

Transportation Association of Canada  
Sustainable Urban Transportation Award  
Nomination of:

Region of Halton  
**Regional Transportation  
Master Plan Study**

March 2005

Nominated by:



March 29, 2005



Transportation Association of Canada  
2323 St. Laurent Blvd.  
Ottawa, ON K1G 4J8

Attention: Ms. Katarina Cvetkovic, Program Manager

**Sustainable Urban Transportation Award Submission**

Dear Ms. Cvetkovic

Dillon Consulting Limited is pleased to nominate the Regional Municipality of Halton for 2004 TAC Sustainable Urban Transportation Award. The nomination is for the *Halton Transportation Master Plan - "The Region in Motion"* completed in June 2004. The plan incorporated components of TAC's New Vision for Urban Transportation, including an emphasis on more compact mixed use urban form, less dependence on the single occupant auto, and sustainable financing methods to implement the strategies in the plan.

If you have any questions regarding this nomination, please feel free to contact me at 416-229-4647, ext. 407.

Yours sincerely,

**DILLON CONSULTING LIMITED**

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Partner

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Encl.

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## **Nomination**

The TAC Sustainable Urban Transportation Award is given out to people, projects or activities that promote sustainable urban transportation and TAC's New Vision for Urban Transportation. In keeping with this vision, the Regional Municipality of Halton developed the *Halton Transportation Master Plan: "The Region in Motion."* The plan incorporated components of the New Vision for Urban Transportation, including an emphasis on more compact mixed-use urban form, less dependence on the single-occupant auto, and sustainable financing methods to implement the strategies in the plan.

In recognition of the elements of sustainability achieved in this plan, Dillon Consulting Limited would like to nominate the Region of Halton for the 2004 TAC Sustainable Urban Transportation Award. The Region's Manager of Transportation, Mr. Edward Soldo, led a dedicated team of engineers and planners that provided the vision and direction to successfully guide this study to completion while gaining community buy-in and support for the plan. This has resulted in a 20-year Transportation Master Plan for the Region of Halton that places an emphasis on sustainability in transportation, land use and financing. The plan was adopted by Council in July 2004. The following nomination submission outlines the primary components of the plan and the support for the nomination of the Region of Halton.

## **Halton Region in Context**

The Region of Halton is located on the western edge of the Greater Toronto Area (GTA), encompassing a land area of approximately 967 square kilometres with a 25-kilometre frontage along Lake Ontario. The Region is comprised of four local municipalities that vary in size, population, and character; they are the City of Burlington, the Town of Oakville, the Town of Halton Hills, and the Town of Milton. The City of Burlington and the Town of Oakville make up the urban area to the south of the Region, while the Town of Halton Hills and Town of Milton make up the largely rural area in the north end of the Region.

Overall, congestion along key Regional corridors is increasing during the peak periods. Roadways in Halton are experiencing moderate to severe congestion resulting in delays to motorists, truck drivers and transit riders as well as a degradation to the quality of life for Halton residents. This deterioration is typically accompanied by higher levels of noise and air pollution, traveler frustration, decreased roadway safety and an overall reduction in Halton's quality of life.

If Halton kept its present course, one needs to imagine conditions in 2021 when the Region's population is estimated at 592,300 and its employment at 307,990. This translates to a growth of 60% and 63%, respectively, from current population and employment levels. If this growth occurs without any improvements to the Region's current transportation system (roadway network, transit service, cycling use, walking), the average trip would take 21% longer.

In order to keep a reasonable quality of life (measured in terms of mobility, environmental impact and sustainability) by 2021, Halton cannot continue its present course.

## Purpose

The purpose of the Halton Transportation Master Plan (HTMP) study was to develop a dynamic integrated transportation strategy that considered all modes of travel. The study provides the Region with the strategies, policies and tools needed to manage traffic safely, effectively and cost efficiently. It provides for a range of transportation choices to meet the needs of Halton residents in conformity with the Official Plan and the Region's Strategic Plan.

The HTMP integrates transportation and land use planning and is founded on the notion of *sustainable development*, which "*meets the need of the present without compromising the ability of future generations to meet their own need.*" The transportation network is based on a proper balance between providing transportation alternatives, protecting the natural environment, enhancing economic competitiveness, and fostering a healthy, equitable society.

The HTMP is different than traditional master plan studies in that it encourages people to change their travel characteristics and to be aware of the consequences if they do not. The HTMP is driven by goals, constraints, and consequences. It focuses on an alternate approach on how to prioritize the Region's capital program and ensure that transit and other alternatives to the single occupant vehicle are maximized.

The HTMP is a product of a significant amount of public consultation. This yielded valuable information with respect to the direction and vision for transportation in Halton, and this formed the foundation for the HTMP. The public confirmed that the Region, through the HTMP, must respect the following nine principles:

1. *Plan communities with an appropriate level of mixed use and higher densities to create an environment where there are opportunities for transportation choices;*
2. *Promote and integrate walking and cycling and other non-auto modes as alternative travel modes;*
3. *Make reducing travel demand a priority in the Region, emphasizing TDM alternatives such as ride sharing, flexible work hours, etc.;*
4. *As a priority, provide transit that conveniently and affordably serves where people need to go, both locally and inter-regionally, and promotes an integrated and accessible transit system;*
5. *Promote cost-effective new technology to better move goods and people;*
6. *Maintain and improve the road system to make the best use of the existing transportation infrastructure;*
7. *Ensure transportation decisions protect and respect the environment;*
8. *Foster political support for transportation solutions that recognize the needs of Halton as well as adjacent communities; and*
9. *Create new innovative ways to pay for future urban transportation systems.*

These nine principles reflect a sustainable vision for Halton with capital programs, strategies and policies that will guide implementation to meet these goals. These nine principles also reflect the key components of the New Vision for Urban Transportation:

- *More compact, mixed use urban form to reduce the need for travel and enhance travel options;*
- *Less dependence on single-occupant autos through more choice and opportunities for walking, cycling, transit and high-occupancy vehicles; and*
- *New financing methods, based on the user pay principle, with revenues dedicated to transportation system improvements.*

The ability of the plan to meet these three objectives is described below.

## **Transportation and Land Use: Breaking the "Vicious Cycle"**

Development in the Greater Toronto Area has traditionally followed a predictable cycle. Acres and acres of uniform lower density housing are developed further and further away from where residents work, leading to more dependence on auto use and low efficiencies for transit services. This leads to congestion, which leads to building and maintaining more roads, which leads to extending development, accommodating more auto use, and so on. This "Traditional Approach" (building more roads and providing less transit) discourages transit use and encourages single-occupant vehicle (SOV) travel.

A new Growth Management transportation approach, which encourages and supports pedestrian-friendly developments, provides more cost-efficient service and higher transit usage, and provides transportation choices, is required. Alternative non-auto travel choices, such as transit and cycling, need to be made more competitive (i.e., convenient and cost-effective) with the automobile.

On the development and policy side, the Region is in a position to influence development and services to development. The plan recognizes that although "sprawl" development has been the norm to-date, it cannot continue — it is not sustainable. Halton recognized that this continued type of development will drive higher levels of congestion and a consumption of landscape.

The Region completed the Halton Urban Structure Plan (HUSP), a comprehensive review of its growth management strategy in the late 1990s. This review was a complex and comprehensive process that dealt with a number of basic issues:

- Does Halton need/want a long term, proactive growth management strategy to deal with development pressures in the Greater Toronto Area?
- Are the growth expectations realistic and manageable?
- Can there be an acceptable accommodation of the growth management strategy with a fiscal management program?
- What are the implications of not implementing the Halton Urban Structure Plan?

The Regional Official Plan is based on the basic principles of sustainable development, land stewardship, landform permanence, and healthy communities which are solid cornerstones for land use planning in Halton.

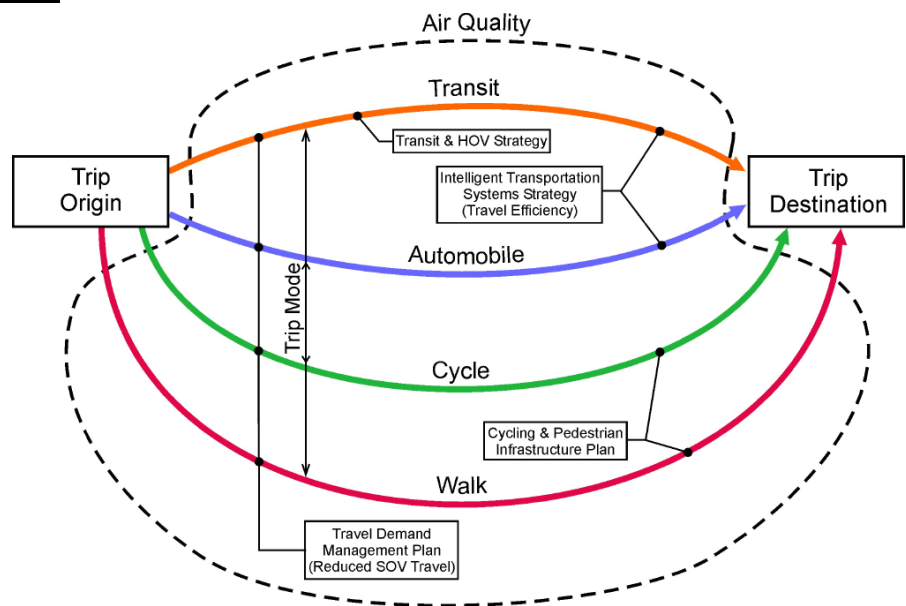
The Halton Urban Structure Plan, in conjunction with the Regional Official Plan, put in place requirements for a land use form that would help curtail this predictable cycle. However, changes in the way in which one travels cannot be successful if the full range of transportation solutions is not utilized. Policy and development decisions must support non-auto modes and must withstand the "not-in-my-backyard" concerns from the existing community about higher density and pedestrian-friendly developments. Major employers and commercial nodes need to be concentrated and easily accessible to transit and alternatives to the single-occupant auto.

The success of the HTMP strategy is highly dependent on the implementation of land use strategies that support transit. In turn, local transit service needs to support and anticipate the demand in the emerging employment and activity centres, and connect with strategic locations on the inter-regional transit network to promote transit. Services should be integrated to provide connections to proposed transfer locations.

### Influencing a More Sustainable Mode Split: What has to Change?

Halton needs to change or evolve its current thinking. Clearly the automobile is here to stay. For ride sharing and commercial activity, automobile availability is a necessity. However, with the anticipated residential and employment growth, the Region of Halton cannot continue to rely on single-occupant auto travel as the predominate transportation choice, especially in the peak periods. While roadway improvements were part of the overall network and system solution, they were identified only **after** consideration of more sustainable modes of travel and technology, such as transit, cycling, walking, TDM and transportation system management alternatives. Measuring benefits to overall air quality as a result of this plan was also an important component.

Some of the key guidelines, plans and strategies in the HTMP that help develop and enhance sustainable urban transportation are summarized below.



### ***Transit and HOV Network Plan***

The basis for the transit plan within Halton is a vision that supports:

- A high-service level local transit system;
- Continuous improvements to the inter-regional transit system (GO Transit); and
- A new Greater Toronto Area (GTA)/Hamilton-wide inter-regional rapid transit network.

With the continued worsening of congestion levels, there is an increasing opportunity for transit to play a key role in moving people in and around the Region. Through the HTMP public consultation process, residents clearly articulated the need for a customer focus when providing transit services that meet their needs and expectations. Transit services must provide competitive travel times, improved reliability of schedules, increased service options, and enhanced station facilities at each point along the trip.

GO Transit and other inter-regional services, as well as local transit routes, stations, and related facilities, need to link together to create a network of transit services that are effective in meeting customers' needs.

Overall, the transit strategy will seek to:

- Provide transit users access to proposed express and inter-regional transit corridor services;
- Operate based on local transit demand;
- Use smaller community transit vehicles, where appropriate;
- Serve communities (i.e., serve the needs of users where reducing walking distance is more important than the time spent on the bus); and
- Serve special needs (e.g., GO Rail passengers in the peak periods; the seniors market during off-peak hours).

Regional initiatives to support transit have been identified and include transit signal priorities and queue jump lanes on Regional Roads, HOV lanes on Dundas Street (Regional Road 5) and Trafalgar Road (Regional Road 3) as priorities, and an HOV education campaign as part of the implementation. In addition, Regional Council supports and encourages improved service of local transit and integrated fare technology (one transit card for all municipalities). The short- and long-term protection for primary and secondary transit corridors, as well as HOV lanes, have been identified through the HTMP and were input into the Regional Official Plan Update (ROPA 25).

### ***Intelligent Transportation Systems Strategy***

Intelligent transportation systems (ITS) include technologies, systems, and strategies to optimize the use of existing and future transportation infrastructure. The HTMP ITS strategy developed is a "road map" for the Region identifying ITS projects and setting the pace and direction of ITS investment in the Region. The strategy focuses on emergency diversion routes, traffic signal coordination, and road weather information systems.

### ***Transportation Demand Management Plan***

The goal of Transportation Demand Management / Transportation System Management (TDM / TSM) strategies are to delay, defer, and possibly even eliminate the need for significant capital investments in new transportation infrastructure.

To assist with these objectives, the HTMP recommended that the Region have a TDM Co-ordinator, with the mandate to co-ordinate public and private sector TDM initiatives in the Region of Halton and prepare a Community TDM Action Plan with the following TDM goals for Halton:

- Reduce auto demands in the commuter peak periods;
- Promote walking and cycling as alternatives to travel by private auto;
- Promote public transit and ride sharing as alternatives to travel by private auto; and
- Participate with other GTA municipalities in the GTA Smart Commute Initiative.

This strategy also involved the Region setting an example by developing a TDM / TSM strategy for their offices (The Halton Regional Centre). This includes policies that support trip elimination, reassignment, scheduling, linking, sharing, and mode choice.

### ***Cycling and Pedestrian Infrastructure Plan***

The Transportation Master Plan consultation process revealed that cyclists are a vital, growing road user group within Halton.

Cycling currently represents a minor proportion of the modal split (approximately 2% of seasonal urban trips). The goal is to provide the incentives (i.e., via the proper infrastructure, education, awareness) to increase this mode share. Although it does not provide a transportation solution on its own, cycling can contribute to a reduction of the problems inherent in an auto-based system.

As part of the HTMP, the Region has made provisions in its right-of-way dimension guidelines to make Regional Roads "friendlier" to cycling — specifically utilitarian cycling, as the goal is to reduce auto trips in the peak periods of travel. As part of this study, the Regional roadway dimension guidelines incorporate at a minimum a 4.2-metre curb lane in urban settings and a 1.0-metre paved shoulder in rural settings on all Regional Roads. Bicycle lanes may also be implemented.

The HTMP also provides for the creation of a Regional Cycling Committee (RCC) to promote, educate, and encourage the increased use of cycling. As part of fulfilling this role, it is envisioned that they would provide an advisory role on relevant Region of Halton projects.



### ***Regional Right-of-Way Dimension Guidelines***

Dimension guidelines for Regional Road rights-of-way have been prepared to accommodate the right-of-way elements that have been proposed to support the goals and objectives of the Transportation Master Plan. This includes consideration of travel lanes, accommodation of cycling strategies, median characteristics and elements of the roadway edge such as landscaping and lighting.

Within the Regional right-of-way dimension guidelines, consideration has been given to providing the appropriate environment to encourage safe pedestrian travel. In addition, the Regional right-of-way guidelines provide for alternative uses such as recreational cyclists and in-line skating through the use of multi-use pathways.

### ***Air Quality Management Strategy***

The Region has developed an air quality management strategy as part of the HTMP — a “first” in the Province of Ontario to proactively address air quality as part of its overall roadway system rather than on a project-specific basis. The strategy has demonstrated that the anticipated travel in the Region’s network will not create an environment (in terms of emissions) worse than what exists today; given that travel will almost double. The strategy includes a number of recommendations which, in most cases, complement a number of the other guidelines and plans presented in this master plan. These include:

- Promote use of public transit and TDM measures;
- Increase Regional fleet fuel efficiency;
- Maintain appropriate driving speeds (e.g., 50-80 km/h) where possible, as these minimize emissions;
- Develop design and maintenance guidelines that reduce air pollution, such as wider paved shoulders and frequent street and shoulder flushing in construction areas;
- Develop a “corporate model” to reduce emissions and lead by example; and
- Develop an education campaign to promote good air quality practices.

### **Sustainable Financing: Costing and Scheduling of the Network Plan**

After first recognizing the impacts of the other plans and initiatives that offer alternative transportation choices, a Capital Expenditure Plan for Halton’s Transportation Network to 2021 was developed. The resulting improvements have been used as background to the updating of the Regional Development Charges By-law. The cost of the transportation network plan was incorporated into the by-law so that the costs of the new system are appropriately allocated between the existing community and new development.

Development charges are charges that the Council of a Municipality may by by-law impose against land to pay for increased capital costs required in a Roads Program because of increased needs for services arising from development of the area to which the by-law applies.

The Roads Program is divided into repaving, reconstruction, and road widening / new alignments. The funding for the capital expenditure plan is shared among existing development (current tax base) and anticipated development ("Growth"). The repaving program will be funded entirely from existing development. Most new construction will be funded by "Growth" via development charges; however, deductions for benefit to existing development are made.

This process of capital financing has helped put in place a user-pay funding approach that allows growth-related capital to be paid for by development and infrastructure improvements and regular maintenance to be paid for by existing development (the Region).

The overall capital cost of road improvement in the Transportation Master Plan is \$804 million. Of this amount, 80.1 percent is funded through development charges, with the remaining paid for by Regional tax dollars. This provides a fair and equitable user-pay process that ensures recommendations in the plan are achievable.

## Implementation

The Vision and Principles established for the HTMP emphasize the need to reduce the demand for automobile travel and to optimize the existing roadway network while meeting the infrastructure needs of all modes. The relationship among the various guidelines, plans and strategies and the principles established for the HTMP are summarized in the following table. The achievement of these strategies will help Halton Region accommodate growth in a sustainable manner, which respects the TAC's New Vision for Urban Transportation.

HALTON TMP STRATEGIES								
	Transportation Demand Management (TDM) Program	Intelligent Transportation Systems (ITS) Strategic Plan	Air Quality Management Strategy	Cycling and Pedestrian Infrastructure Plan	Transit and HOV Strategy	Regional ROW Dimension Guidelines	Regional Road Network	Implementation of the TMP
<b>Transportation Principles</b>								
Plan communities with an appropriate level of mixed use and higher densities to create an environment where there are opportunities for <b>transportation choices</b> .	√			√	√			√
Promote and integrate walking and cycling and other non-auto modes as <b>alternative travel modes</b> .				√		√		
Make <b>reducing travel demand</b> a priority in the Region, emphasizing TDM alternatives such as ride sharing, flexible work hours, etc.	√							
As a priority, provide transit that conveniently and affordably serves where people need to go, both locally and inter-regionally, and promotes an <b>integrated and accessible transit system</b> .					√			
<b>Promote cost-effective new technology</b> to better move goods and people.		√						

	HALTON TMP STRATEGIES							
	Transportation Demand Management (TDM) Program	Intelligent Transportation Systems (ITS) Strategic Plan	Air Quality Management Strategy	Cycling and Pedestrian Infrastructure Plan	Transit and HOV Strategy	Regional ROW Dimension Guidelines	Regional Road Network	Implementation of the TMP
Maintain and improve the road system to <b>make the best use of the existing transportation infrastructure.</b>	√	√					√	
Ensure transportation decisions <b>protect and respect the environment.</b>			√				√	
<b>Foster political support</b> for transportation solutions that recognize the needs of Halton as well as adjacent communities.								√
Create new <b>innovative ways to pay</b> for future urban transportation systems.								√
<b>Key Public Comments</b>								
Need for better transit connections within the Region, especially for senior and student populations					√			
Need better connections between different transportation modes	√	√			√			√
Key way to improve congestion is to get people out of their cars	√				√			√
Incentives and education are needed for both public and politicians to change from the current car-focused culture.								√
Need to create more pedestrian/cycling friendly roads				√		√		
Human health is important issue			√					
Improve the road system recognizing that cars will remain important for Halton							√	√

In conclusion, the HTMP will result in:

- Making the best use of the available capacity using technology where it makes sense;
- A transit system that is integrated within the Region and connected to adjacent municipalities;
- Transit and multi-occupant vehicles in HOV lanes;
- TDM as an active part of daily travel, supported by systems and leadership to make a difference;
- Street design that supports the system and pedestrian mobility;
- A road system where cyclists feel more comfortable; and
- An expanded road system that meets the needs of resident and business traffic.