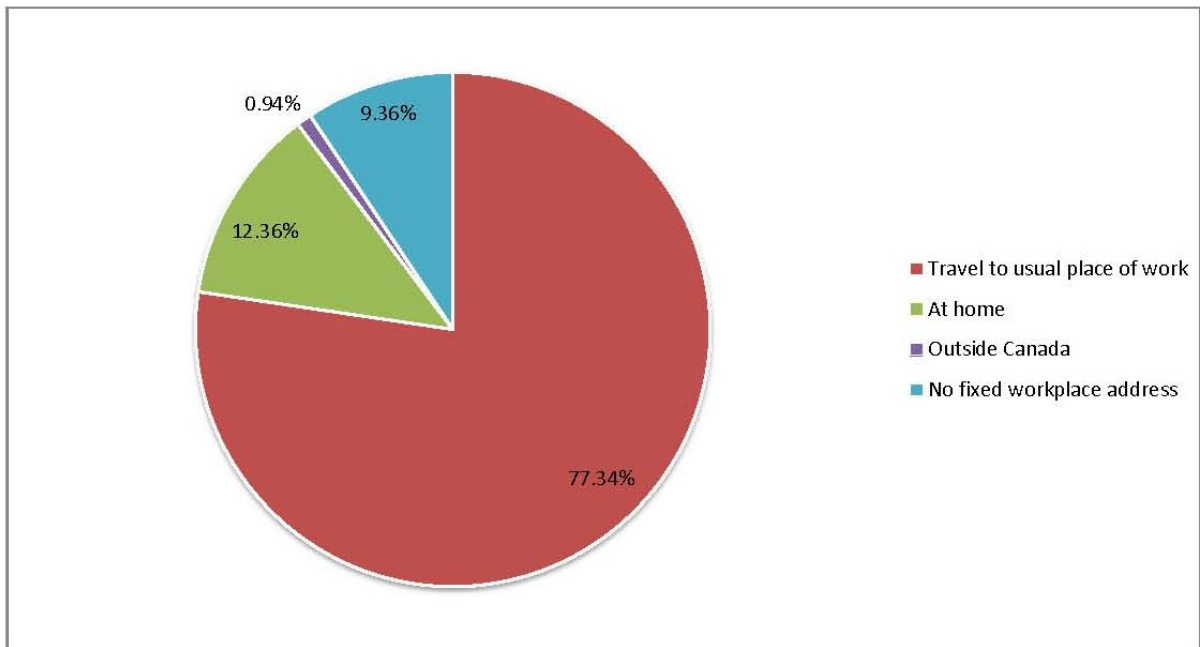
Moreover, about three-quarters of the study area population needing to commute to their job work in their census subdivision of residence. More than 10% of the population study area works from home, which is about twice the percentage observed in the CMA of Halifax and the province of Nova Scotia (table 2.7). Therefore, there is generally less commuting within the study area than in the rest of the province.

Table 2.7 Usual Place of Work of Employed Labor Force in the Study Area, 2006

Employed labor force 15 years old and over	Study Area	%	Halifax (CMA) %	Nova Scotia %
Usual place of work	2,065	77.3%	83.7%	81.9%
In census subdivision of residence	1,975	95.6%	97.4%	72.4%
In different census subdivision	75	3.6%	2.6%	27.6%
At home	330	12.4%	6.1%	6.4%
Outside Canada	25	0.9%	0.5%	0.4%
No fixed workplace address	250	9.4%	9.7%	11.3%
Total - employed labour force 15 years old and over	2,670	100.0%	100.0%	100.0%

Source: Statistics Canada, 2006 Census of Canada

Usual Place of Work of Employed Labor Force in the Study Area, 2006



2.3 Economic Activity

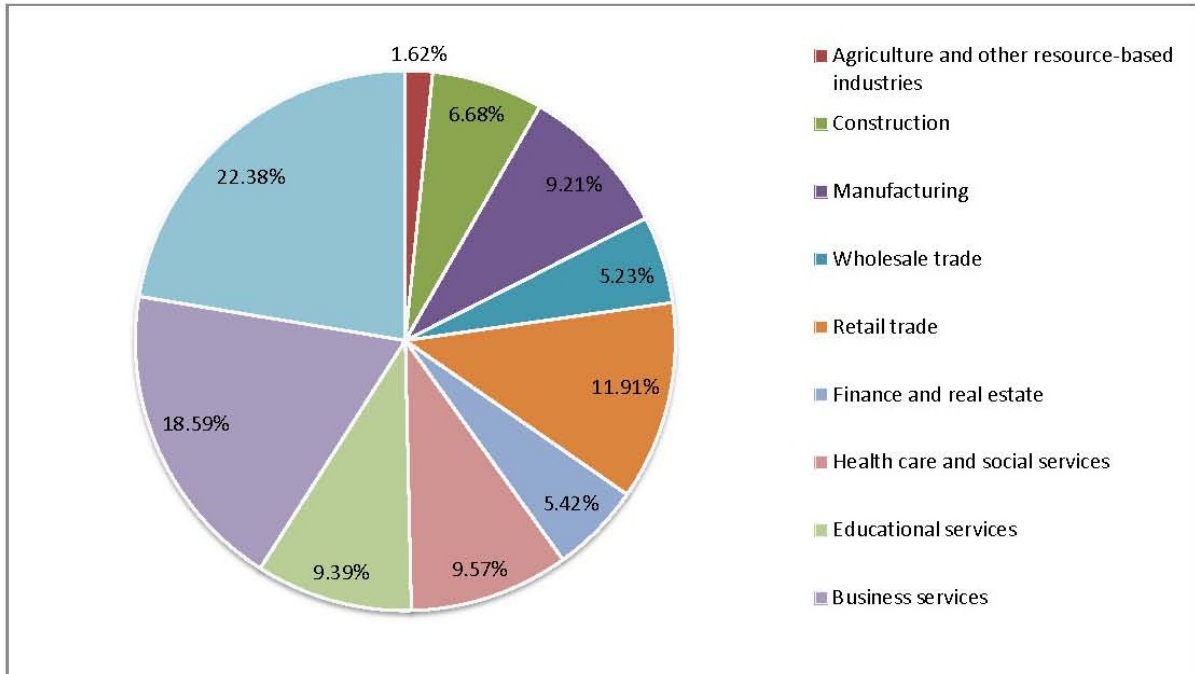
The economic activity in the study area is characterized by a high proportion of employees in the business services, retail trade and manufacturing sectors. Its manufacturing sector (9.2%) is particularly strong compared to the CMA of Halifax (5.2%) (table 2.8).

Table 2.8 Employment by Industries

Economic Sectors	Study Area	%	Halifax (CMA) %	Nova Scotia %
Agriculture and other resource-based industries	45	1.6%	1.7%	5.8%
Construction	185	6.7%	5.5%	6.4%
Manufacturing	255	9.2%	5.2%	8.9%
Wholesale trade	145	5.2%	4.1%	3.5%
Retail trade	330	11.9%	11.9%	12.5%
Finance and real estate	150	5.4%	6.4%	4.6%
Health care and social services	265	9.6%	11.7%	11.7%
Educational services	260	9.4%	7.8%	7.4%
Business services	515	18.6%	20.7%	17.3%
Other services	620	22.4%	25.0%	21.9%
Total	2,770	100.0%	100.0%	100.0%

Source: Statistics Canada, 2006 Census of Canada

Employment by Industries



Furthermore, the St. Margaret's Bay Chamber of Commerce maintains a listing of the main businesses active in the region¹. According to the listing, there are about 66 businesses active in the study area. The services, health and medical, and professional and consulting sectors have the greatest number of establishments in the study area (table 2.9). The complete listing is presented in Appendix B.

Table 2.9 Activity sectors of the main businesses in the study area

Accommodation (2)	Manufacturing (1)
Automotive (3)	Marine (5)
Computers and Internet (2)	Professional and Consulting (7)
Construction (3)	Real Estate (1)
Food service (4)	Restaurant (3)
Health and Medical (8)	Retail (7)
Home & Garden (3)	Services (13)
Investment and Financial (4)	

Note: The number of businesses by sector is indicated in parenthesis

¹St. Margaret's Bay Chamber of Commerce

http://www.baychamber.ca/home/component/option,com_frontpage/Itemid,1/

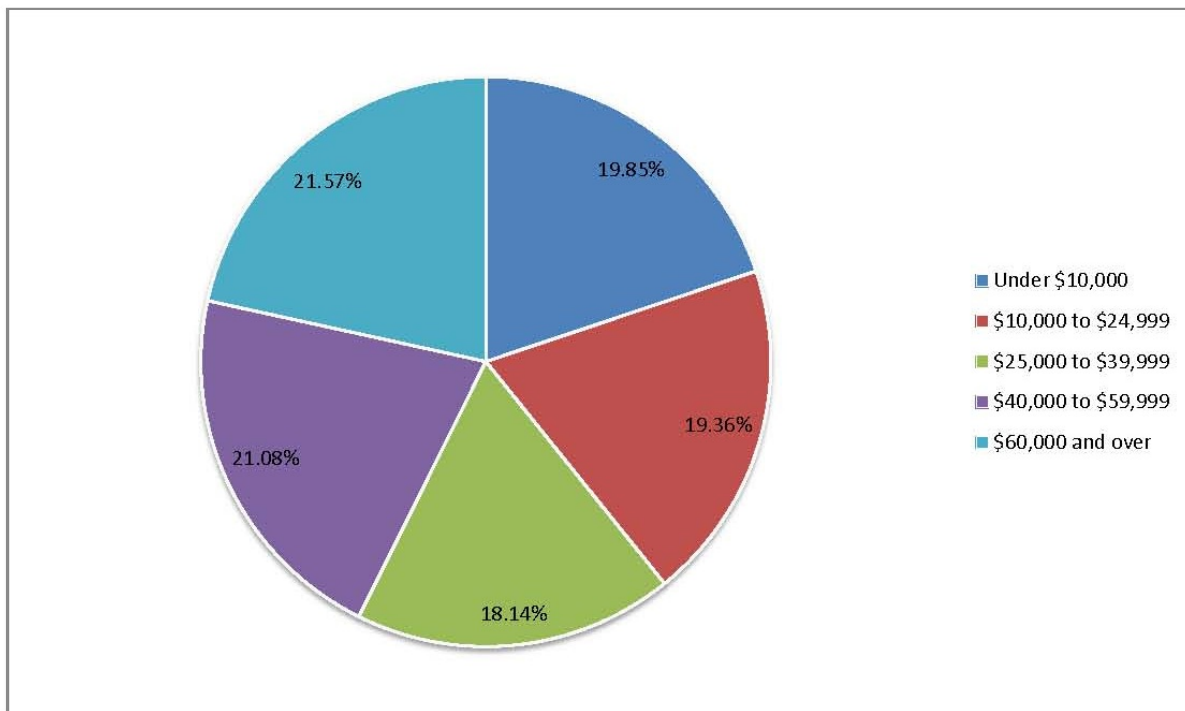
Finally, the study area population's median income is higher than in the CMA of Halifax and the province of Nova Scotia, by approximately 26% and 50% respectively (table 2.10).

Table 2.10 Total Income of the Population in the Study Area, 2005

Total income in 2005 of population 15 years and over	Study Area	%	Halifax (CMA)	Nova Scotia
Under \$10,000	810	19.9%	-	-
\$10,000 to \$24,999	790	19.4%	-	-
\$25,000 to \$39,999	740	18.1%	-	-
\$40,000 to \$59,999	860	21.1%	-	-
\$60,000 and over	880	21.6%	-	-
Median income \$	34,198		27,193	22,815

Source: Statistics Canada, 2006 Census of Canada

Total Income of the population in the Study Area (2005) Population 15 Years and Over



3. TOURISM AND RECREATIONAL ACTIVITIES

3.1 Provincial and Regional Context

Nova Scotia estimated visitation totalled 2.12 million visitors in 2010, which is comparable to the 2000-2008 periods (See Table 3.1 on the following page). The visitation numbers by origin show that visitors from Canada and overseas have stayed relatively at the same level, compared to visitors from the U.S., down sharply for the same period, specifically from 320,000 in 2000 to 185,000 in 2009. Thus, the impact of the tourism industry on the Nova Scotia economy is important. In 2007, it generated \$1.33 billion of revenues to the provincial economy, including \$845 million from non-resident visitors, as well as 32,700 direct and indirect jobs (Tourism, Culture and Heritage, 2011).

These revenues generate economic benefits in all seven touristic regions of the province. The South Shore region, which includes the study area, received 8% of revenues generated by tourism, Halifax/Dartmouth being the most important region in terms of revenues generated (49%). As shown in table 3.2, different sectors of the economy are benefitting from the spending (Tourism, Culture and Heritage, 2007).

Table 3.2 Non-Resident Expenditures by Type in Nova Scotia, 2004

SECTOR	EXPENDITURES
Fixed roof accommodation	30%
Restaurant	26%
Shopping	12%
Vehicle/Fuel	10%
Taxi and Vehicle Rental	8%
Groceries and Liquor	7%
Entertainment	5%
Campgrounds	1%
Other	1%

Source: Tourism, Culture and Heritage, 2007.

Table 3.1 Estimated Total Visitation in Nova Scotia by Origin, 2001-2010.

MARKETS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Atlantic Canada	1,203,600	1,205,700	1,164,400	1,201,600	1,155,900	1,164,100	1,149,500	1,138,100	1,154,200	1,189,300
Quebec	96,000	113,800	102,500	105,700	91,500	97,600	99,700	95,600	92,900	96,200
Ontario	393,900	372,000	410,400	408,400	408,400	410,600	444,800	421,900	441,700	451,100
Western Canada	93,000	107,700	115,900	124,400	115,900	124,500	149,000	159,800	150,200	141,300
CANADA	1,786,500	1,799,100	1,793,300	1,840,200	1,771,700	1,796,800	1,843,100	1,815,400	1,839,000	1,877,800
New England (inc Maine)	115,500	114,400	100,000	100,500	80,800	74,700	73,200	61,500	63,900	60,900
Middle Atlantic	55,000	63,700	50,900	51,100	49,400	47,000	43,900	35,400	33,900	32,200
East North Central	27,900	27,600	24,900	27,300	24,200	22,700	19,100	17,700	16,000	16,000
West North Central	11,700	12,000	9,500	10,700	10,100	7,800	6,800	7,000	5,600	6,100
South Atlantic	46,000	52,700	49,800	54,900	49,700	43,800	42,200	34,700	33,700	33,900
East South Central	5,100	7,000	6,400	7,600	7,200	5,500	4,900	4,200	3,800	3,000
West South Central	10,100	16,400	13,600	19,000	13,900	12,100	10,000	8,400	8,400	8,600
Mountain	7,700	10,800	9,600	11,300	11,100	10,200	8,300	7,600	7,200	7,000
Pacific	14,700	16,300	16,300	18,700	17,200	18,300	15,900	14,500	12,300	13,600
UNITED STATES	293,800	321,200	281,200	301,200	263,600	242,200	224,300	191,200	184,700	181,300
United Kingdom	19,600	19,000	22,600	19,600	27,100	23,300	25,300	24,100	20,000	19,000
Germany	14,400	11,100	13,900	15,100	17,300	17,200	10,300	10,300	10,300	11,400
Other Europe	17,400	14,900	13,800	15,200	16,600	16,900	16,200	18,000	17,400	14,900
Other Overseas	11,800	15,000	18,600	16,800	17,300	19,000	20,500	20,800	21,200	18,700
OVERSEAS	63,300	60,100	68,900	66,700	78,200	76,400	72,300	73,200	68,900	64,000
TOTAL VISITATION	2,143,700	2,180,400	2,143,400	2,208,100	2,113,500	2,115,400	2,139,600	2,079,800	2,092,500	2,123,100

Source: Tourism, Culture and Heritage, 2011.

Data available for the 2006-2010 periods (Table 3.3) indicate that the accommodation activity, a key tourism indicator, was maintained around 2.56 million room-nights sold and 48% occupancy rate. However, the South Shore touristic region accommodation activity faced a constant decline over the same period. Indeed, room-nights sold totalled 194,200 (41%) in 2006 compared to 172,000 (37%) in 2010 (Tourism, Culture and Heritage, 2010).

Table 3.3 Nova Scotia Fixed-Roof Accommodation Demand, 2006-2010

REGION	2006		2007		2008		2009		2010	
	Room-nights Sold	Occupancy Rate%	Room-nights Sold	Occupancy Rate%	Room-nights Sold	Occupancy Rate%	Room-nights Sold	Occupancy Rate%	Room-nights Sold	Occupancy Rate%
Fundy Shore & Annapolis Valley	350,300	37	351,300	38	340,000	35	339,000	35	338,000	36
South Shore	194,200	41	187,300	41	189,000	41	174,000	37	172,000	37
Halifax/Dartmouth	1,324,800	61	1,352,300	60	1,400,400	62	1,332,000	58	1,352,000	59
Eastern Shore	22,200	30	22,400	33	23,700	34	21,000	30	22,000	29
Cape Breton	396,800	43	412,400	45	396,600	42	398,000	44	395,000	44
Northumberland Shore	182,600	42	199,400	44	197,500	44	188,000	39	190,000	41
Yamouth & Acadian Shore	81,400	40	64,800	33	65,700	34	65,000	35	60,000	32
Province	2,552,400	49	2,590,500	49	2,612,800	49	2,517,000	47	2,528,000	47

Source: Tourism, Culture and Heritage, 2010.

3.2 Local Context

3.2.1 Consultations

The local context description was completed according to the interviews carried out with the project stakeholders, namely (alphabetically):

- All Terrain Vehicle Association;
- Bowater Business: owners/operators;
- Randomly selected five (5) business in Study Area;
- Halifax Regional Municipality (HRM);
- HRM Emergency Health Services
- HRM Fire Department;
- Hubbards and Area Business Association;
- St. Margaret's Bay Chamber of Commerce;
- St. Margaret's Bay Rail to Trails Association;
- St. Margaret's Bay Stewardship Association (SMSA).

The questions asked of participants are presented in Appendix C. The general summary of comments made during the consultations is available in Appendix D. The latter also includes summaries specific to meetings held with the St. Margaret's Bay Stewardship Association and the Halifax Regional Municipality (HRM). In addition, approximately 40 randomly selected residents were interviewed during focus group meetings held on February 7th, 2011. Further comments were obtained from the Open House held on March 10, 2011 of which a summary of the comments can be found in Appendix E.

3.2.2 Attractions and Recreational Activities

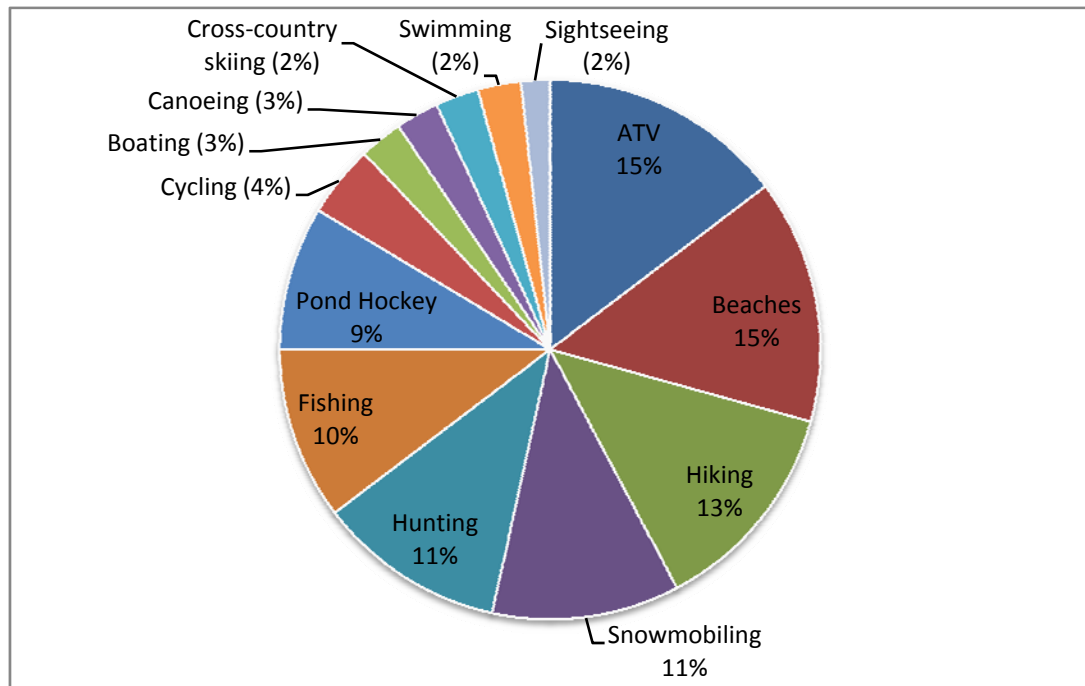
According to the consultations, the study area territory is used by residents to carry out many recreational activities (Figure 3.1), the most popular being ATV (15%), Relaxing at the beach (15%), Hiking (13%), Snowmobiling (11%), Hunting (11%), Fishing (11%) and Pond Hockey (9%). Respondents noted other activities like the Eco-challenge on Bowater lands and formal ATV rallies.

Data obtained also included activities like baseball, dog walking, gardening, bird watching or horseback riding, but the practice of these activities appears to be marginal, at least on the part of the respondents.

When asked about the presence of any unique attribute or must-see attractions on the study area territory, respondents indicated the following:

- Beaches (mainly Queensland) – mentioned in all interviews;
- Rails to Trails – this was also raised by the majority of people;
- Tunnel used by ATV users that passes under the Highway 103 – this was also high response from people and important in the sense of making sure access was maintained to the north of Highway 103;
- Old Annapolis Road Hiking Trail located along Hiking Trail Road north of Highway 103;
- Look-off Park;
- Micous Island;
- Mill and Vinegar Lake;
- St. Margaret’s Bay Inlet;
- Black Point – which offers scenic views of the Bay.

Recreational Activities Practiced within the study area



Source: GENIVAR Consultations, 2011.

Recreational or other community infrastructures within the study area include the government wharf / boat launch, the ATV club house and sports fields located on school grounds and the Rails to Trails facility through the study area.

3.3 Health and Safety

Specific accident data is unavailable for either Highway 103 or St. Margaret's Bay Road. The information presented comes from the interviews with the stakeholders and the population.

According to the respondents, many accidents occur on Highway 103, between Exits 5 and 6. The main accident location identified on Trunk 3, would be the sharp curve near the Cleveland Beach (see the Community Input Plan in Appendix F).

Respondents indicated that the St. Margaret's Bay Road has the following issues:

- People find it difficult to see around turn at Boutilier's Point;
- Lots of ruts in the road;
- Shoulders aren't wide enough;
- Need for guardrails along the water sections;
- "S" turns are problematic;
- Walking along Bay Road with narrow shoulders.

Three accident locations have been identified (see the Community Input Plan in Appendix F): 1) north of Meiseners Lake, 2) north of the Community Hall and 3) north of St. Margaret's Bay Elementary School. Respondents added that biking is dangerous along this road with narrow shoulders.

4. SOCIOECONOMIC ISSUES

4.1 Main Issues

The main issues regarding the project identified by the respondents concern the project justification and quality of life, security, regional economic development, land use, urban sprawl and the environment. In summary:

- Project justification and quality of life – the costs of the project have been highlighted, particularly given the recent cuts in public spending, due to the provincial debt. From this perspective, some respondents questioned the project justification and if it really would benefit the population and the future generations. Some also argue that the project could impact the quality of life, notably if the project involves the loss of property or the degradation of the distinctive regional character of the study area.
- Security – the twinning would likely improve the safety on Highway 103 and the St. Margaret's Bay Road as well as the response time for emergency services.
- Regional Economic Development – the project development involves improvements to traffic flow and potential for new development opportunities, but must be analysed compared to the urban sprawl phenomenon and the potential impact apprehended for some businesses located on the St. Margaret's Bay Road, due to the possible decline of the drive-by traffic.
- Land Use and Urban Sprawl – the twinning would at least involve the construction of an interchange and a service road that might impact private properties. The construction of a connector could impact these components as well. Maintaining of the access to the territory north of Highway 103 is also judged critical. On the other hand, the project planning and implementation must integrate issues surrounding the urban sprawl phenomenon.
- Environment – the project development would involve impacts on the biophysical environment, which concerns the respondents.

4.1.1 Project justification and quality of life

The main preoccupations that have arisen regarding the project justification and quality of life are as follow:

- Loss of personal property – majority of people;
- Proximity of roundabouts to houses – majority of people;
- The fact that more people could be living in the area is seen as both positive and negative (60/40 ratio);
- Costs of the project compared to the recent cuts in public spending, notably in education; (small majority of people).

- The project could take away from natural environment; (50/50)
- Lack of pedestrian access to water and bicycle trails;
- Preservation of the regional distinctive character and its environment is central within the quality of life that it offers.

Data presented in the study show that most people work and live in the study area. However, no detailed origin-destination survey has been achieved, it is therefore impossible to include in the options that would be preferred by the population in the area.

Finally, some respondents outlined that they have been frustrated by the fragmented co-ordination between the three different levels of government and their different agendas/schedules.

4.1.2 Security

Security improvement for both Highway 103 and St. Margaret's Bay Road is identified as one good reason to implement the project. The majority of people conveyed that many accidents occur between Exits 5 and 6 and the twinning would improve safety. RCMP mentioned that the stretch of Highway between Exits 5 and 6 is possibly the worst section for head-on collisions on Highway 103. All emergency responders were in favour of an interchange and connector as it would make response time quicker to residents located along St Margaret's Bay Road. This is because the 100 series highway enables vehicles to travel at a faster speed and provides a more direct path to the area versus having to travel along a narrow and slower road.

As for the respondents, key observations identified during the interviews are the following:

- The project implementation would improve safety and decrease the number of traffic incidents – majority;
- It would improve response time for emergency services – majority;
- Evacuation from the area would be easier with less backtracking when St. Margaret's Bay Road is closed for any reason, i.e. weather, recent bridge closure near Route 333, etc. – majority;
- When traffic is diverted off of Highway 103 due to accident, traffic will not have to divert through the entire length of the Bay Road between Exits 5 and 6 – majority;
- When there is construction on either Highway 103 or St. Margaret's Bay Road, traffic can divert and get around these areas easier – majority;
- New interchange would eliminate time and distance spent driving on unplowed roads, such as St. Margaret's Bay Road. This comment was made

in context to the priority given to snow clearing. Highway 103 is cleared quickly compared to St. Margaret's Bay Road;

- Existing St. Margaret's Bay Road not designed for heavy truck traffic: the project implementation would allow some of this traffic to be diverted to the Highway 103.

4.1.3 Regional Economic Development, Tourism and Recreational Activities

The respondents' opinions vary depending on their interests. On behalf of the regional economic development, the main reasons identified in favour of the project are the following:

- It would improve travel time – majority of people conveyed this point;
- It would reduce beach traffic past some homes – majority of people conveyed this point;
- Improvements to traffic flow will benefit the region – boost to the area in terms of improved access to 100 series highway.
- The project would likely open up land to development opportunities that will lead to greater spending in the area and job creation.

On the other hand, reasons identified as restraints to the project concern the following aspects:

- The quality and the sustainability of the jobs created, beyond the construction period;
- The potential loss of traffic is likely to diminish economical activity of the businesses located along the St. Margaret's Bay Road in the section between exits 5 and 6. Most businesses are located in Upper Tantallon however, there are also smaller home and commercial businesses scattered along the St Margaret's Bay Road through to exit 6.
- The long term cost on infrastructure arising through increased land development (sprawl).

Mitigation of potential impact on tourism and recreational activities is an important issue for the population, notably the maintaining of the accesses to the beaches and to lands to the north of Highway 103.

4.1.4 Land Use and Urban Sprawling

A meeting held with HRM helped synthesize the issue surrounding land use and urban sprawl. In summary, while HRM recognize the importance of vehicle safety, they are concerned that the twinning, interchange and connector will lead to additional pressure on development (urban sprawl). This creates challenges in

context to the direction of the HRM Regional Plan where the direction for growth is focused within the urban settlement areas of HRM.

Based on current development controls, the interchange and connector creates greater opportunities for carrying out open space subdivisions. Further, it creates a situation where MPS policy changes may be sought to enable greater growth in the area that would place additional pressures on the HRM resources. It is noted that any significant commercial development (over 7,000) or open space residential development requires a development agreement involving public engagements in the approval process.

Other concerns emphasized by the respondents are as follow:

- The twinning would at least involve the construction of an interchange and a service road that might impact private properties – the construction of a connector would impact these components as well;
- Maintaining of the access to the territory north of Highway 103 is judged critical;
- The project planning and implementation must integrate issues surrounding the urban sprawl phenomenon;
- Taxes going up on properties because of increased property values is seen by some as positive (70%) and by others as negative (30%);
- Improving the highway system will benefit transportation dependant industry.

4.1.5 Environment

Biophysical environment represents a key issue in the planning and implementation of almost any project. Regarding the current project, respondents outlined the following aspects:

- Impacts on wildlife and their natural corridors and wetlands – majority of people;
- Cost and impact on watersheds and how this may affect existing homes who are dependent on the water supply from the watersheds; majority.
- The St. Margaret's Stewardship Association (SMSA) indicates that they are very concerned about construction impact and the level of effort in making sure appropriate mitigation measures are clearly outlined to the contractor in the tender documentation;
- The SMSA does have areas to recommend on providing direction for compensation in the area for the loss of wetlands and watercourses through the process.

5. ANALYSIS OF THE PROPOSED VARIANTS

The comparison of proposed interchange/connector variants based on technical, social and environmental variables is presented in Table 5.1. Total costs for Options range from \$3.1 million (Options 1, 3B, 3C) to \$4.9 million (Option 4).

Even if it represents the shortest connector, option 1 has a significant impact on wetlands (14,858 m²) and plant species at risk (6). In comparison, option 2 implies the compensation of 7,390 m² (1 plant species at risk), followed by option 4 (3,241 m²). The other three options involve less than 1,276 m² (option 3A) of wetlands compensation (Options 3B and 3C only impact 565m² of wetland).

Options 3A, 3B and 3C present a good overall interchange location between Exits 5 and 6. The most expensive option (Option 4) also affects 10 properties. Option 3B involves the displacing of one building, which is the only option displacing a building.

On their part, respondents indicated, with an overwhelming majority, that there was not enough information provided to make an informed decision regarding the analysis of the proposed variants. It should be noted that these respondents were consulted prior to the Open House that provided information being sought by participants. Table 5.2 shows a summary of the main comments provided through the interviews. However, the Open House provided greater information resulting in more direct response to either support or otherwise for the connector options. Analysis of comments received from the Open House is contained in Appendix E. In addition, through the consultation participants from the community marked up a plan of the proposed twinning, interchange and connector options with their comments of which a copy of these mark-ups have been integrated into one plan that is contained in Appendix F.

Description	Option 1 (14+000 east of The Puddle)	Option 2 (11+000 to Ingramport)	Option 3A (10+400 to Ingramport)	Option 3B (10+400 to Head of St. Margaret's Bay)	Option 3C (10+400 to Head of St. Margaret's Bay)	Option 4 (9+200 to West of Boutilier's Point)
TOTAL COST	3,060,046	3,261,500	3,653,232	3,077,030	3,066,030	4,898,960
Length of Connector Road (km)	1.2	2.3	2.9	1.5	1.5	2.4
Wetlands Area to be compensated (sq. metres)	14858	7390	1276	565	565	2000
Distance to Exit 5, Exit 6 (km)	13.6, 7.7	11.5, 9.8	10, 11.3	10, 11.3	10, 11.3	7.3, 14.0
Properties directly affected	3	4	1	3	3	10
ROW Required/Land (hectares)	13.2	18.4	23.2	12.9	13.1	19.2
Buildings Displaced	0	0	0	1	0	0
Plant Species at risk	6	1	0	0	0	0
Area of Disturbance, Connector Road (hectares)	7.5	13.3	10.9	5.1	5.1	13.6
Number of Watercrossings	1	1	1	1	1	2
Sight Distances at Trunk 3	Good	Okay	Okay	Good	Good	Good
Land Required (based on 80 m ROW)	132000	184000	232000	128826	131626	192000

Table 5.2 Analysis of the proposed variants: summary of the main comments provided through the interviews and the open house

VARIANT	PROS	CONS	FACTS
Option 1	<ul style="list-style-type: none"> • Appears less costly • Appears limitative to the development of urban sprawl • Easy to access beaches • Shortest distance to the highway • Close to fire station and beaches • Least environmental impact • No homes affected • Best option for fire department and emergency response team 	<ul style="list-style-type: none"> • Offset location • Provides less potential to development • Too much armour stone • Too close to Hubbards • May interfere with beachgoers and parking along side of road • Too close to exit 6 • Too close to beaches and homes • Most environmentally sensitive – two lakes, wetland and several watercourses will be affected 	<ul style="list-style-type: none"> • Cost comparable to options 3B & 3C • Largest impact on wetland sensitive areas • No dwellings affected (e.g. relocated) • Interchange location not as well centered between exits 5 and 6 compared to other options
Option 2	<ul style="list-style-type: none"> • Appears to be less impact on the environment and dwellings • Least public disruption • No homes affected 	<ul style="list-style-type: none"> • Too much cut and fill • A lot of bedrock will have to be blasted, near a blind corner of the road 	<ul style="list-style-type: none"> • Cost compared to others are mid range. • 2nd largest impact on wetlands • No dwellings affected (e.g. relocated)
Option 3A	<ul style="list-style-type: none"> • Good overall location • No homes affected 	<ul style="list-style-type: none"> • Impact on dwellings and private properties to be precise 	<ul style="list-style-type: none"> • Cost are second most expensive when compared to the other options. • 4th largest impact on wetlands • No dwellings affected (e.g. relocated)
Option 3B	<ul style="list-style-type: none"> • Midway between exit 5 and 6 • Short • Little environmental damage • Only a temporary cottage will be affected 	<ul style="list-style-type: none"> • High cost and impact on the environment • Loss of homes 	<ul style="list-style-type: none"> • Lower cost comparable to option 1 and 3C • Least impacts on wetlands, tied with 3C • One dwelling affected (e.g. relocated)
Option 3C	(No Comments Received)	<ul style="list-style-type: none"> • High cost and impacts on environment 	<ul style="list-style-type: none"> • Lower cost comparable with 1 & 3B • No dwellings affected • Least impact on wetland (tied with 3B)
Option 4	<ul style="list-style-type: none"> • May present more growing opportunities for businesses • Best midway point between interchanges • Best option for joining old road • Only option that provides a way out for residents if a storm washes out the bridge 	<ul style="list-style-type: none"> • Impact on the river seems to be important • Offset location • Too long • High cost and impact on environment • Impacts on Ingramport River • Loss of homes 	<ul style="list-style-type: none"> • Most expensive • No dwellings affected • Longest connector • 3rd largest impact on wetland

Please note the comments above are based on input from the community, however, comments do not necessarily portray the facts. For example, Option 3C and 4 do not result in the loss of homes as conveyed by some participants.

It should be noted that while research was being carried out for this project there were a number of articles in the local newspaper and other forms of communication that created confusion about the actual impacts of the project options. This appears to have resulted in members of the community being miss-informed and significantly concerned about the project. During the duration of miss-information being circulated the Department was in the process of carrying out research work on the proposed options to fully understand their potential impacts. Hence, the Department at the time was not in a position to provide the information because the work had not been completed. This appeared to be viewed as the Department withholding information versus actually trying to ensure they had the correct information provided for the community. This work was presented at the Open House held in March 2011 and provided significant clarification surrounding the potential impacts of the project, in particular the impacts on individual's homes and land access.

6. CONCLUSION

Overall, both stakeholders and participants were supportive of the project. However, though they were supportive, they also sought to create a connector which balanced the impacts on the environment and the community (in particularly avoiding the destruction of someone's home), while also being fiscally conscious of the cost related to each of the different options. It was recognized that the proposed twinning, interchange and connector will improve safety. Further to this, there will be indirect economic benefits during construction through possible employment and spending in the area. Once the construction is completed, the improved access is likely to lead to land development resulting in an increase in population and spending. The scale of development is difficult to predict because any significant form is likely to require a development agreement involving a full public process with no certainty on its outcome. Easier access via the new connector from Highway 103 to St. Margaret's Bay Road is likely to also encourage more tourism to this area given the scenic attractions located along the coastline (e.g. beaches/Trans Canada trail).

There was also concern raised with regards to the potential impacts on the community that may arise from increased development. Some viewed this as a positive, but the overall majority were concerned about increased development and its consequential impacts on the character, both environmentally and socially, on the community. This matter is effectively beyond the control of the Department of Transportation and Infrastructure Renewal and lies with the jurisdiction of Halifax Regional Municipality. The consultation process indicated the need for community engagement on future development in the area which, through consultation with HRM, we understand is underway. Other issues arising through the consultation were quite specific to individuals and the impacts on their properties.

7. REFERENCES

TOURISM, CULTURE AND HERITAGE. 2011. *Key Tourism Indicators*. Government of Nova Scotia. Internet [01-17-2011]. Address: <http://www.gov.ns.ca/tch/tourism/key-tourism-indicators.aspx>

TOURISM, CULTURE AND HERITAGE. 2007 *Tourism Industry Facts*. Government of Nova Scotia. Internet [01-17-2011]. Address: <http://www.gov.ns.ca/tch/tourism/research-pdfs/2007TourismIndustryFacts.pdf>

APPENDICES

Appendix A – Dissemination Area Reference Maps

Appendix B – St. Margaret's Bay Chamber of Commerce Business Listing

Appendix C – Consultation Questions

Appendix D – Summary of Consultation Comments

Appendix E – Summary of Open House Feedback

Appendix F – Community Input Plan

Appendix A
Dissemination Area Reference Maps

Halifax

CMA / RMR CT / SR
205 0143.01

Dissémination Area by CT
Aire de diffusion selon SR
1 of 1

1234.06
Dissémination Area
Aire de diffusion

1234.56
Census Tract
Secteur de recensement

Name / Nom
Census Subdivision
Subdivision de recensement

Census Metropolitan Area or
Census Agglomeration
Région métropolitaine de recensement ou
Agglomération de recensement

Outside CT
À l'extérieur du SR

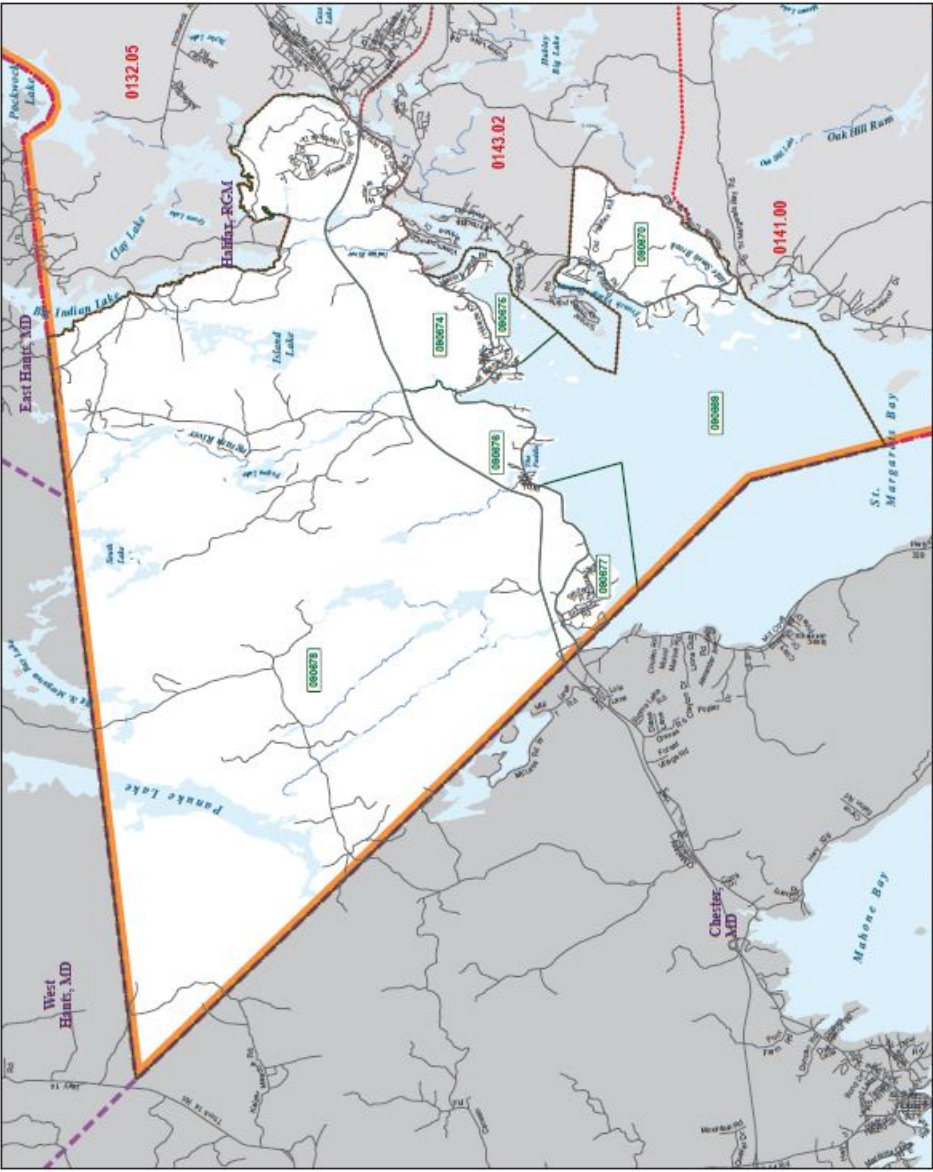
Outside CMA / CA
À l'extérieur de la RMR / AR



1 : 115 000



Lambert Conformé Conic Projection
Échelle horizontale : 1 : 115 000
Centre Méridien : 65° 01' 42" W
Latitude d'Origin : 45° 16' 32" N
Projection conique conforme de Lambert
Mésure étendue convention : 44° 01' 42" N, 61° 40' 35" W
Mésure courbe : 65° 01' 42" O
Latitude d'origine : 45° 16' 32" N
Dissémination Area (Metropolitan Area, by Census Tracts, for
the Census of Canada) - Aire de diffusion (RMR, par secteurs
de recensement) - Région métropolitaine de recensement
Cadastral No. 22-142-003
Source : Information Canada, 2005
Carte de diffusion des aires de diffusion selon les agglomérations
de recensement. SR 0143.01 en français



Appendix B
St. Margaret's Bay Chamber of
Commerce Business Listing

Listing of Businesses active in the Study Area

Type of service	Location	Type of service	Location
Accommodation (2)		Automotive (3)	
Larinda's Landing Oceanfront Cottages	Boutilliers Point	Bonin's Auto Body	Upper Tantallon
Search Home & Vacation Rentals	Boutilliers Pt	Coulstrings Rentals & Repairs	Upper Tantallon
Computers and Internet (2)		Mason's Auto	Tantallon
I Hear Ya Developments Inc.	Upper Tantallon	Construction (3)	
Work@Home Computer Services	Upper Tantallon	Daniel Smith's Construction Limited	Tantallon
Food service (4)		Piercey's Building Materials	Upper Tantallon
Acadian Maple Products Ltd.	Upper Tantallon	Preventive Building Maintenance (PBM)	Head of St Margaret's Bay
Atlantic Superstore - Tantallon	Upper Tantallon	Health and Medical (8)	
M&M Meat Shops	Upper Tantallon	Aqua Soul Therapeutics	Head of St. Margaret's Bay
Mariposa Natural Market & Café	Upper Tantallon	As Nature Intended Nutritional Consulting Inc	Head of St. Margaret's Bay
Home & Garden (3)		Kristel Englund & Associates Inc. Psychological Services	Tantallon
Boutillier Lawn & Garden	Upper Tantallon	Momentum Massage Therapy	Head of St. Margaret's Bay
Redmond's Home Hardware	Upper Tantallon	St. Margaret's Bay Massage Therapy	Upper Tantallon
Redmond's Paint & Wallpaper / Benjamin Moore	Upper Tantallon	St. Margaret's Bay Chiropractic Centre Ltd	Head of St. Margaret's Bay
Manufacturing (1)		Tantallon Dental Centre	Upper Tantallon
LoveTheGloves.com	Upper Tantallon	Whites Denture Clinic	Head of St. Margaret's Bay
Professional and Consulting (7)		Investment and Financial (4)	
Bell & Grant Ltd and Tingley Insurance Agency	Upper Tantallon	Bay Insurance & Financial	Upper Tantallon
Bluenose Accounting & Tax Services Ltd	Upper Tantallon	Credit Union Atlantic	Upper Tantallon
Coveworx Business Consulting	Head of St. Margaret's Bay	Propel Mortgage	Upper Tantallon
Jacqueline Farrow Law Office Inc.	Upper Tantallon	Scotiabank	Upper Tantallon
Keith R. Ayling Lease Consulting Services	Tantallon	Marine (5)	
SMB LAW INCORPORATED	Head of St. Margaret's Bay	Atlantic Wharf Builders Inc	Head of St. Margaret's Bay
Tracey Kennedy's Law Practice	Head of St. Margaret's Bay	Four Winds Charters Ltd.	Tantallon
Restaurant (3)		Polaris Marine Services Ltd	Upper Tantallon
Fredies Fantastic Fishhouse	Upper Tantallon	Schooner Cove Marine Ltd	Boutilliers Point
The Java Factory Café	Upper Tantallon	Shining Waters Marine Limited	Tantallon
Tim Horton's	Upper Tantallon	Real Estate (1)	
Services (13)		Granite Realty	Upper Tantallon
Choi Kwang Do Canada	Upper Tantallon	Retail (7)	
Cornucopia Marketing	Boutilliers Pt	Bike & Bean	Upper Tantallon
Crossroads Academy	Upper Tantallon	Canadian Tire	Upper Tantallon
Giant Steps Children Centre	Upper Tantallon	Crossroads Gifts & Home Décor	Upper Tantallon
Halifax Locksmithing & Security	Upper Tantallon	Sutherland's Jewellery Limited	Upper Tantallon
Masthead News	Hubbards	Teddy Bear Quilts	Tantallon
Ranger Tree Services Ltd	Tantallon	The Annex Bookstore	Upper Tantallon
Shaklee Independent Distributor	Boutilliers Point	Unlimited Country Gardens	Upper Tantallon
St Margaret's Centre	Upper Tantallon		
St. Margaret's Bay & Area Association for Comm. Living	Boutillier's Point		
St. Margaret's Bay Food Bank	Upper Tantallon		
St. Margaret's Bay Regional Tourism Dev. Association	Boutilliers Point		
St. Margaret's Bay Stewardship Assoc	Tantallon		

Appendix C
Consultation Questions

BENEFIT COST ANALYSIS OF PROPOSED ST MARGARETS BAY INTERCHANGE AND CONNECTOR ROAD OPTIONS

Socio-Economic Analysis

BACKGROUND

The Department of Transportation and Infrastructure Renewal (TIR) is currently in the planning process for twinning the 21km section of Highway 103 between Exit 5 at Upper Tantallon and Exit 6 at Hubbard's. As part of this project a new diamond interchange and connector road to St Margaret's Bay is proposed.

The purpose of the interchange is to provide access to properties that adjoin Highway 103 that will have their access eliminated when Highway 103 is twinned and to provide better 100 Series Highway access to communities along St Margaret's Bay Road (Trunk 3).

Four interchange location options and six connector road alignment options are being considered (see attached plan).

QUESTIONS

Recreational activities and other attractions / interests in the study area

1. What are the recreational activities practiced within the study area? Could you indicate which of the following?

- Cycling
- Hiking
- Swimming
- Wildlife viewing
- Fishing
- Hunting
- All-terrain vehicles riding
- Snowmobile riding
- Cross-country skiing
- Other → *Specify:* _____

2. What are the recreational or other community infrastructures within the study area?

Specify:

Could you please indicate the location on the attached map?

3. In your opinion, is there any unique attribute, a must-see attraction, within the study area?

- Yes
- No

If yes, *specify*:

If you answered yes, could you please indicate the location on the attached map?

Project Benefits and concerns

4. In your opinion, is the project likely to improve the conditions inherent to the region's economic development? In what way?

- Yes
- No

Comments:

5. In your opinion, what are the main benefits that the twinning, interchange and connector project will bring to the region?

Specify:

Interchange:

Connector:

6. Do you think the project could have negative impacts on the community?

- Yes
- No

If yes, *specify*:

Health and Safety

7. Do you consider that some sections of Highway 103 and/or St. Margaret's Bay Road are unsafe or problematic to road safety?

- Yes
 No

If yes, *specify*:

Could you please indicate the location on the attached map?

Evaluation of the studied options

8. In your opinion, which of the proposed Interchange options would be of the most benefit to the study area?

- Interchange Option 1
 Interchange Option 2
 Interchange Option 3
 Interchange Option 4

Could you explain why?

9. In your opinion, which of the proposed connector options would be of the most benefit to the study area?

- Connector Option 1
 Connector Option 2
 Connector Option 3A
 Connector Option 3B
 Connector Option 4

Could you explain why?

Appendix D
Summary of Consultation Comments

BENEFIT COST ANALYSIS OF PROPOSED ST MARGARETS BAY INTERCHANGE & CONNECTOR ROAD
OPTIONS

Responses to socio-economic analysis questions from:

Please note the comments received were prior to the Open House. The Open House provided the public and stakeholders with more information on the project. However, the consultation carried out did enable the NSTIR the opportunity to identify the nature of information people were seeking that assisted in preparing for the Open House.

Halifax Regional Municipality, Fire Department, Ambulance, HRM Police, Hubbards and Area Business Association, St Margarets Bay Area Rails to Trails Association, St Margarets Bay Stewardship Association, St Margarets Bay Regional Tourism Development Association, All Terrain Vehicle Association of Nova Scotia, St Margarets Bay Chamber of Commerce, six local business owners/operators, and approximately 40 randomly selected residents.

Accompanying this response is specific summaries from the stakeholders mentioned above.

Question #1

What are the recreational activities practiced within the study area? Could you indicate which of the following?

Responses

- Hiking (15)
- Swimming (3)
- Fishing (12)
- Hunting (13)
- ATV (17)
- Canoeing (3)
- Beaches (17)
- Boating (3)
- Baseball (1)
- Dog walking (1)
- Gardening (1)
- Sightseeing (2)
- Bird watching (1)
- Snowmobiling (13)
- Cross-country skiing (3)
- Cycling (5)
- Horseback riding (1)
- Pond Hockey (10)

Question #2

What are the recreational or other community infrastructures within the study area?

Responses

- Eco-challenge on Bowater lands
- Formal ATV rallies
- Baseball diamonds
- School grounds containing sports fields
- Need to maintain access to recreational areas on both sides of highway
- ATV club house.
- Government wharf.
- Rails to trails.
- **Refer to plan for additional reference.**

Question #3

In your opinion, is there any unique attribute, a must-see attraction, within the study area?

Responses

- Old Annapolis Road hiking trail located along Hiking Trail Road north of Highway 103.
- Tunnel used by ATV users that passes under the Highway 103. – This was also high response from people and important in the sense of making sure access was maintained to the north of Highway 103.
- Beaches (Queensland) – out of all the interviews everyone mention this as a main attraction.
- Look-off Park
- Micous Island
- Rails to trails – This was also raised by the majority of people. Big issue with the connector was how it would be designed into crossing the trail – is the trail going below the connector or over it – people were very concerned about how movement/flow would be maintained if a connector was created because it crosses this important active transportation corridor.
- Mill and Vinegar Lake
- St Margaret's Bay inlet
- Black Point offers scenic views of the Bay.

Question #4

In your opinion, is the project likely to improve the conditions inherent to the region's economic development? In what way?

Responses

- No. Because of the cost of the project and particularly given the Provincial debt with the government making cuts to education that is seen as a greater priority to twinning and an interchange. View spending of this nature not in the interest of future generations. (2)
- Yes. Opens up land to development opportunities that will lead to greater spending in the area and jobs. Some see this as a negative to because the jobs are seen as short term and the development places additional pressures on infrastructure and contributes to urban sprawl. (4)
- Yes. Improving the highway system will benefit transportation dependent industries. (1)
- The interchange is critical for quality access to be maintained. (1)
- Yes. Improvements to traffic flow will benefit the region. (Majority of Businesses consulted viewed this highly)
- No – to explain reasons refer to St Margaret's Bay Stewardship comments as their reasons are more holistic.
- Improved access to highway. (3)
- Improved travel time. (Majority of people conveyed this point)
- Reduced beach traffic. (Majority of people conveyed this point)
- No economic benefit. (2)
- Taking away from coastal road drive-by traffic (4)
- Canadian Tire was a business interviewed and viewed the project as both a positive and negative – the negative related to the potential loss of traffic along the frontage of their store while the benefit was related to the potential increase in development leading to potentially more customers.
- No. May cause a decrease in drive by traffic.

Question #5

In your opinion, what are the main benefits that the twinning, interchange and connector project will bring to the region?

Responses

- Boost to the area in terms of improved access to 100 series highway – majority of people viewed this point.
- Traffic improvements – majority of people interviewed
- Improved response time for emergency services - majority
- Improved safety. - majority
- Decreasing number of traffic incidents. majority
- Decreasing accidents. majority
- Improved access to highway. majority
- New interchange will eliminate time and distance spent driving on unplowed roads (St. Margaret's Bay Road) ; i.e. More of trip spent driving on better maintained roads - majority
- Ability to sell lots faster because there will be closer access to Highway 103 (5)

- All options will reduce the amount of traffic along that stretch of St. Margaret's Bay Road. 50/50
- People were wondering if there are any advantages to school aged children with any of the options (1)
- Are there any advantages to other groups?
- Safety aspects of better access for emergency responders to Highway 103 - majority
- Evacuation from the area is easier with less backtracking when St. Margaret's Bay Road is closed in sections, i.e. recent bridge closure near Route 333 - majority
- When traffic is diverted off of Highway 103 due to accident, traffic will not have to divert through the entire length of the Bay Road between Exits 5 and 6. - majority
- When there is construction on either Highway 103 or St. Margaret's Bay Road, traffic can divert and get around these areas easier - majority
- Better emergency exit from area if roads are closed due to storm (example of recent bridge closure mentioned again) - majority
- Easier access to highway system.
- New connector will provide alternative means to access highway and bypass the old St Margarets Bay Road. This is particularly important for emergency situations.
- Decrease travel time for business – Time is Money.

Question #6

Do you think the project could have negative impacts on the community?

Responses

- Taxes going up on property because of increase property values. seen by some as positive (70%) by others as negative (30%)
- Impacts on wildlife and their natural corridors and wetlands. Majority of people
- Loss of personal property. Majority of people
- Impact on the character and feel of area. 50% of those interviewed
- Cost and impact on watersheds and how this may affect existing homes who are dependent on the water supply from the watersheds. (6) mainly raised by people immediately in the area
- Proximity of roundabouts to houses. – Majority of people
- Project has already had negative impact. Connector road location has already polarized the community. (1)
- Negative if people lose their homes. 50% and the other 50% felt that if the option made economic/environmental sense and the home owner was appropriately compensated then there could be support.
- No long term impacts. (1)
- Yes – refer to St Margaret's Bay Stewardship Association comments
- Overall cost of the project – perhaps money could be better spent on other programs. (5)
- Increased carbon footprint. (4)
- More people will be living in the area seen as both positive and negative 60/40 ratio
- Potential impact on individual land owners
- Light pollution from oncoming vehicles on connector road (1)
- Takes away from natural environment. (4)

Question #7

Do you consider that some sections of Highway 103 and/or St. Margaret's Bay Road are unsafe or problematic to road safety?

Responses

- No specific locations
- Lots of accidents occur between exits 5 and 6.
- Twinning will improve safety.
- Anywhere between exits 5 and 6
- Existing St Margarets Bay Road can be problematic when bridges are out of order.
- Existing St Margarets Bay Road not designed for heavy truck traffic.
- St Margarets Bay Road has the following issues:
 - People find it difficult to see around turn at Boutillier's Point
 - Lots of ruts in the road
 - Shoulders aren't wide enough
 - Need guardrails along water sections
 - Walking Along Bay Road with narrow shoulders
- Refer to plan for areas indicated as having road safety issues
- 'S' turns on St Margaret Bay are problematic.

Question #8

In your opinion, which of the proposed Interchange options would be of the most benefit to the study area?

Responses

- Option 2. No impacts on homes and as long as it has less impact on environment. (4)
- Option 3 – 3a (2)
- Option 3. From a business point of view, this interchange location offers the shortest distance to road network. (6)
- Option 1. Located closest to fire station and would therefore provide quickest route to highway for emergency services. (10)
- Option 1 – easy access to beaches and appears less costly because of distance (2)
- Option 1. Least impact on the community. Shortest distance to highway.(21)
- Option 2 or 3. (1)
- Not enough information provided to make informed decision. This was generally an overwhelming majority. – Should be addressed at Open House.
- Option 1 and 4 are too far and won't be used (according to one person)
- None – does not support the development (1)
- Option 2. The connector exits onto a straight portion of St Margarets Bay and should assist with sight distances and provides a safer alternative.

Question #9

In your opinion, which of the proposed connector options would be of the most benefit to the study area?

Responses

- Option 2 based on less impact on the environment(4)
- Option 3 – 3a (2)
- Option 1 – easy access to beaches and appears less expensive option (2)
- Any option that does not displace homes. Most people agreed with this
- Connector option 1. Closest proximity to fire station. (10)
- Connector option 1. Closest to beaches. (8)
- Connector options 2 or 3A.
- Option 4: businesses may grow (generally may be more opportunity with better access to Highway 103). (6)
- Option 3B/C is seemed to be the best with most people, 3C specifically according to one person (1)
- Mention that Option 3 B/C is seen as a central location for access for all potential users (1)
- Connector option 1. Least impact on community. *Need to consider sight lines for rails to trails. Consider raising connector over the trail for safety. Majority
- Not enough information provided to make informed decision.
- Option 1. Shortest distance.
- People not supportive at all (4)

Other Comments

- Safe access across highway is paramount for recreational vehicles
- Roundabouts are confusing
- Not enough information presented to comment on interchange/connector options
- Something needs to be done about parking at the beaches.
- Was there any contact with providers of services to the area? (i.e. Oil Delivery Services.)
- Need to see more information on Tunnel location under Highway 103 and land access roads

Appendix E
Summary of Open House Feedback

Highway 103 Twinning: Upper Tantallon to Hubbards Open House Comment Form Summary

March 22, 2011

1. Specific Issues Related to the Project

In the second question on the Comment Form, participants were asked to outline any comments, suggestions, concerns or issues regarding the Highway 103 Twinning project that they would like to draw to the attention of the project staff. The variety of issues that were raised, and number of participants commenting on that issue is documented in the table below. Where a specific suggestion was noted to address these concerns, the suggestion has been included in the right column.

Responses to Question #2: ‘Are there any concerns, issues or suggestions regarding the project that you would like to draw to our attention?’

Theme	Concerns/Issues Highlighted by Participants	No. of People	Specific Suggestions Provided	No. of People
Access	Year-round access on gravel roads parallel to the 103 (E.g. Mill Lake to Sawler Lake) for residents and emergency vehicle access	3	Dept of Transportation needs to ensure winter plowing of access roads parallel to 103 (e.g. Mill Lake to Sawler Lake)	3
	Access from 103 to South properties	2		
	Access to rail bed and ATV trails	1		
	Impact on homes by turning Old Rock Road (a private road) into an access road. May remove walk-up access to land on North side of 103	1		
	Access roads won't be used – Hubbards residents are closer to Exit 6; Boutiliers Point/Head of St. Margaret's Bay residents won't double back	1		
Private Property	Impact on Simms Settlement – damage to land, wells, foundation and impact of noise	2		
	Proximity of highway to driveways of houses near Exit 2; impact of blasting during construction	1	Move connector road another 100 m towards Hubbards near Exit 2	1
	Disruption to homes in Ingramport	1		
	Lighting requirements will diminish value and enjoyment of adjacent properties	1		
Environment	Impact on water ways, fish species, and natural habitats from construction and ATVs going under road at River Lake bridge	7	Ensure minimal environmental impact	5
	Impact of narrow median on wildlife crossings	1		
	Increased carbon dioxide emissions and fuel consumption from increasing the speed limit	2		

Theme	Concerns/Issues Highlighted by Participants	No. of People	Specific Suggestions Provided	No. of People
	Impact on the water table has not been considered	1		
Safety	Proposed narrow median is in a section of road where visibility is obscured by turns and hills	2	Make a wide as opposed to narrow median	1
	No evaluation of storm impacts and emergency evacuation options, e.g.: <ul style="list-style-type: none"> – at Head of the Bay side of the Ingramport River – between Schooner Cover and Queensland Beach (where road close to ocean) 	2		
	Steep downslope toward Bay Rd. would make dangerous conditions in rain, snow and ice	1		
Local Economy	Tourist or commuter traffic will bypass businesses between Head of St. Margaret's Bay and the Connector creating an economic dead zone	1		
Traffic	Traffic will increase coming from Halifax to Hubbards and area; bottleneaking will occur during tourist season	3		
	Increased traffic from connector road combined with proposed Destiny Development	1		
Roundabout	Roundabout in option 4 will: <ul style="list-style-type: none"> • Destroy wildlife habitat • Decrease safety of people using rails-to-trails who have to cross it • Reduce property values of homes nearby • Decrease driver safety in winter on slippery roads so close to water 	1		

Theme	Concerns/Issues Highlighted by Participants	No. of People	Specific Suggestions Provided	No. of People
Project and Consultation Process	Not everyone in the community has been consulted or had an opportunity to voice their opinion	4	Have one more session that allows participation as a group People not from the area and not affected by the project should not be involved	1 1
	Individuals are speaking on behalf of the community	3		
	It is not clear how the decision will be made – weight of factors such as safety, cost, public input etc.	3		
	Meeting did not include a “straw vote” on what people think is the best option	1		
	Landowners whose land may be affected or who may be affected by potential expropriation (e.g. in Queensland) were not consulted one-on-one	3		
	There were no environmental representatives at the Open House	1		
Project Rationale	Cost of the project is high - resources are better spent elsewhere	8	Invest money in public transportation, improvements to Highway 3, public education and driver safety, increased police presence	6
	Cost-benefit analysis is un-convincing	1		
	Emergency response rationale is unconvincing - emergency services are nearby (exit 5 & 6), and safety will be resolved with twinning	3	Build an emergency vehicles only access road up by Black Point Firehall Remote control gating, emergency U-turn or simple overpass	1 1
	Traffic volume statistics used to justify the project are misleading; when broken down volumes are less than 90 per hour.	1		

Participants also provided the following general and specific suggestions regarding the project (the number of participants who included this on their comment form is included in brackets):

General Suggestions:

- Don't eliminate or move houses (5)
- Be cost-effective (1)
- Minimize destruction of private property (3)
- Make sure the cost/benefit study makes human considerations (1)
- Choose the option that best fits the aesthetics and environmental aspects of the area (1)

Specific Suggestions:

- Provide a better video that shows the impact on existing housing – e.g. as traffic comes off ramp into the community (2)
- Look at ATV access at exit 6 from rail bed up to null(?) Lake road (1)
- Provide commuter/carpool parking near interchange (2)
- Take Options 3B, 3C and 4 off the table (1)
- Graphics should show efforts for night lighting on roundabouts & how rails to trails will be handled (1)
- Make the stats and results of the focus groups publicly available (1)
- Hold mediation sessions with people who may be impacted; discuss compensation for perceived or real loss (1)

Information provided by participants to help with the decision-making process included:

- Puddle Beach, next to Option 1, is known as the “kids beach” and they often dart around the cars lining the road, making it a dangerous situation
- There is already a fish ladder at Dory(?) Lake
- House on Ingramport River at the bottom of proposed Option 2/3A - round house
- Option 2 has high elevated area after coming off Highway
- Maps did not show all wetlands and watercourses in at least Option 1 and 4

Number of participants who wrote on their comment forms:	
I support the project / feel it is overdue / hope it goes ahead	I feel the project is unnecessary
24	13

Specific Feature of Project	Number of People Who Wrote that they...	
	Approve	Disapprove
Tunnel at Big Rock Road/Vinegar Lake Rd	2	-
Connector Road (in general)	14	7
Roundabout	3	2

OPTION	# COMMENTS	Comments for	Comments against
Option 1	11	<ul style="list-style-type: none"> • Shortest route • Least environmental impact • Cheaper • Best access • No homes affected • Best option for fire department and emergency response team 	<ul style="list-style-type: none"> • Too much armour stone • Too close to Hubbards • May interfere with beach-goers and parking along side of road • Too close to exit 5 • Too close to beaches and homes • Most environmentally sensitive – two lakes, wetland and several watercourses will be affected
Option 2	6	<ul style="list-style-type: none"> • Most sensible • Least public disruption • No homes affected 	<ul style="list-style-type: none"> • Too much cut and fill • A lot of bedrock will have to be blasted, near a blind corner in the road
Option 3A	3	<ul style="list-style-type: none"> • No homes affected 	
Option 3B	8	<ul style="list-style-type: none"> • Midway between exit 5 & 6 • Short • Little environmental damage • Only a temporary cottage will be affected 	<ul style="list-style-type: none"> • High cost and impact on environment • Loss of homes
Option 3C	4		<ul style="list-style-type: none"> • High cost and impact on environment • Loss of homes
Option 4	2	<ul style="list-style-type: none"> • Best midway point between interchanges • Best option for joining old road • Only option that provides a way out for residents if a storm washes out the bridge 	<ul style="list-style-type: none"> • Too long • High cost and impact on environment • Impacts to Ingramport River • Loss of homes

2. Additional Questions from Participants

When do you start?

What is the decision making process?

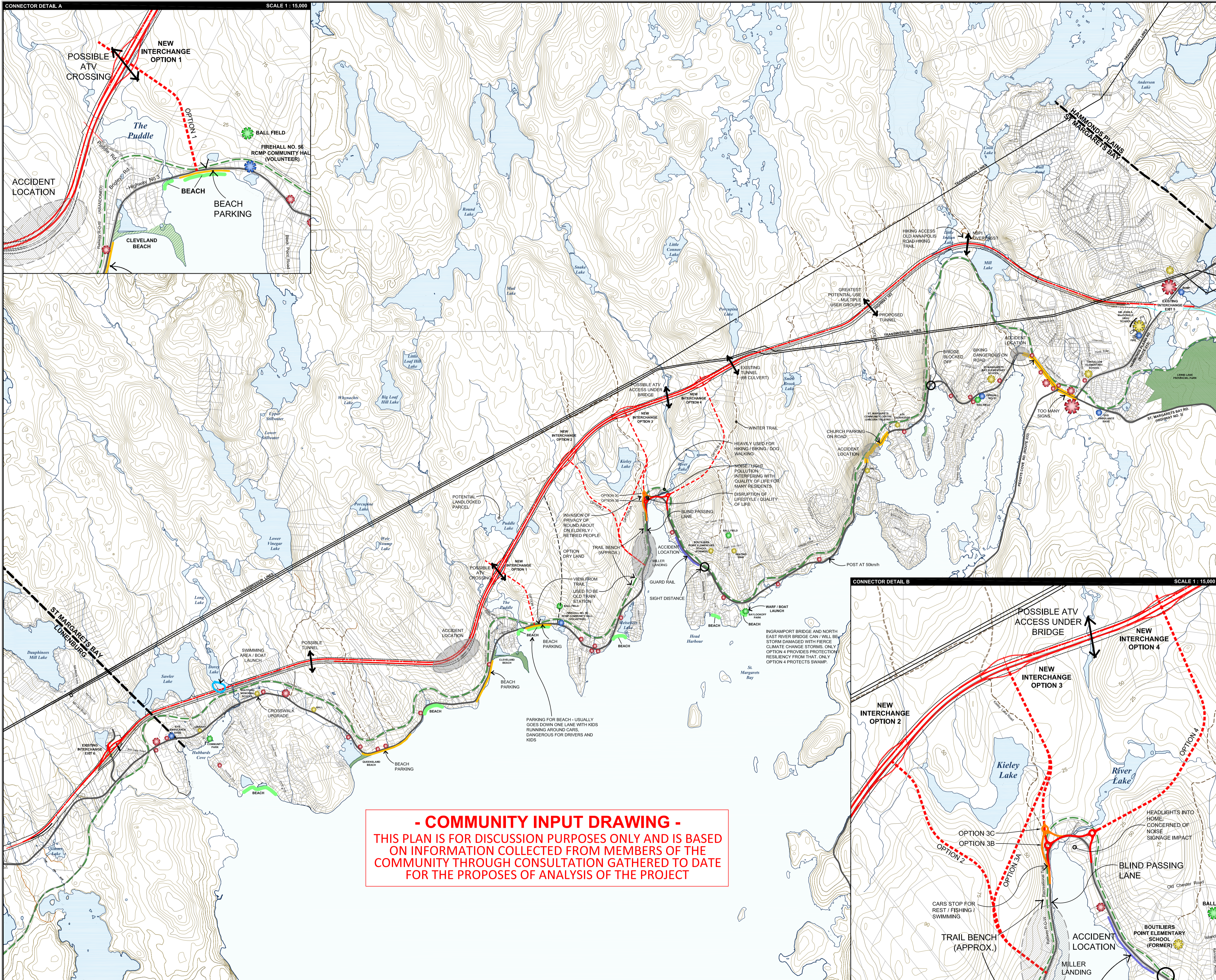
How will the feedback from today's meeting be integrated into the decision-making process?

What is the decision time frame? (When will the option be decided upon?)

Has there been any consideration of social and economic impacts (e.g. loss of business to crossroads area?)

What environmental considerations have been considered besides wetlands (e.g. saltation, increased traffic, effect of run-off, redefinition of communities)?

Appendix F
Community Input Plan



- LEGEND**
- GRAVEL / DIRT ROAD
 - WATERCOURSE
 - REGIONAL PARK
 - RECREATIONAL TRAIL
 - COMMERCIAL CENTRES * NODE SIZE REPRESENTS SIZE OF BUSINESS
 - COMMUNITY FACILITIES
 - EMERGENCY SERVICE FACILITIES
 - PROPOSED CONNECTOR
 - EXISTING ROAD
 - PROPOSED HIGHWAY 103 TWINING

- COMMUNITY INPUT DRAWING -
 COMMENTS SHOWN ON THIS PLAN ARE BASED ON RESEARCH AND INPUT FROM COMMUNITY MEMBERS AND STAKEHOLDERS

SOURCE:
 • BASE PLAN OBTAINED FROM NOVA SCOTIA INFRASTRUCTURE AND RENEWAL LAND USE PLAN, DATED MAY 27 2010. CAD FILE: 103 LAND USE PLAN_Oct_2009.dwg

Designer: **KEN WATTERS** VERSION: **1.2**
 Planner: **NP RYCE**

ST. MARGARETS BAY INTERCHANGE AND CONNECTOR EXIT 5 TO EXIT 6

NOVA SCOTIA
 Transportation and Infrastructure Renewal

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- COMMUNITY INPUT DRAWING -
 THIS PLAN IS FOR DISCUSSION PURPOSES ONLY AND IS BASED ON INFORMATION COLLECTED FROM MEMBERS OF THE COMMUNITY THROUGH CONSULTATION GATHERED TO DATE FOR THE PROPOSES OF ANALYSIS OF THE PROJECT

