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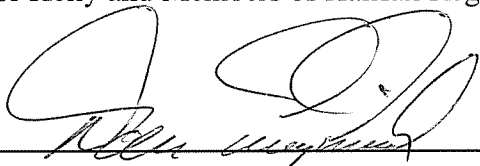


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Halifax Regional Council
July 6, 2004

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:



Dan English, Acting Chief Administrative Officer

DATE: June 28, 2004

SUBJECT: Expanding HRM's Ferry Network with High-Speed Catamarans

ORIGIN

Identification of transportation needs through Regional Planning.

RECOMMENDATION

It is recommended that Halifax Regional Council

1. Approve an increase to the 2004/05 Capital Budget for a new project "Expanding Ferry Network" in the amount of \$80,000 with funding as a non repayable withdrawal from the Service Improvement Reserve, Q310;
2. Authorize staff to proceed with an assessment and pre-design study for the expansion of HRM's harbour ferry network with funding as indicated in the Budget Implications section of this report.

BACKGROUND

HRM's Regional Plan will strive to bolster and expand the region's transportation network in a way that provides good service to existing trip demands and supports strategic decisions regarding future settlement patterns. Several opportunities to service nodes of existing commuter trip generation and/or future development potential with high capacity transit are evident around the harbour. Connecting these nodes to the Capital District using high-speed catamaran ferries appears to provide an exciting and economically sensible means of providing sound transit service.

The regional growth alternatives currently being evaluated through the Regional Plan will all require an increased level of service from our core transit network. Although extending a new route to Bedford from downtown Halifax is expected to have value regardless of future growth patterns, the longer term expansion of the ferry network will depend heavily on how and where future settlement occurs, particularly as it relates to the possible development of new trip-generating nodes around the harbour.

Over the past several months, HRM staff has explored the basics of high-speed ferries and their role in urban transit systems. Before applying this knowledge to the development of a specific plan for the Halifax Harbour and conducting further research, staff is seeking the endorsement of Regional Council to proceed with an assessment and pre-design study as described in this report.

DISCUSSION

The Opportunity

For over 250 years, ferries have played an important role in our region's transportation network. Today, ferries transport over 1.3 million passengers per year between Halifax and Dartmouth. Although there have always been opportunities to connect other destinations around the harbour by ferry, the traditionally slow travel times characteristic of water travel would not have made for the competitive travel times needed to attract high numbers of commuter trips.

That has now changed with the evolution of high-speed, low-wake catamaran ferries. Many port cities like New York; Boston; San Francisco; Sydney, Australia and Hamilton, Bermuda have developed, and are continuing to expand, their high-speed ferry networks. In HRM, our harbour provides an opportunity for us to deliver a higher class of transit travel on a corridor with no rent, no maintenance, and little congestion.

Some of the key benefits to a high speed ferry network include:

- reduction in traffic congestion
- creating transportation choice
- reduction in greenhouse gas emissions

- an important link in emergency response
- attracts development/activity to the waterfront
- no leasing, maintenance, or construction of right-of-way
- traffic congestion avoided
- safest mode of urban transit
- potential to use vessels during off-peak for tour related activities

The Vessels

Based on a preliminary comparison of operating requirements and availability of vessels, staff believe a 29 meter vessel designed by Crowther Design of Australia, or similar vessel, is best suited to our needs. The vessel capacity of 210-260 passengers (depending on design features) seems well suited to projected ridership and the majority of seating is enclosed which is necessary for all-year service. The service speed of 27 knots will provide attractive trips times but not be out-of-place in a relatively confined harbour. The vessel is specifically designed for low wake production, which will be important in minimizing impacts for other harbour users. A spec sheet attached to this report provides a glimpse of the vessel's features. The table below shows it in comparison to our existing ferries:

Table 1 Comparison of Existing Ferry to High-Speed Ferry

	Existing Ferry	High-Speed Ferry
Length	23.8 m	28.8 m
Operating Speed	7 Kts	27 Kts (30 Kts max)
Inside Passenger Seating	146	230
Outside Passenger Seating	134	30
Total Capacity (incl. standing)	398	260
Construction	Steel	Aluminum
Cost for New Vessel	\$7.5 million	\$ 3.7 million
Life Expectancy with Refit	40 years	20 years

The Terminals

To evaluate HRM's best opportunities for an initial stage of a ferry network expansion, a comparison of potential terminal sites was prepared (see Table 2).

Table 2 Comparison of Potential Terminal Sites

	Mill Cove (Bedford)	Purcell's Cove	Eastern Passage	Shannon Park	Wright's Cove (Burnside)
Parking-and-ride and transit transfer ridership	●	◐	◐	○	○
Walk-up ridership	❖❖	❖	○	❖	○
Time saving vs. land travel	◐	●	◐	○	○
Benefit of trip reduction on road congestion	●	●	◐	◐	◐
Docking facilities in place	◐	◐	◐	○	○
Terminal as a trip "destination" as opposed to a trip "generator"	❖	❖	◐	❖❖	●

Key

- High
- ◐ Moderate
- Low
- ❖❖ High Potential
- ❖ Moderate Potential

It should be noted that the feasibility and desirability of operating a service to any location will be determined through the regional plan and future settlement pattern. Mill Cove in Bedford is suggested as a first choice for a routing location as existing ridership from park-and-ride and transit transfer is plentiful and future opportunities arising from the proposed waterfront development project reinforce this location as a major transportation hub.

Purcell's Cove is suggested as a second opportunity primarily because of the potential for attractive travel times by water and the ability to remove traffic loading from the Armdale Rotary. The appropriateness of Purcell's Cove as a transportation hub, however, will be determined through the Regional Plan before any steps are taken towards implementation of this as the second new route.

Possible Implementation Timeline

A time line for establishing two new high-speed harbour ferry routes is proposed in Table 3. The stages of operation associated with that time line are shown in Table 4.

Table 3 Proposed Implementation Schedule

	2004					2005											2006					Future							
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M		A	M	J	J	A	S	
Assessment/pre-design	■	■	■																										
Facilities																													
Halifax terminal modifications																													
Mill Cove terminal/parking																													
Purcell’s Cove terminal/parking																													
Halifax terminal upgrade/relocation																													
Vessels = indicates in operation																													
Acquire Used/Lease/Construct twin vessel(s)																													
Construct 3 rd vessel																													
Operation																													

Table 4 Proposed Stages of Operation

	Total Vessels	Peak Service Frequency		Earliest Start Date
		Mill Cove	Purcell’s Cove	
Stage 1	2	20 min	-	September, 2005
Stage 2	3	20 min	20 min	September, 2006

It is intended that all vessels operating on the extended routes will be identical or nearly identical to aid in the design of loading facilities and provision of maintenance. Acquiring a used vessel in what is currently a active market provides an excellent opportunity for start-up, but expanding the fleet with vessels of consistent design may require commissioning new vessels to be built. Although vessels are available for lease within North America, availability is normally limited to winter months and may be a realistic consideration for short-term periods only.

Implementation Costs

Table 5 shows the costs expected for various components of the project. Note that these are projected costs and, other than the assessment and pre-design work, are not part of the recommendation of this report.

Table 5 Implementation Cost Estimate

	2004/05	2005/06	2006/07	Total
Assessment and pre-design	\$80,000			\$80,000
Facilities		\$4,700,000	\$800,000	\$5,500,000
Vessels	\$5,900,000		\$3,700,000	\$9,600,000
Total	\$5,980,000	\$4,700,000	\$4,500,000	\$15,180,000

Operating and Revenue Projections

Tables 6 and 7 provide a summary of expected operating costs and revenues for stage one operation. Although decisions on the fare to be charged will be reached after further research, these tables demonstrate that ferry service can be provided with a fare and recovery level reasonably consistent with the existing transit service.

Table 6 Operating Cost Projections

Component	Daily Operating Cost
Crew	\$4,400
Fuel/Lubes	\$4,000
Maintenance	\$2,000
Insurance	\$300
Total	\$10,700

Table 7 Revenue Projections

Percentage of Existing Fare	Daily Revenue
100% (\$1.75/trip)	\$3,800
125% (\$2.20/trip)	\$4,700
150% (\$2.60/trip)	\$5,600
185% (\$3.20/trip)	\$6,900
285% (\$5.00/trip)	\$10,700

Assumptions: 3300 one-way passenger trips/day
65 one-way trips/day
65% of full fare per passenger accounts for transfers, passes, and discounts

The ongoing High Capacity Transit Study has projected a potential ridership demand of 1400 one-way trips per peak (90 minutes). With a capacity of 1040 one-way trips per peak in stage one operation, there should be ample passenger demand even without additional future ridership from the Bedford waterfront development and other nearby growth areas.

Implementing a "Pilot" Route

Implementation of stage one operation may be viewed as a pilot project, with future investments dependent on those results. The investments made are easily recovered or redirected if the operation proves problematic or there is a desire to provide transit service through other means such as rail or bus. The vessels may be resold in what is currently an active market within North America and around the world. Parking and terminal facilities at Mill Cove are located so as to be easily adapted to rail or bus rapid transit service. And, of course, there is no investment needed in the "route infrastructure".

Assessment and Pre-design Deliverables

The assessment and pre-design project will be managed by HRM staff retaining consultants only for specialist assignments. The work will be completed by October, 2004 and will include the following key deliverables:

- Site visits to existing urban commuter ferry services, inspection of used vessels available for sale or lease, and development of a capital acquisition plan
- Prospectus of ferry route expansion plan to aid in seeking funding and providing information to the public
- Securing vessel certification and defining training requirements through Transport Canada
- Functional design/costing of terminal and parking facilities
- Environmental impact scoping (including public and stakeholder consultation)
- Market study

BUDGET IMPLICATIONS

The preliminary assessment work will be led by HRM staff and costs will include travel expenses and several small specialist service contracts acquired through standard procurement procedures. The \$80,000 cost of this work will be funded through a withdrawal from the Service Improvement Reserve, Q310. Funding is available from the Reserve, as confirmed by staff of Financial Services.

There are no budget implications to implementation of a ferry network expansion at this time. It is expected that funding the implementation of the project will require participation from other levels of government. Once a recommended plan and funding strategy is developed, it will be brought back to Regional Council for approval.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy and the approved Operating budget, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation. If approved, this will increase the 04/05 Capital Budget as well as increase withdrawals from Reserves.

ALTERNATIVES

Regional Council may choose to delay or not proceed with this study. This is not recommended, as HRM should position itself for potential federal funding of transportation infrastructure projects by developing a sound feasibility and implementation strategy for any recommended transportation projects.

ATTACHMENTS

Spec Sheet for 29m Crowther Design Catamaran Commuter Ferry

Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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