Shifting to Sustainable Transportation

A Sustainable Transportation Framework for HRM

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INTRODUCTION

The Halifax region stands at a crossroads. Major transportation investments are being proposed which could move the region either toward or away from the compact, affordable and sustainable growth envisaged in the Regional Plan. Infrastructure dollars are coming. The first five-year review of the Regional Plan is due to begin in 2011. Agencies are lining up with bold ideas, some of which are more integrated than others. Each of these decisions will affect people’s lives, the local economy and the natural environment. Rather than working at cross-purposes, it is time to imagine what is possible through integrated thinking about transportation choices, opportunities and challenges.

This report communicates the outcomes of a one-day intensive workshop held in January 2009. Hosted by the Shifting to Sustainable Transportation partnership, the workshop was designed to engage participants in a discussion about how best to move the region toward a more integrated and sustainable transportation system.

Transportation Shapes Our Lives

Most Nova Scotians depend on a private vehicle to carry out their daily activities. Yet 30% of Nova Scotians do not drive. People without a car or driver do not have the same opportunities for employment, shopping or recreation as those who do. Over the past fifty years, employers, retailers, developers and governments have adapted to and encouraged car-oriented lifestyles by moving away from town centres to far-flung locations that can only be reached by automobile. So we have a two-class society: those with easy access to a car, and those who are left out. It is time to imagine a society where public transportation and trail systems are convenient, affordable and accessible to all Nova Scotians.

Transportation Shapes Our Natural and Physical Environment

Shifting away from private vehicles to less carbon intensive forms of transportation is essential if Nova Scotia is to meet its climate change commitments. The Province has set a target to reduce GHG emissions to 10 percent below 1990 levels by 2020. Transportation accounts for over 25 percent of the province’s greenhouse gas. According to the 2006 Census, 73 percent of commuter transport in Nova Scotia was made by private single-occupant vehicles.

Less driving could help relieve pressure to widen roadways through neighbourhoods, reduce the amount of space paved over for parking and make streets safer for our children. Across North America, there is growing interest in clustering development into walkable communities, where people can reach high quality public transit on foot and shops, services, daycare and jobs are located near the transit terminal. This helps reduce pressure on valued agricultural lands and natural heritage on the outskirts of towns and cities. It also means that residents don’t have to burn a litre of gas to buy a litre of milk.
Now is the Time
The patterns of living and economic well-being of our region depend on making the right decisions now. Our future cannot be delegated solely to government, agencies or experts. This workshop is a significant first step that will serve as a catalyst for ideas and action. The shift is in recognizing that there are many options to choose from. The right choices are not just technical or economic or political. Choices should reflect the collective values and vision of all citizens for the future of the region. We need to engage in an open, public and informed discussion to shape our future. This is a shift toward openness and inclusion, a shift to environmental, social and economic sustainability. A consolidation of the workshop outcomes and products is presented here, along with some recommended next steps.

THE WORKSHOP
The past fifty years has demonstrated the social, health, environmental and financial consequences of emphasizing one particular mode of regional transportation. If we are to meet our economic, social and climate change obligations we need to think about transportation in a more sustainable way. The Shifting to Sustainable Transportation partnership aims to build on the success of the Regional Plan by engaging the community as a whole to think boldly about the future. The ideas generated from the process must capture people’s imagination, make the best use of what we have and help us become what we want to be. The workshop was conceived in the spirit of creating a collective vision of how people move from place to place within a vibrant, healthy and prosperous region. The process must move from ideas to public debate to action.

A Strategic Partnership
In January 2009 transportation advocates, practitioners, officials and interest groups came together for a full-day workshop to develop a framework called Shifting to Sustainable Transportation. Participants discussed how to create an integrated transportation system that is environmentally, socially and economically sustainable. HRM’s Sustainable Environmental Management Office and HRM transportation and regional/community planners collaborated with Dalhousie University’s Cities & Environment Unit, Ecology Action Centre’s TRAX Program as well as Transport 2000 Atlantic on hosting the workshop. This unique partnership brought together many perspectives and ultimately worked to organize a creative and neutral forum to challenge participants’ thinking about transportation in our region.

The workshop is seen as a starting point for further discussion and most importantly, action. The results have already been shared at the annual Dalhousie School of Planning student conference, Sustainable Action: Turning Challenges into Opportunities, which took place February 11-13, 2009.
Workshop Goals
- Stimulate constructive public discussion on the future of sustainable transportation in HRM
- Explore bold, environmentally, socially and economically sustainable transportation options
- Involve practitioners and advocates in transportation, planning, ecology, community health and related fields in the discussion
- Develop a concept for an integrated sustainable transportation network as a starting point for further discussion

Workshop Process
The Shifting to Sustainable Transportation organizing team worked under the assumption that engaging both transportation professionals and the public is necessary to develop a bold vision for sustainable transportation within HRM.

Over 50 local experts, advocates and stakeholders in transportation, planning and related fields were invited to an all-day workshop held January 26, 2009. While invitations focused on planning and transportation experts, advocates and community groups, participants were asked to bring their expertise, but leave agendas at the door. The goal was to structure a working session where ideas could be expressed freely, building on participants’ enthusiasm and ambitions for creating a more integrated, sustainable transportation system in HRM.

The day began with a presentation on the broad perspectives of sustainability. Through smaller group discussion, participants discussed and articulated Big Ideas to guide any sustainable transportation project and create a framework for evaluating new transportation options.

Over lunch, organizing team members and interested workshop participants worked to organize the principles, concepts and ideas into themes; a list of Big Ideas was presented back to the large group following lunch. In small groups, these ideas were then refined, tested and translated into concept maps that illustrate a multimodal transportation network for HRM.

Finally, the organizers pulled together the main themes and ideas presented in the concept maps to summarize and synthesize the day’s discussion, and outline some possible next steps for action and discussion.

Following the workshop, the organizing team synthesized the ideas presented in the various concept maps into the Multimodal Transportation Network Concept presented in this report.

Workshop Products
1. Big Ideas for an integrated sustainable transportation system (for HRM and surrounding commuters).
2. A Multimodal Transportation Network Concept
These products are presented in the following sections of this report.
THE BIG IDEAS

LAND USE
» Transportation must be integrated with development. Transportation and transit shape development rather than the other way around.
» Focus on creating complete and holistic communities (e.g., schools, shopping, retail, etc., all within a convenient distance)

ACCESSIBILITY
» Build a system that is accessible at the broadest level. There are no physical, financial or social barriers.
» Adopt a broad definition of public transportation. Everyone can get to public transportation and public transportation can get you everywhere.

HIGH QUALITY - BUILDING THE BEST
» Alternatives to private vehicles are viable, easy and fantastic.
» Movement is convenient, safe, reliable, predictable, comfortable and fun.

ENVIRONMENTAL IMPERATIVE
» A balanced approach to transportation focuses on environmental sustainability.
» Locally this will improve air quality and noise pollution, and globally it will reduce the impacts of climate change.

NEW ATTITUDES
» Adopt full cost accounting of transportation to move beyond current norms and think long-term about what we are building.
» Transportation is the foundation of healthy, happy communities.
» Indicators of success beyond economic measures must be considered (qualitative and quantitative) when making decisions about public investment.
» The legal framework governing transportation needs to support the shift to a more sustainable system.

DESIGN
» High quality pedestrian environments integrated with all other active transit modes are an essential component of the design of our cities.
» Design should consider all seasons and conditions.
» Celebrate public spaces and create new places for gathering.

INNOVATION
» Make the most out of existing infrastructure while incorporating and inventing new technologies, management practices and models of success.

INTEGRATION
» Work to complete our transportation system to connect all modes and nodes at the local, regional and global level.
» Improve collaboration amongst government departments, citizens, decision makers, businesses, planners, etc.

The Big Ideas were discussed in the morning session. A Big Idea, or guiding principle, should help people make decisions about future transportation options. They are also a tool for inspiring best practices and innovative policy changes. The Big Ideas articulate what participants agreed were fundamental aspects of good transportation planning in the future. They are the foundation of the ideas articulated in the Multimodal Transportation Network Concept.

Participants were asked if there was a particular issue or possibility related to transportation that brought them to the workshop. In small groups participants then worked toward creating a shared direction forward by outlining Big Ideas for future development of a sustainable transportation system.

Over lunch, workshop organizers and others worked on distilling and further synthesizing the Big Ideas to find the common themes across the groups.

After lunch the consolidated Big Ideas were presented back and the afternoon discussion focussed on how to implement these ideas.

[Figure 1]
Plan for new RapidBusBC service from Douglas Street to Langford in Vancouver, BC.

[Figure 2]
Bicycle and pedestrian lanes in Freiberg, Germany.
MULTIMODAL TRANSPORTATION NETWORK CONCEPT

To illustrate the ideas generated by Shifting to Sustainable Transportation participants, the workshop organizing team created a transportation network concept for the region. This concept consolidates the main approaches to implementing the Big Ideas that were discussed during the afternoon portion of the workshop:

1. Dedicated rights-of-way
2. Transportation nodes and terminals as significant places in the landscape
3. Land use patterns that are integrated with the transportation system
4. Local feeder systems serving the nodes

Buses in Bogota, Columbia move separately from other traffic making them an affordable and fast alternative to driving.

Multimodal Transportation Network Concept for HRM and surrounding commuters.

Shifting to Sustainable Transportation
Multimodal Transportation Network Concept
MULTIMODAL TRANSPORTATION NETWORK CONCEPT

Dedicated Rights-of-Way
A dedicated right-of-way for transit, high-occupancy and active transportation ensures that alternatives to single occupancy automobiles are a fast, convenient and affordable choice. A fixed route also communicates the sense of permanence essential to attract new investment and development over the long term. The actual mode of transportation and exact route selected for these corridors would be appropriate to the situation, e.g., bus, train, light rail or ferry.

Shifting to Sustainable Transportation
Multimodal Transportation Network Concept

[Figure 5]
Multimodal Transportation Network Concept: Dedicated Rights-of-Way

[Figure 6]
Street cars in Portland, Oregon
The doors open at grade level – no step up or gap to contend with.
The trip within the downtown is free. When payment is required, it is by electronic card, dispensed at each station stop. A modern, clean street car with comfortable seats awaits and, once settled, passengers are whisked quietly along the route, the conductor calling out the stations.

Inside there is conversation: catching up on gossip or commenting on the weather. In traffic, street cars have priority and in some cases dedicated lanes. You can even get to the airport – half an hour from downtown - for a mere two dollars. Why would anyone need or even want to drive a car?

[Figure 7]
Ottawa’s O-Train is a low-emission diesel light rail service on existing track. When the service is not operating, the track is available for freight.

[Figure 8]
Fast Ferry in Barcelona, Spain
Transportation Hubs
Transit hubs and terminals are locations where community, commerce and the transportation system interact. They should be permanent structures and form an integral part of the community they serve. Stations are protected from the weather, provide amenities and are comfortable and vibrant meeting places. They are well connected to the surrounding community by multi-use active transportation routes and public open space networks.

Shifting to Sustainable Transportation
Multimodal Transportation Network Concept

Illustrated concept for a transit shelter and pedestrian mall in Nappa, California.

[Figure 12] Illustrated concept for a transit shelter and pedestrian mall in Nappa, California.

[Figure 9] A transportation terminal in Vallingby, Stockholm where bus and light rail meet. Higher residential and commercial densities are within walking distance of the terminal. The regional transportation network links people to multiple employment centres.

[Figure 10] Huddersfield railway station in England offers the opportunity for a pint while you wait for the train.

[Figure 11] Bicycle parking facility within a bus terminal facilitates multi-modal connections for commuters in Barcelona, Spain.

[Figure 13] Multimodal Transportation Network Concept: Transportation Hubs.
MULTIMODAL TRANSPORTATION NETWORK CONCEPT

Land-Use
Planning for future growth must be fully integrated with planning our sustainable transportation system. The Multimodal Transportation Network Concept connects existing and future growth centres to the Regional Centre. As complete communities with a mix of residential, commercial and recreational uses, each of these centres is both a destination in its own right and the origin of commuter trips. A rich mix of land uses at the local level means less reliance on the car to access employment, recreation and services.

Although the Regional Centre is the focal point of the regional network, opportunities to balance future growth (e.g., employment and educational opportunities) across the region should be considered to support the idea of complete communities for all growth centres.

[Figure 15]
New development in Portland, Oregon complements a modern downtown streetcar line, which connects to their LRT system. Since the system was built over $2.3 billion has been invested in business development along the route.

[Figure 16]
Transit-oriented development (TOD) within a walkable distance from a transit station is physically focused on the station itself, with a supporting network of vibrant public spaces, parks, streets, bicycle ways, and well-connected, barrier-free pedestrian ways. Parking ratios are reduced and the station area is designed to give priority to the pedestrian resulting in lower levels of automobile use and higher levels of walking and transit use than found in surrounding neighbourhoods.

[Figure 17]
Development along a transit corridor from A Guide to Land Use and Public Transportation for the rural community of Snohomish County, Washington.
Shifting to Sustainable Transportation: A Sustainable Transportation Framework for HRM

MULTIMODAL TRANSPORTATION NETWORK CONCEPT

Local Feeder Routes

Not all residents will live within walking distance of a transit hub, so a feeder system is required to serve the main transportation corridors. Appropriate modes of travel would be selected based on the local situation, e.g., shared taxis, van-pools, ferries or local buses.

Integrated Transit in Geneva

While visiting Geneva in 2001, I was delighted to discover that the local transit system included not only buses, but also streetcars and small-boat ferries, all conveniently integrated using the same fare system. The outer terminus of the streetcar route blended into a circular street boulevard with grass growing between the rails, so the infrastructure for this high-capacity people mover was barely visible. Near the downtown terminal, we were able to board a small passenger ferry serving one of two routes using Lake Geneva and the river as a transportation corridor. The whole system worked together, the sum being greater than the parts.

Active Transportation in Sanich, BC.

A commuter van service in Huttingburg, Indiana offers residents transit anywhere within the city limits and medical transit to neighbouring Jasper.

Multimodal Transportation Network Concept: Local Feeder Routes

Aquabuses in Vancouver, BC ferry passengers across the harbour to several destinations.
NEXT STEPS

This *Shifting to Sustainable Transportation* report is seen as a first step in an ongoing effort to secure a truly sustainable transportation system for HRM and the surrounding commumershed. The report should inspire and encourage continued discussion leading up to the first five-year review of HRM’s Regional Plan in 2011/2012. It is a resource meant to help communities and all three levels of government take immediate steps toward a more sustainable transportation system and safeguard future opportunities for sustainable transit investment.

Workshop participants identified the establishment of a *Sustainable Transportation Task Force* as a key component of ensuring the Big Ideas outlined in this report are implemented over the long term.

The *Sustainable Transportation Task Force* would be broadly constituted, including private citizens, individuals representing all transportation modes as well as representatives from all levels of government and relevant agencies. The Task Force would also include individuals with planning, urban design and development expertise.

The *Sustainable Transportation Task Force* would be tasked with:

1. *Engaging, inspiring and informing* the public and other stakeholders as part of an ongoing dialogue and debate on how best to implement our shared vision for a sustainable transportation system;
2. Overseeing the development of a long-term *Sustainable Transportation Strategy*;
3. Identifying the immediate and long-term actions required to implement the *Sustainable Transportation Strategy*.

[Figure 22]
*The Neighbourhood Pub*

Warm, cozy, and friendly all describe the “Local” - the neighbourhood pub popularized in Coronation Street and Cheers where everyone knows your name. The local pub is a metaphor for an interesting, accessible, human-scale and vibrant, community-based meeting place. It could be a coffee shop, outdoor plaza, community centre or even transit station. The purpose in each case is the same: to encourage interaction among people.

[Figure 23]
*HRM’s MetroLink service encourages active transportation by equipping all buses with bicycle racks. The racks effectively extend the reach of cycling as a mode of transportation.*

[Figure 24]
*The Dayliner passenger train is remanufactured in Atlantic Canada and can be fully integrated with freight rail.*
We came upon this bicycle parking area by accident after walking from our hotel to the City Centre. It was amazing to see so much parking dedicated to bicycles. On our way we saw numerous cyclists as well as pedestrians. It was a truly active transportation-friendly area.
Image Credits

Figure 1. Sooke Community And Real Estate, http://642blog.ca/tag/bc-transit/
Figure 2. Synoptic, http://www.flickr.com/photos/55454013@N00/72497460/
Figure 3. Sooke Community and Real Estate Blog, http://www.flickr.com/photos/55454013@N00/72497460

**Figure 4. Shifting to Sustainable Transportation** partnership

**Figure 5. Shifting to Sustainable Transportation** partnership

Figure 6. Portland Pete, http://www.flickr.com/photos/portlandpete/462944552/
Figure 7. Earl Andrew, http://commons.wikimedia.org/wiki/File:Otrain.jpg
Figure 8. Igougo, http://photos.igougo.com/pictures-photos-l512-p368389-Ferry_terminal_-_Fast_Ferry_leaving_for_Palma.html
Figure 9. http://www.white.se/repository/typify/files/vallingbycentrum_01.jpg
Figure 10. seant_25@btinternet.com, www.flickr.com/photos/seant_25/3315962697/
Figure 12. Nappa Valley College, www.napavalley.edu/apps/comm.asp?$1=1254

**Figure 13. Shifting to Sustainable Transportation** partnership

**Figure 14. Shifting to Sustainable Transportation** partnership

Figure 15. Jason Leach, http://www.raisethehammer.org/index.asp?issue=2006/12/13
Figure 16. Transform group. 2006. A Transit-Oriented Development Strategy for HRM
Figure 17. Snohomish County Transportation Authority, Washington, http://ntl.bts.gov/DOCS/GL.html
Figure 18. Transport Canada, http://www.tc.gc.ca/Programs/Environment/utsp/casestudyactivetransportation.htm
Figure 19. Huntingburg Public Transportation Information, www.huntingburg.org/public_transportation.htm
Figure 20. www.granvilleisland.com/ www.aquabus.bc.ca/

**Figure 21. Shifting to Sustainable Transportation** partnership

Figure 22. [puamelia], flickr.com
Figure 23. Metro Transit, http://www.halifax.ca/metrotransit/images>Loading-3.jpg
Figure 24. Michael Taylor, http://www.michaeltaylor.ca/
Figure 25. Roxanne MacInnis
### Workshop Schedule

<table>
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<tr>
<th>Time</th>
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| 9:00–9:30  | Introduction  
Presentation: Sustainability context  
Marty Janowitz, Jacques Whitford |
| 9:30–11:00 | Brainstorm Big Ideas for an integrated sustainable transportation system |
| 11:15–12:00| Large group report back                                                  |
| 12:00–1:30 | Working Lunch: Consolidate and refine the Big Ideas  
Presentation: Sustainable transportation examples from Transport Canada’s Urban Transportation Showcase program  
Dave Maclsaac, Transport Canada |
| 1:30–3:00  | Illustrate a sustainable transportation system based on the Big Ideas    |
| 3:15–3:45  | Large group report back                                                  |
| 3:45–4:15  | Discussion and summary of ideas and next steps                           |