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**Halifax Regional Council
Committee of the Whole
November 29, 2005**

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: 
Mike Labrecque, P.Eng., Director, Transportation & Public Works

DATE: November 25, 2005

SUBJECT: Council Focus Area: Traffic and Transit

INFORMATION REPORT

ORIGIN

On October 11, Council approved a list of Council Focus Areas. Staff committed to return to Council with a status report on each item and a suggested approach to further action on the item. Discussion was to include an analysis of current initiatives, issues, options for resolution, capacity and implications.

BACKGROUND

Council has recently indicated focus areas it wishes to address. These include (in no particular order):

Regional plan
Transit
Infrastructure
Traffic
Public safety
Tax Reform
By-law enforcement

Community relations
Youth
Community recreation
Community development
Economic development

Staff committed to preparing a document on each of these focus areas for Council discussion and direction at a Committee of the Whole meeting. Specifically, staff committed to describing its understanding of Council's concerns, what is currently being done in each of these areas, the issues impacting these areas, options for addressing these issues, and the implications of pursuing these options.

DISCUSSION

The issue of traffic and transportation is significant, and there is not enough funding available to address all the concerns raised by Councillors, the public and staff. The attachment highlights the issues and options Council may wish to consider in addressing the issues. It is recognized that this issue will not be resolved quickly. Staff will work under Council's direction to address the issues as appropriate.

Traffic and Transit are two components of HRM's Transportation Network. Therefore, staff has chosen to combine these two issues for review by Committee of the Whole. Staff will be presenting options for consideration in both areas for the next four years.

BUDGET IMPLICATIONS

There are no direct budget implications as a result of the material discussed herein.

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

There are no recommended alternatives.

ATTACHMENT

Council Focus Area: Traffic & Transit

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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COUNCIL FOCUS AREA

TRANSPORTATION PLANNING

Traffic & Transit **Background and Discussion Paper**

1. INTRODUCTION

There has been continued investment in the HRM transportation system over the past few years. When you consider the transit investments stemming from the IBI Study, the introduction of U-Pass for both St.Mary's and Dalhousie, and the introduction of BRT along two corridors, HRM is in a period of unprecedented growth and improvement of this essential service. Looking forward, staff is completing a cultivation project for introduction of a fast ferry service in the Bedford Basin to be known as the Harbour Link.

Traffic modelling associated with the Regional Planning analysis has highlighted the traffic improvements which would have the most significant impact to the urban transportation network. To that end planning is well underway for the conversion of the Armdale Rotary to a Roundabout with an associated lane reversal on Chebucto Road, the widening of portions of Lacewood Drive, and improvements to the Fairview Overpass.

The above two sets of investments, will have a significant positive impact on HRM's urban transportation network, serving the scorecard citizen outcome of moving people and goods more easily.

These improvements to the transportation system notwithstanding, there continues to be more demand for transit service, more demand for traffic improvements, and assets under both categories require continued recapitalization and investment.

In preparing for the 2006/07 Business Plan, capital, and operating budgets Transportation and Public Works Services has created a listing of the transit service issues and expectations that have been raised both directly and through the Regional Planning Process. Although the Regional Plan is intended to cover a twenty-five year time horizon, there is public anticipation that many of the traffic and public transportation improvements will happen during the early years of the plan.

Metro Transit has struggled to meet current passenger travel demands in the its Urban Core Service area. These issues include enhancing service to meet frequency and coverage standards, responding to rapid growth in ridership, expanding the U-Pass program, addressing the impact of the reduced low floor bus capacity, and providing new service in response to new development.

In addition to the demands to expand transit service, Metro Transit has continuing need to replace aging and out dated infrastructure and to expand capacity of both passenger amenities (e.g. terminals, shelters, etc.) and the maintenance of other support facilities to support recent and continuing growth in service. Along with the ongoing bus replacement program, two significant expenditures that must be made are the expansion of Metro

Transit garage facilities to support the recent and expected fleet growth and replacing the aging fare collection system.

There are a number of transportation projects that have been identified through the Regional Plan and these projects are being incorporated into the proposed capital plan. We will continue to place the emphasis on addressing the traffic flow throughout the system. Managing the traffic congestion through the use of traffic signal system upgrades and miscellaneous intersection improvements is a primary focus over the next several years. A strong emphasis will also be placed on active transportation strategies to reduce auto dependency and promote non motorized choices as well as encourage transit usage.

2. COUNCIL CONCERNS

Those present at Council's workshop on setting priorities indicated a need for clear criteria for capital planning, which better reflect priorities of the public. Council has subsequently approved overall criteria. Councillors also indicated a desire to impact the 2006/007 capital budget, which is discussed in the issues section of this paper. In the longer term, Councillors identified an interest in discussing standards.

Councillors also indicated an interest in discussing traffic related issues such as traffic congestion, transportation improvements and the responsibilities of the Traffic Authority.

3. CURRENT TRANSIT INITIATIVES

There are a number of initiatives currently underway which will influence the areas of traffic and transit.

HRM Scorecard: an initiative to determine if we are providing the right services, and if we are doing a good job in providing these services. As part of this initiative, an annual citizen survey has been undertaken to obtain citizen views on HRM services supported the importance of a strong public transit system to provide an attractive alternative to the private auto.

Regional Plan: A 25 year plan to determine where and how HRM should grow. Public Transportation is one of the corner stones of the Plan to help provide mobility for residents.

Asset Management: a systematic process of operating, maintaining and upgrading physical assets cost effectively. One of the challenges Metro Transit faces is the ongoing requirement to replace aging infrastructure and expand the capacity of existing facilities to properly accommodate recent and planned future growth in ridership and service. Both existing passenger and bus storage servicing facilities are being utilized to capacity and

require expanded capacity. Both the parking at several of Metro Transit's park & ride sites are at (or beyond) capacity and the Bridge Terminal is very congested with potential conflicts between passengers, motorists, and buses. The transit service facility at 200 Ilsley Avenue is at capacity and a second small facility has been purchased in Burnside. Although this does address the immediate service needs, it does not have the capacity to allow Metro Transit to continue to grow to meet the increased passenger demand or the service enhancement proposed in the Regional Plan.

Early Approval Capital Budget: In recognition of the benefits to be gained by preparing and issuing tender documents in advance of the construction season, Council has approved portions of the capital budget in advance of approving the total capital budget. This is particularly important for bus purchases, because of the delivery lead time. Waiting until budgets are approved in April/May would effectively delay any peak service improvements until early to mid 2007.

What follows are Council's options for consideration to impact the transit system. Over the next four years there will be approximately \$100 M available for transit investment to impact this area. This is conditional on a number of factors which will be discussed at COW on 29 November 05.

Investment Options

Transit		
<i>Issue</i>	<i>Option</i>	<i>Implication</i>
Passenger Facilities - many facilities are at or near capacity, so expansion and /or improvement is required.	Invest to improve passenger facilities over the next 3-5 years.	Capital - \$ 4.3 M
Satellite Garage - there is currently fleet service capacity for 270 vehicles. Within the next few years investment will be required to build a new facility to support the growth of the fleet.	Build a new transit satellite garage to support growth of the fleet.	Capital - \$ 15-17 M Op - ~ \$ 1 -2 M / annum

<p>Fleet Recapitalization - each year a portion of the fleet needs to be recapitalized.</p>	<p>Continue to recapitalize the transit fleet.</p>	<p>Capital - \$ 38 M over four years Op - none</p>
<p>Technology Replacement - both the fare collection system (farebox) and locator technology (AVL/Go Time) require significant modifications. These are very much transit system critical.</p>	<p>Replace Farebox Replace GoTime (AVL)</p>	<p>Capital - \$2 M (over current planned funding Op - none Capital - \$ 1.5 M Op - \$.6 M</p>
<p>Existing Service Standards - existing service standards are not being met in certain areas</p>	<p>Transit investment to meet existing service standards.</p>	<p>Capital - \$10.5 M Op - \$ 1 M / annum</p>
<p>New Core Services - these include expected demand for for MSVU Upass, NSCC, Dartmouth Crossing and Sackville to Bayers Lake,</p>	<p>Planned investment to further expand service</p>	<p>Capital - \$ 4.6 M Op- \$.6 M / annum</p>
<p>Harbour Link - a higher order fast ferry serving the Bedford Basin area</p>	<p>Introduce the Harbour Link.</p>	<p>Capital - \$ 17 M Op - \$ 1 M /annum</p>
<p>Rural Express Bus - identified as a component of the Regional Plan, this higher order service would likely be introduced along the Hwy 102, 103, and 107 corridor</p>	<p>Introduce Rural Express Bus</p>	<p>Capital - \$ 16.5 M Op - \$.8 M / annum</p>
<p>Metro Link Clayton Park</p>	<p>Introduce Metro Link service from Clayton Park</p>	<p>Capital - \$ 10.5 M Op - \$.7 M /annum</p>
<p>Peninsula Transit Corridor - this would support a mainland MetroLink and Rural Express Service</p>	<p>Develop peninsula transit priority corridor</p>	<p>Capital - \$ 4.7 M Op - none</p>

Councillor Requests - this includes other various requests for service in rural and core areas.	Introduce additional services	Capital - \$ 4.6 M Op - \$.6 M / annum
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4. TRAFFIC CONGESTION

Traffic congestion is one of the inevitable products of a vibrant and growing city. Every city across the country experiences traffic delay on its roadway system to varying degrees depending on the state of the infrastructure at any given point in time. All that transportation professionals across the country have been able to do over decades is to manage the rate of growth of the ever increasing level of traffic delay. Unfortunately traffic congestion is a necessary evil that can never be eliminated. The more unconstrained infrastructure that is added to lower the level of congestion the more vehicles that can be accommodated and in particular the single occupant vehicles. In other words, “if you build it they will come”. Most cities across the country experience a vehicle occupancy to the downtown of approximately 1.2 persons per vehicle. This equates to a ratio of approximately 4 out of every 5 cars with only a single occupant. Higher levels of traffic congestion is one of the tools used to encourage people to use alternate modes of transportation such as transit, walking and biking. It also improves the propensity of commuters to choose carpooling or vanpooling and seek out opportunities to reduce their travel times by telecommuting or flextime.

Transportation improvements at specific locations will reduce the delay at that location for a period of time. However, each time a route is improved traffic redistributes to the fastest route leaving some additional capacity somewhere throughout the system. In the shorter term, it then provides an opportunity for new commuters and/or others to revert back to auto travel. In the medium to longer term as the city and the population grows there are more and more commuters to be accommodated and overall traffic delay will continue to increase. Therefore, there must be a limit on how much infrastructure is built from an economic and environmental sustainability perspective to maintain the balance of alternate travel choices.

5. CURRENT TRANSPORTATION INITIATIVES

The Regional Plan recognizes the balance of locating growth to minimizing the type and form of infrastructure that is required to support development. There are a number of transportation improvements identified over the next four years to improve existing traffic congestion levels and provide some capacity for future growth. The projects funds identified in the last two years of the existing budget envelope are still essential and assumed in the next budget program.

Previously identified projects like the Rotary/Chebucto Lane Reversal and the Lacewood/Fairview interchange are still essential to reduce the level of existing traffic congestion and provide for future growth. Funds are necessary to meet our contribution commitments to the construction of the Wright Avenue/Hwy 118 interchange. The interchange will serve new growth but in future will provide additional access to the Burnside Business Park. Although the Mount Hope Avenue/Hwy 111 interchange is in this years program, it will be completed in the fall of 2006. It will provide a new access for proposed development but will provide an alternate access for Portland Street traffic and the Woodside Industrial Park. This improvement will relieve pressure on the Portland Street/Hwy 111 interchange in the short term and provide significant benefits when Mount Hope Avenue is extended to Caldwell Road. The connection to Woodside will reduce pressure on Pleasant Street and the associated access points. Transportation demand and transportation system management strategies are all components of the Regional Plan and will further help to reduce auto dependency and the pressure on the transportation system overall.

To date Council has supported increases to the Intersection Improvement and Traffic Signals/Rehabilitation/Compliance Programs. Numerous outstanding miscellaneous intersections and roadway improvements with capacity or safety issues have been addressed such as Victoria Rd/Primrose St, Portland St/Pleasant St., Brentwood Ave/Trunk 3, Main Street (Phase 2). A number of projects are identified for the next several years with a priority on Beaver Bank Rd/Windsor Junction Cross Rd, Main Street (Phase 3), St. Margaret's Bay Road, Barrington St/Inglis Street, Quinpool/Willowtree Intersection, etc. In the last two years of the previous budget, program funds for such improvements were reduced by approximately \$200,000. This will have an impact on the number and extent of the projects that can be scheduled. One of the major impacts that is encountered is on projects which require significant land acquisition. As a result the existing program level may constrain the number and extent of the projects in a given year that could be accommodated. Therefore available funds have been reallocated to the Intersection Improvement Program to provide the additional capability to help address key locations.

With Council's support of additional funds over the last several years we have been able to address some of the higher priority traffic signal and pedestrian corridor locations. We have been able to construct/schedule at least three traffic signals and as high as four overhead flashing pedestrian corridors in a given year. Other traffic signals have also been installed or scheduled in HRM through development agreements and in some cases it has been necessary to make contributions. We believe that the available funding for traffic signals is appropriate given our staff capability. We anticipate that over the next four years we should be able to address key warranted locations with the present capacity levels.

The objective of the Traffic Signal Rehabilitation/Compliance Program is to achieve a sustainable level of structural and operational integrity of the system. One of the most cost effective ways to deal with traffic congestion is to improve signal coordination which in many cases will require major upgrades to aging equipment. These types of improvements can reduce delays anywhere from 15% to 40% in some cases. The results can produce reductions of up to 25% in travel times and 10% in fuel consumption. We have been able to make investments on the Dunbrack Street corridor and other isolated intersections. Portland Street has also been recently upgraded in conjunction with the BRT Corridor project. We are planning an aggressive schedule for the next year to identify the top 20-25 intersections in HRM where there is a need to upgrade timing plans and the equipment necessary to maximize coordination. In no particular order, we are concentrating on the following corridors:

1. Bedford Highway - Dartmouth Road to River Lane
2. Sackville Drive
3. Joseph Howe Drive
4. Lacewood Drive - Dunbrack to Willett
5. TK7 - Forest Hills to Montague
6. Cole Harbour Rd - Caldwell to Forest Hills

As part of our intersection review, we will need to examine the following items:

- Type of signal controller to be used along each corridor
- Do the existing cabinets and/or controllers need to be replaced
- Type of communication (phone lines, spread spectrum)
- How many detectors (loops) are required
- pedestrian push buttons
- transit priority options
- other upgrades (pole relocations, elimination of flashing green balls, additional conduit)
- up to date traffic counts

Once we identify what is required at each intersection, we can then set our priorities. We have intersections that are running ten year old signal timing plans and equipment which is over 20 years old. As a result it is anticipated that significant resources are going to be required in the medium to long term. Staff resources will be needed to do the necessary modeling and programming to achieve better coordination. Our capital budget funding and staff resources will dictate which corridors or sections are addressed this year and future years. Progress will be made this year but additional staff and financial resources will be needed in future years to meet acceptable standards. By far, this is the cheapest alternative compared to widening more streets. Therefore available funds have been reallocated to the Traffic Signal Rehabilitation/Compliance/Controller Programs to provide the additional capability to start addressing the deficiencies.

What follows are Council's options for consideration to impact traffic. Over the next four years there will be approximately 32 M available for traffic investment to impact this area. This is conditional on a number of factors which will be discussed at COW on 29 November 05.

Investment Options

Traffic		
<i>Issue</i>	<i>Option</i>	<i>Implication</i>
Strategic Transportation Projects - complete investment on the Armdale Rotary, Lacewood Widening, Fairview Interchange	Complete design and implementation of these projects.	Capital - ~ \$ 9.5 M Op - TBC
Access to Strategic Growth Areas - complete HRM share to Mount Hope Interchange and Wright Avenue interchange.	Complete our share for current scope of projects.	Capital - ~ \$ 8 M (HRM share)
Intersection Improvements - miscellaneous intersection and roadway improvements, to improve safety and operating efficiency.	Invest in various intersection and roadway improvements.	Capital - ~ \$ 4 M
Traffic Signal Upgrades - new signals and equipment replacement for replacement of outdated traffic signalization equipment.	Invest in new signals and upgrades of existing equipment.	Capital - ~ 6 M
Active Transportation Strategies - this includes broad strategies to reduce auto dependencies, such as biking, walking, encourage transit usage, etc.	Invest in the Active Transportation Plan and components.	Capital - ~ \$ 1.2 M (this does not include trails funding from other sources.
Wright Avenue Extension - complete connection to Hwy 118.	Invest in extension of Wright Avenue.	Capital - \$ 4 M

<p>Improvements to Burnside Drive - this includes improvements to the Burnside / Commodore intersection.</p>	<p>Invest in improvements to Burnside Drive</p>	<p>Capital - \$ 1.1 M</p>
<p>Mount Hope Extension - will provide traffic relief on Portland Street.</p>	<p>Extend Mount Hope Avenue to Caldwell Road</p>	<p>Capital - TBD</p>
<p>Larry Uteck Interchange - provide access to strategic growth area</p>	<p>Invest in the interchange on Hwy 102</p>	<p>Capital - TBD</p>
<p>Bayers Road Widening (Hwy 102 to Connaught) - provides increased capacity for growth and reduced congestion</p>	<p>Complete the widening of Bayers Road to Connaught Avenue</p>	<p>Capital - ~ 5.5 M</p>
<p>Brightwood Collector - in anticipation of the sale of the Golf Course, would provide traffic relief to Victoria Rd</p>	<p>Invest in the connection through the Brightwood Golf Course lands from Victoria Rd to Wood lawn Avenue</p>	<p>Capital - to be negotiated</p>
<p>Maroon Drive and Beaver Bank - at this point this would include alignment analysis, functional design and provision for land assembly</p>	<p>Develop alignment plans and invest in necessary land assembly</p>	<p>Capital - ~ \$ 1 M (this would have to be confirmed)</p>
<p>Sackville Expressway (Burnside Expressway) - possible contributions to Provincial expressway</p>		<p>Capital - HRM's share to be determined</p>
<p>There are many other projects that can also be considered for any additional funding opportunities. These are projects like Hwy 113/Kingswood Interchange, Barrington Street Widening, Washmill Court Underpass and the Third Harbour Crossing.</p>		

6. TRAFFIC AUTHORITY POWERS AND RESPONSIBILITIES

There have been inquiries/comments from members of Council respecting the Traffic Authority. The following is intended to provide an overview of the powers and responsibilities of the Traffic Authority in regulating and controlling traffic.

I OBJECTIVE

The Traffic Authority is responsible for the administration and application of a uniform program of traffic regulations and controls that promote the safe and efficient movement of people and vehicles on City streets.

II APPOINTMENT AND POWERS

The Motor Vehicle Act for Nova Scotia governs the structure and the powers and duties of the Traffic Authority. Specific legislation pertaining to Traffic Authorities is primarily outlined commencing with Section 86 of the Motor Vehicle Act.

The Act provides for a Provincial Traffic Authority appointed by the Minister of Transportation who is responsible for all roadways outside the boundaries of incorporated cities and towns. A Local Traffic Authority, responsible for the regulation and control of traffic within the boundaries of a city or town, is appointed by resolution of Council, Such appointments are then normally approved by the Provincial Traffic Authority and Minister of Transportation.

When the Minister of Transportation has determined that a particular portion of a street or highway within a city or town is a main throughfare (i.e., that it provides continuity for the provincial highway system), the Local Traffic Authority shall not exercise any powers as a traffic authority without the approval of the Provincial Traffic Authority. In essence, joint approval is required for an addition or change to the regulation or control of traffic on such designated throughfares.

There may be appointed by similar procedure Deputy Provincial and Local Deputy Authorities. These persons shall, during the absence or incapacity of their respective peers, assume the powers and responsibilities assigned by the Motor Vehicle Act.

The powers of the Traffic Authority involve the regulation and control of traffic on streets and highways under this jurisdiction governed by the Act. Traffic control involves the approval of signs, markings, and signals that are deemed necessary to direct and control traffic. Examples are stop signs, crosswalks, turn control signs, parking signs, traffic signals, designating one-way streets, etc.

In addition, the Traffic Authority is responsible for issuing permits to allow on-street events such as walkathons, processions, road races and parades to proceed in a safe and expeditious manner, minimizing the interference to normal traffic operations.

There are certain sections of the Motor Vehicle Act which specifically allocate jurisdiction to the “local authority” which by definition means the council of a town or city. Examples of “local authority” (i.e., City Council) jurisdiction include: designation of and by-laws regarding truck routes; licensing of taxis, bicycles, etc.; bylaws respecting parking meter rates and residential parking permits; and permanent street closures (subject to approval of Municipal Affairs Minister).