HALIFAX
REGIONAL MUNICIPALITY

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Item No. 6

Halifax Regional Council
April 28, 2009
Committee of the Whole

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:

Dan English, Chief Administrative Officer

Wayne Anstey, Deputy Chief Administrative Officer - Operations

DATE: March 26, 2009

SUBJECT: **HarbourLink Project Update**

ORIGIN

At the June 27, 2006 meeting of Regional Council, the HRM Regional Plan was adopted, which included extension of the harbour ferry network as part of the transportation plan for the region. At the August 8, 2006 meeting, Regional Council approved the Bedford/Halifax Fast Ferry (HarbourLink) project in principle subject to funding. At the June 12, 2007 meeting, Regional Council reaffirmed approval for the fast Ferry (HarbourLink) project in principle subject to funding. Subsequent update reports were provided to Regional Council on September 18, 2007 and December 11, 2007. At the November 18, 2008 meeting, Regional Council approved a five-year transit plan which included HarbourLink.

RECOMMENDATION

It is recommended that Council:

1. Approve the amended HarbourLink Project Schedule dated March 31, 2009 (attachment 2 to this Report);

2. Authorize staff to carry on negotiations with Transport Canada to establish an appropriate classification of vessel under which the HarbourLink vessels will operate;

Recommendations Continued on Page 2

3. Direct staff to review the vessel operating criteria and develop a detailed operating plan for the vessel routes;

4. Direct staff to update the available data on all other transit modes for carrying Bedford to Halifax trips to provide a balanced perspective to Council to facilitate informed decision making on the final transit solution;

5. Direct staff to bring all available information together into a comprehensive economic model for transporting passengers by transit from the Bedford area to Halifax in time for a decision on the 2010 -11 Capital and Operating budget;

BACKGROUND

The HarbourLink project was part of the transit plan in the 2006 HRM Regional Planning Strategy and was included in the five-year transit plan approved by Regional Council in March 3, 2009. The Regional Plan undertook extensive modeling of future regional trip demand based on anticipated growth and determined that high targets for increased transit modal split (the percentage of people who choose to make a particular trip by transit) were needed to avoid significant increases in traffic congestion and expensive and intrusive roadway expansion projects. The Plan suggested that new types of transit service delivery, over and above expanding conventional transit service, are needed to achieve those targets. Those new types of service delivery included MetroLink, MetroX (rural express transit) and HarbourLink.

At the August 8, 2006 meeting, Halifax Regional Council tabled the Fast Ferry Cultivation Study and approved the HarbourLink project in principle subject to funding. At the June 12, 2007 Regional Council meeting, Council reaffirmed approval for the project in principle subject to funding.

Regional Council has previously approved a reallocation of funding from the HarbourLink project to another more pressing project at its March 10, 2009 meeting when funding was approved for the Ragged Lake Transit Centre.

DISCUSSION

Progress has been made on several aspects of the HabourLink project since last update:

Vessel Design/Build

In September, 2008 Expressions of Interest were received from firms and partnerships capable of designing and building catamaran ferries suited for the operation of HarbourLink service between downtown Halifax and Mill Cove in Bedford. In general, the Expression of Interest call specified a vessel with capacity for 250 passengers, speed capability of 28 knots, bow loading, and low wake characteristics. Seven submissions were received, two of which would see the vessels built in Nova Scotia. The estimated cost per vessel ranged between $6.5 million and $12.8 million. In addition to the cost, the submissions provided valuable information on operating characteristics which are being reviewed by HRM staff. These figures will be used to develop a operating plan for incorporation into a comprehensive economic model.

Ridership Market Survey

In February, 2009 an update of the 2005 market survey was completed by Harris/Decima. The market survey confirmed many of the findings of the previous work and generated some new information regarding the park-and-ride aspect of the project and the willingness of users to pay for parking. Results from that survey are included in the in-progress document HarbourLink Plan appended to this report as Attachment One. Support for the ferry remains high with 63% support in the Bedford/Sackville/Hammonds Plains Road market and 76% support in Bedford. The main reasons cited for support was the ability of the project to ease traffic, the convenience of getting downtown, and that it was a great idea for tourists and the city in general.

This market information, including data on parking, willingness to pay, and method of accessing the terminal and downtown workplaces will be part of completing the comprehensive economic model.

The data from this survey is quite consistent with the data collected in 2005 which was used to build a strong preliminary business case for the HarbourLink project.

The Bedford Waterfront Design Study

This study was recently initiated and is scheduled for completion in late 2009. The results of this study will give a clearer picture on the type and extent of development that can occur around the Mill Cove site. This will be key to the potential success of a ferry service, from the perspective of a high density of residential development providing prospective ferry passengers as well as commercial and multi-use facilities providing a potential partner in developing a ferry terminal.

Mill Cove Terminal Siting and Design Options

In February, 2009 Eastpoint Engineering was hired to develop a facility plan for a terminal at Mill Cove. This work will include focus on siting, facility servicing requirements, berthing requirements, and a plan for provide needed capacity for passengers both on an interim and permanent basis. The results of this work will be a valuable input to the comprehensive economic model.

Next Steps

Further steps will be taken by HRM staff in the next few months to complete the comprehensive economic model. These steps include:

- Review of vessel operating criteria - A significant volume of vessel operating data and nautical and climatic conditions within the harbour has now been generated. These will be used to develop a detailed operating plan for the route, including sensitivity to weather and harbour traffic conditions.

- Assessment of options - Although the options of carrying Bedford-to-Halifax trips by other transit modes, such as rail and express bus, were evaluated in the Regional Plan and included in the transportation modelling, that data needs to be updated and documented to provide a balanced perspective to Council that will facilitate informed decision making. The options assessment will include a "do-nothing" scenario, as the timing of major roadway infrastructure projects has been based on implementation of the Regional Plan transit projects, including HarbourLink, and those timelines will be affected by removal of any of the key transit projects. The growth centres of Bedford South and Bedford West will add significant trip demands to the transportation network over the next few years and these trips must be managed through increased capacity in both the transit system and the roadway network. The success of transit in attracting a high percentage of these new trips will have significant benefit in delaying the need to build expensive roadway capacity for vehicle traffic.

- Negotiation with Transport Canada regarding "Class" - Transport Canada are responsible for establishing the classification under which the HarbourLink vessels will operate. This determination will have an effect on equipment required and the design of the vessel itself. We have learned from our Expressions of Interest that the establishment of an appropriate class may reduce the cost of the vessel by more than one million dollars compared to designing to international code.

Project Timeline

Delaying consideration of final approval of the HarbourLink project to the 2010-11 budget has the following benefits:

- allows the Bedford Waterfront plan to achieve greater maturity and better certainty
- allows other important transit projects in the 5-year plan to advance, relieving the public concern that HarbourLink was taking a higher priority
- allows for the completion of a more comprehensive economic model

A revised timeline for the HarbourLink project is included as Attachment Two. This timeline shows that, should funding be committed for the project in the 2010-11 budget year, vessels could be operating by the end of 2012.

Importance of the HarbourLink Project to the Success of the Regional Plan

Part of the Regional Plan Transit System

The Regional Plan proposed a network of regional higher-order transit services to support a sub-network of local conventional transit service. This network is shown schematically in Attachment Three.

Modal split targets must be met for the plan to succeed

Attachment Four shows the transit modal split targets set in the Regional Plan. Over the twenty-five year life of the plan, growth in the region will generate many more trips that must be handled by the transportation network. More and more of these trips must be captured by transit to avoid added pressure for addition of capacity to the roadway network. Although adding bus service to areas that receive none now is beneficial, a far greater result is achieved by increasing modal split in high trip-making markets through the creation of transit service on a dedicated corridor.

Ferry transit can generate a higher transit modal split than conventional transit or MetroLink

Both the 2006 and 2009 market studies indicate a much higher potential for attracting transit riders to HarbourLink than we can achieve with conventional transit or MetroLink. Attachment Five shows the high modal splits we see today as a product of our current ferry network. We acknowledge that other options, such as rail and bus in a dedicated corridor, can achieve equally high modal splits and further comparative analysis will be conducted to supplement the analysis produced as part of the regional plan modelling.

The Regional Plan growth pattern was based on the opportunity provided by ferry network expansion

The rationale for selecting Bedford South, Bedford West and Morris/Russell as strategic growth centres in the Regional Plan was their proximity to the harbour which is essentially a dedicated corridor for ferry transit. Significant growth will occur in Bedford South and Bedford West and without a higher capacity service like HarbourLink there will be enormous demand for new buses. By attracting more of these commuting trips to ferry, there is more capacity to allocate new buses to other service areas.

BUDGET IMPLICATIONS

The capital project budget will be reduced by $800,000 as part of the 2009/10 capital budget process. The funding must be allocated back to the original source, the Strategic Growth Reserve Q126; and become part of Strategic Growth Reserve capacity toward the Canada Games committment or the four-pad arena.

Since this projects timeline will be delayed, additional funding is not required until the 2010/11 capital budget development. Therefore during the 2009/10 capital budget formation the planned budget requirement for the HarbourLink will be redistributed amongst Transit's capital projects. As approved by Council on March 10,2009, $4.6 million has already been redistributed to the Ragged Lake Transit Facility.

CV300751 - HarbourLink

Cumulative Budget Funding	$ 1,000,000
Less: Acutals & Commitments	$ 144,085
Available Balance:	$ 855,915
Less: Budget Reduction	$ 800,000
Available Balance	$ 55,915

Projected balance of uncommitted funds in Q126 to March 31, 2010 is $6,940,050.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES

Regional Council may direct staff to ammend the proposed project timeline to expedite the project or to further delay it.

ATTACHMENTS

Attachment 1: HarbourLink Plan (Interim Report)
Attachment 2: Potential Project Timeline for HarbourLink Approval in 2010-11 Budget
Attachment 3: Regional Higher-Order Transit Network
Attachment 4: Regional Plan Modal Split Targets
Attachment 5: Ferry Modal Split

A copy of this report can be obtained online at http://www.halifax.ca/council/agendasc/cagenda.html then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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_____
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Attachment One

HarbourLink Plan

Interim Report
March 27, 2009

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BACKGROUND

The concept of a ferry linking Bedford and Downtown Halifax was first evaluated in a study released in August 2004 by Cansult & LEA - *Transit Oriented Development and High Capacity Transit Opportunities Analysis - Logical Feasibility Report*. This was followed by *The Bedford/Halifax Fast Ferry Cultivation Study* presented in August 2006.

The *Bedford/Halifax Fast Ferry Cultivation Study* was a preliminary study designed to assess the viability of operating a high speed ferry service between Mill Cove in Bedford and downtown Halifax.

Based on the conclusions of the Cultivation Study, Council approved the project in principle subject to funding and directed staff to continue with the project.

In June, 2007 Regional Council reaffirmed the project in principle subject to funding.

In April 2008, Regional Council was presented with a Five (5) Year Capital Budget. This Five (5) Year Plan included investment in a range of transit projects including new transit maintenance facilities, additional MetroLink routes, Rural Express bus service, downtown shuttle bus service, fare collection technology, security and continued investment in conventional transit routes through the replacement and expansion of the conventional bus fleet.

In July 2008, the Mariport Group Ltd. was awarded a contract to assist HRM in defining the project in greater detail. This included defining the scope for an Expression of Interest for the design and construction of ferry vessels to go to international design and build groups experienced in the design and construction of high speed craft; the scope for a market survey; the scope for an RFP for the conceptual design of a Mill Cove passenger terminal and redesign of the Halifax Ferry Terminal; research and advice on regulatory matters such as Transport Canada requirements related to vessel construction, manning and safety; and general professional advice on the project.

In 2008, an EOI for vessel design and build was issued with six qualified responses received; a market survey on the support and use of a Bedford ferry service was completed and an RFP for the conceptual design of a Mill Cove passenger terminal, a temporary passenger terminal and redesign of the Halifax Ferry Terminal was issued and awarded.

In October, 2007 Regional Council endorsed the *Bedford Waterfront Vision and Strategic Action Plan* and in February 2008, Regional Council approved the *Land Use Planning Study: Western Shore Bedford Basin.* Both studies indicated a need for further detailed studies of the Bedford Waterfront and Birch Cove lands. In February, 2009, Regional Council approved an award to Ekistics Planning and Design to prepare plans and guidelines for future development of these areas. These plans will include various types of development, all of which will have an impact on traffic in the immediate area and on the business case for a ferry service between Mill Cove and downtown.

REGIONAL MUNICIPAL PLANNING STRATEGY (THE REGIONAL PLAN)

In 2006, Halifax Regional Council adopted a Municipal Planning Strategy as a framework to guide future development in the Halifax Regional Municipality. This plan acts as a framework for how future sustainable growth should take place in HRM. A plan with the goal of achieving a shared vision for the future of healthy, vibrant and sustainable communities while preserving the unique character that makes HRM an attractive place to work and live.

This plan identifies the need for investment in public transportation to reduce the impacts of urban growth on the environment and direct growth to specific compact areas where services can be provided easily and cost effectively.

Future investment in public transportation to achieve the outcomes of the Regional Plan will be directed to managing travel demand in HRM through a variety of transportation demand management (TDM) measures including:

- encouraging car and vanpooling and greater use of transit;
- strategically investing in a road transportation network designed to provide options to residents, businesses and visitors to improve the commuting experience;
- improvements to Metro Transit's service levels and ridership through increased coverage, Bus Rapid Transit (MetroLink) service and express bus service;
- encouraging alternative modes of transportation, including the provision of an active transportation plan and network; and
- **increased use of Halifax Harbour as a transportation corridor;**
- **developing centres that are designed to encourage the use of alternative modes of transportation, especially transit.**

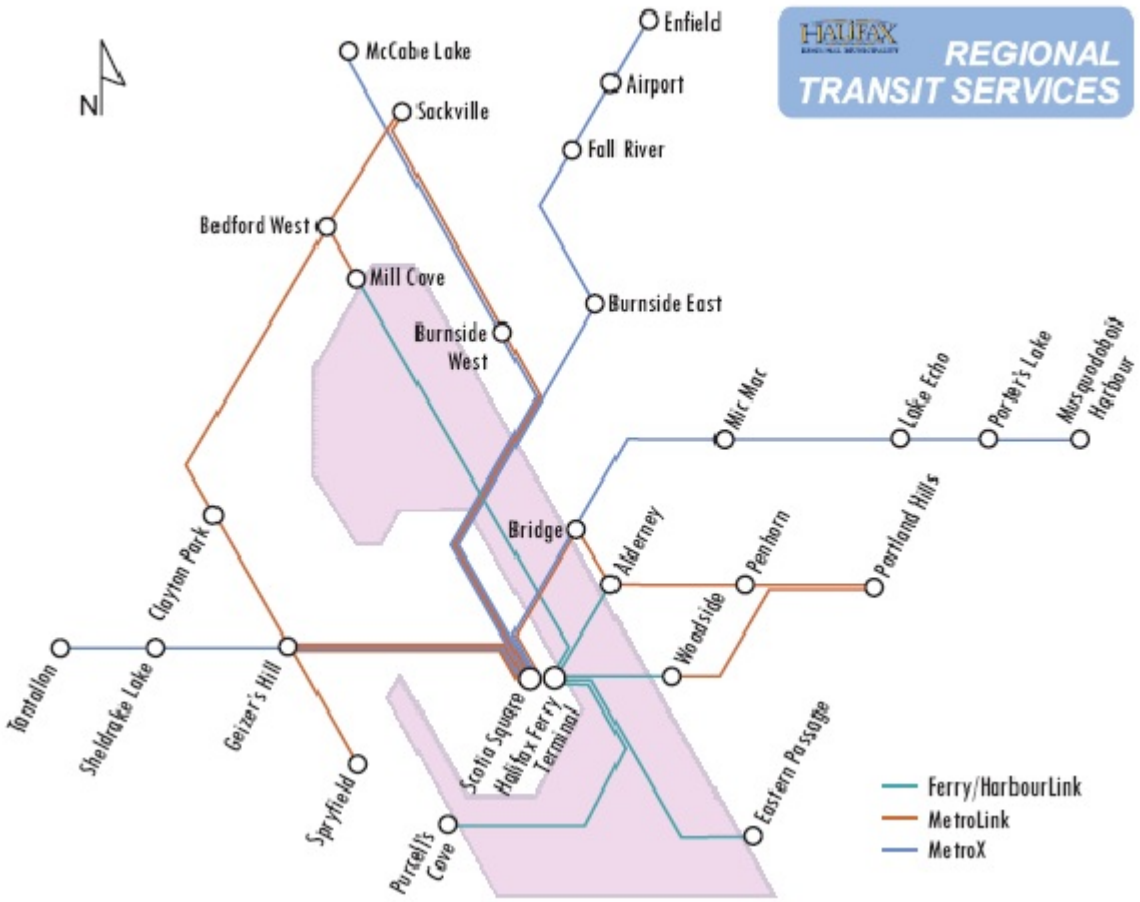
A major initiative will be to make better use of Halifax Harbour as a transportation corridor. While the harbour can be viewed as a impediment to effective transit bus service design, the use of harbour ferry service can turn this obstacle into an opportunity with the extension of commuter ferry service to other communities around the harbour. Potential development sites around the harbour provide important opportunities for transit-oriented design to support an expanded ferry network.

HIGHER ORDER TRANSIT SERVICES

Efficient public transit relies on well planned higher-order transit services. These services are the backbone of any major transit system around which local services can be planned and operated. The Regional Plan sets aggressive modal split targets in order to achieve public transit ridership levels reflected in the plan. This requires investment in services such as bus rapid transit (MetroLink), express bus service and ferry service that will move large numbers of passengers quickly.

The expansion of ferry service to Bedford will provide opportunities to encourage improved local transit services in the Bedford and surrounding area. A multi-use park & ride site in the vicinity of the Hammond's Plains Road and Bicentennial Highway with a short shuttle bus to the Mill Cove Ferry Terminal, can be used for ferry passenger parking and also for a future express bus service or

MetroLink service hub between Sackville and the Clayton Park area and as a transfer point for passengers wishing to transfer to the Bedford ferry or local transit routes.



Ferry service between Bedford and downtown is an important strategic part of a comprehensive higher order public transportation network for HRM. This network of high capacity, limited stop public transportation services will accommodate the movement of large volumes of passengers to major employment, education and other destinations or connection to other local transit services efficiently and cost effectively. Future planned higher order transit services will provide a network of these high capacity services across urban HRM.

ACCESS TO THE DOWNTOWN CORE

Halifax Regional Municipality has invested heavily in the revitalization of the downtown core which has lead to increased demand for convenient access into the city. With this, demand for such conveniences as parking, bikeways and walkways has also grown leading to a challenge in dealing with increased traffic issues downtown and the ability for people to move around easily.

Traffic issues surrounding access to the downtown area from Bedford and surrounding communities has also become a challenge as the road network become over congested.

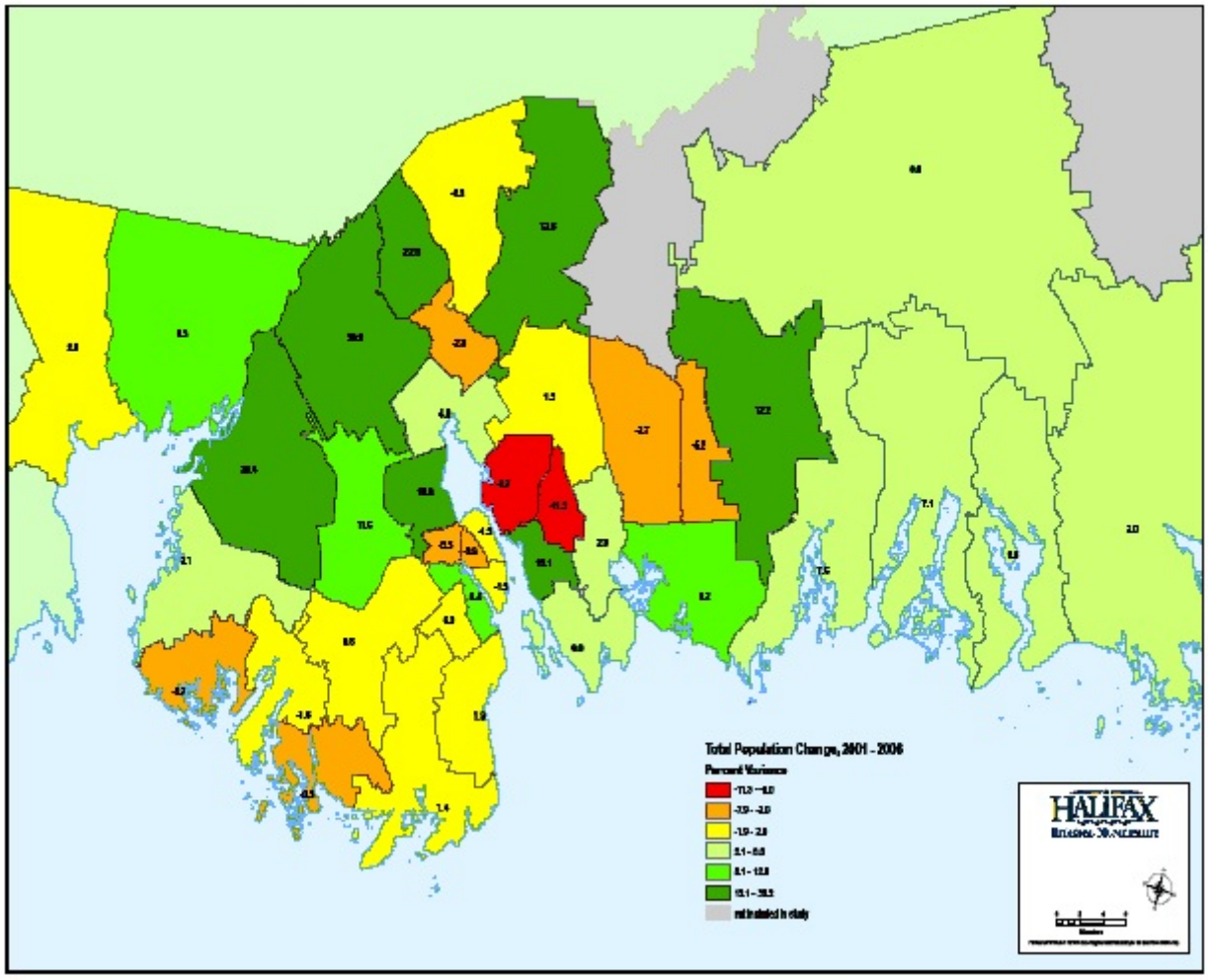
Halifax Harbour, while an obstacle to effective transportation design, offers significant capacity and potential as a transportation corridor through the use of commuter ferry service with very little infrastructure investment compared to increasing road capacity.

FUTURE DEVELOPMENT IN BEDFORD AND SURROUNDING AREA

The following map identifies growth in the Bedford South, Bedford West and surrounding areas between 2001 and 2006.

Bedford, Hammond Plains and surrounding areas are centres with considerable growth potential.

This growth is expected to continue with estimated population increases of approximately 10,000 new residents in Bedford South and Bedford West over the next 10 years placing extreme pressures



on existing street and roadways.

The introduction of ferry service to Bedford will assist in directing that growth and help alleviate

some of the traffic issues that this growth will generate. Land values can be leveraged from high capacity, high quality public transportation service offered by the expansion of ferry service to Bedford and will help Bedford become a cardinal point in the development of Bedford as an economic hub.

The construction of a new ferry terminal on the Mill Cove site can be incorporated into many types of development and will act as a catalyst in the development of the Bedford Waterfront as a residential, commercial and cultural centre.

BEDFORD WATERFRONT VISION AND STRATEGIC ACTION PLAN

In October, 2007, Regional Council approved the "*Bedford Vision and Action Plan*". The Bedford Waterfront was one of the first communities to create a Community Vision, a collaboration between Halifax Regional Municipality and local residents using a visioning exercise to engage the residents on what their community should look like in the future.

The Vision for the Bedford Waterfront will further the goals and policy objectives of the Regional Plan by encouraging the development of the waterfront area as a Suburban Local Centre. By supporting an increase in mixed use development, community services and facilities, and improved transit and active transportation linkages including a proposed high speed ferry, the waterfront could become a draw for families and commuters. By encouraging tourist amenities and cultural and social activities, the waterfront could also become a destination for other HRM residents and visitors.

A summary of the actions relating to transit and transportation identified in the action plan necessary to accomplish the vision objectives for the Bedford Waterfront include:

- Provide safe and accessible pedestrian access at various points west of the current Convoy Run access.
- Provide another vehicular access south of Sobey's parking area.
- **Introduce ferry/water taxi service.**
- **Include ferry terminal services in a mixed-use facility**. These services could be included within a multi-use community centre.
- **Provide appropriate park & ride facilities in proximity to Bedford Highway near proposed ferry jetty.**
- Examine opportunities for shared parking.
- **Provide public transportation services to and from the Bedford Waterfront and proposed ferry terminal as an integral component of higher order service and enhance regular routes feeding these services for the wider Bedford population.**
- Enhance active transportation (trail) from Shore drive, at the mouth of the Sackville River to Admiral DeWolf Park.
- Continue development of the boardwalk for accessible, non-motorized use.

BEDFORD WATERFRONT AND BIRCH COVE DESIGN STUDIES

Two previous studies - the *Bedford Waterfront Vision and Strategic Action Plan* endorsed by Regional Council in October 2007 and the *Land Use Planning Study: Western Shore Bedford Basin* approved by Regional Council in February 2008 identified the need for more detailed studies of the Bedford Waterfront and Birch Cove lands.

The Bedford Waterfront and Birch Cove Design Studies are to be cost-shared between the Waterfront Development Corporation and the Municipality and include plans and design guidelines for future development of these areas including the consideration for ferry service and associated facilities at Mill Cove. These studies were approved by Regional Council and awarded to Ekistics Planning and Design on February 24, 2009. These studies are expected to be completed by late Fall 2009.

The Bedford Waterfront and Birch Cove Design Studies will include three development design scenarios for the Bedford Waterfront including densities and types of development for each design and traffic impacts on the immediate street network. The outcomes of these designs could have a significant impact on the business case for the proposed ferry service.

METRO TRANSIT COMMUTER FERRY SERVICE

Halifax Harbour ferry service has been in place in one form or another since 1752. Today, Metro Transit operates three vessels between Dartmouth and Halifax and Woodside and Halifax, carrying nearly 1.3 million passengers annually. This represents nearly 7% of the total ridership of Metro Transit. The ferry system is an important part of HRM's integrated transit system providing free transferring between buses and ferries. A natural progression is to expand the existing ferry service to include not only Bedford and surrounding area, but eventually to other communities situated around the harbour.

Recently there has been pressure to extend Woodside ferry service from peak only to all day service. Due to the availability of only three vessels to operate the two routes between Dartmouth and Halifax and Woodside and Halifax, off-peak service to Woodside is not possible - due mainly to disruptions in service for ferry vessel maintenance. Peak service frequency between Dartmouth and Halifax is reduced from every15 minutes to every 30 minutes when a conventional ferry vessel is taken out of service for inspection, repairs and maintenance. Operating two vessels between Mill Cove and Halifax during peak travel times and reducing service to one vessel off-peak, modifications to the Woodside docking area would allow the second Bedford ferry to fill in for the conventional ferries when they are out for repairs. This improves reliability on the existing ferry service and provides an opportunity to extend Woodside service all day.

HIGH SPEED FERRY SERVICE ELSEWHERE

The use of high speed craft for commuter travel is common in many other cities around the world. These vessels operate in a number of cities in the United States, Europe, Asia, Australia an elsewhere. They offer safe, reliable and fast travel avoiding traffic congestion, road construction and other delays experienced by other means of commuter travel. Many cities integrate ferry service with other public transit services similar to Halifax Regional Municipality.

CASE STUDIES

Many cities with harbour and water access, have taken the opportunity to operate robust waterborne transportation services to increase the use of public transportation while reducing road construction and maintenance, traffic and parking demands and associated social and environmental impacts.

The following are three of many examples of high speed ferry service operating in urban environments.

Bermuda

Bermuda has invested heavily in high speed commuter ferry service over the last number of years.

Currently, Bermuda operates 11 commuter ferries including
5 conventional ferries;
2 - 170 passenger high speed catamarans operating at 33 knots;
2 - 205 passenger ferries operating at 23 knots; and
2 - 350 passenger ferries operating at 33 knots.

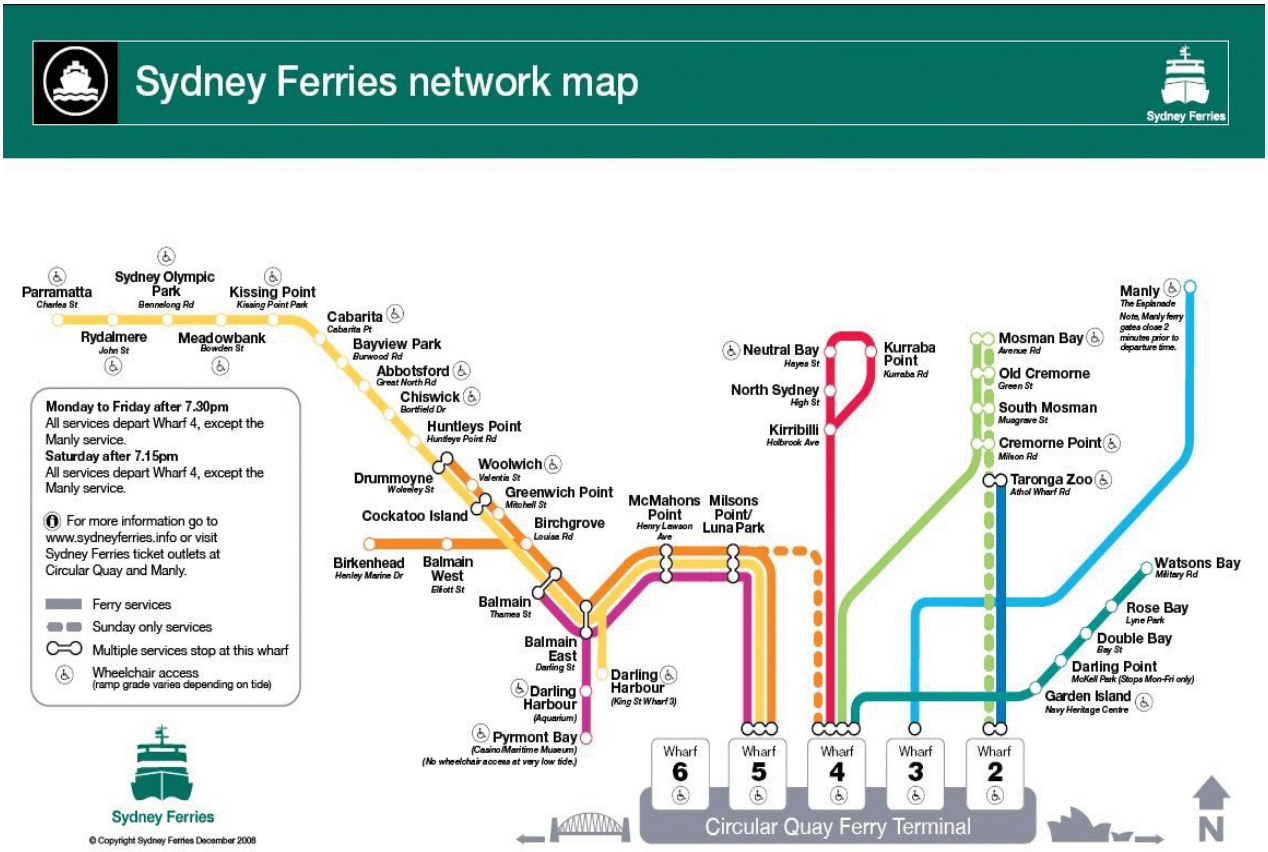
Fares vary from $2.50 to $4.00 depending on the route.

Sydney, Australia

Sydney Ferries operate a total of 28 ferries to various destinations from the main terminal at Circular Quay.

Vessels include: 7 RiverCats with a capacity of 230 passengers operating at 22 knots
2 HarbourCats with a capacity of 150 passengers operating at 22 knots and
4 SuperCats with a capacity of 250 passengers operating at 22 knots
15 conventional ferries with various capacities operating at 12 knots

Fares: One way Adult fares range from $5.20 to $7.70, and weekly TravelPasses range from $38.00 to $60.00 depending on route traveled.



New York SeaStreak, New York Waterways and Water Taxi

A number of ferry services operate along the Hudson and East Rivers, and New York Harbour serving Manhattan and surrounding communities.

SeaStreak operates 4 - 400 passenger commuter ferries between New Jersey and points in Manhattan**.** These vessels operate at a service speed of 38 knots.

Fares are $23 per one way trip and monthly passes range between $490 and $625.

New York Waterways operates a total of 34 vessels including high speed ferries serving 21 ferry routes.

Fares vary according to route.

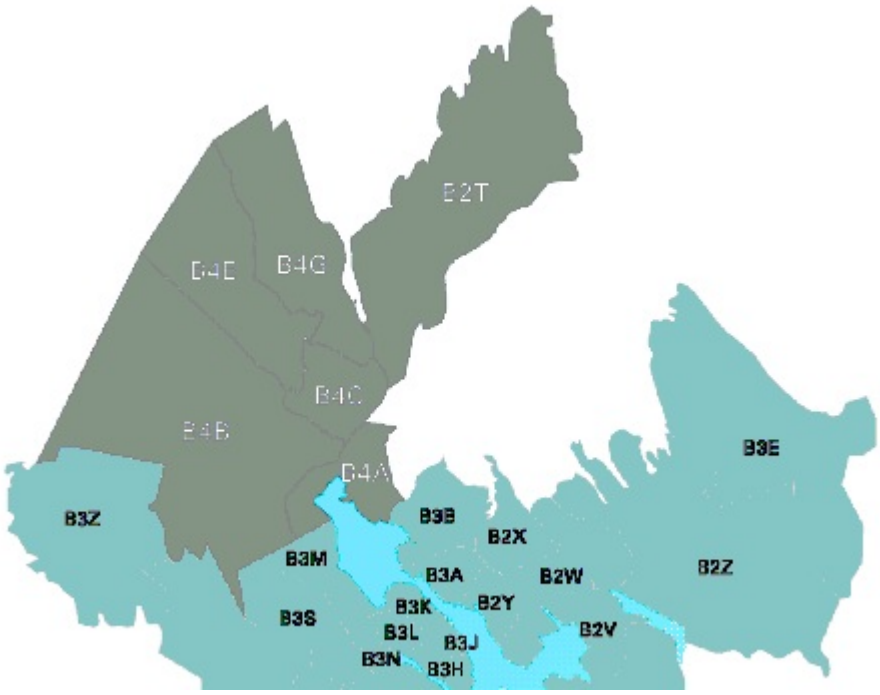
New York Water Taxis operates a total of 10 water taxis serving Manhattan Island and surrounding communities. The Water Taxi fleet includes 5 - 74 passenger vessels operating at a speed of 24 - 28 knots and 5 - 149 passenger vessels operating at a speed of 26 knots.

Fares vary from $3 to $12 with monthly passes from $195 to $360 depending on route and length of trip.

MARKET SURVEY

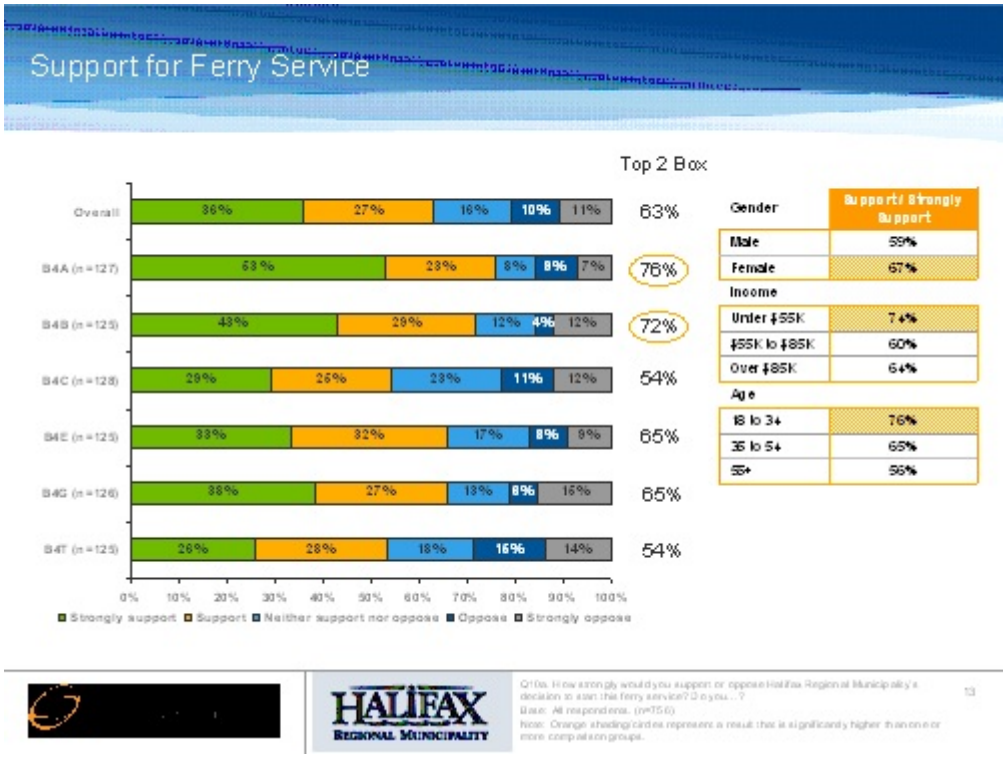
Market surveys undertaken in both 2005 as part of the *Bedford/Halifax Fast Ferry Cultivation Study* and in 2008 have demonstrated both a need for and interest in expanding commuter ferry service between Bedford and Halifax.

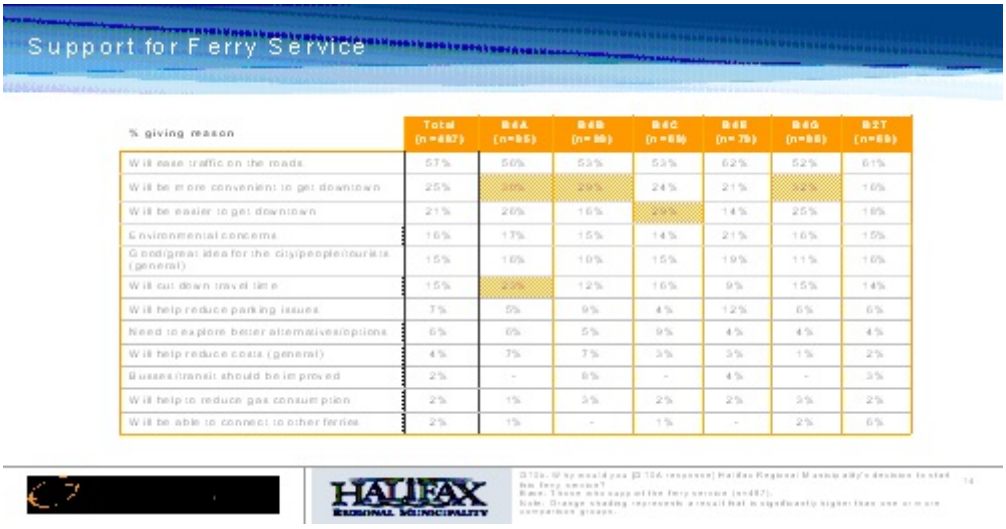
The survey covered the FSA's (Forward Sortation Areas or postal code areas) B4A, B4B, B4C,B4E, B4G, and B2T, considered as the catchment area for potential Bedford ferry users.



Highlights from the most recent survey work:

- 63% of residents in the market area either support or strongly support the Municipality's decision to start a ferry between Bedford and Halifax. 16% neither support or oppose the decision and 21% oppose it.





Opposition/Neutrality towards Ferry Service

% giving reason	Oppose (n=144)	Neutral (n=113)
Too expensive to operate	38%	8%
Buses/transit should be improved	20%	3%
Need to explore better alternatives/options	17%	5%
Waste of money/will cost taxpayers	11%	3%
Not interested/wouldn't use the service	11%	60%
Won't save travel time	11%	5%
Not enough people will use the ferry service	8%	4%
Will help reduce parking issues	2%	-
Environmental concerns	2%	-
Will cut down travel time	2%	-
Good/great idea for the city/people/tourists (general)	1%	9%
Will be easier to get downtown	1%	-
Will ease traffic on the roads	1%	3%
Will be more convenient to get downtown	1%	1%

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Q10b. Why would you [Q10A response] Halifax Regional Municipality's decision to scrap the ferry service?
Base: Those who oppose or are neutral towards the ferry service (n=257).
Note: Orange shading represents a result that is significantly higher than one or more comparison groups.

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Reasons for not Using the Ferry

%giving reason	Total (n=367)	B4A (n=41)	B4B (n=48)	B4C (n=84)	B4E (n=86)	B4G (n=83)	B2T (n=76)
Don't need to / rarely go downtown	28%	28%	31%	31%	25%	29%	28%
Location / poor bus connections	18%	10%	23%	9%	16%	30%	30%
Prefer to drive / take the car	13%	17%	9%	16%	13%	12%	10%
Takes longer than other means	12%	13%	25%	14%	5%	11%	12%
Inconvenient	8%	13%	4%	10%	8%	8%	4%
Cost / waste of money / costs taxpayers	8%	8%	4%	13%	5%	6%	5%
Ferry hours do not meet my schedule	5%	2%	8%	3%	13%	1%	1%
Prefer other forms of public transportation	5%	-	7%	3%	6%	3%	8%
Unfeasible / poor idea/ opposed	4%	-	4%	3%	5%	7%	5%
Need vehicle for work / other purposes	4%	9%	2%	3%	5%	1%	3%
Use it for social / pleasure trips	3%	7%	2%	-	7%	-	1%
Age / health / handicapped	3%	2%	4%	3%	1%	1%	4%
Retired	3%	8%	2%	2%	-	1%	3%
Issues with using the ferry in bad weather	2%	8%	2%	-	-	-	3%
Problems with water travel	2%	-	2%	2%	2%	4%	-

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Q17B. Why do you say that you are not likely to travel on the Bedford ferry?
Base: All respondents who would not be likely to travel on the ferry.
CAUTION should be used in interpreting these results due to small sample size.
Note: Orange shading represents a result that is significantly higher than one or more comparison groups.

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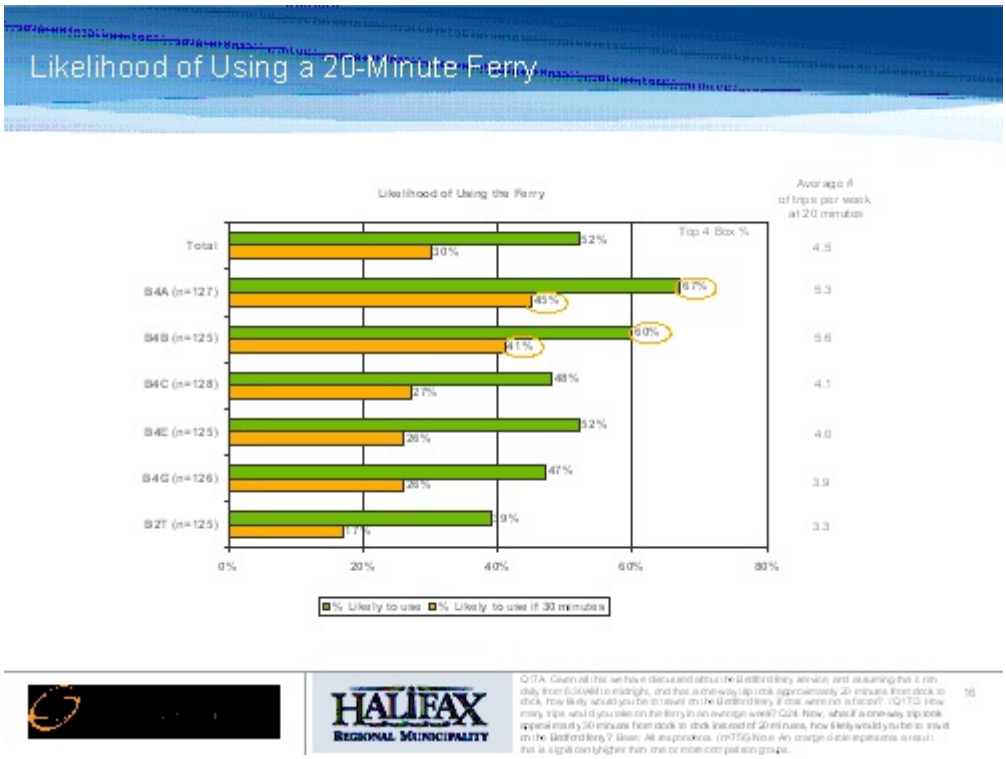
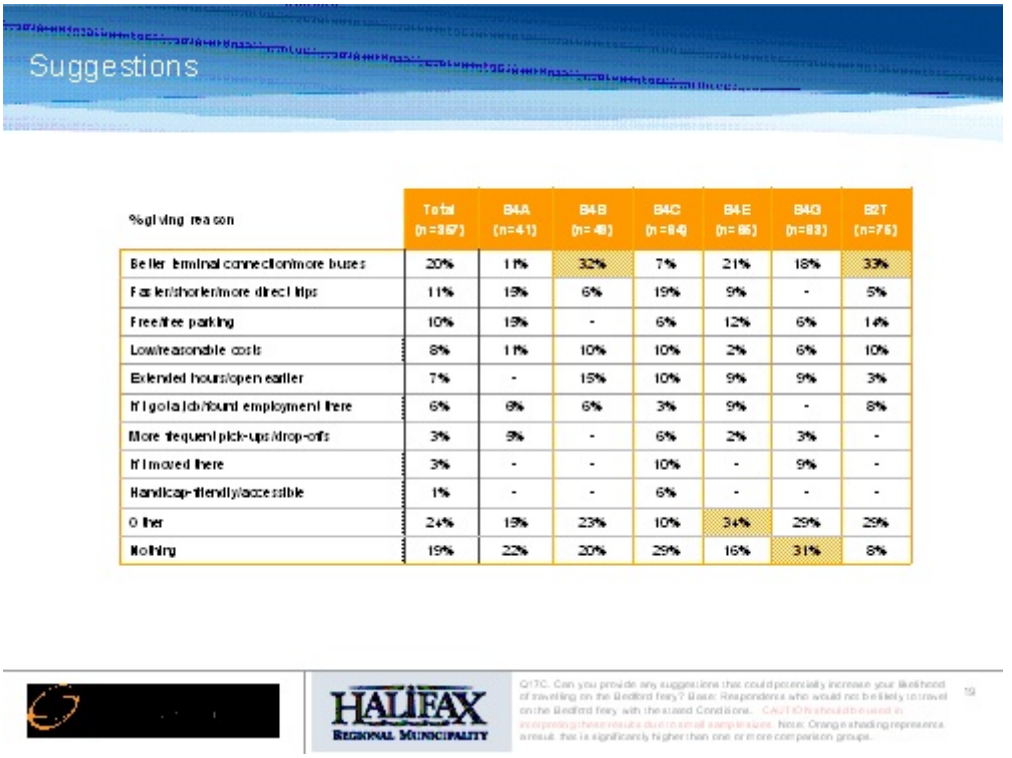
- 52% of residents in the market surveyed would use the ferry if it offered a 20 minute trip.
- Travel times both traveling to Halifax and from Halifax generally reflect peak travel time of pubic transit.

- Travel time is important, likelihood of using the proposed service drops if trip times are reduced from 20 minutes to 30 minutes.



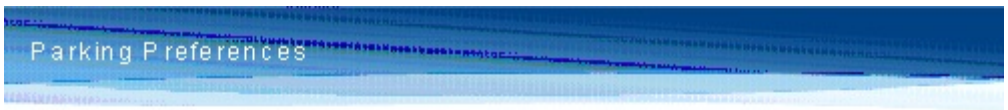


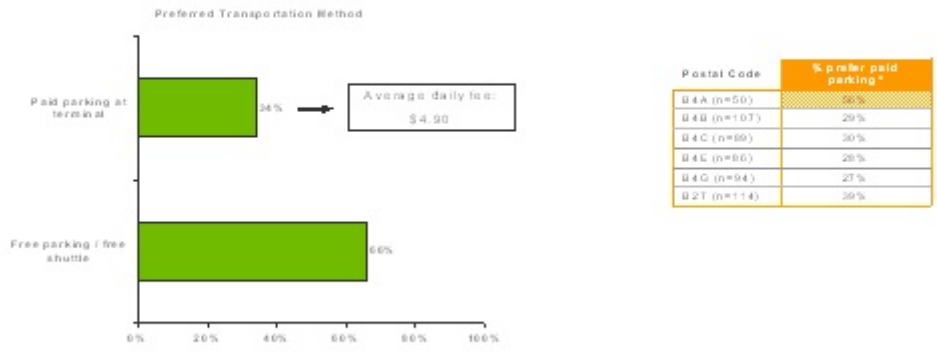
%giving reason	Total (n=387)	B4A (n=41)	B4B (n=40)	B4C (n=84)	B4E (n=86)	B4G (n=83)	B2T (n=76)
Better terminal connection/more buses	20%	11%	32%	7%	21%	18%	33%
Faster/shorter/more direct trips	11%	15%	6%	15%	9%	-	5%
Free/fee parking	10%	15%	-	6%	12%	6%	14%
Low/reasonable costs	8%	11%	10%	10%	2%	6%	10%
Extended hours/open earlier	7%	-	15%	10%	9%	9%	3%
If I got a job/found employment there	6%	6%	6%	3%	9%	-	8%
More frequent pick-ups/drop-offs	3%	5%	-	6%	2%	3%	-
If I moved there	3%	-	-	10%	-	5%	-
Handicap-friendly/accessible	1%	-	-	6%	-	-	-
Other	24%	15%	23%	10%	34%	25%	25%
Nothing	19%	22%	20%	25%	16%	31%	8%

- A majority of potential passengers would prefer to drive to the Mill Cove Ferry terminal.

%ohoo dng option	Total (n=768)	B4A (n=127)	B4B (n=126)	B4C (n=128)	B4E (n=126)	B4G (n=128)	B2T (n=126)
Drive your own car to the ferry terminal	70%	38%	87%	69%	71%	75%	91%
Take the bus to the ferry terminal	10%	3%	-	23%	17%	11%	1%
Walk to the ferry terminal	9%	40%	-	-	1%	-	-
Take the local neighbourhood shuttle	3%	8%	5%	1%	2%	4%	-
Get dropped off at the ferry terminal	2%	4%	3%	1%	1%	3%	1%
Travel as a passenger in someone s else's car to the ferry terminal	2%	1%	1%	2%	2%	1%	2%
Bike to the ferry terminal	1%	2%	1%	-	-	2%	1%
None of the above	1%	-	-	-	2%	-	1%
Would not take the ferry	4%	3%	3%	4%	4%	5%	4%

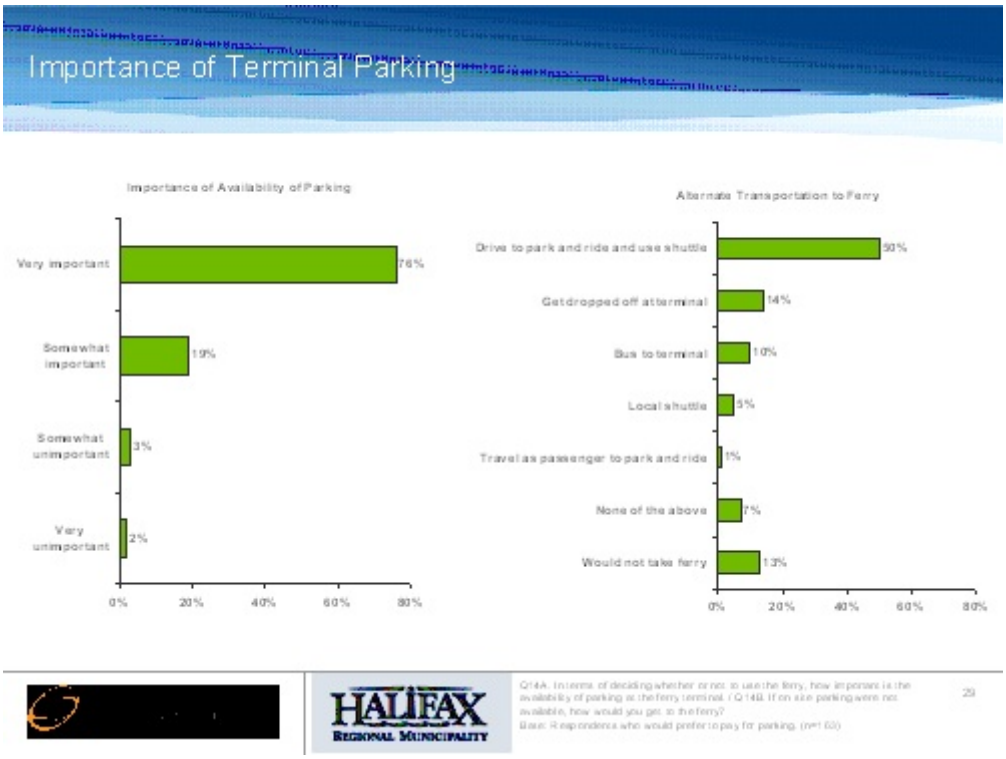
- 34% of potential passengers would be willing to pay for on-site parking at the Mill Cove Ferry Terminal**.**



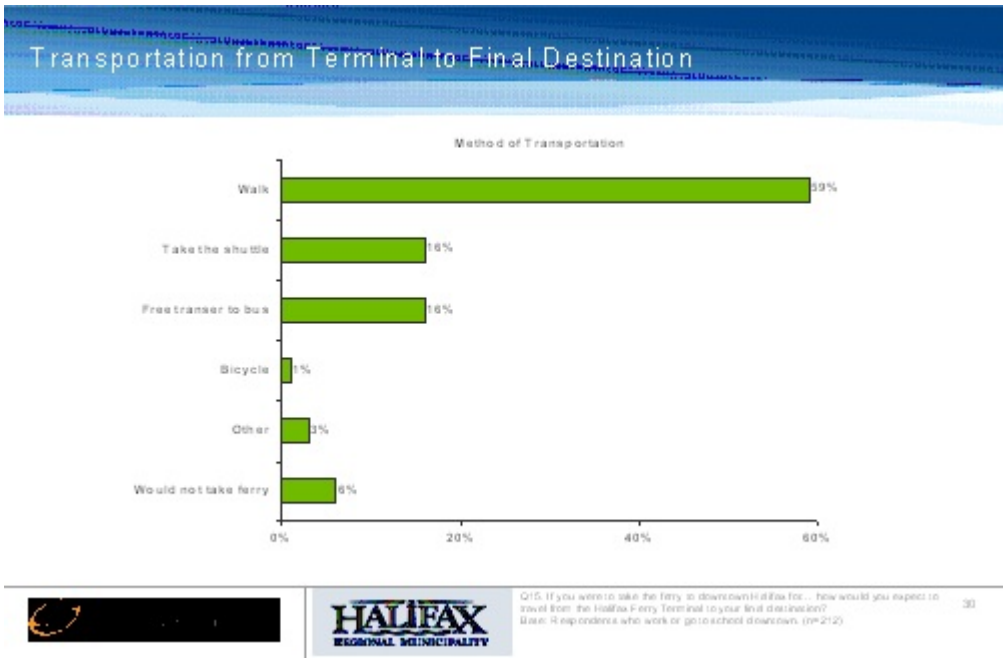


Postal Code	% prefer paid parking *
B4A (n=50)	38%
B4B (n=107)	29%
B4C (n=89)	30%
B4E (n=86)	29%
B4G (n=94)	27%
B2T (n=114)	39%

- If on-site parking were not available, most potential passengers would take advantage of alternate transportation.



- Most ferry passengers would walk or use public transit to their final destination.



RIDERSHIP, FARE REVENUE AND OPERATING COSTS

Ridership, fare levels and revenues will be estimated using information provided by the market survey as a base.

Operating costs will be generated employing a multi-purpose ferry model developed by Mariport and adapted to the needs of the Bedford to Halifax ferry service.

This model incorporates an analysis of the route, time taken and fuel consumption by using estimates of time maneuvering onto or off from the dock, time operated at low speed and slow speed, such as in The Narrows and time operating at full speed, which would be in the Bedford Basin.

Operating costs will include crew wages, terminal and boat cleaning, insurance, fare collection and all ship side maintenance.

Operating costs will include the operation of shuttle buses operating between a remote park & ride site and the ferry terminal.

Because all the ferry vessels offered through the EOI process were very similar, a generic ferry has been used in the analysis. The base case will assume two 250 passenger ferries offering an hourly schedule - 0600 - 2230 hrs. Monday to Friday with half hour service during peak travel times and a late sailing on Friday. Saturday service would be hourly between 0900 - 2330 hrs with a single boat and Sunday service would operate hourly service between 0930 - 1730hrs.

VESSEL DESIGN AND CONSTRUCTION

In July, 2008, Halifax Regional Municipality issued a Request for Expressions of Interest for the design and construction of two 250 passenger ferry vessels. Seven responses were received from international designers and builders of fast ferries. Six of the respondents were pre-qualified to receive an RFP document should the project go ahead. The proponents were provided with background research to ensure they were fully aware of the requirements for the service.

Some of the characteristics required of the responding groups were:

- Wake wash within the proposed limits (Most companies were able to show similar low wash craft that they had designed and/or built and were successfully in operation elsewhere in the world.)
- Good maneuverability and crash stop capability
- Good habitability standards relative to noise, vibration and overall comfort throughout the year
- Engine emissions characteristics that met or exceeded US EPA Tier II standards
- Long term maintainability with condition monitoring of engines and propulsion
- Low fuel consumption relative to speed and service characteristics

All designs offered were catamaran hull form constructed from marine grade aluminum. All proposals recommended propeller drives as being the most efficient at maximum speeds of 28 knots. At this stage, specific designs were not expected but a number of companies responded with vessels that met the requirements.

All proponents offered two engine systems as being the best combination of price and reliability. Generally, power requirements were in the range 900-1kw per engine, and estimated fuel consumption per trip would be less than 200 litres.

Two design/build groups included a Canadian yard, one being in Nova Scotia. A third designer indicated they would seek a Canadian yard as a partner. The other design/build groups would build in the USA, where there is considerable experience in this type of construction *(*Under NAFTA, no duty is payable on ships imported from the USA or Mexico. A duty of 25% is charged against vessels built elsewhere in the world*)*. These companies indicated their intent to involve Canadian companies in the design of, and support for the ferry vessels.

In progressing the ferry vessels, it would be necessary to agree with Transport Canada Marine Safety regarding crewing and construction standards. Because of the nature of the service and its location within the most sheltered portion of Halifax Harbour (which is classed under CSA - Canadian Shipping Standards as sheltered waters throughout the year), Transport Canada is prepared to support an application that the ferries be built to Classification Society Rules rather than the more rigorous High Speed Code Rules promulgated by the International Marine Organization and accepted by Canada. High Speed Code rules are designed more for high-speed craft operating on long open water routes. Most harbour ferries are built to Class Rules, which in no way compromises safety, but can result in significant construction cost savings.

Once a formal ruling has been obtained from Transport Canada, it would be possible to issue an RFP to the qualified design/build teams to commence the process of designing the ferries and determining the cost of construction and time lines.

At this stage it would be possible to adjust the vessel size if needed, as well as other features that may have been suggested from the consultation process.

It is expected that it would take 6-9 months from approval to have detailed responses back from the design/build groups for evaluation. Another 3 months is expected to be needed to evaluate the RFP responses, select a short list and meet with the teams and award a contract. As part of this process, design/build teams could be invited to Halifax, and subject to agreement by the Navy, participate in a simulated high-speed run on the proposed route using the navy vessel simulator.

Following the contract award, design/build teams indicated a need for up to 6 months for detailed design (although most indicated 3-4 months) with 12 months to the first vessel and the second vessel delivered 4-8 months later. Only one yard indicated that both ferries could be delivered at the same time. Some teams indicated capital cost benefits if three ferries were ordered as part of a package.

EOI responses indicated vessel design and construction costs ranging from approximately $6.5 m.

to $12.8 m. per vessel.

Note: The recent global turndown in the marine industry may make it possible to negotiate better prices for vessel construction than reflected in the EOI responses.

TECHNICAL ANALYSIS

A number of technical analysis has been undertaken to define the scope of the vessel design characteristics:

- **Wave Analysis**

  Wave analysis shows the maximum waves that can be expected on the route and assist in determining the hull form and characteristics of the vessel.

- **Wake Wash Analysis**

  Wake wash analysis looked at the wake wash created by other vessels in the Halifax Harbour including the *Whaling City Express* that was chartered for demonstration in 2006. Vessels that were measured included a navy tug, pleasure craft, a Metro Transit ferry and a large container ship. The analysis, which was conducted by one of North America's leading experts on the subject, produced a recommendation as to wash height and energy that should be met by any craft introduced. *(*The target that was given was 25 cm height and 2,000 joules/metre energy at 300 m from the track centreline.*)*

- **Harbour Traffic Analysis**

  The Narrows and the entrance to the Bedford Basin have considerable marine traffic with frequent containership and large vessel movements. For planning purposes it was determined when to expect most commercial traffic. The base planning data for the analysis was provided by Marine Traffic Services. Simulations of harbour traffic were also undertaken using the Navy vessel simulator.

- **Visibility Analysis**

  Based on historic data from Shearwater, Mariport analyzed the frequency of visibility of less than 1 km due to fog, rain, snow, etc. This will assist in determining the equipment fitted on the bridge to aid navigation.

- **Analysis of Dartmouth Ferry Traffic**

  In order to provide guidance in terms of commuter use, extensive analysis of Metro Transit ferry traffic was undertaken which show when morning and afternoon peaks would occur and how ferry use varied during the week and the year. These patterns were confirmed by the market survey.

SITE ACCESS

The present site at the Bedford Waterfront can only be accessed using Convoy Run. In order to have proper access for vehicle and bus traffic, a second access from the Bedford Highway is required. A second access is planned for the site and will be included in the design study now underway. All site access should include pedestrian and bike ways and be fully accessible.

TERMINALS AND DOCKING

The extension of ferry service to Mill Cove will require the need for a ferry terminal and docking facilities. An RFP has been awarded to Eastpoint Engineering Limited for a conceptual design of a full passenger terminal and docking facilities, the recommendation and design of a temporary passenger terminal and docking facility and the redesign of the Halifax Ferry Terminal to accommodate additional ferries.

The preferred arrangement for a passenger terminal at Mill Cove would be the integration of the terminal with a commercial, recreational or other public building. This would reduce the cost of constructing and maintaining a stand alone structure. The full terminal design will provide plans that can be built separately or incorporated into a commercial or public complex. By incorporating the passenger terminal into a commercial structure, there are synergies where the ferry service supports commercial activities and vice- versa.

If the ferry service is planned for operation prior to the Bedford Waterfront lands being fully developed to the point where a permanent terminal either as a stand alone terminal or incorporated into another structure, a temporary passenger terminal could be used on the existing lands as they now stand. A temporary terminal can be designed to be re-located to another location as the ferry service expands.

All terminals and site access would include active transportation opportunities such as walkways and bicycle paths, bicycle storage and would be fully wheelchair accessible.

Features that were identified in the market survey by potential users as important were:

- monitors with transit schedules
- seating
- coffee shop
- convenience store
- television
- day care centre

PARKING AND BUS SHUTTLE SERVICE

Parking is an important consideration in estimating potential ridership. 66% of respondents to the

market survey indicated that they would utilize off site parking and take a free shuttle bus to the ferry terminal while 34% indicated that they would be prefer to pay for on-site parking. Only 9% of respondents said they would not take the ferry if on-site parking was not available.

A park & ride site located in the immediate area of the Bicentennial Highway and Hammonds Plains Road would offer a convenient parking site for commuters traveling along the Hammonds Plains Road, and the Bicentennial Highway from Sackville, Fall River and surrounding areas.

This park & ride facility can also be used as a park & ride and transfer location to local transit routes and provides the opportunity for the introduction of a MetroLink or Express Bus service connecting Upper Sackville with Bayers Lake and Clayton Park with a transfer opportunity to either the Bedford ferry or local transit service.

Shuttle buses would provide a quick trip between the Park & Ride and the Mill Cove ferry terminal.

Should the decision be made to use a temporary terminal at Mill Cove until the lands are more fully developed, on-site parking could be made available with agreement from the Waterfront Development Corporation until such time as the site is developed. Passengers could then be directed to the remote park & ride location.

Should the Bedford Waterfront and Birch Cove Design studies consider some on-site parking, the market survey shows that many potential ferry users would consider paid parking while using the ferry service.

DOWNTOWN SHUTTLE SERVICE

Most potential passengers stating that they would use the Bedford ferry service indicate that they would walk to their final destination from the Halifax Ferry Terminal. However, a number of transit services either terminate at Scotia Square (such as the MetroLink and planned Rural Express Bus services) or at the Halifax Ferry Terminal (such as the current ferry service and the proposed Bedford ferry service). Plans include the introduction of a downtown shuttle connecting the Halifax Ferry Terminal and Scotia Square Transit Terminal with major employment, education and tourist destinations throughout the downtown area. This service will provide a convenient link for those passengers wishing to continue travel to those locations beyond walking distance.

MARKETING AND PROMOTIONS

The Bedford ferry service has been branded as “HarbourLink”, building on the success of the “MetroLink” service. The Bedford ferry service is designed with similar characteristics as bus rapid transit - high-capacity, direct, limited stop service. The ferry service can be viewed as rapid transit on water. In fact, some cities refer to high speed ferry service as “water bus” and “water taxi” service.

Information regarding fares, schedules, park & ride locations and connecting bus services will be important in providing useful passenger information.

The service will also be promoted on convenience, comfort, safety, cost-effectiveness and appeal.

When asked through the market survey, 72% of persons responding that they would use the ferry service, indicated that monitors with transit schedules are an important feature at the proposed ferry terminal.

ECONOMIC IMPACTS

The economic impacts and benefits of the HarbourLink project extend well beyond the business case and the effects on traffic movement and consider the range of social and economic effects that occur when new modes of urban transport are introduced.

Economic Impacts Due to the Construction and/or Maintenance of Ferry Vessels to Nova Scotia

If possible, HRM would prefer to have the proposed ferry vessels constructed locally. Respondents to the EOI for vessel design and construction indicated a willingness to partner with local or Canadian shipyards to either construct the vessels or provide support for the vessels.

Construction of these vessels locally will bring new knowledge and technology to the shipbuilding industry in the region. This will broaden the experience of local shipbuilders with a new product and may give them new opportunities in the high speed ferry construction industry. If vessels are built elsewhere and maintained locally, this will bring new work to local shipyards. In either case, local shipbuilding will benefit and possibly new jobs will be created.

Economic Impacts Due to the Construction of a Mill Cove Ferry Terminal and Renovation to the Halifax Ferry Terminal

The construction of a new ferry terminal at Mill Cove and the re-design of the Halifax Ferry Terminal will create new work in construction and associated industries.

Spin-offs of the new Mill Cove Ferry Terminal will include new opportunities for retail and service development. Potential retailers and service providers will have access to commuter traffic, tourists and other ferry users who will take advantage of possible products and services such as newspaper stands, dry cleaners, coffee shops, day cares, gift and novelty shops and so on.

Economic Impacts Due to Ferry Operations

Expanding ferry operations to Bedford will require additional well-trained ferry crews and operators generating new job opportunities within HRM. This will also provide more opportunity for training and career advancement to HRM employees.

Savings to Ferry Patrons

Patrons of the Bedford ferry service will benefit in many ways - through reduced travel times, travel cost savings and reduced stress.

> **Reduced Travel Times:** For many ferry patrons, this means reduced travel times compared to using the automobile or other method of travel. Reduced travel time means time for other things and can make the time more productive. In fact, using the ferry service provides the opportunity to spend that time on other matters, whether it is relaxing or conducting business during the ferry trip.
>
> **Travel Cost Savings:** The cost of regular use of the ferry service will likely be cheaper than most monthly parking alone and considerably cheaper than using a private automobile. This leaves much greater disposable income to be directed elsewhere.
>
> **Reduced Stress:** A ferry ride reduces or eliminate the stress associated with the operation of the private automobile and the stress of traffic, delays, accidents and inclement weather. The commuter can invest the relief from the stress of personal vehicle travel in more productive time at work or more relaxed time at home.

Creating a Destination

Almost anything new attracts attention. HRM could lever this attention to facilitate the creation of a new destination in the HRM.

The establishment of a new type of public transport and a new terminal in Mill Cove will bring a renewed focus on the role of Bedford and downtown Halifax with respect to residential development, business development and improving HRM's tourism industry and result in a new focal point for the HRM

Improving the Tourism Product

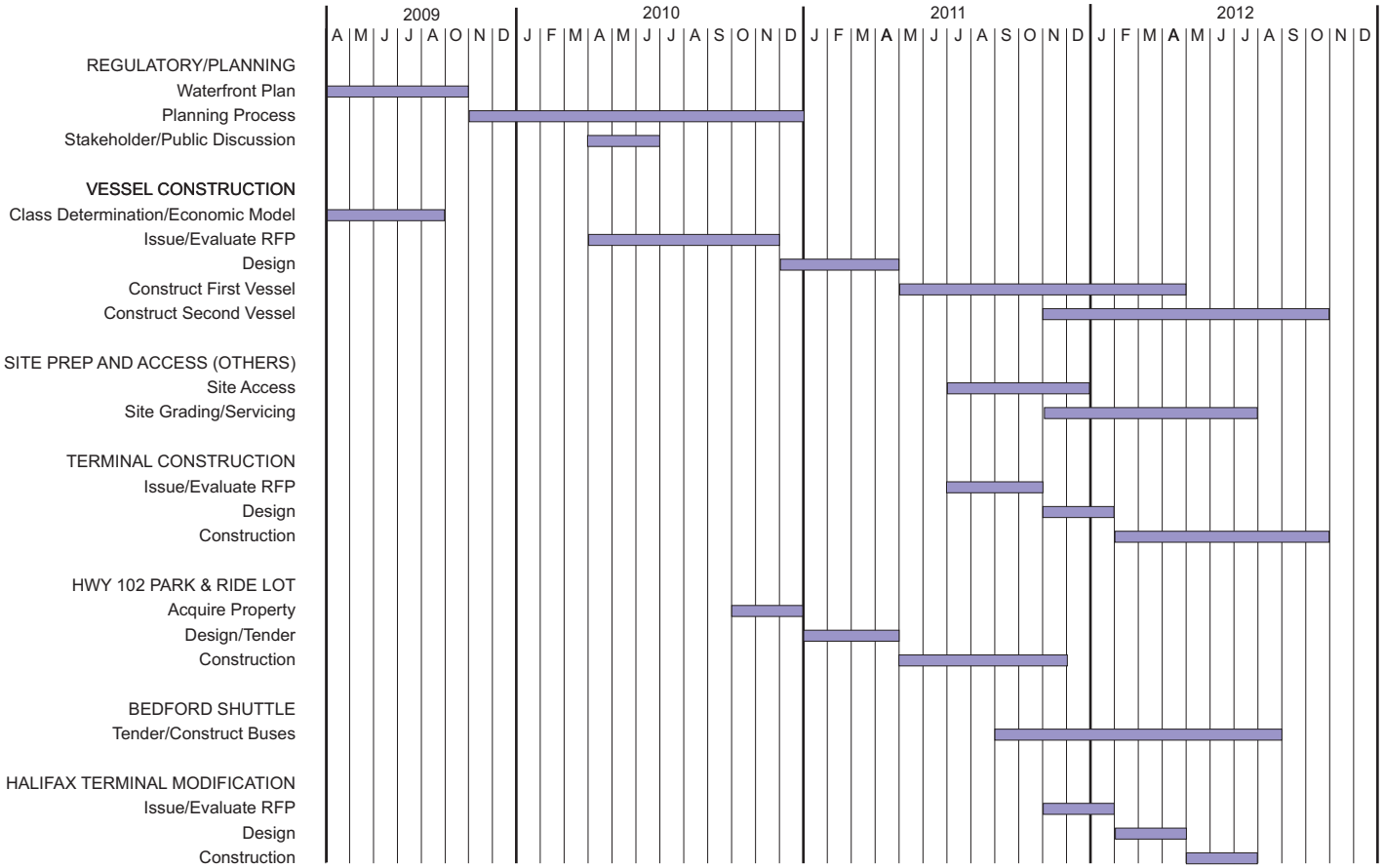
HRM already has a strong tourism product. The expansion of ferry service to Mill Cove will offer tourists another way of visiting and experiencing HRM.

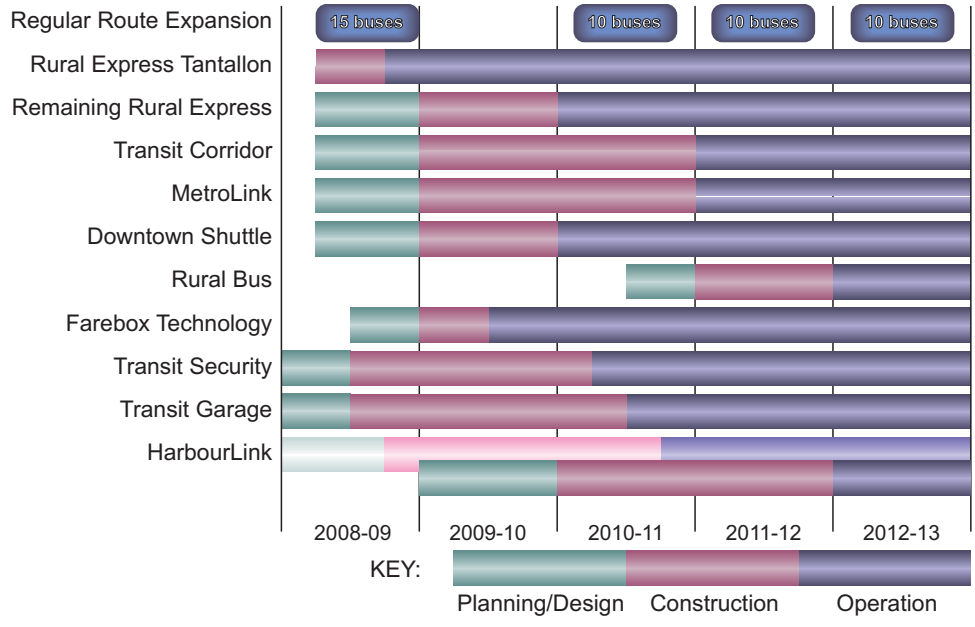
OTHER BENEFITS

Beside the economic impacts mentioned above, there are a number of other benefits associated with the expansion of ferry service to Mill Cove:

- will act as a catalyst in the development of the Bedford Waterfront
- provide another option for commuters traveling between Bedford and Downtown
- create drama in the Harbour by adding visual appeal for visitors and residents
- adds to the notion that Halifax is a 'working' harbour

- promotes Halifax as a progressive city
- relieves pressure on the Bedford Highway
- provides a opportunity for tourists and residents to enjoy the harbour
- encourages walking, biking and a healthy lifestyle





The five-year transit plan approved by Council in 2008 is shown on the right.

The faded bars for HarbourLink at the bottom of the chart indicate the original timeline and the darker bars in the foreground indicate the timeline resulting from the recommendation of this report

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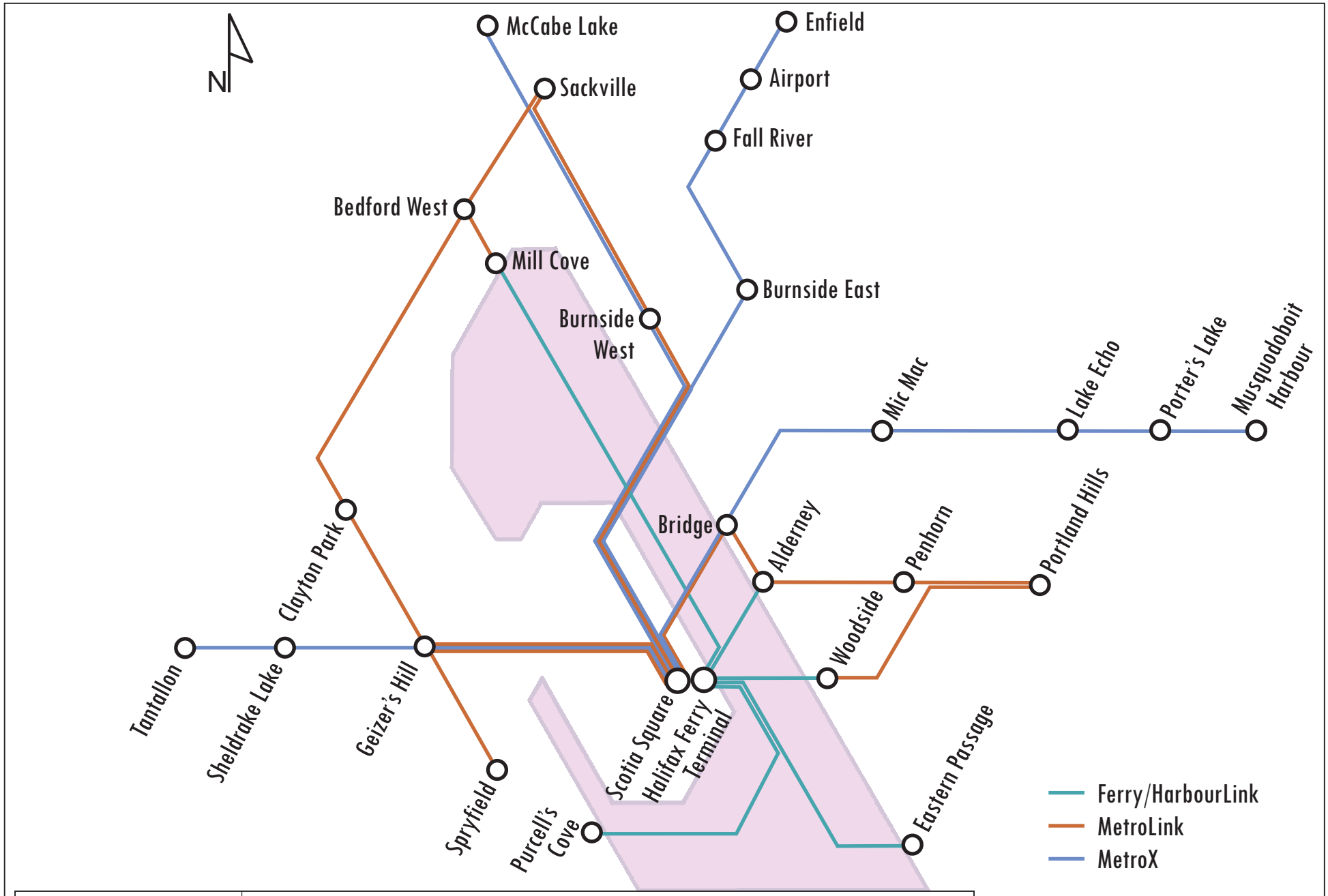
HarbourLink Project Schedule — March 31, 2009

ATTACHMENT 2

Potential Project Timeline with Funding Approval in 2010-11



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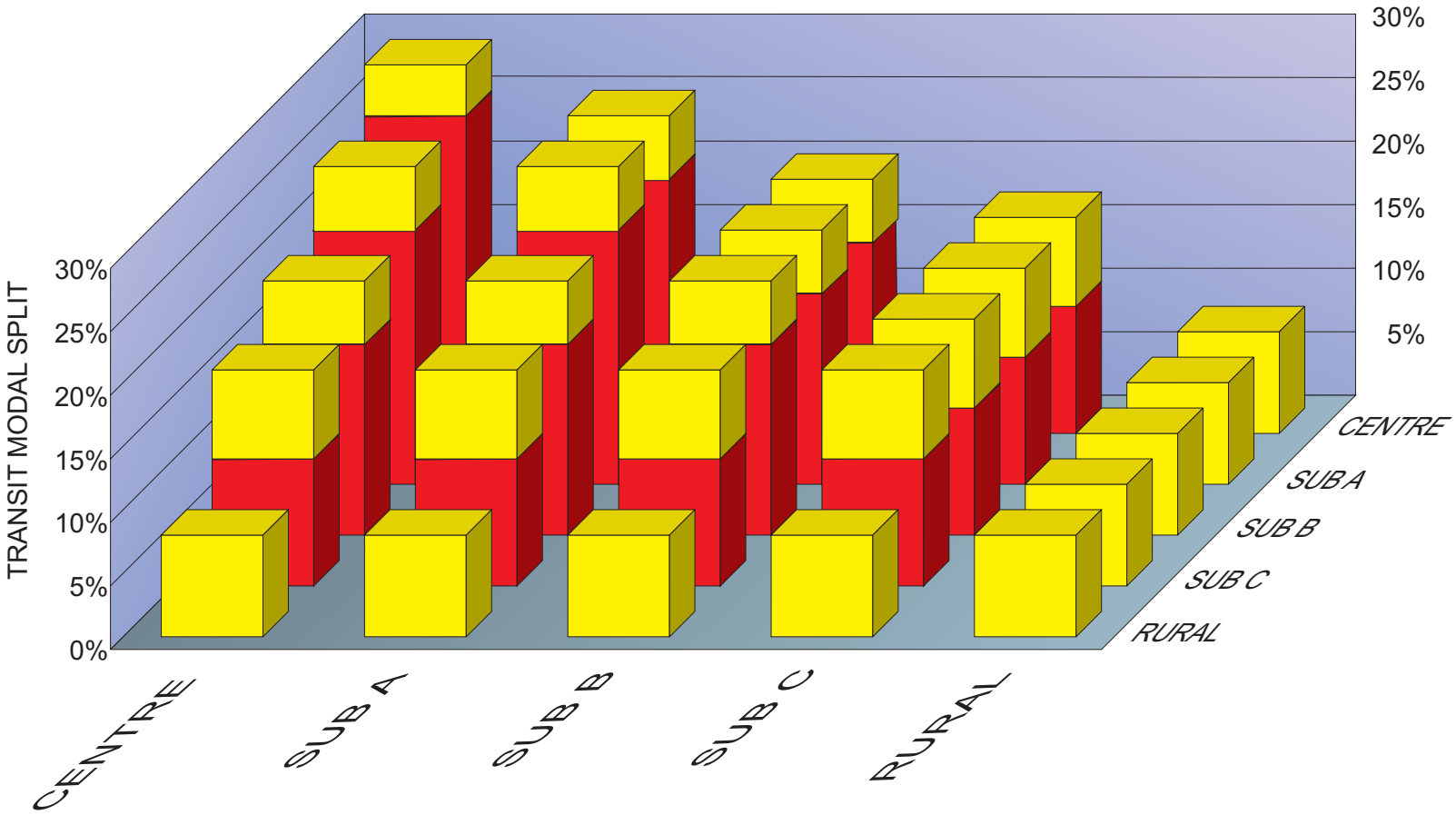
HarbourLink Project Schedule — March 31, 2009

ATTACHMENT 3

Regional Higher Order Transit Network



The Transit Modal Split (percentage of trips that use transit) is shown for every combination of origin and destination broken in Regional Center, Suburban A, B and C (concentric rings of suburban development moved outward respectively from the Centre) and Rural. The red bars indicate existing modal split (currently 18% overall) and the yellow bars indicate how much that modal split will need to increase to meet the Regional Plan targets (increase to 23% overall).

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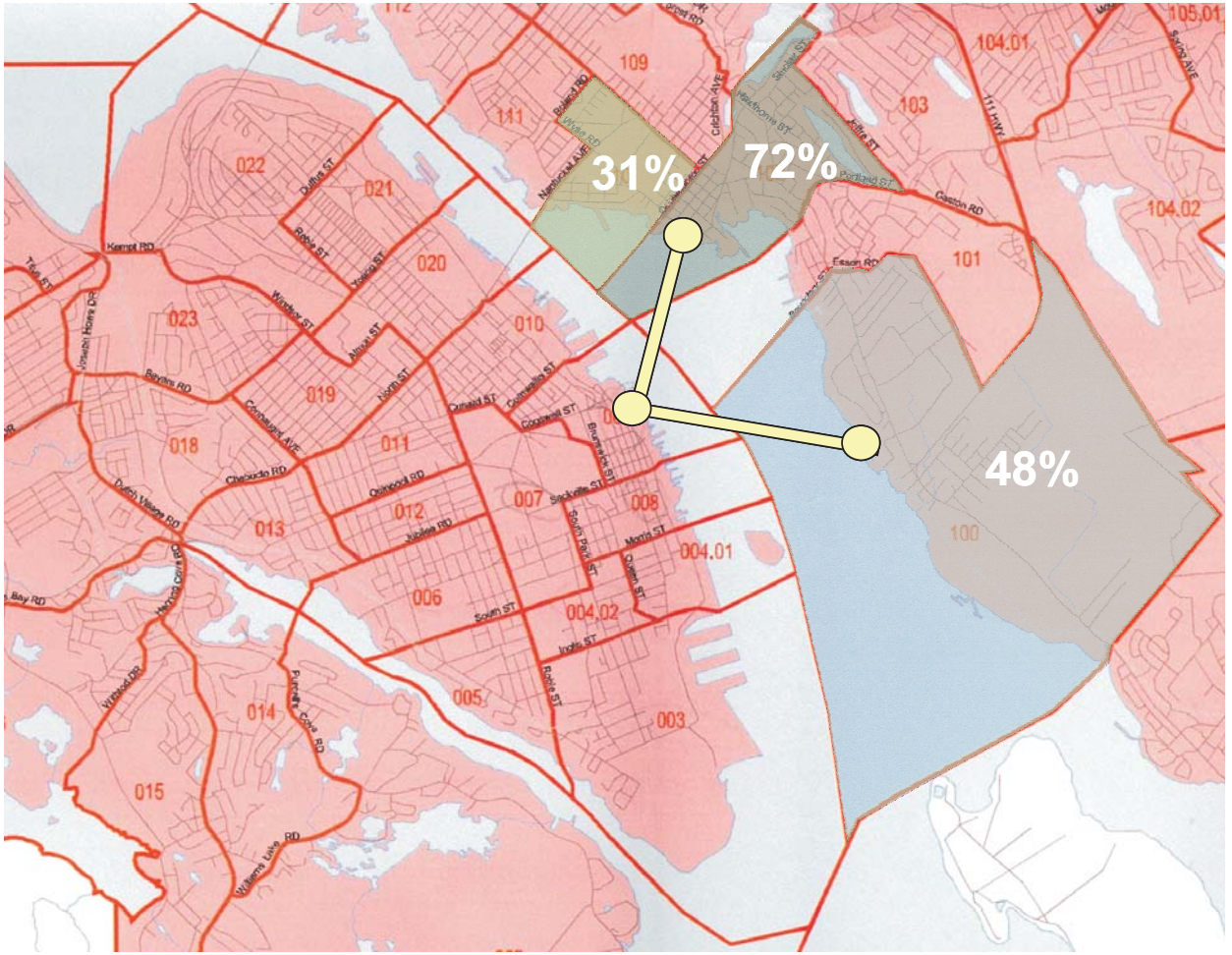
HarbourLink Project Schedule — March 31, 2009

ATTACHMENT 4

Regional Plan Modal Split Targets

Data on transit modal split for existing areas in HRM give us confidence that ferries can attract more people to use transit. The 2006 journey to work data from Stats Canada shows us that of all the census tracts in HRM, the three highest transit modal splits for trips to downtown Halifax are in Dartmouth and all three are in close proximity to existing ferry terminals. .



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HarbourLink Project Schedule — March 31, 2009

ATTACHMENT 5

Modal Split for Ferry