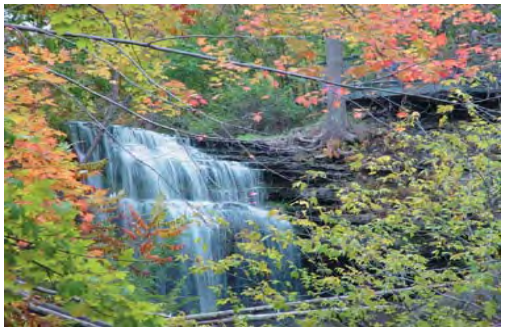
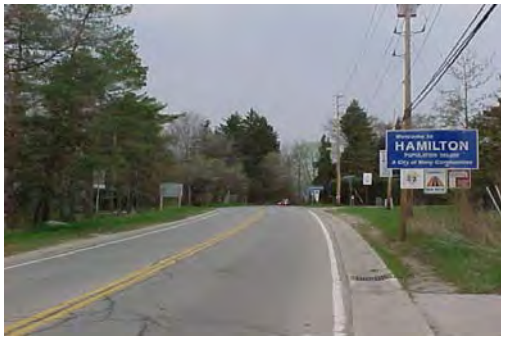
APPENDIX O

Phase 2 Report





WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN PHASE 2

FINAL REPORT

February 2008

City of Hamilton
City of Burlington
Region of Halton

04-3687

Submitted by:
Dillon Consulting Limited

in association with:
Dalton Consulting
Lura Consulting

DILLON CONSULTING

Dalton Consulting Lura Consulting

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GLOSSARY

Glossary of Transportation Planning Terminology

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1.0 INTRODUCTION

1.1 Background

In 1992, the Council for the former Town of Flamborough approved a "Preferred Growth Strategy" to allow for the expansion of the urban area around Waterdown. The Preferred Growth Strategy recommended that Waterdown North and Upcountry Lands be placed within the urban boundary. Although, initially adopted by Town of Flamborough Council in May 1992, a revised version of OPA 28 and related Memorandum of Agreement was ultimately approved by Cabinet in June 2002 by Order in Council 1262/2002, in response to a series of appeals. Cabinet's approval of OPA 28 and the related agreement requires the completion of:

- A Class Environmental Assessment for the Dundas Waste Water treatment Plant expansion/diversion;
- A Master EA Transportation Study;
- A Waterdown South Sub-watershed Study; and,
- Secondary plans where council deems necessary.

Having identified the nature and magnitude of the expected transportation deficiencies, alternative opportunities for improvement at a strategic level were then identified by the study team to resolve them.

In September 1999, the former Town of Flamborough, the City of Burlington, the Regional Municipality of Halton, and the former Region of Hamilton-Wentworth received the *Aldershot/Waterdown Master EA Transportation Network Master Plan Report*, Volumes 1 and 2. The purpose of the study was to identify a future transportation network required to accommodate urban development in the communities of Waterdown and Aldershot. The report did not receive council approval from any of the municipalities. Seven years have passed since the submission of this report. Over this period a number of changes have taken place, including the amalgamation of the former Town of Flamborough with the City of Hamilton, an Order in Council was passed approving OPA 28 expansion of the Waterdown urban area, and a number of changes to the existing road network. This area also has a range of environmental constraints.

As a result of the time lapse and changes that have taken place, a new master plan was initiated in 2003. The master plan has been prepared to fulfill Phases 1 and 2 of the Municipal Engineers Association (MEA) Class EA for municipal projects. The same Class EA provided the overall framework that guided the planning process for this study. The Waterdown/Aldershot Master EA Transportation Network Study, July 2004, reviewed the validity of the 1999 Transportation Phase 1 Master Plan prepared by SNC Lavalin and identified a need for additional east/west and north/south capacity in the study area network once OPA 28 lands are developed.

1.2 Study Purpose

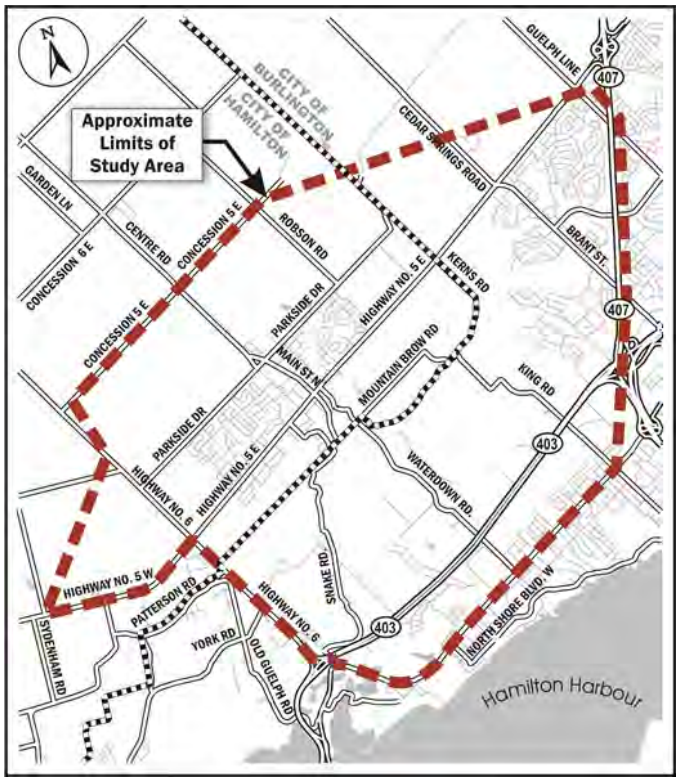
The purpose of this phase of the Waterdown/Aldershot Transportation Master Plan was to confirm the results of the Phase I work and to complete Phase 2 of the Municipal Class Environmental Assessment planning and design process.

This report builds on the previous Phase 1 work (July 2004) and describes the results of the Phase 1 update and Phase 2 work which makes recommendations to resolve the identified road capacity deficiencies.

1.3 Study Area

The study area is an irregular shape generally bounded by Concession 5 East in the north, Highway 407 in the east, Plains Road in the south; and Highway No. 6, including part of the Flamborough Business Park in the west. The limits of the study area are illustrated in ***Figure 1-1***. The study area is located both within the existing community of Waterdown in the City of Hamilton and the community of Aldershot in the City of Burlington. Although the majority of development will occur in the Waterdown community, some of the key transportation network improvements required to support OPA 28 fall outside the City of Hamilton jurisdiction.

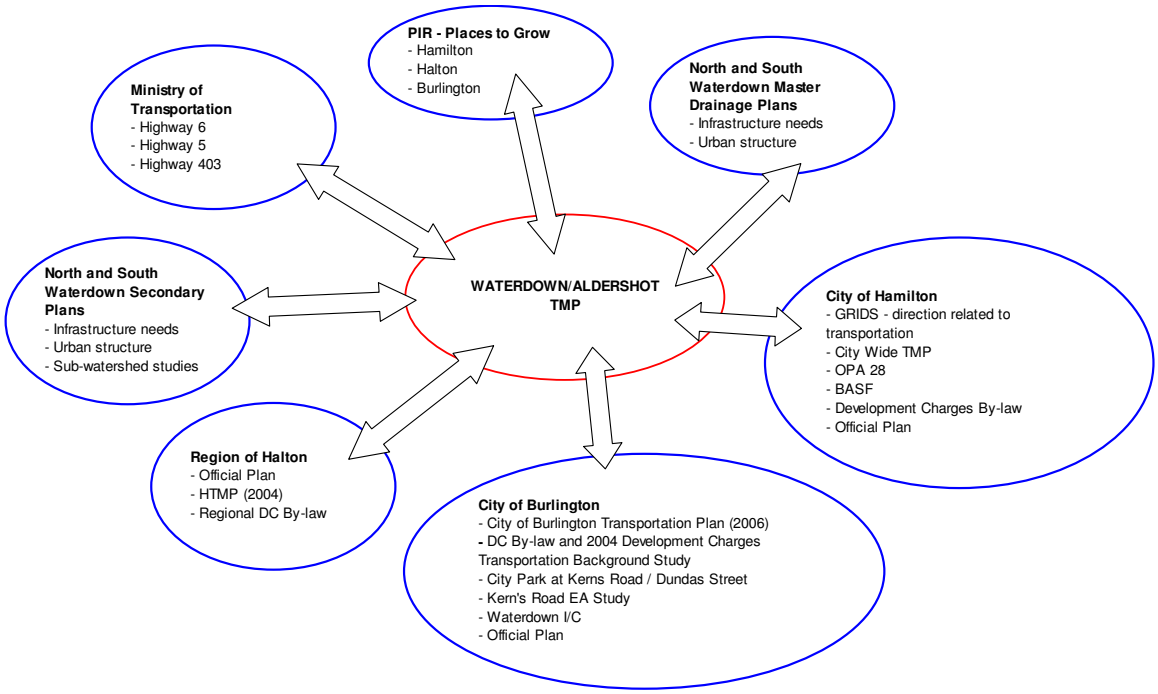
Figure 1-1 – Study Area



1.4 Study Linkages

A number of studies are currently underway or have recently been completed that will have an impact on the Waterdown/ Aldershot Transportation Master Plan. These include studies currently being undertaken by the City of Hamilton, the City of Burlington, the Region of Halton, the Province, and the Niagara Escarpment Commission. An illustration of these study linkages is presented ***Figure 1-2***.

Figure 1-2 – Study Linkages



1.5 Key Study Issues

The study contained a number of key "issues" that were identified from the outset and incorporated in the execution of the work plan. These key issues are presented below.

Strategic Transportation Planning – This study needed to provide the strategic direction to effectively plan for anticipated growth over the next twenty years. It needed to address the integrated multi-modal system the Waterdown/Aldershot community aspires to, by considering the role of all modes in a balanced transportation system. Key issues such as the implications for infrastructure requirements were addressed and these have to balance against cost and other social and environmental impacts.

Community Consultation – The most important component of the project was public consultation. The study had a strong emphasis on Community Consultation due to the sensitivity/controversy of some of the options – including impacts on residences, businesses and the escarpment. The community was kept informed and had meaningful input throughout the study process. Throughout the public consultation process, the Study Team endeavoured to carefully explain and illustrate findings and recommendations. This was accomplished with Stakeholder Advisory Committee meetings, Public Consultation Centre (PCC) presentation materials and discussions, and web pages that were rich in local context, graphic images and straightforward text.

Importance of Transit – From the team's experience in the GTA, it is clear that the current reliance on automobiles for travel during peak periods is not sustainable. With continued reliance on automobiles, roadways across much of the study area will experience substantial increases in peak period traffic volumes in the future, leading to requirements for substantial road improvements, and huge infrastructure costs. The City of Hamilton & Burlington and Region of Halton have already identified a network of inter-regional transit corridors and nodes that can be implemented in an incremental fashion along with development to meet future travel demands in a more balanced fashion, increasing travel choices for all residents and workers, and avoiding the excessive infrastructure costs associated with otherwise needed roadway improvements. The transit system will have to play a much greater role in the future to accommodate the expected increase in travel demand in and around the study area. This will require the implementation of effective transit strategies to increase transit modal split.

Affordable Plan/Cost Estimates – In order to be cost effective and efficient, the Transportation Master Plan was geared to the financial capability of the City of Hamilton, City of Burlington and the Region of Halton. That capability must be as clear as possible, as this will provide assistance in developing and staging the capital program. The first consideration in assessing affordability at this initial stage involves determining what level of capital funding can realistically be allocated annually over the long term to expand the transportation capacity for all modes. The second consideration involves providing input into the project selection process by assessing the major activities/projects from an economic perspective and determining their cost allocations with regard to Development Charges.

Innovation – Many areas of the Master Plan will follow traditional methods to support the development of future transportation priorities for systems and services within the Cities of Hamilton's and Burlington's jurisdiction. This approach is required to satisfy the requirements of the Environmental Assessment processes. The influence of transportation facilities outside the City of Hamilton's jurisdiction and boundaries will be considered at a strategic level to enable the City to productively influence the direction of Central Ontario priorities and funding decisions. The study focused on the coordination of local and inter-regional services and the integration of complementary services.

Smart Growth – The Central Ontario Smart Growth panel has developed a focus on the broad road, rail and transit issues identified in the Master Plan. An inter-regional transit strategy, land use guidelines, new freeway corridors and guidelines for environmental sustainability are all on the agenda of the panel. The Master Plan was responsive to directions from the Smart Growth planning initiatives.

Conservation Authorities – The study area is within an environmentally "rich" part of the GTA, including significant natural features such as the Niagara Escarpment, wetlands designated as "provincially significant" and environmentally sensitive areas. The Niagara Escarpment Commission and Conservation Halton have been active participants in Phase 1 and 2 of the master plan process and were key stakeholders in this study. The Hamilton Conservation Authority provided input in the later stages of the study by providing comments of the draft EA Report.

Fulfilling Class EA Requirements – The study was prepared to confirm the previous Phase 1 work and fulfill Phase 2 of the MEA Class EA planning process. In preparing a Class EA, one of the more critical issues addressed was how the evaluation of alternative improvement scenarios ("alternative solutions") was conducted. A comprehensive and traceable evaluation process was undertaken to consider the range of improvement alternatives and to prioritize system improvements within a preferred transportation network. This employed a methodology that not only assesses the differences between the improvement options under consideration, but also has the ability to address the potentially diverse views and objectives of stakeholders.

1.6 Report Outline

This report has been structured as follows:

- ***Section 1: Introduction*** – provides an overview of the purpose of this assignment and presents relevant background information;
- ***Section 2: Study Process*** – presents the MEA Class EA process, the study team that undertook this assignment and introduces the public consultation process followed throughout the study;
- ***Section 3: Identification of Problem or Opportunity (Phase 1)*** – discusses the process that led to the definition of "The Problem";
- ***Section 4: Developing a Transportation Strategy to 2021*** – presents the various alternatives considered and evaluated and presents the recommended "system" for the Waterdown/Aldershot area;
- ***Section 5: Existing Conditions*** – presents the natural, cultural and socio-economic baseline environmental conditions in the study area;
- ***Section 6: Alternative Solutions Evaluation (Phase 2) –*** describes the alternatives solutions identified to solve the transportation capacity deficiencies and the evaluation process that was undertaken to identify the preferred solutions.
- ***Section 7: Public Consultation and Communications*** – details the public consultation process of the study;

- ***Section 8: Financial Capability*** – discusses the costs of the preferred "system" and cost allocation;
- ***Section 9: Staging Plan*** – presents a staging strategy for the implementation of the recommended infrastructure improvements;
- ***Section 10: Other System Improvements*** – presents other options for consideration to improve the overall transportation system; and
- ***Section 11: Next Steps*** – suggests the action items stemming from this study.

2.0 STUDY PROCESS

2.1 Class Environmental Assessment Planning Process

The Waterdown/Aldershot Transportation Master Plan was carried out in accordance with the MEA Class Environmental Assessment for municipal projects and fulfills the requirements of Phases 1 and 2 of the five phase Class EA planning process.

Phase 1 of the Class EA process is Problem/Opportunity Identification, which was completed in July 2004. Phase 2 examines the consideration of alternative ways to solve the identified problems, giving recognition to environmental, social, economic, cost and transportation service considerations. The five phase Municipal Class EA Planning and Design Process is illustrated in ***Figure 2-1***.

The Municipal Class EA Process encourages municipalities to "prepare Master Plans to address groups of projects, an overall infrastructure system, a number of integrated systems or to co-ordinate the requirements of both the *EA Act* and the *Planning Act* through the development of long range multi-disciplinary plans".

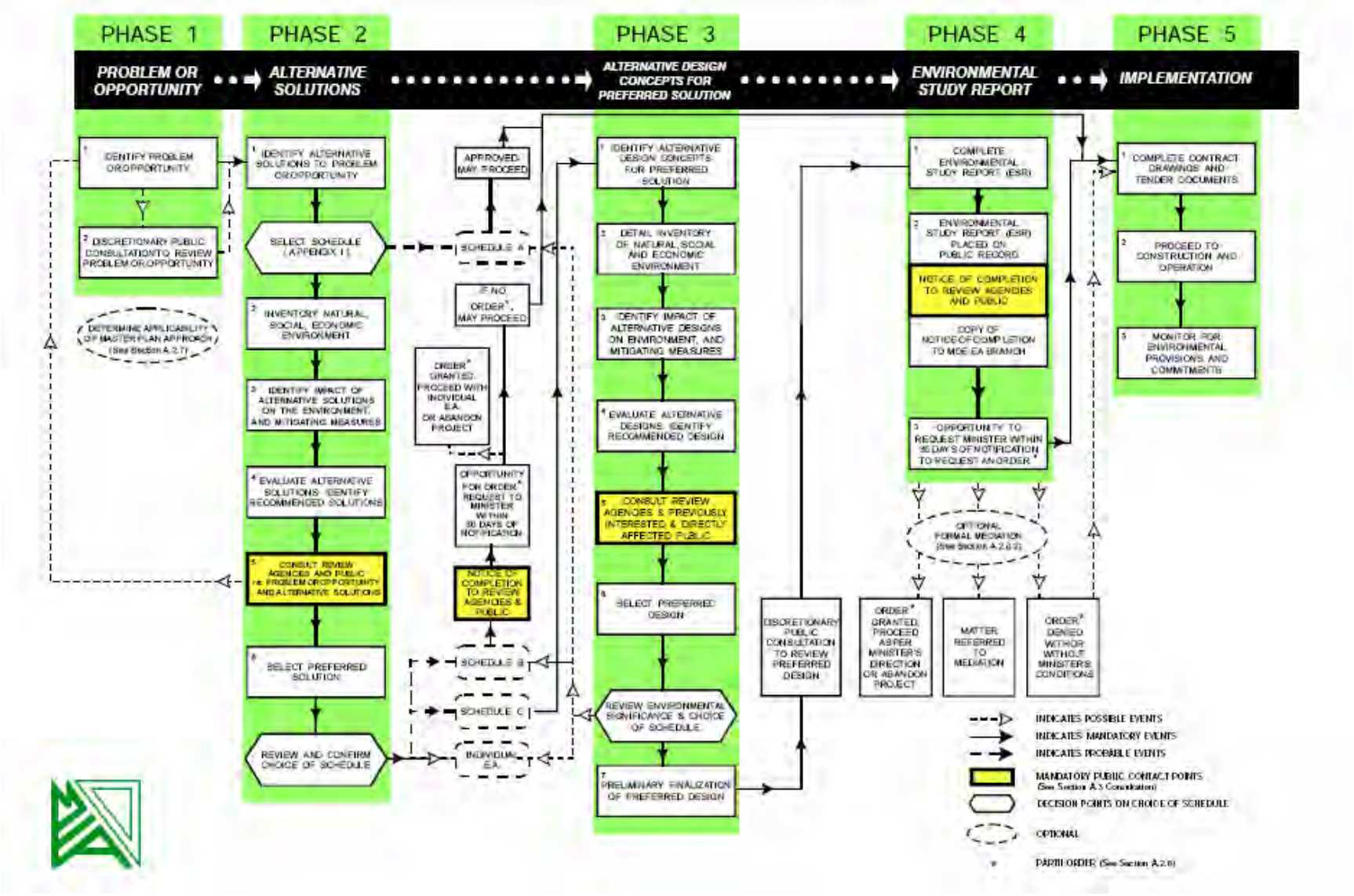
Master Plans generally consist of:

- Broad scope and usually include an analysis of the system in order to outline a framework for future works and developments. Master Plans are not typically undertaken to address a site-specific problem;
- Master Plans typically recommend a set of works which are distributed geographically throughout the study area and which are to be implemented over an extended period of time. Master Plans provide the context for the implementation of the specific projects which make up the plan and satisfy, as a minimum, Phases 1 and 2 of the Class EA process.

"Master Plans are long range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles. These plans examine an infrastructure systems or group of related projects in order to outline a framework for planning for subsequent projects and/or developments. At a minimum, Master Plans address Phases 1 and 2 of the Municipal Class EA process."[1]

[1] Municipal Engineers Association, *Municipal Class Environmental Assessment*, October 2000, as amended in 2007.

Figure 2-1 – Municipal Class EA Planning and Design Process



A number of initiatives in the Waterdown/Aldershot TMP may not require Class EA approval (such as Transportation Demand Management (TDM) strategies). However, Class EA approval will be required for the majority of the proposed roadway improvements. The type and scope of projects dictates how much of the process needs to be followed. Three different levels of transportation projects are identified each of which requires a different degree of EA investigation:

- ***Schedule A Projects*** – projects that involve minor modifications to existing facilities. Environmental effects of these projects are minimal and the projects are, therefore, considered pre-approved;
- ***Schedule A+ Projects*** – projects that also general involve minor modifications to existing facilities and are considered to be pre-approved but a municipality is required to notify the public prior to project implementation;
- ***Schedule B Projects*** – projects that involve minor expansions to existing facilities. As there is some potential for adverse environmental effects, these projects are required to proceed through a screening process including public consultation; and
- ***Schedule C Projects*** – projects that involve the construction of new facilities and/or major expansions to existing facilities. These projects must pass through the entire EA planning process outlined in the Class EA.

The road improvements recommended in this report include a mixture of the above four project types.

The approach used in conducting this Master Plan was based on a number of Class EA requirements. Key features included in this Master Plan include:

- Addresses the key principles of successful environmental planning;
- Addresses the first two phases of the Municipal Class EA;
- Allows for a coordinated process with other planning initiatives – Waterdown North, Waterdown South and Upcountry subdivisions;
- Provides a strategic level assessment of various options to better address overall system needs and potential impacts and mitigation;
- Is generally long term;
- Takes a system wide approach to planning which relates infrastructure either geographically or by a particular function;
- Recommends an infrastructure master plan which can be implemented through the implementation of separate projects; and
- Includes a description of the specific projects.

The approach followed for this Master Plan used a sufficient level of investigation, consultation, and documentation to fulfill the requirements of Phases 1 and 2 of the Municipal Class EA (June 2000). As such, through this Master Plan, the Class EA requirements from any identified Schedule B projects will have been fulfilled. Any Schedule C projects will still need to fulfill Phases 3 and 4 prior to filing an Environmental Study Report for public review. The Notice of Completion for any Schedule B projects will be filed simultaneously with the Schedule C projects, upon completion of Phase 4.

The Master Plan process that was followed conforms to "Master Plan Approach #2" in the MEA Class EA whereby Phase 1 and 2 are documented in a Master Plan Report and separate ESR's will be prepared to document Phase 3 for the Schedule C projects.

The Class EA process includes a provision for a Part II order, whereby an individual can provide a written request to the Minister of the Environment to elevate the project to a higher level of EA investigation. Requests for an order to comply with Part II of the EA Act, however, are only possible for the specific project and not the Master Plan.

2.2 Study Organization

Our approach to the study was centred on five key activities.

Project Initiation – the start up phase of the study. In this phase of the study, we finalized the details of the Study Charter, finalized the public consultation plan and developed the study web page.

The technical work on the project began as part of the **Strategic Overview** phase in September 2004. As part of this work, we undertook most of the data collection and refined the City's transportation model for the Waterdown/Aldershot area. This is also where we gained a thorough understanding of the existing transportation system and infrastructure, opportunities and constraints, financial capability of the City, and confirmed the nature of the transportation problem. In late October 2004 we held the first round of public consultation sessions. These sessions provide insight into the current conditions, and input into options and evaluation criteria that could be considered. A multi-Stakeholder Advisory Committee was formed, and provided input on these two areas. By the end of the Strategic Overview we also developed a set of "reasonable" roadway options to address the problem.

The **Analysis** phase of the study is where we began to identify, evaluate and select elements of the Waterdown/Aldershot transportation system that addressed the transportation problem in an environmentally sensitive, balanced, and multi-modal transportation plan that is financially affordable. We developed transit strategies, action plans for developing and encouraging the use of other modes, and tested a range of transportation alternatives using the transportation model. Stakeholder and public input from the Strategic Overview stage was utilized in shaping the evaluation process to ensure that their priorities and values were reflected in the evaluation of alternatives.

The **Plan Formulation** phase was where the entire plan came together. Individual components of the transportation system were combined to form networks of options for evaluation to select the preliminary plan, which is supported by a range of policies and programs. This was then subjected to a financial assessment and detailed into a staging plan. Both the stakeholders' committee and the general public had another opportunity to provide input to the evolving plan,

as the details began to get more specific, in the second round of public consultation held in April 2005. This activity also included the development of the draft documentation for the study, which was released as a draft document for public review in September 2005. In 2006, the City of Burlington conducted a review of the proposed north-south route. This review was completed in April 2007. The final document has been amended to reflect the outcome of this review.

The final phase **Confirmation & Documentation** included presentations to Committee and Council in open public sessions and the preparation of the final documentation, taking into account all of the stakeholder comments. The public was notified of the completion of the TMP Report.

The work plan for this assignment took place in two process streams as the five key activities were executed. These were:

- ***Technical Stream*** – This process dealt with the technical aspects of the study. It involved the data collection, analysis and evaluation and development of the plan; and
- ***Public Consultation Stream*** – This process involved providing and receiving input from the public and agencies on the project and incorporating this input into the technical stream.

The five key phases of this study were undertaken in a period of approximately 12 months. Each of these phases was executed as illustrated in ***Figure 2-2***.

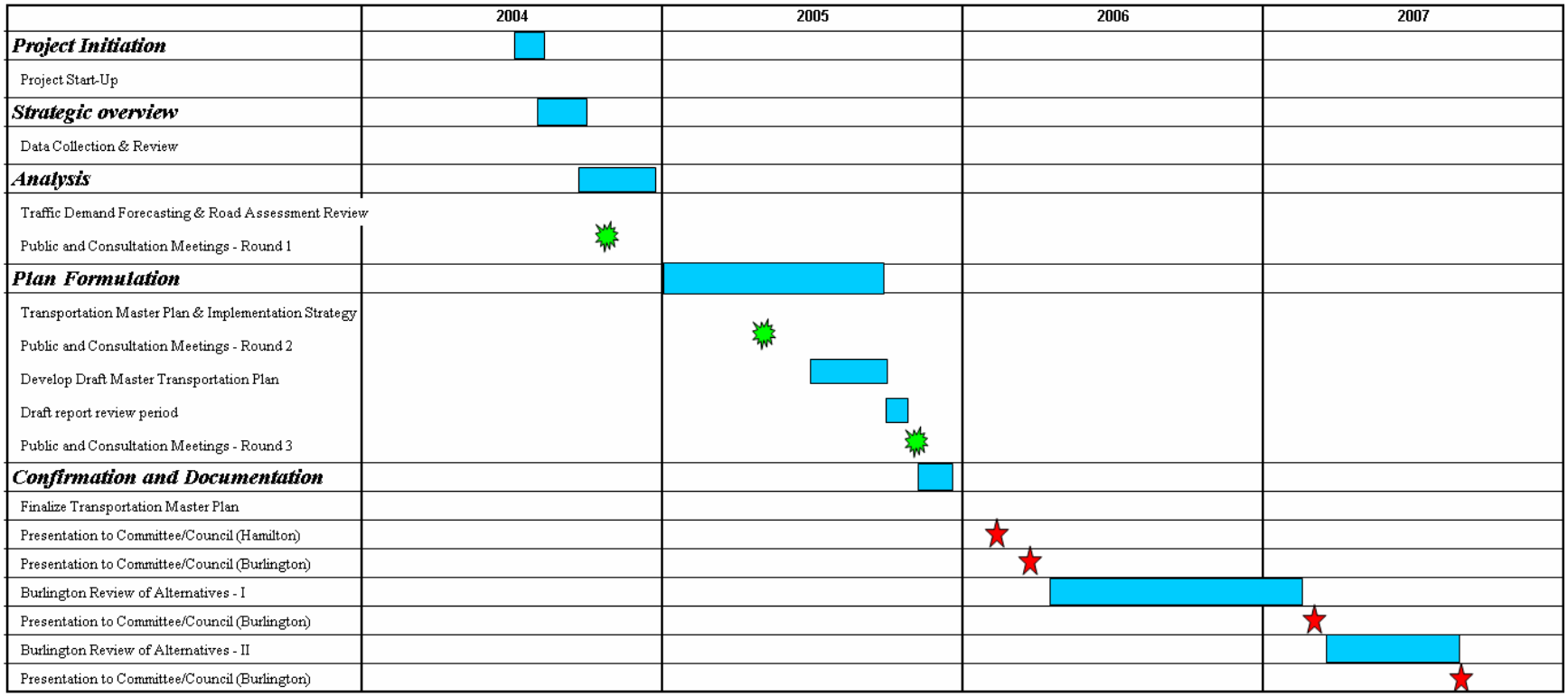
2.3 Study Team

Our core study team is made up of Dillon Consulting Limited with support from Dalton Consulting and Lura Consulting.

Dillon Consulting Limited **(Dillon)** was the prime consultant for this project and accepted corporate and contractual responsibility.

Since the inception of Ontario's Environmental Assessment Act in 1975, corporate planning and commitment has resulted in Dillon Consulting assembling, in-house, most of the disciplines necessary to carry out multi-discipline studies. These disciplines have been totally integrated with our almost 60 years of transportation planning and engineering expertise, resulting in project teams committed to working together as partners with our clients on transportation projects. Multi-discipline transportation projects are a core business for Dillon.

Figure 2-2 – Study Schedule



Lura Consulting **(Lura)** is a leading Ontario-based public communications and consultation firm with 30 years of experience delivering public involvement and community planning services. Lura has been repeatedly recognized for applying innovative consultation techniques locally, nationally and internationally for high profile issues, such as transportation planning, stormwater management, water quality, and waste disposal facility sitting. The firm has extensive experience providing public consultation and communications services in support of Environmental Assessment processes.

Dalton Consulting provided travel demand forecasting and modelling support as required for the undertaking. Dalton Consulting was on the team that developed the York Region Transportation Master Plan and worked with Dillon on the Halton and Kingston Transportation Master Plans, as well as the Pickering Growth Management Study.

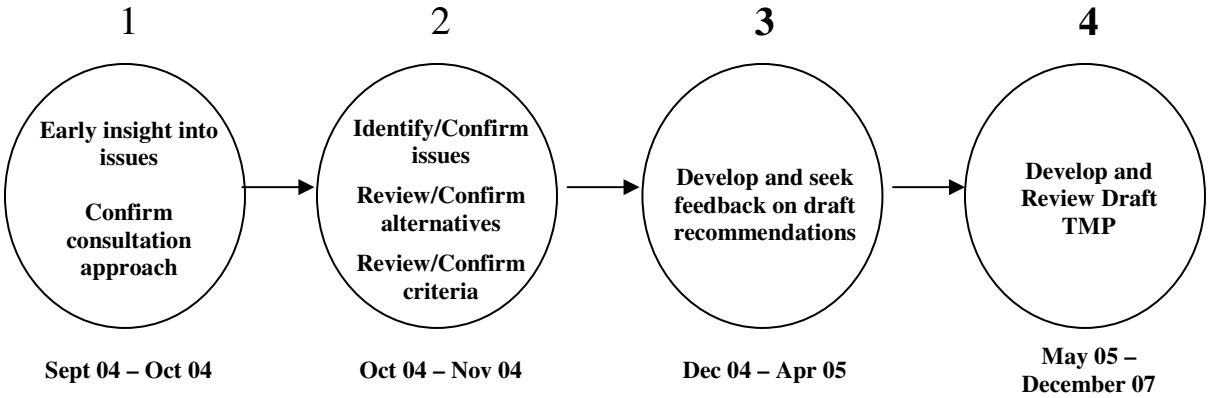
2.4 Public and Agency Consultation and Communication

As illustrated in ***Figure 2-3***, the consultation approach focused consultation and communications activities around four topic/issue areas of the project presented in Section 2.2:

1. Project Initiation;
2. Strategic Overview;
3. Analysis; and
4. Plan Formulation.

In addition to these four focused periods of consultation and communications activity, there were ongoing opportunities for agencies, members of the public and stakeholders to receive information about the project (via the project website and other communications materials, as developed), and also to provide feedback to the proponents (e.g., through phone, fax, email, mail, project website).

Figure 2-3 – Consultation and Communications Work Plan



Section 7.0 details the public consultation and communications process followed in this study.

3.0 IDENTIFICATION OF PROBLEM OR OPPORTUNITY (PHASE 1)

3.1 Waterdown/Aldershot Master EA Transportation Network Study

The Phase 1 Final Report of the *Waterdown/Aldershot Master EA Transportation Network Study* was completed on July 30th, 2004 by SNC-Lavalin. The purpose of Phase 1 was to "review all the land use and transportation network changes, either proposed or constructed, which may effect the study area conclusions and recommendations of the previous Transportation Master Plan Study undertaken by Stantec Consulting Ltd. in September 1999".

The report confirmed the need for additional east-west and north-south capacity in the Waterdown/Aldershot area due to OPA 28, stating that additional capacity was needed in each direction. The report also recommended that the next phase consider all options to provide additional capacity in the Waterdown and Aldershot areas.

3.2 Existing Population/Employment

Waterdown currently has a population of 15,000 (2001 census). The community was established in the late 1700's as a stopping point on Highway 5. The population has remained fairly stable until the early 1990s, when the community received considerable growth, almost doubling in size. Thus, the community is characterized by a combination of old and new development. The town centre is comprised of older homes and retail buildings, which is contrasted by newer residential and retail development along the outer fringe of the developed urban area.

The Flamborough Business Park is located at the intersection of Highway No. 5 and Highway No. 6. This 250-hectare employment area is intended to serve prestige industrial development for the Flamborough area. Currently, the business park has approximately 120 hectares of vacant/agricultural land, with the remainder being occupied by industrial and commercial employment uses. Existing industrial uses are concentrated in the south-east quadrant with more commercially-oriented business located on Highway No. 5.

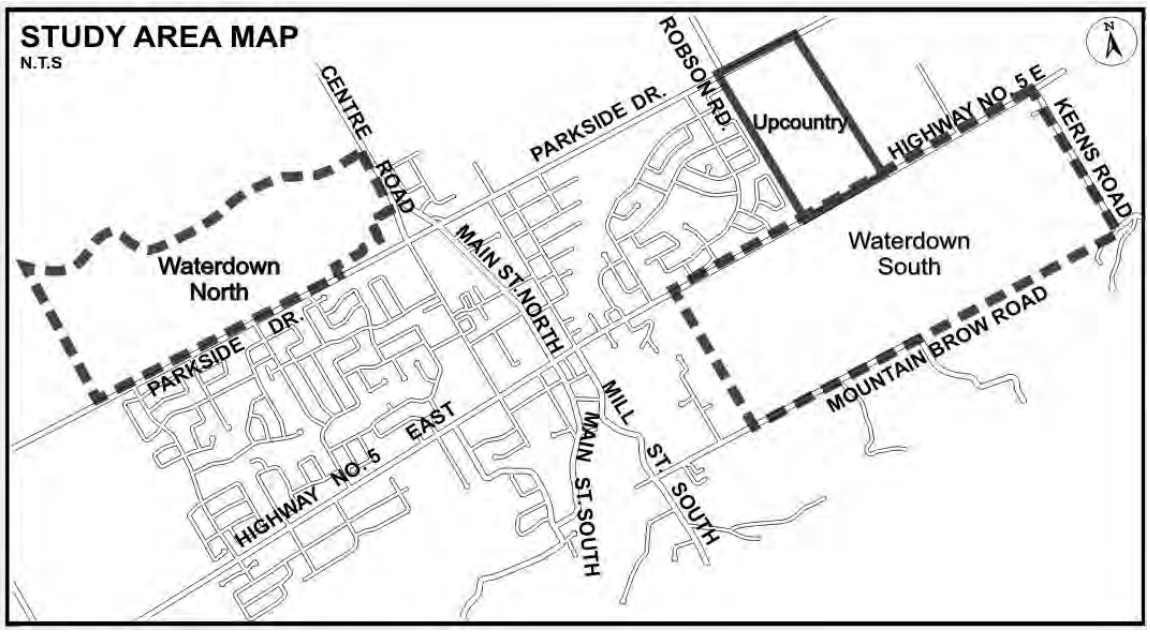
3.3 Population and Employment Forecasts

3.3.1 Waterdown

Official Plan Amendment (OPA) 28
OPA No. 28 to the Town of Flamborough Official Plan was approved by the Executive Council of the Provincial Government of Ontario on June 19, 2002, which would allow the expansion of the Waterdown urban area to accommodate residential growth to the year 2021 based on certain conditions being met. One of the conditions was the completion of a Master Environment Assessment Transportation Study.

The three main expansion areas in OPA No. 28 are Waterdown North, Waterdown South, and Upcountry Lands. These are illustrated in ***Figure 3-1***. The OPA 28 lands consist of approximately 240 hectares of gross developable residential land. The rate of development in the past has been approximately 300 building permits annually. This provides a 15 to 20 year supply of residential land if development continues at a similar rate. Population growth is expected to increase by 15,264 people upon build out. This will generate retail demand for at least 15,422 additional square meters GLA by 2024.

Figure 3-1 – Waterdown Urban Expansion Area



Upcountry Lands

The Upcountry Lands comprise of a 54 hectare land parcel located between Parkside Drive and Dundas Street, east of Robson Road. The lands are designated for residential development. Since the lands are under one ownership and have less complex environmental issues, no secondary planning is required.

Secondary Plans are required for Waterdown North and Waterdown South and are both currently in progress. OPA #28 states that *"Secondary Planning is only required where deemed necessary by Council."* In March 1996, the former Flamborough Town Council passed a resolution stating that since "Upcountry Estate" lands are under one ownership, no secondary planning is required for these lands. For this reason, only Waterdown North and South are subject to secondary planning.

Waterdown North
Waterdown North is a 121 hectare parcel of primarily agricultural land bounded by Borers Creek to the north, Centre Road to the east, Parkside Drive to the south, and the Imperial Oil Sun Canadian Pipeline easement to the west. The area has 7 property owners. Lands adjacent to Parkside Drive are designated predominantly as Mixed Use Area; the north-south portion of Borer's Creek is designated Hazard Lands. The remainder of the area is designated Urban Residential. This will represent approximately 36 percent (5,553 people) of the total population forecast of the Waterdown urban area, along with 5,575 sq m of retail space.

Waterdown South
Waterdown South is a 180 hectare parcel of primarily agricultural land bounded by Highway No. 5 to the north, Kerns Road to the east, Mountain Brow Road to the south, and Flanders Drive to the west. The area has 6 property owners. The area is designated for primarily residential purposes, with small commercial clusters. The lands are projected to accommodate 2,800 to 3,500 residential units with an average density of 35 units per net hectare (65% low density, 25% medium density, and 10% high density). The area is bisected northwest to southeast by a 30 m wide hydro corridor. The Grindstone Creek is a significant natural feature that cuts an east-west path through the northerly half of the area.

Development Applications
There are a number of approved and pending development applications within the City of Hamilton portion of the study area. The majority of these are within the Flamborough Business Park.

The eastern portion of the Business Park abutting Highway No. 6 may be developed as a major commercial centre. There is an application for a Regional Official Plan Amendment and rezoning to allow 600,000 sq. ft. of proposed retail, a 120-room hotel, and 12-pump gas bar on the northeast corner of Highway No. 6 and Highway No. 5 (Flamborough Power Centre). There is also a site plan application for approximately 550,000 sq. ft. of retail/restaurants at the southeast corner of Highway No. 6 and Highway No. 5 (Trinity Development).

Within the existing community of Waterdown, there is a preliminary proposal to permit a four story residential apartment building with a total of 56 units, located on Flamboro Street, south of Dundas Street and west of Main Street.

3.3.2 Aldershot

Aldershot is a primarily residential community located in the south-western portion of the City of Burlington. It has a population of approximately 15,000. The community has a village quality about it and is somewhat isolated from the rest of the City, with the Niagara Escarpment to the north, the QEW to the east, the Hamilton Harbour to the south, and the Royal Botanical Gardens to the west.

The Phase 1 report identified a number of development proposals that are anticipated to occur over the planning horizon of the Transportation Master Plan. These are presented in ***Table 3-1*** and illustrated in ***Figure 3-2***.

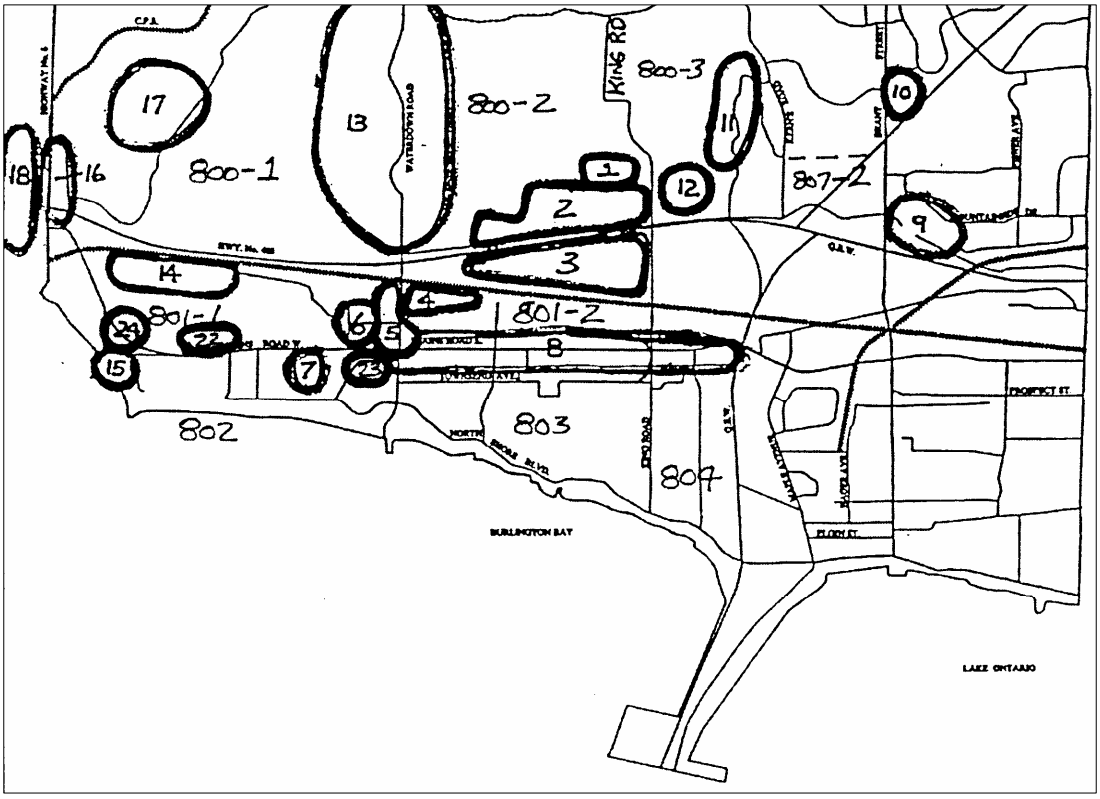
Figure 3-2 Staff at the City of Burlington have confirmed that the list of development applications presented from the Phase 1 Report in ***Table 3-1*** are still up-to-date. Only the development of the Aldershot Plaza (#23) has changed slightly. Currently, a planning study is underway with Phase approval for 266 units.

Table 3-1 – Aldershot Population and Employment Forecasts

	Development Application	Residential Units	Employment
1	Jannock Brick Plant	0	30
2	King's Forest Bus. Park	0	3,400
3	Jannock/CNR lands	0	3,500
4	Blue Circle lands	0	725
5	Waterdown Road lands	0	600
6	Howard Road lands	0	350
7	DeGroote Project	215	0
8	Plains Road lands	100	100
9	Emshih east of Costco	0	550
10	Amherst Drive	230	0
11	United Lands	100	0
12	Geofcott lands	0	400
13	Grindstone Owners	650	250
14	Garden Trails	200	0
15	Easterbrook lands	100	0
16	Bridgeview Office	0	100
17	Snake Road Cemetery	0	0
18	Dundas Pleasantview	25	0
22	West Plains	50	0
23	Aldershot Plaza	500	0
24	RBG Expansion	0	100
	Total	**2,170** *(5,880 pop.[1])*	**10,105**

[1] *approx. growth from 1999 on; *Reproduced from the Waterdown/Aldershot Master EA Transportation Network Study Phase 1 – Final Report, (July 30, 2004) SNC Lavalin*

Figure 3-2 – Expected New Development within Aldershot Area



Source – Waterdown/Aldershot Master EA Transportation Network Study Phase 1 – Final Report, (July 30, 2004) SNC Lavalin

3.4 Existing Major Transportation Network

The report, *Waterdown/Aldershot Master EA Transportation Network Study Phase 1, July 2004*, identified that main gateways in and out of Waterdown are currently close to or at capacity during the peak periods. The primary east-west roads in the study area include Dundas Street/Highway No. 5, Highway 403, Plains Road, and Highway 407. The primary north-south routes in the study area are Highway No. 6, Waterdown Road, and Brant Street (Regional Road 18) (see ***Figure 3-3***).

Dundas Street/Highway 5 is one of the major east-west gateways into and out of the study area. The character and jurisdiction of this road vary significantly. West of Highway No. 6, the road is under the jurisdiction of the Province of Ontario, with two travel lanes. East of Highway No. 6, Dundas Street has a 4-lane arterial road cross section, which is under the jurisdiction of the City of Hamilton. Through the Waterdown community, turning lanes are provided on the two-lane cross section with on-street parking. East of Kerns Road, Dundas Street (Regional Road 5) is under the jurisdiction of the Region of Halton and has four travel lanes.

Waterdown - Aldershot Transportation Master Plan

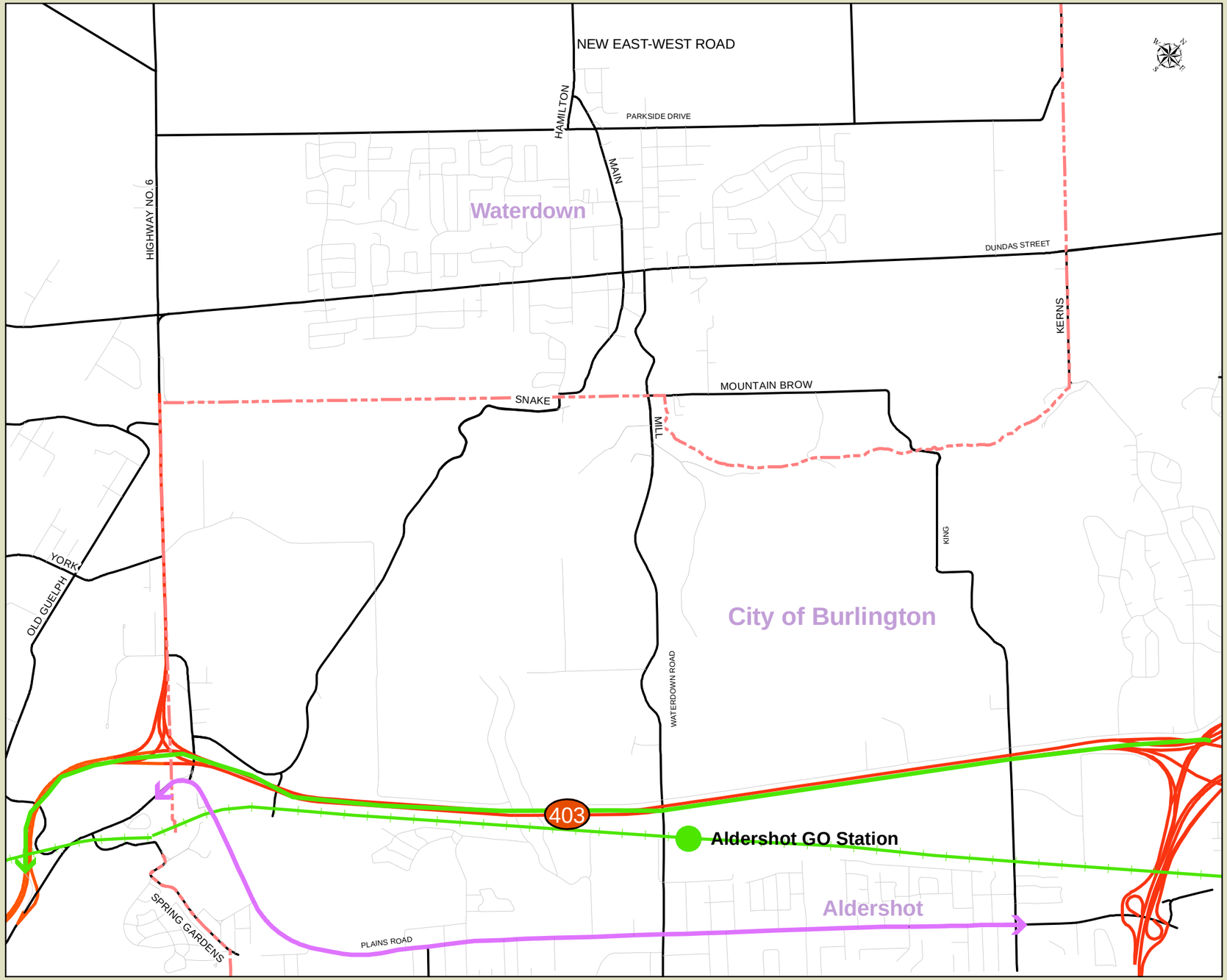


Figure 3.3: Existing Road and Transit Network

- Municipal Boundary
- GO Transit - Bus
- GO Transit - Rail
- Burlington Transit

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM/CC
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

DILLON CONSULTING

Highway 403 is located along the southern portion of the study area. Access to the Highway from the study area is limited to Highway No. 6 for eastbound and westbound traffic, and also Waterdown Road for westbound traffic only.

Highway No. 6 is a 4-lane major north-south gateway into and out of the area located along the western portion of the study area. The highway is planned for widening in the near-term to a 5-lane cross-section (3 lanes northbound and 2 lanes southbound) and conversion to an access controlled highway between Highway 403 and Dundas St.

Waterdown Road is another north-south gateway into and out of the study area, with connection to Highway 403 westbound and Plains Road. This 2-lane road is under the jurisdiction of the City of Burlington.

Table 3-2 illustrates the primary roadway characteristics in the study area.

Table 3-2 – Existing Primary Roadway Characteristics

Street	From	To	Official Plan Road Classification	Jurisdiction
North-South Roads				
Highway 6	Highway 403 Dundas Street East	Dundas Street East Concession 5 East	Highway Highway	Province Province
Snake Road	Highway No. 6	Main Street	Collector	Burlington
Waterdown Road/Mill Street	Plains Road Mountain Brow Road	Mountain Brow Road Dundas Street East	Arterial Arterial	Burlington Hamilton
Hamilton Street/Centre Road	Dundas Street Parkside Drive	Parkside Drive Concession 5 East	Arterial Arterial	Hamilton Hamilton
Main Street	Snake Road	Centre Street	Collector	Hamilton
Robson Road	Parkside Drive	Concession 5 East	Collector	Hamilton
King Road	North Service Road	Mountain Brow Road	Collector	Burlington
Evans Road	Dundas Street	Parkside Drive	Arterial	Hamilton
Kerns Road	North Service Road	Dundas Street East	Collector	Burlington
Brant Street/Cedar Springs Road	Highway 407 Dundas Street East	Dundas Street East North study limit	Major Arterial Arterial	Halton Region Burlington
East-West Roads				
Concession 5 East	Highway No. 6	Robson Road	Collector	Hamilton
Parkside Drive	Highway No. 6	Evans Road	Arterial	Hamilton
Highway No. 5/Dundas Street	West of Highway No. 6 Highway No. 6 Kerns Road	Highway No. 6 Kerns Road Guelph Line	Highway Arterial Major Arterial	Province Hamilton Halton Region
Mountain Brow Road	Waterdown Road	King Road	Collector	Hamilton
North Service Road	Waterdown Road	Highway 407	Arterial	Burlington
Highway 403	Highway No. 6	Highway 407	Freeway	Province
Highway 407	Highway 403	Guelph Line	Freeway (toll)	Province
Plains Road	Highway No. 6	King Road	Arterial	Burlington

3.5 Existing Transit Service

Existing transit service in the study area is limited to the Aldershot community and the Brant Hills and Tyandaga neighbourhoods in Burlington near Brant Street. The Waterdown community currently has no transit services. Presented below is a description of the transit services provided in the study area by each transit provider.

Hamilton Street Railway (HSR)
HSR currently runs no services to the Waterdown community. In December, 2001, The City carried out a Waterdown Transit Study to assess the need, and plan for the provision of transit services in the Waterdown community. The study was based on a review of existing travel patterns and a resident survey. Destinations of potential transit trips originating in Waterdown included downtown Hamilton, Burlington, Waterdown, and the Aldershot GO Station. The primary trip purpose for transit trips were shopping and social/recreational. Four transit options were assessed, which included a fixed route service from the Aldershot GO Station, a fixed route service connecting to Plains Road, a TransCab service (similar to the one operating in Stoney Creek and Glanbrook), and a Trans Link service (similar to the one operating in Dundas). The preferred option was the TransCab service. Mailed opinion surveys were sent, with 32 percent supporting the service and 68 percent of respondents not supporting the introduction of transit service.

In November 2007, the City of Hamilton adopted a Transit Service Enhancements Plan. The plan included the provision of transit service to the Waterdown community. The proposed transit route will provide transit services in the existing urban area of Waterdown (between Dundas Street and Parkside Drive, east of Highway #6). Buses would operate north-south on Waterdown Road, terminating at Plains Road, with direct service to the Aldershot GO/VIA Station. This would provide passengers with an opportunity to transfer to GO Rail and Bus services, VIA Rail service or Burlington Transit buses. Transfers from HSR to Burlington Transit are free of charge, allowing customers to travel to Downtown Hamilton, the Burlington and Appleby GO Stations and other points within Burlington. The introduction of this service is currently under review.

Burlington Transit
Burlington Transit operates Route 1 – Plains/Fairview West on the southern border of the study area. Route 1 runs along Plains Road connecting downtown Hamilton with the Burlington GO Station, with stops at Plains Road and King Road, Plains Road and Waterdown Road, and the Royal Botanical Gardens. Route 1 operates weekday service between 5:20 am and 11:55 pm at 15 minute frequencies during the peaks and half-hour to hourly frequencies during the off-peaks. Limited weekend service at 30 to 60 minute frequencies is also provided. This is the primary transit service for the Aldershot community.

Route 7 – Tyandaga North, and Route 2 – Brant North, also operate within the study area. Route 7 provides a residential feeder service from the Burlington GO Station along Kerns Road and Tyandaga Park Drive. The route operates as a GO feeder service during the weekday peak periods. Route 2 provides a service along Brant Street, between Cavendish Drive (just south of Dundas Street) and the downtown transit terminal. The service runs all day at 15 minute

frequencies during the peaks and 30 minute frequencies during the off-peaks. Saturday service is also operated on this route.

Burlington Transit previously operated rush hour service to the Aldershot GO Station via Route 5 – Francis. This service was discontinued in 2000.

GO Rail

The Aldershot GO Station is located on 1199 Waterdown Road, just south of Highway 403 in the southern part of the study area. The Aldershot GO Station provides service to the Lakeshore West GO Train and Train-Bus, connecting downtown Hamilton to Union Station in downtown Toronto. Ninety-nine percent of passengers surveyed in 2003 accessed the station by private automobile (91 percent drove and 8 percent arrived by kiss n' ride). The station has 637 parking spaces, of which 80 to 87 percent of spaces are utilized (2003 GO Transit survey).

GO Transit operates fifteen weekday eastbound GO Train trips from the Aldershot GO Station to Union Station between 5:35am and 11:08pm. During the AM peak period, five trains depart between 5:35am and 7:19am, constituting the rush hour service towards Union Station. Subsequent trips operate on roughly hourly frequencies during the midday, early afternoon and in the late evening. In the westbound direction, GO Transit operates eighteen weekday westbound GO Train trips from Union Station to Aldershot Station, between 9:44am and 1:44am. The service is generally provided at an hourly frequency throughout the day, with half hour frequencies provided between 5:24pm and 6:24pm. During other times, the GO Train is supplemented by regular Train-Bus service between Burlington GO Station and Hamilton GO Centre. In the eastbound direction, the service runs between 4:30am to 11:08pm. Westbound service arrives at Aldershot GO Station between 7:20am to 2:40am.

On Saturday's and Sunday's, the GO Train operates all day at hourly frequencies between Aldershot GO Station and Union Station. Connections to the Hamilton GO Centre are provided via the Train bus service.

GO Bus

With the exception of the Lakeshore West Train Bus, which is an extension of the GO Rail service, no GO Bus routes have existing stops within the study area. Two existing GO Bus routes pass through the study area, and provide an opportunity to further connect the study area with interregional transit services. These are:

- ***Route 15 – McMaster University Limited Service*** – this service runs express between Union Station and McMaster University with only one stop at the Burlington GO Station. The service operates only during the peak periods, peak direction on weekdays, along with limited Sunday service. Providing an additional stop at the Aldershot GO Station could provide a useful transit connection to McMaster University for Waterdown/ Aldershot residents; and
- ***Route 46 – Highway 407 West GO Bus Service*** – this service connects downtown Hamilton with York University, with stops at McMaster University, Mississauga City Centre, and Bramalea GO Station. The route operates weekday service eastbound between 5:00am and 10:35pm from downtown Hamilton and westbound service arriving

at downtown Hamilton between 7:35am and 1:15am. Both directions operate at approximately half-hour frequencies or better. Currently, the service does not stop within the study area, however, it does pass the Aldershot GO station along Highway 403. A stop for this route at the Aldershot GO Station would provide a good connection to Waterdown/Aldershot residents to Hamilton, McMaster University, and destinations along Highway 407.

VIA Rail
VIA Rail operates out of the Aldershot Station, which shares its facilities with GO Transit. Several trains depart this station each day, including:

- Toronto to London;
- Aldershot to Montreal/Ottawa;
- Toronto to Niagara Falls, Buffalo, and New York; and
- Aldershot to Toronto, Kingston, Toronto.

3.6 Existing Cycling and Pedestrian Trails

3.6.1 Cycling

Within the study area, there are a number of east-west and north-south cycling routes designated by the City of Hamilton and City of Burlington. These are illustrated in ***Figure 3-4***. Some of the major routes include Parkside Drive between Highway 6 and Robson Road, Robson Road north of Parkside Drive, Mountain Brow Road, Main Street North and Centre Road between Dundas Street and Carlisle Road (north of the study area), and Plains Road.

There exists a north-south disconnect in designated cycling routes between the communities of Waterdown and Aldershot.

3.6.2 Trails

A number of trails traverse the study area, the most notable being the Bruce Trail. The Bruce Trail is Canada's oldest and longest footpath, which provides the only public access to the Niagara Escarpment. The Bruce Trail is 782 km long, extending from Queenston on the Niagara Peninsula through Waterdown to Tobermory at the tip of the Bruce Peninsula. The trail has a number of picturesque views, scenic landscapes and 290 km of additional side trails.

Through the study area, the Bruce trail traverses the escarpment south of Dundas Street before heading north of Dundas Street and east of Kerns Road.

Another important trail that was noted is located east of Centre Road connecting the Flamborough Wetlands Park to Parkside Drive.

Waterdown - Aldershot Transportation Master Plan

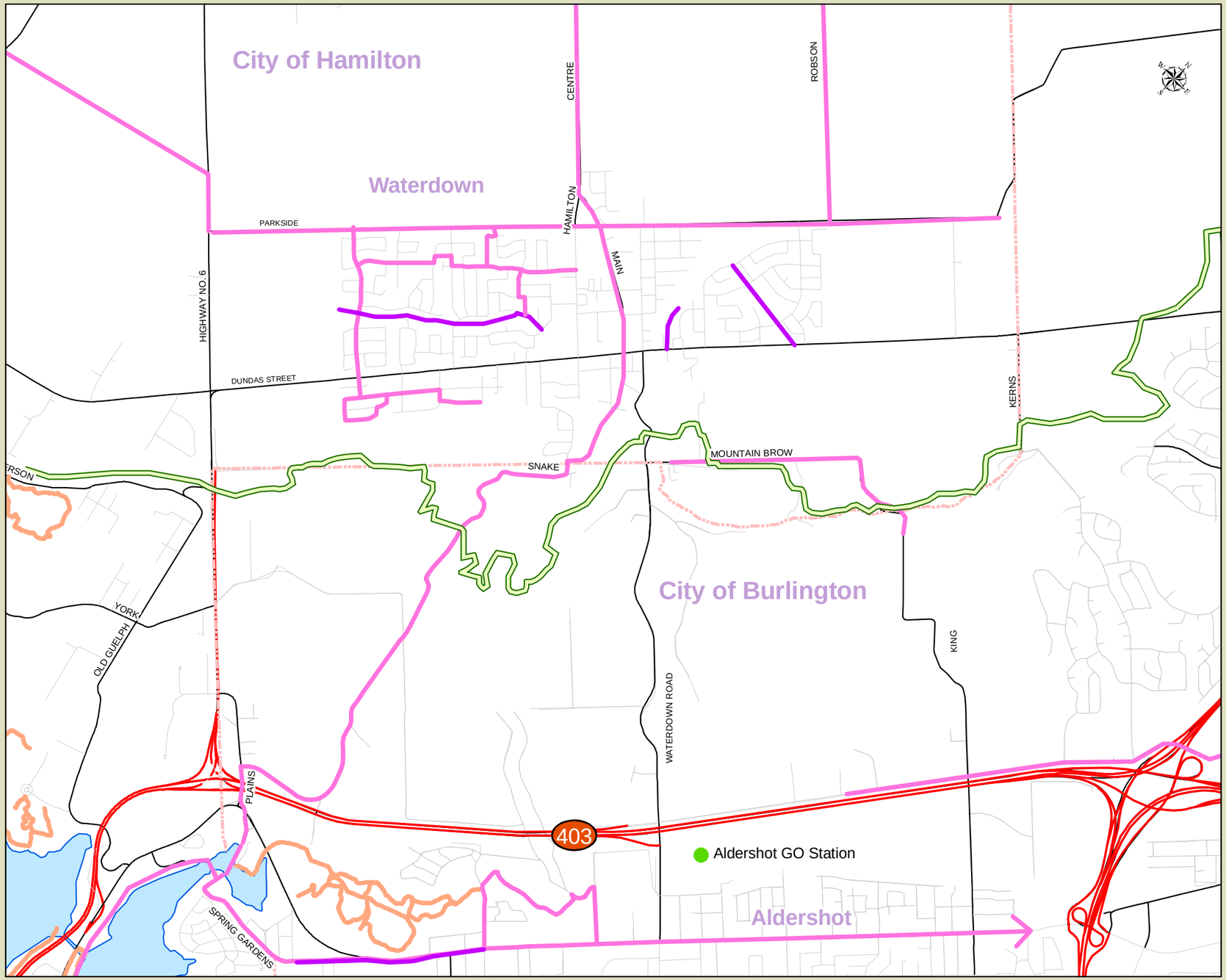


Figure 3.4: Existing Cycling and Pedestrian Trails

- Municipal Boundary
- On Street Bike Route
- Off Road Multi-Use Path
- Bruce Trail
- Other Trails

Scale

0 250 500 1,000 1,500 Meters

Map Notes

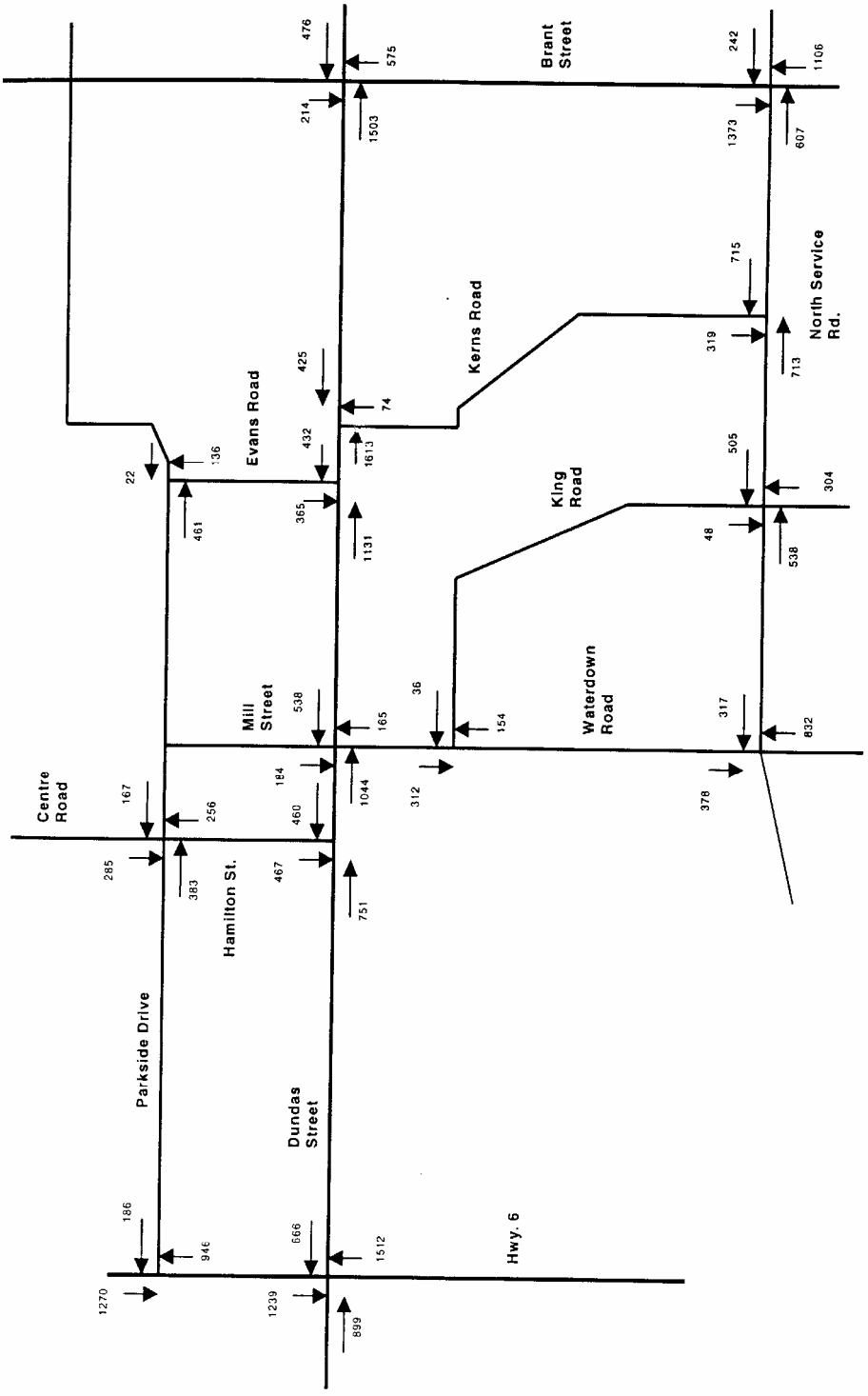
Map created by: PJK
Map checked by: DPM/CC
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

Phase 1 of the Municipal Class EA process as reported in the *Master EA Transportation Network Review of Aldershot/Waterdown (July 2004)* identified existing critical turning movements at major intersections in the study area and screenline volumes for the major road network during the AM and PM peak periods. These figures have been reproduced and are presented in ***Figure 3-5*** and ***Figure 3-6***. A review of traffic volumes was carried out using both SYNCHRO intersection analysis and SimTraffic simulation software. The results of the analysis indicate that "while most intersections are operating well, there are certain specific movements that are experiencing delays and evidence that capacity may soon be (or already has been) reached".

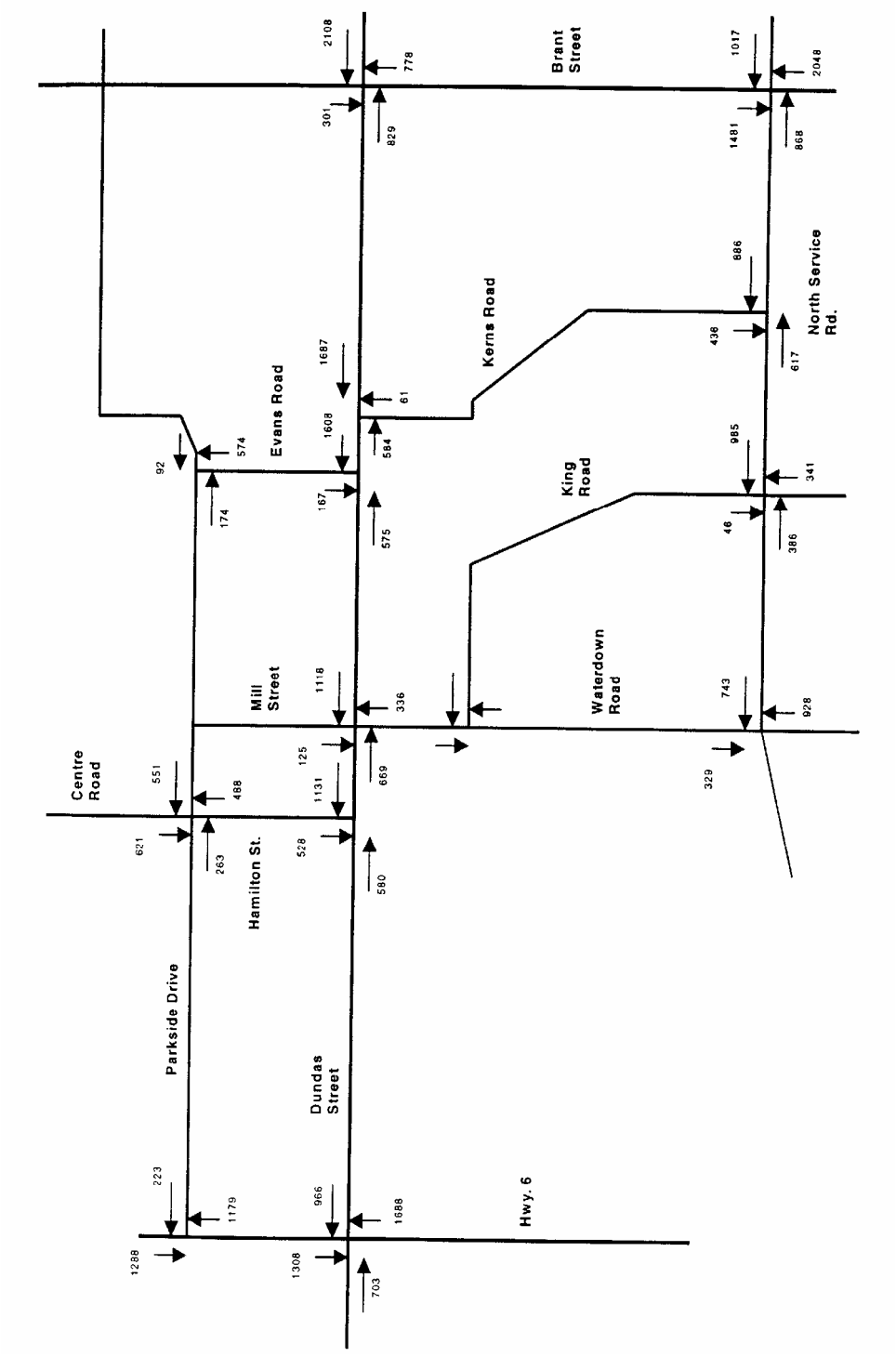
Table 3-3 (reproduced from the Phase 1 report) illustrates the congested movements at study area intersections during the AM and PM peak hour that exhibited a volume-to-capacity (v/c) ratio greater than 0.80. This is a numerical measure of the ratio between volume on a particular intersection turning movement and the available capacity to accommodate that volume. A v/c ratio greater than 0.80 generally means that critical capacity has been reached. This is represented as a high degree of congestion with long delays and queues at signalized intersections. Once a v/c ratio exceeds 1.0, this is defined as the point where the roadway section has failed, and the volume of vehicles on the roadway section has exceeded the available capacity to accommodate them. As illustrated, conditions during the PM peak hour are more congested than the AM peak hour, with a number of movements near to or at capacity.

Figure 3-5 – AM Peak Hour Traffic Volumes (2002/03)



Source – Waterdown/Aldershot Master EA Transportation Network Study Phase 1 – Final Report, (July 30, 2004) SNC Lavalin

Figure 3-6 – PM Peak Hour Traffic Volumes (2002/03)



Source – Waterdown/Aldershot Master EA Transportation Network Study Phase 1 – Final Report, (July 30, 2004) SNC Lavalin

Table 3-3 – Current Critical Turning Movements

Intersection	Movement	Demand volume	v/c	Average delay/veh (s)
AM Peak Hour				
Dundas St. at Mill St.	EB through/right	985 through 53 right	0.88	EBT 33.3 EBR 33.2
Dundas St. at Evans Road	SB left/right	339 left 26 right	0.83	SBL 28.0 SBR 22.5
Dundas St. at Brant St.	EB through	1214	0.92	38.8
Hwy. 6 at Parkside Dr.	SB left	144	0.83	55.4
PM Peak Hour				
Hwy. 6 at Dundas St.	WB left	432	0.85	62.8
Hwy. 6 at Parkside Dr.	SB left	155	0.83	43.1
Dundas St. at Hamilton St.	EB left	149	0.93	24.9
Dundas St. at Main St.	WB through	1040	0.89	30.9
Dundas St. at Mill St.[2]	WB through	927	0.83	56.6
Hamilton St. at Parkside Dr.	NB left	89	0.85	39.8
Dundas St. at Brant St.[3]	NB left WB left WB through	385 492 1562	1.10 1.21 0.94	NBL 233.3 WBL 335.2 WBT 56
North Service Rd. at Brant St.	EB right WB left NB left NB through	435 378 538 1376	0.85 0.82 0.93 1.03	EBR 14.6 WBL 349.7 NBL 108.0 NBT 101.7
Kerns Rd. at North Service Rd.	WB through	680	0.86	32.3
King Rd. at North Service Rd.	WB through	630	0.91	105.3
Waterdown Rd. at North Service Rd.	WB through/left	274 left 349 through	0.96	WBL 95.3 WBT 98.9

N.B. Turning movements shown with a v/c over 1.0 are likely operating at greater saturation flow rates than assumed.

[2]*There is significant recurring queuing westbound on Dundas Street in the PM peak where the 4-lane section ends approaching Mill Street, and this meters demand making the intersection appear to function, when in reality there is a capacity deficiency on Dundas Street.*

[3]*This intersection is in need of improvement by the addition of double left turn lanes (NBL, WBL). This need was also identified in the Transportation Master Plan for Regional Road 5 (Dundas Street) and 25 Corridors, undertaken by Halton Region in 1999.*

Source – Waterdown/Aldershot Master EA Transportation Network Study Phase 1 – Final Report, (July 30, 2004) SNC Lavalin

3.7 Planned Road Improvements

Highway 6
Planned road improvements in the study area include a widening of Highway 6 to five lanes (3 northbound and 2 southbound) south of Dundas Street, and the construction of an interchange at Highway 6 and Dundas Street (EA was recently completed). These improvements are being undertaken by the Ontario Ministry of Transportation (MTO). A planning study has been initiated to review the ultimate need and configuration of Highway 6 north of Highway 5/Dundas Street.

Highway 5
On Highway 5, a Preliminary Design and Environmental Assessment Study is currently underway, under the direction of the MTO that will look at the potential widening of Highway 5 west of Highway 6.

Waterdown Road and Highway 403 Interchange
The City of Burlington has carried out a Class Environmental Assessment (EA) study for improvements to the Waterdown Road/Highway 403 interchange in the City of Burlington, Regional Municipality of Halton. The study included a review of opportunities to improve the existing interchange, including the addition of an eastbound on-ramp (for eastbound traffic to enter Highway 403) and a westbound off-ramp (for westbound traffic to exit Highway 403).

The study has been carried out in accordance with the Municipal Class EA (June 2000) and also fulfilled the requirements of the Class EA for Provincial Transportation Facilities (July 2000).

The City of Burlington is planning to incorporate this project in its 2006 Capital Programme.

3.8 Study Area Transportation Network Analysis

As part of the process, a network analysis was undertaken to assess the transportation requirements for the Waterdown/Aldershot area. The analysis began with the assessment of a future "do-nothing" condition for the 2021 horizon year. The purpose of beginning here was to quantify the magnitude of the transportation problem throughout the network.

The network analysis was developed using the City of Hamilton's A.M. Peak Hour Model to determine travel demand needs and phasing between 2004-2021.

The model "runs" established the anticipated demand on the area network. The strategy then, was to determine how to best serve this demand within the conditions established through the study process.

Despite the identification of capacity deficiencies on the roadway network, the considered solutions were not limited just to roadway expansion or extensions. Rather, other strategic level alternatives that focused on the promotion of non-automobile transportation and multi-occupant vehicles were considered first.

For each of the problem areas identified in the area network by 2021, the potential for alternative roadway improvements was considered and where appropriate, alternatives were identified. The need for roadway improvements was identified taking into consideration the potential for transit, cycling, walking, and Transportation Demand Management (TDM) alternatives to help solve the problem. The roadway improvement alternatives were assessed based on a set of evaluation criteria and a preferred alternative selected for each problem area. The preferred roadway solutions for each problem area were then knitted together with the proposed transit and other considerations to form a total network "system" solution.

3.9 Modeling Process

3.9.1 Synopsis of Existing Model

The City of Hamilton Emme/2 Model was used to provide some of the initial inputs to the Waterdown/Aldershot Transportation Master Plan. The model is a transportation demand forecasting tool used by the City of Hamilton to help plan for future infrastructure requirements in the municipality. The model consists of a year 2001 road network and peak hour auto vehicle and truck trip tables for the years 2001 and 2021. The 2001 trip tables consist of expanded trip data from the 2001 Transportation Tomorrow Survey (TTS)[2] supplemented by census Place of Work – Place of Residence (POW-POR) data, for areas external to the TTS, and truck data from the 1995 Commercial Vehicle Survey (CVS). A 3 percent annual growth factor was used to obtain both the 2001 and 2021 trucking estimates. The 2021 auto vehicle trip table was obtained by "Frataring" the 2001 trip table to trip end totals obtained by applying population and employment growth factors to the 2001 trip end totals.

For the Waterdown/Aldershot TMP the trip matrices from the Emme/2 model (both 2001 and 2021) were re-balanced to revised trip end totals within the study area using standardized trip rates applied to estimates of population and employment.

There was considerable public interest in the modelling methodology and its results from residents along the east-west corridor. The Study Team and members of the public discussed the methodology and results in detail throughout the study process.

3.9.2 Waterdown Network Validation and Base Test

Revisions to Base Year (2001) Network Representation
The base year (2001) road network used in the Hamilton Emme/2 model was reviewed for accuracy within the study area and additional detail added for consistency with the zone system. Those changes included the addition of required centroid connectors and revisions to the existing ones. Based on current information received, a number of link attributes were modified to reflect the existing situation. These are presented in ***Table 3-4*** and ***Table 3-5***.

[2] TTS is a Greater Toronto Area wide transportation behaviour survey collected every five years for the purposes of understanding travel behaviour in participating municipalities.

Table 3-4 – Changes to Base Year (2001) Link Attributes

Attribute	Was	Now
Number of Lanes in each direction.		
Dundas Street – Evans Road to Kerns Road	1	2
Dundas Street – Hamilton Street to Evans Road	2	1
Lane Capacity (Vehicles per hour)		
Hamilton Street – Parkside Drive to Dundas Street	1000	800
Evans Road – Dundas Street to 4th Concession	1200	700
Cedar Springs Road – Dundas Street to No 1 Sideroad	600	800
Kerns Road – N. Service Road to Tyandaga Park Drive	900	700

Table 3-5 – Additions to Base Year (2001) Link Attributes

Link	From	To	Lane Capacity (vph)	Free Flow Speed (kph)
Snake Road	Plains Road	Main Street	500	50
Old York Road	Plains Road	Highway 6	400	50
Main Street	Dundas Street	Centre Road	500	50
Mountain Brow Road	Waterdown Road	King Road	500	50
King Road	North Service Road	Mountain Brow Road	500*	50

*Note: King Road is designated as a collector road and would typically be assigned a roadway capacity of 700 to 800 vehicles per hour/lane. Due, to the current roadway characteristics (e.g. steep grade, narrow road width) the capacity of King Rd was reduced to 500 vehicles/hour/lane. This is standard industry practice.

In addition to the changes above, deletions to Base Year (2001) link attributes included:

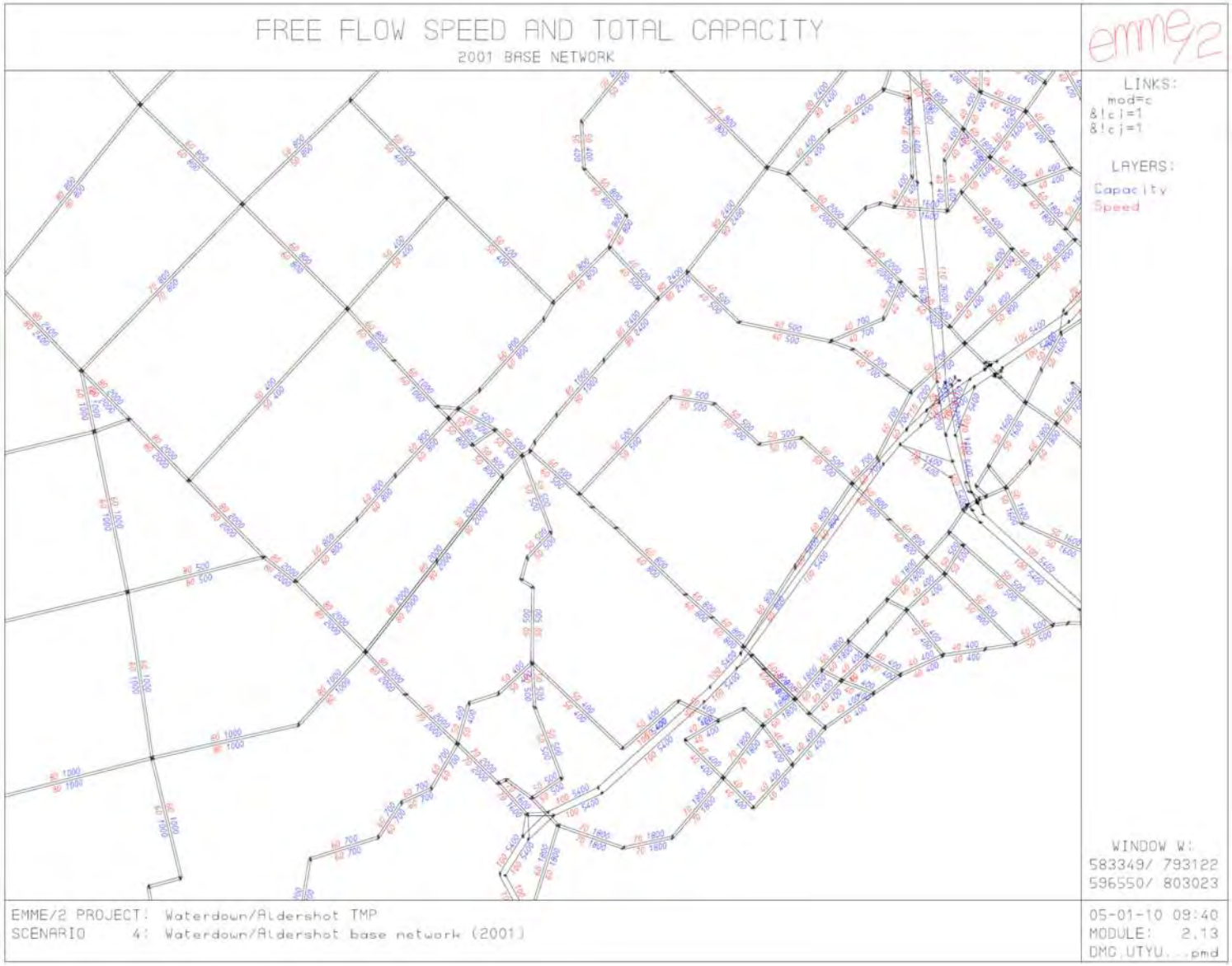
- Kerns Road north of Dundas Street; and
- Mill Street between Dundas Street and Parkside Drive.

The updated base year link attributes for the entire study area are illustrated in ***Figure 3-7***.

Volume Delay Functions

The Hamilton model uses varying levels of GTA zone aggregation to represent the areas outside the City of Hamilton together with a less detailed representation of the road network. In many cases the simulated travel demands from these large zones greatly exceed the capacity of the limited number of roads included in the network. Simulated link speeds are very close to zero in a number of areas resulting in an average a.m. peak hour trip time in excess of 200 hours for the network as a whole. To eliminate this distortion, and any possible effects it might have on trip routings within the study area, the volume delay functions have been modified to simulate free flow conditions on the network in all areas except the Cities of Hamilton and Burlington. The average simulated trip time on the network as a whole is reduced to approximately 30 minutes.

Figure 3-7 – 2001 Base Year Link Attributes



3.9.3 Trip Rates

The trip rates used in the calibration of the Hamilton model are calculated by individual zone using TTS data. The TTS sample size (5%) is not sufficient to provide statistical accuracy at that level of detail. As a result, the number of per capita peak hour trip origins varies from a low of 0 to a high of almost 7. The origin trip rates used in other models are typically in the range of 0.1 to 0.2. The trip ends for the GTA zones that make up the community of Waterdown have therefore been re-calculated using the average trip rate of 0.191 origins per capita of population and 0.293 destinations per job for all 3 zones. Average values of .123 origins per capita and .266 destinations per job were used for all the remaining zones in Flamborough. A population component was subsequently added to the destination trip rates by adding 12.5% of the population to the employment, and applying 75% of the above trip rates to the combined total. Those ratios are based on average values taken from the simplified GTA model. Adding the population component at the destination end was found to have a minimal effect on the assignment results.

3.9.4 Zone Splitting

The data used as input to the Hamilton model is mostly based on the GTA zone system developed by the DMG. The four GTA traffic zones that include the community of Watertown and the adjacent area immediately west of Highway 6 were sub-divided into the 11 sub-zones proposed in the Emme/2 model calibration report. The three zones that Aldershot consisted of in the Hamilton Emme/2 model were sub-divided into 27 sub-zones corresponding to the traffic zones used by Halton Region. To obtain the more detailed trip tables the origins and destinations from the initial trip table were split in accordance with the estimated distribution of population and employment in the sub-zones.

The existing 2021 trip table produced by the model is based on that finer zone system but the procedure and factors used in the sub-division of the GTA zones are not included in the documentation. The 2001 trip table has not been sub-divided nor has the population and employment data on which the forecasts are based. The existing 2021 trip table has therefore been re-aggregated to the GTA zones and a new set of factors developed to sub-divide the three GTA zones in Waterdown plus the GTA zone immediately to the West. The factors represent approximations of the existing and anticipated split in population between the sub zones as shown in ***Table 3-6***.

Table 3-6 – Split in Population

GTA Zone	Hamilton Zone	2001 Split	2021 Split	Area of Planned Development
2630	2630	.3	.4	
	2673	.7	.6	
2631	2631	.9	.6	
	2676	.05	.2	
	2696	.05	.2	
2632	2632	.1	.5	Waterdown South
	2674	.2	.1	
	2675	.7	.4	Upcountry
2633	2633	.05	.25	Waterdown North
	2671	.15	.12	
	2672	.8	.63	

The above factors are applied after the a.m. peak hour trip table after the trip distribution process has been completed. The same factors are used for origins and destinations.

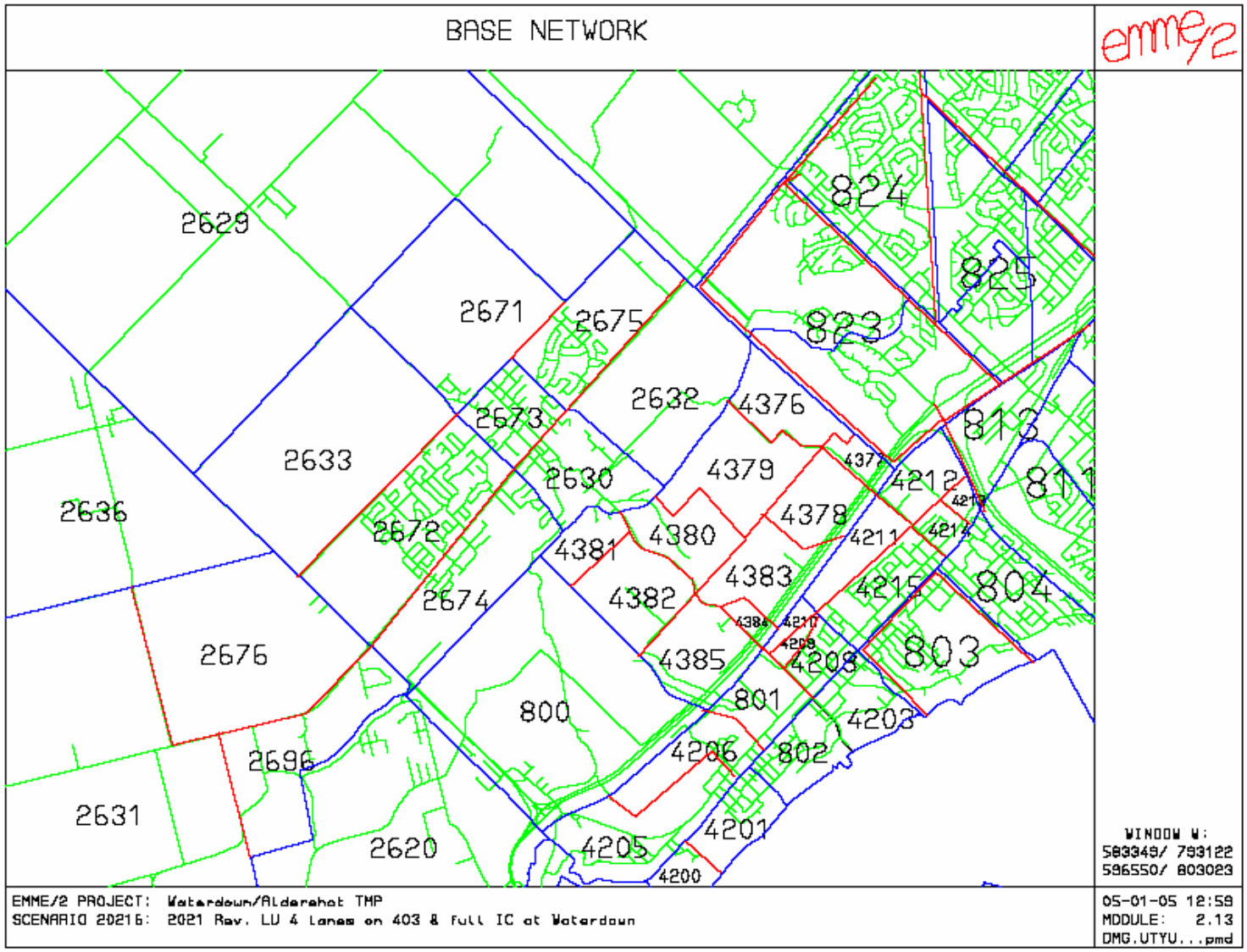
Figure 3-8 illustrates the zones used in the modelling process. The blue lines in the figure represent the GTA zone boundaries while the red lines represent the sub-divided (or aggregated) zones used for the Waterdown/Aldershot model simulation.

3.9.5 Land Use Forecasts

There are some significant differences in the land use growth forecasts relative to those used in the Halton Region Transportation Master Plan and the Highway 6 Study; the most significant difference being the employment numbers for the City of Toronto. All three studies used approximately the same number (1.719 million) for the year 2021 but the Hamilton model uses 1.636 million as its base compared to 1.454 million in the Halton Region model. As a result of this difference in the base, the Hamilton model shows less growth in Toronto's employment (5%) than in population (13%). In the other two studies, Toronto's employment is projected to grow at a faster rate than its population. Analysis of the original 2001 and 2021 trip tables produced by the Hamilton model shows no increase in the number of a.m. peak hour auto driver trips inbound to Toronto. The number of outbound trips increases by 30,000. A change of that magnitude could well have a ripple effect in the trip distribution that extends as far as the Hamilton boundary affecting the projected traffic volumes on both the QEW and Highway 403.

For the purpose of this analysis this difference was not adjusted, yielding a more conservative approach.

Figure 3-8 – Transportation Modeling Zone Map



3.9.6 Screenline Deficiencies

A comparison of simulated traffic volumes and capacity across a number of screenlines[3] indicates the following deficiencies in road capacity. The simulated volumes are for the a.m. peak hour. It can be expected that p.m. peak hour volumes in the reverse direction will be higher by 0% to 30%. Volume to capacity (v/c) ratios in excess of 0.85 is an indicator of potential problems.

2001 Network
This simulation indicates that:

- There is an existing capacity deficiency on Dundas Street east of Hamilton Street in the centre of Waterdown;
- Highway 403 is at, or close to, capacity; and
- Main Street north of Dundas Street is near capacity but the simulated volume is driven by the location of the centroid connector for zone 2673. There is spare capacity on adjacent Hamilton Street and on parallel local streets not included in the network representation.

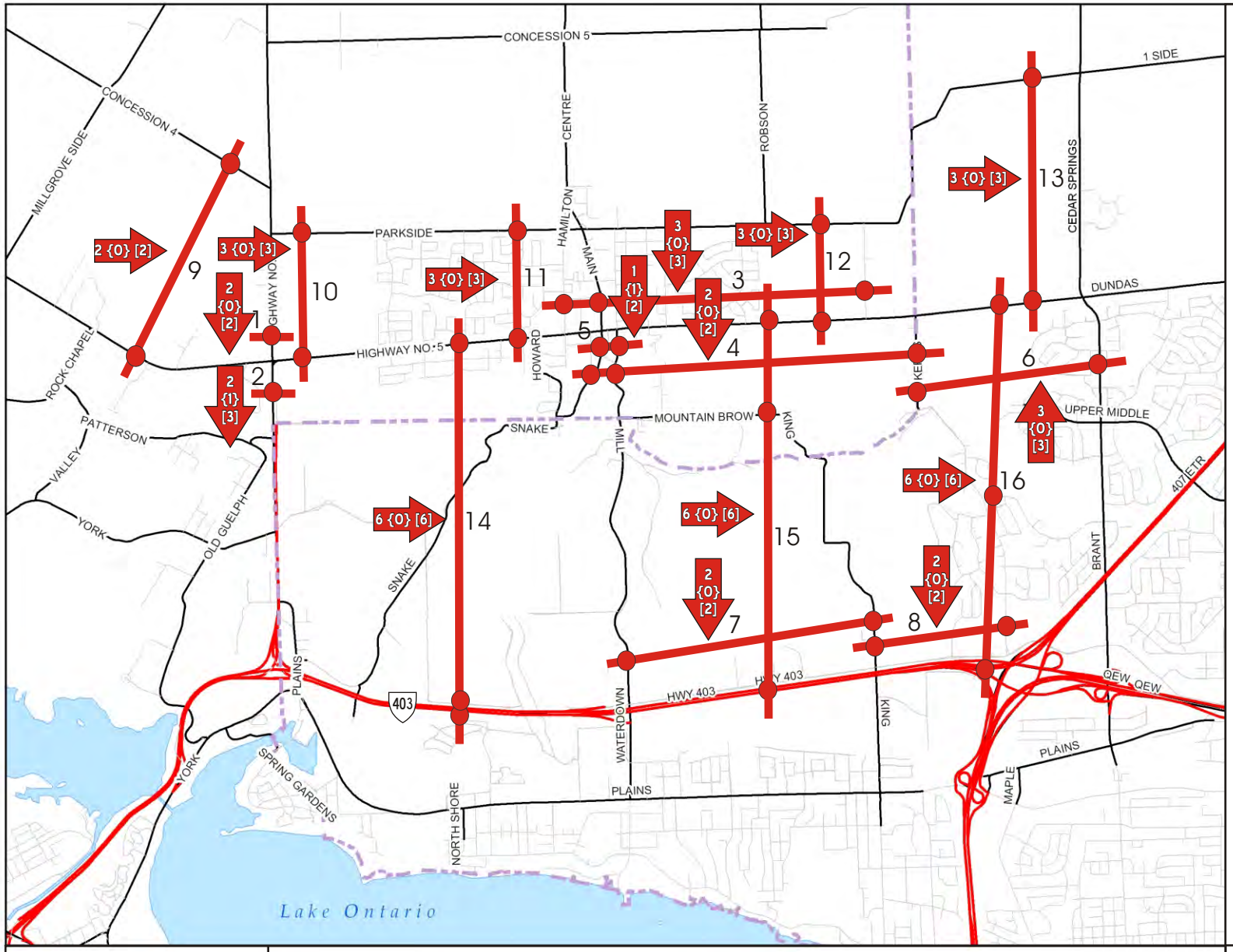
2021 Do Nothing (2001 Network)
This simulation indicates:

- Dundas Street through the centre of Waterdown is significantly over capacity;
- Dundas Street is also at, or over, capacity both East and West of Brant Street in Burlington;
- Highway 403 is over capacity. It should also be noted that the simulated volume on Highway 403 is highest west of Highway 6. Three previous studies (IBI, Halton TMP and Highway 6) all show p.m. peak hour volumes well in excess of 3-lane capacity;
- The simulated volume on Main Street is marginally higher than for 2001, but the same comments apply;
- Highway 6 is at, or above, capacity immediately south of Dundas Street; and
- Mill Street (Waterdown Road) is at, or above, capacity immediately south of Dundas Street.

2021 With full interchange at Waterdown Road & Highway 403
Relative to the 2021 Do Nothing scenario, the addition of a full interchange with Waterdown Road on Highway 403 results in an increase in simulated traffic volumes on Mill Street south of Dundas Street (already at or over capacity) with slight reductions in traffic volumes on Dundas Street east of Mill Street and on Highway 6 south of Dundas Street (not significantly).

The screenline deficiencies of each of the above screenings are illustrated in ***Figure 3-9*** to ***Figure 3-11***.

[3] A screenline is an imaginary line defined in the network that captures a broad corridor through which traffic flows



Legend:

- Freeway (403)
- Arterial / Local Road (Brant St.)
- Municipal Boundary
- Screenline
- Existing Lanes {Additional Arterial Lanes Required} [Total Lanes Required] (e.g. 3 {1} [4])

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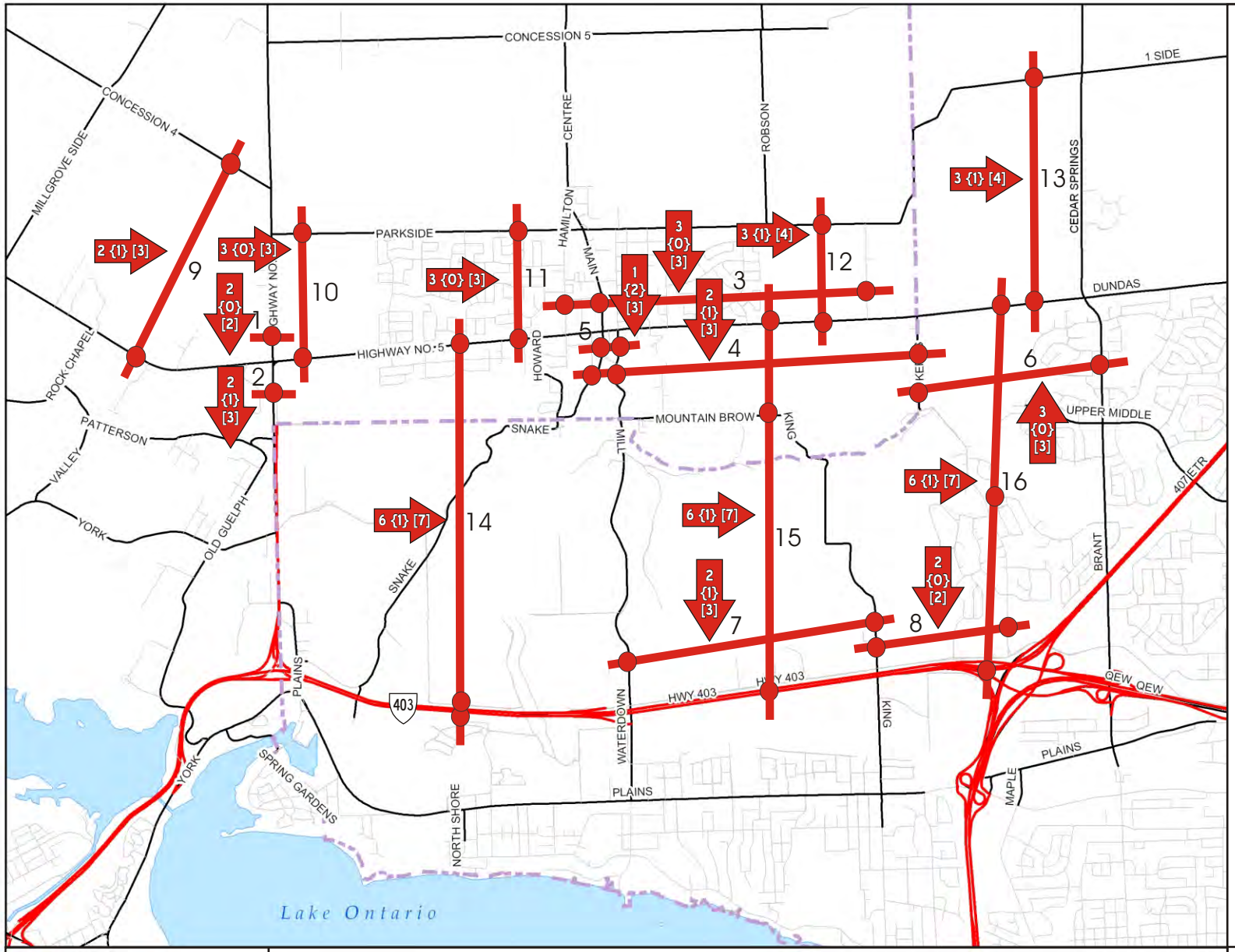
Screenline Deficiencies
2001 Network

Waterdown / Aldershot Transportation Master Plan

Figure 3.9

Not to Scale

September 2007



Legend:

- 403 — Freeway
- Brant St. — Arterial / Local Road
- Municipal Boundary
- Screenline
- 3 {1} [4] — Existing Lanes {Additional Arterial Lanes Required} [Total Lanes Required]

DILLON CONSULTING

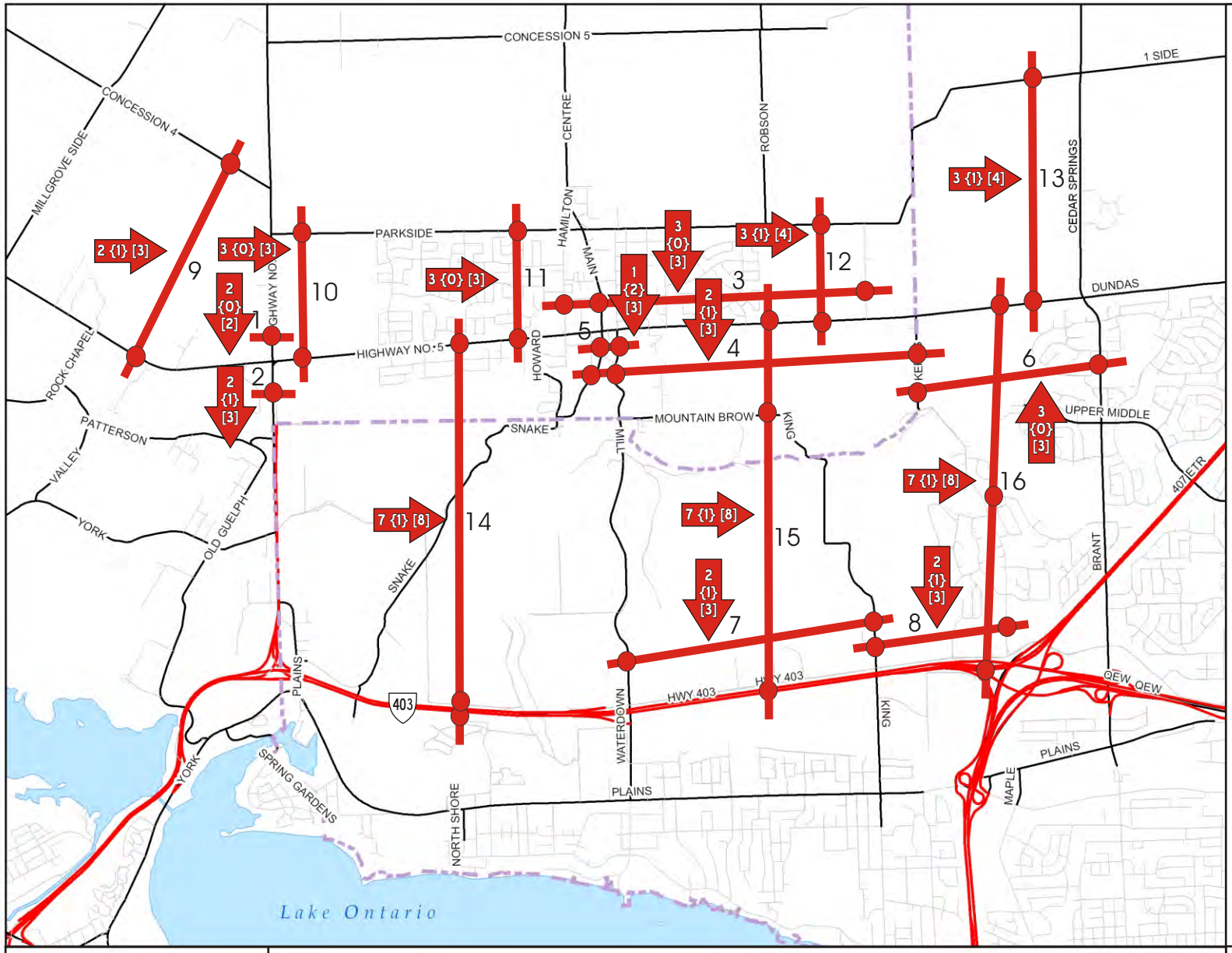
Screenline Deficiencies
2021 Do Nothing (2001 Network)

Figure 3.10

Not to Scale

Waterdown / Aldershot Transportation Master Plan

September 2007



Legend:

- Freeway (403)
- Arterial / Local Road (Brant St.)
- Municipal Boundary
- Screenline
- Existing Lanes {Additional Arterial Lanes Required} [Total Lanes Required] (e.g. 3 {1} [4])

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Screenline Deficiencies

2021 with Full Interchange at Waterdown Road / Highway 403 and 8 Lanes on Highway 403

Waterdown / Aldershot Transportation Master Plan

Figure 3.11

Not to Scale

September 2007

3.10 "The Problem"

The report "Master EA Transportation Network Review of Aldershot/Waterdown" July 2004 was undertaken to "review all the land use and transportation network changes, either proposed or constructed, which may affect the study area conclusions and recommendations of the previous Transportation Master Plan Study undertaken by Stantec Consulting Ltd. in September 1999. The report concluded *"based on the current network choices available, the main conclusion that can be drawn from these results is that both additional east-west capacity and north-south capacity is required for the study area around the Village of Waterdown and depending on what configuration this network would take further improvements would likely be required in Burlington to receive this additional traffic, e.g., North Service Road widening…As this ultimately concludes, the next phase of this Master EA update has to analyze all potential north-south and east-west network improvement options in various combinations that could potentially cater to these very high traffic demands stemming from the future development of Waterdown and Aldershot"*.

North/South Demand
The demand forecasting model developed by the City of Hamilton used for this study forecasts conditions for the A.M. time period. Therefore, based on the character of the study area (i.e., mostly low density residential development) the peak direction of travel will generally be the southbound direction.

Two analyses were undertaken in this study to confirm "The Problem" identified in Phase 1 of the Class EA process. These were:

1. ***Screenline Analysis*** – an imaginary line defined in the network that captures a broad corridor through which traffic flows; and
2. ***"Bottom Up" Approach*** – a "building block" analysis that works from current conditions and adds anticipated traffic from growth.

The north/south screenline analysis evaluated the combined demand and capacity of key north/south links. Links that cannot service this demand for design or operations reasons were not accounted for in the evaluation (i.e., Snake Road and Kerns Road).

As presented in ***Figure 3-11***, the screenline analysis reveals a deficiency in the southbound direction. For planning purposes, a v/c greater than 0.85 is considered "critical" in this analysis. Other AM models use 0.80 as the critical v/c but a more conservative approach was used in this analysis, thus "triggering" system capacity improvements at more congested levels. PM based models use a critical v/c of 0.90.

Taking an approach separate from the transportation demand forecasting tool, a "bottom up" analysis was undertaken to determine any significant north/south deficiencies.

Current estimates for growth within OPA 28 indicate approximately 6,500 new homes will be built by 2021.

The Phase 1 report identified that outbound trips from Waterdown Road are distributed as follows:

Internal (within Waterdown)	25.0%
To Hamilton	20.4%
To West Burlington	2.9%
To Downtown Burlington & Niagara Region	5.9%
To Halton, Peel and East	33.4%
To Milton, Brampton and North Mississauga	3.7%
To Guelph, Waterloo	4.3%
To West along Highway 5	4.4%
Total	100%

The distribution can be aggregated as follows:

East along Dundas Street	20.4%
North along Highway 6	4.3%
Southwest along Highway 6 and Highway 5	24.8%
South and Southeast	25.5%
Internal	25.0%
Total	100%

Therefore, 50.3% of the trips will need to travel along one of the roads that make up the south study area screenline.

6,500 homes x 0.77 trips/home	=	5,005 trips
@ 75% outbound trips	=	3,754 trips
Less 10% for alternate modes	=	3,378 trips
Times 50.3% (southbound)	=	1,699 trips

Using "current" roadway volumes, the existing system has the following available capacity:

Link	Capacity	Volume	Reserve
Highway 6	2,000	1,780	220
Waterdown Road	800	378	422
King Road	500	48	452
Brant Street	2,000	1,373	627
Total	5,300	3,579	1,721

Therefore, if no other growth in traffic were to occur – only traffic generated by OPA 28, there would still be a north/south deficiency in the study area network south of Dundas Street. However, traffic will grow (i.e., as families mature, there will be more cars per household). If one considers a marginal growth of 1% per year to 2021, then the system will require to meet an additional 572 vehicles, which, when added to the unserved demand for OPA 28 equates to the equivalent of one arterial lane.

Therefore, regardless of the approach undertaken to estimate the demand of traffic to 2021, there is a clear conclusion that a north/south deficiency will exist, hence "The Problem" identified in the report, *Waterdown/Aldershot Master EA Transportation Network Study, July 2004*, is confirmed by the work undertaken in this study.

Further considerations of this problem are:

- The need to have a non-congested system to permit reasonable transit operations competitive with the automobile;
- If improvements are not made, the growth in traffic will find its way onto Kerns Road, Tyandaga Park Drive and Snake Road, which already have their share of traffic operational issues (i.e. infiltration of through traffic); and
- The analysis has been undertaken for the A.M. peak, which generally has less traffic on the network, hence the findings provide a "best case" scenario.

East/West Demand
The analysis undertaken to evaluate deficiencies in the east/west direction followed the same approach as undertaken for the north/south conditions.

The east/west screenline analysis evaluated the combined demand and capacity of **key** east/west links. Links that cannot accommodate the demand for design or operations reasons were not accounted for in the evaluation (i.e., Mountain Brow Road).

The screenline analysis revealed deficiencies east of Mill Street in the eastbound direction. Given there are only two roadways servicing this demand (Dundas Street and the QEW), the findings were not surprising.

Deficiencies were also found west of Highway 6 along Highway 5 and Concession 4. These deficiencies will be addressed by the MTO under upcoming assignments.

The link analysis determined a need for one more lane of capacity east of Mill Street.

The "bottom up" analysis revealed the following:

6,500 homes x 0.77 trips/home	=	5,005 trips
@ 75% outbound trips	=	3,754 trips
Less 10% for alternate modes	=	3,378 trips
Times 20.4% (eastbound)	=	689 trips

Current roadway volumes consume the current network capacity as follows:

Link	Capacity	Volume	Reserve
Parkside Drive	800	461	339
Dundas Street	1,000	1,131	---
Total	1,800	1,592	339

Therefore, if no other growth took place except for OPA 28, there would still be a deficiency in the system. If background growth is considered, then an additional 254 vehicles (based on assumed growth rate of 1% per year of 2006 volumes until 2021) must be accommodated in addition to the unserved demand from OPA 28, equating to one arterial lane.

The east/west deficiency identified in the *Waterdown/Aldershot Master EA Transportation Network Study, July 2004*, report is confirmed by the analysis undertaken in this study.

4.0 DEVELOPING A TRANSPORTATION STRATEGY TO 2021

In the preparation of a transportation strategy to the year 2021, emphasis was placed on the development of this strategy based on the principles identified through the master plan process. In defining the needs for the Waterdown/Aldershot area, it is important to note that roadway improvements were identified in combination with other modes of travel including transit, cycling, walking, and transportation demand management.

4.1 Alternative Solutions to Support OPA 28

A number of possible transportation solutions to resolve the road capacity problem were initially identified including:

- Do-nothing;
- Improved public transit;
- Transportation demand management; and
- New roadway capacity.

Attempts were made to solve as much of the problem as possible through non-roadway solutions such as improved public transit and Transportation Demand Management (TDM) measures. These solutions are considered preferred (by the project team and participants to this study) as they result in less reliance on the automobile and result in less environmental effects. The following describes how these possible solutions were considered.

4.1.1 Do-Nothing

The Ontario EA Act requires the consideration of the "do-nothing" scenario. The do-nothing would mean that there would be no improvements to transportation infrastructure in the study area although transportation demand would increase as a result of new land development. The impact of the "do-nothing" on the transportation system was modelled.

A "Do-nothing" modeling scenario was tested that placed the 2021 traffic demands on the roadway using the existing (2001) roadway network and modal splits. Without any road modifications or reductions in modal split (proportion of non-vehicle travel methods) or auto occupancy, peak period traffic on primary corridors in Waterdown will reach critical capacity by 2021 with the development of the OPA 28 lands.

The model shows an increase in both east-west and north-south congestion. Congestion is measured by the volume to capacity (v/c) ratio. This is a numerical measure of the ratio between volume on a particular roadway segment (determined through the Emme 2 transportation model) and the available capacity to accommodate that volume. Generally, a v/c ratio greater than 0.85 indicates critical capacity has been reached. Critical capacity is defined as the point where a transportation facility's ability to accommodate a moving stream of people or vehicles in a given period of time has been reached. This is represented as a high degree of congestion with long

delays and queues at signalized intersections. Once a v/c ratio exceeds 1.0, this is defined as the point where the roadway section has failed, and the volume of vehicles on the roadway section has exceeded the available capacity to accommodate them.

East-west traffic will continue to be concentrated on Dundas Street, which will exceed capacity east of Main Street with a peak hour v/c ratio reaching up to 1.33 in the peak direction. Parkside Drive, east of Robson Road, will also reach a point of critical capacity during the peak periods, with a v/c of 0.95 during the AM peak hour in the peak direction. Links to Dundas Street and Brant Street from Parkside Drive (Evans Road and No. 1 Side Road) will also be operating at or near capacity. In Burlington, Highway 403 and much of Plains Road will also operate at or near capacity in the peak direction during peak hours.

North-south traffic outside of Waterdown relies on four primary connections to Highway 403/Baseline Road: Highway 6, Waterdown Road, King Road, and Brant Street. In the do-nothing scenario, all four roads will operate at or near capacity in the peak direction during the peak periods. Sections of Highway 6, Waterdown Road and King Road will operate beyond capacity, with a v/c ratio of 1.12, 1.18 and 1.02 respectively. This scenario would result in significant traffic congestion.

Another scenario was modelled based on Road improvements to Highway 403 and changes in modal split and travel demand. The scenario assumed a full interchange at Waterdown Road at Highway 403, the widening of Highway 403 from 6 to 8 lanes, the introduction of transit service in Waterdown, resulting in an overall 5 percent reduction in automobile trips, and the introduction of transportation demand management initiatives, further reducing automobile trips by 5 percent (to arrive at a total 10 percent reduction in trips). With these initiatives, congestion issues still continue on the majority of the corridors described above.

4.1.2 Improved Public Transit

Although there are currently no transit services within the Waterdown area, local and interregional transit services exist in the community of Aldershot and adjacent to the study area. The following describes existing transit services by service providers in and adjacent to the study area:

1. **Hamilton Street Railway (HSR)** does not operate transit services in the community of Waterdown although a future extension may be possible. In November 2007, the City of Hamilton adopted a Transit Service Enhancements Plan. This plan included transit enhancements to Waterdown. The Waterdown enhancement will provide bus service for the urban portion of Waterdown situated between Dundas Street and Parkside Drive, east of Highway #6. Buses would operate north-south on Waterdown Road, terminating at Plains Road, with direct service to the Aldershot GO/VIA Station. Customers will be able to transfer to GO Rail & Bus services, VIA trains or Burlington Transit buses. Transfers from HSR to Burlington Transit are free of charge, allowing customers to travel to Downtown Hamilton, the Burlington and Appleby GO Stations and other points within Burlington. Improvements to inter-modal integration and cross-boundary transit services are strategies that can encourage ridership growth.

2. **Burlington Transit** does not operate services in Waterdown, but does operate some service in Aldershot and adjacent to the study area:
   a) Route 1 – Plains/Fairview West operates along Plains Road connecting downtown Hamilton with the Burlington GO Station, with stops at Plains Road and King Road, Plains Road and Waterdown Road, and the Royal Botanical Gardens.
   b) Route 7 – Tyandaga North operates a residential feeder service from the Burlington GO Station along Kerns Road and Tyandaga Park Drive.
   c) Route 2 – Brant North operates a service along Brant Street, between Cavendish Drive (just south of Dundas Street) and the Burlington downtown transit terminal.

3. **GO Transit** operates GO Rail and Bus service on or parallel to Highway 403. Services include:
   a) Lakeshore West GO Train operates fifteen eastbound trains throughout the day from the Aldershot GO Station (located on Waterdown Road, just north of Plains Road) during the AM peak period, and eighteen westbound trains during the PM peak period. During other times, the GO Train is supplemented by regular Train-Bus service between Burlington GO Station and Hamilton GO Centre.
   b) Route 46 – Highway 407 West GO Bus service connects downtown Hamilton with York University, with stops at McMaster University, Mississauga City Centre, and Bramalea GO Station, operating along Highway 403/407. Currently, the service does not stop in the study area.
   c) Route 15 – McMaster University Limited Service operates express between Union Station and McMaster University with only one stop at the Burlington GO Station. Currently, the service does not stop within the study area.

4. **VIA Rail** operates out of the Aldershot Station, which shares its facilities with GO Transit. Several trains depart this station each day, including Toronto to London, Aldershot to Montreal/Ottawa, Toronto to Niagara Falls, Buffalo, and New York; and Aldershot to Toronto, Kingston, Montreal.

   Several transit opportunities are currently being examined to provide transit service in Waterdown and increase the transit mode split for both local and interregional trips. These include:

   1. **Create Interregional Terminal at Aldershot GO Station** – the area has a significant amount of interregional transit service, however, it lacks an appropriate connection to Waterdown. The Aldershot GO Station would provide a good terminus for feeder services with connections to GO Rail, GO Bus, Burlington Transit, and VIA Rail.
      a. As an initial step, provide a starter transit service beginning in 2008 (as outlined by the HSR) to/from the Aldershot GO Station to the existing urban area of Waterdown. The terminus at the Aldershot GO Station will provide a local bus connection to GO Rail and VIA Rail services. As ridership levels increase and the community grows, the service should be extended to the new development areas and the service levels increase to help meet modal split targets.

b. Reroute Burlington Transit Route 1 – Plains/Fairview West to connect to Aldershot GO Station. This will provide direct access to downtown Hamilton and the Burlington GO Station for Waterdown residents.
c. With the construction of a Waterdown Road ramp at Highway 403, discuss opportunity for GO Transit to reroute the Highway 407 GO Bus to stop at the Aldershot GO Station, providing a direct connection to stops along Highway 407 between York University and McMaster University.

2. **Extend Interregional Dundas Service** – The Halton Transportation Master Plan identified opportunities to provide interregional transit service along Dundas Street, connecting downtown Hamilton to Toronto. Through Waterdown, this service is anticipated to provide 15-minute headways during the peak on Dundas Street, and south on Highway 6.

3. **Extension of Burlington Transit Routes** – opportunities exist to extend transit services from Burlington into Waterdown. These include:
   a. Extend Burlington Transit Route 7 – Tyandaga- North on Kerns Road to Waterdown South area.
   b. Extend Burlington Transit Route 2 Brant – Northwest along Dundas Street providing a direct downtown Burlington service for Waterdown residents.

Given the above transit opportunities, it was assumed that a transit mode split of 5% could be achieved in the study area. This mode split was assumed in the transportation capacity modeling work.

As improved public transit in the study area can solve some of the transportation problem, it was retained as part of the overall solution. As it is not possible to solve the entire transportation problem through improved transit, other possible solutions are required.

4.1.3 Transportation Demand Management (TDM)

Transportation Demand Management strategies attempt to delay, defer or even eliminate the need for significant capital investment in new transportation infrastructure by:

- Influencing auto demands in the commuter peak periods;
- Promoting walking and cycling as alternatives to travel by private auto; and
- Promoting public transit and ride sharing as alternatives to travel by private auto.

As part of the Transportation Master Plan process, TDM policies will be identified that could:

- ***Eliminate trips*** – through appropriate land use planning and tele-working initiatives;
- ***Reassign trips*** – by encouraging the use of less congested corridors;
- ***Reduce peak period trips*** – investigating opportunities to shift schedule start and end time of major employers;
- ***Link trips*** – by mixed used land-use planning, thereby promoting walking between activities;

- ***Increase transit use*** – through service and fare enhancements; and
- ***Increase vehicle occupancy*** – through ridesharing organizations.

It was assumed that TDM measures could reduce road capacity demand by 5 percent and therefore was assumed to be included as part of the overall solution. As it is not possible to solve the entire transportation problem through TDM measures combined with improved public transit, other possible solutions are required.

4.1.4 New Roadway Capacity

The City of Hamilton Emme/2 Model was used to provide initial inputs to the Waterdown/ Aldershot TMP. Dillon reviewed the transportation model to 2021 as documented in the Phase 1 Report, and updated the model based on current population and employment estimates.

The initial step was to establish a 2021 "do nothing" scenario to confirm the need for road capacity improvements. Through this process, it was determined that additional north-south and east-west road capacity was needed to accommodate growth up to 2021.

The approach considered all modes of travel to solve the transportation problem prior to increasing the capacity on the road network. This included transit, Transportation Demand Management (TDM), cycling and walking. A 2021 "do nothing" scenario was modelled which conservatively reduced single occupant automobile travel in the study area by up to 15 percent through increased transit use and use of Transportation Demand Management measures. This 15 percent decrease in automobile use also did not solve the north-south or east-west transportation capacity deficiency.

Several corridor alternatives were considered in the evaluation to provide the needed capacity to accommodate the development proposed in the OPA 28 lands in Waterdown. Each corridor alternative assumed a 5 percent transit model split and an additional 5 percent reduction in vehicle trips due to Transportation Demand Management (TDM) measures. Corridor alternatives were grouped into east-west alternatives and north-south alternatives for evaluation purposes.

A prescreening of corridor alternatives was conducted based on their ability to solve the transportation capacity problem. Alternatives that did not solve the problem (where 2021 screenline v/c continued to be greater than 0.85) were screened from further consideration. These include:

- Road improvements on Kerns Road between Dundas Street and North Service Road;
- Widening of Brant Street, between Dundas Street and the QEW;
- Widening of No. 1 Sideroad between Evans Road and Cedar Springs Road;
- Widening of Dundas Street to 4 lanes between Highway 6 and Brant Street (we did include a 4-lane/6 lane Dundas Street widening option); and
- Improving King Road on its own (with no improvement to Waterdown Road).

The King Road 2-lane option was screened because an improved 2-lane King Road on its own does not solve the road capacity problem. Also considered was the potential widening of King Road to 4 lanes. However, a 4 lane King Road would also not solve the problem as:

- Traffic, as demonstrated in the transportation model, would only be drawn to King Road when Waterdown Road was entirely clogged with congestion;
- King Road does not provide a direct route to Highway 403 via the Waterdown Road interchange; and
- Less efficient connection to the Aldershot Transit Station.

As a result of this prescreening exercise, three north-south options and four east-west road improvement options were identified as being able of solving the roadway capacity deficiencies and are presented in ***Table 4-1***.

The three north-south options and four east-west options are presented in ***Figure 4-1*** and ***Figure 4-2***.

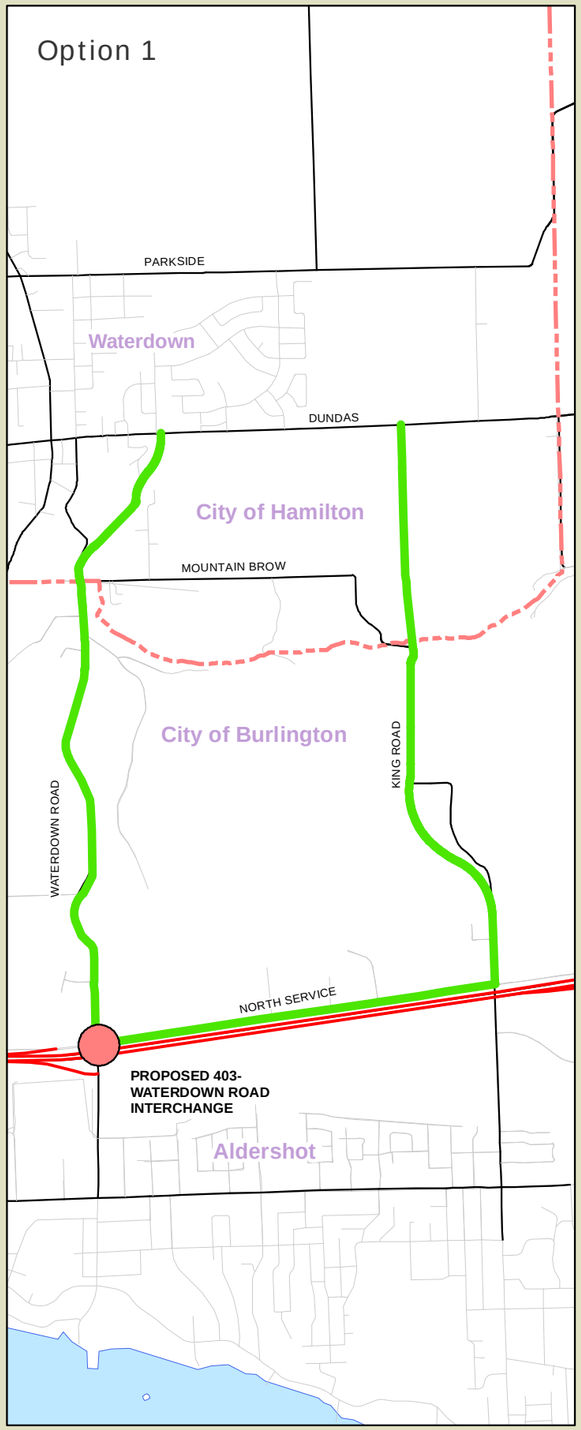
The road improvement alternatives were developed as "corridors" and should not necessarily be considered as the specific routes. As well, it may be possible to reduce the ROW widths for a number of roadway sections and thus, reduce the level of "footprint" effects. The specific route and required ROW will need to be identified as part of future Class EA/road design work.

Table 4-1 – Alternative Road Improvement Options

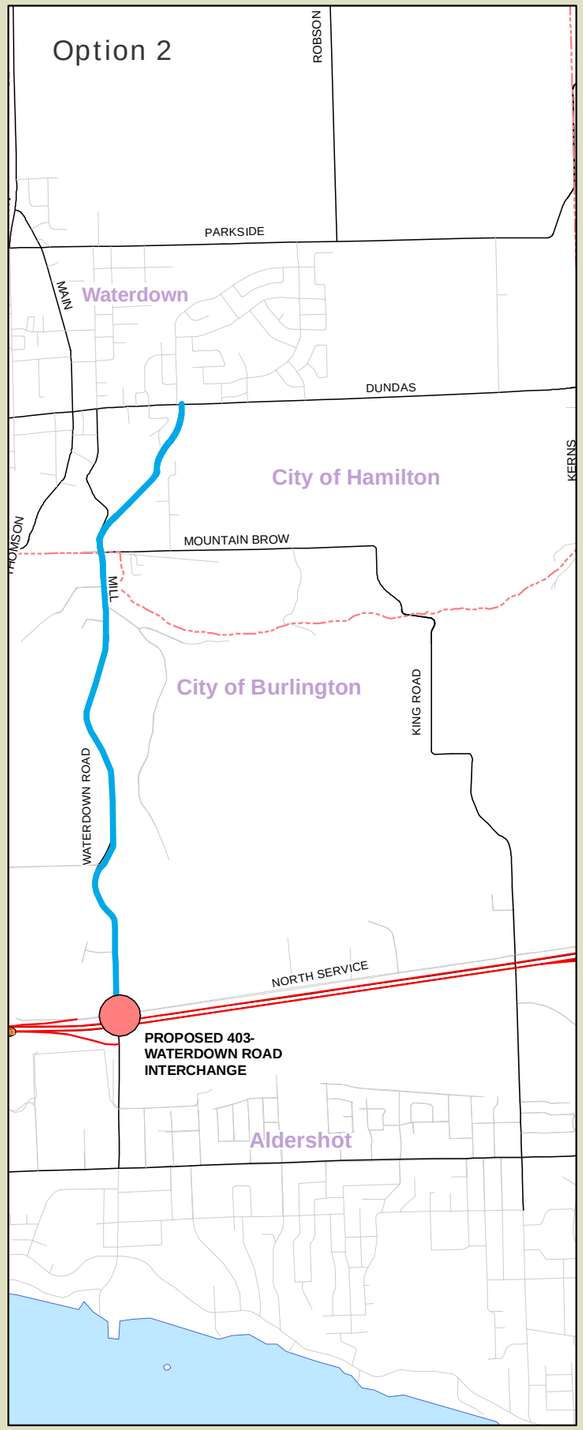
Option	Road Options Description	ROW Needs[4]
North-South Alternatives		
Option 1 – King/Waterdown Road Geometric Improvements (Both 2 lane roads)	• Geometric improvements to Waterdown Road from Highway 403 to Dundas Street (maintain as 2 lanes) • New Waterdown Road ROW north of Mountain Brow Road • King Road requires two sections of new ROW (2 lanes) with geometric improvements to sections of the existing King Road and an extension to Dundas Street. • Widening of North Service Road between King Road and Waterdown to 4 lanes	42-80 m (for both King & Waterdown)
Option 2 – Waterdown Road Widening & Geometric Improvements	• Geometric improvements and widen Waterdown Road to 4 lanes from Highway 403 to Dundas Street • New Waterdown Road ROW north of Mountain Brow Road • King Road remains as a 2-lane roadway. • No improvements to North Service Rd.	50-80 m
Option 3 – King Road Geometric Improvement & Waterdown Road Widening	• Widen Waterdown Road to 4 lanes (no geometric improvements) • New Waterdown Road ROW north of Mountain Brow Road, King Road requires two sections of new ROW • King Road requires two sections of new ROW (2 lanes) with geometric improvements to sections of the existing King Road and an extension to Dundas Street. • Widening of North Service Road between King Road and Waterdown Road	42-80 m (for both King (& Waterdown)
East-West Alternatives		
Option 1 – New North Road	• New north road with 2 lanes • New North Link "By-pass" from Dundas Street West at Rock Chapel Road to Dundas Street East, east of Evans Road	26-32 m
Option 2 – Parkside Drive Widening	• Widen Parkside Drive to 4 lanes • Parkside Drive from Dundas Street West at Rock Chapel Road to Dundas Street East, east of Evans Road	30-43 m
Option 3 – Dundas Street Widening	• Widening of Dundas Street to 4-lanes from Rock Chapel Road to Highway 6 at 30m ROW, to 6-lanes from Highway 6 to Berry Hill Avenue at 43m ROW, to 4-lanes from Berry Hill Avenue to a point just east of Pamela Street at 30m ROW, and to 6-lanes from just east of Pamela Street to Dundas Street, east of Evans Road at 36m ROW	30–39 m (urban cross section)
Option 4 – Parkside Drive Widening & New North Road	• Starting at the west, new 2-lane North Link "By-pass" ROW from Dundas Street West at Rock Chapel Road continuing as a new northern "by-pass" ROW, then swinging south past Centre Road to connect with Parkside Drive east of Churchill Avenue. Widening Parkside Drive to 4 lanes to Evans Road. Then a new connecting link from a point east of Evans Road heading south to connect with Dundas Street	26-43 m

[4] The RoW widths assumed for the purposes of the evaluation were based on applicable road standards and the general characteristics of the existing roadways. It was anticipated that RoW width may be reduced through the implementation of specific road treatments (e.g. retaining walls). This would be investigated in subsequent study phases. In any event, all options were treated equally in this regard.

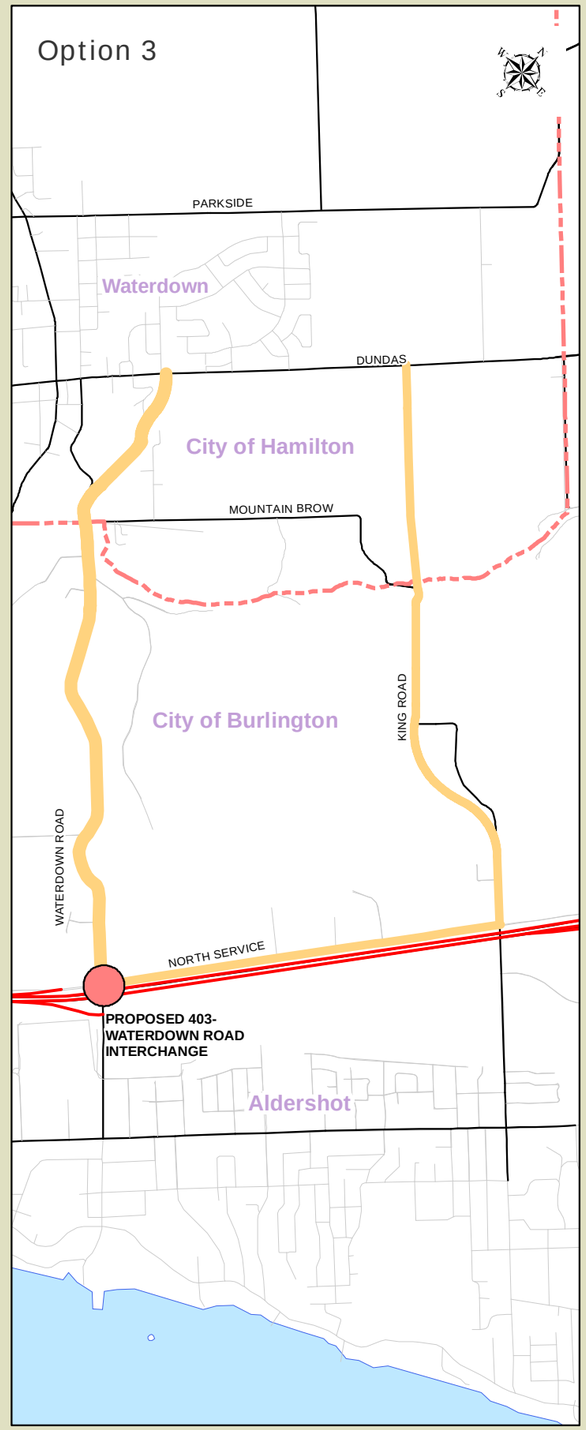
Option 1



Option 2



Option 3



Waterdown - Aldershot Transportation Master Plan

Figure 4.1: North/South Roadway Improvement Options

- Municipal Boundary

Option 1
- King & Waterdown Rd geometric improvements, no widening

Option 2
- Waterdown Rd widening to 4 lanes & geometric improvements

Option 3
- Waterdown Rd widening 4 lanes & King Rd geometric improvements

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

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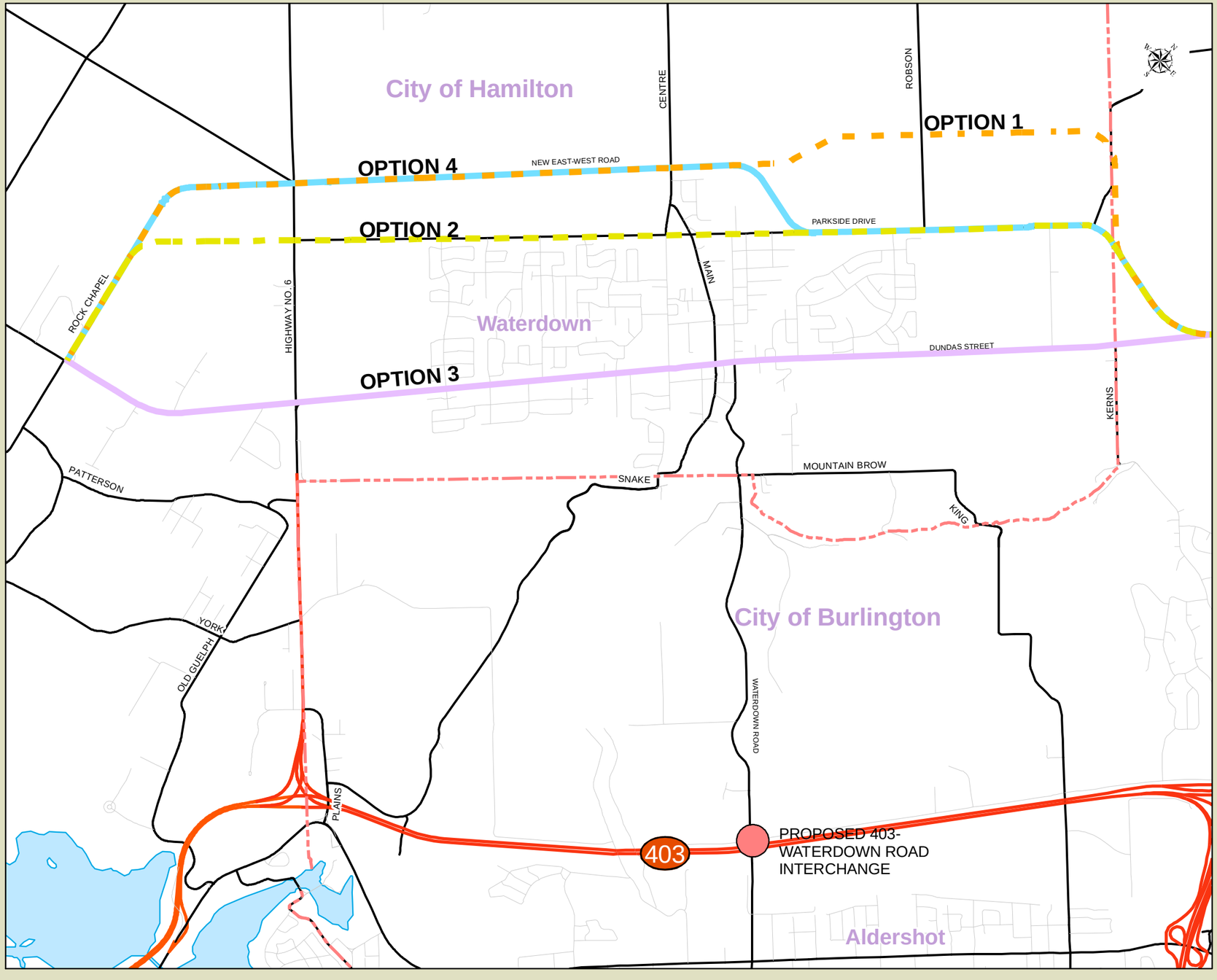

Waterdown - Aldershot
Transportation Master Plan

Figure 4.2: East/West Roadway Improvement Options

- Municipal Boundary

East-West Corridor

- Option 1 - New north road
- Option 2 - Parkside Rd. widening
- Option 3 - Dundas St. widening
- Option 4 - Parkside Rd. widening (partial) & new north road (partial)

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

5.0 EXISTING CONDITIONS

5.1 Introduction

The baseline environmental conditions in the study area were considered in the process to develop and evaluate solutions to the identified transportation problem. ***Figure 5-1*** illustrates the environmental conditions and constraints in the study area. More detailed environmental information including field surveys will be undertaken in Phase 3 of the Class EA process. Much of the existing community of Waterdown, as well as the Upcountry and Waterdown South developments fall under the jurisdiction of the Niagara Escarpment Commission. The area is guided by the Niagara Escarpment Plan, an environmental land use plan that looks to protect, conserve and promote sustainable development to ensure that the Niagara Escarpment will remain a natural environment for future generations.

5.2 Greenbelt Plan

The Greenbelt Act, 2005 was enacted in February, 2005 which authorized the preparation of the Greenbelt Plan, 2005 (approved in February, 2005). The Greenbelt Plan identifies where urbanization should not occur in order to provide permanent protection of the agricultural land base and the ecological features and functions occurring in the Greenbelt Plan Area. That Area includes all of the Niagara Escarpment Plan Area as well as the Oak Ridges Moraine Conservation Plan Area and the Protected Countryside. The policies of the Niagara Escarpment Plan are the policies of the Greenbelt Plan for the Niagara Escarpment Plan Area.

The Protected Countryside lands identified in this Greenbelt Plan are intended to enhance the spatial extent of agriculturally and environmentally protected lands currently covered by the NEP and the ORMCP, while at the same time improving linkages between these areas and the surrounding major lake systems and watersheds. Collectively, the lands in these three plans form the Greenbelt. The Protected Countryside is made up of an Agricultural System and a Natural System, together with a series of settlement areas.

The Agricultural System is made up of specialty crop, prime agricultural and rural areas. The Natural System identifies lands that support both natural heritage and hydrologic features and functions. Both systems maintain connections to the broader agricultural and natural systems of southern Ontario.

The settlement areas, identified as Towns/Villages and Hamlets, vary in size, diversity and intensity of uses and are found throughout the Protected Countryside.

The Greenbelt covers a large portion of the Study Area, stretching from northern Hamilton south-east to Highway 403 in Burlington. All of the area within the Greenbelt that is not covered by the Niagara Escarpment Plan is designated as Protected Countryside in the Greenbelt Plan. ***Figure 5-2*** details these designations.

Waterdown - Aldershot Transportation Master Plan

Figure 5.1: Environmental Conditions and Constraints

- Municipal Boundary
- Provincially Significant Wetland
- Area of Natural or Scientific Interest
- Environmentally Sensitive Area
- Local Wetland
- Woodlot
- Other Natural Habitat
- Niagara Escarpment

City of Hamilton
City of Burlington
Waterdown
Waterdown North
Waterdown South
Upcountry
Parkside Drive Woodlot Candidate ESA
Parkside Drive Wetland Complex
Loggies Creek Swamp
Mill Grave South Woodlot ESA
"Centre Rd Woodlot" Candidate ESA/PSW
Lake Medad Valley Swamp
Lake Medad Valley Swamp
Waterdown North Wetlands ESA
Highview Swamp
Old Nelson Quarry
King City Quarry
Clappison Escarpment Woods ESA
Grindstone Creek ESA
Waterdown Escarpment Woods ESA
Sassafras-Waterdown Woods ESA
Sassafras Woods ESA
Borer's Falls Road Chapel ESA
Bridgeview Valley ESA
Cootes Paradise
Hamilton Harbour
Borer's Creek
Grindstone Creek
Highland Creek
Indian Creek
CONCESSION 5
PARKSIDE
HIGHWAY NO. 5
HIGHWAY NO. 6
DUNDAS
1 SIDE
UPPER MIDDLE
MOUNTAIN BROW
SNAKE
KING
PLAINS
VALLEY INN
SPRINGS GARDENS
OLD GUELPH
YORK
MAPLE
WATERDOWN
HAMILTON
MAIN
HOWARD
THOMSON
CENTRE
ROBSON
KERNS

Scale

0 0.5 1 Kilometers

Map Notes

Map created by: PJK
Map checked by: DPM
Date modified: September 18, 2007
Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority and the Ministry of Natural Resources.

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Waterdown - Aldershot Transportation Master Plan

Figure 5.2: Greenbelt Area And Niagara Escarpment Area

City of Hamilton

Greenbelt

Waterdown

City of Burlington

Aldershot

PARKSIDE
CENTRE
HAMILTON
ROBSON
MAIN
HIGHWAY NO. 5
HIGHWAY NO. 6
MOUNTAIN BROW
KERNS
MILL
KING
OLD GUELPH
SNAKE
WATERDOWN
VALLEY INN
PLAINS
403
QEW

Municipal Boundary

Urban Area

Greenbelt Plan Designations

Greenbelt Plan Area

Niagara Escarpment Plan Designations

Escarpment Plan Area

Escarpment Natural Area

Escarpment Protection Area

Escarpment Rural Area

Protected Countryside
Niagara Escarpment

Scale

0 0.5 1 Kilometers

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority and the Ministry of Natural Resources.

Section 4.2 of the Greenbelt Plan discusses infrastructure within the Greenbelt. Following is an excerpt from the plan with regards to infrastructure:

"4.2 INFRASTRUCTURE

Infrastructure is important to economic well-being, human health and quality of life in southern Ontario and the Greenbelt.

*There is already extensive local and regional **infrastructure** within the Greenbelt to serve its settlements, agricultural and resource sectors and the rural economy. Existing **infrastructure** must be maintained and new **infrastructure** will be needed to continue serving existing and permitted land uses within the Greenbelt.*

*In addition, major **infrastructure** serving national, provincial and inter-regional needs traverses the Greenbelt. It is also anticipated that new and/or expanded facilities will be needed in the future to serve the substantial growth projected for southern Ontario.*

4.2.1 General Infrastructure Policies

For lands falling within the Protected Countryside, the following policies shall apply:

1. *All existing, expanded or new infrastructure subject to and approved under the **Canadian Environmental Assessment Act**, the **Environmental Assessment Act**, the **Planning Act**, the **Aggregate Resources Act**, the **Telecommunications Act** or by the National or Ontario Energy Boards, or which receives a similar environmental approval, is permitted within the Protected Countryside, subject to the policies of this section and provided it meets one of the following two objectives:*
    a) *It supports agriculture, recreation and tourism, rural settlement areas, resource use or the rural economic activity that exists and is permitted within the Greenbelt; or*
    b) *It serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate **infrastructure** connections among urban growth centres and between these centres and Ontario's boarders.*
2. *The location and construction of **infrastructure** and expansions, extensions, operations and maintenance of **infrastructure** in the Protected Countryside, are subject to the following:*
    a) *Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such **infrastructure**;*
    b) *Planning, design and construction practices shall minimize, wherever possible, the **negative impacts** and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;*

*c) Where practicable, existing capacity and coordination with different **infrastructure** services is optimized so that the rural and existing character of the Protected Countryside and the overall urban structure for southern Ontario established by Greenbelt and any provincial growth management initiatives are supported and reinforced;*

*d) New or expanding **infrastructure** shall avoid **key natural heritage features** or **key hydrologic features** unless need has been demonstrated and it has been established that there is no reasonable alternative; and*

*e) Where **infrastructure** does cross the Natural Heritage System or intrude into or result in the loss of a **key natural heritage feature** or **key hydrologic feature**, including related **landform features**, planning, design and construction practices shall minimize **negative impacts** and disturbance on the features or their related functions, and where reasonable, maintain or improve connectivity."*

The full text for the Greenbelt Plan can be found in:
www.mah.gov.on.ca/userfiles/HTML/nts_1_22087_1.html.

5.3 Niagara Escarpment Plan

The Niagara Escarpment includes a variety of topographic features and land uses extending 725 kilometres from Queenston on the Niagara River through the Waterdown area to the islands off Tobermory on the Bruce Peninsula. It contains a number of significant geological and ecological features, is a source of some of southern Ontario's prime rivers and streams, and is a principal outdoor recreation area. The Niagara Escarpment was approved as a Biosphere Reserve on February 8, 1990 by the Bureau of the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and Biosphere (MAB) program.

The Niagara Escarpment Planning and Development Act was established to provide a planning process to ensure that the area is protected. The Niagara Escarpment Plan was developed based on this Act, which serves as a framework of objectives and policies to strike a balance between development, preservation and the enjoyment of the Escarpment.

The Niagara Escarpment Plan cuts through Waterdown in an east-west fashion and then heads north through Hamilton and Halton Region. The portion of the Study Area that is covered by the Plan is primarily located within the City of Hamilton, although there are several areas where the Plan crosses into Burlington. Details are also provided in ***Figure 5-2***.

The Niagara Escarpment Plan has six land use designations, which are:

- Escarpment Natural Area;
- Escarpment Protection Area;
- Escarpment Rural Area;
- Mineral Extraction Area;

- Escarpment Recreation Area; and
- Urban Area.

5.4 Other Planning Studies

In addition to the Greenbelt Plan and the Niagara Escarpment Plan, several other plans and policies were considered in the development and evaluation of transportation alternatives as part of the Phase 2 work as described below:

North Aldershot Interagency Review and Burlington Official Plan

The North Aldershot Interagency Review (NAIR) was undertaken to prepare a land use concept for North Aldershot and an implementation strategy. Various government agencies were represented in the NAIR. A final report was released in May 1994. The purpose of the NAIR was to determine the appropriateness of current plans and policies in the area, recommend a land use plan and strategy for implementation and address government jurisdiction issues. The NAIR produced policies related to Waterdown Road that were in turn incorporated into the City of Burlington's Official Plan (OPA 197) which included:

"aa) The following additional policies shall apply in the North Aldershot Planning Area

(i) measures will be considered on Waterdown Road to discourage increasing volumes of through traffic so as to strengthen its local road function;

(ii) traffic calming measures will be considered on Waterdown Road;

(iii) construction of major new roads and upgrading of existing roads will be limited;

(iv) new public roads will be built to rural standards;

(v) crossing of land designated as Environmental Protection Areas by new areas will be restricted; and

(vi) a Master Transportation Study Environmental Assessment will be undertaken to evaluate north-south and east-west traffic movements in the North Aldershot Planning Area, which may result in the need to further amend this plan."

Because of NAIR some members of the public felt that any improvements to Waterdown Road should be excluded. It was the view of the study team that the NAIR recommendations and resulting OP policies were not grounds on their own to exclude Waterdown Road from consideration for improvement. The NAIR work was undertaken prior to OPA 28 and as such, the demands on the north-south road network changed considerably since the report was prepared. It was the view of the study team to be inclusive and not exclusive and let the EA process decided what the best solutions are to solving the identified transportation capacity problem. Further more, the NAIR recommendations identify the need to undertake a Master Transportation Study EA and recognize that there could be the need to further amend the plan.

It is noted that the NAIR study is over 17 years old, as such, planning policies and environmental conditions as referenced within it may have changed.

Hamilton Official Plan

At the time that the WATMP was initiated, the *Hamilton-Wentworth Official Plan* (2003) and the T*own of Flamborough Official Plan* were considered. Land use designations as well as transportation/transit policies were recognized as part of the EA planning process. Also considered were the results of the *Waterdown South Secondary Plan Study* and the *Waterdown North Secondary Plan Study.*

Provincial Policy Statement

In the identification of the alternative new/improved roadways, regard was given to the Provincial Policy Statement, particularly relating to the protection of natural features such as provincial significant wetlands.

South Waterdown Sub-Watershed Study

The overall purpose of the South Waterdown Subwatershed Study is to develop a management plan for the features and functions of those portions of the Grindstone Creek, Falcon Creek, Indian Creek and Hager-Rambo Creek watersheds that are potentially affected by urban development of the South Waterdown lands. The study is intended to inform planning decision-making (including the preparation of a South Waterdown Secondary Plan) so that changes in land use are compatible with natural systems.

The South Waterdown Subwatershed is being conducted in three stages. In Stage 1, the six sub watersheds of the study area were characterized through a review of background literature and field investigations. In Stage 2, the study team completed a detailed analysis of the potential impacts of the urban development of the South Waterdown lands and develop a management strategy to ensure that the critical elements of the component watersheds are protected. In Stage 3, an implementation and monitoring plan will be developed to describe how management strategies developed in Stage 2 will be implemented. At the time of this report the Subwatershed project team was finalizing the Stage 2 Report and commencing Stage 3 work.

5.5 Natural Environment Features

5.5.1 Terrestrial

The study area is within the deciduous forest region. Much of the natural vegetation has been cleared for agriculture and development in the study area, however, the area contains many large wetlands on top of the escarpment, wooded escarpment slopes as well as wooded creek ravines below the escarpment. Many of the valley slopes are heavily wooded and support hardwood forest cover which provides habitat for Carolinian and prairie savannah species.

The study area contains many significant areas that have been designated as such by either the Ministry of Natural Resources, the conservation authority or the municipality. These include

provincially significant wetlands, environmentally sensitive areas (ESAs), and areas of natural or scientific interest (ANSIs). These significant areas are displayed on ***Figure 3-4***.

Millgrove South Woodlot ESA (also known as Logies Creek Swamp) is located on the southwest side of Highway No. 6. This 77 hectare forested natural area serves as the headwaters of two streams and provides habitat for significant species. This site is considered significant because it serves an important hydrological function and provides habitat for significant species. The forested natural area includes Silver Maple and White Elm dominated swamps as well as Sugar Maple-Beech and Trembling Aspen- White Ash upland areas. There is also a dugout pond, a cattail-Joe-Pye-Weed marsh and cultural meadows. Significant species observed at the site include Broad Beech Fern and Ebony Spleenwort. The ESA includes the Logies Creek Wetland Complex, which is a non-provincially significant wetland complex, made up of 10 individual wetlands, composed of two wetland types (91% swamp and 8% marsh). The ESA is bordered by agricultural fields and strip residential development along the peripheral roads.

Waterdown North Wetlands ESA is located immediately above the community of Waterdown. This 236 hectare area consists of small swamps along Grindstone Creek which help regulate stream flow and maintain water quality in Grindstone Creek above the Niagara Escarpment. The site is considered significant because it serves an important hydrological function. The swamps at this site are a part of the Lake Medad Valley Swamp Complex and include a wide range of species, predominantly broadleaf. In addition to the swamps, the ESA also includes upland wooded areas, cultural meadow and a spruce plantation. The ESA is surrounded by cleared agricultural lands and fragmented by railway and hydro corridors.

Clappison's Escarpment Woods ESA is located south of Highway No. 5 between Highway No. 6 and Thompson Drive. This 76 hectare area encompasses a 2.6 km segment of the Niagara Escarpment and is part of the continuous greenbelt of natural areas along the Escarpment. The ESA is dominated by vertical bedrock exposures of the Niagara Escarpment. The area includes the King City Quarry, which has been designated as an Earth Science ANSI. Vascular plant species richness is amongst the highest in Halton Region and the ESA includes rare species such as perfoliate bellwort, sundrops and American columbo. The area is a source of seepage springs for intermittent tributaries to the lower Grindstone Creek. Land use surrounding the area includes agriculture, rural residential, industrial, and suburban developments.

Medad Valley ESA is located northeast of Waterdown. This 500 hectare forested natural area provides habitat for various rare and uncommon wildlife species. The Medad Valley is considered significant because it serves important hydrological and ecological functions, it includes significant earth science features and it provides habitat for significant species. Lake Medad is within this ESA and much of the area has been designated as provincially significant wetland. The area is the headwaters of the Grindstone and Bronte Creeks. There are groundwater infiltration zones which support the provincially significant wetland as well as the flow in the headwater streams. The ESA contains extensive upland and lowland forests that are relatively undisturbed and provide habitat for nationally, provincially and regionally rare species. The area is also used as a deer wintering range and is a natural corridor for wildlife movement. Adjoining land uses are primarily agricultural.

Grindstone Creek Valley ESA is located in the northwest corner of Waterdown South. This 150 hectare area is comprised of the steep-sided valley of Grindstone Creek as it descends the Niagara Escarpment and crosses the south slopes. The area encompasses provincially significant bedrock exposures and supports many rare and uncommon plant species. The area is considered to be one of the top botanical sites in Halton Region, is excellent for nesting or migrating birds and contains many rare species. The area is also designated as a Life Science ANSI. The ESA provides a continuous wooded linkage between Hamilton Harbour and the Niagara Escarpment. The Grindstone Creek falls have been designated as a locally significant earth science ANSI, while the valley itself has been designated as a provincially significant earth science ANSI. The ESA serves as a major zone of groundwater discharge. The present land use consists primarily of floodplain and hazard lands. Residential areas in the community of Waterdown abut the northern portion of the valley, and Waterdown Road and the CPR railway cross the escarpment. Boundaries and buffers of this ESA are being confirmed through the Waterdown South Subwatershed Study.

Borer's Falls-Rock Chapel ESA is located southwest of the study area. This 330 hectare area includes a southeast-facing, forested segment of the Niagara Escarpment. The area provides a habitat to many significant species. The Borer's Falls – Rock Chapel study area is considered a significant natural area because it serves an important ecological function both as part of the Niagara Escarpment corridor and by providing a key link between Cootes Paradise and the Escarpment. The ESA also contains old growth forest (eastern white cedar) along the escarpment face which is provincially significant. The ESA contains many rare species, including many prairie/savannah and Carolinian species.

Bridgeview Valley ESA is a deep, narrow and steep-sided ravine running south from the escarpment that contains a tributary of Grindstone Creek. The east bank has maturing maple, oak and hickory forest in the south and hemlock in the north. Carolinian habitat and rare species are also present in the ESA The ESA is considered significant due to the presence of rare species such as yellow mandarin and pignut hickory. It is also significant because the area contributes to maintaining surface water quality.

The **Waterdown Escarpment Woods ESA** is located south of Waterdown South, across Mountain Brow Road. This ESA forms a 3.5 km link along the Niagara Escarpment. The ESA is considered significant because it serves an important ecological function in providing linkages along the escarpment, the area contains significant biotic communities, it provides habitat for rare species and is along the Niagara Escarpment. Moraine and limestone pavement areas in the ESA, on the escarpment plateau act as groundwater recharge areas. Above the escarpment the vegetation diversity is high and includes a broadleaf upland forest, a broadleaf swamp, and successional communities. Along the escarpment rim, the White Cedar-Red Oak community is significant. Only a narrow area of field and powerlines separate this ESA from the provincially significant Sassafras Woods. These two areas together create a very complete cross-section of the natural biotic community associated with the Niagara Escarpment.

The **Sassafras Woods ESA** is located adjacent to the Waterdown Woods ESA in Halton Region east of Waterdown Road and north of Highway 403. It supports a secondary growth hardwood forest with an overstory of white pine. This is one of the few remaining woodlots of this type that once covered most of the region south of the escarpment. The area has been designated as a Carolinian site. Sugar maple is dominant with shagbark hickory, witch hazel, American hornbeam and red oak well represented. It is one of the top botanical sites in Halton and has been designated as a Life Science ANSI.

Highview Swamp is a non-provincially significant wetland complex made up of two individual wetlands. Both wetlands are swamp forest.

The Parkside Drive Wetland Complex includes a large tract of wooded area north of Parkside Drive. This area encompasses portions of Borer's Creek and its headwaters. The southern most extension of this area is perpendicular to the proposed alignment and includes forest and wetland community types. The main ecological community in this area is deciduous swamp with a small area of mineral marsh. Additionally, a small red oak forest is found at the south of this site. The southerly extension of this ESA is mainly associated with Borer's Creek and the riparian zone surrounding it.

The **"Centre Road Woodlot"** (east of Centre Road) is a candidate ESA. The area was not considered as a PSW based on the 2004 MNR revaluation of the Logies Creek - Parkside Drive PSW. This feature is important though because it provides linkages between natural features to the east (Lake Mead Valley Swamp) and to the west (Parkside Drive Wetland Complex) as well as two existing ESAs: the Millgrove South Woodlot ESA and the Waterdown North Wetlands ESA. The area is dominated by Swamp vegetation communities, particularly Ash deciduous swamps.

5.5.2 Aquatic Features

The main watersheds in the study area are Borer's Creek and Grindstone Creek, however Falcon Creek, Indian Creek, and Hager Creek are also present.

Borer's Creek and Grindstone Creek watersheds both cross the Niagara Escarpment. Grindstone Creek enters Hamilton Harbour directly whereas Borer's Creek enters Cootes Paradise. Both watersheds contain falls.

Throughout both Borer's Creek and Grindstone Creek watersheds, agricultural practices and residential, commercial and industrial development have resulted in tributaries contaminated with sewage effluent, eroded soil and sediment and chemical runoff. The Hamilton Harbour Remedial Action Plan was initiated in 1986 to address this environmental degradation in the Harbour including key areas like Cootes Paradise and lower Grindstone Creek.

Originating in Flamborough, Grindstone Creek drains an area of 90 km^2, making it one of the main tributaries discharging to the northwest part of Hamilton Harbour. Grindstone Creek supports a warmwater fish community above the escarpment and a significant coldwater fish community bellow the escarpment.

The falls along both the Grindstone Creek and Borer's Creek represent an absolute barrier to upstream fish migration, however the lower reaches provide habitat for fish species that make their way up from Hamilton Harbour. Rainbow trout, a coldwater fish species, migrate into Grindstone Creek and spawn below the Waterdown Falls. Groundwater discharge to the creek in that location provides the cold temperatures required by this species and results in that area's formal designation as "coldwater fish habitat".

Through the consultation process, stakeholders and members of the public have provided valuable knowledge about the environmental conditions in the study area.

5.6 Socio–Economic Environment

5.6.1 Existing Land Use

The study area includes the communities of Waterdown within the City of Hamilton and the North Aldershot area within the City of Burlington. The built-up area of Waterdown extends south from Parkside Drive to just below Dundas Street (Highway 5) to the edge of the Niagara Escarpment. Highway 6 and Evans Road define the western and eastern boundaries of the community. North of Parkside Drive, land use is primarily agricultural with scattered rural residences. Most of the built-up area of Waterdown consists of single-family dwellings. The 2001 population of Waterdown was about 15,000 people representing a growth rate of 28.9% from 1996.

This downtown area is unique as it contains several historic buildings contributing to a "village" type character. Commercial land use within Waterdown is focused along Dundas Street (in the Village area), which includes a number of retail commercial uses. Many of these buildings are located quite close to Dundas Street. Other commercial lands are located along Hamilton Street North that runs between Dundas Street and Parkside Drive. There is considerable and recent "big box" development on Hwy 5 towards Clappison Corners.

North Aldershot, which is part of the City of Burlington, is much more rural in nature and extends north of Highway 403 to the Burlington/Hamilton municipal boundary. Much of North Aldershot is contained within the areas of the Parkway Belt West Plan, the Greenbelt Plan Area, and the Niagara Escarpment Plan. The area somewhat serves as a "rural separator" between Waterdown to the north and the built-up areas of Burlington south of Highway 403. The estimated population of North Aldershot is 15,000 with much of this population being located in the eastern portion of the study area from just west of Kerns Road to Brant Street. Rural residential development is also found along the Waterdown Road corridor.

Commercial land uses are focused along the south limits of North Aldershot including "big box" commercial development at the Brant Street Highway 403/QEW interchange.

5.6.2 Cultural Environment

Cultural Heritage

The Village of Waterdown was developed in the late 1700's/early 1800's around a sawmill on Grindstone Creek, which provided power to the Village. Industrial development continued around the Smokey Hollow area, which included dams, raceways, sawmills, gristmills, flourmills, woollen mills, foundries and tanneries. By 1841 the village population reached 165 people and was incorporated as a village in 1841. The Village name reflected its proximity to the Grindstone Creek waterfall over the edge of the Escarpment. Many of the historic buildings within Waterdown and in the larger study area still exist and have been preserved. Of particular note is the historic downtown area of Waterdown, which provides a village like commercial area. Heritage buildings in the City of Hamilton have been inventoried and are documented in the 2002 report "Hamilton's Heritage, Inventory of Buildings of Architectural and/or Historical Interest". As well, for some of the northern portions of the Study Area, the historical landscapes have been characterized as documented in the City of Hamilton 2004 report "Cultural Heritage Landscape Study".

The City of Burlington has inventoried historic properties as well and has developed an Internet based information system which provides information on designated and non designated properties of historical interest. It is noted that there exists a few historic properties along Waterdown Road in North Aldershot.

During the next phase of work, in areas of road improvements works, historic properties/buildings will be inventoried, mapped and considered in the design and assessment of the proposed road works.

5.6.3 Archaeology

Lands within the study area contain varying levels of archaeological potential. The study area is expected to contain both pre-contact and contact period resources. For those sections of the study area that are contained within the City of Hamilton, archaeological potential and registered sites have been inventoried as documented in the City of Hamilton 2004 report "The Archaeological Study for Growth Related Integrated Strategy" as part of the GRIDS initiative. Recognizing that the evaluations undertaken as part of this TMP were conducted at the "road corridor level", archaeological potential was not assessed at this time. In future phases of the Class EA work for the recommended "Schedule C" projects, it will be necessary to identify and take into account both known/registered sites and sites of med/high potential.

6.0 ALTERNATIVE SOLUTIONS EVALUATION (PHASE 2)

6.1 Evaluation Criteria

To guide the assessment and evaluation of the alternative road improvement solutions, a set of evaluation criteria and indicators were developed. The evaluation criteria were organized on the basis of the following five criteria groups that represent the broad environmental components or areas of concern that the evaluation was based on:

- ***Natural Environment*** – addresses the potential for effects to natural environmental features (terrestrial and aquatic);
- ***Social Environment*** – addresses the potential for effects to people, community features and cultural features;
- ***Economic Environment*** – addresses the potential for effects to business and economic development activity;
- ***Cost*** – addresses the capital cost of the alternative; and
- ***Transportation Service*** – addresses the level of improved transportation service that the alternative provides.

Under each of the criteria groups several criteria were developed. The criteria identify the specific components of the environment potentially affected by the proposed road improvement alternatives. For each criterion, one or more indicators were developed that were used to measure potential effect. A total of 39 indicators were developed and considered in the evaluation. ***Table 6-1*** presents the criteria and indicators that were considered in the evaluations.

Table 6-1 – Evaluation Criteria & Indicators

Criteria Group	Criteria	Indicators
Natural Environment	Potential for impact on terrestrial features	Area of provincially significant wetland removed (ha)
		Area of core ANSIs removed *(not including provincially significant wetland)* (ha)
		Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)
		Area of core ESAs removed *(not including provincially significant wetland)* (ha)
		Area of edge ESAs removed *(not including provincially significant wetland)* (ha)
		Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)
		Area of other woodlots removed (non ESA/ANSI) (ha)
		Area of wetland removed (ha)
		Area of other natural habitat removed (ha)
		Number of new Niagara Escarpment crossings
	Potential for Impact on aquatic features	Number of watercourses crossed

Table 6-1 – Evaluation Criteria & Indicators

Social Environment	Potential for impact on residents	Number of residences displaced
		Number of residences within 25 m of the corridor *(widening of existing road)*
		Number of residences within 25 m of the corridor *(new road corridor)*
		Number of residences within 25-50 m of the corridor (widening of existing road)
		Number of residences within 25-50 m of the corridor (new road corridor)
		Number of residential properties required
		Area of residential properties required (ha)
	Potential for community character impacts	Length of route through existing residential communities (km)
	Potential for impact on community/recreation features	Number of community/recreation features displaced (e.g., schools, churches, parks, etc.)
		Number of community/recreation features within 25 m of the corridor
		Number of community/recreation features within 25-50 m of the corridor
	Potential for impact on cultural features	Number of cultural features removed
		Number of cultural features within 25 m of the corridor
Economic Environment	Potential for impact on business enterprises	Number of businesses displaced
		Number of businesses within 25 m of the corridor
		Number of businesses within 25-50 m of the corridor
		Number of commercial properties required
		Area of commercial properties required (ha)
	Potential for impact on downtown core business area	Length of route through downtown core business areas (m)
	Potential for impact on future land use	Area of land designated for development removed (ha)
	Potential for impact on agricultural land	Area of agricultural land designated for agriculture/rural removed (ha)
Cost	Capital Cost (million $)	Estimated capital cost
Transportation Service	Change in Level of Transportation Service	Critical screenline volume/capacity ratio
		Mean network speed
		Average network volume/capacity ratio
	Change in Safety Levels	Number of residential property access points
		Number of commercial property access points
		Number of roadway access points

The following presents some commentary about the criteria/indicators:

- For the criterion, "potential impact on terrestrial features", a distinction was made on whether the area of the removed feature (e.g., an ESA) is from the "core" or "edge" of the feature. The rationale being that a core effect is more significant as it would result in the splitting of a feature that could affect the ecological functioning of that feature;

- Also for the above criterion, natural features were distinguished on the basis of the type of feature and its level of importance as supported through provincial, regional and local policies/plans (e.g., provincially significant wetlands were assigned the highest importance);
- With respect to the social environment, the number/type of features within 0-25 m and 25-50 m of the roadway were identified as a representative of potential disruption effects (e.g., noise, visual, air quality); and
- The cost criterion/indicator accounts for the capital cost for building the road and an estimated land cost. In costing the various routes, it was assumed that Highway 6 would be crossed at grade for all options.

As a measure of transportation safety, the number of access points along a route was identified. In areas where the corridor passes through lands designated for new development, an estimate of access points was made based on available land use concepts.

The purpose of this evaluation was to identify broad distinctions among the alternatives being considered. The potential for effects were identified based on conceptual level right-of-way (RoW) requirements. In the next Phase of the EA, more detailed assessments will be undertaken that will include fieldwork and the delineation of a more refined RoW for each of the selected routes.

6.2 Evaluation of Alternative Solutions

6.2.1 Evaluation Method Overview

As all of the east-west options could be combined with any of the north-south options, it was determined the north-south alternatives could be compared independently of the east-west alternatives. As a result, two separate evaluations were conducted. The evaluations were conducted on the basis of the evaluation criteria/indicators, the collected data and the relative importance of the criteria/indicators.

Since all road improvement options were considered capable to solve the transportation problem, the option that was identified to have the least overall impact were considered as the preferred option. The approach to select the preferred east-west options and preferred north-south option involved the following three steps:

- ***Step 1*** – Determine the relative importance of the evaluation criteria groups/criteria;
- ***Step 2*** – Determine the Simple Additive Weighting (SAW) scores; and
- ***Step 3*** – Considering the SAW scores and the data/impact levels, rationalize the selection of the preferred option(s).

It is noted that the Stakeholder Advisory Committee was involved throughout this process and the results made available for public review and comment.

Step 1 – Criteria Importance Levels

To establish the relative importance of the criteria/indicators, a criteria ranking/weighting exercise was undertaken with members of the Stakeholder Advisory Committee and members of the public on February 10, 2005. To assist in the exercise, the workshop attendees were provided with the range of data for each indicator. With this information, they were then asked to provide a relative ranking of the criteria groups and criteria and to assign a numerical weight (out of 100 points). Recognizing that the north-south alternatives and east-west alternatives pass through areas with different environmental characteristics, the participants were asked to develop criteria rankings/weightings for each of the two sets of alternatives to be evaluated. The criteria/indicator rankings and weights that were provided by the participants are presented in ***Table 6-2*** and ***Table 6-3***.

For the most part, the criteria weights as provided by the workshop participants were used in the evaluations. Some adjustments were made considering the range of effects associated with each indicator (e.g., the economics criteria group weight for the north-south alternatives was lowered as there are few businesses to be affected by all alternatives). The weight was redistributed to the other criteria groups. The weight value assigned to each indicator was completed by the consultant and was based on: the importance of the features being affected, the potential magnitude of effect and the potential for mitigation.

Step 2 – Simple Additive Weighting Runs

The comparative evaluation process was assisted through the use of the Simple Additive Weighting (SAW) method. The SAW method is useful to help condense large data sets. As each of the alternatives was to be assessed against a large number of environmental considerations, which were all measured on a quantitative (i.e., numerical) basis, the SAW method was considered as an appropriate evaluation method. In addition to the data considered, the SAW results are influenced by the assigned weights (importance levels) to the criteria/indicators considered. The main value of the SAW method is that it can highlight the key differences among the alternatives to assist in decision making.

The SAW approach can give the impression of a high level of detail/precision in the analysis, as it reduces all the inputs/considerations down to a single number. As the alternatives were conceptual in nature, many of the effects could be expected to be reduced through future design work. **As such, the purpose of this was to help identify broad distinctions among the alternatives to assist in the decision to select the preferred alternatives.** Ultimately, to select the preferred alternatives, the SAW results were considered along with reasoned argument that considered the trade-offs among the alternatives (see Step 3).

The exhibits included in ***Appendix A*** present the SAW results for all of the evaluations that were conducted. The tables are organized as follows:

- ***Tables A1 & A2*** – East-west options SAW runs;
- ***Tables A3 & A4*** – Eastern connections options SAW runs;
- ***Tables A5 & A6*** – Waterdown/King options SAW runs; and
- ***Tables A7 & A8*** – Waterdown Road North options SAW runs.

Table 6-2 – North-South Corridor Alternative Evaluation Criteria Ranking and Weighting Summary

Criteria	Summary of Ranking and Weighting - All who attended					
	Ranks (1 through 5)					Weighting
	1	2	3	4	5	
Natural Environment Summary	**8**	**13**	**1**	**0**	**0**	**29.3**
Potential for impact on terrestrial features	19	3	0	0	0	**15.8**
Potential for impact on aquatic features	8	14	0	0	0	**13.5**
Social Environment Summary	**13**	**6**	**2**	**1**	**0**	**30.2**
Potential for impact on residents	18	4	0	0	0	**12.8**
Potential for community character impacts	7	9	5	1	0	**7.4**
Potential for impact on community/ recreation features	4	6	9	3	0	**5.8**
Potential for impact on cultural features	1	3	12	6	0	**4.4**
Economic Environment Summary	**0**	**2**	**13**	**4**	**3**	**16.4**
Potential for impact on business enterprises	5	9	6	1	1	**4.4**
Potential for impact on downtown core business area	10	5	2	5	0	**4.7**
Potential for impact on future land use	5	6	5	6	0	**3.6**
Potential for impact on agricultural land	6	6	5	4	0	**3.6**
Cost Summary	**2**	**1**	**1**	**6**	**11**	**10.5**
Capital Cost	0	0	0	0	0	**10.0**
Transportation Service Summary	**1**	**1**	**4**	**10**	**5**	**13.6**
Change in Level of Transportation Service	9	9	1	1	0	**6.5**
Change in Safety Levels	15	5	0	0	0	**7.6**

Summary of Ranking and Weighting - SAC Members						
	Ranks (1 through 5)					Weighting
	1	2	3	4	5	
5	**5**	**1**	**0**	**0**	**30.5**
10	1	0	0	0	18.4
3	8	0	0	0	12.2
7	**3**	**0**	**1**	**0**	**29.0**
9	2	0	0	0	12.2
4	4	2	1	0	7.9
0	4	5	2	0	5.1
0	2	6	3	0	3.8
0	**1**	**5**	**3**	**2**	**16.5**
4	2	3	1	1	4.9
2	4	2	3	0	3.7
2	3	3	3	0	3.7
4	2	2	3	0	4.2
1	**0**	**1**	**2**	**6**	**9.5**
0	0	0	0	0	9.5
0	**1**	**4**	**3**	**2**	**14.5**
4	5	0	1	0	6.7
8	2	0	0	0	7.9

1 Note: Data in the Ranks columns (1 through 5) represents the frequency of the response to the ranking of the evaluation criteria (i.e.7 of the SAC members thought the Social Environment Criteria was the most important component of the evaluation for the North-South Corridors). The last column in each table represents an average weighting of the evaluation criteria taken from responses from the Stakeholder Advisory Committee and other public participants at the SAC meeting.

Table 6-3 – East-West Corridor Alternative Evaluation Criteria Ranking and Weighting Summary

Criteria	Summary of Ranking and Weighting - All who attended						Summary of Ranking and Weighting - SAC Members					
	Ranks (1 through 5)					Weighting	Ranks (1 through 5)					Weighting
	1	2	3	4	5		1	2	3	4	5	
Natural Environment Summary	**7**	**10**	**1**	**1**	**1**	**26.6**	**4**	**6**	**1**	**1**	**0**	**28.0**
Potential for impact on terrestrial features	14	4	0	1	0	**14.0**	8	2	0	1	0	**15.9**
Potential for impact on aquatic features	7	11	1	0	0	**11.6**	2	8	1	0	0	**12.2**
Social Environment Summary	**14**	**5**	**0**	**1**	**0**	**32.1**	**10**	**2**	**0**	**0**	**0**	**31.0**
Potential for impact on residents	15	2	1	1	1	**14.2**	9	1	1	0	1	**15.0**
Potential for community character impacts	5	10	3	2	0	**7.6**	2	6	2	2	0	**6.4**
Potential for impact on community/ recreation features	1	9	7	3	0	**4.8**	0	6	3	3	0	**3.9**
Potential for impact on cultural features	2	6	9	3	0	**6.0**	1	3	6	2	0	**5.8**
Economic Environment Summary	**2**	**3**	**12**	**2**	**1**	**18.3**	**1**	**2**	**7**	**1**	**1**	**18.6**
Potential for impact on business enterprises	6	12	2	0	0	**5.6**	5	6	1	0	0	**6.4**
Potential for impact on downtown core business area	9	4	6	1	0	**6.1**	5	1	5	1	0	**5.3**
Potential for impact on future land use	2	8	6	4	0	**3.7**	1	4	4	3	0	**3.4**
Potential for impact on agricultural land	4	5	7	4	0	**3.4**	1	5	3	3	0	**3.6**
Cost Summary	**2**	**1**	**1**	**3**	**12**	**10.0**	**1**	**0**	**1**	**1**	**8**	**9.7**
Capital Cost	0	0	0	0	0	**0**	0	0	0	0	0	**9.7**
Transportation Service Summary	**1**	**2**	**4**	**9**	**3**	**13.0**	**1**	**0**	**3**	**5**	**2**	**12.7**
Change in Level of Transportation Service	9	8	1	0	0	**6.6**	6	5	0	0	0	**6.2**
Change in Safety Levels	8	9	1	0	0	**6.7**	6	4	1	0	0	**6.5**

The SAW method involved the following:

Data Standardization – As the data set involves varying scales of data, the data had to be standardized so that the data range for each indicator was on a common scale. If the data were not standardized, then those indicators that have higher valued numbers would result in higher impact scores when multiplied by its respective weight, which would bias the evaluation. The data standardization methods used converted all of the data to a scale of "0 to 1". Two different standardization methods were used including:

Standardization Method #1 $\quad \dfrac{\textbf{Raw Score}}{\textbf{Sum of all Scores}}$

Standardization Method #2 $\quad \dfrac{\textbf{Raw Score}}{\textbf{Max Score}}$

Data Score Determination – After standardizing the data, the standardized data (for each indicator) was then multiplied by the corresponding indicator weight to arrive at a "weighted indicator score". The weighted indicator scores were then summed to arrive at a "total weighted score" for each road improvement option (shown at the bottom of the table). The total weighted scores for each road improvement option could then be used to compare the options. The data presented in the tables are "costs" or impacts, in that the higher the number, the less preferred the alternative is. Therefore, the road improvement option with the lowest total weighted score (least amount of impact) is considered preferred.

Where there was no data recorded for an indicator or where the same level of cost/impact is associated with each option, that indicator was not considered in the evaluation and no weight was assigned to that indicator (as it will not help to distinguish among the options).

Step 3 – Rationalization of Preferred Option
The SAW results, along with the actual data, were then considered to rationalize the selection of the preferred options. In the evaluations, there was no alternative that was identified as being preferred for all criteria groups. Each option has a range of advantages and disadvantages. Through a qualitative discussion, which reviewed the tradeoffs among the alternatives, an argument was then presented to select the preliminary technically preferred corridors.

The following sections presents the Step 3 results.

6.2.2 East-West Alternative Comparison Results

The four east-west road improvement options that were compared are shown in ***Figure 6-1***.

Waterdown - Aldershot Transportation Master Plan

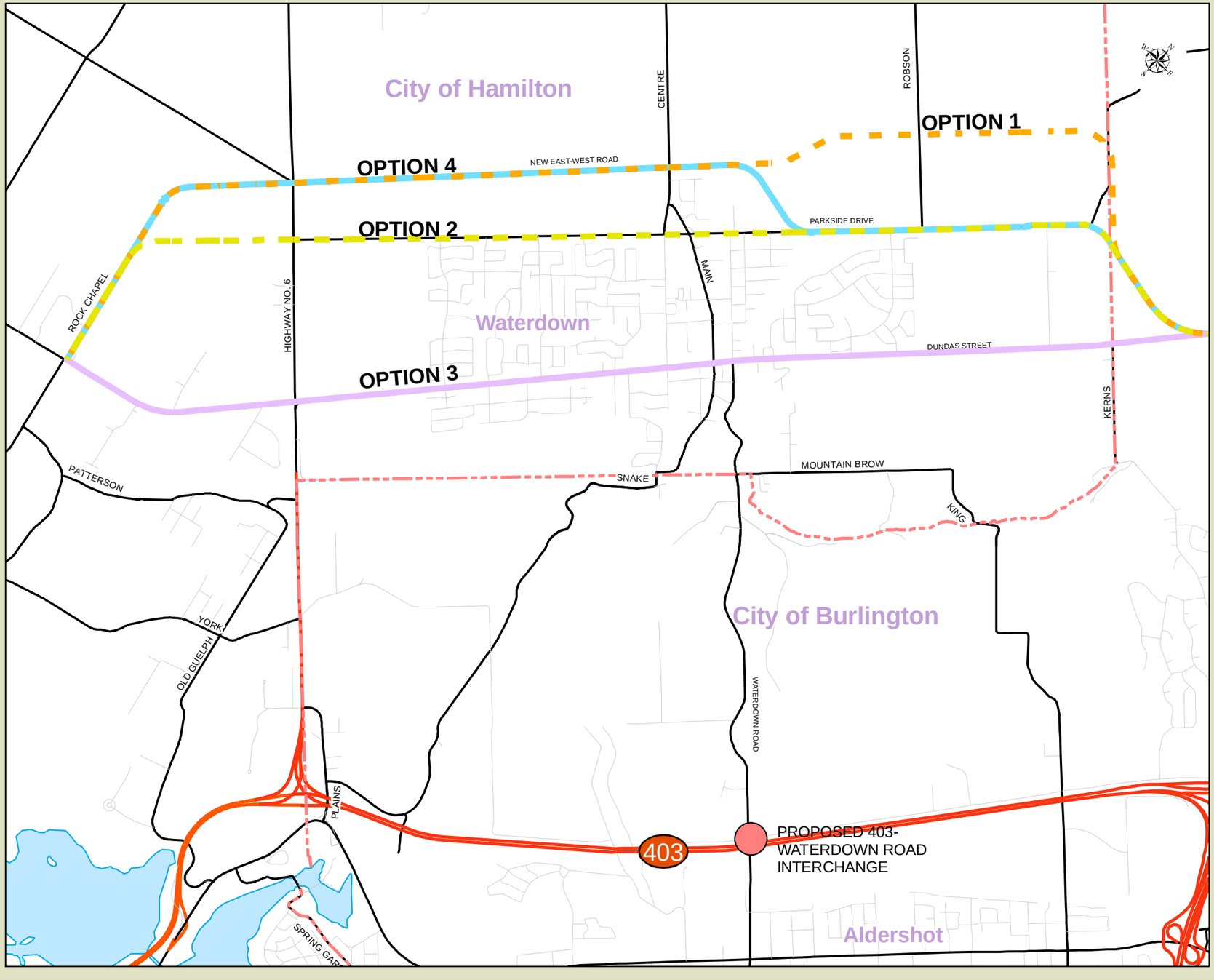


Figure 6.1: East/West Roadway Improvement Options

- Municipal Boundary

East-West Corridor

- Option 1 - New north road
- Option 2 - Parkside Rd. widening
- Option 3 - Dundas St. widening
- Option 4 - Parkside Rd. widening (partial) & new north road (partial)

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

Tables A1 and ***A2*** included in ***Appendix A*** present the SAW runs for this comparison. The weighted scores ranged from 20.08 and 30.73 points (Data Standardization Method #1) and 47.69 to 55.76 points (Data Standardization Method #2). The option with the lowest score is preferred as it is shown to have the less impact/cost. Under both runs, Option 4 (New North Road Hybrid) had the lowest impact score (most preferred). This option involves the widening of the eastern section of Parkside Drive and then extending northward between Robson Road and Centre Road to a new east-west northern "green-field" road.

To confirm the selection of Option 4 as the preferred on the basis of the SAW procedure, the differences among the options (considering the collected data), were reviewed through a reasoned argument approach as presented below. It was on the basis of the rationalization below that Option 4 was selected as the preferred alternative.

Natural Environment
As can be expected, Option 4 (New North Road Hybrid Option) has greater natural environmental effects than the more urban options (Option 2 - Parkside and Option 3 - Dundas) but has less natural environmental impacts than Option 1 – Northern Route. A key advantage of Option 4 over Option 1 is that it results in much less provincially significant wetland being affected, less ESA removed (edge area), less "other woodlot removed, fewer number of watercourses crossed, and less length of route adjacent to ESA/ANSIs. As the ESA removal effects are edge habitat, it may be possible to avoid/minimize these effects through the routing of the roadway. Thus a key advantage of Option 4 is that it avoids many of natural features removal effects associated with Option 1.

Social Environment
Option 4 is only slightly less preferred than Option 1 (New North Road) for the social criteria group, as it has more residences within 25 m of the roadway (53 vs. 0). Option 4 is clearly preferred over the Dundas and Parkside options with far fewer residents being displaced and much fewer residences within 25 m of the ROW that would mean less disruption effects to residents. As well, Option 4 is expected to result in less community effects as it passes through a much shorter distance of existing residential areas as compared to Options 2 and 3. A key advantage of Option 4 is that it avoids much of the built up areas along Parkside by swinging north before Centre Road, which is an area that has much residential development.

Economic Environment
This criteria group considered effects to existing commercial areas, loss of agricultural land and loss of developable lands. There tended to be tradeoffs among the options for all these criteria. As can be expected, Option 3 – Dundas Street has the potential for the greatest effect with 12 businesses displacements and the greatest number of businesses within 25 m that could be disturbed. It was therefore the least preferred for this criteria group. The remaining options were all relatively close. Option 4 and 1 have similar effects and scored second to Option 2 (Parkside) which is considered to have the lowest economic effects. Economic effects associated with Option 1 and 4 include the loss of agricultural land and loss of land designated for future development. As the greatest weight was assigned to the criteria considering effects to existing businesses and effects on the downtown core, the "northern" options tended to be preferred for

this criteria group. A key advantage of Option 4 is that it avoids any effects to the Waterdown downtown core area.

Cost
Both capital and land cost were considered. On this basis the costs ranged from $28 million (Dundas Street) to $14.9 million (New North Road). Option 4 was the second least expensive at $18.2 million.

Transportation Service
All options considered were considered capable of solving the transportation service deficiency problem. Some options did provide greater service capacity than others. Also considered were safety levels, which considered the number of access points along the roadways. For the northern route which is to pass through a large tract of land designated for future development, an estimate of future access points was made based on available land use plans. Option 2 and 3 were considered to be least preferred, in part due to the large number of access routes along these roadways, which would make them less safe than Options 1 and 4. Option 4 was considered slightly less preferred than Option 1 due to existing residential access points along Parkside.

East – West Route Conclusions
Based on the above, it is recommended that Option 4 (Hybrid North Route) be selected as the preferred for the following reasons:

- That it avoids the most significant natural environmental effects associated with Option 1. There would be no removal of core ANSI or ESA areas and minimal loss (0.2 ha) of provincial significant wetlands. Removal of natural habitat is limited to edge areas and more detailed routing work should be able to lessen these effects;
- Option 4 has the least number of residential and business displacements;
- Option 4 largely avoids existing residential and business areas. There would be no impact on the downtown core area of Waterdown;
- The additional cost of Option 4 is only slightly more expensive than the cheapest (Option 1). Option 4 is significantly less expensive than Option 2 and 3. The options that require a road widening would be more expensive than a new "green field" route because it is assumed that a complete reconstruction of the widened road would be required. The existing infrastructure and utilities would likely not be salvageable and would need to be replaced;
- Option 4 will provide a higher level of service and is considered to be a safer alternative than the more urban options; and
- Option 4 also can serve as a by-pass to move truck traffic out of the Waterdown downtown area.

It is noted that significant concern was raised by a group of residents along Parkside Dr. regarding the selection of Option 4, which would involve the widening of a portion Parkside Dr. An alternative alignment suggested by the Parkside Dr. Residents Group was also considered in this study and is discussed in more detail in Section 7.6.4 of this report.

6.2.3 Hybrid Option – Dundas to Parkside Connection Options

When the alternative east-west options were first identified, there existed a number of possible routes to connect Dundas Street to Parkside Drive for the "Northern", "Parkside" and "Hybrid" options. To simplify the east-west route evaluation, the same representative connection route was identified /used for these three options. Recognizing that the Hybrid Parkside/Northern option (Option 4) was selected as preferred, the next step was to confirm the route to connect Dundas Street with Parkside Drive. ***Figure 6-2*** illustrates the 5 connection route options that were identified.

Tables A3 and ***A4*** included in ***Appendix A*** present the evaluation results for the Dundas/Parkside connection options. Each table utilizes a different data standardization method. The data standardization method utilized is noted in each table as a footnote to the table.

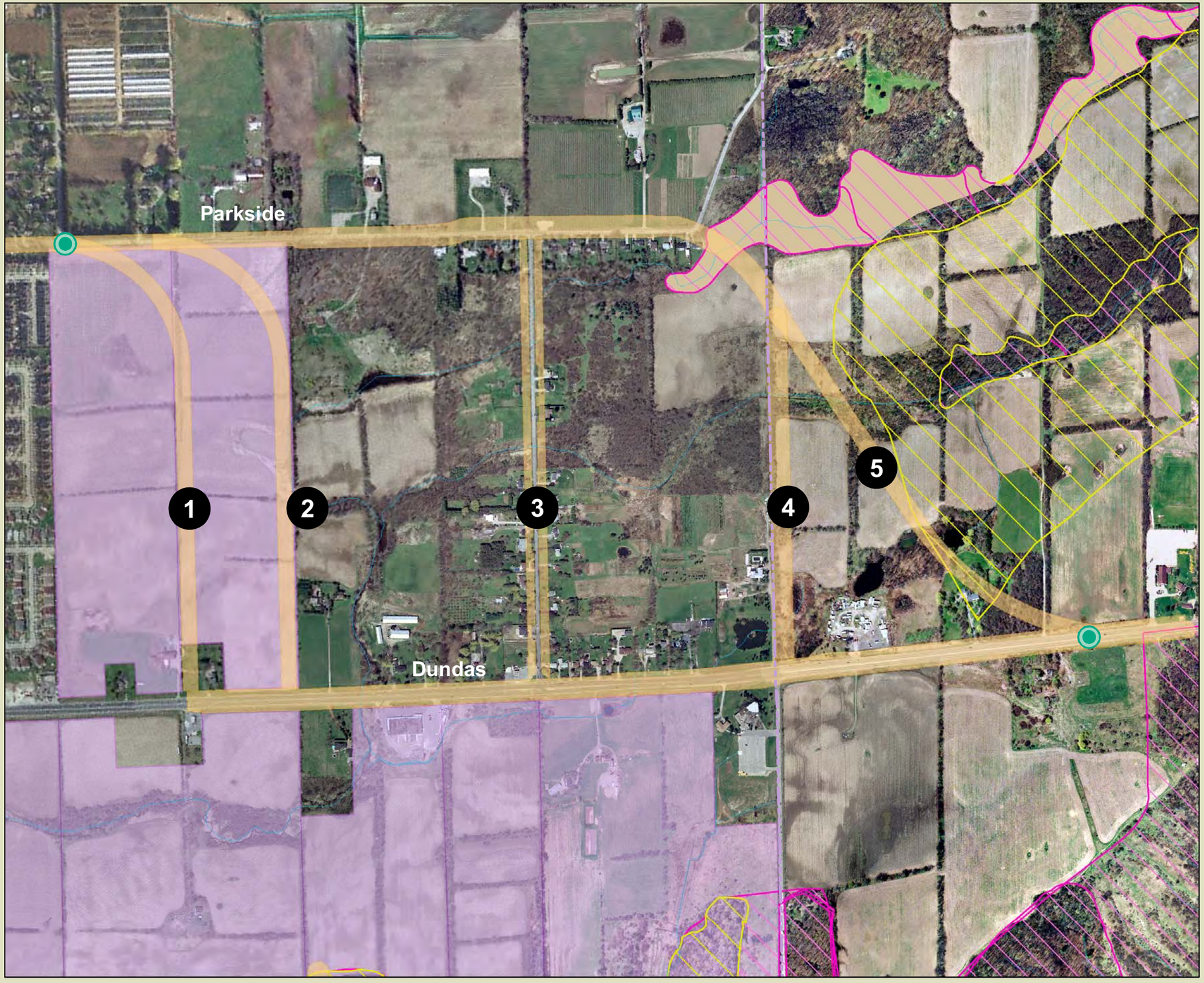
Based on Data Standardization Method #1, the five alternatives scored from 13.55 to 26.40 points and with the second data standardization method, the alternatives scored from 36.83 to 51.19 points. In both cases, Option 2 had the lowest score and thus was preferred. The following rationalizes the selection of Option 2 as preferred.

Data Discussion
From a natural environment perspective, Option 2 was ranked second most preferred with its only impact being the removal of 0.64 ha of "other woodlot". With respect to the social environment, Option 2 was preferred as: it results in minimal displacement (only 2 residences); there are few residents in the vicinity of the alignment (and thus minimal disruption effects); and there will be no removal of built heritage features. Option 2 was also preferred from the perspective of the economic environment as it results in minimal effects on businesses and requires relatively minimal land designated for development and agricultural land. From a cost perspective, Options 1 and 5 are less expensive than Options 2, 3, and 4. Option 2 is least preferred from a transportation perspective. However, the difference among the options in regards to transportation was identified to be minimal and all options can address the problem.

Conclusion
The disadvantage of Option 2 in regards to transportation and being of higher cost than two of the options was not considered to offset all its other advantages as noted above. As such, Option 2 was identified to have the lower overall impact and was identified as the preferred option to connect Dundas Street with Parkside Drive (as part of the preferred Hybrid Option to resolve the east-west problem).

Waterdown - Aldershot
Transportation Master Plan

Figure 6.2: Dundas/Parkside Connection Route Options



- Area of Natural or Scientific Interest
- Environmentally Sensitive Area
- Route Option
- Provincially Significant Wetland
- Locally Significant Wetland
- Future Development Area
- Beginning/End of Route Option

Scale

0 100 200 400 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: July 18, 2005

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority and the Ministry of Natural Resources.

6.2.4 North-South Alternative Comparison Results

Three route options with various configurations of improvements to Waterdown Road and King Road were considered in this evaluation including:

- ***Option 1*** – Waterdown Road (geometric improvements)/King Road extension/North Service Road improvements;
- ***Option 2*** – Waterdown Road (widen to 4 lanes and geometric improvements); and
- ***Option 3*** – Waterdown Road (widen to 4 lanes (no geometric improvements)/King Road extension/North Service Road improvements.

It is noted that under Options 1 and 3, improvements to North Service Rd are required as capacity constraints would still occur on Waterdown Rd. Under Option 2, there would be no capacity constraints on Waterdown Rd., as such, the demand on North Service Road is reduced and no improvements are warranted.

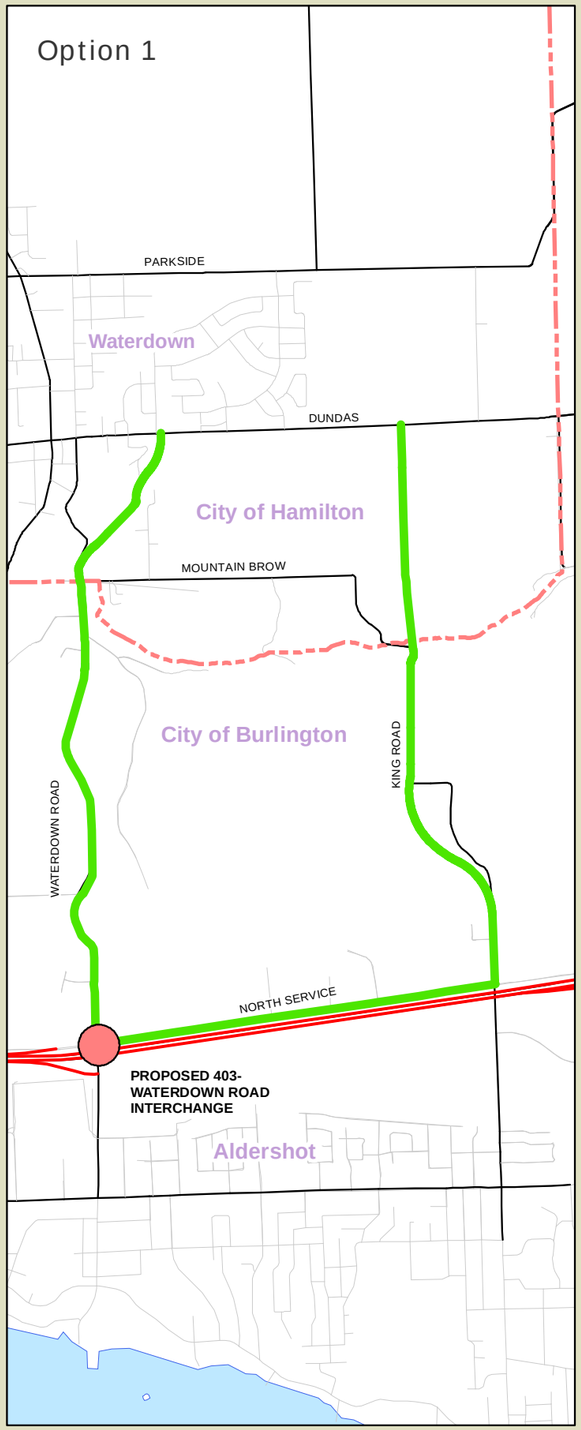
Figure 6-3 shows these options and ***Figure 6-4*** and ***6-5*** show in greater detail the proposed ROWs for Waterdown and King Roads. ***Tables A5*** and ***A6*** in ***Appendix A*** present the SAW evaluation results for the north-south corridor alternatives. Again, it is noted that where there was no data recorded for an indicator or where the same level of effect is associated with all the alternatives, that indicator was no longer considered in the evaluation and no weight was assigned to that indicator.

Under Data Standardization Method #1, the total weighted scores ranged from 22.75 to 40.77 and for the second standardization method, the scores ranged from 57.84 to 96.83. Under both standardization methods, Option 2 (Waterdown Road 4 lanes) was considered as preferred, and by a fairly large degree.

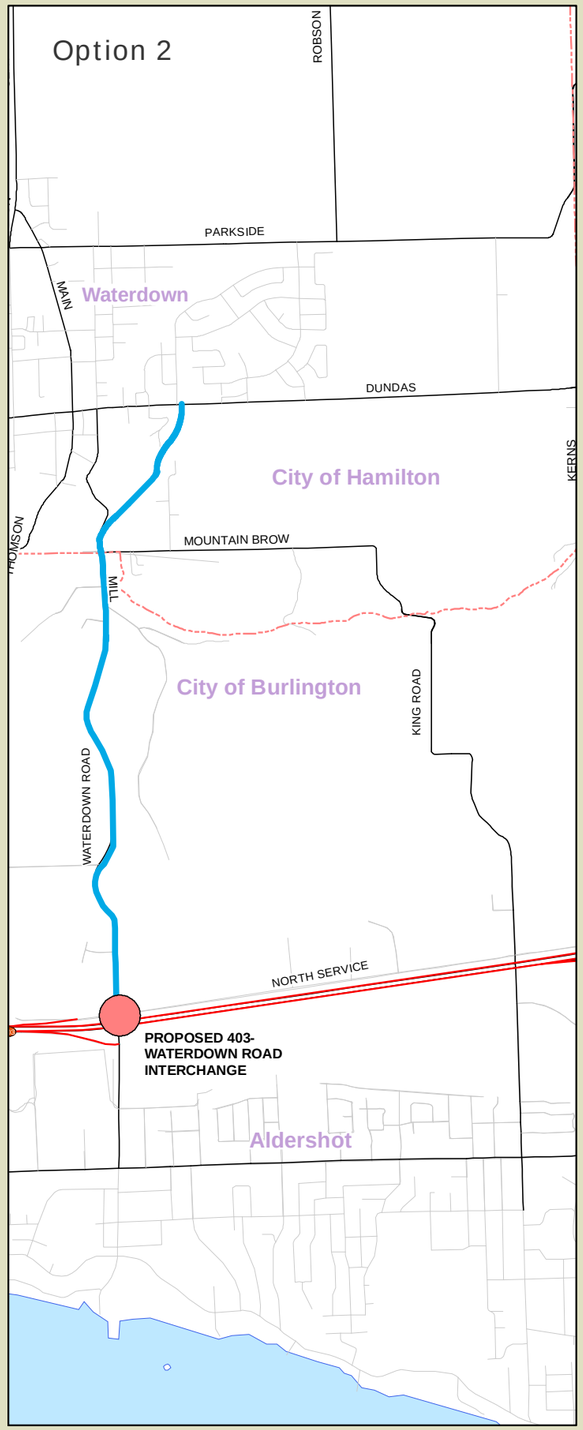
To confirm the selection of Option 2 as the preferred on the basis of the SAW procedure, the differences among the options (considering the collected data), were reviewed through a reasoned argument approach as presented below. It was on the basis of the rationalization below that Option 2 was selected as the preferred alternative.

Natural Environment
The key advantage of Option 2 is that it avoids the substantial natural environmental effects of Options 1 and 3 as a result of the King Road extension (including ANSI and ESA core areas). Environmental effects associated with Waterdown Road can be lessened by moving the widening to the west side of the road to avoid effects on the ANSI/ESA lands to the east of Waterdown Road (Sassafras Woods) and rerouting the new northern extension section to along Mountain Brow Road (See Section 6.5). Option 2 also results in substantially less watercourse crossings.

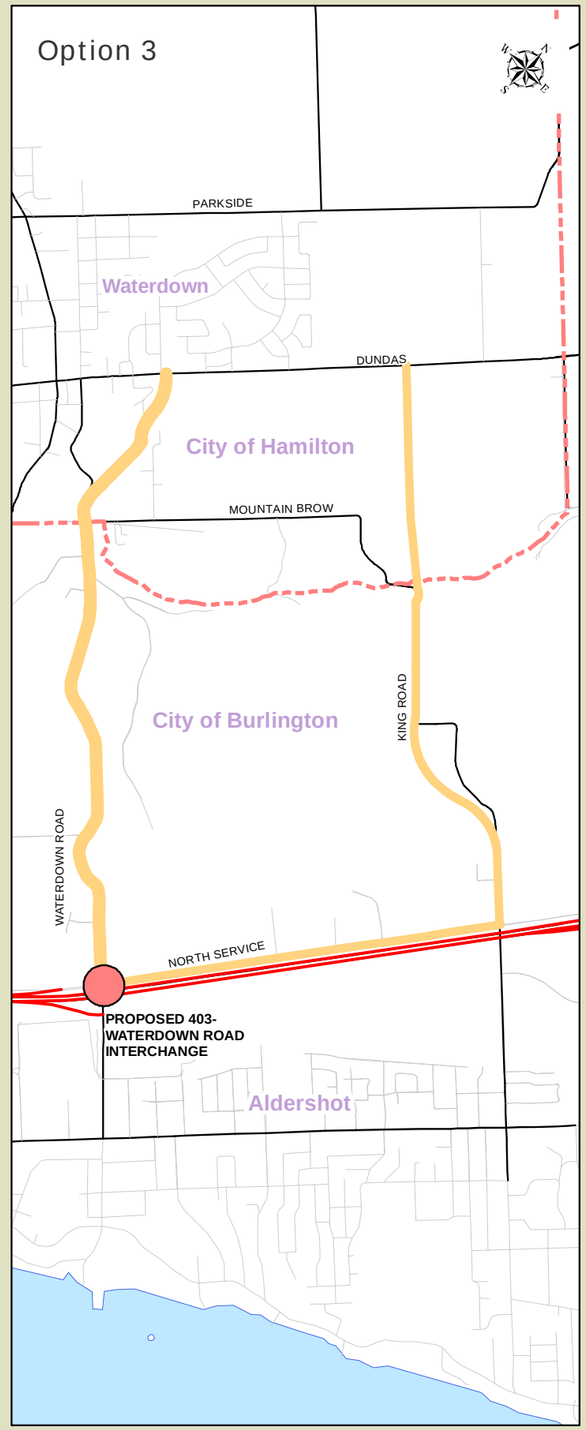
Option 1



Option 2



Option 3



Waterdown - Aldershot Transportation Master Plan

Figure 6.3: North/South Roadway Improvement Options

Municipal Boundary

Option 1

King & Waterdown Rd geometric improvements, no widening

Option 2

Waterdown Rd widening to 4 lanes & geometric improvements

Option 3

Waterdown Rd widening 4 lanes & King Rd geometric improvements

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

Waterdown - Aldershot Transportation Master Plan

Figure 6.4: ROW Detail for the Waterdown Road Corridor

- Muncipal Boundary
- Existing ROW
- Additional ROW Required
- Area of Natural or Scientific Interest
- Environmentally Significant Area
- Future Development Area

Scale

0 50 100 200 Metres

North

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: July 18, 2005

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority and the Ministry of Natural Resources.

Waterdown - Aldershot Transportation Master Plan

Figure 6.5: ROW Detail for the King Road Corridor

- Muncipal Boundary
- Additional ROW Required
- Area of Natural or Scientific Interest
- Environmentally Significant Area
- Other Natural Habitat
- Future Development Area

Scale

0 250 500 Meters

North

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: July18 2005

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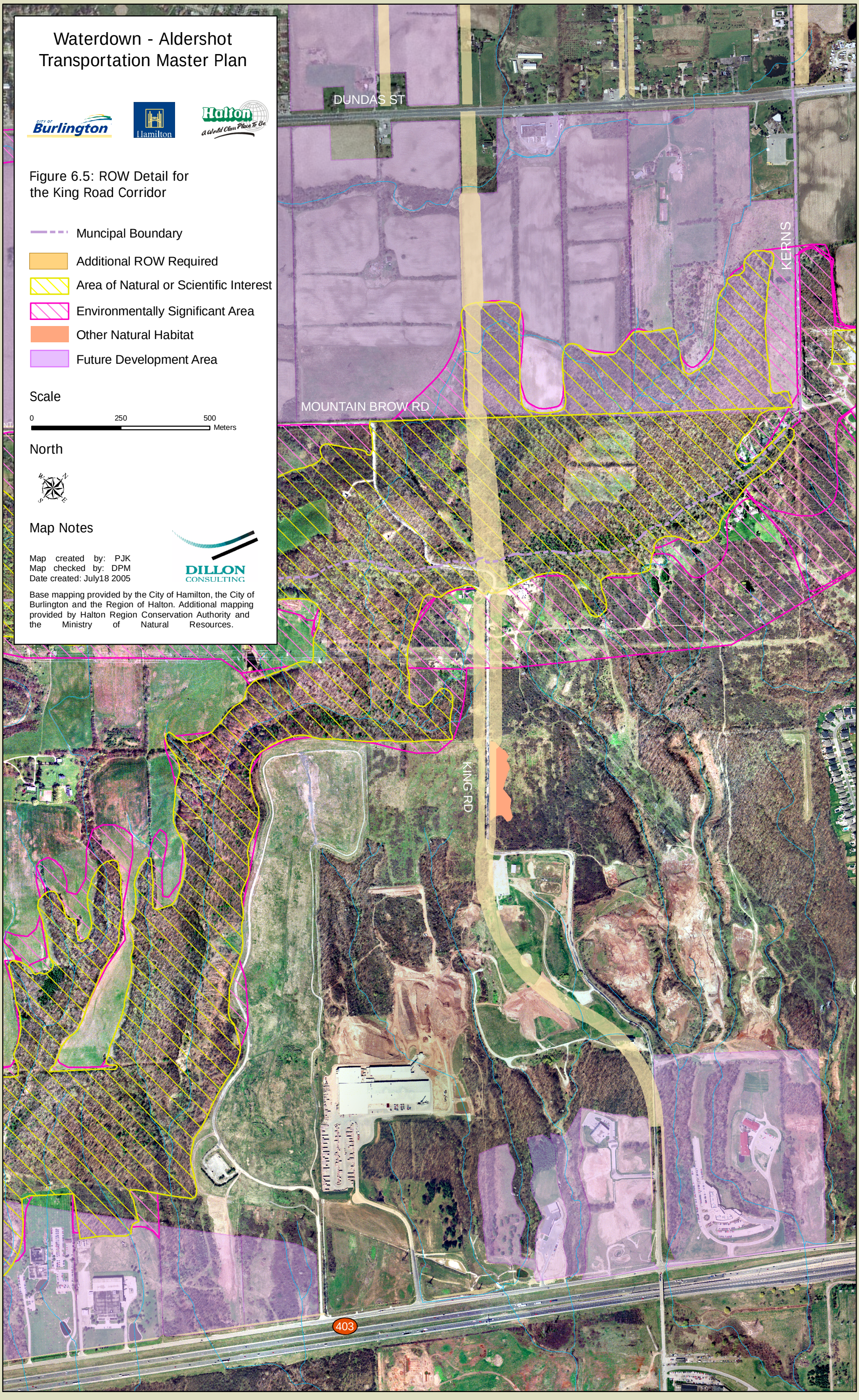
Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority and the Ministry of Natural Resources.



Social Environment
The difference among the options on the basis of the social environment was found to be relatively small as all three options involved some improvement to Waterdown Road, which contained most of the social features. Option 2 has the advantage of affecting fewer community features. However, Option 3 had a slightly lower score and was thus preferred due to fewer residences being displaced from the narrower ROW requirements.

Economic
Generally all the options have low economic effects with no businesses displaced and minimal agricultural land removed. Option 2 had a slightly lower score (fewer businesses within 25 m and 50 m) and was therefore preferred.

Cost
Costs of the roadways ranged from a low of $14 million (Option 2) to $24 million (Options 1 & 3). As Option 2 was the least expensive, it was considered as preferred.

Transportation
All options are able to solve the transportation problem. Based on the assessment criteria that considered capacity and safety/access issues, Options 1 and 3 were considered slightly ahead of Option 2, largely because by improving both Waterdown and King Road, more total capacity is provided. What these criteria did not consider was that although there is more overall capacity, the demand is projected more towards Waterdown Road and less towards King Road such that Waterdown Road is over-utilized and the "extra" capacity on King Road is under-utilized. Thus from a capital investment point of view, the road works required for extra capacity on King Road are not used effectively and efficiently. The additional travel on King Road is slightly greater but in proportion to the percent increase in capacity.

North – South Routes Conclusion
The advantages of Option 2 (which was ranked preferred on the basis of the SAW evaluation) include: much lower natural environment effects, lower economic effects and least cost. The options were considered to be fairly equal with respect to the social environment (as all three options involve some amount of improvement to Waterdown Rd. and result in similar social impacts). Although Option 2 was considered slightly less preferred from a transportation perspective, it could address the capacity problem. For these reasons, Option 2 was considered as preferred.

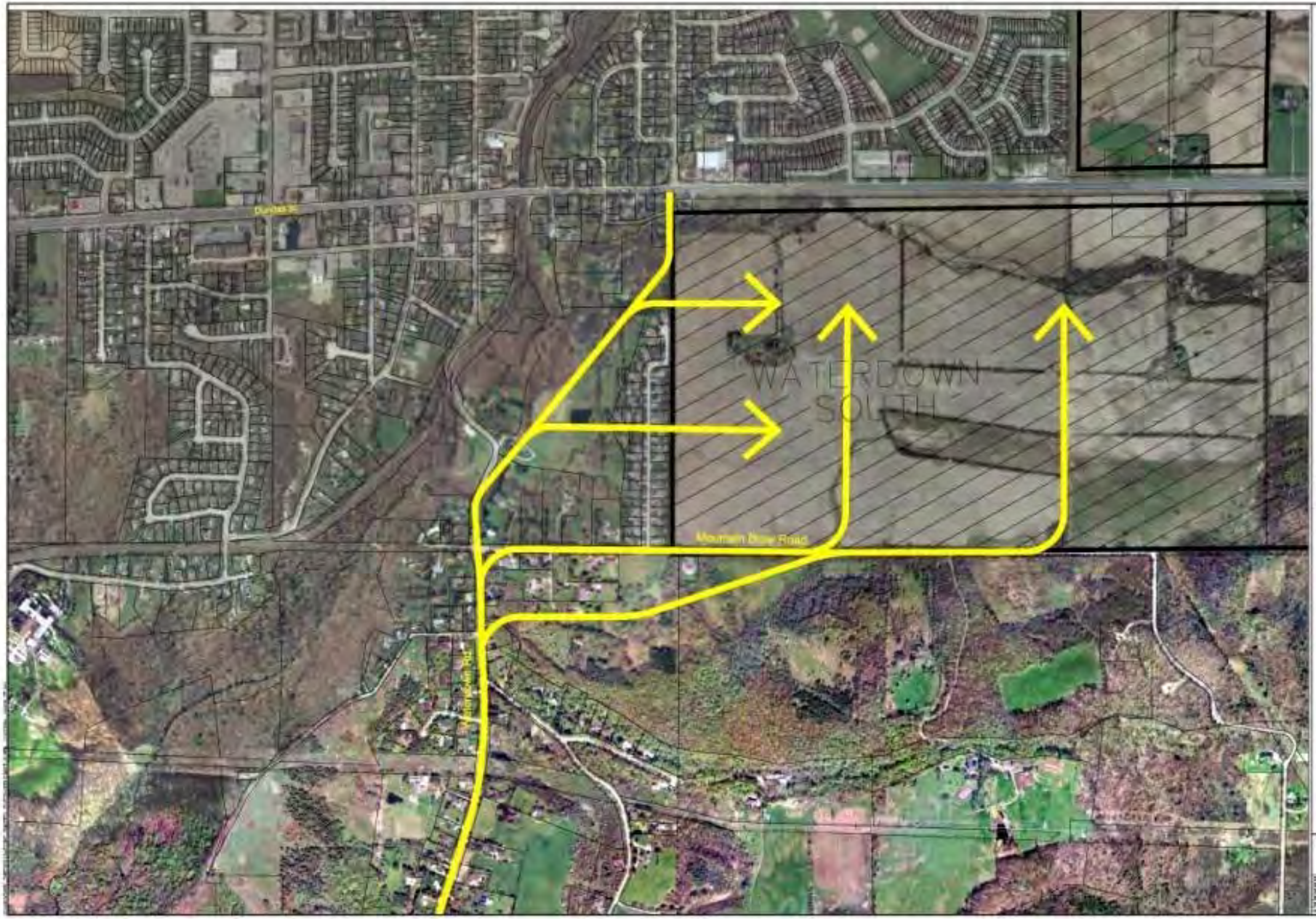
6.2.5 North Waterdown Road Comparisons

The preferred option of widening Waterdown Road to 4 lanes (Option 2) includes a new road extension north of Mountain Brow Road. The impacts to the natural features in this area (that is associated with the Grindstone Creek ESA) were identified to be of concern to the local community. Thus, alternative alignments to this road extension alignment were considered. One alternative alignment was identified which involves the widening of Mountain Brow Road east of Waterdown Road then extending a new road ROW north to Dundas Street through the OPA 28 future development lands.

The original Western Alignment was then evaluated against this new alignment (Eastern Alignment) (with both options originating at Waterdown Road/Mountain Brow Road and ending at Dundas Street). ***Figure 6-6*** shows the general alignment of these two options. ***Tables A7*** and ***A8*** included in ***Appendix A*** present the results of the evaluation. For both data standardization methods, the new alignment (Option B - widen Mountain Brow Road and then extend north to Dundas Street) was overwhelming identified as preferred. It has fewer natural environmental effects, fewer social effects and is least cost. There is also fewer existing access points associated with Option B and is thus preferred from a traffic safety perspective.

As a result of this evaluation, a general alignment through the South Waterdown Secondary Plan area was identified to connect Mountain Brow Rd and Dundas St. The location of this roadway link through the secondary plan area was established by giving regard to the function of this road (transit service, access for Waterdown South development, and transportation demand). Modeling scenarios determined that as the link was located further east, the level of roadway use would decrease as the demand on this road is from existing Waterdown and the planned Waterdown South development. A "loop" road connecting the E/W road corridor with the N/S road corridor was not found to be efficiently used due to the distribution of traffic. Hence the proposed location of the link road within the secondary plan area is considered to be most efficient.

The exact alignment of this roadway is to be determined through future Class EA Phase 3 work.


Dundas St
WATERDOWN SOUTH
Mountain Brow Road
Hamilton
Burlington
Halton
FIGURE 6.6
WATERDOWN ROAD/
DUNDAS STREET
LINK OPTIONS
Map Features
Potential Alignments
Waterdown Urban Expansion Areas
FOR DISCUSSION PURPOSES ONLY
Data Sources
Scale
DILLON
WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN
WATERDOWN ROAD/DUNDAS STREET LINK OPTIONS

6.3 The Preferred Road Improvement Solution

Based on the assessment and comparative evaluation work as described in the previous sections of this report, the preferred road improvement solution was identified as:

North-South Solution

- Geometric improvements and widen Waterdown Road to 4 lanes from Highway 403 to Mountain Brow Road;
- Widen eastern section of Mountain Brow Road to 4 lanes east of Waterdown Road to the new north-south Waterdown Road ROW; and
- New Waterdown Road ROW north of Mountain Brow Road to connect with Dundas Street through the OPA 28 future development lands.

In addition, the City of Burlington has determined that King Rd. cannot be left in its current condition due to road safety concerns. As such, to keep it open, some amount of road/operational improvements or closure to through traffic may be necessary (See Section 10.0 for further discussion regarding this).

East-West Solution

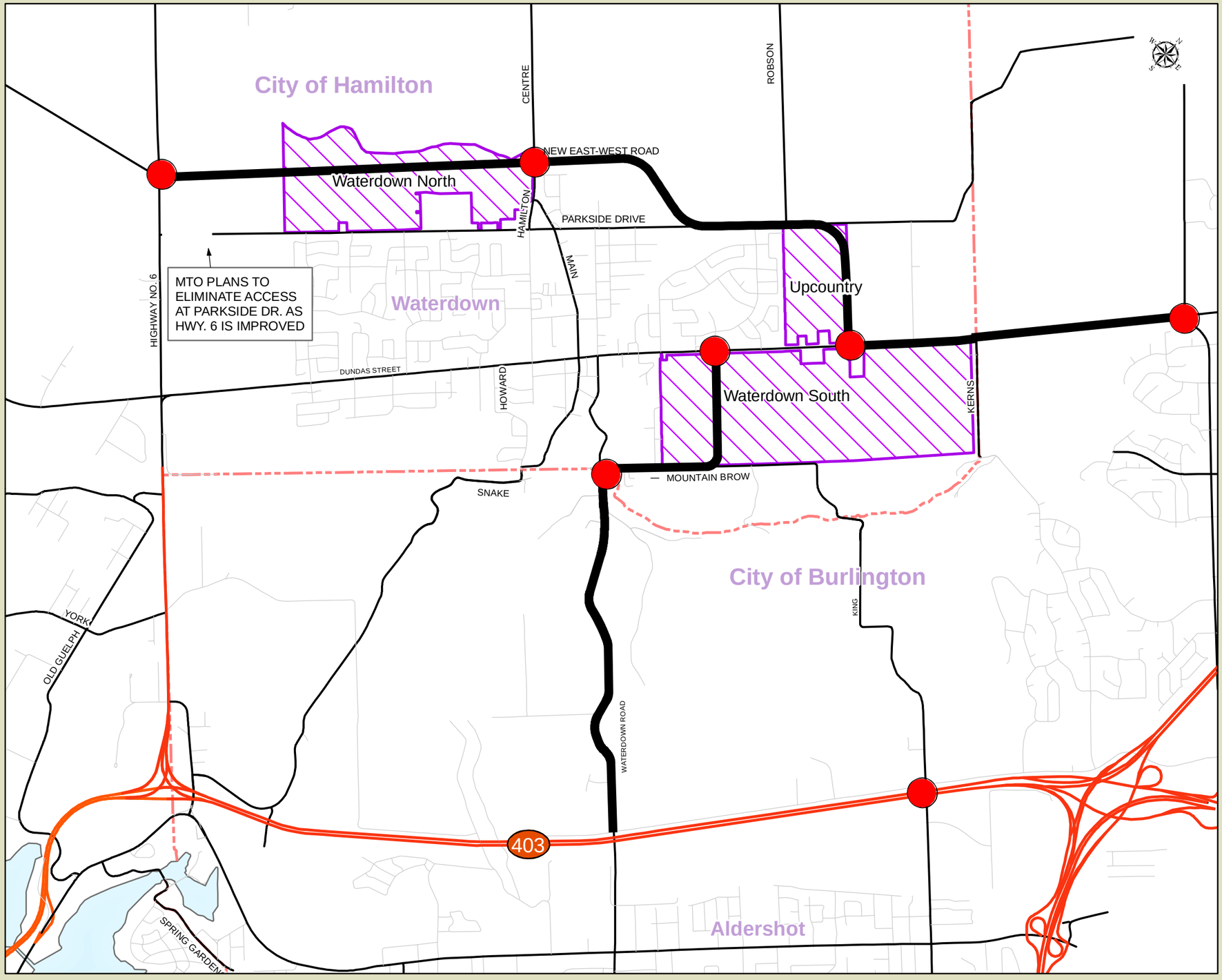
- Starting at the west, a new 2-lane North Link at 26 to 32 m ROW from Highway 6 continuing eastward as a new northern link;
- The ROW then swings southeast past Centre Road to connect with Parkside Drive east of Churchill Avenue;
- Widening Parkside Drive to 4 lanes (30-32 m ROW) to the eastern edge of the "Upcountry" development block;
- New north-south ROW along the eastern edge of the "Upcountry" development block between Parkside Drive and Dundas Street; and
- Dundas Street widening to six lanes from the new north-south ROW connection point to Brant Street.

The east/west options had a western terminus in the west limit of the study area. This terminus is consistent with previous transportation analyses undertaken in the study area, provided for appropriate roadway continuity and connectivity and made provisions for needs to the year 2031 which, although initially part of this assignment, still needs to be evaluated once the population and employment estimates are developed under the "GRIDS" study.

However, in reviewing the transportation demand to 2021 (the current planning horizon for this study), it is evident that the east/west roadway link west of Highway 6 cannot be justified at this time.

Therefore, the preferred east/west solution should have a western terminus at Highway 6. However, once 2031 data becomes available, the need for the extension of this roadway segment west to Highway 5 should be re-evaluated.

Therefore, taking into account the above comment, the preferred road improvement solution is shown on ***Figure 6-7***.



Waterdown - Aldershot Transportation Master Plan

Figure 6.7: Preferred Road Improvements for the Waterdown/Adlershot Transportation Master Plan

- Municipal Boundary
- Preferred Corridor
- OPA No.28 Lands

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM/CC
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

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6.4 Summary of Transportation Solutions for the Waterdown/Aldershot Area

From the analysis undertaken in Phase 2 of the Municipal Class EA Process for the Waterdown/Aldershot TMP the "Problem" identified in Phase 1 – lack of east/west and north/south capacity can be addressed by:

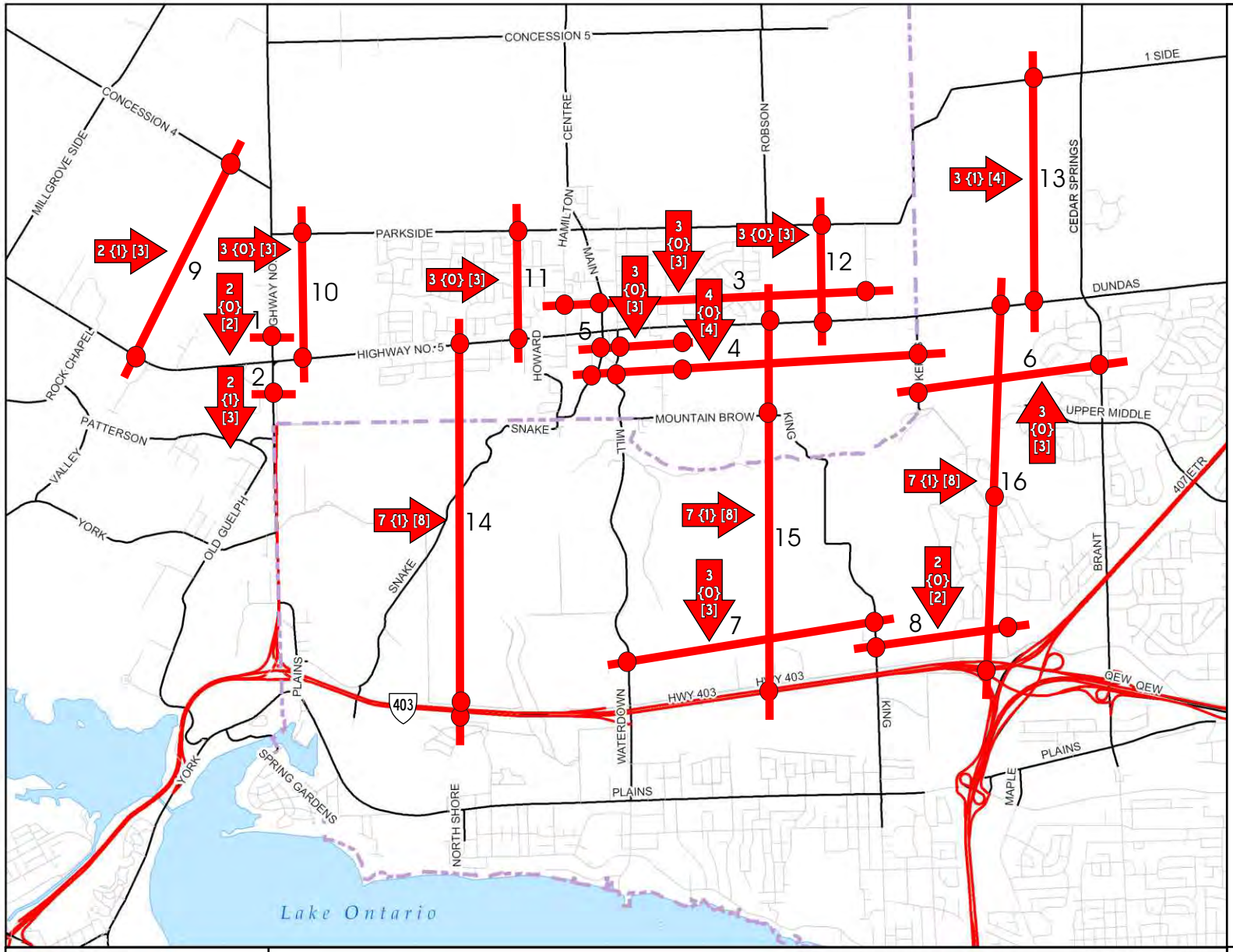
1. Implementing the necessary transit service and transportation demand management measures to achieve a 10% reduction in single occupant automobile travel; consistent with the City-wide TMP TDM Policies and City-wide TMP Transit Services Strategy;
2. Constructing a new east/west roadway generally between Parkside Drive and the greenbelt boundary from Highway 6 dropping to Parkside Drive just west of Robson Road, and then following Parkside Drive to a new roadway along the east boundary of the Upcountry development area;
3. A north/south widening of Waterdown Road between Highway 403 and Mountain Brow Road, the widening of Mountain Brow Road to a new north/south link joining this road with Dundas Street, through the Waterdown South Secondary Plan area;
4. Widening Dundas Street between the "new link" and Brant Street to a six-lane cross-section – or some other way to provide additional east/west capacity in this area;
5. Implementing, in addition to the above specific improvements and operating targets, the City-wide Walking and Cycling Policies to increase awareness and promote these modes of transportation;
6. Widening of Highway 403 west of the Freeman Interchange. Note that this solution is not with the mandate of the municipal partners, but within the mandate of the Province; and
7. Further assessment regarding the form of improvement needed to address safety concerns associated with King Rd.

The City-wide policies referenced above are presented in ***Appendix B***.

With these improvements, the preferred system will operate as follows:

	2021 Modelled Capacity	2021 Modelled Volume	v/c
Critical North/South Screenline			
Waterdown Road north of North Service Road	1,800	1,500	0.83
King Road north of North Service Road	500	446	0.89
Total	2,300	1,946	0.85
Critical East/West Screenline			
Dundas Street west of New Link	2,000	1,711	0.86
Parkside Drive	1,800	1,198	0.65
Total	3,800	2,889	0.76

Some areas of the network will still operate at poor levels of service – modelled volume-to-capacity ratio greater than 0.85, as illustrated in ***Figure 6-8***.



Legend:

- Freeway (403)
- Arterial / Local Road (Brant St.)
- Municipal Boundary
- Screenline
- Existing Lanes {Additional Arterial Lanes Required} [Total Lanes Required] (3 {1} [4])

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Screenline Deficiencies

2021 Land Use on Preferred Network

Waterdown / Aldershot Transportation Master Plan

Figure 6.8

Not to Scale

July 2005

6.4.1 Waterdown Road/Mountain Brow Road Preliminary Design

The selection of Waterdown Road/Mountain Brow Road as the preferred north/south corridor generated considerable concern from residents fronting on these roadways or living close to the corridor. Therefore, preliminary designs have been undertaken to illustrate a potential "alternative design" for this corridor, recognizing that alternative detailed designs will be developed and assessed as part of future Phase 3 & 4 of the Municipal Class EA Process.

Figure 6-9 to ***Figure 6-14*** present one alternative design for this corridor. This design is not meant to prejudice the future Phases 3 and 4 work. It is presented to demonstrate one way to address concerns expressed through the public consultation process.

This particular concept:

- Minimizes property impacts;
- Minimizes the displacement of homes in the vicinity of Waterdown Road/Mountain Brow Road; and
- Provides the necessary capacity to accommodate forecasted traffic by the year 2021.

What this highlights is that as the level of detail increases in future phases of the Class EA process, some of the impacts can be mitigated through detailed route selection and design treatments.

6.5 Review of Preferred Solution – 4-Lane Waterdown Road Recommendation

Due to concerns regarding the proposed improvements to Waterdown Road that were expressed by residents along Waterdown Road at the Community Development Committee meeting of April 1, 2006, the City of Burlington presented a new option in December 2006 that would involve the addition of only one centre lane along Waterdown Road (to make it 3 lanes) and improvements to King Road. The City of Burlington retained a transportation consultant to prepare a plan/profile for this option which was provided to the Dillon study team in October 2006 and which formed the basis of the improved King Road alternative.

To confirm the suitability of this new option proposed by Burlington (3-Lane Waterdown/improved King Road), a comparative evaluation of this new option against the Waterdown/Aldershot Transportation Master Plan recommended north-south improvement option (4-lane Waterdown) was undertaken. The following documents the results of the evaluation.

6.5.1 Proposed 3-Lane Waterdown Road Option

This option, proposed by the City of Burlington, involves the following:

- Improvements to King Road extending from North Service Road to a connection point with Mountain Brow Road. (2 lanes total);
- The addition of one lane to Waterdown Road from the North Service Road to Mountain Brow Road (3 lanes total) as well as the addition of a lane to Mountain Brow Road to the point where it would connect with the new north-south road through the Waterdown South secondary plan area; and
- 2 additional lanes through the secondary plan area to convert the planned collector road into an arterial road to allow a connection between Mountain Brow (4 lanes total) (same as the 4-Lane Waterdown option).

The 3-lane Waterdown Rd option had an assumed RoW width for Waterdown Rd of 27 m, whereas for Mountain Brow Road, a RoW width of only 20 m is available. This 20 m RoW on Mountain Rd. was deemed wide enough to fit an extra lane.

The City of Burlington has also indicated that should Waterdown Road be widened to 4-Lanes then King Road could not be left in its current condition due to expected increased traffic volumes on it. As such, King Road would require road bed reconstruction/ resurfacing. Although these improvements would remain with the current road bed footprint (and would result in no environmental impacts) there would be a cost associated with this improvement. As such, the cost of this improvement (estimated to be about $2 million) was added to the total cost of the 4-Lane Waterdown option in the evaluation.

The Burlington proposed option reflects a higher level of design detail than the conceptual design that was developed for the original options evaluation that was undertaken in Stage 2 of the Class EA.

6.5.2 Evaluation of 3-Lane Waterdown Road Option

The recommended Stage 2 solution (widening Waterdown Road to 4 lanes plus the widening of Mountain Brow Road and the extension of a new roadway though the Waterdown South lands) was compared against the new option as proposed by Burlington.

The same evaluation criteria/indicators as previously used were utilized in this evaluation. Data was primarily based on the GIS data layers/mapping previously used. Some changes were required to the criteria and indicator weights (although the criteria group weights remained unchanged). This was required because in the previous evaluations for a few of the criteria/indicators there was no difference identified among the options and as such, no weight was assigned to these criteria/indicators. Whereas for this evaluation, there is now a difference in the data for these criteria/indicators and as such, some amount of weight had to be reassigned to these criteria/indicators (the total weight of the criteria group remained unchanged though).

Tables A9 and ***A10*** in ***Appendix A*** present the evaluation results. The evaluation results based on the previously used criteria group weights (runs were undertaken for two different data standardization methods) indicate that the 4-Lane Waterdown option is preferred (the lower the overall score indicates a lower overall impact/cost). The following highlights the major differences among the options:

- ***Natural Environment*** – Clear preference for 4-lane Waterdown as it would result in the removal of less amounts of natural habitat (ANSI and ESAs) than the improved King Road option;
- ***Social Environment*** – Clear preference for the 3-lane Waterdown/King option as fewer impacts to residents (property takings) along Waterdown Road (road improvements largely stay within the existing RoW) (although we could expect the same if not greater traffic disturbance effects due to high congestions levels with a 3-lane Waterdown Road option);
- ***Economic*** – Preference to 3-lane Waterdown due to greater planned land use/agriculture effects associated with the 4 lane widening of Waterdown Road;
- ***Cost*** – Preference to the 4-Lane Waterdown which is about $4 million less expensive that the 3-Lane Waterdown/King option; and
- ***Transportation Service*** – Clear preference for 4-lane Waterdown as it provides a higher level of service and a higher overall average network speed. The 4-lane Waterdown option solves the transportation problem whereas the 3-lane Waterdown/Improved King Road option does not solve the problem, as it does not include geometric improvements and as such does not substantially improve the capacity of the roadway.

Also to be considered are the criteria groups weights which when originally developed, it was assumed that all the options being evaluated would more or less solve the transportation problem. As such, the level of difference among the options for Transportation Service was minimal and thus a relatively low level of weight was assigned to the Transportation Service Criteria Group (14 out of 100 pts.). With this evaluation, given the large difference in the extent to which these two options solve the problem, it would be appropriate to assign a much higher amount of weight to this criteria group now. If this was to occur, the 4-lane Waterdown Option would emerge as being even more preferred.

As well, the evaluation does not reflect other effects associated with high traffic congestion levels along Waterdown Road that would result with the 3-lane Waterdown Road Option which would include access difficulties from residential properties and greater air emissions from congested traffic.

Finally, it is understood that agencies such as Halton Conservation and the NEC would not be supportive of improvements that would require substantial widening of the King Rd. road bed.

Based on the evaluation that was undertaken, from an overall environmental assessment perspective, the proposed 3-Lane Waterdown/Improved King Road option is not a superior option over the 4-lane Waterdown Road option that was recommended through the Stage 2 work. **As such, we recommend that the 4-Lane Waterdown option should remain as the preferred option.** Based on a preliminary detailed design for the 4-Lane Waterdown option (which was

not reflected in this evaluation) that many of the impacts can be significantly reduced by narrowing the widened road footprint. For example, based on the design work conducted to date, the 18 residential displacements reported in the evaluation table, can likely be reduced to say 5 or 6 displacements. Subsequent conceptual design work has confirmed this (see next section) and which will be further refined in Phase 3 EA work.

The results of this evaluation were presented to Burlington Council on May 1, 2006 as discussed in *Section 7.4.2* of this Report.

6.5.3 Refinement of the Evaluation

The above evaluation involved the comparison of the 4 Lane Waterdown Road option (at a conceptual level of design detail with a much wider footprint than would likely be required) to the Burlington option (at a more refined level of design). Subsequent to the presentation of above evaluation results to Burlington Council, a more refined design for the 4-Lane Waterdown option was developed. To confirm its selection as the preferred option, it was considered prudent to compare the more refined 4-Lane Waterdown option to the Burlington proposed 3-Lane Waterdown Road/King Road option as presented above. Some comments on the refined design are as follows:

- For the Burlington proposed 3-Lane Waterdown Road/Improved King option, it was assumed that the road improvement can be accommodated within the existing Waterdown Road RoW which would result in zero residences being removed. This is a change over the December 06 evaluation where the overlaying of the original Burlington 3-Lane design resulted in 16 residential displacements. It was assumed that the 3-Lane Waterdown Road option could be accommodated within the RoW;
- The Burlington 3-Lane Waterdown Road option includes bicycle lanes whereas the 4-Lane option does not. The additional RoW width along Waterdown Road for the 4-lanes over 3-lanes ranges from 0 to 7 m;
- Both options include the same amount of improvement (2 additional lanes) to the new Waterdown South "secondary plan" road between Dundas Street and Mountain Brow Road;
- Cost for the 4-Lane Waterdown Road option were updated (and have increased) to reflect: the cost to resurface King Road; the inclusion of the cost for the secondary plan road widening; and the use of a more refined methodology to determine property costs;
- The cost for the 3-Lane Waterdown/Improved King Road Option was put into 2002 dollars. Costs were compared on the basis of the same "dollars", the 4-Lane Waterdown Road option was costed on the basis of 2002 unit prices; and
- Impact data scores were updated to reflect the more refined designs as well as some reinterpretation of the data (e.g. only agricultural land that is designated as such in the OP was considered).

Evaluation Results

The results of the updated comparative evaluation are presented in ***Tables A11*** and ***A12*** in ***Appendix A***. The same evaluation criteria/indicators were used. In comparison to the original evaluation of options, some changes were required to the criteria and indicator weights (although the criteria group weights remained unchanged). This was required because in the previous evaluations, there was no difference identified among the options for a few of the criteria/indicators. Therefore, no weight was assigned to these criteria/indicators. Whereas for this evaluation, there is now a difference in the data for these criteria/indicators.

The evaluation results based on the previously used criteria group weights (runs were undertaken for two different data standardization methods) indicate that once again the 4-Lane Waterdown Road option is preferred (the lower the overall score indicates a lower overall impact/cost). The following highlights the major differences among the options:

- ***Natural Environment*** –Clear preference for 4-lane Waterdown as it would result in the removal of less amounts of natural habitat (ANSI and ESAs) than the improved 3-Lane Waterdown/Improved King Road option;
- ***Social Environment*** – Difference between the options is shown now to be somewhat reduced with only a slight preference to the 4-Lane Waterdown Road option (any residential displacements associated with the 3-Lane Waterdown option would make this option less preferred);
- ***Economic*** – No real difference among the two options;
- ***Cost*** – No real difference among the two options (although the cost of 4-Lane Waterdown Road would be reduced by about $2 million if the King Road resurfacing cost is no longer included); and
- ***Transportation Service*** – Clear preference for 4-Lane Waterdown Road option as it provides a higher level of service and a higher overall average network speed. The 4-lane Waterdown Road option solves the transportation problem whereas the 3-Lane Waterdown/Improved King Road option does not solve the problem.

Based on this revised comparative evaluation of these two options, which reflects a higher level of road design detail for both options, there is an even stronger preference for the 4-Lane Waterdown Road option over the Burlington proposed 3-Lane Waterdown Road/Improved King Road option. The 4-Lane Waterdown Road option is clearly preferred with respect to the Natural Environment and Transportation Service criteria groups and there is now little difference with respect to Social Environment, Economic Environment and Cost criteria groups.

6.6 Additional Suggested New East-West Roadway Alternatives

Alternative options/modifications to the preferred new east-west roadway corridor were also suggested by the public. The consideration and evaluation of these options is discussed in Section 7.6.4 of this Report.

SHEET INDEX

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DESIGN BY:	PM
DRAWN BY:	LR
SCALE:	1:2000
DATE:	JUNE 20, 2005
PROJECT No.	04-3687

WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

FIGURE 6.9 - CONCEPTUAL DESIGN FOR WATERDOWN ROAD CORRIDOR IMPROVEMENTS

STATION 10+000 TO 10+525

PLATE 1

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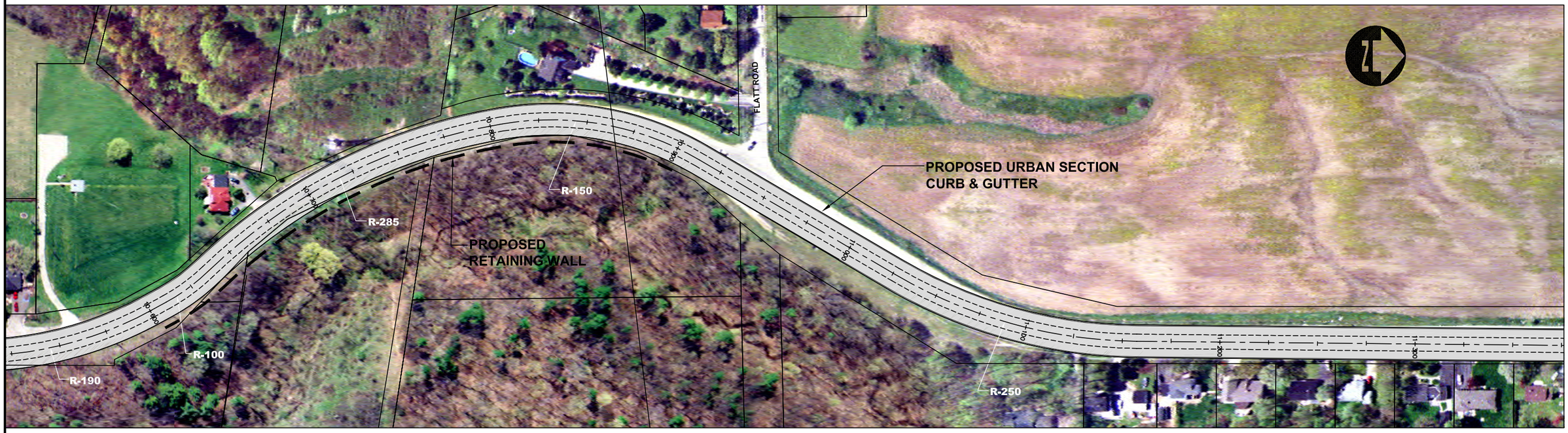

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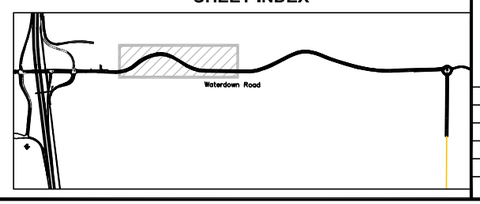

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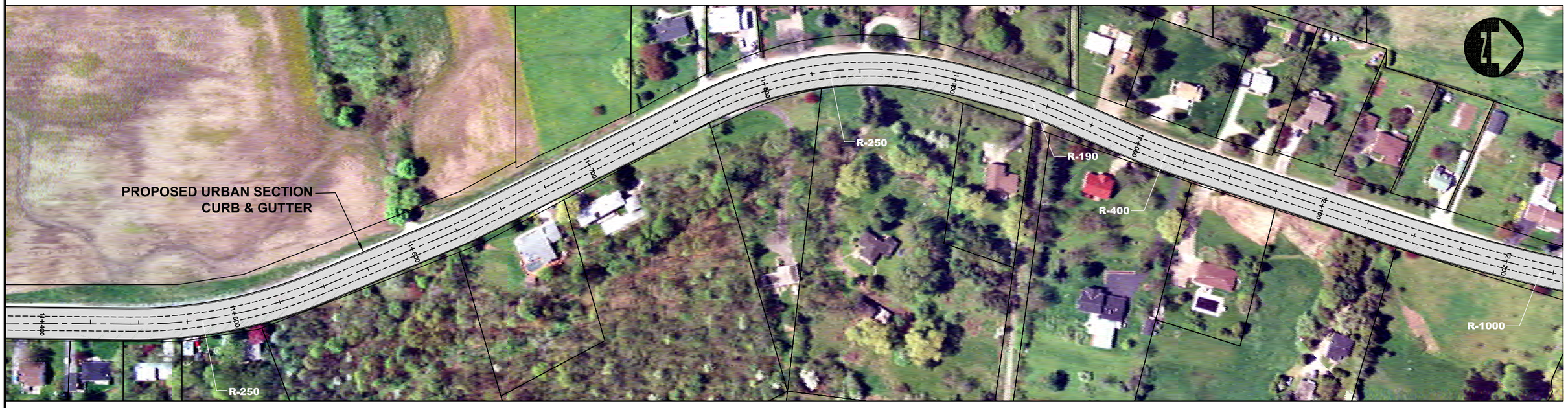
DATE: JUNE 20, 2005	
PROJECT No. 04-3687	

WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

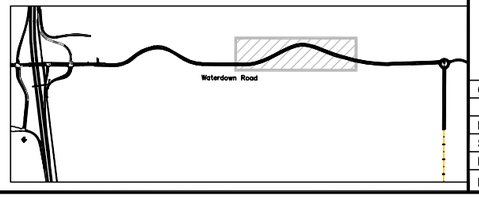
FIGURE 6.10 - CONCEPTUAL DESIGN FOR WATERDOWN ROAD CORRIDOR IMPROVEMENTS

STATION 10+525 TO 11+375

PLATE 2



SHEET INDEX



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SCALE:	1:2000
DATE:	JUNE 20, 2005
PROJECT No.	04-3687

WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

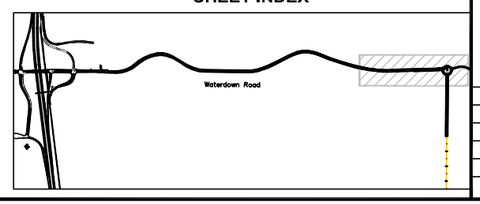
FIGURE 6.11 - CONCEPTUAL DESIGN FOR WATERDOWN ROAD CORRIDOR IMPROVEMENTS

STATION 11+375 TO 12+225

PLATE 3

EXAMPLE ROUNDABOUT TREATMENT FOR WATERDOWN/MOUNTAIN BROW INTERSECTION ALTERNATIVE TREATMENTS TO BE ASSESSED.

SHEET INDEX



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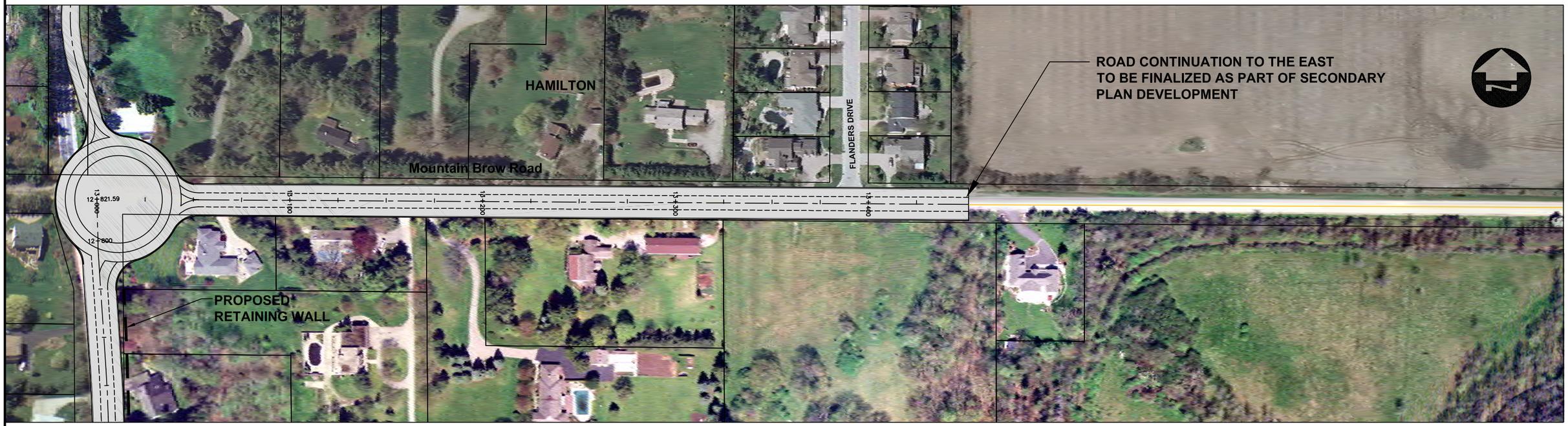
PROJECT No. 04-3687

WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

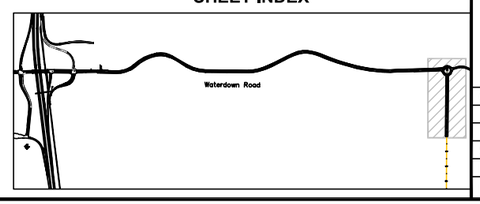
FIGURE 6.12 - CONCEPTUAL DESIGN FOR WATERDOWN ROAD CORRIDOR IMPROVEMENTS

STATION 12+250 TO 13+100

PLATE 4



SHEET INDEX



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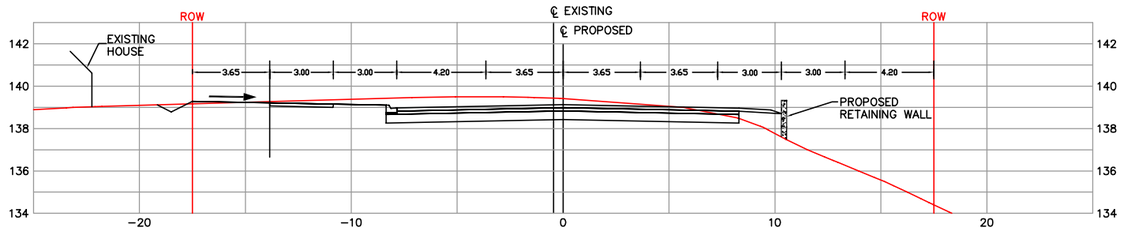
PROJECT No. 04-3687

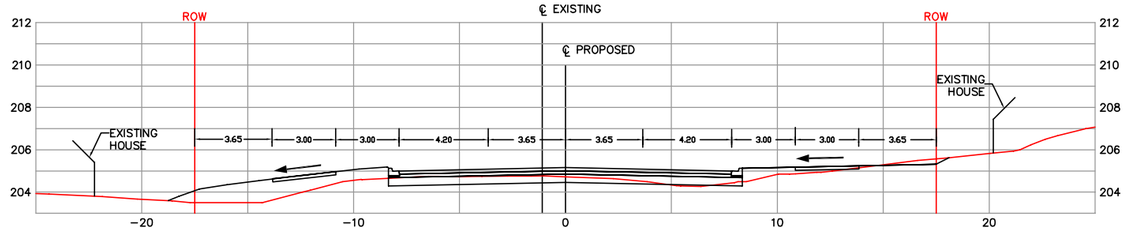
WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

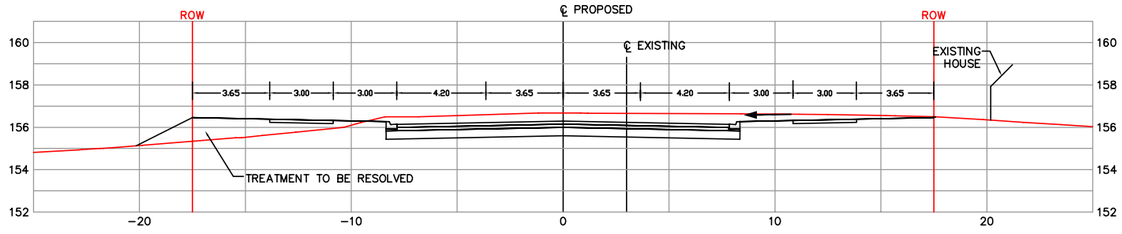
FIGURE 6.13 - CONCEPTUAL DESIGN FOR WATERDOWN ROAD CORRIDOR IMPROVEMENTS

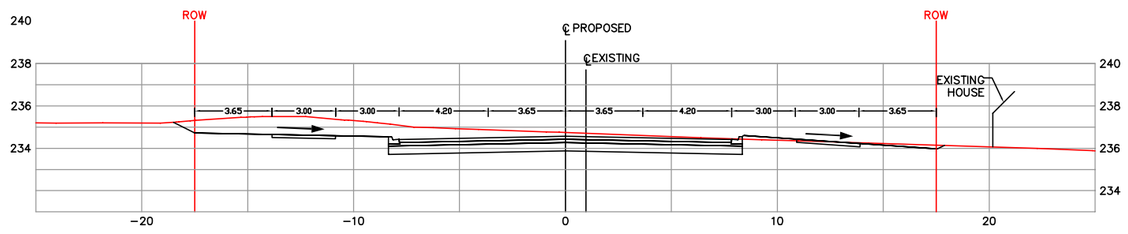
STATION 12+725 TO 13+452

PLATE 5









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WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

WATERDOWN ROAD TYPICAL CROSS SECTIONS AT CONSTRAINT AREAS

Figure 6.14

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7.0 PUBLIC CONSULTATION AND COMMUNICATIONS

Public consultation and communications is an important part of the work undertaken in the Waterdown-Aldershot Transportation Master Plan. First, the interests and concerns of the public and stakeholders need to be understood and taken into account. Second, important local knowledge can be identified that can contribute to an improved planning process. Finally, since the proposed solutions involve the disbursement of taxpayer funds, residents, businesses and agencies need to contribute their ideas and knowledge to the eventual outcome.

This section:

- Outlines the objectives that were established at the outset of the study and the strategies deployed relating to public consultation and communications during the development of the TMP;
- Describes the public consultation and communications program that was conducted during its development;
- Summarizes the outcomes of the process; and,
- Evaluates the effectiveness of the process.

For detailed information on the issues raised, responses provided (by the Study Team), minutes from Public Information Centres and Stakeholder Advisory Committee meetings, and submissions from members of the public, government agencies and other stakeholder groups, please see ***Appendix C***.

7.1 Approach to the Development of the Public Consultation and Communications Plan

At the outset of the study process, a Public Consultation and Communications Plan was prepared. This Plan can be found in the Study Charter (September 2004). The Cities of Hamilton, Burlington and the Region of Halton, along with representatives of the consulting team participated in executing the Plan. The following outlines the objectives of the Plan.

Objectives of the Public Consultation and Communications Activities

- **Clearly communicate** the purpose and focus of the Transportation Master Plan (TMP);
- **Provide the Big Picture context**, including explaining the relationship between the TMP and the range of other activities and plans that are linked to it (including those activities and/or plans that have recently been completed, are currently underway, or are proposed);
- **Provide Focused Discussions, by clearly** identifying the focus of the consultations at various stages of Phase 2, including those decisions which are 'on the table' and those which either have already been decided or are outside the scope of this process;
- **Share information** with, and **seek feedback** from, targeted stakeholders and the public regarding development of the TMP;

- Implement a consultation and communications program that has the **flexibility to respond** to changing project and stakeholder needs;
- **Demonstrate to local elected officials and the public** the Study Team's commitment to meaningful public consultation and effective communications; and,
- Meet Municipal Class EA consultation requirements, as well as consultation requirements of the project partners, including the City of Hamilton, the City of Burlington and the Region of Halton.

To successfully achieve the consultation and communications objectives, the following strategies were deployed:

- Get and keep people engaged;
- Correctly identify target stakeholder groups;
- Have contact early and often;
- Provide clear, concise, relevant information – as early as possible;
- Demonstrate how ideas from previous consultations have been/will be considered;
- Time and focus public engagement and consultation activities to match decision milestones in the TMP technical work plan;
- Manage meetings for maximum effectiveness;
- Provide several mechanisms to provide information and collect feedback (meetings, web-site, internet, email, fax, mail, phone, personal contact); and,
- Demonstrate how feedback will be/was considered.

7.2 Key Study Messages

At the outset of the TMP process, a number of key messages were identified to guide the process. These key messages are identified below and separated into 'process' messages, and 'content' messages.

Process Messages

- The study is a joint project being led by the following partners: City of Hamilton, the City of Burlington and the Region of Halton.
- The Phase 2 TMP study is following the Municipal Engineers' Association Class Environmental Assessment Process.
- The study is guided by a Steering Committee that, in addition to the above partners, also includes the Ontario Ministry of Transportation, Conservation Halton, the Hamilton Conservation Authority and the Niagara Escarpment Commission.
- Public consultation is an essential component of the project. This will be achieved through the establishment of a Stakeholder Advisory Committee, three rounds of Public Information Centres, individual meetings and communications.

Content Messages

- City of Hamilton Official Plan Amendment 28 (OPA 28) approves residential development and limited commercial and retail growth in Waterdown. This Amendment was directed by an Ontario Cabinet decision (2002).
- Development plans have been proposed to the City of Hamilton, however, these cannot be implemented until transportation alternatives are identified and a Transportation Master Plan is completed.
- The approved development includes approximately 6,500 new residential units and limited commercial/retail. The residential development will support an additional estimated population of approximately 15,000 people, with about half of the units planned for north of Highway 5 and the other half south of Highway 5.
- Based on previous studies (and to be confirmed through this project), transportation infrastructure is required to support the new development, particularly to move people east, west, and south to places of employment.
- The project is looking at a full range of options on how to address transportation demand, including: improving existing infrastructure (roads and bridges) and constructing new infrastructure, implementation of public transit, provision and improvement of cycling and pedestrian infrastructure, and promotion of transportation demand management.

7.3 Public Consultation and Communications Activities

The Waterdown-Aldershot TMP was undertaken to meet the Municipal Engineer's Association Class EA process. For Phases 1 & 2, there is only one mandatory point of public contact where the public is invited to comment on the selection of the preferred alternative solution.

The project partners undertook a public engagement process that exceeded the formal public notice and consultation requirements of the Class EA process. Additional notices/events included:

- Pre-consultation stakeholder identification and discussions;
- A project initiation notice;
- Notices to attend three rounds of Public Information Centres;
- Three rounds of Public Information Centres;
- Formation of a Stakeholder Advisory Committee, and holding four meetings; and,
- Issuing of interim study reports for public review.

It is noted that a fourth round of PICs are planned for Winter 08 to present the final TMP and to initiate the Phase 3 Class EA work for the applicable road projects recommended in the TMP.

The consultation approach focused consultation and communications activities around four study stages:

1) Confirm Approach to the Study;
2) Review and Confirm Issues, Alternatives and Criteria;
3) Develop and Seek Feedback on Alternatives; and
4) Develop and Review Draft Transportation Master Plan (two drafts – 2006, and 2007)

In addition to these four focused periods of consultation and communications activity, there were ongoing opportunities throughout the process for members of the public and stakeholders to receive information about the project (via the project website and other communications materials, as developed), individual meetings with members of the study team, and also to provide feedback to the project partners (e.g. through phone, fax, email, mail, and the project website).

Figure 7-1 depicts the technical work plan, and the public consultation. It demonstrates the integration between the two activities.

In addition to the above consultation activities, due to the considerations regarding the proposed North-South route by the City of Burlington (undertaken from 2006-2007) the following additional activities were to be undertaken:

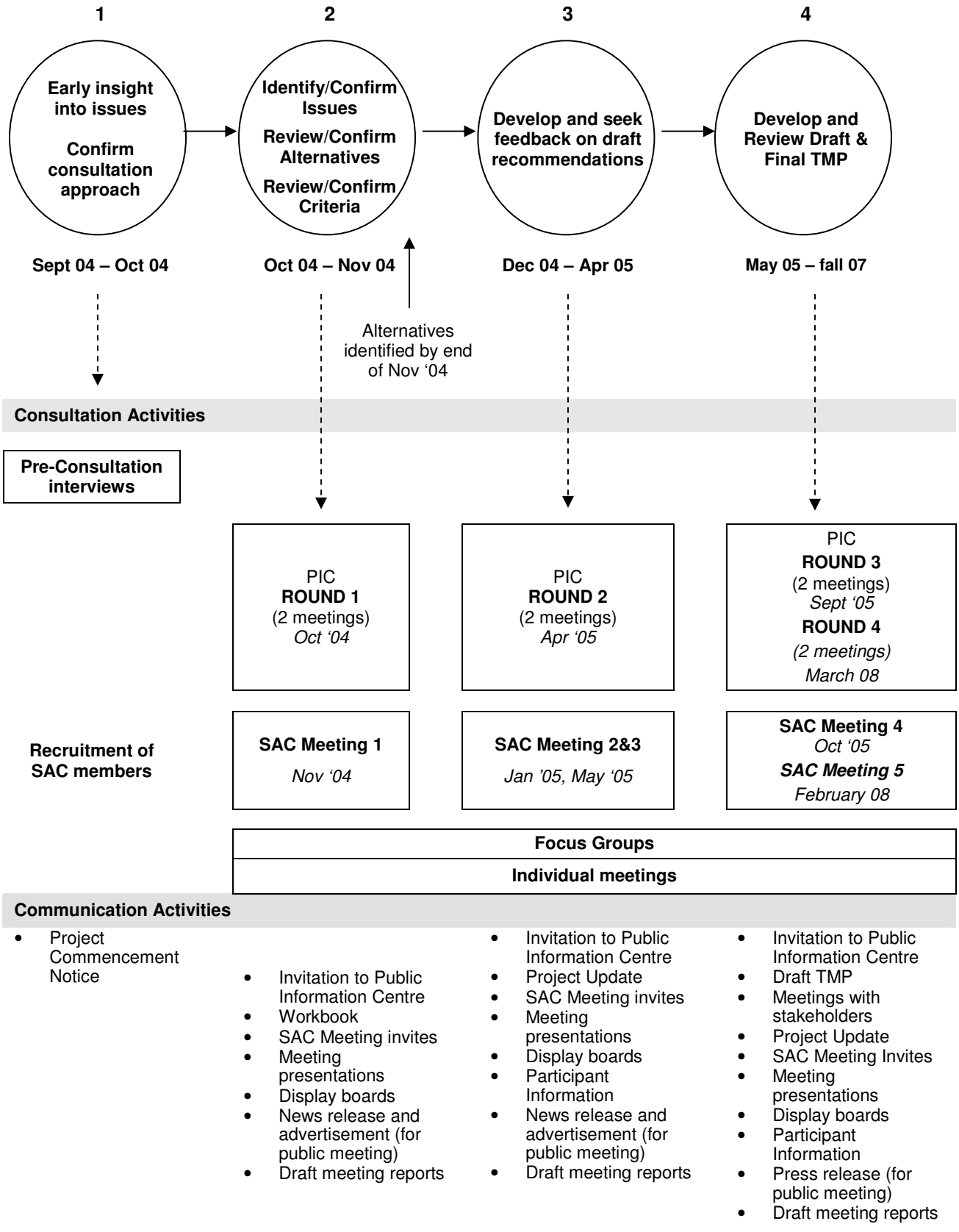
a) Any changes to the initial Draft Phase 2 report are presented and discussed with the public; and,
b) Discussions take place with the stakeholders and the public regarding the work plans for the upcoming study phases.

In response to the above, the following activities are planned for Winter 2008:

- Release of a study "Path Forward" document;
- Communications with the study's extensive mailing list;
- Newsletter;
- Public Information Centre (at two locations);
- A final meeting of the Stakeholder Advisory Committee.

Also planned are consultations with First Nations and government agencies.

Figure 7-1 – Work Plan Overview



7.3.1 Communications Activities

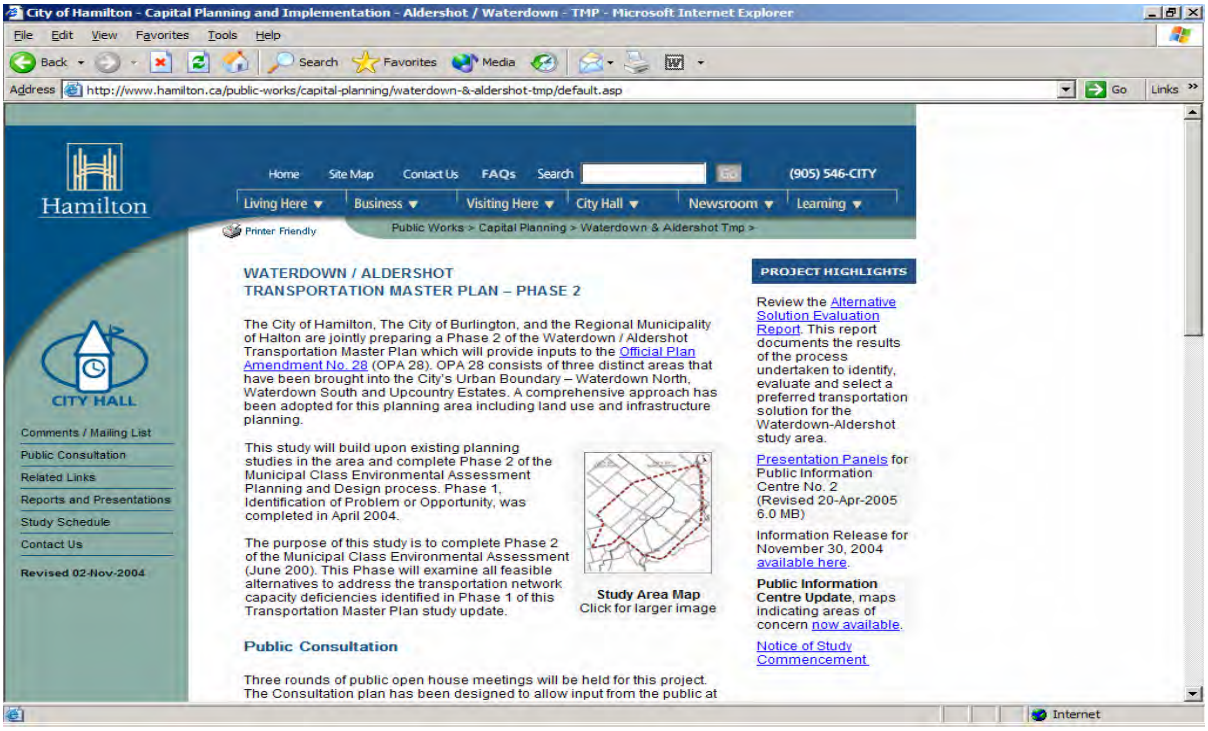
An effective communications program creates awareness of a project and opportunities for involvement and participation. It should also provide information in a clear, concise way that enables the public and stakeholders to understand the issues that need to be addressed, and the different considerations that influence the decision-making process. The following communications activities were undertaken though-out this study:

Notice of Study Commencement
A Notice of Study Commencement was published in early October 2004 in conjunction with the notice of the first Public Information Centre. The Notice informed the public that the study would consider all options to provide additional capacity in the overall transportation network to accommodate the deficiencies identified in Phase 1, including 'Do Nothing'. It also invited public participation and comments at any time during the study process. This Notice is located in ***Appendix C1***.

Study Web Page
A study web page was developed in the project initiation phase of the study. The purpose of the web page was to provide the public-at-large with the most up-to-date information available on the study progress, act as a medium for the exchange of information (i.e., the ability to download reports, presentation materials, etc…) and provide a source for comment/input. The web page was located at:

www.hamilton.ca/WaterdownTMP

Figure 7-2 – Study Web Page



E-Mail, Verbal and Written Communications

Throughout the study, members of the Study Team, municipal officials from each of the three partners' organizations, and politicians were available to receive information, obtain input and ensure that responses were provided.

Consultation Communications

At various stages throughout the study, communications materials were developed to assist consultation activities, including:

- Presentations at consultation events;
- Display boards at consultation events;
- Pre-meeting notification/invitations (through ads and e-mail communications to the study mailing list);
- Post-meeting communication (including posting of draft minutes on project website);
- Study website updates;
- Presentations to Council (to City of Hamilton and City of Burlington);
- Media coverage;
- Media releases; and,
- Steering Committee Meetings.

7.3.2 Consultation Activities

Public Information Centres (PICs)

Public Information Centres – Issues, Alternatives and Criteria – Round 1

This first set of public consultation activities took place on October 24 and 26, 2004 in Aldershot and Waterdown, respectively. Approximately 57 people signed in at the Aldershot meeting and 71 in Waterdown.. This round of consultation covered the following information:

- Purpose of the Transportation Master Plan;
- Background to the Study;
- Official Plan Amendment 28 – City of Hamilton;
- Municipal Class EA Planning and Design Process;
- Recommendations from 1999 Stantec Study;
- Purpose and recommendations from Phase 1 Study;
- Key Study Components/Schedule;
- Suggested approaches and potential alternatives for the Transportation Master Plan;
- Criteria for Evaluation/Area Constraints;
- Existing and Potential Transportation Systems; and,
- Next Steps.

Participants reviewed study area maps, identified priority areas for protection (or of concern) and participated in discussions around issues, options and evaluation criteria to be considered in the development of the Transportation Master Plan.

PIC presentation materials and a summary of the meetings are provided in ***Appendix C2***.

Public Information Centres – Presentation of Proposed Solutions – Round 2

The second round of public consultation took place on April 20 and 21, 2005 in Aldershot and Waterdown, respectively. Approximately 204 people signed in at Aldershot and 198 people in Burlington. This round of consultation covered the following information:

- Purpose of this round of Public Consultation;
- "Recap" - Background to the Study;
- Official Plan Amendment 28 – City of Hamilton;
- Municipal Class EA Planning and Design Process;
- Recommendations from 'Phase 1';
- Environmental Assessment Undertaken as part of Phase 2;
- Preferred Transportation Network and Supporting Policies; and,
- Next Steps.

These two meetings were designed in a "town hall" format, to first present the proposed solutions, and secondly, to enable members of the public to share their concerns and obtain answers to questions from the study team. Prior to the meetings, the Study Team held an open house, presented information on display panels, and was available to answer questions.

PIC presentation materials and a summary of the meetings are provided in ***Appendix C2***.

Public Information Centres – Review Draft Transportation Master Plan – Round 3

The third round of public consultation took place on September 26 and 27, 2005, in Waterdown and Aldershot, respectively. Approximately 350 people signed in at the two meetings. This round of consultation covered the following information:

- Presentation of the Draft Transportation Master Plan;
- Discussion of community issues; and,
- Next Steps.

PIC presentation materials and a summary of the meetings are provided in ***Appendix C2***.

Public Information Centres - Presentation of Final Phase 2 Transportation Master Plan - Round 4

A fourth round of public consultation will take place to complete the consultations on Phase 2 in March 2008. These PICs will also engage participants in discussions around the Phase 3 and 4 work planning and consultation activities. Documentation of these meetings will be prepared and form part of the public record as part of the Phase 3 and 4 reporting.

Stakeholder Advisory Committee

The Waterdown-Aldershot Transportation Master Plan Stakeholder Advisory Committee (SAC) was formed to obtain input from community stakeholders on all stages of the development of the TMP. Its mandate was to provide a forum for in-depth discussion of project issues with a representative group of interested citizens and stakeholders. In particular its role was to:

- Provide a balanced, inclusive discussion and advisory forum for community members and stakeholders;
- Review and provide comments on draft documents produced through the review process;
- Provide a forum for the discussion of issues, opportunities and solutions; and,
- Discuss other relevant matters that the Project Team refers to the Stakeholder Advisory Committee for feedback.

The Stakeholder Advisory Group reported through the TMP Project Team to the City of Hamilton, City of Burlington and the Region of Halton.

Meetings

The SAC held five meetings in total during the study period. The following lists the SAC meetings that were held during the course of the TMP study *(Note that the final October 07 meeting is still to be held).*

SAC Meeting	Meeting Topics
SAC Meeting #1 November 2004	Role of the Stakeholder Advisory Committee Background to the Transportation Master Plan Summary of Public Meeting Advice Review of Transportation Alternative Solutions/Functional Plans SAC Advice on Transportation Alternative Solutions/Functional Plans
SAC Meeting #2 January 2005	Review and Advice on Evaluation Criteria to be used in evaluating alternatives, and selecting preferred transportation network solution(s)
SAC Meeting #3 May 2005	Review recommended alternative solutions/functional plans Review recommended transportation network solution(s), programs and policies
SAC Meeting #4 October 2005	Review of Draft Transportation Master Plan
SAC Meeting #5 February 08 (planned)	Review of Final Transportation Master Plan

Membership

To ensure a balanced representation, the Stakeholder Advisory Committee was initially comprised of representatives from:

- Local Community –Waterdown North;
- Local Community – Waterdown South;
- Local Community – Aldershot;
- Senior Citizen Organization representative;
- Youth Organization representative;
- Community at Large – Waterdown (2);
- Community at Large – Aldershot (2);
- Environment Organizations – Hamilton, Burlington and Halton;
- Business Organizations – Waterdown and Aldershot;
- Recreation and Tourism (2);
- Councillor Rick Craven, City of Burlington;
- Councillor Margaret McCarthy, City of Hamilton;
- Developer;
- Cycling Committee;

- Education;
- Hamilton Transit Users Group; and,
- Safety Organization.

After the second meeting, two additional member groups were added: The Bruce Trail Association, and the Waterdown South Residents' Association.

The SAC's Terms of Reference and Meeting Notes are presented in ***Appendix C3***.

7.4 Presentations to Councils/Agencies

Throughout the Phase 2 planning period, the Project Steering Committee kept members of Council and government agencies informed about the study.

7.4.1 Presentation to the City of Hamilton Council

The Draft Phase 2 Waterdown-Aldershot Transportation Master Plan was presented and endorsed by City of Hamilton Council at its meeting of March 1st, 2006. The Council resolution authorized the City, in conjunction with the City of Burlington and the Region of Halton, to proceed with Phase 3, 4 and 5 of the Waterdown/Aldershot Transportation Master Plan Study.

7.4.2 Presentations to the City of Burlington Council

At its May 1st, 2006 meeting of Council, Burlington Council directed staff and the project team to review a 3-lane Waterdown Road/Improved 2-lane King Road option. The option was in response to concerns that the City of Burlington staff and members of the public raised over the ability of the existing King Road alignment across the escarpment to safely handle the additional traffic generated from the OPA No. 28 development. A consultant was retained by the City of Burlington to provide an independent review of the existing King Road alignment and develop a functional plan for the 3-lane Waterdown Road/Improved 2-lane King Road option.

An evaluation of the 3-lane Waterdown Road/Improved 2-lane King Road option and the recommended 4-lane Waterdown Road option was conducted by Dillon Consulting based on the evaluation criteria, weighting, and process used in the Phase 2 Waterdown-Aldershot Transportation Master Plan. The evaluation of the 4-lane Waterdown Road option included the estimated cost to reconstruct King Road to improve the condition of pavement surface. The evaluation results based on the previously used criteria group weights indicated that the 4-lane Waterdown Road option is preferred.

In July 2007, the City of Burlington approved the expansion of Waterdown Road with a number of conditions and authorized staff to proceed with Phase 3 of the Master Plan process. The City of Burlington Council resolution was as follows:

THAT the findings of the Phase 2 Waterdown/Aldershot Transportation Master Plan Study Report from Dillon Consulting be received; and

THAT the Director of Engineering be directed to proceed with Phases 3 and 4 of the Waterdown/Aldershot Transportation Master Plan in conjunction with the City of Hamilton and Region of Halton, subject to the following conditions:

(i) *THAT Phase 3 of the Waterdown/Aldershot Transportation Master Plan Study evaluate options for a phased implementation of the 4-lane Waterdown Road that would include an initial 3-lane option as illustrated in Figure 1 of Engineering Department Report E-42/07, dated June 6, 2007 along with additional transportation considerations and/or design modifications as follows:*

- *Increased road width only from 13.3 meters to 14.2 meters (i.e. minimum road width to accommodate 4-lanes)*
- *Inclusion of a multi-use off-road pathway up to 4.0 meters on one side of the road only*
- *Detailed evaluation of a counter-flow traffic control option utilizing 3-lanes to provide increased peak hour capacity in order to delay for as long as feasible, or possibly eliminate the need to reconfigure Waterdown Road to four lanes; and*
- *THAT Hamilton implement a viable public transportation system with a utilization experience of 5% to service the OPA 28 lands at 80% build out; and*

ii) *THAT prior to build-out of the OPA 28 lands, defined as not greater than 6,500 units, the City of Burlington undertake a separate Environmental Assessment (EA) Study pertaining to the reconfiguration of Waterdown Road to four lanes from Hwy. 403 to Mountain Brow Road; and*

(iii) *THAT this study have a steering committee and a stakeholder group to include at least three residents of Waterdown Road representing three separate families; and*

(iv) *THAT Phase 3 of the Waterdown/Aldershot Transportation Master Plan Study evaluate detailed alternatives and confirm a preferred design allowing King Road to remain open as a two lane roadway as illustrated in Figure 2 of Engineering Department Report E-42/07, dated June 6, 2007; and*

(v) *THAT a cost-sharing agreement with the City of Hamilton for the north-south road improvements be finalized to the satisfaction of the Director of Engineering, City Treasurer and City Solicitor and that the Director of Engineering report back to Council for final approval when an agreement is reached; and*

(vi) *THAT priority be given to the Phase 3 work required to fully address all of the detailed design questions raised by Waterdown Road residents including, but not limited to, confirmation of the road alignment, impacts to individual properties and land acquisition requirements; and*

THAT the Director of Engineering report back to Council on the Phase 3 preferred design alternative for Waterdown Road and King Road as part of consideration and approval of the Phase 4 Waterdown/Aldershot Transportation Master Plan Environmental Study Report; and

THAT the Director of Planning be directed to initiate an amendment to the Burlington Official Plan to clarify the policies relating to Waterdown Road and distribute such draft amendment to residents of Waterdown Road in a timely fashion.

7.4.3 The Region of Halton

As a Project Partner, Halton Region was actively consulted throughout the project and provided input into the generation and evaluation of options. Halton Region's Council resolution regarding the Master Plan recommendations was as follows:

1. *THAT Regional Council endorse the preferred East-West solution (including the widening of Dundas Street) identified in the Phase 2 Waterdown/Aldershot Transportation Master Plan as outlined in Report No. PPW65-07.*
2. *The Regional Council endorse a North-South solution identical to that contained in the City of Burlington resolution, more particularly:*

    a. *THAT Regional Council endorse the City of Burlington's position that Phase 3 of the Waterdown/Aldershot Transportation Master Plan Study evaluate options for a phased implementation of the 4-lane Waterdown Road that would include an initial 3-lane option as illustrated in Figure 1 of Engineering Department Report E-42/07, dated June 6, 2007 along with additional transportation considerations and/or design modifications as follows:*

        i. *Increased road width only from 13.3 meters to 14.2 meters (i.e. minimum road width to accommodate 4-lanes)*
        ii. *Inclusion of a multi-use off-road pathway up to 4.0 meters on one side of the road only*
        iii. *Detailed evaluation of a counter-flow traffic control option utilizing 3-lanes to provide increased peak hour capacity in order to delay for as long as feasible, or possibly eliminate the need to reconfigure Waterdown Road to four lanes; and*
        iv. *That Hamilton implement a viable public transportation system with a utilization experience of 5% to service the OPA 28 lands at 80% build out; and*

    b. *AND FURTHER THAT Regional Council endorse the City of Burlington's position that prior to build-out of the OPA 28 lands, defined as not greater than 6,500 units, the City of Burlington undertake a separate Environmental Assessment (EA) Study pertaining to the reconfiguration of Waterdown Road to four lanes from Hwy. 403 to Mountain Brow Road; and*

    c. *AND FURTHER THAT Regional Council endorse the City of Burlington's position that Phase 3 of the Waterdown/Aldershot Transportation Master Plan Study evaluate detailed alternatives and confirm a preferred design allowing King Road to remain open as a two lane roadway as illustrated in Figure 2 of Engineering Department Report E-42/07, dated June 6, 2007; and*

3. *THAT the Regional Clerk forward a copy of Report No. PPW65-07 to the City of Burlington, City of Hamilton, Niagara Commission, and Conservation Halton.*

7.4.4 The Niagara Escarpment Commission (NEC)

Throughout the study, the NEC provided input into the generation and evaluation of options. The NEC supports the expansion of Waterdown Road as the preferred north-south solution. The NEC was represented on the Steering Committee for this project.

7.4.5 The Ministry of Transportation (MTO)

MTO was a member of the project Steering Committee and attended some of the meetings. MTO was also met with separately to discuss their concerns that related primarily to the Waterdown Road/Hwy 403 interchange and the future intersection of the new east-west road with Hwy 6.

7.4.6 Conservation Halton and Hamilton Conservation Authority

The Halton and Hamilton Conservation Authorities were members of the Steering Committee. Consultation was undertaken with these agencies to obtain input on study process, background information, and draft documents. Their interests in the project related primarily to the potential for effects to natural features.

7.4.7 The Ministry of the Environment (MOE)

Meetings were held with the Ministry of the Environment (MOE) in March 2006 to present the study to them and again in February 2007. In October 2007, City of Hamilton staff met with MOE EA Branch representatives in response to the MOE being contacted by members of the public regarding their concerns about the TMP study process and EA elevation (Part II Order) requests. Although the MOE does not typically get involved with the review of Master Plans, given the high level of interest/concern with the project, the project proponents requested the MOE to review the Phase 2 report and findings.

7.5 First Nations Consultation

First Nation communities are being contacted to confirm their interest in the results of the Phase 2 work and involvement in future Phase 3 and 4 work.

The following First Nations are being contacted:

- Six Nations of the Grand Council;
- Mississaugas of the New Credit; and
- Huron-Wendat First Nation.

In addition to these individual First Nations, contact is also being made with higher level organizations such as:

- The Department of Indian and Northern Affairs;
- The Metis Nation of Ontario;
- The Chiefs of Ontario;
- Ontario Secretariat of Aboriginal Affairs (OSAA); and
- Ministry of Attorney General.

Through these contacts, First Nations are being advised on the Phase 2 recommendations and their input sought on level of interest on future Phase 3 EA work.

7.6 Community Issues and Results of the Consultation and Communications Program

At the outset of the study an 'issues and responses' database was developed. All issues, ideas, options, and concerns, obtained from all sources, were documented in the database. Members of the Study Team provided individual responses to issues raised by members of the public, outside of the formal meeting process. These responses are also documented in the database.

The database will continue to be used and updated in subsequent stages of this project.

A summary of the issues and responses can be seen in ***Appendix C***. The following is an overview of issues and ideas raised or brought forward by members of the public and stakeholders throughout the process.

7.6.1 Consultation on Issues, Alternatives and Criteria

Public Consultation – Round 1

Two Public Information Centres and two Stakeholder Advisory Committee meetings were held during round 1.

Public Information Centres

Approximately 130 people attended the two Public Information Centres held in late October 2004. At these meetings, the Study Team presented the results of the Phase 1 study, identified a number of options for consideration, and requested input on a number of evaluation criteria to be used in the study.

Concern and anxiety was expressed at both meetings regarding the status and results of previous work (the Stantec study), the position of the City of Burlington regarding whether or not the Waterdown Road option could be supported, if selected, and concern over the decision relating to the Official Plan Amendment.

Attendees participated in workshops to both comment on advantages and disadvantages of potential alternatives raised from previous work, and to identify criteria that could be used in assessing and evaluating proposed solutions. ***Table 7-1*** provides a summary of the issues raised at both Public Information Centres.

Table 7-1 – Summary of Input Received on Issues, Alternatives and Criteria – Public Consultation Round #1

General Observations	• Very thorough analysis of advantages and disadvantages, comprehensive • Similarities in the advantages and disadvantages identified for each option
Input on North South and East West Options	**Advantages for Existing Routes included**: • Less impact than new routes; • In some cases, improvements needed anyway; • Access to transit and GO; • Reductions in current bottlenecks. **Disadvantages included**: • Impacts on existing communities; • Intrudes on environmentally significant areas; • Need to maintain character of rural areas; • Increases in current bottlenecks. **For new routes or extended routes, advantages included**: • Less impact on existing community. **Disadvantages included**: • Impacts on escarpment and green space; valued areas.
Other Options	• Transit • Alternative North/South road connecting King Road and North Service Road. or Highway 403 to Dundas Street • Improve Aldershot GO then plan transit • Reverse traffic direction in rush hours • Use Brant Street as major North/South route • Link to Mid-Peninsula highway plan
Input on Criteria/Factors	• Load criteria in favour of transit – link to public transit, access to GO • Protect natural areas and environmentally sensitive areas • Improve density to support transit • Reduce impact on existing community • Maintain integrity as viable Town-village • Consider maintenance costs of new roads, vs. existing roads • Air Quality • Public safety; emergency planning • Need to reduce traffic in congested areas • Consider economic impact on taxpayers

SAC Meeting #1

On November 23, 2004, the first meeting of the Stakeholders' Advisory Committee was convened. The SAC reviewed its Terms of Reference and work plan, received a presentation from the Study Team on progress to date, and participated in a discussion with the Study Team on possible alternatives. The Study Team presented a draft "Alignment Map" showing new or proposed roadways. This map was posted on the study website in December 2004.

Stakeholders raised a variety of issues and ideas, additional options, and commented on various options. In particular, concerns were expressed about the Official Plan Amendment and how much growth would occur, the destination of traffic to be serviced by the proposed road options, the need for alternative modes of transportation, in particular local transit in the Village of Waterdown and bicycle lanes.

SAC Meeting #2

On February 10, 2005, the Stakeholders Advisory Committee convened its second meeting. In addition to sitting members, about 13 members of the public registered, however approximately 20 attended. The SAC heard a delegation from a representative from the Waterdown South Residents' Association. The purpose of the second SAC meeting was to review a "short listed" group of alternative transportation solutions, provide advice on the ranking and weighting of various evaluation criteria, and to identify issues of concern to the Study Team. Members of the public participated in the evaluation exercise.

The Study Team presented two remaining north-south options – Waterdown Road and King Road. Both Brant Street and Kerns Road had been eliminated from further consideration. A number of issues and questions were raised including the consideration of no north-south option, the need for cost sharing between Hamilton and Burlington, and the protection of "23 acres" of green lands north of Mountain Brow Rd/Waterdown Rd.

A summary of the input received from the SAC on the importance of various criteria is presented in ***Table 7-2*** below. A value of "1" represents the highest priority, while "4" represents the lowest priority.

Table 7-2
SAC Criteria Importance Rating

Criteria	North-South Corridors	East-West Corridors
Natural Environment	2	2
Social Environment	1	1
Economic Environment	4	3
Cost	3	3
Transportation Service	4	3

7.6.2 Consultation on Preferred Alternatives

Public Consultation – Round 2

Two Public Information Centres and one Stakeholder Advisory Committee meeting was held during round 2.

Public Information Centres

Two Public Information Centres were held in Aldershot and Waterdown in April 2005. The purpose of these meetings was to present the proposed solutions. Over 500 people attended both meetings. The meeting included a presentation of the results of the study so far, and the floor was opened to questions.

Table 7-3 is a summary of Issues and Concerns raised by participants at those meetings.

SAC Meeting #3

The third meeting of the SAC was held on June 9, 2005. In addition to sitting SAC members, approximately 40 members of the public were in attendance. For the first half hour of the meeting, the SAC heard from members of the public about their concerns regarding the options.

SAC members discussed the proposed Waterdown Road option and explored a number of issues with the Study Team

Table 7-3 – Summary of Issues and Concerns Regarding the Preferred Alternatives – Public Consultation Round 2

General	• Majority of participants attending both meetings were from the Waterdown Road area. • Majority of participants from both of the meetings are opposed to the North-South option to widen Waterdown Road. • Some participants from both meetings felt that both options, North-South and East-West appear to solve the problem, are cost effective, and provide for the least impact on residents. • Some participants did not receive notification of the meetings.
Key Issues and Concerns	• The proposed widening of Waterdown Road is creating a great deal of anxiety and opposition in the community. • There is a need for creative solutions to the problem. • Many people support the North-South option of widening King Road to four lanes, using creative designs, despite the environmental impacts. • Most people indicated that the development of Waterdown Road/Mountain Brow Road is not an acceptable option since there is greater social impact than the King Road option. Concern that impact on people is preferred over impact on environment, flora and fauna. • Some people supported the Waterdown Road option, and indicated that the option to widen King Road has too many environmental impacts. • Social impact – anxiety and concern expressed about acquisitions along Waterdown Road as details about the specific alignments are not yet available. • Basis for the assessment – Concern expressed that documentation was not available on how the screening and evaluation process was conducted. Report needs to be reviewed and discussed by the public before decisions are made. • The plan for public transit needs to be significantly strengthened. Residents use cars to get to and from Waterdown. Need to integrate the need for better public transportation in a much stronger way – not just the GO train. • Concern that the East-West route might encourage traffic on Highway 6. • Road safety – Enforce reasonable speed limits on busy roads; prevent winter accidents by designing the road appropriately. • Safety of hikers and cyclists on the Bruce Trail needs to be a priority. • Traffic could reach capacity on King Road even if Waterdown Road is expanded. • Connect N/S and E/W routes; this will reduce traffic congestion on Highway 5 and 6. • Development is not welcome in Waterdown, concerns surrounding OPA28. Politicians encouraged to lobby for the revocation of OPA28. • Protect environmentally sensitive areas and wildlife. Many participants support the decision to protect “23 acres”. • Concerns that truck traffic will increase and continue to move through residential areas. • Need to continue to involve local residents in the planning process, it was suggested that another round of public meetings are held prior to final study recommendations being made. • Concern about the health and safety of the children, schools need to be built to accommodate for growth. • Hamilton Hydro may have plans to install hydro lines along Parkside Drive. • Participants would like to receive more information about the project.

7.6.3 Consultation on the Draft Phase 2 Transportation Master Plan Report

Public Consultation Round 3
In conjunction with the release of the Draft Phase 2 TMP Report, two Public Information Centres were convened (September 05), and one Stakeholder Advisory Committee meeting.

Public Information Centres
About 350 people registered at the two Public Information Centres held on September 26 and 27 20005. At these meetings, participants expressed considerable concern about the proposed north-south and east-west solutions. The following is a summary of the issues raised at both public information centers.

- Concern that the Study Team's proposals will not solve the problem;
- Opposition to the proposed east-west route on the basis of cost, environmental impact to wetlands and ESAs, and lack of evaluation of other alternatives;
- Opposition to proposed north-south route on the basis of social impact, heritage district disruption, lack of access for emergency vehicles; proposed alignment will not deter traffic from Waterdown Road north of Mountain Brow Road; lack of comprehensive analysis of alternative, including King Road and, Brant Street;
- Opposition to OPA 28, and proposed densities, including encouragement to local politicians to continue to fight it. Suggestion made that densities be capped, thus negating the need for this study;
- Overall disheartenment over growth plans and lack of participation opportunities;
- Overall concern over low cost estimates for both routes - estimates considered misleading;
- Proposals that trucks should be prohibited from the new east-west route;
- Real estate values have diminished since this TMP study;
- Continued concerns that the transit options are not robust enough, and do not provide adequate incentives for encouraging commuters to use transit instead of cars;
- Request was received for a new environmental assessment process, to consider all alternatives rigorously, or in any event, to have this process peer reviewed at this time;
- A number of inconsistencies and errors in the draft TMP were brought to the attention of the study team; and,
- Overall concern over the cost to the taxpayer, and emphasis placed on the developer paying the full costs of the road and necessary services.

At these meetings, two new alternatives were presented for consideration, along with requests for detailed analysis of King Road vs. Waterdown Road, consideration of Brant Street (for north-south route options) and consideration of Dundas Street widening for the east-west route.

Stakeholder Advisory Committee Meeting #4
The fourth stakeholder advisory meeting also included a half an hour at the beginning of its meeting to hear from members of the public. One presentation was received. At this meeting SAC members provided roundtable comments on their response to the Draft report. The focus was on:

- Transit options, and the need for more focus on these options;
- Need for dedicated cycling lanes;
- Concerns over OPA 28, growth and density of future development;
- Concerns over proposals to close Mill Street and King Street; and,
- Study could implement more carefully the recommendations on the studies referenced in the appendices to the TMP, and include focus on Burlington.

After the PICs and SAC meetings, a number of briefs, submissions and written comments were received by the study team.

All comments have been documented in the 'issues and responses' database.

7.6.4 Assessment of Alternative Corridor Options Proposed by the Public

The study team received two corridor alternatives to the recommended east-west route, that were proposed by members of the public. These alternatives were reviewed to assess their appropriateness as reasonable and feasible alternatives to the recommended roadway options. These include:

1. **New Dundas Street Option** – this option is a proposed modification of the recommended new east-west option (Option 3). The option would involve the use of Dundas St. (Hwy 5) to accommodate the additional road capacity needs. Dundas Street between Hamilton Road and the bridge just east of Mill Street would not need to be widened, and the additional capacity required along Dundas Street could be accomplished through the removal of parking lanes and prohibiting left turning movements during the peak periods. This option was reviewed by the Study Team, but was determined not to solve the transportation problem. The study team met with the individual who presented this option to explain the rationale for not considering it further. A detailed response to this suggested option was also provided which is contained in ***Appendix C5*.**

2. **New North Road Option** – this option is a proposed modification of a section of the Option 1 (New North Road) that would involve shifting south a section of the alignment that is to the east of Mill Street south (about halfway between the Option 1 route and Parkside Drive) to avoid environmentally significant areas. The shifting of the alignment to the south would however result in impacts to two business properties though (OPTA Minerals and Connon Nursery). This option was suggested as an alternate to improving Parkside Drive even through Parkside Dr is an identified arterial roadway and road right-of-way had been set aside for future widening. This option was evaluated with the other east-west alternatives described in this report. The evaluation resulted in this new alternative coming in second to the preferred alternative using one data standardization method, and being tied for first place in using a second data standardization method (See ***Appendix C5***). As such the difference among the two alternatives on the basis of the evaluation criteria was shown to be small.

However, it is noted that the high costs of business displacement (an industrial waste materials processing facility and a nursery) were not included in the evaluation as the original evaluation criteria were not designed to take this level of business impacts into account. This is a significant consideration missing from this evaluation. A follow-up meeting with the industrial facility (Opta Minerals Inc.) in Summer 2007 confirmed that the development of a roadway through their facility would result in significant effects to their operations as it would remove lands that are used for their processing. They were unsure as to whether they could continue to operate at this location should a road pass through their lands.

With the consideration of the expected high costs associated with the displacement of 1, possibly two businesses, it was expected that the evaluation results would favour the original decision to widen Parkside Dr. The study team met with the North East Parkside Drive Residential Community representatives (who suggested this option) to explain the evaluation results. A detailed response to this suggested option was also provided which is contained in ***Appendix C5***.

Despite the above, the City of Hamilton has agreed to review the decision to widen Parkside Dr. in more detail and consider alternate feasible routing options as part of the future Phase 3 Class EA work. This work will be undertaken with the input of the community and affected businesses in the area. The steps to be undertaken include:

- Discuss the alternate (to widening of Parkside Dr.) roadway alignment with residents and neighbouring businesses;
- Determine the costs of property acquisition (and possibly business relocation) that would arise from the implementation of an alternative alignment; and
- Determine the feasibility/acceptability of an alternative alignment. If justified, proceed to evaluation of this option against the preferred Parkside Dr. alignment option.

7.7 Evaluation of Consultation Program

Monitoring and evaluation of the public consultation and communications program implementation is an important responsibility that was implemented on an ongoing basis throughout the project. Typical tools used by our team to facilitate our assessment of the success of the program included:

- Short feedback forms at public events that seek input on the effectiveness of the consultation approach;
- Ongoing documentation of process-related feedback and suggestions received throughout the process; and
- Regular check-in with members of the Steering Committee.

The following section provides a summary of how effective the consultation and communications plan was in achieving specific objectives. In addition, issues and suggestions are provided for future stages and other Class Environmental Assessments that may be undertaken by partner organizations.

Get and keep people engaged: The study had numerous opportunities for public input, with eight public meetings held, and five SAC meetings. However, given the nature of this project, members of the affected public have suggested that more meetings would have been useful.

Correctly identify target stakeholder groups: Target stakeholder groups were identified early on in the study. After the October 2004 PIC, an additional group was formed. Two additional members were added to the SAC to reflect these interests. However, the "representativeness" of the SAC has been questioned by some participants. The SAC was intended to broadly reflect the variety of transportation interests resident in the partnering municipalities. The participation of stakeholders was valued and appreciated by the Study Team. There appears to be interest in continuing the SAC process in subsequent stages, but perhaps at a more local level.

Have contact early and often: Communications occurred during Phase 2 on a scheduled basis according to the study work plan. Increased communications activities occurred when the corridors and preferred solutions were presented (commencing December 2004 and increasing throughout the remainder of the study period). The volume of input from members of the public was tremendous. Increased resources could be allocated to this activity in future phases and in future studies. In particular, a web-based consultation mechanism could be established that would enable the sharing of input and responses to a broad group of interested people.

Provide clear, concise, relevant information – as early as possible: The study team received advice that it could have prepared a status report at each stage of the work plan. While presentations were posted on the web site, improvements in the timing of web postings and access to input from government review agencies would have been helpful to participants.

Demonstrate how ideas from previous consultations have been/will be considered: At each public event, this issue was discussed. However, given that different people attended different meetings, communications of these matters could have been improved with a Q and A section on the study web site.

Time and focus public engagement and consultation activities to match decision milestones in the TMP technical work plan: Input was received and considered on an ongoing basis throughout the study. Discussions at formal meetings were focused on the relevant stage of the study plan, and community requirements. Suggestions from members of the public were considered and incorporated into the study where possible.

Manage meetings for maximum effectiveness: The Town Hall design for the second and third round of public information centres was an effective way of receiving input. In addition, members of the public who did not wish to speak in public provided comments through written comment forms and briefs. SAC meeting #2 received a large attendance from members of the general public, who may have believed the purpose of the meeting to be a PIC. As such,

effective meeting management was a challenge and adjustments were made to subsequent meetings.

Provide several mechanisms to provide information and collect feedback (web-site, internet, email, fax, mail, phone, personal contact): Numerous mechanisms were provided and proved successful. Some delays in responses to issues were experienced between February and May and further efforts should be taken to ensure quick turnaround in the future. A Customer Service Protocol has been developed to assist with this issue in subsequent phases.

Demonstrate how feedback will be/was considered: Members of the Study Team worked closely with the public at specific stages in the study, and communications were established on a regular basis. The issue/response matrix documents all issues, and responses, and is attached in the Appendix.

Recommendations for future phases:

- Consider establishing a web-based dialogue, and ensure that adequate resources are provided to maintain and support it;
- Ensure that correspondence from members of the public is responded to within a specified time period;
- Provide adequate resources to enable meetings with affected members of the public when required;
- Consider a newsletter/flyer to provide frequent updates to affected members of the public as new information becomes available. Include information on timing of decisions, and mechanisms for participation;
- Consider establishing two Neighbourhood Advisory Committees (North-South and East-West), inviting existing members to continue should they wish, and adding members of the public, through an open, advertised approach. Ensure that at a minimum, five families with a Waterdown Road address are included.
- Consider holding community-neighbourhood-resident meetings to discuss study findings as the project progresses; and,
- Continue to convene PICs before significant decisions are made.

In general, the participation throughout the development of the TMP has resulted in valuable local knowledge and information. This knowledge has, and will be taken into account in future phases of the study.

8.0 FINANCIAL CAPABILITY

Having established a transportation strategy to the year 2021, the next critical step is to define its cost and funding source(s).

A Capital Expenditure Plan for the Waterdown/Aldershot network to 2021 has been developed as part of this master plan study. The plan is divided into:

- Road Widening/New Alignments;
- Transit Costs (Capital and Operations);
- New Intersections/Traffic Management; and
- New/Improved Interchanges with Provincial Freeways.

Costing is based on benchmark costs and typical cross-sections. The benchmark costs contain normal engineering and construction contingency allowance. Benchmark costs were developed for the north/south and east/west preferred solutions.

The funding for the capital expenditure plan is shared among Existing Development ("Non-Growth" - current tax base) and the anticipated development ("Growth").

Most new construction will be funded by "Growth" via development charges, however, deductions for benefit to existing development are made.

For road widenings and new alignments, growth will be allocated 100% of the costs after deducting costs for repaving existing lanes. If the widening is over a major structure, the estimated rehabilitation cost of the existing structure will be deducted as a benefit to existing development.

The Plan also includes projects in the Traffic Management category. These projects are primarily intersection improvements involving new turning lanes (or lengthening of existing turning lanes) and perhaps signalization. To recognize that the traffic management projects will produce smoother riding surfaces, geometric improvements and may update signal technology, a 5% deduction will be applied to projects at existing intersections as a benefit to existing development.

8.1 Capital Costs – Reconstruction and New Widening/New Alignments

The preferred "system" for the study area contains one widening of an existing roadway and one new alignment, for the north/south and east/west options respectively. The north/south option is estimated to cost $18.2 million and the east/west is estimated to cost $12.6 million, as detailed in ***Appendix D***.

8.2 Capital and Operating Costs – Transit Strategy

Based on the service plan presented in this study, the annual operating costs and capital costs were estimated to provide local transit service into Waterdown as illustrated in ***Figure 8-1***. Several assumptions were used in this cost estimate:

- Bus purchase cost is $450,000;
- HSR would need to purchase required buses for peak period service;
- Hourly operating cost of $72.55;
- Six hours of peak service per day, including reverse routing;
- Weekday service between 5:45 am and 10:30 pm;
- 45 minute cycle length per trip (including dwell time); and
- No weekend service (although not costed, the need for this service will be determined through more detailed operational studies).

Based on these assumptions, ***Table 8-1*** illustrates the projected annual operating cost and capital cost for the 2021 local Waterdown weekday transit service.

Table 8-1 – 2021 Local Waterdown Transit Operating and Capital Cost

Routes (Assume Two-way Service During Peak Periods)	Capital Costs			Annual Operating Cost		
	Buses Required	Bus Purchase	Total	Daily Bus Hours	Hourly Cost*	Annual Cost
Route 1 (Peak and Off-peak)	3	$450,000	$1,350,000	34.2	$72.55	$624,705
Route 2 (Peak Period Reverse Route)	3	$450,000	$1,350,000	18.0	$72.55	$272,514
Total	**6**		**$2,700,000**	**52.2**		**$897,219**

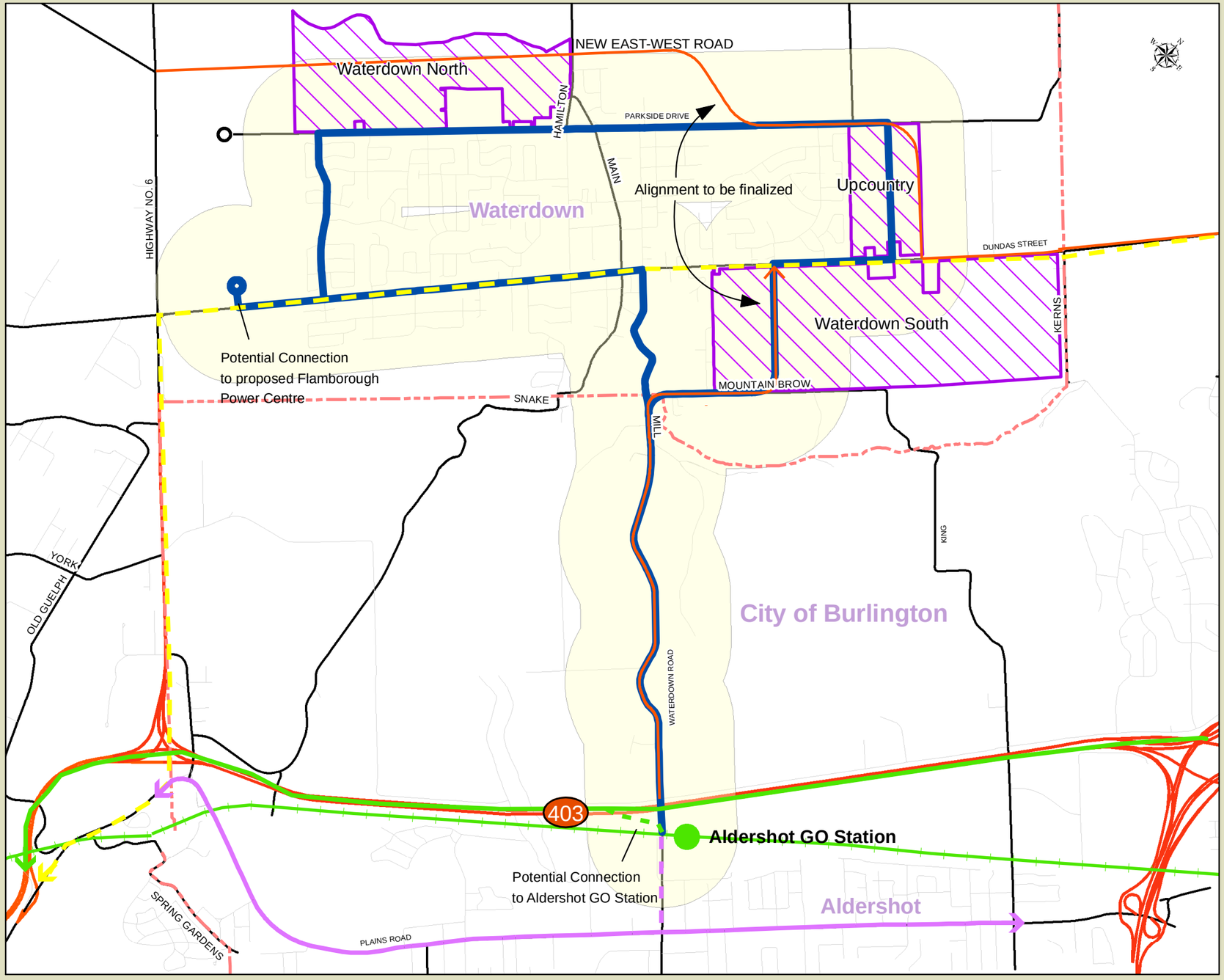
* Based on 2003 Operating Data

As a first step, the introduction of a starter transit service to the existing Waterdown community (proposed by the HSR for 2008) will require an annualized operating cost of $343,000. Two additional buses would also be required to provide the service, at a cost of $880,000.

The transit recommendations in this TMP are primarily operational improvements and would be considered as Schedule A projects under the MEA Class EA. As a result, no additional EA related work would be required for these transit initiatives.

8.3 New Intersections/Traffic Management

Within the context of this study, Dillon undertook some intersection analyses by making best efforts to forecast turning movements for the 20-year horizon. Recognizing that using a long range regional model to do this is not a precise exercise, we undertook preliminary intersection operations analyses at key study area intersections based on model output and other adjustments, as illustrated ***Figure 8-1***.



Waterdown - Aldershot Transportation Master Plan

Figure 8.1: Conceptual Waterdown Transit Strategy

- Municipal Boundary
- GO Transit - Road
- GO Transit - Rail
- Burlington Transit
- Halton Region Transportation Master Plan Proposed Transit Service
- New Alignment
- OPA No.28 Lands
- Proposed Waterdown Transit Route

2 - Way Peak Service
1 - Way Off Peak Service

Connections to Lakeshore West GO Train service, VIA Rail, and potential connections to Burlington Transit Plains Road Bus and Highway 407 GO Bus at Aldershot GO Station.

- Route Service Area Coverage (500m)

Scale

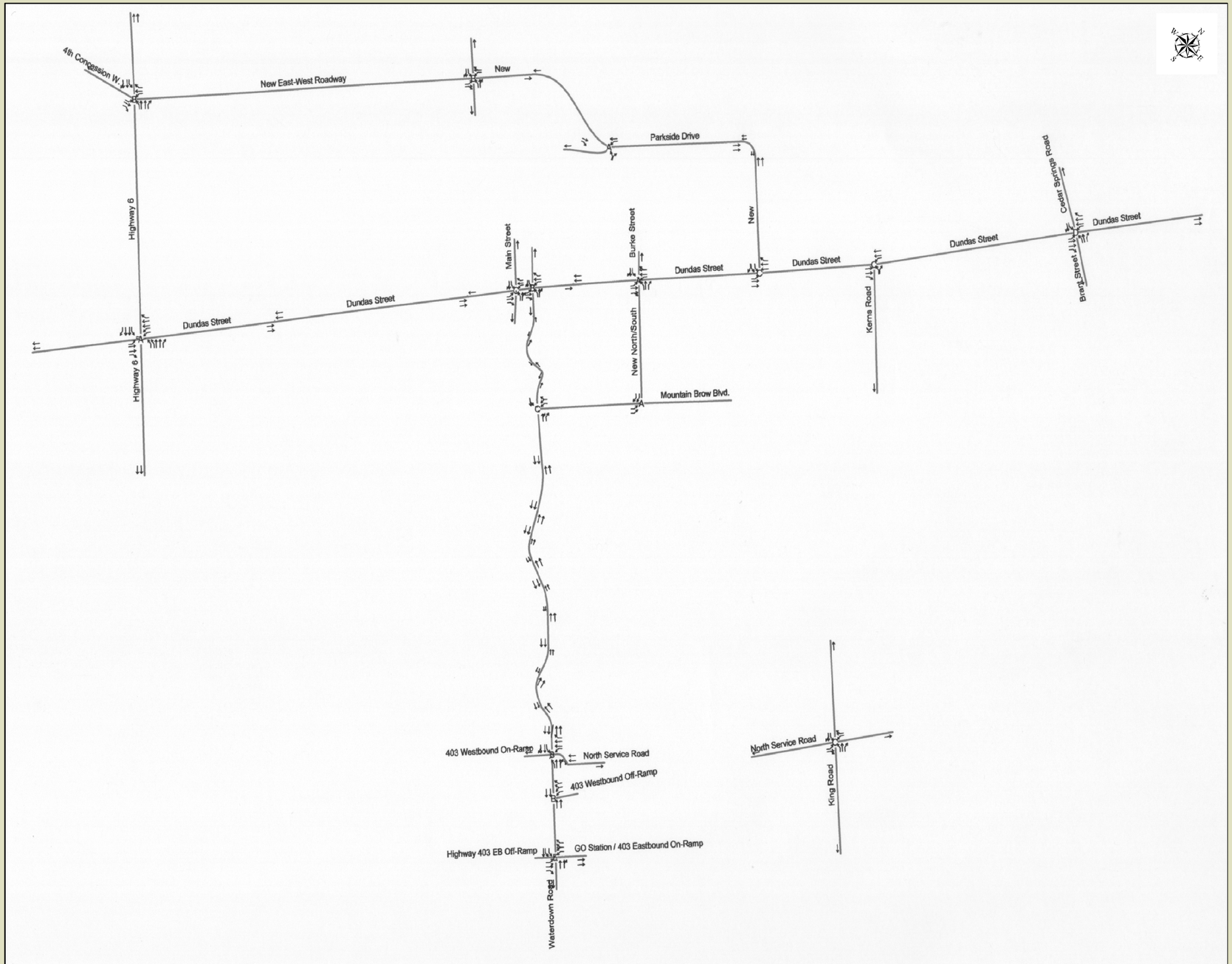
0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM/CC
Date created: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

DILLON CONSULTING



Waterdown - Aldershot Transportation Master Plan

Figure 8.2: Study Area Intersections Operational Analysis

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM
Date created: July 18, 2005

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

Based on this review, intersection improvements will be required as presented in ***Table 8-2***.

Table 8-2 – Study Area Intersection Improvements

Intersection	Improvement	Estimated Cost (Millions)
Dundas Street/Brant Street	Intersection Improvements / Auxiliary lanes (Dual westbound left)	$0.94 M
Dundas Street/New Link	New intersection and signals	$1.2 M
East-West Link/Highway 6	New intersection and signals	$1.2 M
East-West Link/Centre Road	New intersection and signals	$0.6 M
Waterdown Road/Mountain Brow Road	Roundabout or traffic control signal	Included in costs presented in Section 7.1
King Road/North Service Road	Auxiliary lanes (westbound right turn)	$0.238 M
	Total	**$4.178 M**

In addition to the "infrastructure" costing presented above, the City should budget $250,000 for "traffic management" measures such as transit priority signals or queue jump lanes, to be determined at a more detailed stage of analysis. More detailed analysis will be undertaken as part of future Class EA work which may update the improvement type and cost estimate.

8.4 New/Improved Interchanges with Provincial Freeways

As discussed earlier in this report, the City of Burlington has negotiated with the MTO to improve the interchange of Waterdown Road at Highway 403. The costing and allocation was presented by City staff to Community & Corporate Services Committee on June 20, 2005. The total cost of the improvements is approximately $9 million, which will be shared by MTO and the City of Burlington.

8.5 Summary of Costs and Allocation

The project presented above, their estimated costs and the allocation of these costs is presented in ***Table 8-3***. These costs will be updated in subsequent required EA and design work for each of these specific projects.

8.6 Cost Allocation by Municipality

Discussions between the City of Hamilton and the City of Burlington on this matter are ongoing and will be documented under separate cover.

Table 8-3 – Estimated Costs and Allocation

Project	Category				Estimated Cost	Allocation % (1)			Allocation $$		
	Road Widening/ New Alignment	Transit	New Intersections/ Traffic Management	New/ Improved Interchanges		Growth	Non-Growth	Other	Growth	Non-Growth	Other
CAPITAL											
1 . New east/west link	✔				$ 14,015,000	100%			$ 14,015,000	$ -	
2 . Widening of Waterdown Road between Highway 403 and Mountain Brow Rd	✔				$ 13,100,000	95%	5%		$ 12,445,000	$ 655,000	
3 . Widening of Mountain Brow Rd / New link between Mountain Brow Rd and Dundas Street	✔				$ 5,100,000	98%	2%		$ 4,998,000	$ 102,000	
4 . Widening Dundas Street between the "new link" and Hamilton/Halton boundary to a six-lane cross-section	✔				$ 3,500,000	95%	5%		$ 3,325,000	$ 175,000	
5 . Widening Dundas Street between the Hamilton/Halton Boundary and Brant Street to a six-lane cross-section (2)	✔				$ 10,040,000	75%	25%		$ 7,530,000	$ 2,510,000	
6 . Dundas/Brant Intersection (2)			✔		$ 940,000	50%	50%		$ 470,000	$ 470,000	
7 . Dundas/New Link Intersection			✔		$ 1,200,000	95%	5%		$ 1,140,000	$ 60,000	
8 . East/West Link/Highway 6 Intersection			✔		$ 1,200,000	95%	5%		$ 1,140,000	$ 60,000	
9 . East/West Link/Centre Street Intersection			✔		$ 600,000	95%	5%		$ 570,000	$ 30,000	
10 . King Road/North Service Road Intersection			✔		$ 1,438,000	97%	3%		$ 1,408,000	$ 30,000	
11 . Traffic Management			✔		$ 250,000	95%	5%		$ 237,500	$ 12,500	
				Total =	$ 51,383,000				$ 47,278,500	$ 4,104,500	$ -
TRANSIT											
12 . Transit - Capital (4)		✔			$ 2,700,000	TBD	TBD		TBD	TBD	
TOTAL					**$ 54,083,000**				**$ 47,278,500**	**$ 4,104,500**	

(1) The growth/non-growth allocation has been estimated based on the transportation assessment. This may be refined as part of the Development Charges update review process
(2) Included in the Halton Region Development Charge
(3) A component of this is included in the Burlington Development Charge
(4) Transit operating costs not included in the estimated cost

9.0 STAGING PLAN

The staging plan presents the timelines when the recommended infrastructure improvements must be in place to support the forecasted growth. The current network can accommodate approximately 500 new units before reaching capacity. Therefore, improvements are required to accommodate the other 6,000 units to be developed in OPA 28 and no additional development over an initial 500 new units should take place until the recommended improvements in this TMP have been implemented.

At a growth rate of 500 units per year (based on current construction industry estimates), OPA 28 lands will be built out by 2018. Therefore, the infrastructure must be in place before this time.

As population and employment grows within the study area, infrastructure must be built when the need arises so as to accommodate the demand. Thus, the roadway improvements must be staged in a timely fashion so that they are built to accommodate growing traffic demand, and alleviate traffic congestion. The staging plan analysis evaluated the roadway network adjacent to the three areas of OPA 28 (Waterdown South, Upcountry, and Waterdown North) and estimated the infrastructure needed as each area develops, being cognizant that the infrastructure improvements should be in place prior to the growth.

In terms of staging the various roadway improvements and measures identified through the strategies plans and guidelines, a preliminary staging plan has been developed based on the four planning horizon years evaluated in the TMP.

The staging plan is presented by major strategy.

Implement Prior to:	**2006**	**2011**	**2016**	**2021**
North/South				
Widen Waterdown Road to 4 lanes between Highway 403 and Mountain Brow Road		X		
Mountain Brow Road improvements between Waterdown Road and link to Dundas Street		X		
Widen Mountain Brow Road between Waterdown Road and link to Dundas Street		X		
East/West				
New 2-lane East/West corridor between Centre Road and Highway 6		X		
New 2-lane East/West corridor between Centre Road and Parkside Drive		X		
Widen Parkside Drive to 4 lanes between East/West Corridor and link to Dundas Street		X		
New 2-lane North/South link to between Parkside Drive and Dundas Street		X		
Widen Dundas Street to 6 lanes from North/South link to Brant Street[1]			X	

[1] *Coordination required with Halton Region as the Region has this section programmed for widening to six lanes by 2020.*

The staging plan is illustrated in ***Figure 9-1***.

Waterdown - Aldershot Transportation Master Plan

Figure 9.1: Major Infrastructure Improvement Staging Plan

City of Hamilton

City of Burlington

Waterdown

Waterdown North

Waterdown South

Upcountry

New East-West Road

Parkside Drive

CENTRE

HAMILTON

MAIN

HIGHWAY NO. 6

DUNDAS STREET

SNAKE

MOUNTAIN BROW

KERNS

KING

WATERDOWN ROAD

YORK

OLD GUELPH

403

2

4

6

Municipal Boundary

OPA No.28 Lands

2011

2016

2021

Number of Lanes

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM/CC
Date modified: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

10.0 OTHER SYSTEM IMPROVEMENTS

Further discussion is provided in this section on issues of broader interest to the City of Hamilton, the City of Burlington and the Region of Halton. We are also introducing specific network improvements for further consideration. These matters do not solve "the problem" on their own but in looking at the entire network, present opportunities for improvement.

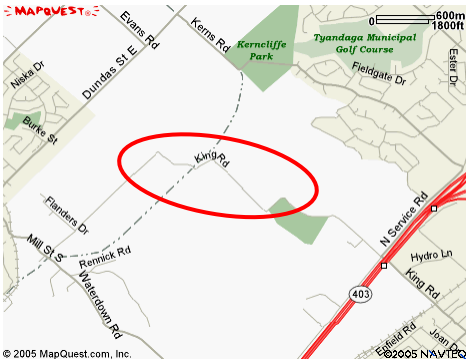
Main Street Closure

As part of public input from Phase 1 and through this study, a request was made that Main Street North be closed at the northern limits with the intersection of Centre Road. The reason for this request is concern about traffic from the future Waterdown North area infiltrating through this established neighbourhood.

The level of transportation analysis undertaken in this Phase 2 of the EA process is strategic and too broad to determine if this specific link would/is required to keep the overall transportation system operating at adequate levels of service. In terms of the overall network function, it would be preferred that traffic from/to Waterdown North travel along Parkside Drive and the new east/west link as these would provide more direct flow to/from the east and south. At the strategic level, closing Main Street North at Centre Road would not appear to hinder the system operation, however, a detailed traffic operations analysis and resident survey/consultation should be undertaken prior to finalizing such a decision.

King Road

Through this Master Plan, Waterdown Road/Mountain Brow Road was identified as the preferred north/south alternative to accommodate the additional road traffic capacity that is expected to be generated through growth in Waterdown.



The City of Burlington (through Council Resolution) has requested that improvements to King Rd be considered to allow it to remain open as a 2-lane roadway. There are safety concerns associated with King Rd. in its current condition should it be subject to additional traffic use (which are likely as a result of the OPA #28 developments). Currently this road has very sharp curves and steep grades that limit its throughput capacity. Although major improvements to the road way geometry are expected to result in significant environmental impacts within the Escarpment, there may be some level of improvement that could be done that would result in acceptable impacts to the NEC and Halton Conservation.

It is recommended that the following work be undertaken in regards to King Rd:

- Investigate the feasibility/acceptability of improvements deemed necessary to keep King Rd open as a two lane roadway as per City of Burlington Council Resolution; work with the NEC and Halton Conservation in making this determination;
- If it is deemed that the level of improvement required to keep King Rd open as a two lane roadway would result in unacceptable environmental impacts, examine other options such as operational improvements (e.g. designate as a one-way roadway with the road direction alternating with the peak period) or road closure; and
- Work with the Waterdown South Secondary Plan urban designers to ensure the internal roadway system for this secondary plan area does not promote the flow of traffic to/from King Road (e.g. few access points, left-turn restrictions).

Public feedback on this matter in the third round of public consultation was generally in favour of keeping King Road open.

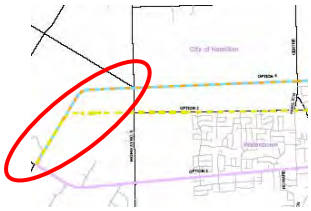
Depending on the decided course of action for King Rd, it may be necessary to undertake Class EA Phase 3 and 4 work for the roadway. In any event, the public is to be consulted in the decision making process.

New East/West Road at Highway 6

The intersection of the east/west link to Highway 6 was placed at a distance of 1.7 kilometres from the intersection of Highway 6 with Dundas Street/Highway 5. This distance is the same as that between Dundas Street/Highway 5 and the future York Road Interchange. In the interim stages, it is envisioned that the Highway 6/East-West Hybrid intersection would be at-grade, operating with traffic control signals. As the Ministry of Transportation progresses with its access control initiatives on Highway 6 north of Dundas Street/Highway 5, this at-grade intersection can be converted to a partial interchange.

New East/West Road West of Highway 6

The modeling analysis undertaken in Phase 2 did not support the need for the extension of the east/west link west of Highway 6. Therefore, at this time, a specific link cannot be recommended. However, once the City develops its 2031 forecasts, there may be a need for such a link. Therefore, the protection for a corridor between Highway 5 and Highway 6 should be further studied before any redevelopment is allowed in these lands.



Kearns Road

The City of Burlington is carrying out a Class EA study to review Kern's Road between Dundas Street and Bonfield Court. The overall goal of this study is to review this section of Kern's Road to determine what options and alternatives are appropriate to address existing and future issues related to cut-through traffic, vehicle speeds and road safety. In addition to a history of neighbourhood concerns, two new factors have the potential to increase traffic in the area. First and foremost, is the OPA 28 development in Waterdown that has the potential to generate traffic that may use Kern's Road and Dundas Street. A number of options for Kern's Road are being considered including Do Nothing, a southbound restriction at the escarpment crossing and full closure at the escarpment crossing.

Cycling and Pedestrian Trails

Other potential trails in the Waterdown area include the Imperial Oil and Sun Canadian Pipeline Easement located along the western boundary of Waterdown North. This pipeline provides an opportunity to create a north-south pedestrian/trail linkage connecting Waterdown North with the existing residential neighbourhoods and the Bruce Trail to the south. Opportunities for additional trails are presented in ***Figure 10-1***.

Niagara to GTA Transportation Corridor

The Ministry of Transportation – Ontario (MTO) completed the Niagara Peninsula Transportation Needs Assessment Study in May 2003, which recommended a new Mid-Peninsula Highway. The study is a component of the MTO's long range planning program to improve transportation through Ontario's international gateways and highway corridors. This corridor is now referred to as the Niagara to GTA Transportation Corridor. This is a proposed facility linking Fort Erie with Hamilton.

The Ministry of Transportation has initiated a new "Full Environmental Assessment" for this project in early 2005. The implementation of this facility is expected to be beyond the 2021 planning horizon of the Waterdown/Aldershot TMP.

GTA Ferry Services

A concept is being promoted in the GTA, which is of importance to Hamilton/Burlington/Halton – a Hover Craft service proposed to connect St. Catharines, Hamilton, Mississauga, Pickering and Oshawa. U.S. sites are also proposed. This service plans a 25 minute trip between Hamilton and Toronto. The implementation date has not been determined. The benefit from such a service would be the removal of some "through" traffic. The City of Hamilton/Burlington and the Region of Halton should monitor and support, in principle, these and other initiatives that remove vehicular trips from the Hamilton/Burlington/Halton roadway network.

Province of Ontario Provincial Transportation Strategy

A Provincial Transportation Strategy is being developed by MTO in conjunction with the province's Growth Management Plan to address growth challenges over the next 30 years. The Strategy will provide the basis for integrating land use and transportation planning decisions, identifying strategies for the future development of inter-regional and multi-modal highway corridors that support the growth management objectives and infrastructure investment priorities identified in the Growth Management Plan.

Greater Toronto Transportation Authority (Metrolinx)

The Province has established the Greater Toronto Transportation Authority (now known as Metrolinx) under the chair of former City of Burlington Mayor Robert McIsaac as an important part of their transportation vision. Metrolinx will play an important part of this strategy by providing a balanced, effective, sustainable regional transportation framework in the GTA that will implement the Provincial vision for a stronger Ontario built around stronger communities, a vibrant economy, a healthy environment and a high quality of life.

Waterdown - Aldershot Transportation Master Plan

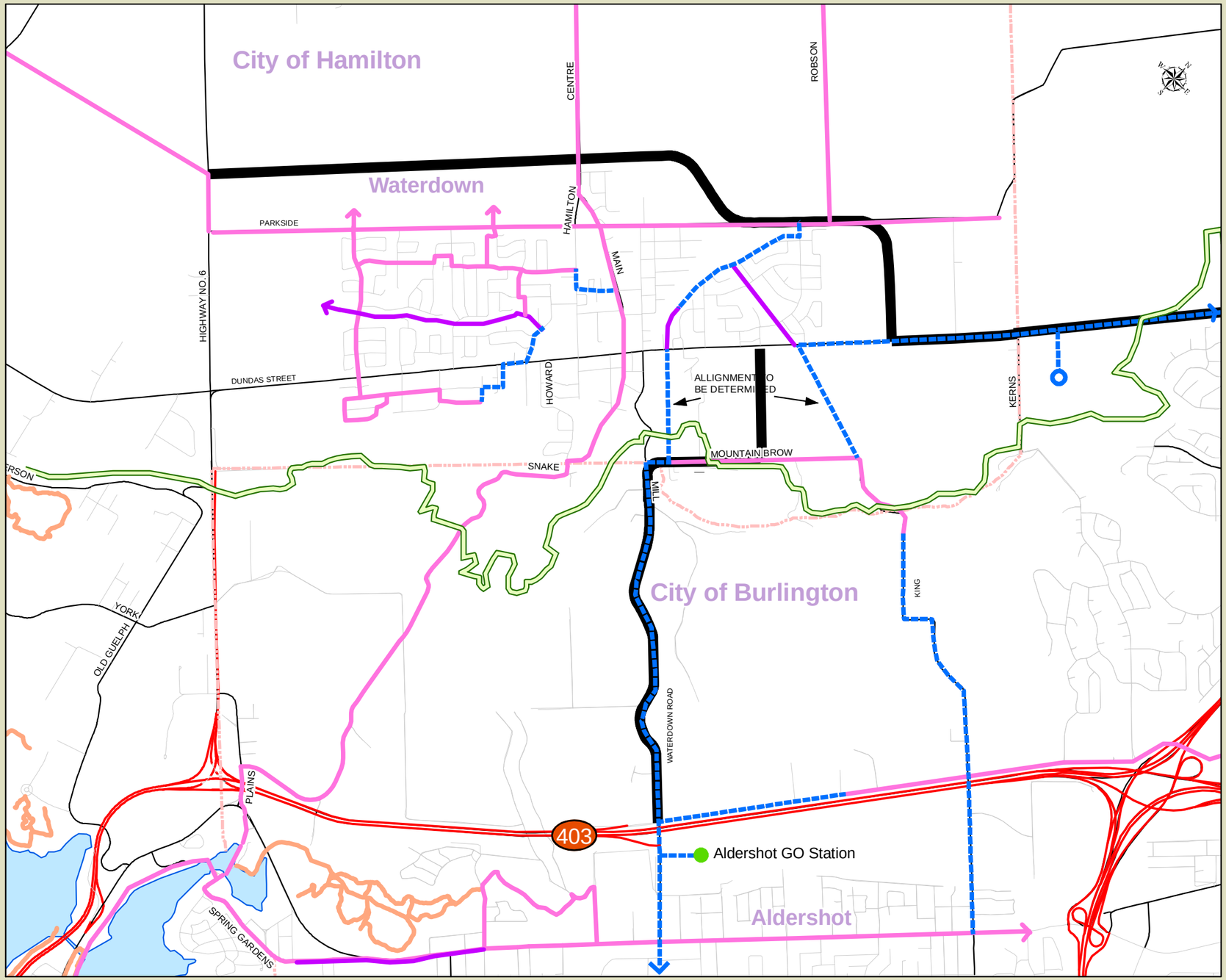


Figure 10.1: Potential Future Cycling and Pedestrian Routes

- Municipal Boundary
- On Street Bike Route
- Off Road Multi-Use Path
- Bruce Trail
- Other Trails
- Opportunities for the Cycling and Trail System
- Preferred Corridor

Scale

0 250 500 1,000 1,500 Meters

Map Notes

Map created by: PJK
Map checked by: DPM/CC
Date modified: September 18, 2007

Base mapping provided by the City of Hamilton, the City of Burlington and the Region of Halton. Additional mapping provided by Halton Region Conservation Authority.

DILLON CONSULTING

11.0 NEXT STEPS

In terms of the future steps for the TMP, there is a need for immediate attention to some aspects of the plan and a need to identify "tracking" measures for the longer-term implementation needs. More specifically, some of the recommendations in the TMP strategies, plans and guidelines will require further coordination, study, analysis and/or design.

The following future steps (***Table 11-1***) simply note the "next" step in the process for the short, medium and long term.

Table 11-1
Implementation Schedule

Time Frame	Principal Municipality		
	City of Hamilton	City of Burlington	Region of Halton
Short Term (0 to 5 years)			
• Undertake Phases 3 to 5 of the Municipal Class Environmental Assessment Planning and Design Process for the preferred north/south option – the Widening of Waterdown Road/Mountain Brow Road Corridor between Highway 403 and Dundas Street	X	X	
• Undertake Phases 3 to 5 of the Municipal Class Environmental Assessment Planning and Design Process for the preferred east/west option – the "hybrid" alignment between Highway No. 6 and Dundas Street	X		X
• Review road and/or operations improvement options for King Rd.	X	X	
• Evaluate opportunities to implement TDM measures in Waterdown/ Aldershot	X	X	X
• Undertake transit operation's analyses to confirm appropriate infrastructure/plant to service the Waterdown/Aldershot area	X	X	
• Undertake operational analyses of Main Street Waterdown to determine the feasibility of closing this roadway at Centre Road	X		
• Continue to participate in GTA-wide and MTO transportation planning initiatives	X	X	X
• Construct the interchange improvements at Highway 403 and Waterdown Road	X	X	
• Liaise with the MTO regarding the widening of Highway 403 from the Freeman Interchange to Highway 6	X	X	X
Medium Term (5 to 10 years)			
• Continue to participate in GTA-wide and MTO transportation planning initiatives	X	X	X
• Liaise with the MTO regarding the widening of Highway 403 from the Freeman Interchange to Highway 6	X	X	X
• Undertake transit operation's analyses to confirm appropriate infrastructure/plant to service the Waterdown/Aldershot area	X	X	

Table 11-1
Implementation Schedule

Time Frame	Principal Municipality		
	City of Hamilton	**City of Burlington**	**Region of Halton**
Long Term (10+ years)			
• Widen Dundas Street to six-lanes from Brant to the intersection with the East/West Hybrid link	X		X
• Continue to participate in GTA-wide and MTO transportation planning initiatives	X	X	X
• Liaise with the MTO regarding the widening of Highway 403 from the Freeman Interchange to Highway 6	X	X	X
• Undertake transit operation's analyses to confirm appropriate infrastructure/plant to service the Waterdown/Aldershot area	X	X	

GLOSSARY
Glossary of Transportation Planning Terminology

GLOSSARY OF TRANSPORTATION PLANNING TERMINOLOGY

The following are terms used throughout the Waterdown/Aldershot Transportation Master Plan (TMP). These terms are a collection of typical terms used in numerous transportation planning exercises throughout North America.

AADT (Annual Average Daily Traffic) - Data used to represent the amount of traffic occurring on roads. AADT is collected annually for various segments of roadway by the road authority.

Access - Refers to the ability to reach or connect to a roadway.

Access Management - Techniques of transportation infrastructure management intended to: reduce congestion and accident rates, lessen need for highway widening, conserve energy, and reduce pollution. Examples include; limiting entrance and exit of traffic on highways, use of medians and turn lanes, placement and timing of signals, as well as implementation of supportive local by-laws and policies.

Accessibility(1) - (1) The extent to which facilities are barrier free and useable by disabled persons, including wheelchair users. (2) A measure of the ability or ease of all people to travel among various origins and destinations.

Accessibility(2) - Ability to reach a destination or use a facility or service without being impeded by physical or other barriers due to auditory, visual, mobility, or cognitive disabilities.

Alternative Modes (of Transportation) - The term "mode" is used to refer to and distinguish from each other the various forms of transportation, such as automobile, transit, ship, bicycle and walking. Alternative mode refers to any mode other than single occupant vehicle.

Arterial - A major street or highway. It is a general term, which includes expressways, major and minor arterial streets' and provincial highways having regional continuity. It is a road intended to move a relatively large volume of traffic at medium to high speeds.

Bicycle (or "Bike") - A vehicle propelled by human power upon which any person may ride, having two tandem wheels, except scooters and similar devices. The term also applies to three- and four-wheeled human-powered vehicles, but not tricycles for children.

Bicycle Facilities - A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, bike lanes, paved shoulders and wide outside lanes.

Bicycle Lane ("Bike Lane") - A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

Bicycle Path ("Bike Path") - See Shared Use Path Bicycle System. A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational signage. Bicycle systems should establish a continuous routing, but may be a combination of any and all types of bikeways.

Bikeway - A generic term for a road, street, or path that in some way is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. This term can be used interchangeably with "bicycle facility".

Capacity - The volume of vehicles the road was designed to carry in a unit of time, such as an hour; can also be applied to transit or bicycle/pedestrian paths.

Collector - A street or highway that provides for traffic movement between major streets and local street. It is a road intended to collect traffic from local streets and land-access roads

Community - A physical or cultural grouping of stakeholders with common interests created by shared proximity or use. Community can be defined at various levels within a larger context (e.g., neighbourhood, city, or region).

Commute Alternatives - Carpooling, vanpooling, transit, bicycling, walking, and telecommuting. Also includes any alternative work-hours program.

Commute - A repetitive home-to-work or work-to-home trip.

Commuter - Person who travels regularly between home and work or school.

Congestion - Recurrent congestion is defined as a condition lasting for 15 minutes or longer where travel demand exceeds design capacity. That typically means freeway speeds were 50 km/h or less during peak commute periods on a typical incident-free weekday. "Non-recurrent" congestion is defined as backups caused by special circumstances, such as accidents, stalled vehicles, sporting events, etc. The consequences of congestion are longer and less predictable travel times.

Consultation - When one party confers with another identified party and, prior to taking action(s), considers that party's views.

Corridor - A geographic area that is defined by major roads and rail facilities, and major flows of travel. Transportation corridors are identified for the purpose of analyzing the patterns and flows of traffic between origins and destinations.

Centroid - the "centre" of a traffic zone in modelling. The two data systems, the street system (network) and the zone system (socio-economic data), are interrelated through the use of "centroids." Each zone is portrayed on the network by a point (centroid) which represents the weighted center of activity for that zone. A centroid is connected by a set of links to the adjacent street system. That is, the network is provided with a special set of links for each zone which connects the zone to the street system. Since every zone is connected to the street system by

these "centroid connectors," it is possible for trips from each zone to reach every other zone by way of a number of paths through the street system.

Demand Management - A set of strategies that promote increased efficiency of the transportation system by influencing individual travel behaviour.

Frataring – The fratar model is a trip distribution model. This model accepts an O-D trip table and allows the application of growth factors to be applied to either or both ends of a trip interchange. The growth factors for the external station generally relate to the population, employment, and tourist growth of the region served by the road the external station is on. The growth factors of the internal analysis units generally relate to the residential, commercial, and industrial growth in the analysis unit. For the analysis units which have zero trip ends in the "base" year but will have activity in future years, modellers determine the most likely trip interchanges and so adjust the input trip table before applying the growth factors.

Ferryboat - Vessel, generally a steam or diesel-powered conventional ferry vessel, for carrying passengers and/or vehicles over a body of water; may also be a hovercraft or other high speed vessel.

Freeway - A multilane divided highway without traffic signals and with limited opportunities for access and egress.

Greenway - A corridor of undeveloped land, usually in an urban area, which is set aside or used for conservation and/or recreation. Greenways can also serve as pedestrian and bicycle facilities for recreation and transportation. In this region, the term is often used to mean a Shared Use Path, rather than the more complete definition of greenway.

HCM (Highway Capacity Manual) - published by the Transportation Research Board (TRB), the HCM outlines fundamental information and computational techniques on the quality of service and capacity of highway facilities.

Headway - The scheduled time interval between any two revenue vehicles operating in the same direction on a route. Headways may be LOAD driven, that is, developed on the basis of demand and loading standards or, POLICY based, i.e., dictated by policy decisions such as service every 30 minutes during the peak periods and every 60 minutes during the base period.

High-Occupancy Vehicle (HOV) lane - A lane designated for the exclusive use of high-occupancy vehicles, such as carpools, vanpools, other ridesharing modes, and buses.

Home-based Work Trip Attractions - Home-based work trip attractions describes the trips made by commuters from their homes to their place of work.

Human Environment - The surroundings in which people conduct their lives, including built and natural environments, as well as cultural resources.

Impacts - The effects of a transportation project, including (a) direct (primary) effects; (b) indirect (secondary) effects; and (c) cumulative effects.

Intelligent Transportation System (ITS) - A system that uses modern electronic, communication and control technologies to provide travelers with better information on traffic condition, provide vehicles with safety equipment and improve the transportation infrastructure. Also includes technologies that identify, monitor, or control vehicles.

Intelligent Vehicle Highway System (IVHS) - Intelligent Vehicle Highway Systems are technological innovations developing or applying electronics, communications and information processing technologies to improve the efficiency and safety of surface transportation systems. Such technology may include systems that alert authorities to emergency situations, on-board navigation systems for vehicles, electronic collection of tolls and transit fares, traffic management centers that can adjust speed limits, traffic signals and road access and electronic monitoring of vehicles.

Intermodal - The term "mode" is used to refer to and distinguish from each other the various forms of transportation, such as automobile, transit, ship, bicycle and walking. Intermodal refers specifically to the connections between modes.

Intermodal Planning - Planning that reflects a focus on connectivity between modes as a means of facilitating linked trip making.

Land Use - The purpose for which land or the structures on the land are being utilized; for example: commercial, residential, retail.

Level of Service (LOS) - This is a qualitative or quantitative measure used to characterize the operating conditions of a transportation service, as perceived by its users. Most commonly applied to traffic operations, where designations go from A (best) to F (worst). Summarizes transportation operating conditions. It is usually used to describe a section of road or an intersection as experienced by drivers, but can also be applied for users of other modes of transportation. A system of indicating delay at signalized intersections, which is graded on a letter scale from A to F, generally outlined by the HCM as: A <= 10 sec, B = 10-20 sec, C = 20-35 sec, D = 35-55 sec, E = 55-80 sec, F > 80sec.

Liveable Community - A neighbourhood, community or region with compact, multidimensional land use patterns that ensure a mix of uses, minimize the impact of cars, and promote walking, bicycling and transit access to employment, education, recreation, entertainment, shopping and services.

Local Roads - Provide access to private property or low volume public facilities.

Local Service - A type of operation that involves frequent stops and consequent low speeds, the purpose of which is to deliver and pick up transit passengers as close to their destinations or origins as possible. Transit service involving many stops and low operating speeds with the purpose of picking up or delivering passengers as closely as possible to origins and destinations.

Long Range Objectives - A long-term (20-25 years) general end that is achievable and marks progress toward a goal.

Measures of Effectiveness (MOE) - Parameters describing the quality of service provided to drivers, passengers, and pedestrians. Speed, delay, passenger loadings, and transit vehicle travel time could be examples. Qualitative rankings such as Level of Service and On-Time Performance would be based on these measures.

Mobility - Refers to the ability to travel along a highway facility.

Mode - Any one of the following means of moving people or goods: aviation, bicycle, highway, paratransit, pedestrian, pipeline, rail (commuter, intercity passenger and freight), transit, space and water. A way people or goods get from one place to another, such as using cars and trucks, freight and passenger trains, walking, bicycling, and riding buses.

Mode Split - Mode split is the percentage of trips taken by each of the possible modes of travel (auto, transit, bicycle, walking). Mode split does not refer to the number of trips, but rather to the proportion of people that use each of the various modes of transportation. It also describes the process of allocating the proportion of people using modes. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using public transportation.

Multi Modal - Refers to the availability of multiple transportation options, especially within a system or corridor. A multi-modal approach to transportation planning focuses on the most efficient way of getting people or goods from place to place, be it by truck, train, bicycle, automobile, airplane, bus, foot, or even a computer modem.

Multi Modal Planning - Planning that reflects consideration of more than one mode to serve transportation needs in a given area.

Natural Environment - The surroundings not made by humans within which the transportation system operates. This includes both physical and ecological aspects, including traditional cultural resources.

Non-Motorized Travel - Travel accomplished by cycling or walking.

Pedestrian - One who walks or journeys on foot; a walker.

Preservation - Actions taken to protect existing natural and human environments, investments and mobility options.

Public Meeting/Consultation - a formal or informal event designed for a specific issue or community group where information is presented and input from community residents is received.

Quality of Life - This classification includes work which is designed to enhance the environment associated with, or impacted by, transportation improvements. Program categories within this classification include transportation enhancements, noise walls, landscape, air quality, signs, wetland mitigation, and rest areas.

Rapid Transit - Rail or bus transit service operating completely separate from all modes.

Right-of-Way - The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian. A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Roadway - A general term denoting a public way intended for vehicular use.

Shared Use Path - A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the roadway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.

Short Range Objective - A short-term (5-10 years), specific, measurable, intermediate end that is achievable and marks progress toward a goal.

Shoulder - The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses. In rural areas, this portion may also be used for bicycle and pedestrian travel.

Sidewalk - The portion of the street or highway right-of-way designated for preferential or exclusive use of pedestrians.

Signed Shared Roadway (Signed Bike Route) - A shared roadway that has been designated by signing as a preferred route for bicycle use.

Single-Occupant Vehicle (SOV) - A vehicle containing only the driver and no other passengers.

Stakeholder Advisory Committee (SAC) - A representative group of stakeholders that provided direction to the Waterdown/Aldershot TMP.

Stakeholders - Individuals and groups with an interest in the outcomes of policy decisions and actions.

Sustainability - Meeting the needs of the present without compromising the ability to meet the needs of the future.

TAC (Technical Advisory Committee) - This was a committee that represented the government agencies within and adjacent to the study area, as part of the Waterdown/Aldershot TMP.

Transit - Generally refers to urban passenger transportation service, local in scope, provided to the public along established routes with fixed or variable schedules at published fares.

Transportation Demand Forecasting Model - A demand-forecasting model is a tool for representing and analyzing the major ways people get around. Usually this tool is a software package, which incorporates a road network, land use data, and a mathematical formula to distribute and route trips. The model is calibrated to existing traffic counts. Then it can be used to forecast traffic and test the effect of changes in the road network.

Transportation Management Association (TMA) - Transportation Management Associations are groups of businesses, which develop transportation demand management (TDM) measures in order to reduce the need for commuter parking. Measures may include carpool matching services, transit subsidies, shuttle vans, etc. By working as a group, TDM measures are more effective.

Transportation Master Plan - A long-range document that identifies facilities and programs that should function as an integrated transportation system and includes a financial plan that demonstrates how the long-range plan can be implemented. The plan must show that the current system can be operated and maintained over the long-term, as well as recommend capital expansion projects to be constructed.

Transportation Planning - A collaborative process of examining demographic characteristics and travel patterns for a given area. This process shows how these characteristics will change over a given period of time, and evaluates alternatives for the transportation system of the area and the most expeditious use of funding. Long-range planning is typically done over a period of twenty years; short-range programming of specific projects usually covers a period of three to five years.

Transportation System Management - Techniques for increasing the efficiency, safety, capacity, or level of service of a transportation facility without increasing its size. Examples include, but are not limited to, traffic signal improvements, traffic control devices including installing medians and parking removal, channelization, access management, ramp metering, and restriping for high occupancy vehicle (HOV) lanes. TSM is a combination of low-cost strategies that use a total approach to transportation system management. The goal is to shift emphasis from expanding capacity to making better use of existing transportation systems.

Travel Demand Management (TDM) - TDM is a combination of strategies or actions whose goal is to encourage travelers to use alternatives to driving alone. TDM strategies may be developed for a single work site, specific corridor, or area.

Travel Time - The time it takes to travel door-to-door.

Vehicle Kilometres of Travel (VKT) - The sum of all the kilometres traveled by vehicles (not people) in a specified amount of time.

Vision - A description of the future physical appearance and qualities of a community.

Volume - The number of vehicles that actually pass through a given kilometre of road in a unit of time such as a day; can also be applied to transit or bicycle/pedestrian paths.

APPENDIX A
Evaluation of Alternative Solutions

Waterdown/Aldershot TMP
Preliminary East/West Routes Comparative Evaluation
Table A1: East/West Evaluation - Data Standardization Method 1[1]

						Option 1: New North Road			Option 2: Parkside - 4 lanes			Option 3: Dundas			Option 4: New North Road Hybrid		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**27**	**Potential for impact on terrestrial features**	**17**	Area of provincially significant wetland removed (ha)	6	2.11	0.69	4.16	0	0	0	0	0	0	0.93	0	1.84
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0		
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3	0.64	0.31	0.94	0.78	0.38	1.13	0	0	0	0.64	0.31	0.94
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	2	0.051	0.50	1.00	0.00	0.00	0.00	0	0.00	0.00	0.051	0.50	1.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	2.24	0.72	1.44	0.37	0.12	0.24	0.12	0.04	0.08	0.38	0.12	0.24
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	2	2244.70	0.51	1.02	446.27	0.10	0.20	606.00	0.14	0.27	1122.90	0.25	0.51
				Area of other woodlots removed (non ESA/ANSI) (ha)	1	2.01	0.42	0.42	1.56	0.32	0.32	0.02	0.004	0.004	1.25	0.26	0.26
				Area of wetland removed (ha)	-	0			0			0			0		
				Area of other natural habitat removed (ha)	1	0.82	0.35	0.35	0.71	0.30	0.30	0	0	0	0.82	0.35	0.35
				Number of new Niagara Escarpment crossings	-	0			0			0			0		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	21	0.40	3.96	13	0.2	2.5	5	0.1	0.9	14	0.3	2.6
Natural Environment Total								13.28			4.65			1.30			7.77
Social Environment	**32**	**Potential for impact on residents**	**19**	Number of residences displaced	7	4	0.15	1.04	3	0.1	0.8	17	0.6	4.4	3	0.1	0.8
				Number of residences within 25 m of the corridor *(widening of existing road)*	3	0	0.00	0.00	206	0.5	1.4	194	0.4	1.3	53	0.1	0.4
				Number of residences within 25 m of the corridor *(new road corridor)*	5	8	0.29	1.43	9	0.3	1.6	0	0.0	0.0	11	0.4	2.0
				Number of residences within 25-50 m of the corridor (widening of existing road)	1.5	0	0.00	0.00	279	0.6	1.0	88	0.2	0.3	73	0.2	0.2
				Number of residences within 25-50 m of the corridor (new road corridor)	1.5	20	0.34	0.52	12	0.2	0.3	0	0.0	0.0	26	0.4	0.7
				Number of residential properties required[3]	-	3			139			37			46		
				Area of residential properties required (ha)	1	1.039	0.19	0.19	2.64	0.5	0.5	0.34	0.1	0.1	1.39	0.3	0.3
		Potential for community character impacts	**5**	Length of route through existing residential communities (km)	5	0.300	0.04	0.19	3.700	0.48	2.40	2.70	0.35	1.75	1.000	0.13	0.65
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	2			0			0			2		
				Number of community/recreation features within 25 m of the corridor	3	1	0.07	0.21	8	0.57	1.71	4	0.3	0.9	1	0.07	0.21
				Number of community/recreation features within 25-50 m of the corridor	1	0	0	0	0	0	0	3	1	1.00	0	0	0
		Potential for impact on cultural features	**4**	Number of cultural features removed	2	1	0.13	0.25	1	0.13	0.25	5	1	1	1	0.13	0.25
				Number of cultural features within 25 m of the corridor	2	2	0.11	0.22	2	0.11	0.22	12	1	1	2	0.11	0.22
Social Environment Total								4.06			10.09			12.25			5.61
Economic Environment	**18**	**Potential for impact on business enterprises**	**6**	Number of businesses displaced	3	2	0.11	0.33	2	0.11	0.33	12	0.67	2.00	2	0.11	0.33
				Number of businesses within 25 m of the corridor	2	2	0.02	0.05	6	0.07	0.14	73	0.88	1.76	2	0.02	0.05
				Number of businesses within 25-50 m of the corridor	0.5	2	0.17	0.08	8	0.67	0.33	0	0	0	2	0.17	0.08
				Number of commercial properties required[3]	-	1			6			48			2		
				Area of commercial properties required (ha)	0.5	0.18	0.15	0.07	0.31	0.26	0.13	0.54	0.44	0.22	0.18	0.15	0.07
		Potential for impact on downtown core business area	**5**	Length of route through downtown core business areas (m)	5	0	0	0	0	0	0	895	1.00	5.00	0	0	0
		Potential for impact on future land use	**3**	Area of land designated for development removed (ha)	3	4.90	0.41	1.23	1.86	0.16	0.47	0.002	0.0002	0.0005	5.21	0.44	1.31
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	4	24.70	0.42	1.67	14.20	0.24	0.96	0.34	0.01	0.02	20.06	0.34	1.35
Economic Environment Total								3.43			2.36			9.00			3.20
Cost	**10**	**Capital Cost (million $)**	**10**	Estimated capital cost	10	$14.9	0.17	1.73	$25.0	0.29	2.90	$28.0	0.33	3.25	$18.2	0.21	2.11
Transportation Service	**13**	**Change in Level of Transportation Service**	**6.5**	Critical screen line volume/capacity ratio - screen line 11	1.5	0.33	0.20	0.31	0.43	0.27	0.40	0.52	0.32	0.48	0.34	0.21	0.31
				Critical screen line volume/capacity ratio - screen line 12	1.5	0.73	0.25	0.38	0.79	0.27	0.41	0.71	0.24	0.36	0.69	0.24	0.35
				Mean network speed	-	56			57			57			56		
				Average network volume/capacity ratio	3.5	0.56	0.24	0.85	0.61	0.27	0.93	0.57	0.25	0.87	0.56	0.24	0.85
		Change in Safety Levels	**6.5**	Number of residential property access points	3	0	0.0	0.00	156	0.58	1.75	71	0.26	0.79	41	0.15	0.46
				Number of commercial property access points	2	0	0.0	0.00	11	0.12	0.25	78	0.88	1.75	0	0.00	0.00
				Number of roadway access points	1.5	13	0.1	0.22	20	0.23	0.34	40	0.46	0.69	14	0.16	0.24
Transportation Service Total								1.76			4.07			4.95			2.22
Total	**100**		**100**		**100**			**24.26**			**24.07**			**30.75**			**20.91**

Note:
[1] Standardized data = data / sum of data values for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.

Waterdown/Aldershot TMP
Preliminary East/West Routes Comparative Evaluation
Table A2: East/West Evaluation Data Standardization Method 2[1]

						Option 1: New North Road			Option 2: Parkside - 4 lanes			Option 3: Dundas			Option 4: New North Road Hybrid		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**27**	**Potential for impact on terrestrial features**	**17**	Area of provincially significant wetland removed (ha)	6	2.11	1.00	6.00	0	0	0	0	0	0	0.93	0	2.65
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0		
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3	0.64	0.83	2.48	0.78	1.00	3.00	0	0	0	0.64	0.83	2.48
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	2	0.051	1.00	2.00	0.00	0.00	0.00	0	0.00	0.00	0.051	1.00	2.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	2.24	1.00	2.00	0.37	0.17	0.33	0.12	0.05	0.11	0.38	0.17	0.34
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	2	2244.70	1.00	2.00	446.27	0.20	0.40	606.00	0.27	0.54	1122.90	0.50	1.00
				Area of other woodlots removed (non ESA/ANSI) (ha)	1	2.01	1.00	1.00	1.56	0.78	0.78	0.02	0.01	0.01	1.25	0.62	0.62
				Area of wetland removed (ha)	-	0			0			0			0		
				Area of other natural habitat removed (ha)	1	0.82	1.00	1.00	0.71	0.87	0.87	0	0	0	0.82	1.00	1.00
				Number of new Niagara Escarpment crossings	-	0			0			0			0		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	21	1.00	10.00	13	0.6	6.2	5	0.2	2.4	14	0.7	6.7
Natural Environment Total								26.48			11.56			3.04			16.76
Social Environment	**32**	**Potential for impact on residents**	**19**	Number of residences displaced	7	4	0.24	1.65	3	0.2	1.2	17	1.0	7.0	3	0.2	1.2
				Number of residences within 25 m of the corridor *(widening of existing road)*	3	0	0.00	0.00	206	1.0	3.0	194	0.9	2.8	53	0.3	0.8
				Number of residences within 25 m of the corridor *(new road corridor)*	5	8	0.73	3.64	9	0.8	4.1	0	0.0	0.0	11	1.0	5.0
				Number of residences within 25-50 m of the corridor (widening of existing road)	1.5	0	0.00	0.00	279	1.0	1.5	88	0.3	0.5	73	0.3	0.4
				Number of residences within 25-50 m of the corridor (new road corridor)	1.5	20	0.77	1.15	12	0.5	0.7	0	0.0	0.0	26	1.0	1.5
				Number of residential properties required[3]	-	3			139			37			46		
				Area of residential properties required (ha)	1	1.039	0.39	0.39	2.64	1.0	1.0	0.34	0.1	0.1	1.39	0.5	0.5
		Potential for community character impacts	**5**	Length of route through existing residential communities (km)	5	0.300	0.08	0.41	3.700	1.00	5.00	2.70	0.73	3.65	1.000	0.27	1.35
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	2			0			0			2		
				Number of community/recreation features within 25 m of the corridor	3	1	0.13	0.38	8	1.0	3.0	4	0.5	1.5	1	0.13	0.38
				Number of community/recreation features within 25-50 m of the corridor	1	0	0	0	0	0	0	3	1	1.00	0	0	0
		Potential for impact on cultural features	**4**	Number of cultural features removed	2	1	0.20	0.40	1	0.20	0.40	5	1	2	1	0.20	0.40
				Number of cultural features within 25 m of the corridor	2	2	0.17	0.33	2	0.17	0.33	12	1	2	2	0.17	0.33
Social Environment Total								8.34			20.25			20.58			11.88
Economic Environment	**18**	**Potential for impact on business enterprises**	**6**	Number of businesses displaced	3	2	0.17	0.50	2	0.17	0.50	12	1.00	3.00	2	0.17	0.50
				Number of businesses within 25 m of the corridor	2	2	0.03	0.05	6	0.08	0.16	73	1.00	2.00	2	0.03	0.05
				Number of businesses within 25-50 m of the corridor	0.5	2	0.25	0.13	8	1.00	0.50	0	0	0	2	0.25	0.13
				Number of commercial properties required[3]	-	1			6			48			2		
				Area of commercial properties required (ha)	0.5	0.18	0.33	0.17	0.31	0.58	0.29	0.54	1.00	0.50	0.18	0.34	0.17
		Potential for impact on downtown core business area	**5**	Length of route through downtown core business areas (m)	5	0	0	0	0	0	0	895.00	1.00	5.00	0	0	0
		Potential for impact on future land use	**3**	Area of land designated for development removed (ha)	3	4.90	0.94	2.82	1.86	0.36	1.07	0.002	0.0003	0.001	5.21	1.00	3.00
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	4	24.70	1.00	4.00	14.20	0.57	2.30	0.34	0.01	0.05	20.06	0.81	3.25
Economic Environment Total								7.67			4.82			10.56			7.10
Cost	**10**	**Capital Cost (million $**	**10**	Estimated capital cost	10	$14.9	0.53	5.32	$25.0	0.89	8.93	$28.0	1.00	10.00	$18.2	0.65	6.50
Transportation Service	**13**	**Change in Level of Transportation Service**	**6.5**	Critical screen line volume/capacity ratio - screen line 11	1.5	0.33	0.63	0.95	0.43	0.83	1.24	0.52	1.00	1.50	0.34	0.65	0.98
				Critical screen line volume/capacity ratio - screen line 12	1.5	0.73	0.92	1.39	0.79	1.00	1.50	0.71	0.90	1.35	0.69	0.87	1.31
				Mean network speed	-	56			57			57			56		
				Average network volume/capacity ratio	3.5	0.56	0.92	3.21	0.61	1.00	3.50	0.57	0.93	3.27	0.56	0.92	3.21
		Change in Safety Levels	**6.5**	Number of residential property access points	3	0	0.0	0.00	156	1.00	3.00	71	0.46	1.37	41	0.26	0.79
				Number of commercial property access points	2	0	0.0	0.00	11	0.14	0.28	78	1.00	2.00	0	0.00	0.00
				Number of roadway access points	1.5	13	0.3	0.49	20	0.50	0.75	40	1.00	1.50	14	0.35	0.53
Transportation Service Total								6.04			10.27			10.98			6.82
Total	**100**		**100**		**100**			**53.85**			**55.84**			**55.15**			**49.05**

Note:
[1] Standardized data = data / sum of data values for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property

Waterdown/Aldershot TMP
Preliminary Hybrid Option - Eastern Connection Routes Comparative Evaluation
Table A3: Hybrid Option - Eastern Connection Routes Evaluation - Data Standardization Method 1[1]

						Option 1			Option 2			Option 3			Option 4			Option 5		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**27**	**Potential for impact on terrestrial features**	**17**	Area of provincially significant wetland removed (ha)	-	0			0			0			0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0			0		
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	7	0	0	0	0	0	0	0	0	0	0	0	0	0.64	1.00	7.00
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0			0		
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0	0	0	0	0	0	0	0	0.263	0.43	1.72	0.35	0.57	2.28
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	3	0	0	0	0	0	0	0	0	0	0	0	0	446.27	1.00	3.00
				Area of other woodlots removed (non ESA/ANSI) (ha)	3	0.005	0.002	0.01	0.64	0.22	0.67	0.58	0	0.61	0.60	0.21	0.63	1.02	0.36	1.07
				Area of wetland removed (ha)	-	0			0			0			0			0		
				Area of other natural habitat removed (ha)	-	0			0			0			0			0		
				Number of new Niagara Escarpment crossings	-	0			0			0			0			0		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	2	0.12	1.18	3	0.2	1.8	7	0.4	4.1	3	0.2	1.8	2	0.1	1.2
Natural Environment Total								1.18			2.44			4.73			4.12			14.53
Social Environment	**32**	**Potential for impact on residents**	**19**	Number of residences displaced	7	0	0	0	2	0.2	1.6	6	0.7	4.7	0	0.0	0.0	1	0.1	0.8
				Number of residences within 25 m of the corridor *(widening of existing road)*	3	45	0.16	0.47	48	0.2	0.5	90	0.3	0.9	53	0.2	0.6	53	0.2	0.6
				Number of residences within 25 m of the corridor *(new road corridor)*	5	5	0.31	1.56	3	0.2	0.9	0	0	0	4	0.3	1.3	4	0.3	1.3
				Number of residences within 25-50 m of the corridor (widening of existing road)	1.5	39	0.13	0.19	46	0.2	0.2	70	0.2	0.3	73	0.2	0.4	73	0.2	0.4
				Number of residences within 25-50 m of the corridor (new road corridor)	1.5	4	0.22	0.33	1	0.1	0.1	0	0.0	0.0	6	0.3	0.5	7	0.4	0.6
				Number of residential properties required[3]	-	27			30			62			44			44		
				Area of residential properties required (ha)	1	0.193	0.03	0.03	1.13	0.2	0.2	3.06	0.5	0.5	1.07	0.2	0.2	1.07	0.2	0.2
		Potential for community character impacts	**5**	Length of route through existing residential communities (km)	5	0.70	0.26	1.29	0.70	0.26	1.29	1.31	0.48	2.42	0	0	0	0	0	0.00
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	0			0			0			0			0		
				Number of community/recreation features within 25 m of the corridor	4	0	0	0	0	0	0	0	0	0	1	1.00	4.00	0	0	0
				Number of community/recreation features within 25-50 m of the corridor	-	0			0			0			0			0		
		Potential for impact on cultural features	**4**	Number of cultural features removed	2	1	0.50	1.00	0	0	0	0	0	0	0	0	0	1	0.50	1.00
				Number of cultural features within 25 m of the corridor	2	0	0	0	0	0	0	0	0	0	0	0	0	2	1.00	2.00
Social Environment Total								4.88			4.77			8.84			6.83			6.69
Economic Environment	**18**	**Potential for impact on business enterprises**	**6**	Number of businesses displaced	-	0			0			0			0			0		
				Number of businesses within 25 m of the corridor	3	3	0.50	1.50	2	0.33	1.00	1	0.17	0.50	0	0.00	0.00	0	0.00	0.00
				Number of businesses within 25-50 m of the corridor	-	0			0			0			0			0		
				Number of commercial properties required[3]	-	1			1			2			1			1		
				Area of commercial properties required (ha)	3	0	0	0	0	0	0	2.00	0.996	2.99	0.00	0.00	0.00	0.00	0.00	0.00
		Potential for impact on downtown core business area	**5**	Length of route through downtown core business areas (m)	-	0			0			0			0			0		
		Potential for impact on future land use	**3**	Area of land designated for development removed (ha)	6	2.65	0.68	4.07	0.31	0.08	0.48	0	0	0	0.31	0.08	0.48	0.31	0.08	0.48
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	6	2.94	0.17	1.01	2.21	0.13	0.76	0.85	0.05	0.29	5.47	0.31	1.87	6.05	0.35	2.07
Economic Environment Total								6.58			2.24			4.26			2.36			2.56
Cost	**10**	**Capital Cost (million $**	**10**	Estimated capital cost	10	$6.1	0.13	1.30	$10.9	0.23	2.31	$11.8	0.25	2.49	$9.8	0.21	2.07	$8.7	0.18	1.84
Transportation Service	**13**	**Change in Level of Transportation Service**	**6.5**	Critical screen line volume/capacity ratio - screen line 11	-	0.34			0.34			0.34			0.34			0.34		
				Critical screen line volume/capacity ratio - screen line 12	-	0.69			0.69			0.69			0.69			0.69		
				Mean network speed	-	56			56			56			56			56		
				Average network volume/capacity ratio	-	0.56			0.56			0.56			0.56			0.56		
		Change in Safety Levels	**6.5**	Number of residential property access points	3	35	0.2	0.48	39	0.2	0.54	64	0.3	0.88	40	0.2	0.55	39	0.2	0.54
				Number of commercial property access points	2	4	0.4	0.73	5	0.5	0.91	1	0.1	0.18	1	0.1	0.18	0	0.0	0.00
				Number of roadway access points	1.5	6	0.2	0.26	8	0.2	0.34	8	0.2	0.34	7	0.2	0.30	6	0.2	0.26
Transportation Service Total								1.47			1.79			1.41			1.03			0.80
Total	**100**		**100**		**93.5**			**15.41**			**13.55**			**21.73**			**16.41**			**26.40**

Note:
[1] Standardized data = data / max data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
[4] The Level of Transportation Service is not affected when comparing these two routes. Both options have equal scores for each indicator therefore, a weight has not been allocated to these indicators. Total score is now out of 93.5 instead of 100.

Waterdown/Aldershot TMP
Preliminary Hybrid Option - Eastern Connection Routes Comparative Evaluation
Table A4: Hybrid Option - Eastern Connection Routes Evaluation - Data Standardization Method 2[1]

						Option 1			Option 2			Option 3			Option 4			Option 5		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**27**	**Potential for impact on terrestrial features**	**17**	Area of provincially significant wetland removed (ha)	-	0			0			0			0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0			0		
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	7	0	0	0	0	0	0	0	0	0	0	0	0	0.64	1.00	7.00
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	-	0			0			0			0			0		
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0	0	0	0	0	0	0	0	0.263	0.76	3.02	0.35	1.00	4.00
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	3	0	0	0	0	0	0	0	0	0	0	0	0	446.27	1.00	3.00
				Area of other woodlots removed (non ESA/ANSI) (ha)	3	0.005	0.005	0.01	0.64	0.63	1.89	0.58	0.57	1.72	0.60	0.59	1.77	1.02	1.00	3.00
				Area of wetland removed (ha)	-	0			0			0			0			0		
				Area of other natural habitat removed (ha)	-	0			0			0			0			0		
				Number of new Niagara Escarpment crossings	-	0			0			0			0			0		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	2	0.29	2.86	3	0.43	4.3	7	1.00	10.0	3	0.43	4.3	2	0.29	2.9
Natural Environment Total								2.87	0.00		6.17			11.72			9.08			19.86
Social Environment	**32**	**Potential for impact on residents**	**19**	Number of residences displaced	7	0	0.00	0.00	2	0.33	2.3	6	1.00	7.0	0	0	0	1	0.17	1.2
				Number of residences within 25 m of the corridor *(widening of existing road)*	3	45	0.50	1.50	48	0.53	1.6	90	1.00	3.0	53	0.59	1.8	53	0.59	1.8
				Number of residences within 25 m of the corridor *(new road corridor)*	5	5	1.00	5.00	3	0.60	3.0	0	0	0	4	0.80	4.0	4	0.80	4.0
				Number of residences within 25-50 m of the corridor (widening of existing road)	1.5	39	0.53	0.80	46	0.63	0.9	70	0.96	1.4	73	1.00	1.5	73	1.00	1.5
				Number of residences within 25-50 m of the corridor (new road corridor)	1.5	4	0.57	0.86	1	0.14	0.2	0	0	0	6	0.86	1.3	7	1.00	1.5
				Number of residential properties required[3]	-	27			30			62			44			44		
				Area of residential properties required (ha)	1	0.193	0.06	0.06	1.13	0.37	0.4	3.06	1.00	1.0	1.07	0.35	0.3	1.07	0.35	0.3
		Potential for community character impacts	**5**	Length of route through existing residential communities (km)	5	0.700	0.53	2.67	0.700	0.53	2.67	1.31	1.00	5.00	0.0	0.0	0.0	0	0	0
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	0			0			0			0			0		
				Number of community/recreation features within 25 m of the corridor	4	0	0	0	0	0	0	0	0	0	1	1.00	4.00	0	0	0
				Number of community/recreation features within 25-50 m of the corridor	-	0			0			0			0			0		
		Potential for impact on cultural features	**4**	Number of cultural features removed	2	1	1.00	2.00	0	0	0	0	0	0	0	0	0	1	1.00	2.00
				Number of cultural features within 25 m of the corridor	2	0	0	0	0	0	0	0	0	0	0	0	0	2	1.00	2.00
Social Environment Total								12.89			11.14			17.44			12.90			14.28
Economic Environment	**18**	**Potential for impact on business enterprises**	**6**	Number of businesses displaced	-	0			0			0			0			0		
				Number of businesses within 25 m of the corridor	3	3	1.00	3.00	2	0.67	2.00	1	0.33	1.00	0	0.00	0.00	0	0.00	0.00
				Number of businesses within 25-50 m of the corridor	-	0			0			0			0			0		
				Number of commercial properties required[3]	-	1			1			2			1			1		
				Area of commercial properties required (ha)	3	0	0	0	0	0	0	2.00	1.00	3.00	0	0	0	0	0	0
		Potential for impact on downtown core business area	**5**	Length of route through downtown core business areas (m)	-	0			0			0			0			0		
		Potential for impact on future land use	**3**	Area of land designated for development removed (ha)	6	2.65	1.00	6.00	0.31	0.12	0.71	0.31	0.12	1	0.31	0.12	0.71	0.31	0.12	0.71
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	6	2.94	0.49	2.92	2.21	0.37	2.19	0.85	0.14	0.84	5.47	0.91	5.43	6.05	1.00	6.00
Economic Environment Total								11.92			4.91			5.55			6.15			6.71
Cost	**10**	**Capital Cost (million $**	**10**	Estimated capital cost	10	$6.1	0.52	5.22	$10.9	0.93	9.28	$11.8	1.00	10.00	$9.8	0.83	8.31	$8.7	0.74	7.38
Transportation Service	**13**	**Change in Level of Transportation Service**	**6.5**	Critical screen line volume/capacity ratio - screen line 11	-	0.34			0.34			0.34			0.34			0.34		
				Critical screen line volume/capacity ratio - screen line 12	-	0.69			0.69			0.69			0.69			0.69		
				Mean network speed	-	56			56			56			56			56		
				Average network volume/capacity ratio	-	0.56			0.56			0.56			0.56			0.56		
		Change in Safety Levels	**6.5**	Number of residential property access points	3	35	0.55	1.64	39	0.61	1.83	64	1.00	3.00	40	0.63	1.88	39	0.61	1.83
				Number of commercial property access points	2	4	0.80	1.60	5	1.00	2.00	1	0.20	0.40	1	0.20	0.40	0	0.00	0.00
				Number of roadway access points	1.5	6	0.75	1.13	8	1.00	1.50	8	1.0	1.50	7	0.88	1.31	6	0.75	1.13
Transportation Service Total								4.37			5.33			4.90			3.59			2.95
Total	**100**		**100**		**93.5**			**37.27**			**36.83**			**49.61**			**40.03**			**51.19**

Note:
[1] Standardized data = data / maximum data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
[4] The Level of Transportation Service is not affected when comparing these two routes. Both options have equal scores for each indicator therefore, a weight has not been allocated to these indicators. Total score is now out of 93.5 instead of 100.

Waterdown/Aldershot TMP
Preliminary North/South Routes Comparative Evaluation
Table A5: Waterdown/King Evaluation Matrix Data Standardization Method 1[1]

						Option 1: 2 lane Waterdown & King			Option 2: 4 lane Waterdown			Option 3: 4 lane Waterdown with 2 lane King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	3.72	0.58	3.76	0.49	0.08	0.49	2.22	0.35	2.25
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	1.55	0.31	1.08	2.08	0.41	1.45	1.39	0.28	0.97
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	3.93	0.50	2.00	0	0	0	3.93	0.50	2.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	2.44	0.44	0.89	1.008	0.18	0.37	2.03	0.37	0.74
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	4578	0.41	0.61	2142	0.19	0.28	4578	0.41	0.61
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	4.42	0.42	0.63	2.41	0.23	0.34	3.78	0.36	0.53
				Area of wetland removed (ha)	-	0			0			0		
				Area of other natural habitat removed (ha)	1	0.44	0.50	0.50	0	0	0	0.44	0.50	0.50
				Number of new Niagara Escarpment crossings	2	2	0.40	0.80	1	0.20	0.40	2	0.40	0.80
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	18	0.46	4.62	3	0.08	0.77	18	0.46	4.62
Natural Environment Total								14.88			4.10			13.02
Social Environment	**31**	**Potential for impact on residents**	**26**	Number of residences displaced	10	15	0.34	3.41	19	0.43	4.32	10	0.23	2.27
				Number of residences within 25 m of the corridor *(widening of existing road)*	7	67	0.35	2.46	62	0.32	2.27	62	0.32	2.27
				Number of residences within 25 m of the corridor *(new road corridor)*	4	12	0.34	1.37	11	0.31	1.26	12	0.34	1.37
				Number of residences within 25-50 m of the corridor (widening of existing road)	-	15			15			15		
				Number of residences within 25-50 m of the corridor (new road corridor)	-	9			9			9		
				Number of residential properties required[3]	-	75			75			75		
				Area of residential properties required (ha)	5	9.92	0.35	1.76	9.22	0.33	1.64	9.04	0.32	1.60
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.35			2.35			2.35		
		Potential for impact on community/ recreation features	**5**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.5	8	0.47	1.18	1	0.06	0.15	8	0.47	1.18
				Number of community/recreation features within 25 m of the corridor	2.5	6	0.46	1.15	1	0.08	0.19	6	0.46	1.15
				Number of community/recreation features within 25-50 m of the corridor	-	1			1			1		
		Potential for impact on cultural features		Number of cultural features removed	-	1			1			1		
				Number of cultural features within 25 m of the corridor	-	7			7			7		
Social Environment Total								11.33			9.82			9.85
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0			0		
				Number of businesses within 25 m of the corridor	1.5	2	0.50	0.75	0	0	0	2	0.50	0.75
				Number of businesses within 25-50 m of the corridor	0.5	2	0.40	0.20	1	0.20	0.10	2	0.40	0.20
				Number of commercial properties required[3]	-	1			0			1		
				Area of commercial properties required (ha)	1	0.01	0.50	0.50	0	0	0	0.01	0.50	0.50
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	10.62	0.39	1.56	6.95	0.26	1.02	9.58	0.35	1.41
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	0.77	0.36	1.08	0.72	0.34	1.02	0.63	0.30	0.90
Economic Environment Total								4.10			2.14			3.76
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$23.6	0.38	4.99	$14.0	0.23	2.96	$24.0	0.39	5.06
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	-	0.71			0.71			0.71		
				Critical screen line volume/capacity ratio - screen line 4	1.67	0.57	0.40	0.67	0.47	0.33	0.55	0.39	0.27	0.46
				Critical screen line volume/capacity ratio - screen line 5	1.67	0.70	0.43	0.71	0.51	0.31	0.52	0.43	0.26	0.44
				Critical screen line volume/capacity ratio - screen line 7	1.67	0.85	0.38	0.63	0.64	0.29	0.48	0.75	0.33	0.56
				Mean network speed	-	56			56			56		
				Average network volume/capacity ratio	2	0.58	0.36	0.71	0.56	0.34	0.69	0.49	0.30	0.60
		Change in Safety Levels	**7**	Number of residential property access points	1	55	0.34	0.34	52	0.32	0.32	55	0.34	0.34
				Number of commercial property access point	3.5	15	0.42	1.46	6	0.17	0.58	15	0.42	1.46
				Number of roadway access points	2.5	13	0.38	0.96	8	0.24	0.59	13	0.38	0.96
Transportation Service Total								5.48			3.73			4.81
Total	**100**		**100**		**100**			**40.77**			**22.75**			**36.49**

Note:
[1] Standardized data = data / max data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.

Waterdown/Aldershot TMP
Preliminary North/South Routes Comparative Evaluation
Table A6: Waterdown/King Evaluation Matrix Data Standardization Method 2[1]

						Option 1: 2 lane Waterdown & King			Option 2: 4 lane Waterdown			Option 3: 4 lane Waterdown with 2 lane King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	3.72	1.00	6.50	0.49	0.13	0.85	2.22	0.60	3.88
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	1.55	0.75	2.61	2.08	1.00	3.50	1.39	0.67	2.35
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	3.93	1.00	4.00	0	0	0	3.93	1.00	4.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	2.44	1.00	2.00	1.008	0.41	0.83	2.03	0.83	1.67
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	4578	1.00	1.50	2142	0.47	0.70	4578	1.00	1.50
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	4.42	1.00	1.50	2.41	0.54	0.82	3.78	0.85	1.28
				Area of wetland removed (ha)	-	0			0			0		
				Area of other natural habitat removed (ha)	1	0.44	1.00	1.00	0	0	0	0.44	1.00	1.00
				Number of new Niagara Escarpment crossings	2	2	1.00	2.00	1	0.50	1.00	2	1.00	2.00
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	18	1.00	10.00	3	0.2	1.7	18	1.00	10.00
Natural Environment Total								31.11			9.36			27.67
Social Environment	**31**	**Potential for impact on residents**	**26**	Number of residences displaced	10	15	0.79	7.89	19	1.00	10.00	10	0.53	5.26
				Number of residences within 25 m of the corridor *(widening of existing road)*	7	67	1.00	7.00	62	0.93	6.48	62	0.93	6.48
				Number of residences within 25 m of the corridor *(new road corridor)*	4	12	1.00	4.00	11	0.92	3.67	12	1.00	4.00
				Number of residences within 25-50 m of the corridor (widening of existing road)	-	15			15			15		
				Number of residences within 25-50 m of the corridor (new road corridor)	-	9			9			9		
				Number of residential properties required[3]	-	75			75			75		
				Area of residential properties required (ha)	5	9.92	1.00	5.00	9.22	0.93	4.65	9.04	0.91	4.56
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.35			2.35			2.35		
		Potential for impact on community/ recreation features	**5**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.5	8	1.00	2.50	1	0.13	0.31	8	1.00	2.50
				Number of community/recreation features within 25 m of the corridor	2.5	6	1.00	2.50	1	0.17	0.42	6	1.00	2.50
				Number of community/recreation features within 25-50 m of the corridor	-	1			1			1		
		Potential for impact on cultural features		Number of cultural features removed	-	1			1			1		
				Number of cultural features within 25 m of the corridor	-	7			7			7		
Social Environment Total								28.89			25.52			25.30
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0			0		
				Number of businesses within 25 m of the corridor	1.5	2	1.00	1.50	0	0	0	2	1.00	1.50
				Number of businesses within 25-50 m of the corridor	0.5	2	1.00	0.50	1	1	0	2	1.00	0.50
				Number of commercial properties required[3]	-	1			0			1		
				Area of commercial properties required (ha)	1	0.01	1.00	1.00	0	0	0	0.01	1.00	1.00
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	10.62	1.00	4.00	6.95	0.65	3	9.58	0.90	3.61
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	0.77	1.00	3.00	0.72	0.94	2.82	0.63	0.83	2.48
Economic Environment Total								10.00			5.69			9.09
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$23.6	0.99	12.82	$14.0	0.58	7.60	$24.0	1.00	13.00
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	-	0.71			0.71			0.71		
				Critical screen line volume/capacity ratio - screen line 4	1.67	0.57	1.00	1.67	0.47	0.82	1.38	0.39	0.68	1.14
				Critical screen line volume/capacity ratio - screen line 5	1.67	0.70	1.00	1.67	0.51	0.73	1.22	0.43	0.61	1.03
				Critical screen line volume/capacity ratio - screen line 7	1.67	0.85	1.00	1.67	0.64	0.75	1.26	0.75	0.88	1.47
				Mean network speed	-	56			56			56		
				Average network volume/capacity ratio	2	0.58	1.00	2.00	0.56	0.97	1.93	0.49	0.84	1.69
		Change in Safety Levels	**7**	Number of residential property access points	1	55	1.00	1.00	52	0.95	0.95	55	1.00	1.00
				Number of commercial property access point	3.5	15	1.00	3.50	6	0.40	1.40	15	1.00	3.50
				Number of roadway access points	2.5	13	1.00	2.50	8	0.62	1.54	13	1.00	2.50
Transportation Service Total								14.01			9.67			12.33
Total	**100**		**100**		**100**			**96.83**			**57.84**			**87.39**

Note:
[1] Standardized data = data / maximum data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.

Waterdown/Aldershot TMP
Preliminary North Waterdown Routes Comparative Evaluation
Table A7: North Waterdown Route Comparison Standardization Method 1[1]

						Option 1: West 4 lane North Waterdown			Option 2: East 4 lane Waterdown Alternative		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	8	0.49	1.00	8.00	0.00	0	0
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	6	1.82	0.94	5.66	0.11	0.06	0.34
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	-	0.0			0		
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	3	0.09	1.00	3.00	0.000	0	0
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	3	684.00	1.00	3.00	0.00	0	0
				Area of other woodlots removed (non ESA/ANSI) (ha)	2	1.93	0.91	1.83	0.18	0.09	0.17
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	-	0			0		
				Number of new Niagara Escarpment crossings	-	1.00			1.00		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	1	0.25	2.50	3.00	0.75	7.50
Natural Environment Total								23.99			8.01
Social Environment	**31**	**Potential for impact on residents**	**31**	Number of residences displaced	10	3	0.60	6.00	2	0.40	4.00
				Number of residences within 25 m of the corridor *(widening of existing road)*	7	9	0.35	2.42	17	0.65	4.58
				Number of residences within 25 m of the corridor *(new road corridor)*	-	9			0		
				Number of residences within 25-50 m of the corridor (widening of existing road)	4	4	0.36	1.45	7.0	0.64	2.55
				Number of residences within 25-50 m of the corridor (new road corridor)	4	7	1.00	4.00	0	0	0
				Number of residential properties required[3]	-	23			13		
				Area of residential properties required (ha)	6	6.78	0.92	5.51	0.60	0.08	0.49
		Potential for community character impacts		Length of route through existing residential communities (km)	-	0			0		
		Potential for impact on community/ recreation features		Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	1			1		
				Number of community/recreation features within 25 m of the corridor	-	1			1		
				Number of community/recreation features within 25-50 m of the corridor	-	1			1		
		Potential for impact on cultural features		Number of cultural features removed	-	0			0		
				Number of cultural features within 25 m of the corridor	-	0			0		
Social Environment Total								19.39			11.61
Economic Environment	**10**	**Potential for impact on business enterprises**		Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	-	1			1		
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**6**	Area of land designated for development removed (ha)	6	2.07	0.42	2.54	2.81	0.58	3.46
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	4	0.71	0.20	0.80	2.85	0.80	3.20
Economic Environment Total								3.35			6.65
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$4.2	0.51	6.63	$4.0	0.49	6.37
Transportation Service[4]	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	-	0.71			0.71		
				Critical screen line volume/capacity ratio - screen line 4	-	0.47			0.47		
				Critical screen line volume/capacity ratio - screen line 5	-	0.51			0.51		
				Critical screen line volume/capacity ratio - screen line 7	-	0.64			0.64		
				Mean network speed	-	56			56		
				Average network volume/capacity ratio	-	0.56			0.56		
		Change in Safety Levels	**7**	Number of residential property access points	1	11	0.92	0.92	1	0.08	0.08
				Number of commercial property access point	3.5	9	1.00	3.50	0	0.00	0.00
				Number of roadway access points	2.5	6	0.60	1.50	4	0.40	1.00
Transportation Service Total								5.92			1.08
Total	**100**		**100**		**93**			**59.27**			**33.73**

Note:
[1] Standardized data = data / max data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
[4] The Level of Transportation Service is not affected when comparing these two routes. Both options have equal scores for each indicator therefore, a weight has not been allocated to these indicators. Total score is now out of 93 instead of 100.

Waterdown/Aldershot TMP
Preliminary North Waterdown Routes Comparative Evaluation
Table A8: North Waterdown Route Comparison Standardization Method 2[1]

						Option 1: West 4 lane North Waterdown			Option 2: East 4 lane Waterdown Alternative		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	8	0.49	1.00	8.00	0.00	0	0
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	6	1.82	1.00	6.00	0.11	0.06	0.36
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	-	0.0			0		
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	3	0.09	1.00	3.00	0	0	0
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	3	684.00	1.00	3.00	0	0	0
				Area of other woodlots removed (non ESA/ANSI) (ha)	2	1.93	1.00	2.00	0.18	0.09	0.19
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	-	0			0		
				Number of new Niagara Escarpment crossings	-	1.00			1.00		
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	1	0.33	3.33	3	1	10
Natural Environment Total								25.33			10.55
Social Environment	**31**	**Potential for impact on residents**	**31**	Number of residences displaced	10	3	1.00	10.00	2	0.67	6.67
				Number of residences within 25 m of the corridor *(widening of existing road)*	7	9	0.53	3.71	17	1.00	7.00
				Number of residences within 25 m of the corridor *(new road corridor)*	-	9			0		
				Number of residences within 25-50 m of the corridor (widening of existing road)	4	4	0.57	2.29	7	1.00	4.00
				Number of residences within 25-50 m of the corridor (new road corridor)	4	7	1.00	4.00	0	0.00	0.00
				Number of residential properties required[3]	-	23			13		
				Area of residential properties required (ha)	6	6.78	1.00	6.00	0.60	0.09	0.53
		Potential for community character impacts		Length of route through existing residential communities (km)	-	0			0		
		Potential for impact on community/ recreation features		Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	1			1		
				Number of community/recreation features within 25 m of the corridor	-	1			1		
				Number of community/recreation features within 25-50 m of the corridor	-	1			1		
		Potential for impact on cultural features		Number of cultural features removed	-	0			0		
				Number of cultural features within 25 m of the corridor	-	0			0		
Social Environment Total								25.99			18.20
Economic Environment	**10**	**Potential for impact on business enterprises**		Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	-	1			1		
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**6**	Area of land designated for development removed (ha)	6	2.07	0.74	4.42	2.81	1.00	6.00
		Potential for impact on agricultural land	**4**	Area of agricultural land designated for agriculture/ rural removed (ha)	4	0.71	0.25	1.00	2.85	1.00	4.00
Economic Environment Total								5.42			10.00
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$4.2	1.00	13.00	$4.0	0.96	12.50
Transportation Service[4]	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	-	0.71			0.71		
				Critical screen line volume/capacity ratio - screen line 4	-	0.47			0.47		
				Critical screen line volume/capacity ratio - screen line 5	-	0.51			0.51		
				Critical screen line volume/capacity ratio - screen line 7	-	0.64			0.64		
				Mean network speed	-	56			56		
				Average network volume/capacity ratio	-	0.56			0.56		
		Change in Safety Levels	**7**	Number of residential property access points	1	11	1.00	1.00	1	0.09	0.09
				Number of commercial property access point	3.5	9	1.00	3.50	0	0.00	0.00
				Number of roadway access points	2.5	6	1.00	2.50	4	0.67	1.67
Transportation Service Total								7.00			1.76
Total	**100**		**100**		**93**			**76.74**			**53.00**

Note:
[1] Standardized data = data / maximum data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
[4] The Level of Transportation Service is not affected when comparing these two routes. Both options have equal scores for each indicator therefore, a weight has not been allocated to these indicators. Total score is now out of 93 instead of 100.

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Table A9: 3 Lane Waterdown/King vs. 4 Lane Waterdown Evaluation Matrix Data - Standardization Method 1

						4 lane Waterdown			3 lane Waterdown with Upgraded King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	0.00	0.00	0.00	1.29	1.00	6.50
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	0.37	0.51	1.78	0.36	0.49	1.72
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0.00	0	1.35	1.00	4.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	0.942	0.76	1.53	0.29	0.24	0.47
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	1458	0.29	0.43	3615	0.71	1.07
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	0.65	0.46	0.69	0.76	0.54	0.81
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	1	0	0.00	0	0.25	1.00	1.00
				Number of new Niagara Escarpment crossings	2	1	0.33	0.67	2	0.67	1.33
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	5	0.42	4.17	7	0.58	5.83
Natural Environment Total								9.26			22.74
Social Environment	**31**	**Potential for impact on residents**	**23**	Number of residences displaced	8	18	0.53	4.24	16	0.47	3.76
				Number of residences within 25 m of the corridor *(widening of existing road)*	6	70	0.57	3.41	53	0.43	2.59
				Number of residences within 25 m of the corridor *(new road corridor)*	3	0	0.00	0.00	0	0.00	0.00
				Number of residences within 25-50 m of the corridor (widening of existing road)	1	18	0.60	0.60	12	0.40	0.40
				Number of residences within 25-50 m of the corridor (new road corridor)	1	0	0.00	0.00	0	0.00	0.00
				Number of residential properties required[3]	-	66			3		
				Area of residential properties required (ha)	4	2.93	0.83	3.33	0.59	0.17	0.67
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.05			2.05		
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.0	1	0.25	0.50	3	0.75	1.50
				Number of community/recreation features within 25 m of the corridor	1	1	0.50	0.50	1	0.50	0.50
				Number of community/recreation features within 25-50 m of the corridor	1	1	1.00	1.00	0	0.00	0.00
		Potential for impact on cultural features	**4**	Number of cultural features/property removed	2.5	1	0.17	0.42	5	0.83	2.08
				Number of cultural features within 25 m of the corridor	1.5	7	0.58	0.88	5	0.42	0.63
Social Environment Total								14.87			12.13
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	3	1	0.50	1.50	1	0.50	1.50
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	8.93	0.73	2.92	3.30	0.27	1.08
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	3.32	0.52	1.56	3.95	0.54	1.63
Economic Environment Total								5.98			4.21
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$15.9	0.44	5.72	$20.3	0.56	7.28
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	1.25	0.71	0.51	0.64	0.68	0.49	0.61
				Critical screen line volume/capacity ratio - screen line 4	1.25	0.47	0.52	0.65	0.43	0.48	0.60
				Critical screen line volume/capacity ratio - screen line 5	1.25	0.51	0.53	0.66	0.45	0.47	0.59
				Critical screen line volume/capacity ratio - screen line 7	1.25	0.64	0.41	0.51	0.93	0.59	0.74
				Mean network speed	1	0	0.00	0.00	1	1.00	1.00
				Average network volume/capacity ratio	1	0.56	0.53	0.53	0.49	0.47	0.47
		Change in Safety Levels	**7**	Number of residential property access points	1	42	0.48	0.48	46	0.52	0.52
				Number of commercial property access point	3.5	0	0.00	0.00	5	1.00	3.50
				Number of roadway access points	2.5	6	0.40	1.00	9	0.60	1.50
Transportation Service Total								4.48			9.52
Total	**100**		**100**		**100**			**40.30**			**55.89**

Note:
[1] Standardized data = data / max data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
For "Mean Network Speed" - the average speeds were 56 km/hr and 45 km/hr respectively - as the 3 Lane Waterdown Rd option has an substatially lower speed it was assigned a "1" & $ Lane Waterdown was assinged) as it has a higher average speed

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Table A10: 3 Lane Waterdown/King vs. 4 Lane Waterdown Evaluation Matrix - Data Standardization Method 2

						4 lane Waterdown			3 lane Waterdown with Upgraded King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	0.00	0.00	0.00	1.29	1.00	6.50
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	0.37	1.00	3.50	0.36	0.97	3.40
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0.00	0	1.35	1.00	4.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	0.942	1.00	2.00	0.29	0.31	0.62
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	1458	0.40	0.60	3615	1.00	1.50
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	0.65	0.86	1.28	0.76	1.00	1.50
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	1	0	0.00	0	0.25	1.00	1.00
				Number of new Niagara Escarpment crossings	2	1	0.50	1.00	2	1.00	2.00
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	5	0.71	7.1	7	1.00	10.00
Natural Environment Total								15.53			30.51
Social Environment	**31**	**Potential for impact on residents**	**23**	Number of residences displaced	8	18	1.00	8.00	16	0.89	7.11
				Number of residences within 25 m of the corridor *(widening of existing road)*	6	70	1.00	6.00	53	0.76	4.54
				Number of residences within 25 m of the corridor *(new road corridor)*	3	0	0.00	0.00	0	0.00	0.00
				Number of residences within 25-50 m of the corridor (widening of existing road)	1	18	1.00	1.00	12	0.67	0.67
				Number of residences within 25-50 m of the corridor (new road corridor)	1	0	0.00	0.00	0	0.00	0.00
				Number of residential properties required[3]	-	66			3		
				Area of residential properties required (ha)	4	2.93	1.00	4.00	0.59	0.20	0.81
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.05			2.05		
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.0	1	0.33	0.67	3	1.00	2.00
				Number of community/recreation features within 25 m of the corridor	1	1	1.00	1.00	1	1.00	1.00
				Number of community/recreation features within 25-50 m of the corridor	1	1	1.00	1.00	0	0.00	0.00
		Potential for impact on cultural features	**4**	Number of cultural features removed	2.5	1	0.20	0.50	5	1.00	2.50
				Number of cultural features within 25 m of the corridor	1.5	7	1.00	1.50	5	0.71	1.07
Social Environment Total								23.67			19.70
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	3	1	1.00	3	1	1	3
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	8.93	1.00	4	3.30	0.37	1.48
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	3.32	0.84	2.52	3.95	1.00	3.00
Economic Environment Total								9.52			7.48
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$15.9	0.78	10.20	$20.3	1.00	13.00
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	1.25	0.71	1.00	1.25	0.68		
				Critical screen line volume/capacity ratio - screen line 4	1.25	0.47	1.00	1.25	0.43	0.91	1.14
				Critical screen line volume/capacity ratio - screen line 5	1.25	0.51	1.00	1.25	0.45	0.88	1.10
				Critical screen line volume/capacity ratio - screen line 7	1.25	0.64	0.69	0.86	0.93	1.00	1.25
				Mean network speed	1	0	0.00	0.00	1	1.00	1.00
				Average network volume/capacity ratio	1	0.56	1.00	1.00	0.49	0.88	0.88
		Change in Safety Levels	**7**	Number of residential property access points	1	42	0.91	0.91	46	1.00	1.00
				Number of commercial property access point	3.5	0	0.00	0.00	5	1.00	3.50
				Number of roadway access points	2.5	6	0.67	1.67	9	1.00	2.50
Transportation Service Total								8.19			12.37
Total	**100**		**100**		**100**			**67.11**			**83.06**

Note:
[1] Standardized data = data / maximum data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.

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Table A11: 3 Lane Waterdown/King vs. 4 Lane Waterdown Evaluation Matrix Data - Standardization Method 1

						4 lane Waterdown			3 lane Waterdown with Upgraded King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Score**	**Data**	**Standardized Data**	**Weighted Score**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	0.00	0.00	0.00	1.29	1.00	6.50
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	0.36	0.50	1.75	0.36	0.50	1.75
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0.00	0	1.35	1.00	4.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	0.420	0.59	1.18	0.29	0.41	0.82
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	1357	0.27	0.41	3615	0.73	1.09
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	0.60	0.44	0.66	0.76	0.56	0.84
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	1	0	0.00	0	0.25	1.00	1.00
				Number of new Niagara Escarpment crossings	2	1	0.33	0.67	2	0.67	1.33
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	4	0.36	3.64	7	0.64	6.36
Natural Environment Total								8.31			23.69
Social Environment	**31**	**Potential for impact on residents**	**23**	Number of residences displaced	8	7	0.70	5.60	3	0.30	2.40
				Number of residences within 25 m of the corridor *(widening of existing road)*	6	59	0.47	2.83	66	0.53	3.17
				Number of residences within 25 m of the corridor *(new road corridor)*	3	0	0.00	0.00	0	0.00	0.00
				Number of residences within 25-50 m of the corridor (widening of existing road)	1	12	0.50	0.50	12	0.50	0.50
				Number of residences within 25-50 m of the corridor (new road corridor)	1	0	0.00	0.00	0	0.00	0.00
				Number of residential properties required[3]	-	26			3		
				Area of residential properties required (ha)	4	0.53	0.47	1.89	0.59	0.53	2.11
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.05			2.05		
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.0	1	0.25	0.50	3	0.75	1.50
				Number of community/recreation features within 25 m of the corridor	1	0	0.00	0.00	1	1.00	1.00
				Number of community/recreation features within 25-50 m of the corridor	1	0	0.00	0.00	0	0.00	0.00
		Potential for impact on cultural features	**4**	Number of cultural features/property removed	2.5	2	0.29	0.71	5	0.71	1.79
				Number of cultural features within 25 m of the corridor	1.5	3	0.38	0.56	5	0.63	0.94
Social Environment Total								12.60			13.40
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	3	1	1.00	3.00	0	0.00	0.00
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	3.14	0.49	1.95	3.30	0.51	2.05
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	0.05	0.02	0.05	3.05	0.98	2.95
Economic Environment Total								5.00			5.00
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$20.3	0.51	6.63	$19.5	0.49	6.37
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	1.25	0.71	0.51	0.64	0.68	0.49	0.61
				Critical screen line volume/capacity ratio - screen line 4	1.25	0.47	0.52	0.65	0.43	0.48	0.60
				Critical screen line volume/capacity ratio - screen line 5	1.25	0.51	0.53	0.66	0.45	0.47	0.59
				Critical screen line volume/capacity ratio - screen line 7	1.25	0.64	0.41	0.51	0.93	0.59	0.74
				Mean network speed	1	0	0.00	0.00	1	1.00	1.00
				Average network volume/capacity ratio	1	0.56	0.53	0.53	0.49	0.47	0.47
		Change in Safety Levels	**7**	Number of residential property access points	1	42	0.48	0.48	46	0.52	0.52
				Number of commercial property access point	3.5	0	0.00	0.00	5	1.00	3.50
				Number of roadway access points	2.5	6	0.40	1.00	9	0.60	1.50
Transportation Service Total								4.48			9.52
Total	**100**		**100**		**100**			**37.01**			**57.99**

Note:
[1] Standardized data = data / max data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.
For "Mean Network Speed" - the average speeds were 56 km/hr and 45 km/hr respectively - as the 3 Lane Waterdown Rd option has an substatially lower speed it was assigned a "1" & $ Lane Waterdown was assinged) as it has a higher average speed
In some cases land identified as "agriculture" is also identifed as future development lands. As was done in the original evaluation, these same lands were consideres by both the "agriculture" and "future development lands" indicator.

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Table A12: 3 Lane Waterdown/King vs. 4 Lane Waterdown Evaluation Matrix - Data Standardization Method 2

						4 lane Waterdown			3 lane Waterdown with Upgraded King		
Criteria Group	**Criteria Group Weight**	**Criteria**	**Criteria Weight**	**Indicators**	**Indicator Weight[2]**	**Data**	**Standardized Data**	**Weighted Data**	**Data**	**Standardized Data**	**Weighted Data**
Natural Environment	**32**	**Potential for impact on terrestrial features**	**22**	Area of provincially significant wetland removed (ha)	-	0			0		
				Area of core ANSIs removed *(not including provincially significant wetland)* (ha)	6.5	0.00	0.00	0.00	1.29	1.00	6.50
				Area of edge ANSIs removed *(not including provincially significant wetland)* (ha)	3.5	0.36	1.00	3.50	0.36	1.00	3.50
				Area of core ESAs removed *(not including provincially significant wetland)* (ha)	4	0	0.00	0	1.35	1.00	4.00
				Area of edge ESAs removed *(not including provincially significant wetland)* (ha)	2	0.420	1.00	2.00	0.29	0.69	1.38
				Length of corridor adjacent to ESAs & ANSIs *(on both sides of new road corridor)* (m)	1.5	1357	0.38	0.56	3615	1.00	1.50
				Area of other woodlots removed (non ESA/ANSI) (ha)	1.5	0.60	0.79	1.18	0.76	1.00	1.50
				Area of wetland removed (ha)	-	0			0		
				Area of other natural habitat removed (ha)	1	0	0.00	0	0.25	1.00	1.00
				Number of new Niagara Escarpment crossings	2	1	0.50	1.00	2	1.00	2.00
		Potential for impact on aquatic features	**10**	Number of watercourses crossed	10	4	0.57	5.7	7	1.00	10.00
Natural Environment Total								13.96			31.38
Social Environment	**31**	**Potential for impact on residents**	**23**	Number of residences displaced	8	7	1.00	8.00	3	0.43	3.43
				Number of residences within 25 m of the corridor *(widening of existing road)*	6	59	0.89	5.36	66	1.00	6.00
				Number of residences within 25 m of the corridor *(new road corridor)*	3	0	0.00	0.00	0	0.00	0.00
				Number of residences within 25-50 m of the corridor (widening of existing road)	1	12	1.00	1.00	12	1.00	1.00
				Number of residences within 25-50 m of the corridor (new road corridor)	1	0	0.00	0.00	0	0.00	0.00
				Number of residential properties required[3]	-	26			3		
				Area of residential properties required (ha)	4	0.53	0.90	3.59	0.59	1.00	4.00
		Potential for community character impacts		Length of route through existing residential communities (km)	-	2.05			2.05		
		Potential for impact on community/ recreation features	**4**	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	2.0	1	0.33	0.67	3	1.00	2.00
				Number of community/recreation features within 25 m of the corridor	1	0	0.00	0.00	1	1.00	1.00
				Number of community/recreation features within 25-50 m of the corridor	1	0	0.00	0.00	0	0.00	0.00
		Potential for impact on cultural features	**4**	Number of cultural features removed	2.5	2	0.40	1.00	5	1.00	2.50
				Number of cultural features within 25 m of the corridor	1.5	3	0.60	0.90	5	1.00	1.50
Social Environment Total								20.52			21.43
Economic Environment	**10**	**Potential for impact on business enterprises**	**3**	Number of businesses displaced	-	0			0		
				Number of businesses within 25 m of the corridor	-	0			0		
				Number of businesses within 25-50 m of the corridor	3	1	1.00	3	0	0	0
				Number of commercial properties required[3]	-	0			0		
				Area of commercial properties required (ha)	-	0			0		
		Potential for impact on downtown core business area		Length of route through downtown core business areas (m)	-	0			0		
		Potential for impact on future land use	**4**	Area of land designated for development removed (ha)	4	3.14	0.95	4	3.30	1.00	4.00
		Potential for impact on agricultural land	**3**	Area of agricultural land designated for agriculture/ rural removed (ha)	3	0.05	0.02	0.05	3.05	1.00	3.00
Economic Environment Total								6.86			7.00
Cost	**13**	**Capital Cost (millions)**	**13**	Estimated capital cost	13	$20.3	1.00	13.00	$19.5	0.96	12.49
Transportation Service	**14**	**Change in Level of Transportation Service**	**7**	Critical screen line volume/capacity ratio - screen line 3	1.25	0.71	1.00	1.25	0.68		
				Critical screen line volume/capacity ratio - screen line 4	1.25	0.47	1.00	1.25	0.43	0.91	1.14
				Critical screen line volume/capacity ratio - screen line 5	1.25	0.51	1.00	1.25	0.45	0.88	1.10
				Critical screen line volume/capacity ratio - screen line 7	1.25	0.64	0.69	0.86	0.93	1.00	1.25
				Mean network speed	1	0	0.00	0.00	1	1.00	1.00
				Average network volume/capacity ratio	1	0.56	1.00	1.00	0.49	0.88	0.88
		Change in Safety Levels	**7**	Number of residential property access points	1	42	0.91	0.91	46	1.00	1.00
				Number of commercial property access point	3.5	0	0.00	0.00	5	1.00	3.50
				Number of roadway access points	2.5	6	0.67	1.67	9	1.00	2.50
Transportation Service Total								8.19			12.37
Total	**100**		**100**		**100**			**62.53**			**84.67**

Note:
[1] Standardized data = data / maximum data value for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3] For information only. Effect was measured through the area of residential/commercial property required.

APPENDIX B

City-Wide Policies on TDM, Transit Services and Walking & Cycling

City of Hamilton

Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton
TRANSPORTATION MODAL SHARE TARGETS AND TRANSIT STRATEGIES POLICY PAPER

FINAL REPORT

JANUARY 2005

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1. INTRODUCTION

1.1 Study Background and Objectives

The City of Hamilton *City-wide Transportation Master Plan* will provide inputs to the *Growth Related Integrated Development Strategy* (GRIDS) and make recommendations to Council on the adoption of a City-wide Transportation Policy that is cognisant of Vision 2020 and other City of Hamilton long-term planning objectives. The project has been divided into three distinct phases. The first phase consisted of the technical calibration of the existing transportation model to reflect current transportation conditions in Hamilton. The second phase, which is the object of this and other policy papers, will focus on the development of 23 policy papers in the following areas: Travel Demand, Urban Development, System Performance, Infrastructure Planning and Infrastructure Financing. Following the completion of the Policy Papers, the City will proceed to develop transportation scenarios (Phase 3 of the project) based upon the results of the policy work performed in Phase 2 and the land use scenarios developed through the broader GRIDS study and will test the efficiency and viability of these scenarios by integrating them into the calibrated model.

This policy paper addresses the issues of Transportation Targets. The paper addresses two separate, but related topics. The first issue relates to **Model Split Targets**, which addresses the relative role of each mode (walking, cycling, transit and automobiles) in accommodating future travel demand. The second issue relates to specific **Long Range Transit Targets**, which sets the direction for the transit system and related components.

The primary focus of this paper is on targets for transit. However, it is important to examine targets for transit in the context of other modes.

The remainder of this introduction provides a description of the key issues associated with long range transportation targets. Section 2 provides an overview of the existing situation in Hamilton. Section 3 provides supporting information on recent trends and possible contributions of transit, while Section 5 highlights experience and practices from other jurisdictions. Section 6 outlines the development and refinement of policy options and potential supporting actions.

1.2 Why Consider Transportation Targets?

Most cities in Canada have developed targets or goals to address various aspects of transportation system performance. These targets may address transportation demand (e.g. 20% of all trips to be accommodated by transit) or transportation supply (e.g. 80% of residents to be within a 400 m walk of bus service).

Setting transportation targets is important for a number of reasons:

- To provide direction on how transportation can become more sustainable, in accordance with the goals and objectives of the City's Sustainable Vision (Vision 2020);
- To set the general directions for infrastructure decisions and to identify "what improvements may be required to achieve a desired future state for the transportation system"; and,
- To help identify future funding needs and priorities, especially the magnitude of investment needed to achieve a desired outcome.

While transportation targets are important, they also have a number of limitations and risks. For example, if transportation targets are too aggressive or optimistic, progress towards achieving the targets will be slow and may undermine the overall credibility of the targets. Similarly, if the City makes decisions on achieving a specific target, such as reducing motorized travel, and the target is not achieved, they may be left in a position where the transportation system is not adequate.

This policy paper attempts to provide a balanced perspective on the development of transportation targets and corresponding policies.

1.3 The Overall Vision

The starting point for the development of transportation targets is the City of Hamilton's Vision for Sustainability – Vision 2020. In 1989, Hamilton was chosen to be a participant in the Local Agenda 21 program by the United Nations-sanctioned International Council for Local Environmental Initiatives. The Region of Hamilton-Wentworth, now City of Hamilton, developed its Vision 2020, a guide for the region's movement towards sustainability. The Vision highlights the need to guarantee access for all residents to all of the cities activities, be they employment, education, health, or leisure, and it recognizes that participation in these activities is contingent upon a safe and efficient transportation system.

The recently re-approved Vision 2020 stipulates that Hamilton's residents should have access to and be able to choose from a variety of transportation modes. The Vision also recognizes that a significant proportion of the city's residents, for reasons including age, physical ability or finances, are unable to operate a personal vehicle, and therefore that ownership of a vehicle should not be a prerequisite for participation in the city's life. It recognizes the importance of transit and non-motorized transportation modes such as walking, cycling and roller-blading not because they allow for a reduction in greenhouse-gas emissions, they are affordable, and directly contribute to the health of those who partake in them.

To encourage movement toward a city where residents are not dependant upon the automobile and engage in active or other alternative modes of transportation, an appropriate balance between different transportation modes must be identified. The proportion of trips made using each mode, commonly referred to as a modal share or modal split, will need to be assessed to establish the desired contribution of each mode and associated medium and long-term targets. These will frame progress towards a balanced transportation system. They will highlight necessary efforts to enable the use of particular modes, and allow real and informed choice.

An appropriate balance between modes will:

- Increase efficiency of the current system by balancing demand with existing supply and reducing congestion;
- Increase quality of life by minimizing negative impacts of transportation (air pollution, land intensiveness, noise);
- Increase levels of health by promoting healthy lifestyles;
- Support transportation systems that guarantee access to all activities for all city residents;
- Generate cost savings by reducing resource consumption; and
- Generate long term cost savings by requiring only strategic infrastructure development for efficient transportation (reduced road or parking construction).

The remainder of this paper accepts the Vision 2020 principles and objectives as the general long term goal of the City and identifies and evaluates possible policy options to support progress towards this Vision.

2. EXISTING POLICIES AND BACKGROUND INFORMATION

2.1 Current Roles and Responsibilities

2.1.1 TRANSIT SERVICES

The **Hamilton Street Railway Company (HSR)** is responsible for all bus transit service within the city, including accessible transportation. HSR is the Transit Division of Public Works Department, and therefore reports to Council through that department.

HSR is responsible for the planning, operation and promotion of the municipal transit services. This includes capital planning within the budget framework provided for transit.

While HSR is responsible for the day-to-day operations and planning of the transit system, other divisions and departments are involved in long range planning decisions:

- **Planning and Development Department** - instrumental in a wide variety of activities that influence transportation mode choice, including transit. Responsibilities include planning, land development, property management, and downtown renewal.
- **Capital Planning and Implementation Division (Public Works)** – responsible for Environmental Assessments and Transportation Planning and road projects. Capital planning would be responsible for any new transit projects involving new infrastructure (e.g. transit lanes)
- **Traffic Division (Public Works)** – responsible for operating roadway facilities used by transit.

In addition to HSR, **GO Transit** provides inter-city transit using both rail and bus services. GO Transit generally serves commuters travelling to/from the Greater Toronto Area (GTA). GO is a Crown Agency of the Province under the Ministry of Transportation of Ontario. Although GO reports to Province, it coordinates with the City of Hamilton regarding issues that impact Hamilton. The City of Hamilton is also represented on the Board of Directors of GO Transit.

2.1.2 NON-MOTORIZED TRAVEL MODES

The City of Hamilton's **Planning and Development** department is instrumental in the design and construction of environments amenable to the provision of all modes, particularly transit and non-motorized modes. The **Official Plan Reform Section** of the **Long Range Planning Division** of Hamilton's department of Planning and Development is responsible for the city's Official Plan. The Official Plan determines urban boundaries, land-use dispositions and general dispositions regarding transportation. Land use dispositions at a local and regional level will have a direct impact on mode choice. The **Urban Design Section** of this division considers the city as a more local scale, but similarly ensures that environments make transportation choices visible and practical. This division, in conjunction with **Downtown Renewal**, will be instrumental in the inclusion of downtown corridors supportive of specific modes such as walking and transit.

The Planning and Development department also includes the **Hamilton Municipal Parking System**, whose operations influence the desirability of automobile mode choices by controlling the supply and price of parking at destinations.

2.2 Review of Existing City of Hamilton Policies

2.2.1 VISION 2020

Hamilton's Vision 2020 opens with a commitment to providing access. In the city advocated, "people have the ability to contribute and participate in community life regardless of physical and mental ability, income, age, gender, spiritual or cultural background or geographic location." In its description of transportation, the vision stipulates that "public streets are designed and managed to safely accommodate public transit, cyclists, pedestrians and automobiles as complimentary forms of transportation"; and "public transit provides all citizens with easy access to activity areas". The Vision also states the desire *"to encourage a shift in personal lifestyle and behaviour towards transportation choices that enhance personal health and fitness, save money, and have the lowest environmental cost."*

To monitor progress towards a sustainable community, Vision 2020 established a series of sustainability indicators. Two indicators are aimed at monitoring progress on changing modes of transportation, transit ridership per capita and number of cars owned per capita. Initially, a target of 100 transit rides per person per year was established. This was largely based on the 1996 Regional Transportation Review, discussed later in this section.

2.2.2 OFFICIAL PLANS

Official Plan of Hamilton Wentworth

This regional plan promoted the availability of transit, by guaranteeing its presence near most residential areas:

> *3.1.1.8 Promote the integration of transit plans into the design of neighbourhood and secondary plans to achieve a distance of approximately 400 meters or a five minute walk between 90% of residential units and transit stops.*

The Public Transit section also set the explicit target of 100 trips/person/year (4.3.2.3), and encouraged transit supportive parking policies.

Recognising the importance of land use, this plan also identifies a number of regional nodes and corridors for intensification and mixed use development.

Former Municipalities

A large part of the newly-amalgamated City of Hamilton is not currently serviced by public transportation, especially smaller communities and rural areas. This does not however mean that transit has not been considered in future development. Several former municipalities adopted strategies and policies to increase the pedestrian amenity and density of their core areas, and include spaces where transit might be included, should it become feasible.

The Official Plan for Ancaster, for example, includes a recommendation "to study the necessity or needs of public transit within the Town". Areas such as Glanbrook, Dundas, and Flamborough encourage the inclusion of transit link residents to the main commercial areas and central Hamilton, "as warranted by economic feasibility and service demand" (Flamborough, D.5.8). Dundas additionally sees the application of urban design principles as a means to enable future transit ridership.

2.2.3 REGIONAL TRANSPORTATION REVIEW

The 1996 Regional Transportation Review's Transit Plan set out the following objectives (6.2.3):

- *Improve existing transit services to encourage and accommodate the Official Plan target goal of 100 annual trips per capita through provision of high operating speeds, reliable service and good passenger amenities;*
- *Support the economic and social rejuvenation of Downtown Hamilton by focusing transit services on the Central Area and significantly improving accessibility to the area from all parts of the Region;*
- *Develop and implement a more uniform level of service throughout the urban areas of the Region,*
- *Provide a greater integration of public transit services with urban land use and with other travel modes, particularly pedestrian, cyclists and autos (park and ride), and*
- *Develop full accessibility to public transit services for people with mobility limitations.*

The plan also proposes the development of rapid transit corridors toward Eastgate Mall, Limeridge Mall, and McMaster, radiating from the central area terminal, which would concurrently facilitate transfer to the GO Rail Station and upgrade the current McMaster-CBD-Eastgate "Beeline" service.

Hamilton's **Public Transit Strategy**, a sub-section of the Regional Transportation Review includes the mode split targets (as a share of motorized trips), and details the options for bus rapid transit:

The target modal share of 100 rides per capita per annum by 2021 (for internal travel within Hamilton Wentworth), compares to a 1991 value of about 57 rides per capita per annum. These can also be expressed in terms of the overall a.m. peak hour modal split. In 1991 the overall peak hour modal split was 13.6 and the target is equivalent to an a.m. peak hour mode sp7lit of 23%.

These targets are then specified across three screenlines at the a.m. peak hour as follows:

Screenline	Direction	A.M. Peak Hour Modal Split Target*	2021 AM Peak Hour Transit Trips	2021 AM Peak Hour Auto Trips**
Woodward (8, from the east)	Westbound	20% (10%)	2,050	6,200 (9,200)
Dundurn (11, from the west)	Eastbound	20% (10%)	2,230	6,750 (6,800)
Central Escarpment (10A, from the south)	Northbound	25% (13%)	2,960	6,730 (8,200)

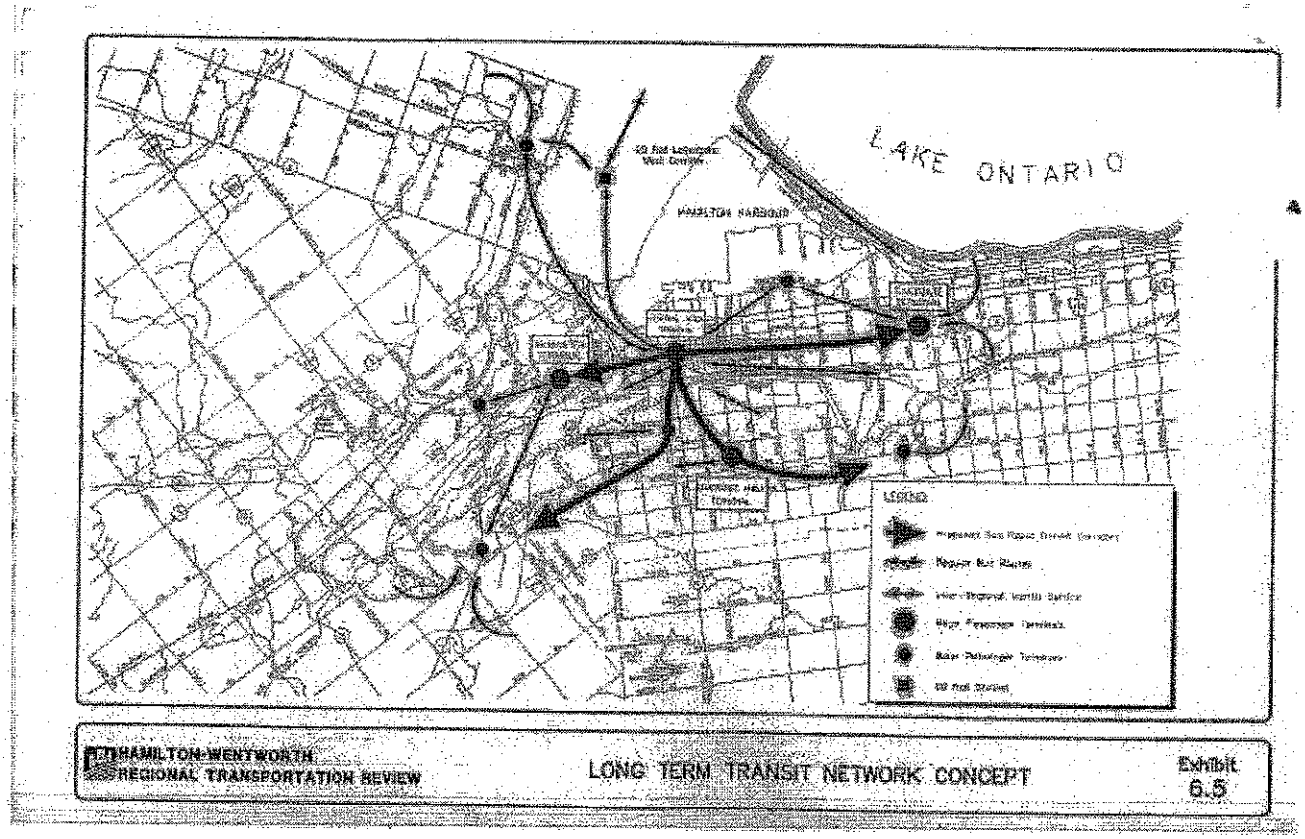
* (10%) refers to the 1991 modal split
** (9,200) – 1991 road capacity

In 1996, these targets did not seem as ambitious as one might think. They were comparable to many other cities of similar size, and only five years before, in 1986 ridership levels had reached 75 rides per capita per annum.

The Transit Strategy explores options to stimulate ridership and concludes that the implementation of a system based upon two bus rapid transit corridors, connecter routes and feeder service would be optimal. The corridors identified are shown on Exhibit 2.1 and include:

- McMaster to Eastgate East-West Corridor, through the central area,
- John/ James Corridor through the Jolley Cut to the Upper City

Exhibit 2.1: Transit Nodes and Corridors (1996 Regional Transportation Review)



Source: Hamilton-Wentworth Regional Transportation Review, 1996

2.2.4 HAMILTON RAPID TRANSIT DEVELOPMENT PROGRAME (1976)

The idea of developing rapid transit in Hamilton is not a new one, as testified by the Hamilton Rapid Transit Development Programme of the mid-seventies. The 1976 *Recommended Priority Corridor Within the Basic Trunk Network* Report had three primary objectives: "to delineate a basic rapid transit network, based on the 25 year growth forecast; to identify the priority rapid transit corridors for implementation and to develop broad performance specifications to provide guidelines in the selection of a suitable technology." The report recommended development of rapid transit along two corridors, the first along Upper James, linking the mountain to the downtown core, and the second toward McMaster.

At the time (e.g. 1976), it was expected that population would increase by 50% and employment by 100% over the 25 year horizon, which would have made Hamilton much larger than it is today.

3. PAST TRENDS AND THE CURRENT SITUATION

3.1 Modal Shares

Exhibit 3.1 illustrates the relative importance of each travel mode on a City-wide basis between 1986 and 2001. Like many other Canadian cities during this period, the City of Hamilton saw a significant increase in the use of automobiles with corresponding decrease in the use of transit. Between 1986 and 2001, local transit went from handling 12% of morning peak period trips to 6%. Most of this was due to increases in the use of automobiles, which now handle about 85% of daily trips (driver and passenger combined).

While there is no single factor that has contributed to these trends, a growing reliance on automobiles for personal travel can be explained by development trends. Development in the city of Hamilton has been greatest in the periphery of the urban area, in areas such as Ancaster, Dundas and Stoney Creek. A large part of the development in these areas is characterised by low density residential development which is centred on automobile travel and is difficult to serve by transit. This is evident by the current non-auto mode shares for trips originating in these areas, as shown on Exhibit 3.2.

In addition to land use, other factors that have contributed to changes in mode, which are explored in more detail in Chapter 4 of this paper, include:

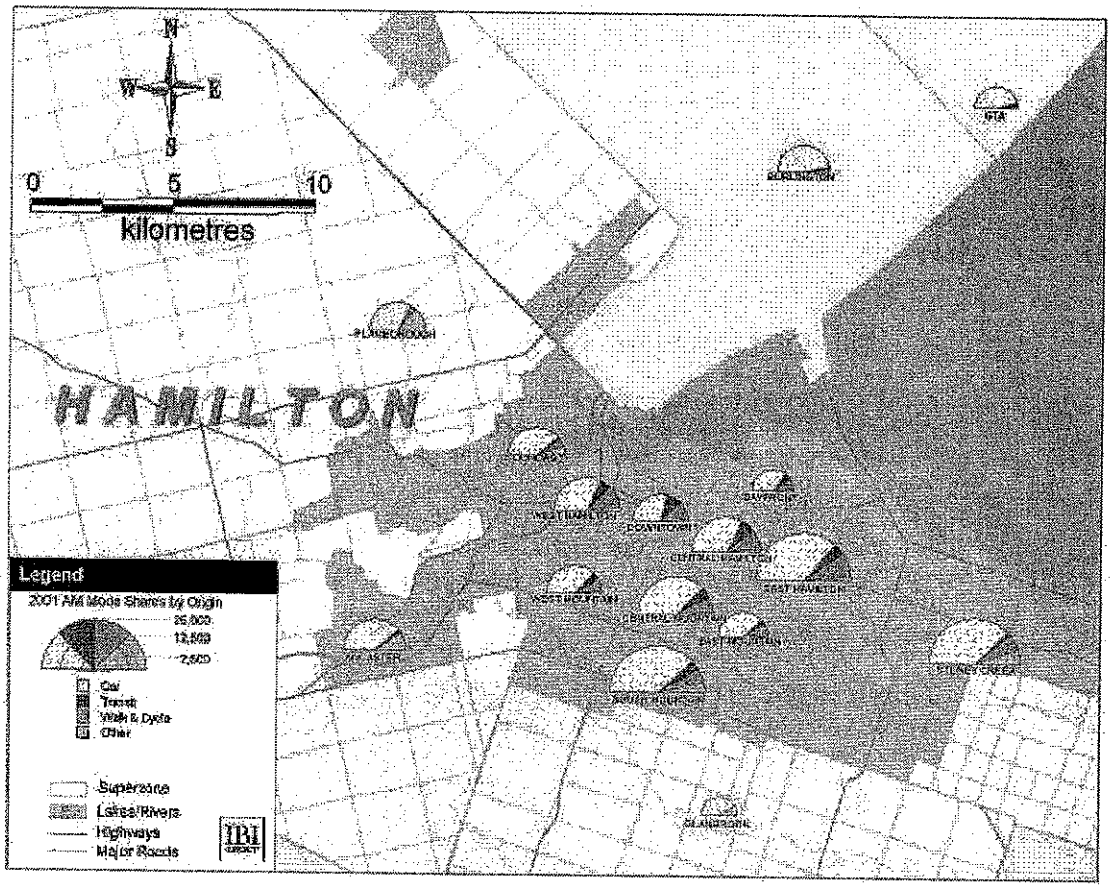
- Decreasing transit service levels;
- Increasing transit costs relative to auto travel; and,
- Changing demographics.

Exhibit 3.1: Historical Trends in Mode Shares for Trips made by Hamilton Residents

AM Peak Period						
	Auto Driver	Auto Passenger	Local Transit	GO Train	Walk and Cycle	Other
1986	63%	11%	12%	0%	11%	4%
1996	63%	13%	7%	1%	12%	5%
2001	64%	12%	6%	1%	11%	6%
24 hours						
	Auto Driver	Auto Passenger	Local Transit	GO Train	Walk and Cycle	Other
1986	63%	18%	10%	0%	7%	2%
1996	66%	18%	6%	0%	7%	3%
2001	68%	17%	5%	1%	6%	3%

Source: Transportation Tomorrow Survey, 2001, 1996 and 1986 Travel Survey Summaries for the Greater Toronto Area, prepared by the Data Management Group, University of Toronto Joint Program in Transportation, February 2003.

Exhibit 3.2: Mode Shares of Morning Peak Period Trips to Hamilton, by origin (2001)



3.2 Existing Transit Services

The Hamilton Street Railway currently provides transit service throughout the urbanised area of Hamilton. Bus routes criss-cross the old city of Hamilton and extend from Dundas and Ancaster in the west to Stoney Creek in the east, providing service generally within walking distance of most destinations. HSR does not presently serve Flamborough or Glanbrook. A map of the current bus system routes in provided in Appendix A.

GO Transit complements this local service with a combination of regional bus and rail, with the rail service operating along a line running from Hamilton to Union Station in Toronto, with stops in Aldershot, Burlington, Appleby, Bronte, Oakville, Clarkson, Port Credit, Long Branch, Mimico, and Exhibition.

3.2.1 MAIN CORRIDORS AND FREQUENCIES

Major hubs for HSR service include Jackson Square (downtown), McMaster University, Lime Ridge Mall (Central Mountain), and Eastgate Mall (Stoney Creek). While many lines branch out from these hubs, a number follow common connecting links. Between the McMaster and Jackson Square (Downtown) hubs, the King, Delaware, Beeline, and University lines run east on Main St. and west on King St. Several of these lines continue to share sections of east and west routes as they progress toward Eastgate Square.

Of the cordon point data readily available for this study, the single point with the highest ridership was at the intersection of Upper Wellington and the Jolley Cut, through which pass approximately 11,000 weekday passengers. Detailed pairs of points must however be considered on Main and King, as each street carries a single direction of traffic. This yields loads of 11,500 and 13,250 passengers along the Main/ King axis, east and west of Jackson Square respectively. At these points, buses also frequently run with loads above capacity. Details regarding load and load/capacity ratios are presented in Appendix B.

These data confirm that the Downtown area is currently the single most important predominant transit hub. Access routes to and from the terminal at Jackson Square (Gore Park) are therefore key corridors for transit service. These corridors include:

- **Main Street East and West (eastbound) and King Street East and West (westbound)** – King, Delaware, Beeline, and University lines.
- **John Street (northbound) and James Street (southbound)** extending up the Jolley Cut – Upper Ottawa, Upper Gage, Upper Wentworth, Upper Wellington, Upper Kenilworth, College, Upper Sherman, Upper James, and Sanatorium lines.

Lines in the downtown area such as the King or Barton lines run every seven to ten minutes. Lines on the mountain tend to run every 15 minutes during peak hours and every 20 to 30 minutes off peak. Other lines that serve a specific clientele, such as the University line, tend to run every 15 minutes during peak and every half an hour off-peak, with reductions in service when activity at the destination is reduced.

GO Transit operates both regional bus and rail service to Hamilton. Bus stops for GO Transit regional service are located at King and Dundurn, Main and Longwood, the GO Center and McMaster University. Go Rail service stops at Aldershot (Ancaster) and at the GO Center. The Hamilton GO Center is also located two blocks south of Jackson Square, facilitating connections with HSR service. Bus service to and from Toronto operates 15 times a day, every hour in both directions.

GO Rail service to Hamilton's Downtown terminal is limited to peak period peak direction service only. There are currently 3 trains that leave Hamilton in the morning and four trains that return in the evening. During remaining periods, trains start or terminate at Burlington station. There are 28 trains in the day and evening per direction to and from Toronto along the Lakeshore West line that serve Burlington Station.

3.2.2 TRANSIT SERVICE LEVELS OUTSIDE THE FORMER CITY OF HAMILTON

Transit service outside the old city of Hamilton is very limited. Regional and intercity transit services are limited to the GO/ Via station at Aldershot, along the Lakeshore line to Hamilton. Only two municipal (HSR) lines run through each of Ancaster and Dundas, neither operates on weekends. The Pleasant Valley and York Road neighbourhoods of Dundas are also serviced by a peak period fixed/flexible route, bringing passengers toward and from main line services, but requiring only a half hour notice for desired ride times.

In Glanbrook and Stoney Creek, arrangements have been made with local taxicab services to connect riders from areas beyond the bus service area with bus lines 27, 2, 10, 55, and 55A. Started in 1998 as a pilot project to service northern Stoney Creek, "Transcab" service has proven to be successful in cost-effectively connecting residents of areas not dense enough to warrant bus service with main transit lines. The service currently operates Monday to Saturday during the day, and costs an additional 50c above regular bus fare. Residents are required to call only an hour before their desired travel time when going toward transit lines, and service is provided at all bus

arrivals at the transit stops. In Glanbrook, Transcab services are also fully accessible, upon customer request.

3.2.3 FARE POLICIES

The current HSR cash fare is $2.10. HSR currently offers discounts to purchasers of tickets and monthly passes. These discounts are greater where additional age considerations apply, or programmes have been coordinated with employers. Fares are as described in Exhibit 3.3.

Exhibit 3.3: Current HSR Fares

	Cash Fare	Ticket (purchased in sets of 5)	Monthly pass	Reduction granted by purchase of tickets
Adult	$2.10	$1.70	$65	19%
Child	$2.10	$1.35	$50	36%
Student	$2.10	$1.35	$50	36%
Senior	$2.10	$1.70	$65 Annual pass: $205	19%

HSR also recently started the Employer Commuter Pass (EC Pass) program that offers discounted transit passes to employers who purchase bulk bus passes for their staff.

McMaster University students are entitled to unlimited travel using HSR, upon presentation of valid student identification proving that they are enrolled, as the purchase of a HSR pass is included in their student fees. Undergraduate students do not benefit from this pass during the summer.

GO-Transit fare policies are similar to HSR's in that discounts are granted for the purchase of two or ten tickets or a monthly pass, and are increased for students and seniors. A single adult fare to Toronto's Union Station costs $8.45, while a monthly pass allowing you to make the same trip costs $269.

HSR has developed integrated fares with both GO Transit and Burlington Transit. Fare integration with Burlington Transit is fully complete, requiring only a valid transfer to switch between HSR and Burlington Transit Services on intersecting routes. Integration with GO Transit is also facilitated in that GO-Transit monthly pass holders can purchase an additional HSR monthly pass at a reduced rate of $15.

3.2.4 HISTORICAL TRANSIT TRENDS

Despite an increase in the population of HSR's service area, ridership has been decreasing, as illustrated by Exhibit 3.4. Following the decrease in ridership, Exhibit 3.5 shows that service (as measured by vehicle service hours) has also decreased. It should be noted that the abrupt drop in service and ridership in 1998 and only partial recovery in 1999 can be attributed to a three month strike lasting November 2 1998 to January 22, 1999. Even when this event is taken into consideration, there is a clear downward trend in HSR's ridership.

Council's decision to impose area rating for transit in the former area municipalities outside of the old City of Hamilton, and to change the formula so that the transit deficit is apportioned based 100%

on the route mileage within a community has led in some instances to decreased transit service levels, in order to reduce property tax impacts for non-transit using ratepayers.

Exhibit 3.4: HSR Ridership and Service Area Population, 1992-2002

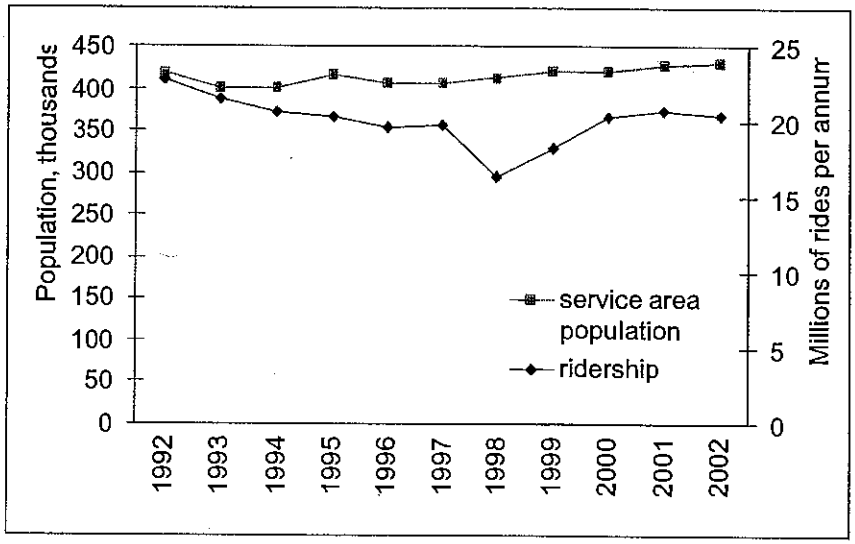
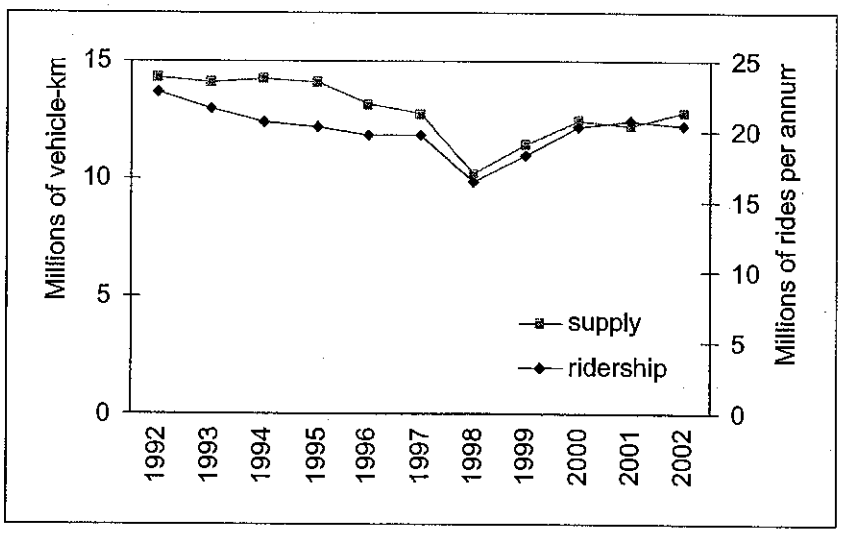


Exhibit 3.5: HSR Ridership and Supply, 1992-2002



Over the past decade, average HSR fares have increased steadily, not unlike most transit properties in Canada. This trend is illustrated in Exhibit 3.6. Although ridership has fallen, it has not fallen to the same extent that fares have risen, indicating that a large segment of HSR's riders may be captive, i.e., that they are unable to use another mode.

The ratio of revenue to cost depicted in Exhibit 3.7 has oscillated, with an overall positive trend. An increasing farebox recovery ratio has a mixed impact on transportation performance. A higher ratio means that HSR is operating more efficiently and reducing its overall burden on the tax base. However, it also means that transit riders are shouldering a greater portion of the cost of transit,

which is a public benefit and this is likely responsible for a significant portion of the ridership losses that have been experienced. From a social perspective, it is desirable to have an increasing cost recovery ratio that is complemented by an increasing trend in transit ridership, which has not been the case in Hamilton in over the last decade.

Exhibit 3.6: Ridership and Fares, 1992-2002

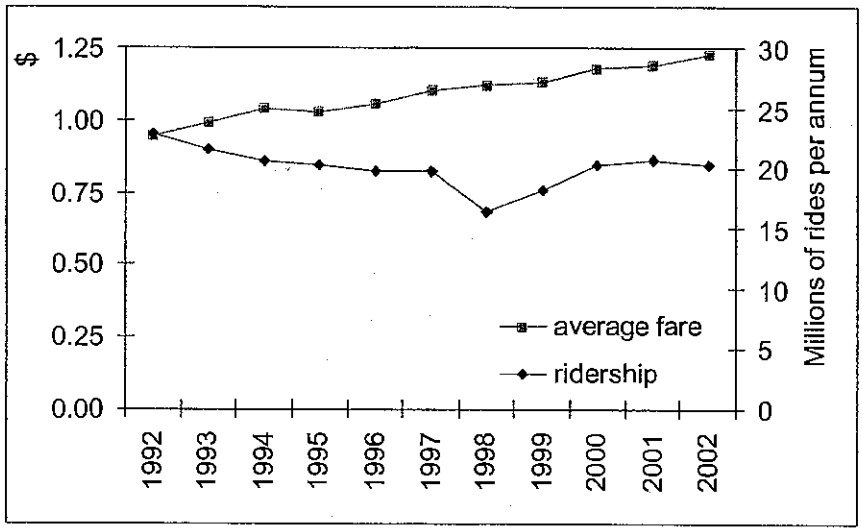
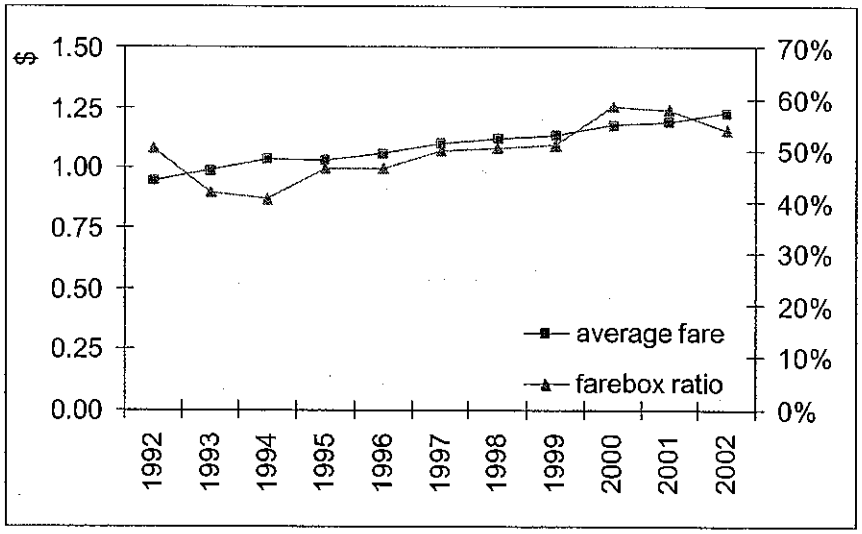


Exhibit 3.7: Average Fare and Farebox Ratio, 1992-2002

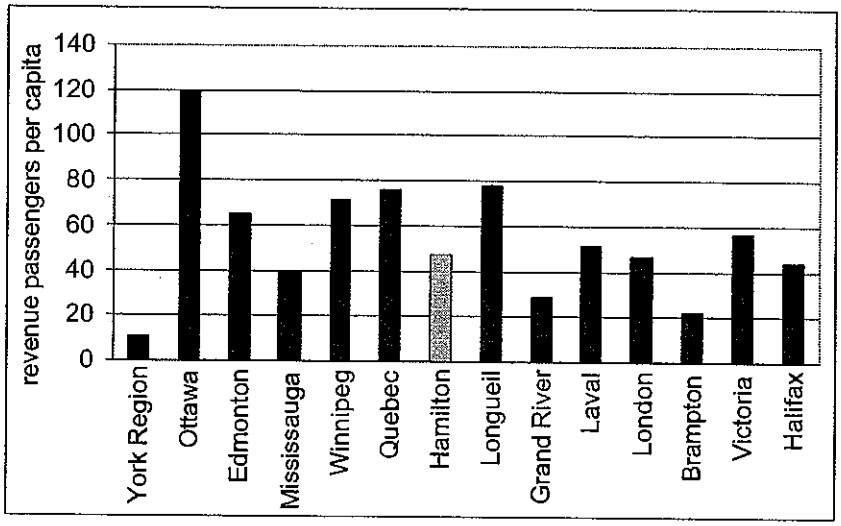


3.2.5 HSR IN A NATIONAL CONTEXT

When compared to other transit providers with similar service populations, HSR is about average. Vehicle hours per capita, revenue passengers per capita, or net expenditures per capita all fall within the range defined by similar sized cities, as illustrated in Exhibits 3.8 to 3.10. It should be noted that of the operators featured in these exhibits, Edmonton was the only area to operate both light rail transit and buses in 2002, although Ottawa has an extensive busway system. However, as

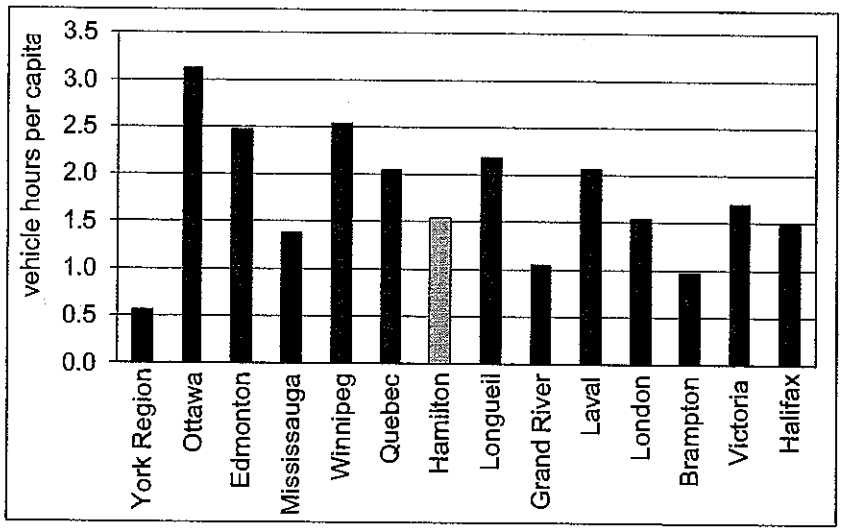
discussed in Chapter 5, York Region, Winnipeg, Waterloo (Grand River Transit) and Halifax are all considering or have committed to higher-order transit – either Bus-Rapid Transit (BRT) or light rail transit (LRT).

Exhibit 3.8: 2002 Annual Per Capita Ridership



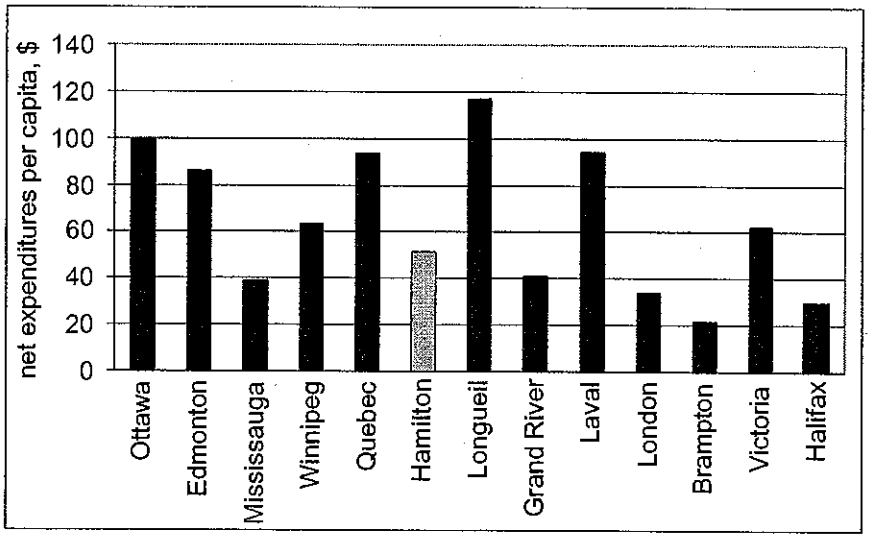
Source: Canadian Urban Transit Association, Canadian Transit Fact Book, 2002
Note: Transit operators are depicted in order of decreasing service area population

Exhibit 3.9: 2002 Annual Vehicle Service Hours per Capita



Source: Canadian Urban Transit Association, Canadian Transit Fact Book, 2002
Note: Transit operators are depicted in order of decreasing service area population

Exhibit 3.10: 2002 Net Expenditures per Capita



Source: Canadian Urban Transit Association, Canadian Transit Fact Book, 2002
Note: Transit operators are depicted in order of decreasing service area population

4. FACTORS INFLUENCING TRAVEL BEHAVIOUR

The mechanisms that motivate choice of mode have been studied extensively. Although their relative influence varies from one area to another, they generally include:

- Land use factors, including distances between activities and ability to make trips using non-auto modes.
- Service levels, including availability, accessibility, level of amenity, travel time, including out-of vehicle waiting time, safety and security.
- Transportation costs, both absolute and out-of-pocket.
- Demographic factors: such as age and income.

Each of these broad factors are discussed briefly below in order to provide context to the development of policies that may influence current travel trends.

4.1 Land Use Patterns

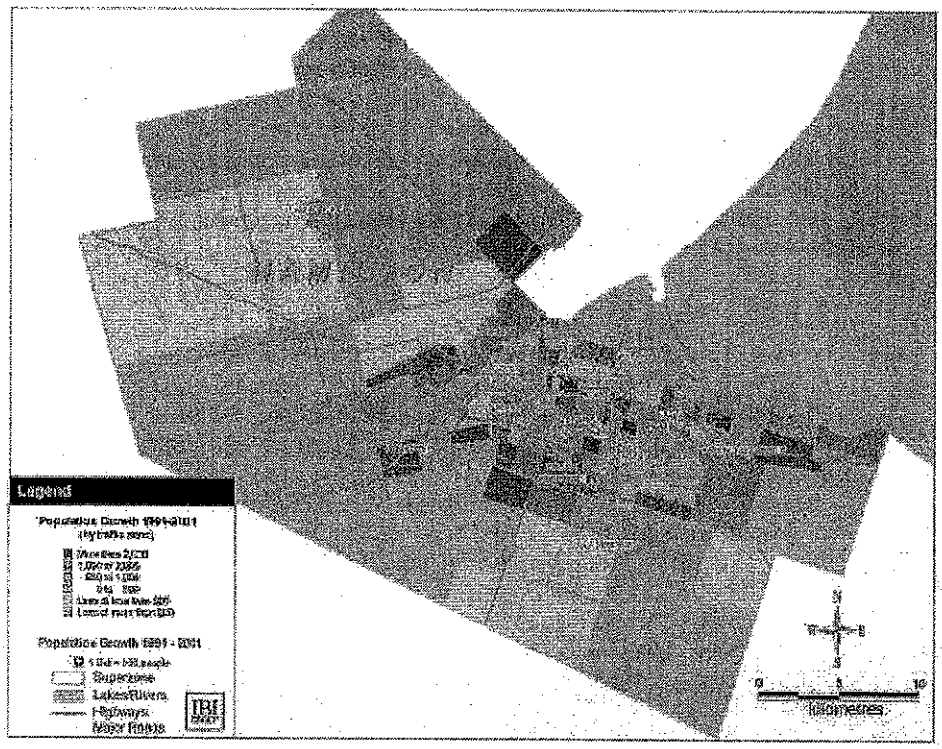
As discussed previously, land use patterns and growth patterns have a direct influence on the use of transit and other non-auto modes. As displayed in Exhibit 4.1, most of the growth in the City of Hamilton has been in areas that are not primary transit markets. This is compounded by losses in employment in the Downtown core and Central Hamilton.

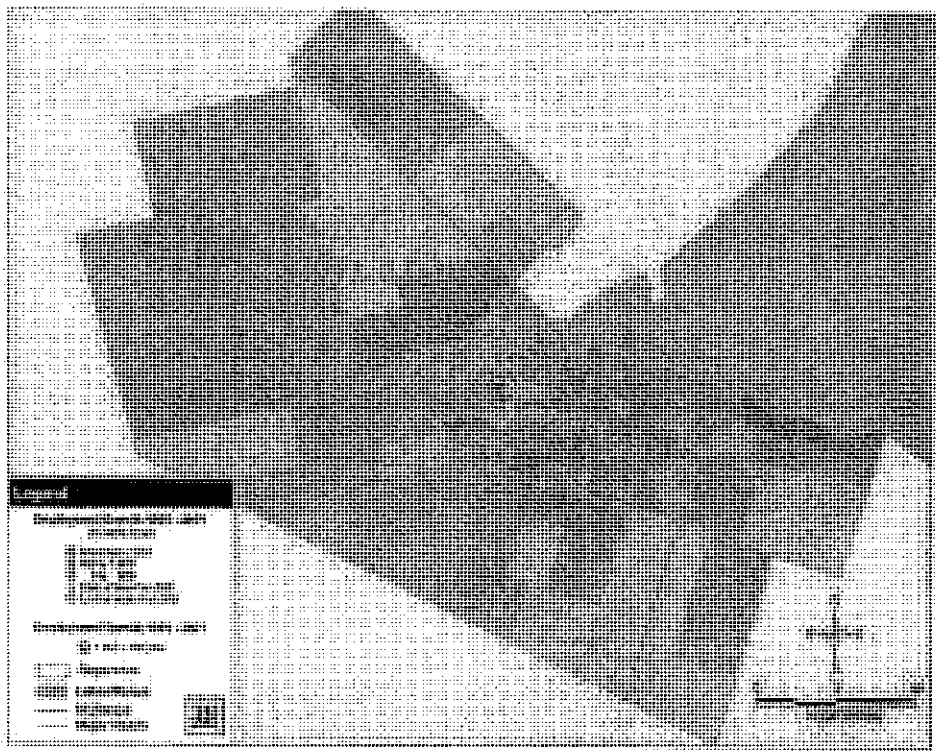
At present, about 25% of all transit trips in the City of Hamilton originate from the Downtown Core or Central Hamilton. A further 70% are generated from within the rest of the former City of Hamilton, with only 5% coming from outside the City of Hamilton. Similar patterns occur for trip destinations where the Downtown and Central Hamilton account for 25% of all transit trips.

In contrast to these patterns of transit usage, growth in population and employment has been in the direct opposite direction. Between 1991 and 2001, areas outside of the former City of Hamilton accounted for 75% of all population growth while employment in the Downtown and Central Hamilton decreased by 25%. Given these growth patterns, the observed trends in transit mode shares were unavoidable.

Clearly, reversing the declining role of transit can only be achieved by recognizing past and projected land use trends. To date, the simpler administrative environment created through amalgamation has not necessarily resulted in coordination and implementation of land use plans that allow transit to take on a larger role in meeting travel demand.

Exhibit 4.1: Historical Population and Employment Growth (1991–2001)





Fortunately, plans for new areas and existing areas are heading in the right direction to facilitate greater use of transit and other non-auto modes. These are already outlined in former regional and local planning documents and include intensification along corridors to increase street activity and promote community building through the use of non-motorized modes. Within the simpler administrative environment created by amalgamation, it is possible to coordinate and ensure implementation of these plans.

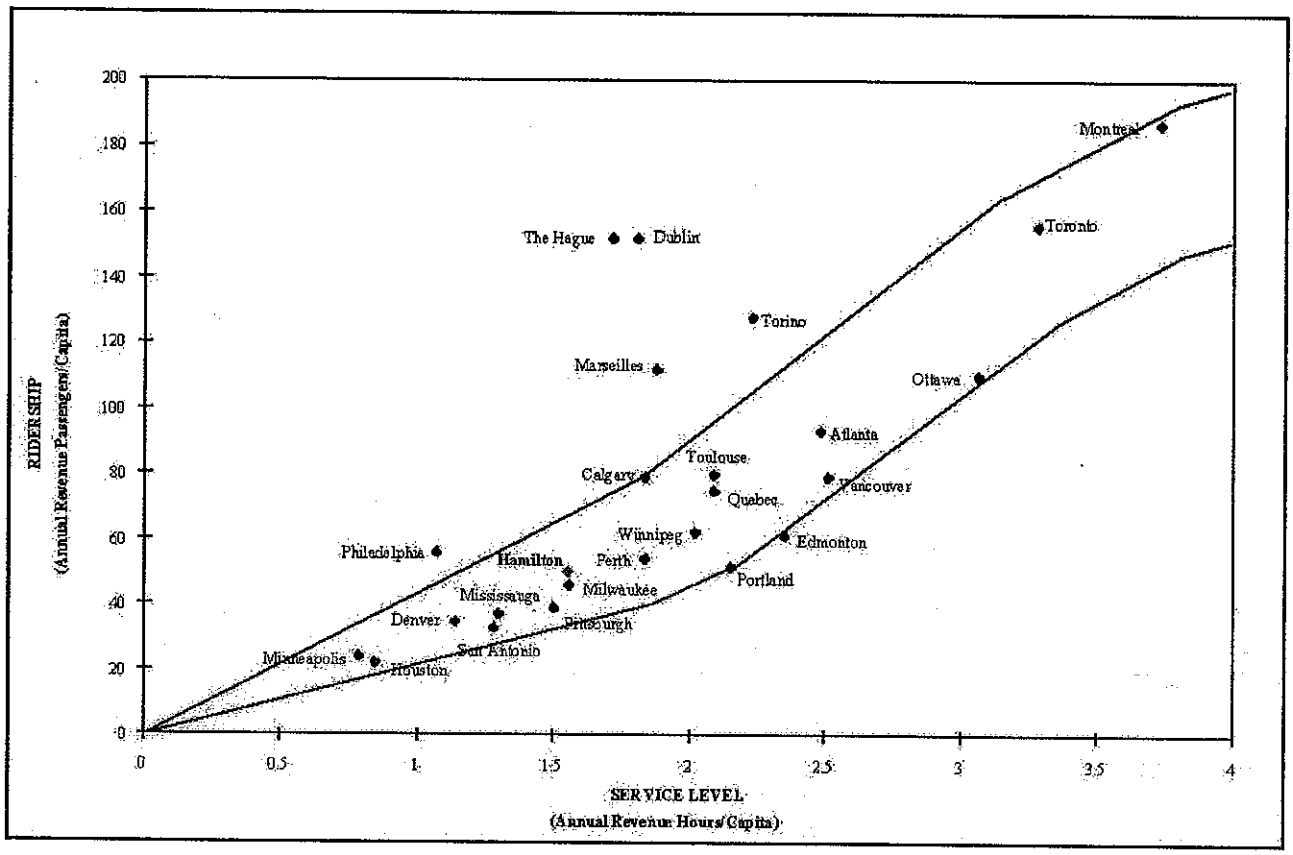
Highly beneficial to transit ridership are Hamilton's current plans for its central area and the push to increase density in the downtown core. Downtown employment in Hamilton is expected to increase as a result of new policies contained in the Downtown Secondary plan, reversing the trend of decline of the past few years.

4.2 Service Levels

Exhibit 4.2 shows a correlation between level of service and ridership levels for transit. More specifically, it confirms that in a North-American context the availability of service as measured by revenue hours per capita is a key element in choice of that mode. Hours of service translate into issues such as frequency, extent of the service area, and operating hours, all of which play into the choice of a mode. Transit service levels also describe the degree of flexibility provided, assumed inherently unlimited with the personal vehicle, as the latter is assumed to be always available to its driver, and easily directed to the destination of one's choice. Where transit is not granted priority on the road network, operating speeds of personal vehicles are much greater, as they do not need to take into consideration stops for other passengers. Hamilton's position relative to other comparable cities is below the median and average for both transit ridership and level of service, but well within the expected correlation.

Safety, security and stigma are also very important issues in the choice of a mode. Particularly for non-motorized modes, conflicts with other modes, the availability of secure parking and climatic conditions can play into the choice of a mode. The availability of dedicated facilities such as sidewalks and well-lit and well-maintained trails also greatly contributes to the perceived feasibility of non-motorized modes. These factors are explored in other policy papers, such as Level of Service and Walking and Cycling.

Exhibit 4.2: Ridership versus Service Levels



Source: Compiled by IBI Group from various sources. Data is representative of ridership levels for other cities in 1998.

4.3 Demographic Factors

Age, number of persons per household, and income are all factors in the choice of mode. These often limit a person's ability to use one or several modes implying a reduction in the number of choices available to them individually versus all of the choices available for a given trip. Demographic characteristics can either directly or indirectly limit the availability of certain modes. Younger persons, for example, may not be legally old enough to drive, whether or not they have access to a vehicle.

The aging population of many areas in Hamilton also increases the incidence of physical incapacities. Loss of sight, mobility, hearing, or other physical abilities associated with aging can become prohibitive to driving and active transportation modes, without imply a reduction in mobility needs. Ensuring that modes such as transit or assisted transit are available in all area of the city guarantee independence and activity of the elderly for a longer period of time.

Income and personal wealth also play a part in the selection of modes, once again determining the feasibility of auto-ownership and the ratio of drivers to automobiles. For families with limited income, even the cost of a single vehicle can be prohibitive. Sharing a vehicle often leaves one person at a time reliant on another mode, such as transit. Employment type and field greatly influence transportation needs. The need to carry commercial goods or tools, or work at unusual or irregular

times or places such as shift work, for example, influence transportation needs: trips are in time periods outside of regular commuting times; cumbersome loads are difficult to accommodate.

Between 1986 and 2001, the median age of Hamilton residents increased from 32.1 to 37.8. A large majority of this increase can be explained by the increase in the over 65 age category, which increased from 11% to 16%. A corresponding decrease occurred in the 16-25 age category (17% to 13%). This may partially explain the tends in transit mode shares, as persons between 16 and 25 have the highest rates of transit use.

4.4 Transportation Prices

Costs factor into the choice of a mode, and generally more strongly when these are out-of-pocket costs. While walking is relatively costless and other active modes require only minimal investment, motorized transportation is more expensive, be it because of fare or pass purchase, or fuel, parking, and insurance costs.

Transportation prices do not however currently reflect their true costs, as the contribution of municipal or other taxes to transportation systems is often overlooked. For automobile owners, where the initial costs (purchasing, insuring, etc.) of the car has already been made, the incremental price difference between using their personal vehicle and another mode – even an active mode – is fairly low. Where parking is not free, it is still relatively inexpensive although recent fuel price increases have made it less so. Parking prices in the downtown core range from 2 to 5 dollars for the entire day, at their highest barely more than a single return bus fare. For families or groups making a trip together, this makes the personal vehicle appear more economical than transit.

Transit fare prices, in particular, are critical. For travel to work when active modes are not feasible, transit may be the only affordable alternative. The stability of Hamilton's transit ridership despite recent price increases would tend to indicate a low elasticity of demand: of those who ride transit, the majority are "transit captives". Transit is their only choice most often because it is the only choice they can afford or it is the only feasible choice available. As fares increase, this affordability decreases, reducing accessibility of employment, and finally increasing chances that transit captives will become dependant upon social security networks.

5. REVIEW OF CURRENT INITIATIVES IN OTHER JURISDICTIONS

This section explores policies in other jurisdictions related to transportation targets, and specifically mode split targets. It also provides a summary of some of the initiatives jurisdictions are pursuing to help achieve these targets.

5.1 Ontario

Region of Peel

The Region of Peel Official Plan calls for an "increased public transit modal share" in its general objectives, and specifies that "It is the Policy of the Regional Council to encourage area municipalities to achieve a minimum 20% Peak Period modal split for transit within the urban system served by transit by the year 2021". The plan also includes the provision of "bicycle and pedestrian opportunities in the design of roadways" and the creation of a bicycle network in coordination with adjoining regions/municipalities. A policy to encourage ridesharing is coupled with the development of a High Occupancy Vehicle (HOV) network.

Region of Durham Transportation Master Plan

The Region of Durham Transportation Master Plan sets a target of "reducing afternoon peak period automobile driver trips by 15% below forecasts compared to forecasts based on current trends by 2021. A tremendous projected growth makes this a necessary measure to keep the transportation system operating at a reasonable level of service. Most of this reduction in the automobile driver mode share is expected to be absorbed by transit, bolstered by the phased development of a bus rapid transit network. The implementation of this *Transit Priority Network* includes "transit priority measures, such as reserved lanes, queue jump lanes and transit-activated signals", and the promotion of transit supportive land-uses. Additionally, GO transit is being lobbied to increase bus and rail service.

York Region

York Region is seeing increasing urbanisation in the form of low density bedroom communities for Toronto as well as increased employment with employees coming both from Toronto and within York Region. This has resulted in large increases in traffic, both to and from Toronto as well as within the Region, which are generating congestion problems the Region is attempting to address. York Region Transit currently provides local bus service while GO Transit operates commuter service to Toronto including a number of park-and-ride facilities.

With the goal of "providing service that is convenient, accessible and equitable to all the residents of York", the York Region *Transportation Master Plan*'s Regional Infrastructure chapter highlights the importance of coordinated transit that links origins and destinations, including coordination with service beyond the region's boundaries. It also stresses the importance of urban design and minimization of walking distance to transit stops.

The Official Plan stipulates in its public transit section that, "it is the policy of Council that [...] in the urban areas the thirty year target will be one-third of all peak period trips by transit"(6.2.1). This share is supported by a policy to "support improvements in service, convenient access, and good urban design", including pedestrian walkways and extensive rapid transit development.

The implementation of a regional rapid transit network is based on the phased introduction of rapid transit on the Yonge and Highway 7 corridors with additional links to subway lines in Toronto, expansion of GO rail, intermodal transit points, and a network of HOV lanes to facilitate bus

movements on other arterial corridors. The first phase of York's rapid transit network will be Bus-Rapid-Transit and is set to be operational by 2005. Many of the areas served by the rapid transit network may not yet have densities sufficient to support rapid transit service but these areas are growing and densities are increasing quite rapidly. In light of continued development pressures due to the proximity of Toronto, the rapid transit network is welcomed rather as a frame to guide more desirable and place-sensitive forms of development.

City of Ottawa

The City of Ottawa has also adopted a policy very similar to Hamilton's Vision 2020. The City's *Transportation Master Plan* of June 2003 sets ambitious numerical targets for sustainable modes, in keeping with this agenda. Variations in the afternoon modal share of walking and cycling are conservative: "the walking modal share will increase from 9.6% in 2001 to 10% in 2021", and "the cycling modal share will increase from 1.7% in 2001 to 3% in 2021". These variations are based in the assumption of compact mixed-use development and the continued development of facilities, countering an increase in the number of trips too long to be feasible, particularly by walking.

Transit on the other hand is where most of the shift to sustainable modes is expected to happen. The Plan foresees that "transit will increase significantly: in the afternoon peak hour in 2021, 30% of all motorized person-trips will be made by transit – an objective that nearly doubles the current proportion". Extensive infrastructure developments are scheduled concurrently to support this growth.

With a service population of just over a million, the City of Ottawa's OC Transpo has developed an extensive transit system, which aptly negotiates the city's finger-shaped development between historic waterways. A bus rapid transit system referred to as the Transitway serves as a spine to a system including local, main line, express and employment area service. The recently developed O-Train adds light rail to this comprehensive service.

The Transitway is a dedicated and often grade separated bus right-of-way running east-west along Highway 417 (Queensway) and through the downtown core, with branches splitting toward major destinations in the south. This infrastructure has been built progressively, starting with reserved lanes in the downtown core and the east west lines, expanding along the routes to the south. Buses maintain a high frequency along this axis, with lines extending toward major nodes and transfer points.

Intermodal integration is a key component of this system. Bicycle parking and bicycle racks on buses allow smooth transfer from one mode to another. Park-and-ride facilities are set up at Transitway stations outside of the downtown core and in a number of rural villages to allow drivers to transfer to the transit system. Express buses link riders from these lots to stations along the Transitway.

Ottawa's commitment to transit has succeeded in keeping transit mode shares at 15% of all motorized trips in the PM peak period. Ottawa's Transportation Master plan seeks to increase this share to 30% by 2020 through an extensive infrastructure plan that would quadruple the current rapid transit infrastructure. Key elements within the transit strategy are summarized as follows:

- ***Essential supporting measures*** *in the areas of land use planning, parking management, transportation demand management, financial incentives for transit use, intermodal integration and infrastructure priority setting*

- ***Transit service strategy initiatives*** *related to route network structure and service standards, fares and funding, service to villages and rural areas, interprovincial transit service, and service from adjacent municipalities*

- ***Transit service for customers with disabilities*** *through more accessible conventional services as well as specialized services*

- ***Transit priority initiatives*** *that will reduce delay and increase reliability for transit vehicles operating on arterial roads*

- ***Rapid transit system expansion*** *to create Transitway and light rail networks several times larger than today's, and to build dozens of new stations and several new Park & Ride lots*

- ***Fleet expansion and replacement*** *to upgrade and almost double the size of today's transit fleet while integrating environment-friendly technologies that can reduce air emissions*

5.2 Rest of Canada

Winnipeg

Winnipeg has mode shares higher than most cities of its size, at all times of the day and for the entire city. It boasts annual ridership of 72 rides/capita (in the service area). Winnipeg Transit's service is based in a system of 68 bus routes including main line bus service, express buses and suburban feeders. The city's radial urban form facilitates service from suburban areas toward the downtown core. In several low-density residential areas, service on-demand is provided by the DART system, linking riders to main lines. Nine park-and-ride lots and bicycle racks on buses for certain routes encourage intermodal transfer.

As of March 19, 2004, the City of Winnipeg has secured funding from all three levels of government to implement the first development phase of a new Bus Rapid Transit (BRT) service outlined in the City of Winnipeg's official plan, *Plan Winnipeg 2020 Vision*. The BRT plays a central role in the City's plan for downtown revitalisation and compact urban development, while stimulating the local economy and being environmentally responsible. The BRT initiative will include "exclusive busways in radial corridors for transit and emergency vehicles", transit signal priority, and upgraded stations that provide up-to the minute information and comfortable waiting areas. The busways will also include recreational paths for active transportation modes such as walking and cycling.

Halifax

Halifax Regional Transit has also developed a bus rapid transit strategy involving priority signals along three corridors, connecting downtown Halifax with surrounding communities. Efficient traffic operations along these corridors are guaranteed by the SCOOT traffic management system, which re-establishes signal coordination after pre-emption by a transit vehicle.

This BRT system is integrated with assisted transit for persons with disabilities. Stops along the transit corridor are equipped to serve both clienteles. Intermodal integration is also promoted at transit stops: carpool vehicles benefit from preferential parking measures, and lockers are provided for bicycles.

Quebec City

Quebec City has decided to increase both ridership on its transit system and transit's overall modal share. To achieve these goals, the city is considering an expansion of its current "Metrobus" rapid transit lanes. Service levels to lower density areas will be maintained and increased, stations and vehicles will be modernised. Increased capacity on Metrobus lanes will be achieved using articulated buses or through implementation of a light rail system.

5.3 United States and Europe

Rapid transit and priority measures for active transportation modes are increasingly being put into place in large and medium size urban centres around the world. These cities understand these measures as a means to reduce vehicular congestion, improve air quality and more generally enhance the quality of life of their citizens. Cities in the United States such as Houston, St Louis and Seattle have implemented light rail schemes. Others such as Cleveland, Pittsburgh, Portland and Honolulu are or have implemented bus rapid transit or a combination of bus and rail rapid transit.

Concurrently with these efforts is increasing recognition of the importance in appropriately designing communities. Pedestrian, cycling and transit-friendly urban form are increasingly advocated and required for new development and the reconversion of existing areas. This includes the development of cycling networks, or streetscape improvements to improve the pedestrian realm.

Quantitative targets, particularly for mode splits, are however infrequent.

6. POLICY OPTION ISSUES

6.1 Future Outlook

In order to develop policies to influence future directions, it is necessary to examine what the future would look like assuming current trends remained constant. The City of Hamilton has developed land use forecasts for a trends scenario and these are used as a starting point for the examination of future transportation trends.

As discussed previously, there is a direct link between development patterns and transportation behaviour. In general, lower density suburban areas are more difficult to serve by transit and therefore a lower portion of trips are made by transit. The same holds true for walking and cycling.

Exhibit 6.1 illustrates how transportation performance measures, specifically trips per capita by mode and mode shares, would change over time under current trends. In calculating these variables, the City has been subdivided into four distinct areas:

- Downtown and Central Area;
- the rest of the former City of Hamilton;
- Ancaster, Dundas and Stoney Creek (representing suburban areas with limited transit); and,
- Glanbrook and Flamborough (representing suburban and rural areas with little or no transit).

Modal shares and trips per capita for the City as a whole are based on holding mode shares constant for each geographic area and applying these to the estimated total person trips.

In 2021, assuming a trends land use scenario, more people will be living in areas not currently served by transit or with relatively low transit service levels. This has the effect of lowering both the number of transit trips per capita and the transit mode split for the City as a whole. It also has the effect of lowering auto passenger mode shares as well as walking and cycling mode shares. Without intervening land use or transportation policies, as more people move the suburban areas, more people will need to rely on private automobiles for their daily travel.

The projected trend scenario is a challenge, particularly given environmental concerns as well as the projected rising cost of fuel (see Energy Use and Greenhouse Gas Emissions Policy Paper for discussion of the issue).

Exhibit 6.1: Current and Projected Based Case Land Use and Transportation Trends

2001 Existing Land Use and Travel Patterns

	Downtown and Central Area	Rest of City of Hamilton	Dundas, Ancaster, Stoney Creek	Flamborough, Glanbrook	City Total
2001 Population	63,850	253,864	116,798	48,880	483,392
Total Trip Productions	105,518	533,582	183,925	54,198	877,223
Total Trips per Person	1.65	2.10	1.57	1.11	1.81
Transit Trips	13,868	38,316	2,822	148	55,154
Transit Trips Per Person	0.22	0.15	0.02	0.00	0.11
Annual Transit Rides per Person [1]	70	48	8	1	37
Transit Mode Split	13%	7.2%	2%	0.3%	6.3%
Auto Driver Trips	62,047	341,829	129,440	38,056	571,372
Auto Driver Trips per Person	1.0	1.3	1.1	0.8	1.2
Auto Driver Mode Shares	59%	64%	70%	70%	65%
Auto Passenger Trips	16,032	96,556	32,041	8,994	153,623
Auto Passenger Trips per Person	0.3	0.4	0.3	0.2	0.3
Auto Passenger Mode Shares	15%	18%	17%	17%	18%
Walking and Cycling Trips	11576	44418	9208	1883	67085
Walking and Cycling Trips per Perso	0.2	0.2	0.1	0.0	0.1
Walking and Cycling Mode Shares	11%	8%	5%	3%	8%
Other Trips [2]	1995	12463	10414	5117	29989
Other Trips per Person	0.0	0.0	0.1	0.1	0.1
Other Mode Shares	2%	2%	6%	9%	3%

2021 Land Use and Travel Patterns - Projected Trends

	Downtown and Central Area	Rest of City of Hamilton	Dundas, Ancaster, Stoney Creek	Flamborough, Glanbrook	City Total
2021 Population	68,804	263,640	151,037	71,332	554,813
% change	8%	4%	29%	46%	15%
Total Trip Productions	113,705	554,130	237,842	79,093	984,769
Total Trips per Person	1.65	2.10	1.57	1.11	1.77
Transit Trips	14,944	39,792	3,649	216	58,601
Transit Trips Per Person	0.22	0.15	0.02	0.00	0.11
Annual Transit Rides per Person [1]	70	48	8	1	34
Transit Mode Split	13%	7.2%	2%	0.3%	6.0%
Auto Driver Trips	66,861	354,992	167,385	55,536	644,775
Auto Driver Trips per Person	1.0	1.3	1.1	0.8	1.2
Auto Driver Mode Shares	59%	64%	70%	70%	65%
Auto Passenger Trips	17,276	100,274	41,434	13,125	172,109
Auto Passenger Trips per Person	0.3	0.4	0.3	0.2	0.3
Auto Passenger Mode Shares	15%	18%	17%	17%	17%
Walking and Cycling Trips	12,474	46,128	11,907	2,748	73,258
Walking and Cycling Trips per Perso	0.2	0.2	0.1	0.0	0.1
Walking and Cycling Mode Shares	11%	8%	5%	3%	7%
Other Trips [2]	2,150	12,943	13,467	7,467	36,027
Other Trips per Person	0.0	0.0	0.1	0.1	0.1
Other Mode Shares	2%	2%	6%	9%	4%

[1] Based on 320 equivalent days per year.

[2] Includes taxi and school bus

Note: Figures exclude trips to and from areas outside of the City. The figure of transit ridership per capita is also based on total population, including population in areas not served by transit.

6.2 Options for Improving Mode Choice and Reducing Auto Dependence

The starting point for developing policy options for transportation targets is that there is a need to promote a more balanced transportation system which provides a range of travel mode options and results in a reduced dependence on motorized transportation, specifically single occupant vehicles. This broad policy objective has been in place since the adoption of Vision 2020 in the early 1990's and has recently been endorsed through the Vision 2020 Renewal process and the G.R.I.D.S study design and consultation processes.

Despite the policies that have been put in place to move towards a more sustainable transportation system, actual transportation trends have been moving in the opposite direction as highlighted in this report.

One of the limitations of past efforts, including the 1996 Regional Transportation Review, is that they have failed to look at transportation and land use in a comprehensive manner. It is not realistic to establish a target for doubling transit mode splits if population and employment are shifting to areas that are difficult to serve efficiently with transit. A compounding factor, was the fact that transit funding has been reduced over the years necessitating transit service reductions and fare increases.

Another limitation of previous work is that targets for promoting sustainable transportation have focused primarily on transit (e.g. mode shares, transit riders per capita), without considering the real goal of sustainable transportation – which is to reduce the need for motorized travel. For example, a 50% increase in transit ridership per capita may seem like a large goal, however, under the current situation this would result in a 4% reduction in auto trips only, assuming all new transit riders came from automobiles.

This policy paper adopts a comprehensive and integrated approach for developing transportation targets addressing the following potential policy areas:

- Land use considerations
- Reducing motorized travel and shifting travel to more sustainable modes
- Providing improved transit

Potential options under each of these areas are examined in the remainder of this section.

6.3 Land Use Considerations

Land use is a key determinant of transportation choices. Land use strategies that would serve to increase the potential for walking, cycling and transit are generally well documented and include:

- increasing development densities, particularly in primary transit corridors, such that higher transit service levels can be provided, which in turn improves the efficiency of transit and makes it a more attractive alternative;
- providing a mix of compatible land uses and live/work opportunities so that people can walk or cycle to activities and so that trip frequencies and/or distances are reduced.
- improving the design of developments, with features for pedestrians and cyclists (e.g. connectivity of streets, attractive pedestrian spaces, variety of building types).

These strategies are discussed in more detail in the Urban Structure and Land Use Policy Paper as well as the Urban Design Policy Paper.

The challenge facing the City of Hamilton is that it its urban structure is generally established. With only a 15% projected increase in population, it would be difficult to drastically influence settlement patterns.

Nevertheless, there are opportunities for promoting new development and focusing redevelopment in areas that have a greater potential for more sustainable transportation options, for example, downtown Hamilton.

Under a **hypothetical** scenario, if 75% of the projected population growth from the outer areas were refocused on the downtown and the older part of the City (taken as the former City of Hamilton), and travel patterns and behaviour remained as it is today, the likely effect would be as follows:

	Existing	2021 Trends Landuse	2021 with 75% of population growth in former City of Hamilton (hypothetical scenario)
Annual Transit Rides per capita [1]	37	34	37
Daily Transit Mode Shares	6.3%	6.0%	6.4%
Daily Walk and Cycle Mode Shares	7.6%	7.4%	7.7%

[1] Note: Figures exclude trips to and from areas outside of the City. The figure of transit ridership per capita is also based on total population, including population in areas not served by transit. Considering only areas served by transit, riders per capita was 47 in 2002.

This simplistic calculation, which does not account for possible changes in employment growth patterns, suggests that changes in land use alone, at least at the broad level, will not result in significant changes to travel behaviour over a 20-year period. As a result, changing travel behaviour and reducing auto dependence will require a combination of measures, including improved transit service as well as incentives and disincentives for mode shifts.

6.4 Encouraging More Sustainable Travel

The goal of the city is to encourage a shift to more sustainable forms of transportation including walking, cycling and transit as a means of reducing the impacts of motorized travel. In addition, where motorized travel is required, it is desirable to have more people per vehicle. Over and above this, there is a need to reduce both the number of auto trips and length of auto trips if more sustainable transportation is to be archived.

During the consultation exercises for this study, it was apparent that changing travel behaviour will require a combination of incentives and disincentives. Potential incentives for reducing motorized travel or encouraging mode share increases of more sustainable modes include the following:

- Increasing transit service coverage, transit service levels and transit speed through priority measures;
- Improving facilities for pedestrians and cyclists;

- Providing discounted transit fares to targeted markets (e.g. post-secondary students, major employers);
- Improving the image of using transit, walking and through information campaigns and through the design of facilities and services.

Most of these incentive initiatives are discussed in more detail in other policy papers including the Walking and Cycling Policy Paper and the Travel Demand Management Paper.

Potential disincentives for reducing auto use:

- increasing parking fees, or simply charging for parking;
- increasing the variable costs of transportation (e.g. through the use of road pricing or fuel pricing);
- regulating auto use;
- providing a better balance in service levels (e.g. designing intersections to maximize passenger throughput as opposed to vehicle throughput).

Most of these potential disincentives are discussed in the Financing and Funding Policy Paper or the Level of Service Policy Paper.

In order to establish realistic transportation targets, it is necessary to estimate the potential impact of various incentives and disincentives on travel behaviour. Within this policy paper, the intent is to establish targets for various transportation performance measures, while other policy papers discuss in more detail the means by which these targets might be achieved.

6.4.1 POTENTIAL IMPACTS OF INCENTIVES FOR SUSTAINABLE TRANSPORTATION

Numerous studies have quantified the potential impacts of incentives for changing travel mode shares. The discussion below draws on this research to provide a broad estimate of the potential impact of different policy incentives.

Increasing Transit Service Coverage

Potential Effect: Current daily transit mode shares in Flaborough and Glanbrook, not presently served by transit, are less than 1%. In Ancaster, Dundas, and Stoney Creek, which have basic transit services, transit mode shares are approximately 2% of all trips. On the other hand, transit modes shares for trips originating in the former City of Hamilton (outside of the downtown) are approximately 7%. It is reasonable to assume that simply providing transit service to key centres in Flamborough and Glanbrook (e.g. Binbrook, the Airport, Waterdown, etc.) would achieve at least a 2% transit mode share. Similarly, increasing transit service levels in Dundas, Ancaster and Stoney Creek may increase transit shares to 5% from 2%.

City-wide Impacts: Applying the above assumptions to each of the four representative geographic areas could increase overall transit mode shares for the City from approximately 6% under the 2021 base scenario to 7%. The number of transit trips would increase from 34 to 39 trips per person per year.

Increasing Transit Service Levels

Potential Effect: There are various ways of increasing service levels. The City could choose to increase service levels evenly across the City, or focus on providing increased service and reduced headways in key corridors. Research has shown that for every 10% increase in transit vehicle-kilometres (a broad measure of service), transit ridership increases by approximately 70%[1]. Of course, this varies by the level of existing service and the manner in which vehicle-kilometres are increased.

City-wide Impacts: If HSR were to increase transit vehicle-kilometres by 25%, an amount which would bring service levels back to 1991 levels, the resulting impacts on transit ridership would be approximately a 17% increase. In 2021, rather than being 34 riders per capita, annual transit ridership per capita would be approximately 40 rides per capita for the entire City.

In order to achieve 100 annual riders per capita in 2021, a target consistent with Vision 2020, transit service would need to be increased by nearly 300%, all else being equal (i.e. no changes in land use and no other incentives or disincentives).

Discounted Transit Fares

Potential Effect: Since 1991, HSR has had to raise average transit fares by approximately 35%, which outpaced general inflation. Increases were a result of increased labour costs as well as reduced funding. One method of increasing transit ridership would be to reduce fares. This could be done on a broad basis, or on a more strategic basis by reducing fares for key markets (similar to the U-Pass Program at McMaster). Another method would be to introduce free transit in specific areas (such as the downtown) as a means of encouraging more transit use in general. Typically, most transit properties apply a fare elasticity of –0.3 to estimate impacts of changes in fares on demand (i.e. a 10% reduction in fares would increase ridership by 3%).

City-wide Impacts: In Hamilton, ridership appears to be more inelastic as ridership has remained relatively stable in spite of fare increases. However, under a very simple scenario, if HSR were to reduce average fares by 30%, it could be expected that ridership would increase by about 9%.

Marketing Incentives

Potential Effect: HSR has done a relatively good job of maintaining the image of transit in light of service reductions and limited marketing budgets. Perhaps the greatest potential for improving the image of transit is to market specific services. For example, the "Bee Line" express service provides competitive travel times and can be marketed as an enhanced service. Other municipalities, have adopted strategies of developing improved transit services and marketing these as "a different type of service." For example, York Region is promoting bus rapid transit as a travel choice that is competitive to private automobiles.

City-wide Impacts: The impacts of improved marketing of transit on a City-wide basis have not been quantified as the impacts would depend on the type of services being promoted.

6.4.2 POTENTIAL IMPACTS OF DISINCENTIVES TO REDUCE AUTO DEPENDENCY

A number of potential disincentives to encourage reductions in auto use have been considered by cities across Canada. Some the more commonly used disincentives are discussed below along with their potential impacts.

[1] The Canadian Transit Handbook, Table 7.6, Canadian Urban Transit Association, 1993.

Increased Parking Fees

Potential Effect: As shown previously, parking fees for commuter parking in Downtown Hamilton are very low and provide little disincentive to driving. The Downtown Transportation Master Plan supported a policy of increasing long term parking fees as a means of discouraging auto travel. Various studies have estimated the impacts of increasing parking charges. For example, a study prepared for Transport Canada reviewed case studies of employer-based programs that involved raising employee parking fees to market rates and found that they showed significant decreases in vehicle use, in the range of a 26 to 81 percent decrease in solo driving[2]. The same study examined a scenario of including an additional $2 to $4 charge on parking through urban areas, which yielded reductions in auto vehicle-kilometres of travel of 13% to 25% in large urban areas in Canada. Transit usage was estimated to increase by up to 18%. While these estimates are based on a large number of assumptions, they do indicate that the impact of a parking charge on mode choices would be significant.

City-wide Impacts: The impact of parking charges on mode shares would vary by degree of application. Realistically, influencing parking charges throughout the City of Hamilton, where most parking is currently free, would be difficult. Parking charges, if they were considered, are most applicable for the downtown core. At present, 16% of morning peak hour auto driver trips (28,600 trips) are destined to the downtown core or Central Area. Based on the above information, it would be realistic to expect that trips destined to the downtown could be reduced by at least 10% with the introduction of parking price increases. Increases in transit service levels would need to occur in order to ensure the downtown remained a key centre of attraction.

Increasing Variable Costs of Driving

Potential Effect: Increasing the variable costs of driving is a very direct method of encouraging more sustainable transportation behaviour and one that has been advocated by others on the basis that single occupant auto travel does not cover its "full-costs" in terms of environmental, social and economic impacts[3],[4]. While there are numerous approaches that could be adopted for increasing the variable costs of driving, including distance-based insurance, emissions charges and vehicle registration fees, the two approaches that are most applicable for a municipality are road charges (i.e. tolls for a specific facility) and fuel charges, though the latter would require legislative changes in Ontario. Several studies have examined research and concluded that (very generally) for every 10% increase in the cost of travel per-kilometre, vehicle travel would be reduced by 2%[5].

City-wide Impacts: Under a hypothetical scenario, if the variable costs of transportation were increased by 10% across the City, through a combination of one or more pricing strategies, it is possible that vehicle travel would be reduced by 2%. However, the impacts would depend on the degree to which alternative travel choices (e.g. walking, cycling and transit) are improved.

Regulating Auto Use

Potential Effect: Regulating auto use, for example by requiring permits to travel in certain area, or restricting driving on smog days, has been applied in Countries such as China where urban congestion and air quality are severe. Regulating auto use through direct means would not be applicable for Hamilton in the current context, largely because of the economic implications it would have. It is discussed here only to show that there are a range of strategies for achieving transportation targets. If very aggressive targets for reducing auto use were adopted, regulations on auto use would be required in the absence of other measures.

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[2] Strategies to Reduce GHG Emissions from Passenger Transportation in Urban Canada, prepared by Hagler Bailly for the National Climate Change Process, Transportation Table, 1999
[3] Full Cost Transportation Pricing Study, prepared by IBI Group for the Transportation and Climate Change Collaborative, March 1995.
[4] Socially Optimal Transport Prices and Markets – Principles, Strategies and Impacts, Victoria Transport Policy Institute, November 1999.
[5] Backgrounder on Greenhouse Gas Emissions from Transportation, National Round Table on the Environment and the Economy, 1998.

Balancing Service Levels by Mode

Potential Effect: Balancing levels of service, for example reducing the amount of "green time" at a signal for cars and reallocating for increased pedestrian crossing times, or providing a "queue jump" at a traffic signal for buses, would have the effect of reducing capacity for cars while improving service levels for other modes. The impacts of these strategies would vary by location depending on the amount of capacity that is provided for each mode.

6.5 Setting Transportation Targets

The 1996 Regional Transportation Review established a target of 20-25% of all peak hour trips across three screenlines being handled by transit. Targets of 15% and 20% of all peak hour trips were set for walking and cycling combined for 2011 and 2021 respectively. It was implied, but not clearly laid out, that these increases in transit and non-auto modes would reduce the number of auto trips. No targets were developed for auto occupancies or auto trip distances.

This policy paper sets out a different approach for establishing transportation targets in that it starts with auto usage as the basis for targets, from which mode specific targets for transit, walking, cycling and auto occupancies are derived. This approach is consistent with the general intent of Vision 2020, which is to become a more sustainable City. Unlike some other areas of Ontario where population growth and associated auto growth is expected to increase significantly, the City of Hamilton could accommodate all projected vehicular growth with only modest changes to the transportation system.

Transportation targets were therefore set to take into account the following:

- Auto travel is essential for the City of Hamilton to be economically viable;
- Single occupant vehicle use is the primary determinant of transportation-related emissions, which must be reduced to achieve environmental goals, improved public health, and broader goals such as the Kyoto protocol;
- High auto dependence is a signal that other modes such as transit, walking and cycling are not a viable option for many people;
- Reductions in auto usage will off-set the need for road infrastructure expansion.

Recognizing that it is important to provide stability and predictability over time, transportation targets are proposed for both the short term and longer term.

In the short term (by 2011), it is proposed that:

- Automobile usage as measured by vehicle-kilometres is reduced by 10% compared to existing (2001) levels.

This could be achieved through the following:

- Shifting 10% of the daily trips made personal automobiles to other modes including transit, walking and cycling;
- Reducing average auto trip lengths by 5%;
- Increasing auto occupancies by 5%.

The impact of these proposed targets on key transportation demand measures are shown in Exhibit 6.2.

These targets are highly achievable given the proposed policy directions set out as part of this Transportation Master Plan as well as the pending Official Plan. For example, reducing auto trips by 10% could be achieved by a person biking to work one month of the year. Reductions in trip lengths could be achieved through changes in land use that are proposed as part of the Official Plan, for example increasing the proportion of residents living in the downtown or permitting retail uses such as a corner store to locate near a residential neighbourhood. It is noted that since 1986, average auto trip distances have increased by 14%, therefore a 5% reduction is not out of the question. Increasing auto occupancy will also be encouraged by programs such as employer-based ridesharing programs (see Transportation Demand Management Policy paper).

In the longer term (by 2021) it is proposed that:

- Automobile usage as measured by vehicle-kilometres is reduced by 20% compared to existing (2001) levels.

This is a much more aggressive goal than the short term strategy because population and employment are projected to be 17% and 26% higher in 2021 respectively than in 2001. However, this target could be achieved through the following:

- Shifting 15% of the daily trips made personal automobiles to other modes including transit, walking and cycling;
- Reducing average auto trip lengths by 10%;
- Increasing auto occupancies by 5%.

This longer term scenario is also highly achievable without drastic changes in travel behaviour or limitations on residents mobility. For example, the resulting transit mode split target of 12% for 2021 is only slightly higher than the 1986 value of 10%.

Exhibit 6.2: Proposed Transportation Targets

	Current Situation (based on 2001 data)	Potential Near Term Scenario (based on a goal of reducing auto vehicle-kilometres by 10% compared to 2001)	Potential Long Term Scenario (based on a goal of reducing auto vehicle-kilometres by 20% compared to 2001)
Estimated daily vehicle kilometres of travel by Hamilton residents	4.8 million km	4.3 million km	3.8 million km
Share of daily trips made by single-occupant drivers	68%	58%	52%
Share of daily trips made by using municipal transit	5%	9%	12%
Share of daily trips made by using walking or cycling	6%	10%	15%
Annual transit rides per capita (City-wide) [1]	40	60	80-100

[1] Based on total residents within City boundaries, including residents outside primary service areas. Excludes GO Transit ridership.

6.6 Strategies for Improving Transit

6.6.1 ESTABLISHING TRANSIT CORRIDORS

Transportation plans for Hamilton since the mid seventies have envisioned the development of a rapid transit system. Past plans have considered both an east-west corridor as well as a north-south corridor.

Establishing and designating corridors for higher order transit is seen as a critical step in achieving the transportation targets outlined in this paper as well as Vision 2020. Establishing transit corridors will achieve the following objectives:

- Provides the basis for more flexible zoning which could allow and promote more compact transit-supportive development adjacent to designated transit corridors;
- Enables more efficient operation of transit vehicles;
- Allows for a range of service types, including limited stop services, which can provide travel times between major nodes that are competitive with automobiles;
- Allows HSR to market the service as a "different-type" of service, improving the overall image of transit.

As confirmed in Exhibit 6.4, most of the former City of Hamilton, and parts of Stoney Creek are of densities judged to be sufficient to support good transit service (densities above 40 residents or jobs per hectare). Newer development areas do not yet warrant similar levels of service. A number of the areas in Hamilton's downtown and central area are sufficiently dense to warrant some form of rapid transit (densities above 120 residents and jobs per hectare). These areas extend along an east – west axis below the escarpment.

The exact alignment and characteristics of the transit corridors will be established in the next phase of the Transportation Master Plan. In general, there would be two corridors:

- An east-west corridor extending from McMaster University to Eastgate Square
- A north-south corridor extending from the Downtown Core to Limeridge Mall and potentially from downtown (or a southerly location) to Meadowlands

It is proposed that the development of transit corridors occur in a phased approach starting with the enhancement of the existing Beeline (express service). A possible strategy for introducing higher-order transit would be as follows:

In the short term, establish a priority transit system by:

- Increasing service levels on existing lines within the designated corridors;
- Introducing transit priority measures including signal modifications and queue jump lanes in congestion areas;
- Developing enhanced transit stop facilities and terminal facilities;

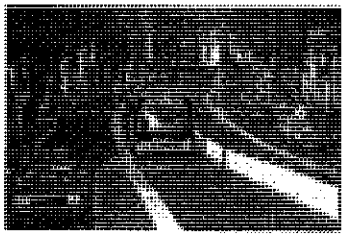
In the longer term, establish a Bus Rapid Transit System by:

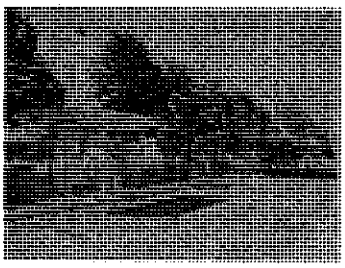
- Dedicating lanes for buses;
- Potentially utilizing advanced special-purpose buses;
- Enhancing station facilities at key locations, with the goal of integrating stations with existing or new developments;
- Implementing passenger information systems along the routes, including real-time bus information at key transit stops.

While the preliminary expectation is that the rapid transit system would rely on bus technology, it is premature to finalize this recommendation until detailed alignments and ridership forecasts are established. However, some of the considerations and characteristics of each technology are provided in Exhibit 6.3 below.

A **Bus Rapid Transit** system would be similar to systems being implemented in York Region and proposed for Brampton, Durham and many other Canadian Cities. The key advantage of a Bus Rapid Transit system is that it is cost-effective, can be developed incrementally, and provides very competitive travel times for transit. This type of system allows the City to introduce more transit-friendly development, which will ultimately provide the basis for moving to higher forms of rapid transit in the future, including **Light Rail Transit** or Subway Transit, if supported by sufficient land use densities.

Exhibit 6.3: Characteristics of BRT and LRT





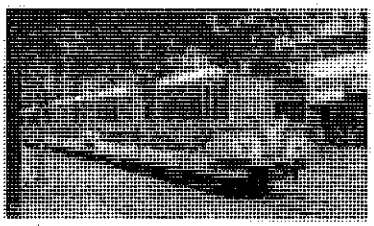
Bus Rapid Transit (BRT)

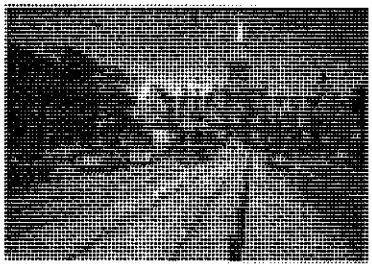
Description:

Bus Rapid Transit (BRT) consists of buses operating in some form of exclusive bus lanes, exclusive right of way or mixed traffic with transit priority measures

Characteristics:

Peak Capacity:	~10,000 pass/hr
Minimum Headway:	1- 2.5 minutes
Capital Cost:	Moderate
Operating Cost:	Medium-High





Light Rail Transit (LRT)

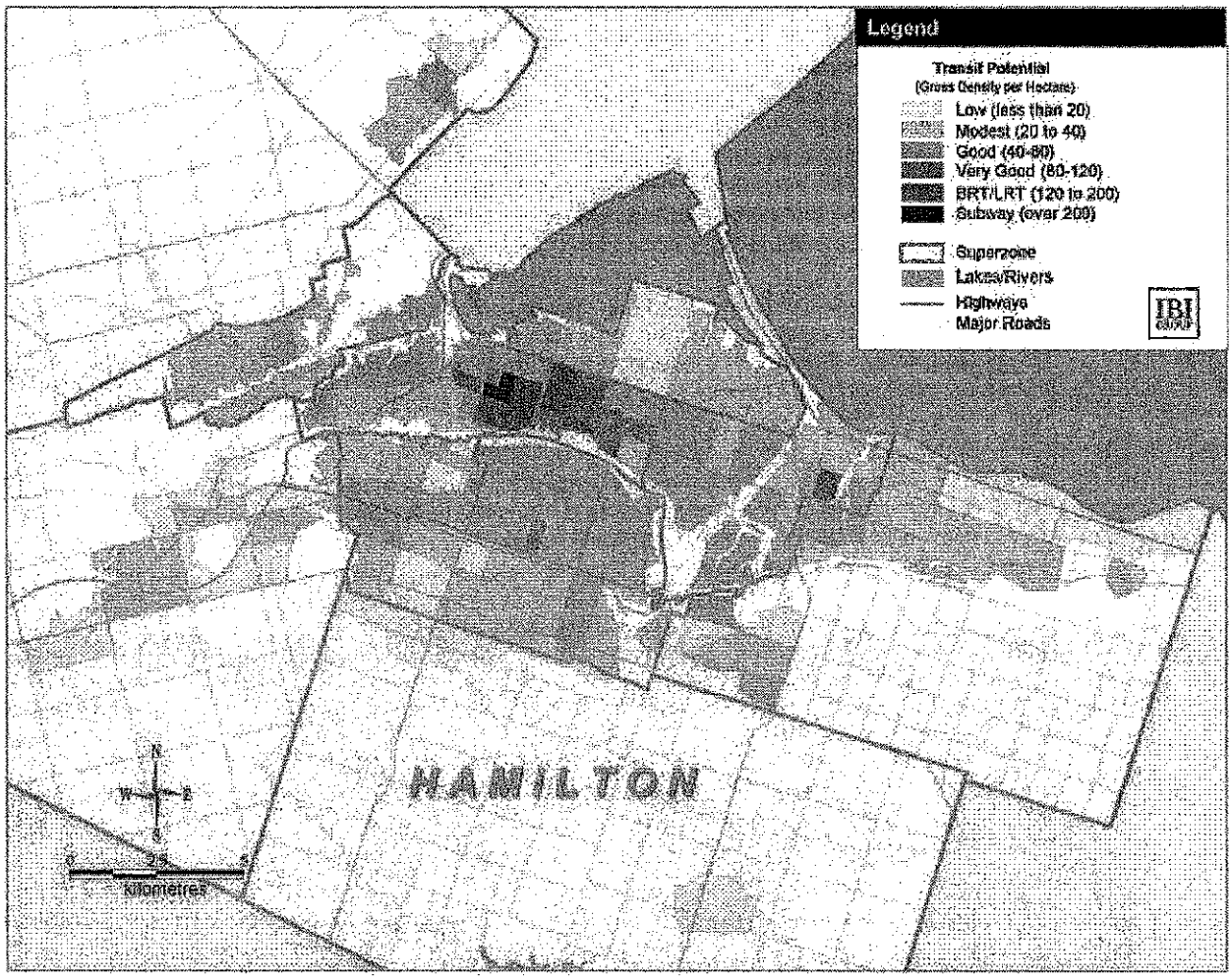
Description:

Light Rail Transit (LRT) uses relatively low-cost rail technology and usually obtains electric power from overhead wires.

Characteristics:

Peak Capacity:	20,000 pass/hr
Minimum Headway:	2- 3 minutes
Capital Cost:	High
Operating Cost:	Medium

Exhibit 6.4: Transit Potential throughout the City of Hamilton (2001)



6.6.2 INCREASING TRANSIT SERVICE LEVELS

Presently, HSR provides approximately 1.55 annual vehicle hours per person, a measure of transit service levels. This generates approximately 47 annual revenue passengers per capita (rides per capita). In order to achieve the targets set in this paper, as well as Vision 2020, it will be necessary for HSR to significantly increase service levels. It is estimated that a level of 80-100 rides per capita would require a doubling of existing service levels.

The challenge with increasing service levels is that, by itself, an increase in service levels may not translate directly into increased demand. Service levels should only be increased in corridors where there is sufficient potential to generate additional demand. The King Street corridor through McMaster University would be a key corridor where service increases would be justified.

Another challenge with increasing service levels is that it has direct cost impacts on HSR. Historically, cuts in transit service levels have been made to achieve City-wide cost reductions. If the policies in this Transportation Master Plan are to be achieved, this practice would need to be reversed, although funding increases would logically be done in a gradual manner so that ridership can respond and net costs can be managed.

At present, HSR's net cost per person in the transit service area is $51 per year. One option for ensuring transit service levels are increased to levels necessary to achieve modal split objectives is to establish a fixed amount that the City will spend on transit per year, per person, and incrementally increase this over time. For example, a target of increasing transit funding by $5 per capita per year over the next 10 years could be established. Options for implementing this are discussed further in the *Transportation Funding and Financing Paper*.

6.6.3 INCREASING TRANSIT SERVICE COVERAGE

A key goal of the Transportation Master Plan is to provide improved mode choice options for residents and employees of Hamilton. This includes making transit an option in areas not presently served by transit. There are various options for achieving this, which would depend on the specific characteristics of the area, such as:

- Expanding the base transit network to new areas.
- Introducing special community bus services to low density areas.
- Establishing park and ride and designated pick-up and drop-off areas at major transit hubs and terminals in suburban areas; this would allow enable someone to be dropped off at a transit hub and complete their journey using the bus.
- Providing transit service to special generators, including the Airport

As a general policy, the City should attempt to provide at least 90% of residents and employees within the City, at least in the built-up parts of the City, with transit service within a 400m walk (5 minute walk).

6.6.4 GO TRANSIT AND VIA

The Central Ontario Smart Growth Panel ***Shape the Future*** Final Report (April 2003) identifies a proposed intercity rapid transit link extending between Hamilton and Fort Erie. This link would likely be similar to the GO Rail service currently provided to Hamilton, but may also build on the existing VIA rail service. More recently, the Province has released its growth strategy entitled **Places to**

Grow, which reaffirms the need to provide high additional inter-regional transit services and specifically identifies a future inter-regional transit link between Hamilton and Niagara[6].

This service would have the benefit of increasing transit service to and from Hamilton, but it may also increase the attractiveness of Hamilton as a "bedroom" community, allowing people to more easily commute from Hamilton to other areas of the GTA. The service would, however, reduce intercity commuting by car, thereby freeing up capacity on facilities such as Highway 403 and the QEW.

One option for increasing the benefit of a proposed inter-city rapid transit system would be to establish an easterly station within the City of Hamilton. This would allow people living in Stoney Creek to commute to Downtown Hamilton via rail. This phase of the Transportation Master Plan should review the feasibility and benefits of one or more new inter-regional transit stations.

VIA Rail is also an important mode in facilitating intercity travel to and from Hamilton. At present, there is no VIA station in Hamilton and travellers must board at Aldershot. There is a growing need for a downtown VIA station which would be more capable of facilitating seamless travel between transit modes.

6.6.5 OTHER ISSUES

Other issues related to the improvement of transit services include the following:

- Developing a strategy for providing Downtown terminal functions, recognizing that Gore Park cannot handle additional buses;
- Options for replacing the existing Automatic Vehicle Location system, which is currently based on older technology;
- Options for replacing transit vehicles, including fuel/engine technologies (natural gas, hybrid vehicles, etc.) and low floor bus requirements; and,
- Implications of participating in the GTA Smart Card program.

It is not within the scope of these policy papers to conduct a separate analysis of each of these issues; however, as a general policy, it is recommended that the following factors be considered in evaluating these and other decisions regarding the transit system:

- Potential to increase ridership and/or transit user satisfaction;
- Potential to save costs, which can then be used to improve services;
- Potential to reduce impacts on the environment.

[6] Ministry of Public Infrastructure and Renewal, Ontario, Place to Grow: Better Choices. Brighter Future, http://www.placestogrow.pir.gov.on.ca/userfiles/HTML/nts_2_20438_1.html

7. RECOMMENDED POLICIES

Based on the above review, the following policies are recommended for consideration in the Transportation Master Plan:

Recommended Policy

Reduce the community's dependence on single occupant automobile travel (as measured by total distance travelled) by 10% by 2011 and 20% by 2021, compared to 2001 by providing and facilitating improved travel options for residents and employees.

Implementation

- Through increases in transit service levels, improved infrastructure for walking and cycling and public information programs, sustainable transportation modes will become feasible and attractive options for more trips, with the goal being to reduce the number of trips per person made by automobile by 10% by 2011 and 15% by 2021.
- By encouraging more compact, mixed-use development, encouraging growth in the Downtown Core, and adopting economic policies to ensure more people who live in Hamilton work in Hamilton, auto trip lengths will be reduced by 5% by 2011 and 10% by 2021
- By implemented Travel Demand Management (TDM) measures including promoting ridesharing, average auto occupancies will be increased by 5%
- Monitor and report trends toward targets on an annual basis using cordon count data, transit ridership data and periodic surveys (e.g. Transportation Tomorrow Survey conducted every five years)

Recommended Policy

Evaluate all future land use decisions in terms of their impacts on reducing automobile dependence and improving modal choice, including decisions on the location of new communities, establishment of minimum densities to support transit and provision of a mix of uses that bring activities closer together thereby making walking, cycling and transit viable alternatives for most trips.

Implementation

- Through the Official Plan, establish minimum densities for developments within a designated east-west corridor and a north south corridor. Gross urban densities should be at least 80 –100 (population plus employment divided by land area in hectares).
- Encourage new development to locate adjacent to areas already served by transit.
- New developments should be constructed such that 90% of residents or employees are within 400m of an existing transit route or proposed new transit route
- In new communities outside of the existing transit service area, land should be dedicated to allow the potential for HSR buses to turn around, should service be extended to these areas in the future.

Recommended Policy

By 2011 or sooner, establish a transit priority network in an east-west corridor between McMaster University and EastGate Square and in one or more north-south corridors between Central Hamilton and Hamilton Mountain. By 2021 or sooner, upgrade these corridors to operate as Bus Rapid Transit facilities in dedicated lanes or corridors.

Implementation

- Confirm the location of bus rapid transit facilities, including proposed cross-sections for near term and longer term facilities, location of major transit stops and methods to ensure transit priority
- Develop a marketing strategy to promote the transit priority network as a special service that is competitive with automobiles
- Implement zoning provisions that ensure land uses in transit corridors are transit-supportive
- Develop a detailed plan and description of the proposed services that can be submitted to the Federal and Provincial Governments to be considered for special funding, including funding generated from a dedicated fuel tax.

Recommended Policy

Increase transit service levels on an incremental basis, in conjunction with other policies to improve the viability of transit, with a goal of increasing annual transit ridership per capita by 5% per year. Direct service level increases to corridors and routes that have the potential to generate increased transit ridership in a cost-effective manner.

Implementation

- Ensure that transit service levels are not reduced at any point in time through the provision of stable and predictable funding for transit (See Funding Paper)
- Set a goal of increasing spending on transit each year
- Increase service on routes with growing ridership
- Complete a detailed transit service strategy to identify corridors and routes that would benefit from increased service levels

Recommended Policy

Increase opportunities for all residents and employees of the City of Hamilton to have access to the transit system

Implementation

- Establish a goal of providing at least 90% of residents and employees within the City with transit service within a 400m walk (5 minute walk).
- Provide service to and from new communities and existing rural communities where there is a sufficient demand to justify transit service

- Consider extending hours of service to communities where only peak period service is provided
- Expand the municipal transit service area to include major employment generators such as the airport and integrate/supplement these services with inter-regional connections.
- Where regular transit service cannot be economically provided, examine options for providing a community-based "Transcab" service similar to services that presently exist in Glanbrook and Stoney Creek.
- Establish park and ride-facilities at key transit hubs in the outer areas of the City

Recommended Policy

Work with the Provincial Government to ensure that the proposed intercity rapid transit network connecting Hamilton and Niagara Region to the GTA is developed in a manner that benefits Hamilton residents and makes Hamilton more attractive as an employment destination

Implementation

- Investigate opportunities for one or more intercity transit stations between downtown Hamilton and the Niagara Region boundary
- Identify opportunities to coordinate new intercity services with existing and planned municipal transit services

8. IMPACTS OF POLICY OPTIONS

8.1 Assessment Factors

Assessment of policy options is based on factors for achieving sustainable growth and development across all of the policy papers developed in this project. They fall under the three major categories of **social, economic and environmental** impacts, and they are described briefly below.

Exhibit 8.1: Assessment Factors

Impact	Acts on	Description (or examples)
Social	Residential communities	Improves quality of life in neighbourhoods
	Safety and security	Reduces collisions; improves personal safety and security
	Ease of implementation & governance	Provides clarity, measurability, accountability
Economic	Development	Attracts employment, capital, optimal use of transportation infrastructure capacity, and future land use
	Land value	Increases land value, or does not decrease land values
	Operating and capital costs	Reduces or defers public and private costs of transportation capital (construction or acquisition of fixed infrastructure and rolling stock) and operations (maintenance, enforcement, delay, fuel, etc.)
	Congestion	Improves traffic flow (or slows deterioration thereof)
Environmental	Air quality	Reduction of Criteria Air Contaminants
	Noise and vibration	Minimizes noise impacts
	Natural environment	Improves water quality, green spaces, flora and fauna etc.

The rating system that will be used to apply these criteria is a visual five-point scale, to reflect a range from strong positive impact to strong negative impact. **(+, +, o, --, --)**

+ Represents the strong positive impact, **o** represents absence of significant impact either way, and **--** represents strong negative impact.

8.2 Summary of Evaluation

The factors described in Section 8.1 are applied to the policy options described in Section 7. The results of a preliminary qualitative assessment using the rating scheme are provided in Exhibit 8.2.

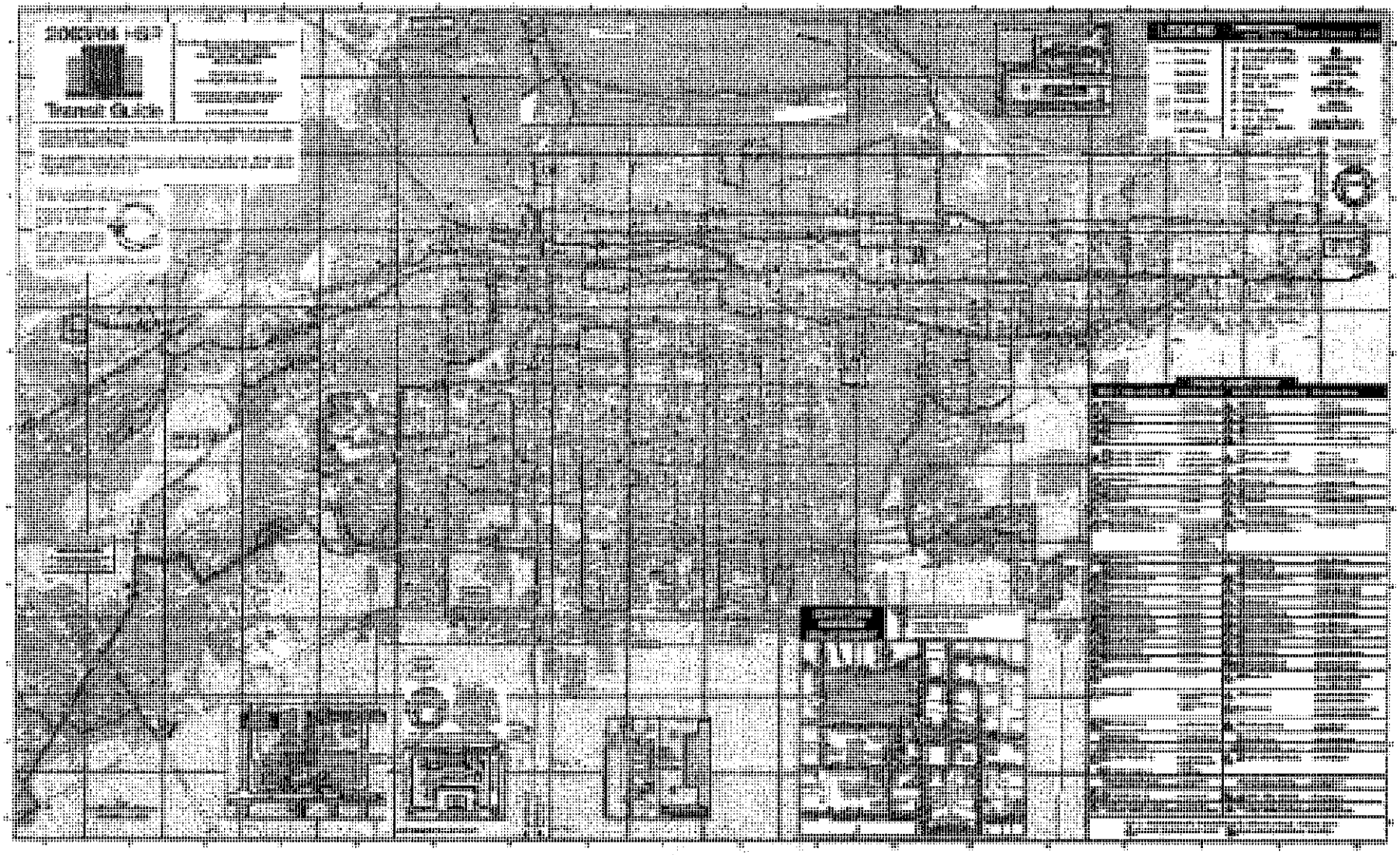
Exhibit 8.2: Impacts of Policy Options

Policy Option	Social			Economic				Environmental		
	Residential Communities	Safety and Security	Ease of Implementation and Governance	Development	Land Value	Operating and Capital Costs	Congestion	Air Quality	Noise and Vibration	Natural Environment
Reduce the community's dependence on single occupant automobile travel (as measured by total distance travelled) by 10% by 2011 and 20% by 2021, compared to 2001 by providing and facilitating improved travel options for residents and employees.	+	+	-	+	+	-	+	+	0	+
Evaluate all future land use decisions in terms of their impacts on reducing automobile dependence and improving modal choice, including decisions on the location of new communities, establishment of minimum densities to support transit and provision of a mix of uses that bring activities closer together thereby making walking, cycling and transit viable alternatives for most trips.	+	+	+	+	-	+	+	+	-	+
By 2011 or sooner, establish a transit priority network in an east-west corridor between McMaster University and EastGate Square and in one or more north-south corridors between Central Hamilton and Hamilton Mountain. By 2021 or sooner, upgrade these corridors to operate as Bus Rapid Transit facilities in dedicated lanes or corridors.	+	+	-	+	+	+/-	+	+	+	+
Increase transit service levels on an incremental basis, in conjunction with other policies to improve the viability of transit, with a goal of increasing annual transit ridership per capita by 5% per year. Direct service level increases to corridors and routes that have the potential to generate increased transit ridership in a cost-effective manner.	+	+	-	+	+	-	+	+	0	+

Policy Option	Social			Economic				Environmental		
	Residential Communities	Safety and Security	Ease of Implementation and Governance	Development	Land Value	Operating and Capital Costs	Congestion	Air Quality	Noise and Vibration	Natural Environment
Increase opportunities for all residents and employees of the City of Hamilton to have access to the transit system.	+	+	+	+	+	-	+	+	0	+
Work with the Provincial Government to ensure that the proposed intercity rapid transit network connecting Hamilton and Niagara Region to the GTA is developed in a manner that benefits Hamilton residents and makes Hamilton more attractive as an employment destination.	+	+	-	+	+	-	+	+	0	+

APPENDIX A

CURRENT HSR TRANSIT SYSTEM MAP



APPENDIX B

TRANSIT ROUTE STATISTICS

TOTAL LOAD AT CORDON POINTS BY TIME PERIOD

Station Name	Direction	Route Name	Time Period							Grand Total
			Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	
Barton St. at Ferguson Ave. N.	East	Barton	191	320	508	635	1,040	419	217	3,330
	West	Barton	155	512	522	581	872	436	192	3,270
Total			**346**	**832**	**1,030**	**1,216**	**1,912**	**855**	**409**	**6,600**
Fennell Ave. at West 5th St.	North	College	70	108	199	285	544	137	123	1,466
		Sanatorium	41	105	108	67	143	58	12	534
		Upper Kenilworth	43	101	122	62	96	27	19	470
	N Total		*154*	*314*	*429*	*414*	*783*	*222*	*154*	*2,470*
	South	College	22	274	256	216	347	218	67	1,400
		Sanatorium	17	131	96	136	246	108	58	792
		Upper Kenilworth	4	28	80	129	281	55	45	622
	S Total		*43*	*433*	*432*	*481*	*874*	*381*	*170*	*2,814*
Total			**197**	**747**	**861**	**895**	**1,657**	**603**	**324**	**5,284**
James St. at Murray St.	East	Bayfront	83	75	99	196	305	67	112	937
	South	Bayfront	58	198	155	142	248	57	47	905
Total			**141**	**273**	**254**	**338**	**553**	**124**	**159**	**1,842**
King St. E. at Wellington St. N.	West	Beeline Express	77	475	189	112	467	54		1,374
		Delaware	53	166	132	191	96	96	40	774
		King	175	647	875	994	715	296	213	3,915
Total			**305**	**1,288**	**1,196**	**1,297**	**1,278**	**446**	**253**	**6,063**

Station Name	Direction	Route Name	Time Period							Grand Total
			Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	
King St. W. at Caroline St.	West	Beeline Express	55	389	277	104	231	77		1,133
		Delaware	42	399	404	612	740	389	338	2,924
		King			59	356	191			606
		University		190	55	154	126	127	11	663
		Upper Paradise	9	72	52	133	317	79	50	712
Total			**106**	**1,050**	**847**	**1,359**	**1,605**	**672**	**399**	**6,038**
Main St. at West Ave.	East	Beeline Express	6	238	55	123	625	54		1,101
		Delaware	10	52	53	115	185	102	124	641
		King	64	249	636	842	952	546	379	3,668
Total			**80**	**539**	**744**	**1,080**	**1,762**	**702**	**503**	**5,410**
Main St. W. at Hess St.	East	Beeline Express	7	70	71	159	620	155		1,082
		Delaware	123	411	404	638	782	414	349	3,121
		King	2	65	285	503	261	146		1,262
		Locke	15	34	36	43	31	19	12	190
		University	13	70	103	221	332	81	85	905
		Upper Paradise	62	149	94	96	138	93	15	647
Total			**222**	**799**	**993**	**1,660**	**2,164**	**908**	**461**	**7,207**

Station Name	Direction	Route Name	Time Period							Grand Total
			Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	
Upper Wellington St. at Concession St.	North	Upper Gage	79	255	185	162	158	37	28	904
		Upper James	49	134	144	209	331	130	77	1,074
		Upper Ottawa	37	237	131	110	97	55	45	712
		Upper Sherman	59	219	158	142	150	53	31	812
		Upper Wellington	43	213	144	117	124	72	27	740
		Upper Wentworth	67	144	168	201	218	167	87	1,052
	N Total		*334*	*1,202*	*930*	*941*	*1,078*	*514*	*295*	*5,294*
	South	Upper Gage	22	78	117	176	425	171	98	1,087
		Upper James	38	116	228	250	300	91	39	1,062
		Upper Ottawa	48	84	77	151	289	100	62	811
		Upper Sherman	13	57	85	131	344	129	83	842
		Upper Wellington	8	48	117	187	354	177	77	968
		Upper Wentworth	20	86	147	215	410	148	36	1,062
	S Total		*149*	*469*	*771*	*1,110*	*2,122*	*816*	*395*	*5,832*
Total			**483**	**1,671**	**1,701**	**2,051**	**3,200**	**1,330**	**690**	**11,126**
Wellington St. N. at Wilson St.	East	Cannon	3	84	54	184	401	106	37	869
	West	Cannon	33	132	95	111	62	27	8	468
Total			**36**	**216**	**149**	**295**	**463**	**133**	**45**	**1,337**
Wellington St. S. at Hunter St.	East	Delaware	21	104	207	367	571	176	101	1,547
	West	Delaware	99	449	425	363	245	101	47	1,729
Total			**120**	**553**	**632**	**730**	**816**	**277**	**148**	**3,276**
Grand Total			**2,036**	**7,968**	**8,407**	**10,921**	**15,410**	**6,050**	**3,391**	**54,183**

AVERAGE LOAD OVER CAPACITY RATIO AT CORDON POINTS BY TIME PERIOD

Station Name	Dir.	Route Name	Time Period: Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	Grand Total
Barton St. at Ferguson Ave. N.	East	Barton	30%	58%	54%	59%	105%	82%	55%	65%
	West	Barton	46%	79%	57%	65%	87%	68%	36%	66%
Total			**35%**	**70%**	**56%**	**62%**	**95%**	**74%**	**44%**	**65%**
Fennell Ave. at West 5th St.	North	College	35%	44%	51%	92%	128%	39%	34%	65%
		Sanatorium	20%	31%	41%	35%	28%	18%	8%	27%
		Upper Kenilworth	26%	35%	54%	30%	22%	15%	6%	25%
	N Total		*28%*	*37%*	*49%*	*61%*	*62%*	*26%*	*19%*	*42%*
	South	College	11%	65%	76%	73%	88%	67%	21%	61%
		Sanatorium	8%	30%	30%	30%	49%	46%	33%	34%
		Upper Kenilworth	2%	11%	27%	41%	53%	24%	13%	28%
	S Total		*7%*	*41%*	*48%*	*47%*	*63%*	*49%*	*20%*	*43%*
Total			**17%**	**39%**	**48%**	**53%**	**63%**	**37%**	**19%**	**42%**
James St. at Murray St.	East	Bayfront	26%	23%	34%	57%	68%	19%	34%	39%
	South	Bayfront	33%	60%	40%	42%	55%	14%	17%	38%
Total			**29%**	**41%**	**37%**	**50%**	**61%**	**16%**	**26%**	**39%**
King St. E. at Wellington St. N.	West	Beeline Express	47%	130%	92%	50%	71%	25%		75%
		Delaware	67%	107%	61%	75%	41%	45%	21%	57%
		King	42%	92%	102%	97%	75%	41%	38%	74%
Total			**46%**	**105%**	**93%**	**86%**	**69%**	**39%**	**34%**	**71%**

Station Name	Dir.	Route Name	Time Period							Grand Total
			Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	
King St. W. at Caroline St.	West	Beeline Express	38%	85%	98%	29%	34%	30%		52%
		Delaware	12%	91%	83%	90%	78%	60%	55%	70%
		King			98%	81%	49%			68%
		University		92%	48%	39%	28%	45%	37%	43%
		Upper Paradise	6%	26%	21%	45%	68%	37%	20%	37%
Total			**16%**	**76%**	**71%**	**64%**	**55%**	**48%**	**45%**	**57%**
Main St. at West Ave.	East	Beeline Express	17%	51%	21%	57%	93%	68%		64%
		Delaware	7%	38%	25%	52%	89%	50%	51%	47%
		King	15%	48%	65%	109%	97%	83%	100%	77%
Total			**13%**	**48%**	**51%**	**90%**	**95%**	**75%**	**81%**	**69%**
Main St. W. at Hess St.	East	Beeline Express	11%	17%	21%	61%	84%	75%		53%
		Delaware	34%	67%	49%	92%	86%	63%	48%	65%
		King	7%	25%	66%	113%	69%	75%		72%
		Locke	12%	22%	19%	19%	12%	12%	7%	15%
		University	43%	27%	17%	56%	58%	44%	86%	44%
		Upper Paradise	59%	46%	38%	34%	28%	26%	6%	31%
Total			**30%**	**40%**	**40%**	**73%**	**64%**	**52%**	**37%**	**52%**

Station Name	Dir.	Route Name	Time Period: Early AM	AM Peak	Midday AM	Midday PM	PM Peak	Early Eve	Late Eve	Grand Total
Upper Wellington St. at Concession St.	North	Upper Gage	41%	94%	54%	54%	34%	21%	9%	44%
		Upper James	24%	59%	48%	70%	76%	66%	25%	55%
		Upper Ottawa	38%	79%	42%	36%	24%	26%	14%	37%
		Upper Sherman	35%	95%	51%	46%	33%	27%	12%	42%
		Upper Wellington	27%	56%	44%	32%	25%	23%	11%	32%
		Upper Wentworth	27%	43%	48%	56%	48%	52%	27%	44%
	N Total		*32%*	*70%*	*48%*	*49%*	*40%*	*36%*	*17%*	*42%*
	South	Upper Gage	13%	30%	34%	57%	102%	77%	33%	54%
		Upper James	22%	52%	68%	80%	75%	42%	13%	54%
		Upper Ottawa	31%	30%	23%	49%	70%	47%	20%	40%
		Upper Sherman	8%	22%	27%	38%	86%	61%	26%	42%
		Upper Wellington	4%	16%	40%	45%	84%	56%	27%	43%
		Upper Wentworth	9%	31%	44%	58%	93%	46%	15%	47%
	S Total		*14%*	*29%*	*39%*	*54%*	*85%*	*55%*	*23%*	*47%*
Total			**23%**	**51%**	**44%**	**51%**	**62%**	**46%**	**20%**	**45%**
Wellington St. N. at Wilson St.	East	Cannon	3%	27%	25%	73%	96%	74%	26%	54%
	West	Cannon	47%	48%	32%	44%	14%	13%	6%	28%
Total			**20%**	**37%**	**29%**	**59%**	**55%**	**37%**	**16%**	**41%**
Wellington St. S. at Hunter St.	East	Delaware	7%	22%	43%	80%	77%	38%	31%	48%
	West	Delaware	45%	90%	88%	74%	39%	22%	11%	54%
Total			**23%**	**57%**	**66%**	77%	**59%**	**30%**	**20%**	**51%**
Grand Total			25%	55%	52%	64%	67%	47%	30%	52%

City of Hamilton

Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton
TRAVEL DEMAND MANAGEMENT (TDM) POLICY PAPER

Prepared by Noxon Associates Limited

For IBI Group

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1. INTRODUCTION

1.1 Study Background and Objectives

The City of Hamilton *City-wide Transportation Master Plan* will provide inputs to the *Growth Related Integrated Development Strategy* (GRIDS) and make recommendations to Council on the adoption of a City-wide Transportation Policy that is cognisant of Vision 2020 and other City of Hamilton long-term planning objectives. The project has been divided into three distinct phases. The first phase consisted of the technical calibration of the existing transportation model to reflect current transportation conditions in Hamilton. The second phase, which is the object of this and other policy papers, will focus on the development of 23 policy papers in the following areas: Travel Demand, Urban Development, System Performance, Infrastructure Planning and Infrastructure Financing. Following the completion of the Policy Papers, the City will proceed to develop transportation scenarios (Phase 3 of the project) based upon the results of the policy work performed in Phase 2 and the land use scenarios developed through the broader GRIDS study and will test the efficiency and viability of these scenarios by integrating them into the calibrated model.

This policy paper addresses the issue of **travel demand management (TDM)**. The remainder of this introduction provides a description of TDM including benefits and examples. Section 2 provides an overview of the existing situation in Hamilton and some supporting information on travel trends while Section 3 highlights experience and practices from other jurisdictions. Section 4 and Section 5 outline the development and refinement of policy options and potential supporting actions.

1.2 Overview of Travel Demand Management

For decades, Canadian cities have responded to growing transportation demands by increasing supply—building new roads and rapid transit systems, or making existing facilities larger. But meeting the transportation needs of an increasing population has become more challenging, and municipalities are recognizing a new reality—they can no longer rely solely on new infrastructure to meet increasing travel demands. They must actively make the best possible use of today's infrastructure.

Travel demand management (TDM) helps us get the most from our transportation systems. It encourages people to:

- Get around by using travel modes (e.g. walking, cycling, public transit or carpooling) that consume fewer resources and create fewer undesirable impacts
- Travel outside peak hours to avoid congestion
- Travel less by choosing closer destinations or combining several trips into one
- Use telework or other substitutes for travel where practical

TDM can help reduce traffic congestion, defer or eliminate the need for new infrastructure, and improve air quality. It is recognized around the world as a solid investment, particularly when the alternatives are expensive new infrastructure or increased congestion and delay. In fact, TDM has emerged as a major theme in virtually all strategic transportation studies conducted by Canada's municipal, provincial and federal governments in the last decade.

1.2.1 HOW TDM WORKS

TDM influences the purpose (*why?*), destination (*where?*), time (*when?*) and mode (*how?*) of personal travel decisions, by:

- Making travel options more attractive
- Building positive public attitudes towards travel options
- Helping people understand how their travel decisions affect the community
- Using incentives and disincentives to influence personal travel decisions

TDM strategies remove social, economic or physical barriers that keep individuals from walking, cycling, taking transit or ridesharing. While these barriers vary from person to person, they might include:

- Poor understanding of transit routes and fares
- Transit costs that exceed parking fees
- Difficulty in finding carpool partners
- Difficulty in getting home from work in a family emergency
- Lack of personal confidence in cycling on busy roads
- Lack of parking, showers and change facilities at workplaces
- Lack of awareness of the health benefits of walking and cycling
- Cultural perceptions of driving as a higher status activity than walking, cycling or riding transit

It is important to note that TDM can only be part of a complete transportation solution. The success of TDM will depend, in part, on having travel options (e.g. walking, cycling, transit, carpooling) that are convenient, safe and affordable. Only frustration will result from programs that encourage transit use where service is poor, or that promote cycling where facilities are unsafe. For this reason, TDM must be accompanied by programs to enhance transit service, road safety, land use planning, and infrastructure design and operation.

1.2.2 BENEFITS OF TDM

By helping individuals travel more efficiently and minimizing the need for infrastructure, TDM can help conserve public and private funds, land and other natural resources while reducing undesirable social and environmental impacts. The benefits that TDM can bring to municipalities, businesses and individuals include the following:

- **Public cost savings.** These include reductions in direct capital costs (e.g. road planning, design, construction, land), operating costs (e.g. street lighting, traffic signals, enforcement) and maintenance costs (e.g. snow removal, road sweeping, patching and sealing). They also include reductions in the indirect social costs of air, water and noise pollution, health care due to collisions and poor fitness levels, and the "barrier effect" of major transportation facilities on communities.

- **Private cost savings.** These include reductions in individual and family spending on automobile acquisition, operation, maintenance, parking, licensing and registration. By encouraging walking, cycling and transit use – all of which are much less expensive than automobile travel – private financial resources can be redirected to housing, food, education, recreation, or other important needs.

- **Congestion and delay reduction.** As roads get more congested, the delay caused by a single additional vehicle rises dramatically. For this reason, the reduction in delay caused by preventing (or diverting) even a small amount of automobile travel can be significant for individuals, and for businesses that value time more highly. In this way, TDM can help those who continue to drive personal or commercial vehicles.

- **Better environmental health.** One trip by car consumes three times more fuel and creates three times more greenhouse gas emissions than the same trip by public transit. By limiting future automobile demands, TDM can minimize air and water pollution from road construction, maintenance and use. Roads and parking also consume an immense amount of greenspace in growing cities.

- **Better public health.** Road safety, air quality and physical fitness are all public health issues linked to car use. Walking, cycling and public transit reduce air pollution that aggravates respiratory illness, and increase physical activity levels that help prevent chronic illness. Public transit is also significantly safer than automobile travel.

- **More liveable communities.** Walking, cycling and transit travel create vibrant and dynamic public spaces, and add "eyes on the street" that enhance personal security and deter crime. They offer important support to commercial activities along our cherished main streets, and in pedestrian-oriented market spaces.

- **Better access to opportunity.** The one-third of Canadians who are non-drivers largely depend on walking, cycling and public transit to reach jobs, education, and vital services like health care. By making those travel options more convenient and rewarding, TDM measures can improve personal access to opportunity. They can also eliminate the need for some families to buy a first or second car, freeing up income better used for food or medicine, shelter, child care or education.

1.2.3 EXAMPLES OF TDM MEASURES

Many TDM measures have been applied by North American municipalities, including:

- Workplace programs that improve commuter options for employees

- School programs that encourage parents and students to walk, bike, take transit or carpool to school

- Discounted transit passes sold at workplaces through payroll deduction or post-secondary student fees

- Ridematching services that help carpoolers find compatible partners

- Guaranteed ride home programs that help commuters get home if they work late, if they are stranded by their carpool, of if their child falls ill at school

- Skills courses that train cyclists to ride with safety and confidence in traffic

- Special events that encourage people to try new travel options
- Campaigns that use positive messages and images to counter negative attitudes about walking, cycling and transit use
- In-house programs to improve commuter options for municipal employees, demonstrating leadership by example
- Economic measures including incentives like preferential tax treatment for employee transit benefits, or disincentives such as bridge tolls, parking levies or congestion pricing

1.3 TDM and the City of Hamilton

Like all major cities in Canada, Hamilton is seeking effective and affordable ways to meet its residents' need for access and mobility. There is little doubt that its transportation strategy will include an expanded transit fleet, new park-and-ride lots, and active transportation facilities like bike lanes, sidewalks and pathways. This infrastructure will be needed to serve growing travel demands and to make non-driving options more attractive. But it will take more than concrete, steel and rubber tires to bring about the future described by the new Vision 2020.

Hamilton's transportation challenges are made more unique by several key circumstances:

- Relatively low levels of both road congestion and transit use (about 50 rides per capita annually, versus 65 in Winnipeg or Edmonton and 75 in Quebec City), for a Canadian city of its size;
- High supply and low cost of long-term parking in the downtown core;
- Relocation of employment from the central area and waterfront area to outlying lower-density business parks;
- Ongoing development in outlying suburban areas, where transit service is minimal and densities are low
- Growing pressure on crossings of the escarpment, due to ongoing development above it and limitations on possible corridors

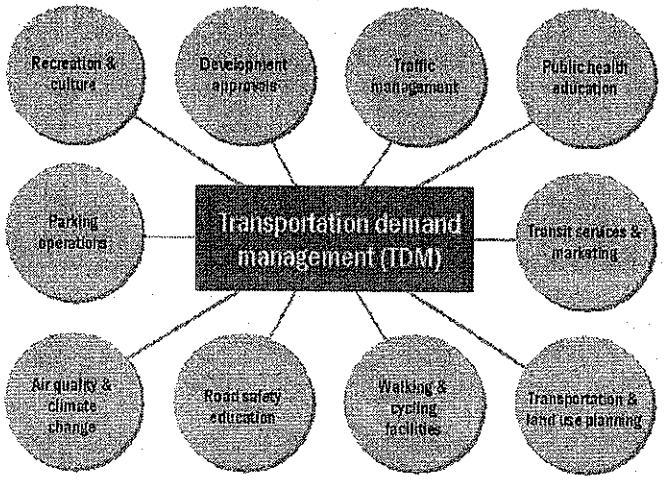
In the absence of severe road congestion or other system-level transportation problems, recent planning efforts (e.g. the 1996 Region Transportation Review) have noted as a principal challenge the need to deal with future growth in a manner that preserves residents' transportation choices and quality of life. In this respect, Hamilton's stance on TDM may differ from other North American cities that have taken an aggressive approach to demand management. For example, rapidly growing cities such as Markham and the City of Toronto insist on the consideration of TDM in all major development proposals.

TDM offers Hamilton a way not to fix problems, but rather to prevent them. For this reason, the City has the opportunity (and probably the need) to introduce TDM policies and programs that represent "carrots" (incentives) rather than "sticks" (disincentives). Disincentives carry a much greater risk of public backlash, and experience has shown that their sustainability is much greater where their immediate benefits (e.g. mitigating severe problems) are clear.

Some other current conditions that represent opportunities for TDM to succeed in Hamilton include:

- **Municipal amalgamation.** The amalgamation offers a chance to develop and integrate new policy directions and ways of doing business within the structure of local government. Effective TDM programs rely on linkages to a wide range of municipal services, and the early years of amalgamation are an opportunity to proactively develop supportive relationships (see figure below).

Possible linkages between TDM and other municipal responsibilities



- **Urban Transportation Showcase Program funding.** Recent approval by Transport Canada of federal funding for an Urban Transportation Showcase Program project proposed by the City of Hamilton in association with several GTA municipalities. This project would see the establishment of a regional network of transportation management associations (TMAs, including one in Hamilton) to plan and implement commuting-related TDM measures. This development is discussed further in Section 2.1.1.

- **Growing public interest in sustainability.** Through initiatives such as Vision 2020 and GRIDS, Hamilton's public is becoming well versed in issues related to sustainable communities. Land use, air quality and climate change are all growing in stature as major social issues. TDM can take advantage of public interest and support in these areas by virtue of the strong synergies that link them.

- **McMaster University's TDM program.** McMaster University has included supportive TDM policies in its campus planning documents, and followed up by creating the Alternative Commuting and Transportation (ACT) office which is building a TDM program for students, staff and faculty. This local TDM showcase provides an invaluable forum for building public awareness, and for pilot testing specific TDM measures in the Hamilton context.

- **The potential of partnerships.** Partnerships with outside organizations such as employers, schools and community groups can help Hamilton access otherwise hard-to-reach markets. They can also leverage the resources of partners, providing a high level of return on investment.

2. CURRENT SITUATION

2.1 TDM Roles and Responsibilities

2.1.1 SMART COMMUTE ASSOCIATION PROJECT

In terms of TDM activity in Hamilton, the development most pertinent to the creation of new policies is the recent success of a proposal by Hamilton and several GTA municipalities to Transport Canada's Urban Transportation Showcase Program. That project will implement a number of regional and local TDM measures, based on recent experience with a transportation management association[1] (TMA) pilot project in the Black Creek/York University area. It is scheduled to be active from 2004 through at least 2006.

A new GTA-wide Smart Commute Association would oversee regional activities and the development of common programs. A series of TMAs (including one in Hamilton) would customize and deliver those programs, would promote regional branding and customer service strategies. Each TMA would have a board of directors with representatives of area employers, property managers and other stakeholders. TMAs would work with employers to deliver site audits, surveys of employee travel patterns, commuter incentives, special events and parking management assistance.

TDM services offered through the project could include Internet-based ride matching, employer-based transit fare sales, and the promotion of alternative work hours, telecommuting, cycling, parking management, car sharing, shuttles and vanpools. The TMAs and parent Smart Commute Association would encourage employers to offer and promote TDM measures, educate the public about travel options and the environmental impacts of driving alone, provide incentives for behaviour change, and deliver promotion and learning events with partners.

2.1.2 OTHER

At present, the City of Hamilton has little program activity within the TDM umbrella. One notable new development, however, is Hamilton Street Railway's Employer Commuter Pass (EC Pass) which offers a discount to employers who purchase monthly bus passes for their staff. Employers, in turn, offer the passes to their employees at full, partial or no cost. The City has itself implemented the EC Pass program, allowing departments (albeit with a relatively low uptake) to offer each employee a discounted transit pass in exchange for giving up his/her free parking privileges. Council also recently considered a recommendation to limit City-paid parking only to employees who are required to use a personal vehicle three or more times a week, in conjunction with an investigation of ways to encourage the use of other commuter options. Council's decision on the issue was deferred, pending an investigation of potential spill-over parking impacts in downtown neighbourhoods. Elsewhere in the community, McMaster University has an active TDM program, as discussed in Section 2.2.7, below. The Moving on Sustainable Transportation (MOST) program of Transport Canada has also awarded Environment Hamilton and McMaster's Ontario Public Interest Research Group over $30,000 to investigate the feasibility of community transit passes (bulk discounted transit passes purchased by a block of households in a given neighbourhood), and to form a Transit Users Group (TUG) to represent riders' interests.

[1] Transportation management associations (TMAs) allow cost-effective service delivery by centralizing many functions that each employer might otherwise do independently. These can include program planning, commuter surveys, employee communications and special events. TMAs provide a platform for arranging government partnerships and customized transit services. They can also shoulder many of the operational tasks associated with employer-based TDM programs, something that can outgrow the ability of a municipality to do on its own.

2.2 TDM Policies

This section presents TDM-related information from policy documents, or policy background documents, developed by the new City of Hamilton, its constituent former municipalities, or other key partners.

2.2.1 CITY OF HAMILTON – VISION 2020

The city's new Vision 2020 document provides strong direction for the establishment of TDM policies by the City of Hamilton. Following are key excerpts from the vision statement that either support, or are supported by, the notion of managing transportation demand:

"Healthy lifestyles, improve safety measures and quality healthcare have progressively reduced disease and disability."

"Citizens pursue sustainable lifestyles."

"Waste-reduction, energy efficiency and respect for ecological systems characterize all aspects of community life and private decision making."

"Different kinds of compatible activities and land uses are mixed together, so that we can walk to meet our daily needs for work, recreation and other services."

"Employment opportunities are distributed among home-based businesses, central urban cores and neighbourhood gathering places, as well as industrial business parks that are accessible by public transit and a city-wide system of trails."

"We have many transportation choices. We are not dependent on automobiles and trucks."

"Our transportation system improves community health by reducing the need for automobile use and making it easy and attractive to walk, cycle, skateboard or roller-blade."

"Public transit provides all citizens with easy access to activity areas."

"Most people can walk or cycle to work because jobs and housing are near one another."

"All people can find employment opportunities in the city."

"Firms find a competitive advantage in being located in an attractive, safe and healthy community and operating at the forefront of energy efficiency, pollution prevention and control and material re-use and recycling."

2.2.2 FORMER REGION OF HAMILTON-WENTWORTH – OFFICIAL PLAN

The Official Plan of the former Region (which will remain in effect until the City adopts a new one) stresses the importance of a multimodal transportation system and promotes the use of "alternative modes" through better facilities and services for walking, cycling and transit travel. While the plan does not speak to the management of demand (per se) it does reflect a progressive approach to regulatory or infrastructure-oriented measures that can remove barriers to changing demands. Specifically, in Section 4.3, "Integrated Transportation System", the plan identifies the following policies:

- 4.3.2.5 Cooperate with the Area Municipalities in their development of parking policies and facilities that support the transit system in their Municipal Centres

- 4.3.3.4 Investigate methods for transporting bicycles on public transit vehicles, and secure bicycle parking at appropriate terminal and transfer points

- 4.3.3.5 Provide adequate bicycle parking facilities at its public administrative buildings and transit transfer points

- 4.3.3.6 Require Area Municipalities to make revisions to appropriate zoning by-laws to include a required minimum provision for bicycle parking in high activity areas and at public buildings

- 4.3.3.7 Request the Province of Ontario, and other agencies to assist initiatives to encourage bicycling

2.2.3 FORMER REGION OF HAMILTON-WENTWORTH – REGIONAL TRANSPORTATION REVIEW (1996)

The Regional Transportation Review, completed by the former Region in 1996, explicitly acknowledges that it was underpinned by the Region's 1993 VISION 2020, which:

- Supported sustainable transportation and an approach of managing growth in travel activity, rather than simply accommodating it

- Encouraged, for a variety of reasons, a shift in individual lifestyles and behaviours towards sustainable travel choices

- Encouraged actions to slow the increasing demands for auto travel, to provide incentives for the use of alternative modes, and to educate the public about sustainability issues

- Called for the Region to lead by example in addressing employee commuting habits

The TDM-related recommendations of the Regional Transportation Review included:

- Provision of bicycle racks at major activity areas

- Enhancement of cycling awareness by distributing route maps and safety information, and by making cycling skills courses available

- Creation of parking management programs at suburban workplaces to promote transit, carpooling and other means of reducing single-occupant vehicle use

- Better control of long-term parking supply and pricing

- Provision of bicycle parking at strategic municipal parking lots

A key recommendation highlighted by the Regional Transportation Review Technical in its Executive Summary was "That the Region ensure leadership by example by establishing a Travel Demand Reduction Program for Municipal Employees". It suggested reducing free parking, charging for parking, discounting bus passes, improving bicycle storage, providing bus tickets for business travel. One goal of this recommendation was to demonstrate the Region's commitment to its own vision, and to set an example for area businesses to follow.

2.2.4 CITY OF HAMILTON – OFFICIAL PLAN

The Official Plan of the former City of Hamilton appears not to contain any policies that address the need for, or application of, travel demand management strategies.

2.2.5 CITY OF HAMILTON – DOWNTOWN TRANSPORTATION MASTER PLAN (2001)

The City of Hamilton has undertaken several planning initiatives focused on its goal of a revitalized downtown. In 2001, it completed a Downtown Transportation Master Plan that comprehensively examined surface transportation issues in the downtown core.

Guiding principles of the study included the need for better parking management (specifically, favouring short-term parking at the expense of long-term parking) and a higher priority for non-auto travel modes in the core.

The study report included several observations, conclusions and recommendations relevant to the consideration of TDM policy development:

- Parking costs for most downtown auto commuters ($43 average monthly parking fee) are lower than for transit commuters ($58 monthly transit pass).
- Travel times for auto commuters are lower than for transit commuters, due to the relative absence of congestion.
- In the morning peak hour in 1996, 63% of people travelling to the downtown area did so by driving.
- Transit's share of travel to downtown fell by almost half from 1986 to 1996 (when the downtown transit modal share stood at 14%), and compare poorly to cities of a similar size in Canada (e.g. Winnipeg at 36%).
- The combined modal share of walking and cycling to downtown in 1996 was 12%.
- High levels of downtown off-street parking capacity (0.72 spaces per employee in 1996) were considered to be a significant disincentive to shifting commuter travel behaviour, partly by keeping the price of off-street parking quite low.
- The physical environment of downtown roadways was found to present many challenges to commuters who wish to walk or cycle.
- Recommendations focused on influencing travel demand included:
  - Increasing daily parking rates in City-owned lots
  - Establishing an auto trip reduction program for City staff, as an initial step towards a similar area-wide program
  - Investigating the provision of secure bicycle parking in City-owned off-street parking facilities

2.2.6 FORMER REGION OF HAMILTON-WENTWORTH – SHIFTING GEARS (1999)

This plan to improve cycling in the former Region of Hamilton-Wentworth represented an update of relevant portions of the 1992 Bicycle Network Study, based in part on the results of the 1997 Hamilton-Wentworth Community Cycling Survey.

The plan was consistent with typical travel demand management objectives, and aimed to:

- Encourage a shift in personal lifestyles and behaviours toward sustainable transportation modes like cycling
- Foster improved cycling skills among residents
- Promote the economic, health, recreational and tourism benefits of cycling

The actions recommended by the plan included several that were TDM-related, including:

- Provision of bicycle parking at strategic destinations
- Provision of cycling skills education for children and youth
- Provision of safe routes to school programs for elementary school students
- Continued production of a cycling route map
- Provision of cycling displays at theme events and shopping centres
- Provision of cycling-related information on the Region's Web site

2.2.7 MCMASTER UNIVERSITY – CAMPUS MASTER PLAN (2002)

McMaster University is one of Hamilton's major travel generators, and an important community leader. The institution's Campus Master Plan, completed in 2002, emphasized the role of TDM in overcoming parking capacity deficiencies and increased congestion at key access points. It called for the development of a campus TDM program to reduce future single-occupant vehicle travel to and from campus by 10 percent (or 15 percent when combined with the effects of expected growth in traffic congestion). This would maintain peak hour and single-occupant vehicle trips to and from campus at current levels.

The plan called for the closure of some campus roads to regular traffic, the addition of traffic calming measures, the creation of new walking and cycling routes, and improvements to transit services and facilities. Other recommended TDM elements included:

- Promotion and facilitation of carpooling, and the establishment of preferential carpool parking (i.e. better location and/or reduced cost)
- Adding secure bike storage and facilities for showering and changing
- Scheduling classes to reduce peak weekday parking and travel demands
- Making parking eligibility rules more restrictive
- Considering increased parking rates that would:

- At least equal transit costs
- Cover the operating cost of an expanded shuttle bus service
- Build capital reserves for future structured parking facilities
- Relate the cost of a parking space to its proximity to the heart of campus

As a result of the Campus Master Plan work, McMaster's Alternative Commuting and Transportation (ACT) Office was created in 2002 with the goal of increasing the numbers of faculty, staff and students who bike, walk, take transit and carpool to campus. The ACT Office has full-time staff and takes a proactive approach to events, research, policy and program development, information provision and partnership development with both on-campus and off-campus groups.

3. SUPPORTING INFORMATION AND ANALYSES

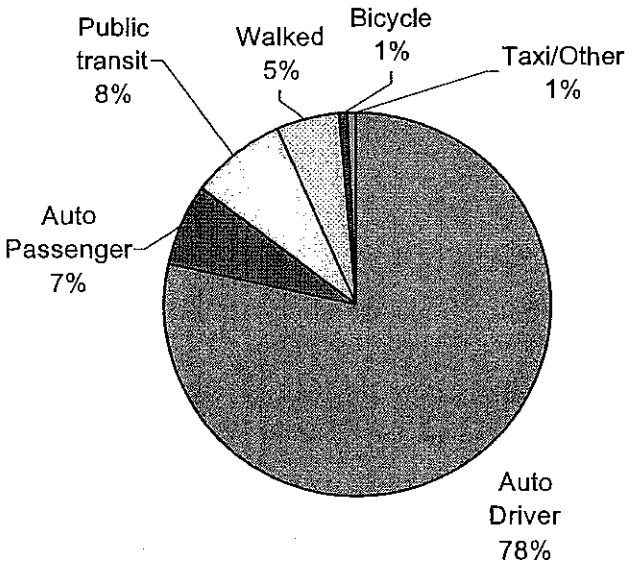
The purpose of this section is to provide a brief background on travel patterns as context to the development of policy options.

3.1.1 JOURNEY TO WORK MODE SHARES

A large part of TDM is focused on changing work trip behaviour, although changing behaviour for non-work trends is also important.

Exhibit 3.1 shows the breakdown of mode shares for work trips made by Hamilton residents. A total of 85% of work trips are made by private vehicles, either as a driver or passenger. Only 8% of work trips in the Hamilton CMA (including Burlington and Grimsby) are made by transit while walking and biking account for 6%. These figures suggest that there is an opportunity for TDM to have a significant impact on mode shares if the right incentives are provided.

Exhibit 3.1: 2001 Journey to Work Mode Shares



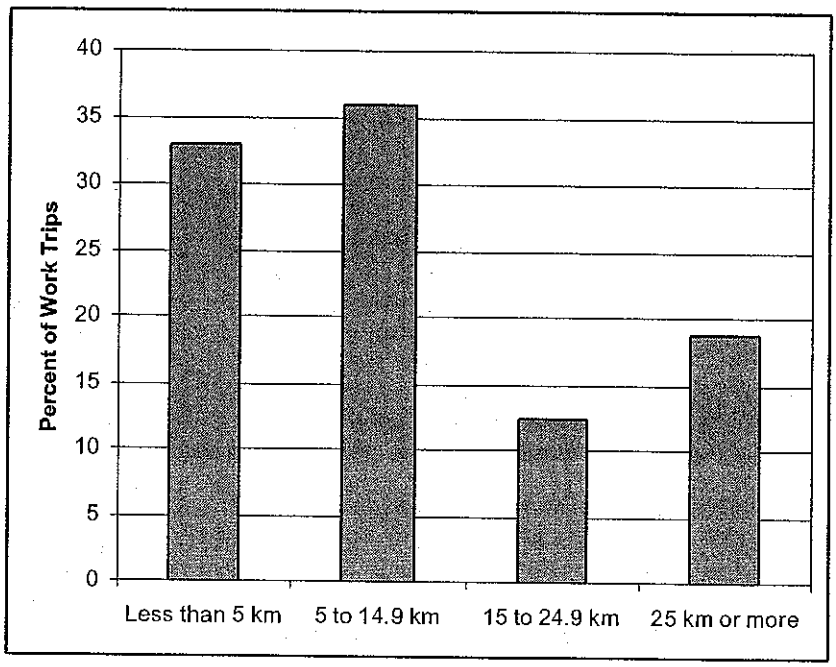
Source: Statistics Canada

3.1.2 WORK TRIP LENGTHS

Another consideration in the effectiveness of TDM is the distribution of work trip lengths. It is generally easier to encourage walking and cycling for short trips while ridesharing is more suitable for longer trips.

Exhibit 3.2 shows the distribution of work trips based on the 2001 Census. As shown, there are a large number of trips less than 5 km (33%), which is a prime market for walking and cycling.

Exhibit 3.2: Distribution of Work Trip Lengths



4. MUNICIPAL TDM PRACTICES ELSEWHERE

4.1 Ontario

Ontario communities, like those across Canada, are still in the relatively early stages of developing comprehensive and effective municipal TDM programs that are supported by strong policies. Some examples of the most progressive TDM programs follow:

- **The Black Creek Regional Transportation Management Association** (see www.bcrtma.org) was initiated as a TDM pilot project of the City of Toronto. The Black Creek TMA which offers its members (about a dozen employers in northwest Toronto) ridematching and guaranteed ride home programs, coordination of special events, and general assistance in developing commuter options programs. The TMA is largely driven by the needs and activities of its most dynamic member, York University, which (like McMaster University) is trying to manage parking and congestion challenges while supporting growth in campus population and building needs.

- **The Kitchener-Guelph Traffic Reduction Initiative** (see www.wpirg.org/traffic) is a community-based project of the Public Interest Research Groups (PIRGs) of Waterloo and Guelph, sponsored by (among others) the cities of Guelph, Kitchener and Waterloo and the Region of Waterloo. It works with major employers (including the City of Guelph, the University of Waterloo, the University of Guelph, and Cambridge Memorial Hospital) to improve commuter options. It offers Internet-based ridematching among other services.

- **The City of Ottawa's TravelWise program** (see www.ottawa.ca/travelwise) is a community-wide TDM initiative that has focused primarily on special events and public education. The program has two full-time staff members. Its accomplishments include creation of an interdepartmental TDM Task Force, creation of a Round Table for employers with TDM programs, development of a comprehensive Web site with information on using sustainable travel modes, development of a successful commuter options program with Nortel Networks, a high-quality cycling route map, an annual cycling guide distributed to households across the community, the installation of bike lockers at rapid transit stations, successful Commuter Challenge and International Walk to School Day events, an Active and Safe Routes to School pilot project, and annual cycling awards. The City's plans to more actively engage area employers appear to have lost forward momentum due to fallout from 2001's municipal amalgamation and subsequent budgetary issues.

4.2 Rest of Canada

A number of Canadian cities are working to build community-wide TDM programs. These include:

- **Greater Vancouver's Go Green Choices program** (see www.gogreen.com/choices), delivered by a non-profit group (Better Environmentally Sustainable Transportation, or BEST) on behalf of the Greater Vancouver Transportation Authority (TransLink). Go Green Choices supports employer-based TDM programs (including several TMAs) through training and program development assistance, information sharing events (e.g. quarterly seminars), promotional events (e.g. transportation fairs, Commuter Challenge, Bike Month), cycling skills training. Go Green Choices also promotes the ridesharing programs of the Jack Bell Foundation, an independent provider of vehicles and ridematching services for carpools and vanpools.

- **Calgary's Escape the Rush information campaign** (see www.calgary.ca) increases awareness among businesses and the general public of TDM's benefits, and encourages local employers to improve commuter options for their workers. The program focuses on promoting modal shift to walking, cycling, transit and carpooling, as well as on flexible work hours and teleworking.

- **The Allégo program of Montreal's Agence métropolitaine de transport** (see www.amt.qc.ca) works with businesses to improve commuter options for their employees. Allégo has supported the creation of a number of TMAs and supported projects in the areas of employee commuting surveys, ridesharing and workplace shuttles.

- **Halifax's TRAX program** (see www.trax.ns.ca) is delivered by the non-profit Ecology Action Centre with support from federal, provincial and local governments. TRAX offers ridematching, cycling promotion, special events, employee surveys, and other services to area employers.

4.3 United States

Community TDM practices in the United States are substantially more widespread and comprehensive than those in Canada. The principal reasons for this include an earlier start (about 10 years earlier), substantial federal and state money for programs that fight mounting air quality and congestion problems, and progressive federal taxation policies that make employer-provided commuting subsidies non-taxable.

U.S. practices have also been credited with greater success, due in part to their earlier start and greater funding levels, but also because they have been applied during a period when the incremental improvement in public transit services has greatly outstripped that seen in Canada, where transit funding has stagnated or dropped in many jurisdictions.

One of the most significant differences between Canada and the US is the treatment of transit and vanpool benefits. In Canada, employer provided transit benefits are a taxable benefit. Conversely, in the U.S., the most recent Federal legislation (TEA 21) allow for $100/month in tax-free benefits to employees using public transportation and vanpools[2]. As a result, a number of companies specializing in the implementation of transit-pass programs on behalf of employers have been established.

Due to the large differences between Canada and the United States in the areas of tax incentives for TDM, this report does not provide a detailed review of best practices outside of Canada.

[2] Association for Commuter Transportation (ACT), http://tmi.cob.fsu.edu/act/tea21/tea21X.asp

5. TDM POLICY ISSUES

Effective TDM requires a supportive policy foundation that can ensure consistent long-term direction and resource availability. The inclusion of TDM policies in Official Plans and Transportation Master Plans is evidence of a principled and lasting commitment, and confirms that demand management is an essential part of a community's overall transportation strategy.

There are five key issues that, ideally, would be addressed in a TDM policy document. These are listed below and discussed in the subsequent sections:

- Need and justification
- Objectives
- Positioning
- Roles and responsibilities
- Program development

5.1 Need and Justification

Communities across North America have firmly declared the era of predict-and-supply transportation strategies to be over. The new sustainability paradigm calls for the active, concurrent management of demand and supply to achieve an optimal balance among financial, social and environmental objectives.

Master plans and official plans should reflect a long-term perspective, anticipating future needs and effective responses to them. Examining the importance of TDM in American cities gives us a clue of where Canadian communities, even those who have yet to actively pursue TDM strategies, are likely headed. The transportation funding crisis that our communities find themselves in only strengthens this conclusion. If cities like Hamilton do not (and likely will not, for the foreseeable future) have sufficient funds to build and maintain the transportation infrastructure they need, managing demand is not only part of a balanced scenario—it could become a principal tool for managing our urban transportation systems.

But financial considerations are not the only driver for TDM. A number of other quality of life objectives, like those identified in Hamilton's Vision 2020, are directly supported by demand management measures. These include improved air quality, more active lifestyles, support for businesses, energy efficiency, and personal choice and equity. Explicit linkages to these areas can strengthen the rationale for TDM.

Directions for TMP policy:

- Validate the concept of TDM as an essential part of Hamilton's transportation strategy
- Explain that demand management is a necessary complement to infrastructure supply and operation
- Identify TDM's benefits for the transportation system
- Identify TDM's benefits for the community vision or other municipal goals

5.2 Objectives

A municipality is likely to set two types of objectives for TDM in its policy documents:

- **System objectives** are higher-level transportation goals, such as:
  - Shifting travel from single-occupant vehicles to walking, cycling, transit and/or carpooling
  - Limiting growth in traffic volumes, congestion and parking demands
  - Shifting transportation demand to off-peak hours
  - Improving air quality and preserving efficient goods movement
  - Maintaining accessibility of strategic areas such as downtowns, business parks or university campuses

System objectives indicate the intent of a certain policy or program direction. However, they cannot be relied on as the sole descriptors of desired program outcomes because they are too general to be used for monitoring or evaluation purposes. The factors that influence success (or lack of it) in reaching these objectives are simply too numerous, and frequently complex. For example, TDM programs may not increase transit use if service cuts lead to reduced route frequencies and higher fares.

- **Program objectives** are specific to an endeavour, and for TDM could include such general outcomes as:
  - Building public awareness and support for sustainable travel options
  - Providing practical, user-oriented information about sustainable travel options to residents, employers and institutions
  - Providing tools and assistance to partners who are undertaking their own TDM measures (e.g. employers, post-secondary institutions, non-profit community groups)
  - Increasing the number of employers and educational institutions that actively support commuter options for their employees and/or students
  - Leading by example through internal TDM programs that improve commuter and business travel options for municipal employees, and through improvements to public facilities that encourage sustainable travel by the public

Accomplishment of these objectives, to some extent, can be measured and attributed to measures undertaken as part of a TDM strategy.

Directions for TMP policy:

- Identify the system objectives that are most relevant to Hamilton's situation, and that may provide a sense of overall direction for the development of TDM strategies. These might focus on rebuilding transit ridership, increasing cycling and carpooling, maintaining access to McMaster University, and helping to improve air quality. (Note that the objective of reducing parking demand in the downtown area is excluded.

because the most effective tools to do so are likely to be parking supply restrictions and pricing disincentives. From the viewpoint of building public support for TDM, both of these tools are better applied outside the scope of a TDM program. See Section 4.3 for more on this point.)

- Identify program objectives that are consistent with the challenges and opportunities that are known or expected to arise. The use of an appropriate level of detail is important, because more detailed program planning is likely necessary to establish detailed or quantified targets (e.g. number of employers with programs, specific TDM tools to offer to partners). Program objectives for Hamilton might include all those listed above, with specific references made to developing a pilot TMA in concert with the upcoming GTA-wide Smart Commute Initiative, and to working with McMaster University to strengthen its TDM program.

5.3 Positioning

When TDM is introduced through policy channels, it is important to place it in proper perspective. The following qualifications should be made to ensure that decision-makers, senior staff and members of the public maintain a positive but realistic view of what TDM can do for the community:

- TDM does not force people to change how they travel. Rather, it modifies the social and economic contexts within which people make their travel decisions. It is not reasonable to expect people to choose a method of travel that is not best for them. Likewise, "wishful thinking" approaches are ineffective. TDM should strive to make real improvements that help people make travel choices that are best for both themselves and the community.

- Long-term TDM success will rely on effective land use planning and development controls, and on the delivery of essential transportation infrastructure and services that make walking, cycling and public transit viable as travel options.

- Expectations for TDM must be realistic, and recognize that it takes time to change the complex social systems that surround transportation. They must also be in accordance with the resources and priority the community is willing to accord to TDM.

- TDM should be presented as a tool to achieve positive change and better travel options, as much as possible. While disincentives (road tolls, parking fees, driving prohibitions, etc.) are well within the TDM toolbox, they are best reserved for situations where crisis is imminent or where public receptiveness has otherwise been confirmed. TDM programs can easily become a target for public discontent, so they should continually present those responsible for TDM as allies of the travelling public.

- TDM in an environment like Hamilton's should not be "anti-car", and should actively include drivers by helping them save money through responsible vehicle operation. TDM messages should stress the positive benefits of desirable travel options (e.g. cheaper, healthier, more fun). More aggressive approaches may work in communities where drivers can easily see the disbenefits of their current behaviours, but in a community with little congestion and few parking problems they are more likely to be counterproductive.

Directions for TMP policy:

- Clearly establish a positive role for the TDM program by delegating disincentive-based transportation measures (e.g. user fees) to other policy areas (See Funding and Financing Paper)

- Manage expectations by clarifying that the most meaningful TDM goals are likely long-term. The TMP policies will be a starting point, and must be followed up with program development. Progress will be incremental and will require steady support, determination and patience

- Identify linked needs such as compact mixed land uses and higher transit service levels

5.4 Roles and Responsibilities

It is helpful for TMP-level policies to identify or allocate responsibility for different actions. Required tasks that lie outside the scope of Council's authority should be clearly identified as such, to minimize confusion and maximize their odds of actually getting done. Policies are also an opportunity to lay the groundwork for future relationships with others by clearly establishing related Council positions.

Policies should place responsibilities into one of three categories:

- Actions by the City that lie within its mandate and authority, such as developing tools and services, conducting outreach and education, and operating its own facilities

- Actions by others that the City can influence through the provision of assistance, the creation of partnerships, the use of its powers of approval, and so on. These could include measures undertaken by business groups, developers, employers, schools or community groups

- Actions that the City may ask others to undertake, such as legislative changes, resource contributions or project participation by senior levels of government

Directions for TMP policy:

- Identify tasks that the City will be responsible for, including leading by example and offering tools or services that help others

- Identify tasks that the City will actively encourage and help others to do, such as setting up employer-based commuter options programs, including bike racks and shower facilities in new commercial developments, or developing active and safe routes to school for students

- Identify things that City would like the provincial and federal governments to do, such as contribute to pilot projects, enact legislation to encourage employer-provided transit benefits, and so on

5.5 Program development

Key principles to help guide the development of municipal TDM programs include:

- One of the most effective ways to demonstrate the viability and benefits of TDM measures is to **lead by example**. Municipalities are large employers and thus generate significant commuting activity. They also operate facilities that act as major travel generators for the public, including administrative buildings, arenas, libraries, conference centres and entertainment venues.

- Programs should be based on a **strong community dialogue** around sustainable transportation needs and solutions, which may already exist or which may need to be created. Advisory Committees, public information sessions, stakeholder workshops and outreach to school boards or business groups are all useful ways to get in touch with what people want, and what they are willing to do. Dialogue will help lead to TDM programs that **fit the unique context** of a given community, with its own opportunities and challenges. Measures that work in other cities may need to be adapted significantly before local application.

- Governments must **leverage resources** by providing the motivation for others to act, and by enabling and assisting their actions. Accessing these resources may be made easier by **structuring programs around "channels"** or delivery mechanisms. These include other municipal departments (e.g. to enable leadership by example), employers (as individuals or in groups like TMAs), educational institutions (from elementary schools through to post-secondary institutions), non-profit organizations (like neighbourhood associations and environmental interest groups), and individual households.

- Policies may **highlight the wide variety of TDM measures** that are possible, if only to demonstrate openness and preserve options at an early stage.

- There are benefits to be gained by **highlighting linkages** among program elements, so that individuals see the improvements to their transportation choices as more than a collection of unrelated changes. Most TDM programs **adopt an identity** (or "brand") that provides a foundation for a stronger relationship with transportation consumers.

- It is important to **monitor and evaluate programs**, especially in the early stages, to enable continuous improvement. Program managers should learn from experience and modify programs if it improves the odds of success. It's also wise to build in opportunities for user feedback, otherwise the thoughts of those people making the effort to communicate are likely to be negative.

Directions for TMP policy:

- Make leadership by example a priority, but emphasize the need for realistic, positive and inclusive steps (as discussed in Section 4.3) and refrain from committing to measures that may prove too difficult or costly. Address the need for measures to improve commuting and business travel options for employees, and to improve travel options for visitors to municipal facilities.

- Commit to consultation as a part of program development, perhaps as a temporary task force or advisory committee. The end product will have greater credibility among stakeholders, partners and the public if it reflects their input.

- List the diverse areas of possible TDM activity, including but not limited to communications, education, promotional events, technical assistance, tool development, service provision, and research and monitoring. Mention existing commitments to major initiatives.

- Identify key program delivery channels (employers, educational institutions, community groups and households), and the need and desire to work with stakeholders within those channels. Highlight groups that represent priority channels (e.g. employers through TMA formation).

- Explore the notion of branding the program to make TDM tools and services more identifiable and accessible to the public.

- Affirm that program development will be an iterative process that relies on monitoring and evaluation.

6. RECOMMENDED POLICIES

The purpose of this Phase 2 component of the Transportation Master Plan is to set out a series of policy directions to guide the development of the final Transportation Master Plan. This section identifies recommended TDM policies for inclusion in Hamilton's TMP. These concise recommendations build on the discussion in Section 5, and presume that the TMP will contain additional discussion that provides context for both policy and implementation recommendations.

There are a number of steps that are required, including the completion of Phase 3, that need to occur before the final plan can be implemented. However, in building momentum for the Transportation Master Plan, and subsequent Official Plan, a number of possible implementation actions could be considered as identified below. It is noted that these are implementation initiatives only and may evolve after the approval of the basic policy recommendations.

Recommended Policy

Apply travel demand management strategies as an essential part of land use controls and the provision of transportation infrastructure and services, in pursuit of a more sustainable transportation system.

Implementation

- Create and fill the position of TDM Coordinator within the city staffing structure, to be responsible for leading and managing the City's implementation of these recommended policies
- In close consultation with local residents, businesses and other initiatives such as the Smart Commute Initiative, develop a comprehensive TDM implementation plan that will confirm key objectives, set priorities for short-term action, and identify required resources
- Assign direct and indirect responsibilities for TDM-related action within the municipal organization, ensuring consistency and mutual support among diverse programs including those related to traffic, transit, parking, environment, development approvals, health and recreation

Recommended Policy

Actively consider TDM as a component of other initiatives intended to increase walking, cycling, transit use and carpooling, particularly to and from major travel destinations including the downtown core and McMaster University

Implementation

- Explicitly consider TDM in all municipal transportation plans and studies (e.g.Class EA projects and Neighbourhood Traffic Management Plans) including the degree to which it can help achieve key objectives, and what actions are required to do so
- Through appropriate forums, working groups and other avenues, encourage partners and other external organizations to consider TDM fully in their own transportation plans

Recommended Policy

Demonstrate a strong organizational commitment to TDM through adoption of a "leadership by example" role

Implementation

- Improve commuter options and business travel options for municipal employees, including providing more shared use vehicles for employees to travel to meetings during working hours
- Improve travel options for clients and visitors to municipal facilities, including better pedestrian connections, bicycle parking, transit information and so on (See Walking and Cycling Paper and Transportation Targets Paper)

Recommended Policy

Build public awareness of sustainable travel options and their personal and community benefits

Implementation

- Promote sustainable transportation choices through communications and outreach methods including Web sites, cycling route maps, cycling skills training, household flyers, media relations, and special events that raise the profile of sustainable transportation choices and encourage trial by individuals
- Consider the use of a TDM program identifier to link initiatives and provide a recognizable platform (or "brand") for TDM tools, services and communications

Recommended Policy

Maximize the effectiveness and value of municipal TDM investments by fostering partnerships with local businesses, educational institutions and community groups

Implementation

- Develop a suite of TDM tools and services that can be applied by employers, schools and community groups
- Work with the business community to identify and address TDM opportunities such as tools and training to improve employer-based commuter options programs
- Develop a pilot transportation management association (TMA) with local institutions and employers, in conjunction with the SmartCommute Initiative
- Work with McMaster University to strengthen its local leadership role in developing and evaluating new TDM initiatives, and facilitating their TDM program
- Work with elementary and secondary schools to identify and address TDM opportunities, such as the development of an Active and Safe Routes to

School program

- Help community associations, interest groups and non-governmental organizations develop and implement TDM-related initiatives, particularly those aimed at families and individuals
- Regularly recognize and reward community partners in TDM initiatives

Recommended Policy

Work with other governments and agencies to strengthen TDM initiatives in Hamilton through intergovernmental partnerships like the SmartCommute Initiative

Implementation

- Solicit the active support and participation of the Province of Ontario and the federal government in TDM initiatives, including financial assistance for pilot projects and legislative amendments to encourage employer-provided transit benefits
- Work with adjacent municipalities, particularly those in the GTA, to implement consistent and mutually-supportive TDM initiatives on a regional level

Recommended Policy

Monitor TDM initiatives and their effects, with the goal of continually improving related tools and services

Implementation

- As part of a broader TDM implementation plan, establish a framework for measuring and reporting on TDM activities, starting by measuring progress of the Smart Commute Initiative

7. IMPACTS OF POLICY OPTIONS

7.1 Assessment Factors

The assessment of policy options is based on factors for achieving sustainable growth and development across all of the policy papers developed in this project. They fall under the three major categories of **social, economic and environmental** impacts, and they are briefly described below.

Exhibit 7.1: Evaluation Criteria

Impact	Acts on	Description (or examples)
Social	Residential communities	Improves quality of life in neighbourhoods
	Safety and security	Reduces collisions; improves personal safety and security
	Ease of implementation & governance	Provides clarity, measurability, accountability
Economic	Development	Attracts employment, capital, optimal use of transportation infrastructure capacity, and future land use
	Land value	Increases land value, or does not decrease land values
	Operating and capital costs	Reduces or defers public and private costs of transportation capital (construction or acquisition of fixed infrastructure and rolling stock) and operations (maintenance, enforcement, delay, fuel, etc.)
	Congestion	Improves traffic flow (or slows deterioration thereof)
Environmental	Air quality	Reduction of Criteria Air Contaminants
	Noise and vibration	Minimizes noise impacts
	Natural environment	Improves water quality, green spaces, flora and fauna etc.

The rating system that will be used to apply these criteria is a visual five-point scale, to reflect a range from strong positive impact to strong negative impact. (**+**, **+**, **0**, **--**, **-**)

+ Represents the strong positive impact, **0** represents absence of significant impact either way, and **-** represents strong negative impact.

7.2 Summary of Impacts

Exhibit 7.2 provides an overall summary of the potential impacts of the proposed recommended TDM policy options. By nature, TDM policies should produce social and environmental benefits because they are intended to improve and expand the travel options available to individuals. The only potential negative implication (for any resident including current car users) of TDM is that the

City may need to apply staff and financial resources to implement these policies. However, the pay-offs in terms of improved travel options and reduced auto trips are expected to far out-weigh these resource requirements, particularly if the private sector is encouraged to participate and contribute.

Exhibit 7.2: Evaluation of Policy Options

Recommended Policies	Social			Economic				Environmental		
	Residential communities	Safety and security	Ease of implementation & governance	Development	Land value	Operating and capital costs	Congestion	Air quality	Noise and vibration	Natural environment
Apply travel demand management strategies as an essential complement to land use controls and the provision of transportation infrastructure and services, in pursuit of a more sustainable transportation system	+	+	+	+	0	+	+	+	+	+
Actively consider TDM as a component of other initiatives intended to increase walking, cycling, transit use and carpooling, particularly to and from major travel destinations including the downtown core and McMaster University	+	+	+	+	0	+	+	+	+	+
Demonstrate a strong organizational commitment to TDM through adoption of a "leadership by example" role	0	0	+	0	0	0	0	0	0	0
Build public awareness of sustainable travel options and their personal and community benefits	+	+	+	+	0	+	+	+	+	+
Maximize the effectiveness and value of municipal TDM investments by fostering partnerships with local businesses, educational institutions and community groups	+	+	-	+	0	+	+	+	+	+
Work with other governments and agencies to strengthen TDM initiatives in Hamilton through intergovernmental partnerships like the SmartCommute Initiative	+	+	+	+	0	+	+	+	+	+
Monitor TDM initiatives and their effects, with the goal of continually improving related tools and services	+	+	+	+	0	+	+	+	+	+

City of Hamilton

Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton
WALKING AND CYCLING POLICY PAPER

Prepared by Stantec

For IBI Group

FINAL REPORT

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1. INTRODUCTION

1.1 Study Background and Objectives

The City of Hamilton *City-wide Transportation Master Plan* will provide inputs to the *Growth Related Integrated Development Strategy* (GRIDS) and make recommendations to Council on the adoption of a City-wide Transportation Policy that is cognisant of Vision 2020 and other City of Hamilton long-term planning objectives. The project has been divided into three distinct phases. The first phase consisted of the technical calibration of the existing transportation model to reflect current transportation conditions in Hamilton. The second phase, which is the object of this and other policy papers, will focus on the development of 23 policy papers in the following areas: Travel Demand, Urban Development, System Performance, Infrastructure Planning and Infrastructure Financing. Following the completion of the Policy Papers, the City will proceed to develop transportation scenarios (Phase 3 of the project) based upon the results of the policy work performed in Phase 2 and the land use scenarios developed through the broader GRIDS study and will test the efficiency and viability of these scenarios by integrating them into the calibrated model.

This policy paper addresses the issues of **Cycling and Walking** under the category of Travel Demand. The remainder of this section outlines the benefits walking and cycling and the role of government in encouraging non-motorized travel. Section 2 reviews current policies that affect non-motorized travel. Section 3 describes the objectives for increasing non-motorized travel. Section 4 reviews walking and cycling related practices in other jurisdictions. Section 5 outlines policy options for increasing non-motorized travel. Section 6 provides succinct recommendations. Section 7 evaluates the policy recommendations. The policy paper on **Accessibility** elaborates on the special considerations necessary for disabled travelers.

1.2 The Importance of Walking and Bicycling

In healthy communities walking, cycling and other kinds of non-motorized transportation (e.g. roller blades, scooters, skateboards, etc.) are a normal, routine part of daily life. These active modes contribute to the quality of life and public health, provide options for getting around, and are important elements of the integrated transportation solution the City of Hamilton wants to achieve. Specifically, walking and cycling are directly related to the following GRIDS strategic directions:

> Four: Design Neighbourhoods to improve access to community life.
>
> Six: Expand transportation options that encourage travel by foot, bicycle and transit and enhance efficient inter-regional transportation connections.

Promoting and encouraging walking and cycling through the provision of facilities and programs helps build active communities, and reduces the dependence on automobile transportation and the associated infrastructure costs, air quality, safety and congestion problems. With the increasing focus on the health costs of our sedentary lifestyles, daily walking and cycling are seen as essential components of a healthy lifestyle. Many communities are attempting to redesign themselves to facilitate non-motorized travel by:

- Providing walkways and bikeways that accommodate and encourage non-motorized travel, rather than only designing communities around the automobile;

- Managing traffic and road design to allow pedestrians, cyclists and other travelers as well as motorists to use the roads. Features that facilitate automobile use such as wide roads and intersections, large parking lots, drive-through businesses can create an uncomfortable and unsafe environment for non-motorists;

- Encouraging walking and cycling within and between communities by managing the shape of urban growth and promoting more compact development.

Within transportation plans, policies that affect walking and cycling involve the planning, design, implementation, operation and maintenance of linear facilities (sidewalks, crosswalks, trails, bikeways, and bicycles on transit) and other amenities (benches, shelters, bicycle parking, etc.), and may also complement policies in other City programs that encourage cycling and walking (safety and education programs, bikeway maps, etc.).

2. EXISTING CITY OF HAMILTON POLICIES

2.1 Downtown Transportation Master Plan

This recently completed (2001) report identifies the elements of downtown's transportation system that hinder pedestrian and cycling movements. Most of these concerns are related to historical changes that made car use easier. The Downtown plan develops recommendations to improve the environment for in downtown Hamilton. These include:

- Identifies crucial pedestrian corridors and connections that should be upgraded with wider sidewalks, improved lighting and other features to make walking more attractive.
- Introduce bicycle lanes on specific streets in downtown to make cycling easier and safer.
- Introduction of two-way streets, which are generally more friendly for walking and cycling.

2.2 Official Plans from the Former Municipalities

Hamilton-Wentworth Official Plan: Towards a Sustainable Region
This report identified strategies for encouraging walking and cycling throughout the former Region of Hamilton-Wentworth. With respect to cycling the report requested that provincial government agencies assist with initiatives to encourage cycling.

To encourage pedestrian activity, the report recommended:

- Design safe, pedestrian-friendly streets that are visually appealing, make walking more inviting, provide weather protection with overhangs at store fronts, discourage the placement of objects that will impede pedestrians, reduce or eliminate vehicle traffic by design in areas of high pedestrian activity, provide exclusive pedestrian links in areas of high pedestrian activity and vehicular traffic, separate vehicular and pedestrian traffic, and provide adequate lighting;
- Encourage Area Municipalities to improve sidewalk construction and design standards to ensure that sidewalks continue into shopping areas, recreation areas and other similar public complexes; sidewalks are of sufficient width to comfortably accommodate pedestrian traffic; and sidewalks can be easily used by disabled persons.

Former City of Hamilton Official Plan
The Plan proposed a pedestrian and bicycle circulation system that would link the various activity nodes throughout the City. The proposed system would complement, and provide an alternative to, vehicular circulation in the Central Policy Area. Key policy recommendations from the Hamilton Official Plan were as follows:

- Promote the development of a "link-node" system that will link major pedestrian destinations such as Schools, Parks and Commercial areas (e.g. the Central Policy Area) by pedestrian paths, sidewalks along certain roads, or bicycle routes.
- Where feasible, co-ordinate the "link-node" system with the development and/or redevelopment of Residential and other areas throughout the City.

- Policies on cycling and walking related to the urban design of the Central Policy Area, include providing a network of parks and pathways throughout and linking the Central Policy Area to provide pedestrians and cyclists with a convenient way to move about;

- Provision of an elevated pedestrian walkway system, "+15", emanating from Jackson Square, connecting adjacent future development with the Square to the north, south and west, integrated with the transit system and the ground level pedestrian walkways, and incorporating appropriate landscaping measures and other amenities. This concept was removed from later plans.

City of Stoney Creek Official Plan
Policies related to walking in the Stoney Creek Official Plan are with respect to enhancing the character and function of the Downtown:

- Promote the amenity of the sidewalk through the uniform design and distribution of street furniture, information kiosks, receptacles, trees and planting boxes, and public and private signage and lighting;

- Encourage the upgrading of existing pedestrian linkages and/or the implementation of new linkages between the Downtown and nearby residential areas. In this regard, open space areas adjacent to existing water courses shall be utilized wherever feasible.

Town of Ancaster Official Plan
The Ancaster Official Plan states that the transportation goal is to promote circulation systems for motor vehicles, pedestrians and bicycles that will provide for the present and future circulation needs of the Town in a planned, efficient, economic, safe and attractive manner. There are no policies specific to cycling and walking other than those incorporated into the urban design aspects of specific land use designations, i.e., Commercial, Village Core.

Town of Dundas Official Plan
Policies contained in the Dundas Official Plan related to cycling and walking are as follows:

- New development or redevelopment adjacent to open space corridors shall maintain or enhance public access to trails, bikeways and parks within the open space corridors;

- Create a safer pedestrian environment and minimize the inherent conflicts between pedestrian and vehicular traffic;

- Where possible, sidewalks will be provided on at least one side of Local roads and on both sides of Arterial or Collector roads;

- Along major transit routes, provide amenities such as continuous sidewalks, canopies, arcades, shade trees and seating areas to improve the pedestrian environment along major shopping streets.

Township of Glanbrook Official Plan
The Glanbrook Official Plan includes specific cycling and walking policies in the non-motorized movement section of the transportation policies, as follows:

- Whenever possible, pedestrian walkways and bicycle pathways will be provided in new plans of development and in the redevelopment of existing residential areas, to link the residential areas with local commercial and community facilities;

- Schools and other uses that are high pedestrian traffic generators shall be adequately and safely served by pedestrian and bicycle routes;

- Encourage the provision of pedestrian and bicycle pathways through a linking open space system;

- Where linking the pedestrian walkways and bicycle pathways is not possible, provide for the establishment of safe pedestrian walkways and bicycle pathways with designated road right-of-way widths, encourage a design that physically separates the pedestrian walkways and bicycle pathways from the driving portion of the road. Implement on Township roads and encourage for the Regional Roads and Provincial Highways;

- Vehicular parking areas shall be designed such that they are separate from and do not cause conflict with pedestrian and bicycle routes.

Town of Flamborough Official Plan
No specific policies on cycling or walking are contained in the Flamborough Official Plan.

2.3 Technical Documents

Regional Transportation Review: Bicycle and Pedestrian Strategies, Vision 2020
This technical memorandum documents the bicycle and pedestrian components of the 1996 Regional Transportation Review and builds on the strategies set forth in *Vision 2020*, outlining policy directions as summarized below.

Cycling Policies:

- Continue implementation of the Region's Bicycle Commuter Network Study and Five-Year Implementation Plan;

- Establish an extensive network throughout the urban and rural areas of the Region for both utilitarian and recreational cyclists of various skill levels;

- Encourage bicycle safety through a better understanding and compliance with rules of the road and also through a better educated motorist;

- Encourage cycling as a feasible means of transportation;

- Interface bicycle and transit facilities to encourage commuting and other trips by bicycle;

- Provide secure public and private bicycle parking facilities.

Walking Policies:

- Increase the modal split to the walk mode as a means of reducing motorized trips;

- Increase the walk trips in the Central Area to reduce short auto trips, and increase the on-street activity;

- Make transit more accessible in suburban developments by providing better design and maintenance of pedestrian facilities connecting to transit stops;

- Increase the potential number of walk trips in urban developments by providing more live-work, school, shop and recreation opportunities in closer proximity;
- Increase the safety of pedestrians.

Shifting Gears: A New Cycling Plan for Hamilton-Wentworth
This 1999 report, prepared by the Region of Hamilton-Wentworth updated the 1992 *Hamilton-Wentworth Regional Bicycle Network Study*. The report notes that new directions for transportation described in *Vision 2020* were incorporated into the 1995 *Hamilton-Wentworth Official Plan* and the 1996 *Regional Transportation Review*. The Regional Official Plan acknowledged that cycling is an essential form of transportation for many residents and states that the Region will:

- Ensure the implementation of the 1992 Bicycle Network Study;
- Request that Area Municipalities make provision for cycling in land-use planning processes;
- Ensure that road designs incorporate provisions for cyclists where warranted and appropriate;
- Investigate integration of cycling and public transit;
- Provide adequate bicycle parking at public buildings.

The report noted that although the existing policies appear adequate, their implementation has posed difficulties. In particular, "making provisions for land use patterns and design features that accommodate all types of cycling in a safe and efficient manner" has not become a standard requirement in the various types of land-use decision-making processes regarding neighbourhood or secondary plans, plans of subdivision and site plans.

Design Guidelines for Bikeways, Region of Hamilton-Wentworth
Prepared by the Region of Hamilton-Wentworth in 1999, this guide presents recommended guidelines for the uniform design of bikeways throughout the Region, adopting basic bikeway guidelines recommended by the Transportation Association of Canada and the Ministry of Transportation, Ontario and other agencies, modified to suit local circumstances. The guide is compatible with the fact that bicycles are vehicles under the *Ontario Highway Traffic Act*, they can be ridden on all streets and highways except freeways and, therefore, on-street bikeways must be designed to allow cyclists to ride in a manner consistent with motor vehicle operation.

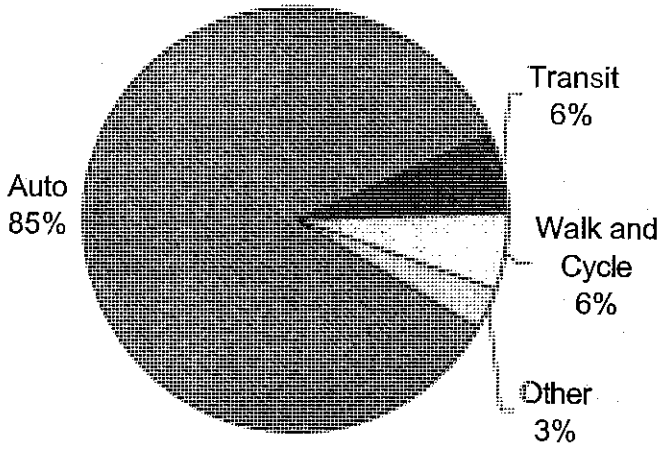
3. SUPPORTING INFORMATION AND ANALYSIS

3.1 Current Walking and Cycling Activity

In 2001, Hamilton residents made over one million trips each day. As shown in Exhibit 3.1, 6% (64,206) of all residential trips were by walking and cycling. This increases to about 11% for trips made in the morning peak period. Since 1986, the share of trips by walking and cycling has decreased only slightly (75 to 6%) whereas transit has seen more significant losses to the auto[1].

In terms of utility walking and cycling trips (i.e. non-recreational trips), walking and cycling mode shares are much higher in downtown than in the lower density suburban areas. For example, for AM Peak Period trips starting and ending in the downtown core, walking accounts for 60% of all trips. In comparison, trips made by walking or cycling in the morning peak hour in outer areas (e.g. Glanbrook, Stoney Creek, etc.) represent less than 1% of all trips. The 1997 Hamilton-Wentworth Community Cycling Survey indicated that most cycling takes place in Dundas/West Hamilton/Downtown Hamilton area on various trails, and to a much lesser extent in Ancaster, Waterdown and other local areas. Participation in cycling is very low in Stoney Creek and on the Mountain. This illustrates the impact that location, density of activities and infrastructure has on travel choices.

Exhibit 3.1: 24-Hour Mode Split, City of Hamilton



Source: Transportation Tomorrow Survey[2]

Periodically measuring the mode share of walking and cycling can provide quantitative measures to evaluate the effectiveness of policies. Specific targets for travel demand related to walking and cycling were found only in the *Regional Transportation Review.* The target for the peak hour share of travel by walking and cycling was 10% in 1991 and forecast to be 15% in 2011 and 20% in 2021.

Shifting Gears reported that with respect to safety, the average number of police reported collisions per year from 1990 to 1997 is 6,470. On average, approximately 190 of these involved cyclists and

[1] Transportation Tomorrow Survey 2001, 1996 & 1986 Travel Survey Summaries. Fifth Report of the 2001 Series.
[2] Ibid p. 89

310 involved pedestrians. Assuming there are 1 million trips, 10,000 cycling trips (1%) and 90,000 walking trips (9%) in the City, cyclists are 3 times more likely to be involved in a police reported collision and pedestrians are half as likely to be involved compared to motorists. Teenagers are at the greatest risk for cycling injuries and most cycling collisions occur while they are riding on sidewalks and crosswalks, and at intersections and along major streets such as Main Street, King Street and Barton Street (based on 1994 police records).

Shifting Gears also reported from the 1996 Transportation Tomorrow Survey that nearly 90% of all cycling trips are 5 km or less in length and walking trips are 2 km or less in length. In comparison, 50% of all auto trips are less than 5 km in length and 20% are less than 2 km in length, with the potential of being made on foot or on bicycle.

3.2 Existing Walking and Cycling Infrastructure

The City of Hamilton has a well-established network of cycling routes. A copy of the cycling map can be found on the City's website. Numerous linear trails have been implemented within the City including Chedoke Rail Trail from Hamilton to Ancaster, Hamilton Harbour Waterfront Trail, Beach Trail/The Breezeway and Lake Ontario Waterfront Trail, Escarpment Rail Trail from Hamilton's lower city to the mountain, Red Hill Valley Trail, Hamilton-Brantford Rail Trail, Cootes Drive Trail from Dundas to McMaster University, Rail Trail from the east mountain to Haldimand County, Dofasco Trail in Stoney Creek on the mountain, Bruce Trail, and the TransCanada Trail.

There are elements of Hamilton's successful bicycle network that can continue to be enhanced, such as:

- Creation of on-street bicycle lanes through the downtown core;
- Identification of routes that are not suitable for cycling, but are key links in the overall network. These links were noted as "cautionary on-street bicycle routes" in the City's Bikeways, Trails & Parks map[3].

Sidewalks are generally provided along roadways throughout the urban areas of the City, with some exceptions. In particular, rural roadways with fairly recent urban development, such as Rymal Road, or on the fringe of urban development do not have sidewalks. These roadways may exist with a rural design for some time until the pavement warrants reconstruction. This results in a period of inadequate infrastructure that cannot handle increasing non-motorized demands. In rural areas, some destinations that could generate a high pedestrian demand, such as schools or community centres may not be connected to the rural settlement areas.

3.3 Recent Efforts

The City of Hamilton continues to make progress in improving walking and cycling facilities. Examples include:

- Designation of a bicycle lane on Markland Street –this initiative was inexpensive and has had the effect of narrowing the roadway width in effort to calm traffic;
- Potential bicycle lanes on Hunter Street – the Downtown Transportation Master Plan identified Hunter Street as a key cycling route. In 2004, it is expected that Council will approve the funds to implement a new dedicated bicycle lane on Hunter Street;

[3] These routes included Charlton Avenue, Herkimer Street, Hunter Street, and sections of York Boulevard, King Street East, Woodward Avenue, Barton Street East, North Service Road, Mount Albion Road, Upper Ottawa Street, Stone Church Road, Upper Wentworth Street, Mohawk Road West, King Street West/Brock Road, and Centre Road

- Ferguson Avenue – the City has identified this a key pedestrian and cycling route. Design work is now proceeding;

- Hess Street – several years ago Hess Street was transformed to include wider sidewalks and other traffic calming measures. Hess Street is now a hub of pedestrian activity.

- Urban Braille - The system is primarily designed for visually impaired persons and users of a variety of mobility devises such as wheelchairs and scooters.

Numerous physical barriers to cycling and walking such as freeways and the Niagara Escarpment have been overcome with investments in infrastructure such as the Chedoke bicycle-friendly stairs, Highway 403 multi-use trail crossing, the LINC tunnel and pedestrian bridge crossings, the contraflow bicycle lanes on King Street at the Highway 403 on-ramp, and the Desjardin Canal bridge under Highway 403, York Boulevard and rail lines.

Future linear trail enhancements include extensions of the Hamilton Harbour Waterfront Trail easterly to the new Discovery Centre and beyond and northerly to Burlington, and improvements to the Lake Ontario Waterfront Trail connection across Burlington Canal.

4. REVIEW OF PRACTICES IN OTHER JURISDICTIONS[4]

4.1 City of Toronto

The City of Toronto has integrated walking and cycling issues into its larger planning process. As a result walking and cycling are recognized as important components of mobility, access and recreation. Walking and cycling are examined and promoted in the City Official Plan and the Cycling Master Plan of 2002.

In addition, the City has created a distinct Bike Plan and a standing citizen's advisory committee. The City's vision for biking is:

> *"...to create a safe, comfortable and bicycle friendly environment in Toronto, which encourages people of all ages to use bicycles for everyday transportation and enjoyment."*

The primary goals for the Bike Plan are to increase the number of trips made by bicycle and reduce the number of cycling collisions and injuries. The recommendations for the bike plan are to:

- **Make city streets safer and more amenable to bicycle riders.** The City of Toronto proposes to improve bicycle detection at traffic signals, amend by-laws to exempt bicycles, use traffic calming to enhance safety and maintain access, investigate two-way bicycle access on one-way streets, provide wide curb lanes on arterial roadways, develop a pavement repair reporting system, ensure street cleaning practices, respond to cyclists' needs, continue catch basin grate replacement program, and review practices for cyclist safety during road construction;

- **Develop a safe bicycle network.** The City of Toronto proposes to develop a inter-municipal cycling network while incorporating innovative design and information systems, enhancing safety through proper maintenance, identification of dangerous intersections, increasing police resources and by lobbying the Ontario Ministry of Transportation to adopt safety policies for bicyclists;

- **Promote cycling.** The City of Toronto should expand the Bike Week program, develop a bike-to-school program, create cycling guides, maps and special events, use the City's website to provide cycling information, support educational campaigns, encourage cycling by City and private employees and tourists;

- **Coordinate cycling and transit.** The City of Toronto should gather information on the needs of cycling transit users, provide bicycle racks on buses, improve bicycle access to stations, and develop Bike-and-Ride promotion strategies;

- **Improve bicycle parking throughout the City.** Develop a city-wide bicycle parking strategy, install new bicycle racks, investigate alternative bicycle parking tools, review zoning laws to facilitate bicycle parking, produce bicycle parking guidelines for developers, and develop a strategy for reducing bicycle theft.

[4] In addition to the policies examined below, The Pedestrian and Bicycle Information Center, <www.pedbikeinfo.org>, maintains a list of exemplary bicycle and pedestrian plans.

4.2 City of Ottawa

The City of Ottawa has incorporated walking and cycling into its Official Plan, *Ottawa 2020*, as well as the supporting *Transportation Master Plan*. The City recognizes several factors that influence non-motorized trip making including: suitable distances between origins and destinations, positive individual attitudes toward walking and cycling, safe direct routes, adequate maintenance especially for snow removal, as well as parking and personal facilities for cyclists.

The Transportation Master Plan commits the City to develop comprehensive pedestrian and cycling plans, implement and maintain a cycling network, provide sidewalks, high quality rapid transit stations, and pedestrian connections across hazardous transportation facilities, develop level of service indicators to assess pedestrian and cycling facilities, and coordinate transit priority and bicycle facilities.

The City also agrees to address several measures that support pedestrian and cycling improvements which include:

- Building public awareness of the environmental, health and economic benefits of walking and cycling;
- Create partnerships with private and public institutions to encourage non-motorized travel;
- Provide maps and other information for non-motorized networks;
- Promote safety and fair access for all road users;
- Develop a bicycle parking plan;
- Coordinate transit service and infrastructure with walking and cycling initiatives;
- Develop safe non-motorized pathway systems for recreation and travel; and
- Remove snow from non-motorized facilities.

4.3 U.S. Department of Transportation

The U.S. Department of Transportation's Policy Statement—Integrating Bicycling and Walking into Transportation provides some additional international insight into the role of non-motorized transportation and American efforts to integrate it with their road system.

The paper established criteria for requiring bicycle and pedestrian facilities in urban areas. It stated that sidewalks and bicycles will be accommodated in all new construction and reconstruction projects in urbanized areas unless one or more of three conditions are met:

- Bicyclists and pedestrians are prohibited from using the roadway.
- The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use.
- Where scarcity of population or other factors indicate an absence of need.

In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

Sidewalks, shared use paths, street crossings (including over- and under-crossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

The design and development of the transportation infrastructure shall improve conditions for cycling and walking through the following additional steps:

- Planning projects for the long-term. The design and construction of new facilities should anticipate likely future demand for cycling and walking facilities and not preclude the provision of future improvements.

- Addressing the need for bicyclists and pedestrians to traverse corridors as well as travel along them. Therefore, the design of intersections and interchanges shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient

5. IDENTIFICATION OF POLICY OPTIONS

This section outlines the areas for policies and the major concerns with developing and implementing walking and bicycling policies. The residents of the City of Hamilton have a long established interest in using local policy to promote walking and cycling. The former plans discussed earlier in Section Two provide an excellent starting point for the City to develop new policies.

All new policies for the City of Hamilton must consider the limits of available resources and the benefits of proposed policies. Although some level of cost/benefit analysis is warranted when establishing new walking and cycling policies, such an analysis is beyond the scope of this paper. In addition to the easily identifiable monetary costs of construction, the City should make certain to identify the unquantifiable benefits that accrue to the entire community through improved sustainability, health and quality of life.

5.1 Public Information

Providing the public with information about walking and cycling can increase public awareness of these modes as means of traveling. The City can increase awareness of walking and cycling by providing information on the following topics:

- **Safety** – Publish and distribute information about safe use of the transportation system. This can include information about the importance of wearing bicycle helmets, securing bicycles, crossing streets at designated crosswalks, and information to drivers about how to share the road with pedestrians and cyclists.

- **User Information** – This can include user information such as maps of recreational trail networks and bicycle parking locations.

- **Promotional Information** – The City can encourage walking and cycling among residents with pamphlets discussing the personal benefits of walking and cycling.

Information should be targeted to particular groups to help messages reach the residents who are most likely to walk or ride a bicycle. Information to schoolchildren should put strong emphasis on safety and identifying the best routes to school. Information for commuters can identify bicycle locker and shower facilities. Information to drivers should focus on announcing the arrival of other road users, and safety information about sharing road space with bicycle lanes.

5.2 Developing Useful Networks

Hamilton should continue to develop and expand dedicated facilities pedestrians and cyclists. A safe, convenient network of sidewalks, trails, and bicycle lanes will make travel by foot and bicycle more attractive for Hamilton residents. The new City of Hamilton is well positioned to continue developing these networks. The recent amalgamation also puts the new City in a good position to coordinate these networks at a community-wide level.

- **Safety** – Safety and security are prerequisites to encourage people to walk and cycle. If an area does not feel safe, people will not use it. Safe facilities require reasonable shelter from traffic, lighting for evening use, snow clearance in the winter, and other measures. Pedestrians, cyclists and motorists will necessarily share some portions of the road network. Sharing the road system will require infrastructure and training to ensure safety for all users while avoiding unreasonable automobile congestion.

- **Connectivity** – Building useful networks requires a general plan for connectivity. Isolated bicycle trails and sidewalks that suddenly stop are of limited use and can make travel unsafe. To create walking and cycling *networks,* recreational trails should be knitted together with utilitarian travel corridors to make citywide travel by foot or bicycle easy. Trails should link neighbourhoods with parks and recreation facilities, waterfronts, conservation areas, schools and other public buildings, cultural and historic sites, business areas and transit facilities. The City can also adopt basic standards for new or reconstructed infrastructure, such as requiring sidewalks along all surface streets, which will open new corridors to non-motorized travelers.

  Walking requires a relatively simple network of interconnected pathways. While pedestrian facilities are less complicated than railways or motorized corridors, making them truly useful does require basic amenities. A designated walking surface, such as a sidewalk, pathway or boardwalk, as well as ramps for disabled access should be provided. Pedestrians also require highly visible crosswalks to traverse roads and a pleasant environment in which to walk. These areas must be safe and should be well lit and quickly cleared of snow.

  A citywide network of bicycling trails, bicycle lanes, bicycle parking and shower facilities will provide the supporting network for cycling to become a reasonable means of travel for short to medium distances. The community already has already moved forward on this issue with plans from former municipalities. The new City can work to combine these various plans into a new bicycle plan.

  In addition to the physical infrastructure, these non-motorized networks require ongoing legal, financial and maintenance support from the City to remain attractive. Sidewalks must be cleared of snow. Parking in bicycle lanes should be discouraged with regular enforcement and ticketing.

- **Interconnectivity** – To get the most out of each transportation network, they should be integrated to make connections between modes as easy as possible. Making sure all bus stops have certain non-motorized amenities, such as hardtop surfaces, benches, shelters, lighting and bicycle lockers can encourage walking cycling and transit trips. Providing bicycle racks on buses can also encourage bike-transit trips.

Additional guidance on the above considerations is readily available. For example, Walkable Communities Inc., is a U.S. non-profit organization that provides additional guidance for improving pedestrian accessibility and developing walking and cycling infrastructure. They provide on-site audits of communities to identify strengths and potential directions for future initiatives.

5.3 Land Use

The land-use patterns in a community can have a profound effect on the attractiveness of walking and cycling. Walking and cycling are best suited for trips that are short to medium distances and the more destinations that can be brought within walking/cycling distance of each other, the more attractive these modes will become. By encouraging more compact, street-oriented development through appropriate zoning, the City can help make walking and cycling more attractive to a larger number of residents. The concept of more **Urban Structure** is discussed thoroughly in its own policy paper.

In addition, the appearance of the area surrounding walking and cycling facilities also has an impact on the attractiveness of these modes. Surrounding activities, architecture, and urban planning (collectively called urban design) can create environments that can encourage or discourage non-motorized travel. Many of these principals are already part of the downtown transportation master plan. **Urban Design** elements are discussed further in their own policy paper.

5.4 Municipal Corporate Leadership

The City of Hamilton can promote walking and cycling in the community by setting an example as a employer and facility owner.

- **Employees** - The City can encourage walking and cycling among its own employees with incentives and appropriate infrastructure at all municipal work sites (bicycle parking, showers, sidewalks, coordination with transit).

- **Public Facilities** – As the owner and manager of a significant number of public facilities, the City can make certain that all public facilities and pedestrian and bicycle friendly. This can encourage non-motorized travel to those facilities and set a leading example for other property owners for how to make their facilities accessible for pedestrians and cyclists.

6. RECOMMENDED POLICIES

Based on the above review, the following policies are recommended for consideration in the Transportation Master Plan:

Recommended Policy
Provide user-oriented information for all pedestrians, cyclists and other road users to increase awareness of non-motorized networks, user guidelines and safety requirements.
Implementation
• Develop and distribute a combined walking/bicycling map to illustrate all recreational and utilitarian travel corridors in the City, as well as additional facilities such as bicycle parking sites. • Develop and distribute safety information to pedestrians and bicyclists concerning safe use of the transportation network. • Develop and distribute information for motorists on how to safely share road space with cyclists and pedestrians. • Consider disabled persons and persons using mobility aids in all aspects of planning for pedestrians.

Recommended Policy
Build awareness and promote the benefits of walking and cycling.
Implementation
▪ Create and fill the position of TDM Coordinator within the city staffing structure, who will also assist in promoting walking and cycling. • Provide information on the environmental and personal benefits of walking and cycling. • Support the implementation of recognized pedestrian and cyclists safety education programs such as CAN-BIKE. Consider creating a cycling education program for children and adults similar to the City's swimming program to promote the development of non-motorized travel as a life skill. • Work with school boards and other agencies and community groups to support and develop safe-routes-to-school programs for walking and cycling. • Support a Bicycle-Friendly and Pedestrian-Friendly Business Awards program • Continue to support the Hamilton Cycling Committee as a Citizen Volunteer Committee reporting to Council through a Committee of Council to assist in implementing and monitoring the policies.

Recommended Policy
Continue to improve and expand the existing network of pedestrian and bicycle infrastructure.
Implementation
• Continue to move towards the 2008 Ultimate Bicycle Network Master Plan as outlined in *Shifting Gears*. Initial goals should be to address missing links of major on-street routes, improvements in corridors of high or expected demand, and projects identified in current studies such as in the Downtown. • Establish bikeways and sidewalks in all new transportation construction and reconstruction projects as provided for in the **Road Classification Policy Paper**, unless significant justification is provided otherwise. In rural areas, include paved shoulders in all construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. • Support the police practice of patrol on foot and by bicycle with training through a

recognized safe-cycling program, and establishing enforcement priorities based on collision research.
- Create a senior staff level pedestrian and cycling coordinator position to monitor and assist in the implementation of the policies until such time that the policies are integrated into the everyday practises of the City administration.
- Provide bicycle parking at all municipal facilities and endeavour to make bicycle parking available at important activity centres throughout the city.
- Improve safety and attractiveness of cycling by providing and maintaining appropriate signage for current and future cycling routes.
- Implement a non-motorized maintenance program. Expand programs to clean and remove snow from pedestrian and bicycle facilities. Develop a program for quick repair of infrastructure such as street/sidewalk repair, catch basin repair, removal of road hazards, signage repairs, traffic signal modifications, etc. Place priority on safety-related spot improvements.
- As a major employer in Hamilton, take a leadership role in encouraging and supporting cycling and walking by staff by providing appropriate access to buildings, bicycle parking, change/shower facilities based on updated zoning by-laws.
- Monitor levels of service and safety for non-motorized users of the transportation infrastructure and adjust policies, programs and practises as needed.

Recommended Policy

Promote the coordination of transit trips with walking and cycling trips so multi-modal trips are convenient, safe and comfortable.

Implementation

- Continue to provide and maintain benches, shelters and bicycle parking at key transit nodes. Develop a program to install and maintain bicycle lockers at the Downtown GO Terminal.
- Explore opportunities and issues related to providing bicycle racks on buses, particularly buses that cross the Escarpment, and those serving student populations, and large employment centres.
- Bicycles should be permitted on buses outside of peak hours and on underutilized routes during peak hours at the discretion of the driver based on bus occupancy.
- Promote cycling and walking connections with pubic transportation in transit marketing programs including partnership programs with employers.

Recommended Policy

Plan communities to make walking and cycling convenient, safe and comfortable, lessening the demand for auto trips and improving community health.

Implementation

- Recognize the importance of non-motorized transportation in the Transportation Master Plan.
- Facilitate pedestrian and cycling trips by promoting compact development.
- As a long-term strategy, use zoning regulations to create more compact and mixed-use neighbourhoods as a means of allowing trips to become shorter, making walking and cycling more attractive and convenient. Specific policies are outlined in more detail in the *Urban Structure Policy Paper.*

Recommended Policy
Use conditions of development to provide for and enhance cycling and walking.
Implementation
• Require all new developments to provide safe and convenient pedestrian and cycling environments and access through building orientation, site layout, traffic management, and the provision of facilities such as sidewalks, crosswalks, bikeways, bicycle parking and connections to transit service. • Encourage secure bicycle parking for all new multi-family residential buildings and bicycle parking and shower/change facilities for larger non-residential developments (e.g. more than 50 employees). • Work with developers to provide pedestrian amenities such as street lighting, benches, and parks. • Create a cash-in-lieu program so developers can chose to provide money to a municipal fund for non-motorized trail if on-site non-motorized facilities are unreasonable.

Exhibit 7.2: Impacts of Policy Options

Policy Option	Social			Economic				Environmental		
	Residential Communities	Safety and Security	Ease of Implementation and Governance	Development	Land Value	Operating and Capital Costs	Congestion	Air Quality	Noise and Vibration	Natural Environment
Provide user-oriented information for all pedestrians, cyclists and other road users to increase awareness of non-motorized networks, user guidelines and safety requirements.	+	+	+	o	o	o	+	+	+	+
Build awareness and promote the benefits of walking and cycling.	+	+	+	o	o	o	+	+	+	+
Continue to improve and expand the existing network of pedestrian and bicycle infrastructure.	+	+	-	+	+	--	+	+	+	+
Promote the coordination of transit trips with walking and cycling trips so multi-modal trips are convenient, safe and comfortable.	+	+	+	+	+	-	+	+	+	+
Plan communities to make walking and cycling convenient, safe and comfortable, lessening the demand for auto trips and improving community health.	+	+	-	o	o	o	+	+	+	+
Use conditions of development to provide for and enhance cycling and walking	+	+	--	o	+	+	+	+	+	+

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7. IMPACTS OF POLICY OPTIONS

7.1 Assessment Factors

Assessment of policy options is based on factors for achieving sustainable growth and development across all of the policy papers developed in this project. They fall under the three major categories of **social, economic and environmental** impacts, and they are described briefly below.

Exhibit 7.1: Assessment Factors

Impact	Acts on	Description (or examples)
Social	Residential communities	Improves quality of life in neighbourhoods
	Safety and security	Reduces collisions; improves personal safety and security
	Ease of implementation & governance	Provides clarity, measurability, accountability
Economic	Development	Attracts employment, capital, optimal use of transportation infrastructure capacity, and future land use
	Land value	Increases land value, or does not decrease land values
	Operating and capital costs	Reduces or defers public and private costs of transportation capital (construction or acquisition of fixed infrastructure and rolling stock) and operations (maintenance, enforcement, delay, fuel, etc.)
	Congestion	Maintains traffic flow at acceptable level
Environmental	Air quality	Reduction of Criteria Air Contaminants
	Noise and vibration	Minimizes noise impacts
	Natural environment	Improves water quality, green spaces, flora and fauna, etc.

The rating system that will be used to apply these criteria is a visual five-point scale, to reflect a range from strong positive impact to strong negative impact. **(+, +, o, --, --)**

+ Represents the strong positive impact, **o** represents absence of significant impact either way, and **--** represents strong negative impact.

7.2 Summary of Evaluation

The factors described in Section 7.1 are applied to the policy options described in Section 6. The results of a preliminary qualitative assessment using the rating scheme described previously are provided in Exhibit 7-2.

APPENDIX C
Public Consultation Information

C 1- Notice of Commencement

PUBLIC INFORMATION CENTRES

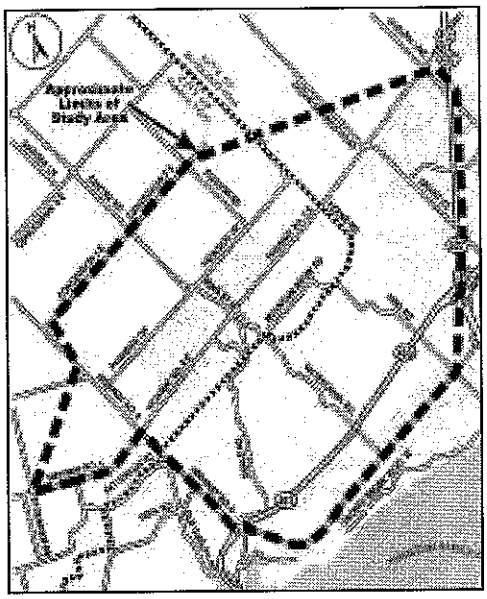
WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN AND CLASS ENVIRONMENTAL ASSESSMENT NOTICE OF STUDY COMMENCEMENT

THE STUDY

The City of Hamilton has initiated Phase Two of the Municipal Engineers Association Municipal Class Environmental Assessment (June 2000) (EA) process for the Waterdown / Aldershot Transportation Master Plan. Phase Two of the Class EA Master Plan study will assess how the transportation network in the areas of Waterdown and Aldershot can be improved.

Phase One of the Class Environmental Assessment process has been completed and confirmed the need for the following transportation improvements:

1) Additional east-west capacity in the overall transportation network in the Waterdown North and Waterdown East/ Aldershot/ Burlington area
2) Additional north-south capacity in the overall transportation network in the Waterdown/ Aldershot/ Burlington area



The purpose of Phase Two of the Class EA process is to consider all options, including "Do Nothing", along with options that will provide additional capacity in the overall transportation network, in order to accommodate the additional transportation demands resulting from new development.

PUBLIC CONSULTATION PROCESS

A public consultation process has been designed by the study team to allow input from the public at different times during the project. Several Public Information Centres (PICs) were held for Phase One of this study. The first round of Public Information Centres for Phase Two of the EA study, will be held at the dates and locations mentioned below. An additional series of Public Information Centres will be held prior to the completion of Phase Two.

PUBLIC INFORMATION CENTRES

The following Public Information Centres will be held to present this project and receive public input:

DATE:	October 26 2004	*And*	**DATE:**	October 28 2004
TIME:	6:00 pm to 9:00 pm		**TIME:**	6:30 pm to 9:00 pm
LOCATION:	LaSalle Park Pavilion 50 North Shore Blvd. E. Burlington		**LOCATION:**	Flamborough Family YMCA 207 Parkside Drive, Waterdown

PUBLIC COMMENTS INVITED

There is an opportunity at any time during this process for interested persons to review outstanding issues and bring concerns to the attention of the Project Managers. If you have any questions or comments or wish to be added to the study mailing list, please contact:

Alvaro Almuina
Dillon Consulting
235 Yorkland Blvd, Suite 800
Toronto, ON M2J 4Y8

Phone: 416 229-4647 ext. 455
Fax: 416 229-4692
Email: aalmuina@dillon.ca

Andrew Head
Project Manager, Transportation/Transit
Capital Planning and Implementation Division
Public Works Department
320-77 James Street North
Hamilton, ON L8R 2K3

Phone: 905-546-2424 ext. 2433
Fax: 905-546-4435
Email: ahead@hamilton.ca

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

C 2- Public Information Centre # 1 Materials

Waterdown / Aldershot
Transportation Master Plan

Public Information Centres
October, 2004

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Introduction

- Purpose of the Transportation Master Plan
- Background to the Study
  - Official Plan Amendment 28 – City of Hamilton
  - Municipal Class EA Planning and Design Process
  - Recommendations from 1999 Stantec Study
  - Purpose and recommendations from Phase 1 Study
- Key Study Components / Schedule
- Suggestions for the Transportation Master Plan
- Criteria for Evaluation /Area Constraints
- Existing and Potential Transportation Systems
- Next Steps

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Why do a Transportation Master Plan?

- Prepare a Strategy that supports OPA 28
- Identify alternative solutions to transportation issues and opportunities to 2031
- Identify and protect future transportation corridors
- Integrate policies, programs, funding and infrastructure needs
- Identify the cost of transportation services and their allocation (i.e. Hamilton and Burlington DC)
- Serves as Phase 1 & 2 of the Municipal Class Environmental Assessment

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Official Plan Amendment No. 28
City of Hamilton

- OPA No. 28 was **approved** on June 19, 2002
- Allows the expansion of the Waterdown urban area to accommodate residential growth to the year 2021
- Brought three areas into the City's Urban Boundary
  - Waterdown North
  - Waterdown South
  - Upcountry Estates
- Expected population growth of over 15,000 at build out
- Approval for development based on conditions being met, such as completion of a Transportation Master Plan

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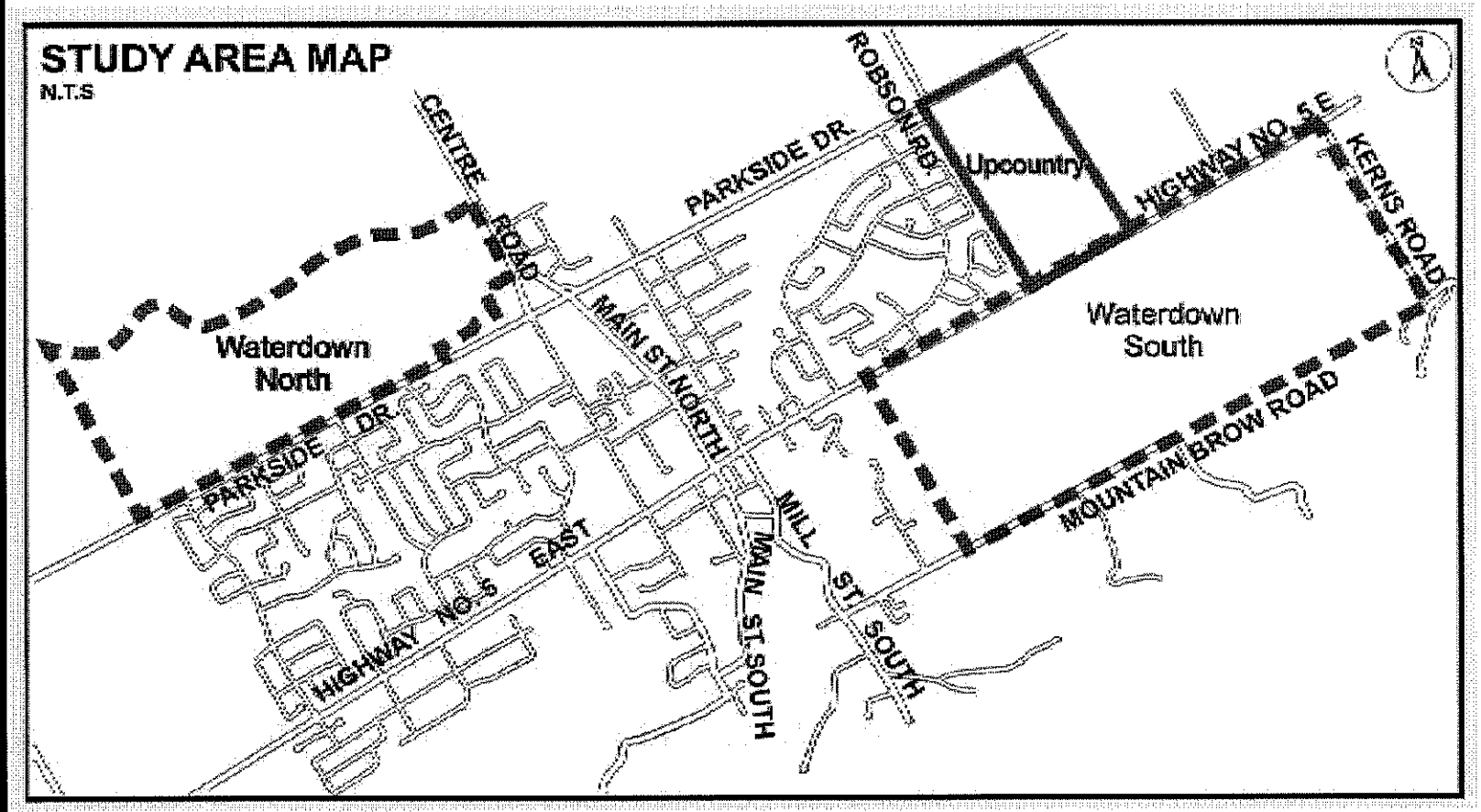
Official Plan Amendment No. 28



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Study Area

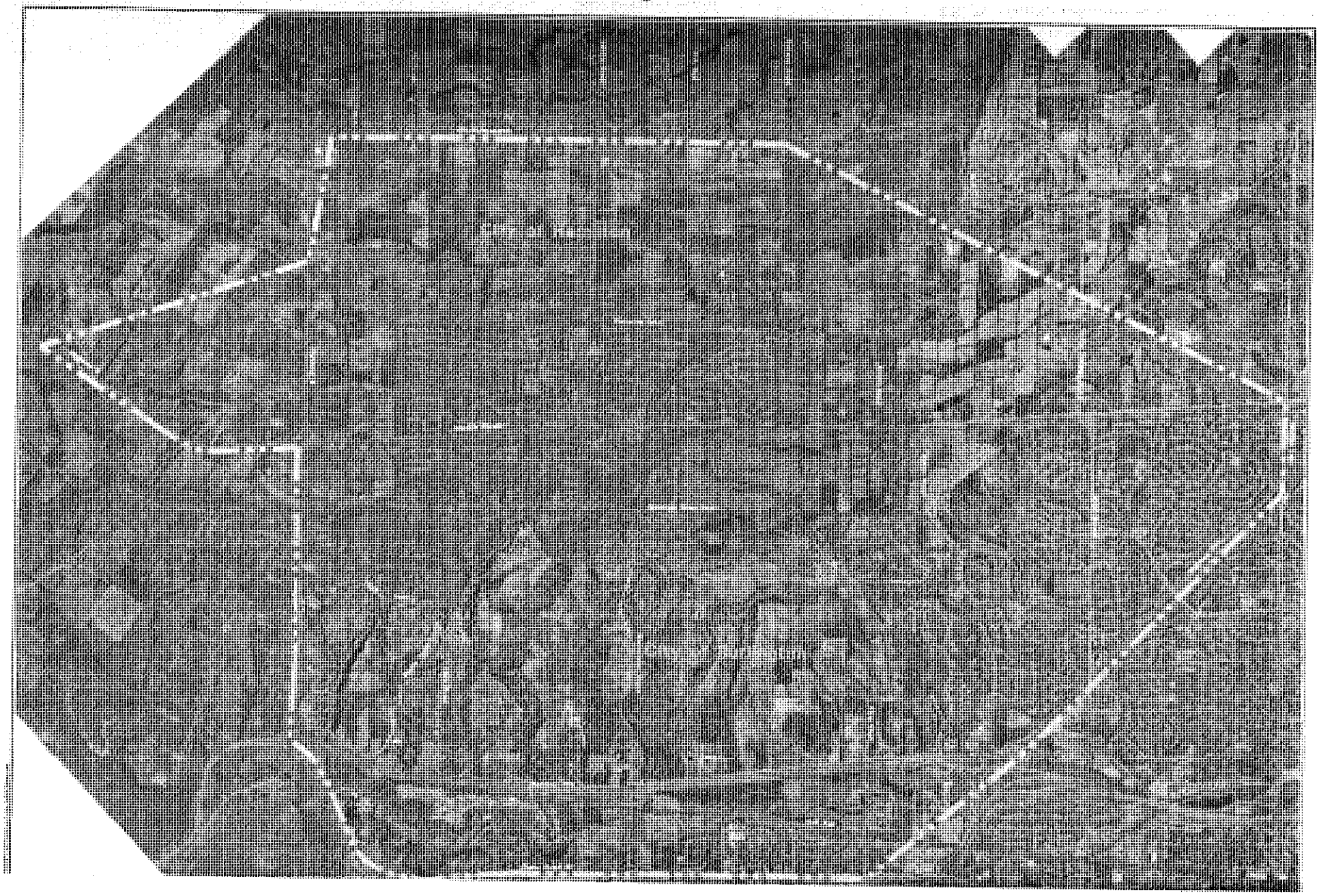
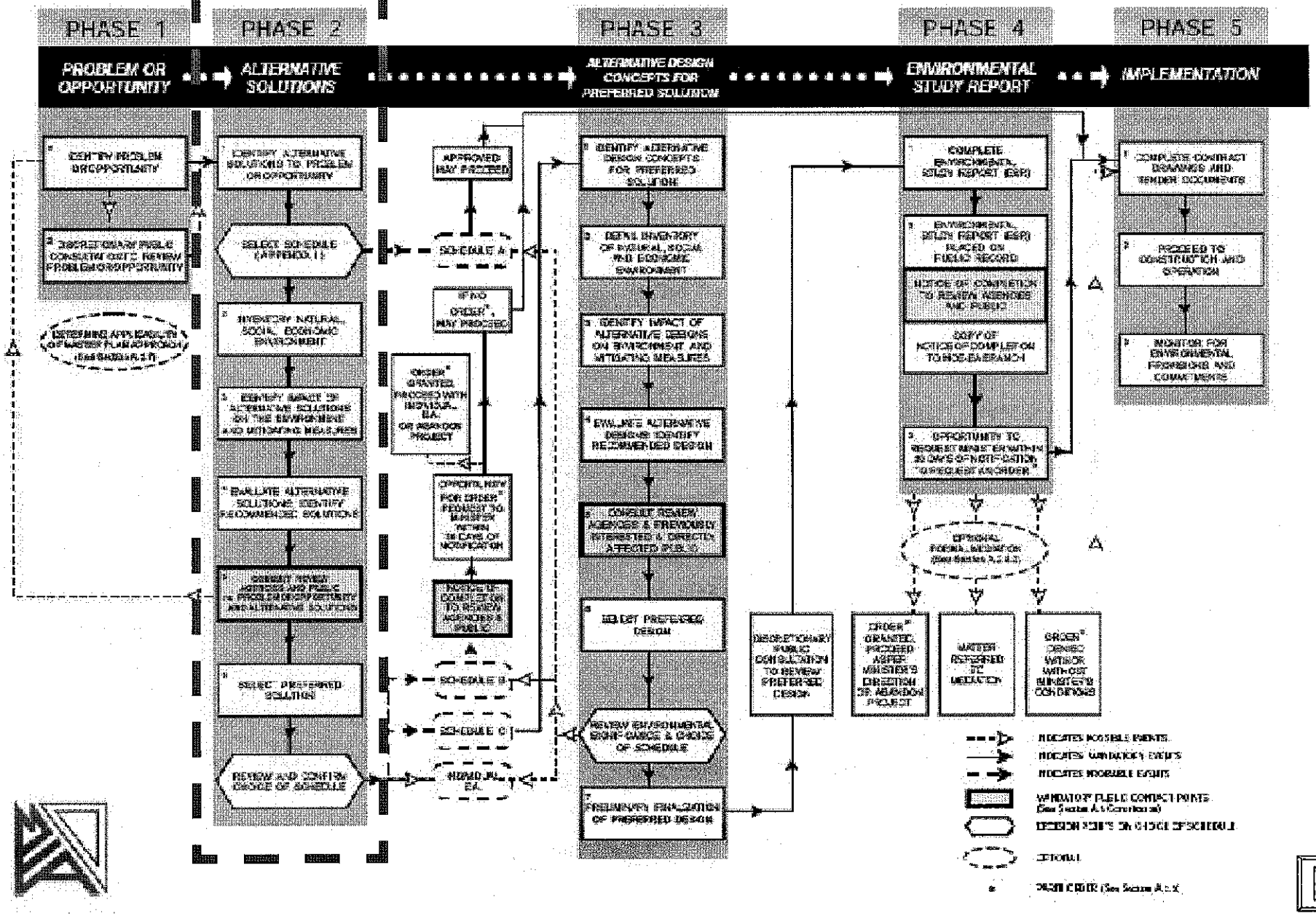
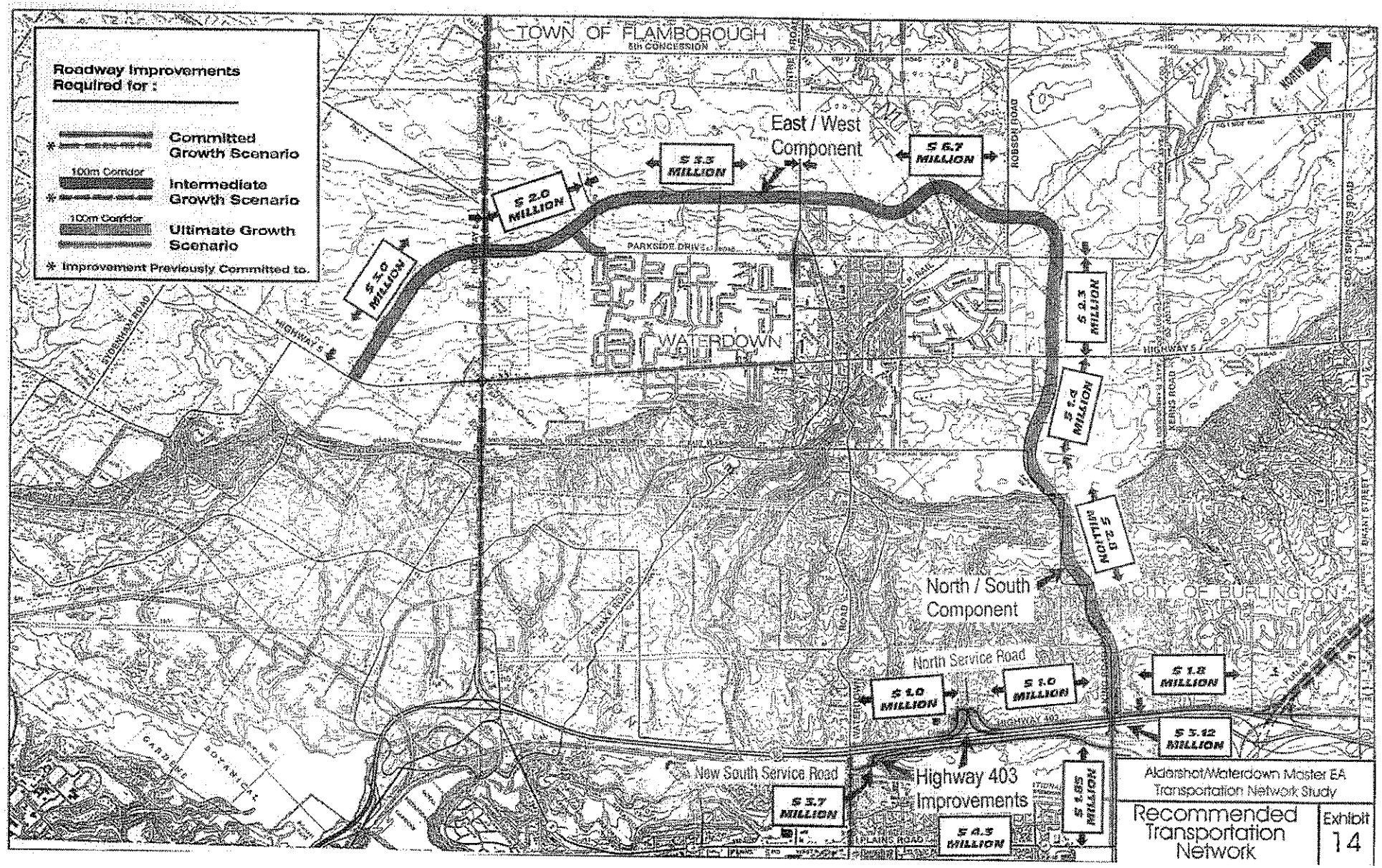


EXHIBIT A.2 MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



Recommendations from 1999 Study



Phase 1 TMP
Study Purpose

- Phase 1, Identification of Problem or Opportunity, was completed in April 2004.
- Purpose of the Report was to:
  - Review the validity of the 1999 Transportation Master Plan
  - Identify a need for additional east/west and north/south capacity with OPA 28 lands developed.

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Phase 1 TMP
Study Recommendations

- Confirmed need for additional east-west and north-south capacity in the Waterdown/Aldershot area due to OPA 28
- Consider all options to provide additional capacity in the next phase of the study.

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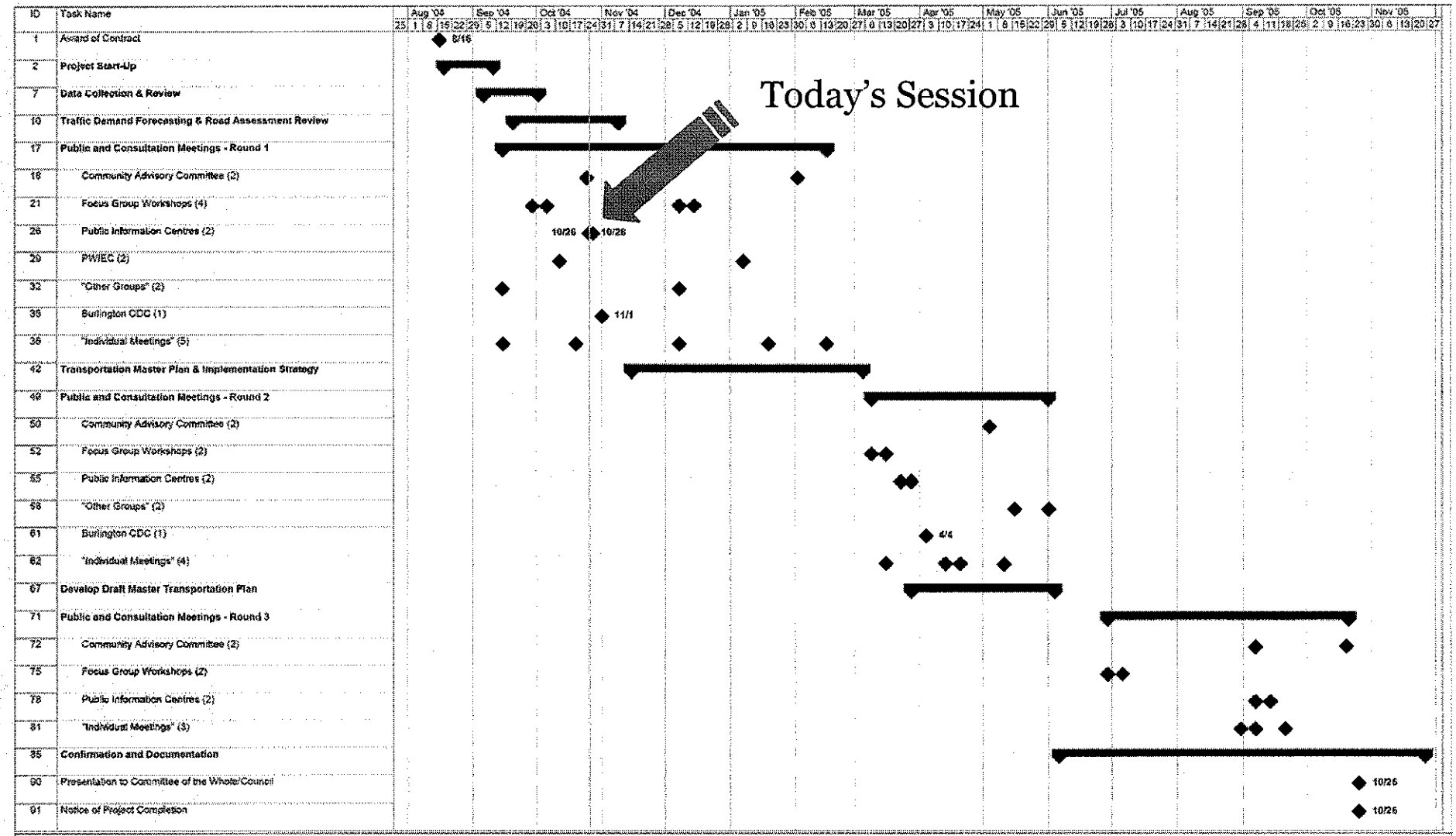
Study Schedule



Key Transportation Master Plan Components

- **Roads Network** – Investment strategy for new and expanded roads to serve growth
- **Transit Strategy** - Investment in transit service and/or interregional service
- **Cycling and Walking** - Promote cycling and walking as an alternative mode of transportation for utilitarian and recreational use

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Key Transportation Master Plan Components

- **Transportation Demand Management** - Decrease the use of single occupant vehicles through managing demand (i.e. ridesharing, HOV lanes)
- **Land Use** - Better coordination of land use and transportation that encourages alternative modes

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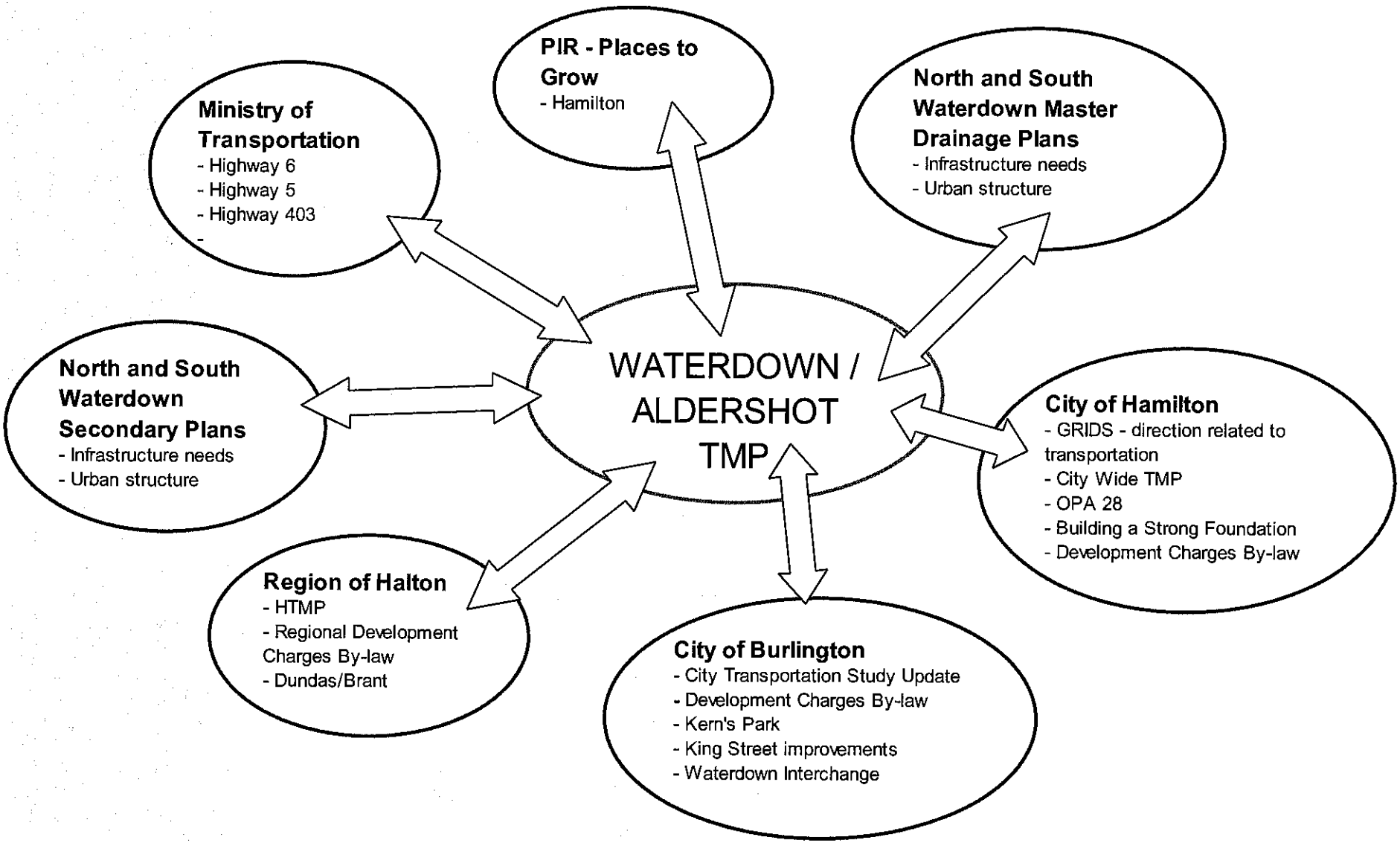
Study Linkages



Suggestions for the Transportation Master Plan

The following highlights some of the suggestions for the Waterdown/Aldershot Transportation Master Plan:

Link Transportation to Land Use

- Encourage local economic development to reduce trips
- Integrate transportation transfer centers into the community
- Increase density in residential areas and focus development on areas with good transit service

Protect the Environment

- Develop road network improvements that minimize impacts and avoids ESA's

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Suggestions for the Transportation Master Plan

Improve Demand Management

- Provide incentives to change travel behavior without taking away travel choice
- Manage transportation demand on a larger scale (e.g. flex hours, work at home, rideshare database, etc.)

Improve Transit Service

- Introduce local transit service into the Waterdown
- Focus on inter-regional transit including rail
- Dedicate new lanes as HOV/transit lanes
- Ensure transit travels to places people want to go

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Suggestions for the Transportation Master Plan

Improve Road Service

- Widen QEW & Hwy 403 - include HOV/transit lanes
- Keep new roadway corridors wide for future flexibility
- Address both local and through traffic issues
- Accommodate trucking needs - important to the regional economy

Political Leadership

- Get political buy-in for long-term transportation plan
- Have all City employees lead by example
- Educate public on importance of behaviour change

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Suggestions for the Transportation Master Plan

Identify Funding Opportunities and Economic Impacts

- Investigate opportunity to use the gas tax
- Consider potential economic impact of decreased auto use

Move Forward Incrementally

- Look for low cost, quick fix solutions in the short term
- Habits are hard to change and taxes are hard to raise – so look for incremental change

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Criteria for Evaluation

- Evaluation criteria based on achieving transportation principles for the area
- Criteria include:
  - Natural Environment
  - Social Environment
  - Economic
  - Cost
  - Transportation Service

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Environmental Constraint Area

Map Features

- Study Area
- Upper Tier Municipal Boundary
- Environmental Constraint Area
  (Includes Environmentally Significant Areas, Areas of Natural or Scientific Interest, Provincially Significant Wetlands, Greenland Policy Areas, floodplain lines for Bronte Creek/Grindstone Creek and woodlots
- Niagara Escarpment Planning Commission Regulated Area

Data Sources

Data provided by the City of Hamilton, The City of Burlington and the Halton Region Conservation Authority.

Scale

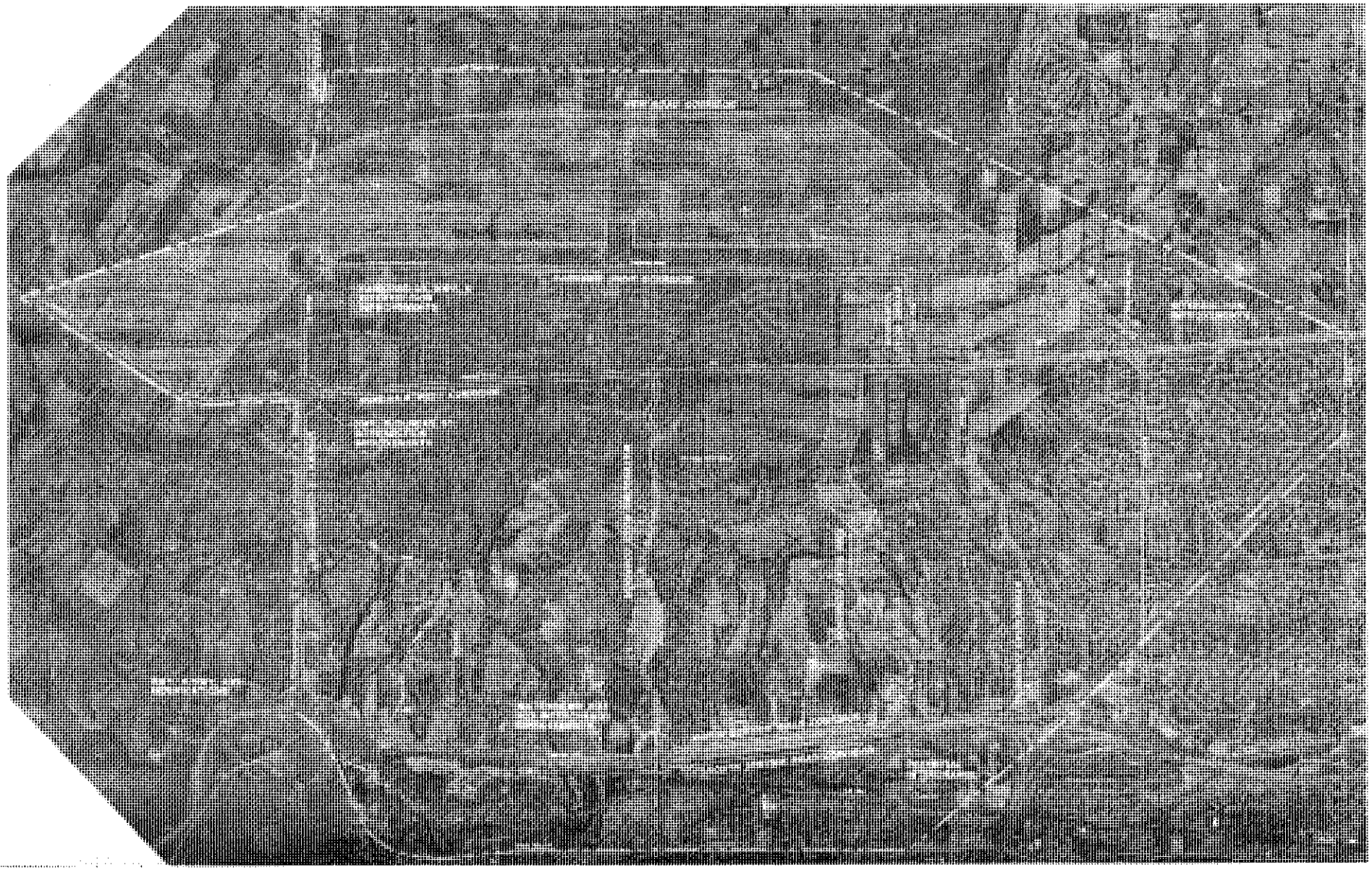
0 500 1,000 2,000

Meters

Map Notes

Map created by PJK
Map checked by AA
October 23, 2004
File:\GIS\043937\Aldershot Open House 8x11.mxd

Possible Infrastructure Improvements and New Corridor Alternatives



Next Steps

- Evaluate transportation alternatives that meet the principles of the TMP
- Identify and evaluate impact of alternatives through a comprehensive evaluation process
- Conduct a second Public Information Centre in March, identifying a preferred road network and supporting policies
- Conduct a third Public Information Centre in September to present the Draft Transportation Master Plan

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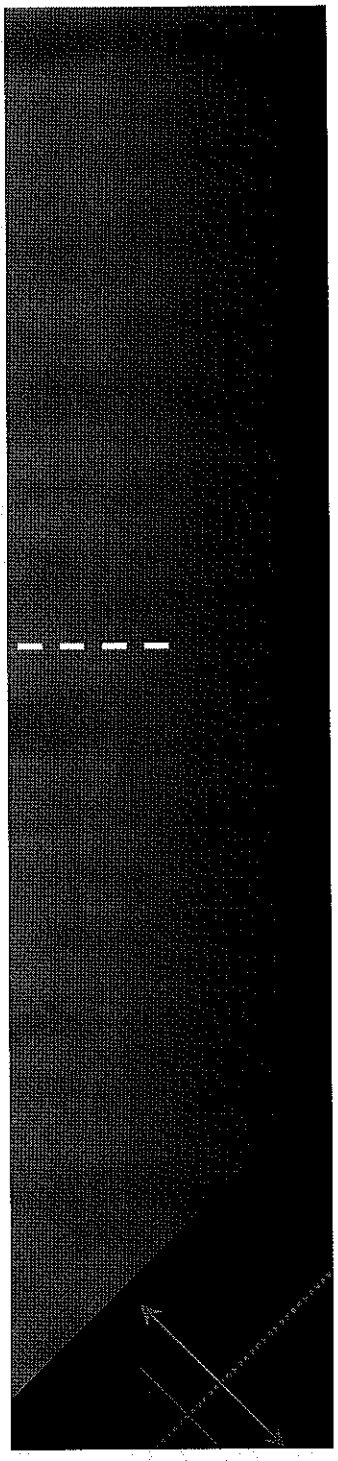

THANK YOU FOR ATTENDING!

Your comments on the information presented would be appreciated

Please fill out a comment form and leave it in the comment box.

-OR-

Give us a Call to talk about the project

Andrew Head, City of Hamilton Project Manager

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Waterdown-Aldershot Transportation Master Plan

PARTICIPANT WORKBOOK

Hamilton

CITY OF Burlington

Halton
A World Class Place To Be

October 28, Waterdown
Flamborough Family YMCA, 207 Parkside Drive, Waterdown

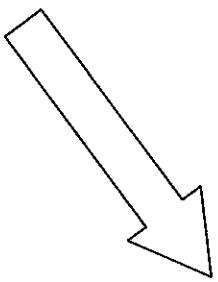
PROPOSED AGENDA

6:00 pm	**Open House and Review Displays**
7:00	**Welcome and Opening Remarks** Mary Lou Tanner, City of Hamilton
7:05	**Introductions and Agenda Review** Nicole Swerhun, Facilitator, Lura Consulting
7:15	**Overview Presentation** Claudio Covelli, Dillon Consulting Limited *Questions of Clarification*
7:55	**Discussion** • Identification of sites/areas of value to the community • Advantages and disadvantages of different options • Community advice on how to approach the evaluation of options
9:25	**Closing Remarks**
9:30	**ADJOURN**

Notes on the Presentation

1. ***Think about the study area, and the sites/areas/features in the area that are of value to you.***

   Use the space below to **make a list of the most valuable features**.



When you have completed your list, take some of the blue stickers from your table, and **attach one blue sticker to the study area map to indicate the location of each valued site/area/feature**.

Use ONE RED STICKER to identify what you feel is the MOST valuable site.

Use a post-it note to label each site/area/feature, and attach it next to the sticker on the map.

2. A number of recommendations have been made in the past regarding roadway improvements in the Waterdown-Aldershot area. While the study will explore options that do not involve road improvements (including transit, land use, demand management, pedestrian and cyclist options, etc.), road improvements will be a significant element of the study.

   Please review the list of road improvement options listed in the table below and on the following page. Working with other participants at your table, **identify the major advantages and disadvantages of each option.**

   Identify one member of your table to take notes, and another to report back to the full group on the results of your discussion.

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
To Improve EAST-WEST Capacity		
Widen Highway 5 between Highway 6 and First St./Laurendale Ave.		
Widen the North Service Road Kerns Rd. east		
Between Waterdown Rd. and Kerns Rd.		
Create a NEW East-West roadway north of Parkside Dr. between Highway 5 (west of Highway 6) and Brant St./Cedar Springs Rd.		
Create a NEW South Service Road between Waterdown Road and King Road		
Widen Parkside Dr. between Evans Rd. and Highway 6		

Make intersection improvements on Parkside Drive		

Note to Nicole: You may want to add spaces in each row to give them more room to write

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
To Improve NORTH-SOUTH Capacity		
Widen Highway 6 by adding a truck climbing lane (for northbound traffic at the escarpment)		
By adding a center left turn lane north of Highway 5		
Widen Waterdown Road from Highway 403 to Dundas St.		
Widen King Road between the North Service Road and Dundas St.		
Extend King Road with a connection to Parkside Dr. or to a new east-west roadway		
Widen Kerns Road between the North Service Rd. and Dundas St.		
Extend Kerns Road with a connection to Parkside Dr. or to a new east-west roadway		
To Improve ACCESS to the 403		
Make **interchange improvements** at Waterdown Rd.		
Make **interchange (partial) improvements** at King Rd.		

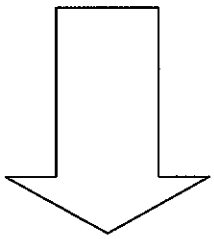
Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS		

3. The Project Team recognizes that there are significant issues related to many transportation options that will be explored through the Transportation Master Plan development process.

   From your perspective, **what are the most important factors that the Project Team should consider when evaluating different transportation options**? Please list those factors below, and identify which factors should take priority (if any).

Factors	Note the Highest Priority Factors with a Star (*) in this column

ADDITIONAL COMMENTS



PLEASE RETURN COMPLETED WORKBOOKS ON YOUR WAY OUT. If you would like additional time to complete it, please return it by Friday, November 5, 2004 to:

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WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRE #1

MEETING SUMMARY

OCTOBER 26TH, 2004
LASALLE PARK PAVILION
BURLINGTON, ONTARIO

OCTOBER 28TH, 2004
FLAMBOROUGH FAMILY YMCA
WATERDOWN, ONTARIO

Hamilton

City of Burlington

Halton
A Great Place To Be

This meeting summary was prepared by Lura Consulting. It presents the key discussion points and outcomes from the October 26th and 28th, 2004 Public Information Centres for the Waterdown - Aldershot Transportation Master Plan. If you have any questions or comments regarding the report, please contact either:

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WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRES

OCTOBER 26TH, 2004, 6:00 - 9:30 P.M.
LASALLE PARK PAVILION, BURLINGTON

OCTOBER 28TH, 2004, 6:30 - 9:30 P.M.
FLAMBOROUGH FAMILY YMCA, WATERDOWN

1. ABOUT THE PUBLIC INFORMATION CENTRES

The Public Information Centres (PICs) were co-hosted by the City of Hamilton, City of Burlington and Region of Halton to introduce the Transportation Master Plan (TMP) and seek participant feedback on the different road alternatives being considered as well as advice on evaluation criteria. The Transportation Master Plan was originally identified as a requirement of Official Plan Amendment 28 for the City of Hamilton and following recommendations by 1999 Stantec study. Public consultation for this project is being undertaken to fulfil the Municipal Class Environmental Assessment (EA) Planning and Design process requirements.

Specifically, the Public Information Centres were designed to:
1) *Introduce participants to the project*
2) *Seek feedback on: (a) the sites/features/locations in the study area that participants value most; (b) the advantages and disadvantages of different road alternatives being considered; and (c) participants' advice on how the project team should go about evaluating options.*

Approximately 57 people signed in at the Aldershot meeting, and 71 in Waterdown, including individual community members, representatives from non-governmental organizations and representatives from government agencies. The PIC agenda is attached as Appendix A and the list of participants who registered at both meetings is included in Appendix B.

This report has been organized to reflect the common presentations provided at both meetings, in sections two and three. Section four details the specific feedback from the PIC held on October 26th, and section five details the specific feedback from the PIC held on October 28th, 2004.

2. WELCOMING AND OPENING REMARKS

Mary Lou Tanner, City of Hamilton

Ms. Tanner thanked all participants for coming and stated that the City and the project team will listen to participants' comments and will incorporate the feedback received from this meeting into the alternatives that are being considered.

Nicole Swerhun and Sally Leppard, Lura Consulting, Facilitator

The Facilitator welcomed all participants to the event and explained that Lura Consulting has been retained to help the Hamilton/Burlington/Halton team with the public consultation component of this project. The Facilitator recognized that there are a lot of different opinions, and indicated that her role is to facilitate a constructive, mutually respectful discussion as a neutral third-party that enables the group to best understand the different views and perspectives held.

It was recognized that this was not the first time participants have been asked to participate in discussions regarding transportation in Waterdown or Aldershot as there have been a number of studies and plans developed in the past that provide an important foundation for this project. As such, the PIC agenda was designed to ensure that both participants who had been previously involved in discussions and those who are new to the process, were able to participate.

The Facilitator reviewed the agenda and indicated the meeting will provide more information about the transportation master plan, what studies have been done to date, next steps and then provide an opportunity to hear participants' views on the areas they value, feedback on design options and evaluation criteria.

3. OVERVIEW PRESENTATION

Claudio Covelli (October 26 Meeting) and Alvaro Almuina (October 28 Meeting), Project Managers of Dillon Consulting Limited presented a brief background of the Waterdown - Aldershot Transportation Master Plan (TMP), identified the core study area, reviewed the key components, reviewed the criteria for evaluation and recommendations made to date. A summary of the key presentation components is presented below. The complete presentation/display boards can be viewed on the City of Hamilton's Web site at www.city.hamilton.on.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/default.asp

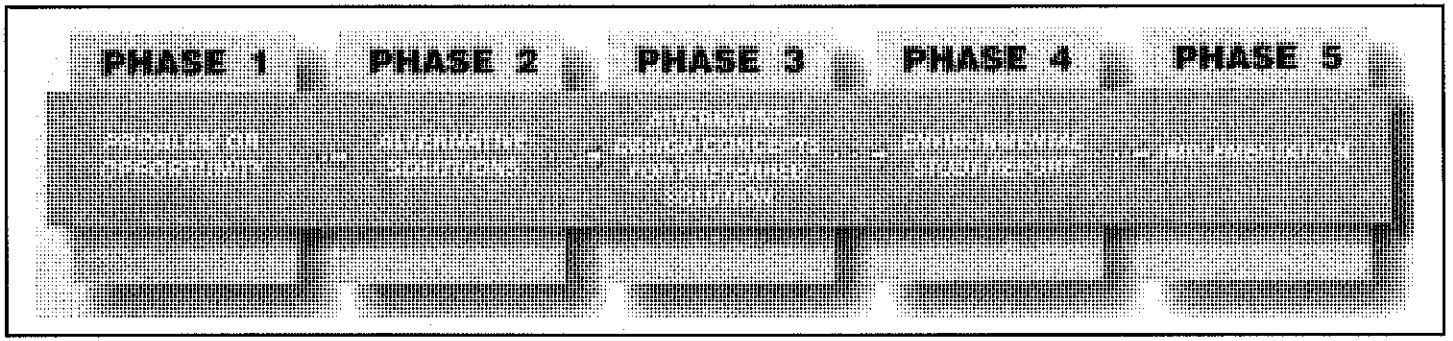
Why Do a Transportation Master Plan?

The TMP's primary goal is to identify alternative solutions to transportation issues and opportunities to the year 2031. The TMP will include the identification and protection of future transportation corridors, integration of policies, programs and infrastructure needs, examine the costs of transportation services in the area and consider community needs. The TMP will serve as both Phase 1 and Phase 2 of the Municipal Class EA.

The TMP will be designed to support the Official Plan Amendment (OPA) 28. The OPA 28 was approved in June 2002 and allows for the expansion of the Waterdown urban area to accommodate residential growth to the year 2021 which is anticipated to reach over 15 000 persons. This expanded area now encompasses three areas within the City's urban boundary including Waterdown North, Waterdown South and Upcountry Estates.

What is the Municipal Class EA Process?

The Municipal Class EA process provides a decision-making framework that enables the requirements of the provincial Environmental Assessment Act to be met. The Municipal Class EA applies to public sector agencies that are undertaking common water, wastewater and road infrastructure projects, such as this one. The Class EA process includes five phases: (1) identification of the problem; (2) identification of alternative solutions and designs; (3) analysis and evaluation of the alternatives and their impacts; and the creation of alternate designs for preferred solutions; (4) documentation of the study; and (5) implementation of the final design. One of the requirements within the Municipal Class EA is to include public participation in defining the problem and identifying possible resolutions.



Phase 1 of the TMP Study was completed in July 2004. It was designed to identify the problem(s) and opportunities for improvement for the TMP and involved a review of the validity of the 1999 TMP study. The recommendations stemming from Phase 1 identified a need for additional East-West and North-South capacity with the development of OPA 28 lands. This would also include considering all options to provide additional capacity in the next phase of the study.

The process is currently in Phase 2 - identification of alternative solutions.

Suggestions for the Transportation Master Plan

Mr.Covelli (October 26 Meeting) and Mr. Almuina (October 28 Meeting) indicated that through previous consultations with various stakeholders there have been a number of suggestions made to incorporate in the TMP, including the need to:

1) **Link transportation to land use**
   - Encourage local economic development to reduce trips;
   - Integrate transportation transfer centres in the community; and
   - Increase density in residential areas with a focus on development with good transit service.
2) **Protect the environment**
   - Develop road network improvements that minimize the impacts; and
   - Avoid environmentally significant areas.
3) **Improve Demand Management**
   - Provide incentives to change travel behaviour without taking away transit choice; and
   - Manage transportation demand on a larger scale.
4) **Improve Transit Service**
   - Introduce local transit service in Waterdown;
   - Focus on inter-regional transit;
   - Dedicate new lanes as transit lanes; and
   - Ensure transit travels to the right places.
5) **Improve Road Service**
   - Widen QEW and Highway 403;
   - Keep new roadway corridors wide for future flexibility;
   - Address both local and through traffic issues; and
   - Accommodate trucking needs.
6) **Encourage political leadership**
   - Get political buy-in for a long-term transportation plan;
   - Have all City employees lead by example; and
   - Educate the public about the importance of behaviour change.
7) **Identify funding opportunities and economic impacts**
   - Investigate opportunity to use the gas tax; and
   - Consider potential economic impact of decreased auto use.
8) **Move forward incrementally**
   - Look for low cost, quick fix solutions in the short-term; and
   - Look for incremental change over the long-term.

Criteria for Evaluation

Mr.Covelli (October 26 Meeting) and Mr. Almuina (October 28 Meeting) indicated that in thinking about the types of evaluation criteria to be employed to determine the final recommendations, the group should consider the five categories below. He also indicated that this is not an exhaustive list, so others can also be included.

1) Natural environment
2) Social environment
3) Economic
4) Cost
5) Transportation service

4. PARTICIPANT FEEDBACK - October 26th, LaSalle Park Pavilion, Burlington

This section provides an overview of the feedback received from participants at the October 26th Public Information Centre. This summary is a collection of comments obtained from table discussions and individual feedback provided through workbooks. For the detailed compilation of all comments received, please see Appendix C.

General Questions, Comments and Concerns:

Immediately following the presentation, and prior to commencing the small table discussions, participants were asked if they had any comments directly related to the presentation. The following identifies the participants' questions (identified with 'Q') or comments (identified with 'C'), with responses from the project team in *italics*.

Q: Can developers develop lands or do they have to wait until the TMP is approved?
The lands currently owned by developers identified in OPA 28 are affected by the TMP and its completion. Once the TMP has identified alternatives the approval process for the development of the lands may continue. The preferred solutions from the TMP may affect the development of some of the OPA 28 lands.

C: The team identified emerging potential options for East/West transportation including making intersection improvements on Parkside Drive, widening Highway 5 and creating a new South Service Road between Waterdown Road and King Road, and North/South solutions as well. When looking at potential solutions to meet capacity needs we need to fit within the overall context of the area.

Q: Can the team confirm when the identification of alternatives will be complete?
According to the current study schedule, the alternatives will be identified by the end of November.

Q: On the map there is a new corridor alternative, how different is this from the previous Waterdown Road by-pass proposal?
This new corridor alternative is wider than the previous proposal. The idea is that after the PIC, we will seriously investigate alternatives within the corridor taking into consideration the opportunities and constraints.

Q: Will the study recognize development in Aldershot as well as Waterdown?
Yes it will.

Q: Are the proposed alternatives the only ones being considered?
No, if there are others that you recommend be considered, we will investigate those alternatives as well. That forms an important part of the PIC process.

Q: What is the final deadline to develop a range of alternatives?
There is no set deadline for ideas. We will consider new ideas throughout the process, but the intent is to have a workable list by the end of November. If new ideas are presented after the end of November, we will consider those as well.

Q: Was the MTO provincial corridor identified in this process?
No. The MTO provincial corridor is a separate process. They are currently at the very early stages of the planning process and not near development. MTO representatives are, however, on the Steering Committee.

Q: Can we get an overview of the traffic patterns for the area?
We can provide that data at the next PIC.

Q: How will bottlenecks be addressed?
They will be addressed through a range of solutions that include transit, cycling, walking and roads. The Phase 1 analyses identified the need for both additional north-south and east-west capacity.

Q: How would we have access to Highway 403 at King Road?
We can't fit a full interchange in at that location, but we will investigate if a partial interchange could work. If that option is not viable then it will be removed from consideration.

Q: What is the distance from the shaded section on the Alternatives map and the 5th Concession?
Best guess is 350m.

Q: Does it make sense that we are deciding the options now - by the end of November - when the Greenbelt plan will be released in December?
The province will be releasing the Greenbelt map shortly - we expect during the next week to 10 days. This is a draft version but we anticipate there won't be many changes. Even though our schedule is to have all alternatives identified by the end of November, we will include any on-going policies/programs, such as the Greenbelt, as the process develops.

Focus Question #1: Think about the study area, and the sites/areas/features in the area that are of value to you. Make a list of the most valuable features.

Participants were asked to take some of the blue stickers and attach them to the study area map to indicate the location of each valued site/area/feature. They were also asked to use one red sticker to identify what they felt was the MOST valuable site, and use a post-it note to label each site/area/feature.

The sites/areas/features that were most valued by the participants include:

• Green spaces and environmentally sensitive areas such as Joe Sam's Leisure Park, Parkside Wood Lot, Grindstone Creek, and LaSalle Park Kerncliff Park • Niagara escarpment • Waterdown Road • King Road	• Water courses • Bruce Trail • Downtown and historical features • Quiet residential streets • Schools

A map of the sites/areas/features that were most valued by the participants is available on the project website at www.city.hamilton.on.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/default.asp

A colour map will also be provided at the Stakeholder Advisory Committee Meeting.

Focus Question #2: A number of recommendations have been made in the past regarding roadway improvements in the Waterdown-Aldershot area. While this study will explore a range of transportation options (including transit, land use, demand management, pedestrian and cyclist options, etc.) road improvements will be part of the study.

Participants were asked to review the list of road improvement options in the table and identify the major advantages and disadvantages of each option.

The most common advantages and disadvantages for each of the identified options are presented in the table below. For more detailed participant feedback, see Appendix C.

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Widen Highway 5 between Highway 6 and First St./Laurendale Ave.	• Existing route • Less impact - relieve congestion from QEW • Less impact than other options • Would need to combine with HOV lane, so less car traffic • Make Hwy 5 one-way during peak hours	• Waterdown worth saving • It would destroy character • Impact historical buildings • If increased by one lane only, already at capacity • West Parkway Greenbelt areas NEPA #71 • Does not address key bottlenecks
Widen the North Service Road East of Kerns Rd.	• Removes traffic from Plains on existing corridor • Exists already • Good access to future employment uses, leads to transit support, which supports increased density • Add centre lane to North Services Road • Protect North Service Road from any more access	• ESA north of North Services Road; • Loss of green spaces • Encourages more development • Number of significant wetlands, Grindstone watershed • Probably not feasible since the intersection at Highway 407 and Brant Street is at capacity
Between Waterdown Rd. and Kerns Rd.	• Removes traffic from Plains Road • Relieves QEW congestions	• Loss of green spaces • Does not address bottlenecks

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity Continued		
Create a NEW East-West roadway north of Parkside Dr. between Highway 5 (west of Highway 6) and Brant St./Cedar Springs Rd.	• Less disruptive on existing community • Reduces traffic on Parkside and Highway 5	• On Niagara Escarpment • Through Waterdown • May be in greenbelt • Loss of green spaces • Potential environmental impacts
Create a NEW South Service Road between Waterdown Road and King Road	• Diverts traffic off Plains • Zoned employment • Existing corridor	• Won't be effective if traffic has nowhere to go • Create problem around GO, especially if it is expanded • Congestion
Widen Parkside Dr. between Evans Rd. and Highway 6	• Has to be re-built anyway • There is room there • Existing corridor	• Too many driveways for 40km/hr traffic • Requires demolition of homes • Not appropriate for trucks • Too much congestion in town
Make intersection improvements on Parkside Drive	• Helps traffic flow • Needs to be done anyway	• Safety concerns • Creates congestion in town • Does not achieve major improvement

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
Widen Highway 6 by adding a truck climbing lane (for northbound traffic at the escarpment)	• It's a given • It already exists • There is room there • Links Highway 403 to Highway 401 • Would allow future traffic demands to be met	• Need to widen along escarpment • Too far west to address future growth
By adding a centre left turn lane north of Highway 5	• Would increase speed • Addresses external traffic demand	• Safety • No capacity improvement for the East/West 403 problem
Widen Waterdown Road from Highway 403 to Dundas St.	• Would provide more access to the GO station • Goes along with the interchange at Highway 403 • Addresses external traffic demand • Reasonably direct route	• City of Burlington on record opposing this option • Need to maintain character of rural area • Destruction around the Bruce Trail and Sleepy Hollow waterfalls • The need to widen means an escarpment cut • The access point is still a tunnel, even if it was widened • Now its a non-truck route
Widen King Road between the North Service Road and Dundas St., or Extend King Road with a connection to Parkside Dr. or to a new east-west roadway	• Little impact • Join Plains Road close to the QEW access • Less disruptive to residential areas • Removes traffic from other North/South routes	• Difficult to get up escarpment • Will need escarpment interchange • Impacts Magnetic Hill • Has level crossing

Widen Kerns Road between the North Service Rd. and Dundas St. Or Extend Kerns Road with a connection to Parkside Dr. or to a new east-west roadway		• Residential area with numerous driveways • Speed limits are too low • Three parks would be affected • Hilly topography • Won't carry the traffic volumes • No political support for this option • Concern about safety issues with kids (changing demographic - older people moving out, younger families moving in) • Impacts of required Escarpment cut
To Improve ACCESS to the 403		
General Comments - *not necessarily advantages or disadvantages*	• Need interchange somewhere • Increase capacity on North and South Services roads needs to be addressed • Limit Waterdown interchange option, therefore, between the two have full interchange	
Make interchange improvements at Waterdown Rd.	• Possibly reduces traffic flows on Plains Road • Local and GO train access to Highway 403 from both directions • Funnels traffic to provincial highway	• Need interchange somewhere other than Waterdown • Could lead to growth in immediate are • ESA in vicinity
Make interchange (partial) improvements at King Rd.	• Funnels traffic to provincial highway	• Too close to Brant Street, 403, 407, QEW and Waterdown

Participants were also asked to identify the advantages and disadvantages for any other options not included above. Participants did present a number of other options, which are presented in the table below. For more detailed description of the other options presented by participants, see Appendix C.

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS		
Transit alternatives	• Reduces vehicle use, therefore reduces need for road network expansion	• Cost and education
Create an alternate North/South road - connecting King and North Service Road or Highway 403 to Dundas	• Less intrusive to communities	
Improve Aldershot GO Train, then plan transit to funnel commuters to GO Train	• Reduces vehicle use, therefore reduces need for road network expansion	• Cost and education
Build higher density sub-division		
Need better connections between municipalities, which increase chance for people to take transit		
Link to gas tax		

Focus Question #3: The Project Team recognizes that there are significant issues related to many transportation options that will be explored through the Transportation Master Plan development process.

From your perspective, what are the most important factors that the Project Team should consider when evaluating different transportation options? Please list those factors below, and identify which factors should take priority (if any).

Participants identified a number of factors that they considered to be the most important for the Project Team to consider when evaluating the options. The most common are presented in the table below. For more detailed description of the evaluation criteria presented by participants, see Appendix C.

Factors	Note the Highest Priority Factors with a Star (*) in this column
• Maximization of mass transit - need the study to be loaded in favour of public transit; desperate need for political leadership	*
• Protection of natural areas - impacts on environment need consideration, especially the escarpment which is a unique environment (in world)	*
• Need density to support mass transit which helps improve natural areas; pick best spot for high density growth and put road there	*
• Reduction of impact on existing community	*
• Consideration of long term maintenance costs of new roads/versus existing roads (i.e. more roads - increased maintenance costs)	*
• Don't want transit on by-pass because no people live there (therefore focus on major routes where transit makes sense)	
• Concern re: weighted approach to criteria and selection, need to have transparent evaluation	
• Air quality - invest in the future; mass transit; otherwise spend more money on health costs and other societal costs	

5. PARTICIPANT FEEDBACK - October 28th, Flamborough Family YMCA

General Questions, Comments and Concerns:

Immediately following the presentation, and prior to commencing the small table discussions, participants were asked if they had any or comments directly related to the presentation. The following identifies the participants' questions (identified with 'Q') or comments (identified with 'C'), are listed below with responses from the project team in *italics.*

Q: The team identified additional East/West and North/South lanes as an option for existing roads, how many new lanes will there be, and how much could this cost?
If this option is selected as a preferred alternative, the overall impacts to the community and projected growth for the area will be considered, once that piece is complete further detail like costing and number of lanes will be looked at.

C: Concern that some areas that are being considered as an option should not be, while others that could be considered are not.
Currently the process is in Phase 2 of the Environmental Assessment. The team will be investigating all of the suggested options including the opportunities and disadvantages for each. Once all of the options have been investigated, a list of preferred options will be developed and presented to the Public for their review. There is no deadline for comments during the process. If there are other areas that could be considered the team will look at those as well.

Q: Has the team considered where the wastewater drainage from this development will go, considering that the Water Treatment Plant in Waterdown is almost at capacity?
All wastewater drainage for OPA 28 will go to the Water Treatment Plant in Dundas, Ontario.

Q: Public Transit is an important piece to the members of this community. What is the plan for public transit for Waterdown?
To accommodate the additional demands due to the development of the OPA 28 lands, the Consultant team is working to design effective Public Transit Strategies to ensure that the need for transit in the area is addressed. Councillor McCarthy indicated that although the need for Transit in the Waterdown area had been previously identified, there were significant difficulties in implementing a transit system due to cost and density implications. The development of OPA 28 should bring in a sufficient population and employment base to support transit.

Q: What does OPA 28 mean?
Official Plan Amendment (OPA) No. 28 lands consist of three areas: Waterdown North, Waterdown South, and Upcountry Estates. In June 2002, the Province of Ontario approved OPA No. 28 which brought those lands into the urban boundary of Hamilton.

Q: Why does this Plan affect Burlington?
Because of the close proximity of the OPA 28 lands to the Hamilton/Burlington boundary, some of the projected traffic generated from the OPA 28 lands will travel across the boundary into Burlington.

Q: Can Brant Street be considered a North/South option?
Brant Street is at the far East end of the study area. It is too far and therefore was not considered a feasible option.

Q: How many cars will there be on King Road?
In order to project the volume of traffic for the roads, the Consultant team will look at the projected growth of the study area over a 20 to 30 year period as part of the Master Plan process.

C: Most of the North/South routes pass through the escarpment. As such, there is a concern regarding the high volume of vehicles travelling on roads that are not designed and cannot accommodate such high volumes.

Focus Question #1: Think about the study area, and the sites/areas/features in the area that are of value to you. Make a list of the most valuable features.

Before the meeting began, Participants were asked to take blue stickers and attach them to the study area map to indicate the location of each valued site/area/feature. They were also asked to use one red sticker to identify what they feel is the MOST valuable site, and use a post-it note to label each site/area/feature, and attach it next to the sticker on the map.

The sites/areas/features that were most valued by the participants include:

• Kerns Road • Green spaces and environmentally sensitive areas • Niagara escarpment • Waterdown North and South • King Road • Parkside Drive • Quiet Areas • Points of interest • Rural Areas and Farmland	• Watersheds • Bruce Trail • Downtown • Historical features • Residential streets • Schools • Recreation Centres • 'My House'

A map of the sites/areas/features that were most valued by the participants is available on the project website at www.city.hamilton.on.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/default.asp

A colour map will also be provided at the Stakeholder Advisory Committee Meeting.

Focus Question #2: A number of recommendations have been made in the past regarding roadway improvements in the Waterdown-Aldershot area. While this study will explore a range of transportation options (including transit, land use, demand management, pedestrian and cyclist options, etc.) road improvements will be part of the study.

Participants were asked to review the list of road improvement options in the table and identify the major advantages and disadvantages of each option.

The most common advantages and disadvantages for each of the identified options are presented in the table below. For more detailed participant feedback, see Appendix C.

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Widen Highway 5 between Highway 6 and First St./Laurendale Ave.	▪ Good idea and long overdue to make use of an existing corridor ▪ Will reduce current bottlenecks ▪ Alternate Lanes on Hwy 5, Reverse directional traffic in a.m. and p.m. ▪ Consider high level bridge or tunnel through the area ▪ May increase local business in Waterdown	▪ Strong concern that without removing existing buildings, this piece of the road is already at maximum capacity ▪ Potential negative Impact on local businesses and High schools and historical sites ▪ Will encourage additional traffic, which may increase bottlenecks
Widen the North Service Road East of Kerns Rd.	▪ Could speed up traffic flow ▪ Close to major arteries (403 & QEW) ▪ Least impact to residential area ▪ Use to take as much capacity as possible ▪ Good idea, but cut off at King Road	▪ Highway is already at capacity, this may not solve the problem, congestion on North Service Road ▪ Concerns regarding Emergency Services ▪ Potential for a bottleneck at Brant Street
Widen the North Service Road Between Waterdown Rd. and Kerns Rd.	▪ Could easily handle traffic ▪ Close to major highways ▪ Extend to create access to GO Station ▪ Strong option, but reduce the speed limit	▪ Consider the impact on Environmentally Sensitive Areas ▪ Leads to already overloaded highways
Create a NEW East-West roadway north of Parkside Dr. between Highway 5 (west of Highway 6) and Brant St./Cedar Springs Rd.	▪ Can handle high traffic flow ▪ Less impact on homes and businesses ▪ Divert traffic from other overloaded highways ▪ Will smooth traffic overflow ▪ Good Solution	▪ Could take business away from Downtown; ▪ Prime farmland; would create severances ▪ Environmentally Sensitive Area

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Create a NEW South Service Road between Waterdown Road and King Road	▪ Will enhance major East-West connection ▪ Alternative to Highway 403 and 5 ▪ Away from residential	▪ Not effective from emergency services perspective ▪ Would not benefit for 20 year growth (OPA 28 lands) ▪ Access to GO station
Widen Parkside Dr. between Evans Rd. and Highway 6	▪ Repair and add a third lane ▪ Good to use an existing corridor, should be treated as local, not as a bypass	▪ Safety Issues (Pedestrian traffic, Schools, YMCA) ▪ Strong concern, suggested to by-pass Parkside altogether ▪ Lack of space ▪ Impact on residential area
Make intersection improvements on Parkside Drive	▪ A needed improvement ▪ Safety ▪ Adding more intersections would reduce capacity and slow traffic	▪ Parkside should not be an option

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
Widen Highway 6 by adding a truck climbing lane (for northbound traffic at the escarpment)	▪ Discourages traffic through Waterdown ▪ Could ease traffic flow ▪ Little impact on residential areas	▪ MTO is already conducting works ▪ Could increase traffic on already dangerous highway
By adding a centre left turn lane north of Highway 5	▪ Safety ▪ Deter traffic from residential ▪ Could link to Bypass	▪ Not an issues, this has already been done ▪ Hazardous if used by trucks ▪ Congestion still in Waterdown
Widen Waterdown Road from Highway 403 to Dundas St.	▪ Connection to GO Station and Highway 403 ▪ Direct access to Burlington from Waterdown	▪ Impacts on existing homes; ▪ Impacts on Downtown Waterdown; Grindstone Creek; Escarpment ▪ Potential Emergency Services problems ▪ Not feasible; no point in adding to the problem and increasing congestion
Widen King Road between the North Service Road and Dundas St.	▪ Least impact to existing development and residential areas	▪ Some environmental impact
Extend King Road with a connection to Parkside Dr. or to a new east-west roadway	▪ Away from residential area (during construction) ▪ Would be a good option if the road could be straightened ▪ Essential for new development ▪ Link to GO Station	▪ Impact on environment and escarpment ▪ Would need to connect to east-west
Widen Kerns Road between the North Service Rd. and Dundas St.	▪ Link to GO Station ▪ Access to Burlington from Waterdown	▪ Large residential area ▪ Safety ▪ Disturbing Parklands ▪ Direct traffic away from businesses Waterdown ▪ Impact on Environment ▪ Strong concerns

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
Extend Kerns Road with a connection to Parkside Dr. or to a new east-west roadway	▪ Access to bypass	▪ Disruptive for residential area ▪ Increase of traffic flow
To Improve ACCESS to the 403		
General Comments - *not necessarily advantages or disadvantages*	▪ If Highway 407 was a normal highway and not a toll route this would decrease traffic	
Make interchange improvements at Waterdown Rd.	▪ Would ease, and improve flow of traffic on Highway 403 and Highway 5	▪ Waterdown Road does not have the capacity ▪ Would prefer to see another location ▪ Increased traffic flow on already grid locked Roads and Highways
Make interchange (partial) improvements at King Rd.	▪ Link to Burlington and Waterdown from Highway 403 ▪ Discourage travel through residential neighbourhoods	▪ Too close to major Highway six interchange

Participants were also asked to identify the advantages and disadvantages for any other options not included above. Participants did present a number of other options, which are presented in the table below. For more detailed description of the other options presented by participants, see Appendix C.

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS		
Transit Alternatives		Need more emphasis in the plan
Improve Link to Aldershot GO Train, plan routes to ensure easy access GO Train		
Need to plan the North/South & East/West roads, before planning for development		
Link to Greenbelt Plan		
Use Brant Street as a major North/South route		
Link to Mid-Peninsula Highway Plan		

Focus Question #3: The Project Team recognizes that there are significant issues related to many transportation options that will be explored through the Transportation Master Plan development process.

From your perspective, what are the most important factors that the Project Team should consider when evaluating different transportation options? Please list those factors below, and identify which factors should take priority (if any).

Participants identified a number of factors that they considered to be the most important for the Project Team to consider when evaluating the options. The most common are presented in the table below. For more detailed description of the evaluation criteria presented by participants, see Appendix C.

Factors	Note the Highest Priority Factors with a Star (*) in this column
East/West: Keep Waterdown's integrity as a viable Town-Village (need by-pass)	*
North/South: environmental protection.	*
Existing residential (including driveways) are a key factor for East/West and North/South	*
Needs to be safe for people of Waterdown	*
Needs to be cost efficient (new vs. reconstruction)	*
Emergency Planning	*
Reduce traffic through Waterdown	*
Impact on Environmentally Sensitive Areas (wetlands, woodlots, watershed)	*
Use existing Roadways first before building new ones	*
Impact on community life. Don't make major road in residential area like Parkside. The total lack of the province to build or expand roads at their level & downloading has made things worse	*
Economic impact on tax payers	*
Educate and Inform the Public and the Community	*
Link the area to Public Transit, provide access to the GO Station	*

6. NEXT STEPS

Claudio Covelli (October 26 Meeting) and Alvaro Almuina (October 28 Meeting) indicated that the team will take into consideration all the ideas and feedback presented at the PIC. The next steps include (1) evaluation of the transportation alternatives that meet the principles of the TMP; (2) identification and evaluation of the impacts of the alternatives through an evaluation process; (3) conduct a second PIC in March that identifies a preferred road network and supporting policies; and (4) conduct a third PIC in September to present the draft TMP.

Nicole Swerhun (October 26 Meeting) and Sally Leppard (October 28 Meeting) thanked everyone for their participation and feedback at the public information centre on the Transportation Master Plan. She noted that advice from this meeting will be incorporated into a report to be circulated to all PIC participants.

Mary Lou Tanner expressed appreciation on behalf of the City of Hamilton and project team for the ideas and feedback provided by participants at this meeting.

APPENDIX A: AGENDA

Waterdown - Aldershot Transportation Master Plan Public Information Centre #1

OCTOBER 26TH, 2004, 6:00 - 9:30 P.M.
LASALLE PARK PAVILION, BURLINGTON

OCTOBER 28TH, 2004, 6:30 - 9:30 P.M.
FLAMBOROUGH FAMILY YMCA, WATERDOWN

AGENDA

6:00 pm **Open House and Review Displays**

7:00 pm **Welcome and Opening Remarks**
Mary Lou Tanner, City of Hamilton

7:05 pm **Introductions and Agenda Review**
Nicole Swerhun/Sally Leppard Facilitator, Lura Consulting

7:15 pm **Overview Presentation**
Claudio Covelli/Alvaro Almuina Dillon Consulting Limited

Questions of Clarification

7:55 pm **Discussion**
- Identification of sites/areas of value to the community
- Advantages and disadvantages of different options
- Community advice on how to approach the evaluation of options

9:25 pm **Closing Remarks**

9:30 pm **Adjourn**

APPENDIX B:

LIST OF PARTICIPANTS- October 26th, LaSalle Park Pavilion, Burlington

The following is a list of participants who signed in at the Public Information Centre:

Resident	Resident	Affiliated Participant		City of Hamilton
Valerie Adam	Barry Horosko	Marilyn Baxter	Bay Area Restoration Council	Mary Lou Tanner
Sandy Adam	David Johnson	John Burman	The Spectator	Andrew Head
Soren Andersen	Donald Johnson	Bill Cooke	The Cooke Group Inc.	Gary Kirchknapf
Mr. S. Andrews	David Lead		Fairwood Place East Inc	Trevor McClung
Mrs. S. Andrews	Mike Maughan	Shelley Gayland	Burlington Sustainable Development Committee	Councillor Margaret McCarthy
Linda Austin	Stephen Naylor	Paul Hill	Paul Hill Consulting	**City of Burlington**
Shawn Austin	Bill O'Brien	Juli Laudadio	Metrus Development	Paul Allen
Keith Baird	Doug Peters	David McKay	Burlington Sustainable Development Committee	Allan Magi
Ed Bohe	Cor Potma	Vim Peptone	Terra-Waterdown	Councillor Rick Craven
Bart Brasseau	Michelle Read	Guy Sheppard	Burlington Sustainable Development Committee	
Rick Breznim	Rob Read	Brian Smith	Plansmith Consulting	**Region Of Halton**
Linda Cooper	Edward Soldo			Edward Soldo
Rob Cooper	Randy Stellings			
Brian Corbey	Bill Stoddart			**Dillon Consulting**
Ivor David	Paul Thomson			Claudio Covelli
Jack Davidson	Joan Wannad			Dennis Kar
Pat Davidson	Mary Jane Wood			
H. Dutka	David Wood			**Facilitator's Office**
Jim Dwyer	Allan B. Wright			Nicole Swerhun, Lura Consulting
Patti Henderson	Bob Hoosley			Susan Hall, Lura Consulting

LIST OF PARTICIPANTS- October 28th, **Flamborough Family YMCA**, Waterdown

The following is a list of participants who signed in at the Public Information Centre:

Resident	Resident	Resident	City of Hamilton
Kevin Andrews	Patti Henderson	Stephen Naylor	Mary Lou Tanner
Laurence Appleby	David Hicks	Manny Oliviera	Andrew Head
Joy Aubin	Jeff Holdright	John Onufer	Trevor McClung
Jean-Marc Aubin	Angelo Hotarianni	Tony Onufer	Tim McCade
Morris Booker	Nik Janjic	Keith Paul	Councillor Margaret McCarthy
Nel Bos	Norm Jaschinski	James Pelletier	
Rick Breznik	Albert Kenel	Geoff Rae	**City of Burlington**
Adrian Burtershaw	Maria Kenel	Mary Rae	Allan Magi
Michael Carey	Jason LaParte	Dan Remollino	Robin Van De Lande
Murray Charlton	David Lee	Heinz Schweinbenz	Paul Smithson
Vince Cornacchia	Richard Lewis	Jim Sherlock	
Dianne Cornish	H. Maisoninek	Dawn Silveira	**Region of Halton**
Ivor David	M. Maisoninek	Ed Stevenson	Eric Hakomaki
Gary Deathe	Dino Mamone	Dan Terzievski	
Ben Dikkeboom	J.K.S Marriott	Anne Thomson	**Dillon Consulting**
Catherine Drenth	John W. Maxwell	Phil Thorburn	Alvaro Almuina
Jason Drewth	Charmaine McDonnell	Pam Thurgar	Dennis Kar
M Joan Duguay	Nancy McLaughlin	James Webb	
Shelley Gaylard	Bob McLaughlin	Chris Westell	**Facilitator's Office**
Hank Gelderman	Sue McMaster	Mary Westell	Sally Leppard, Lura Consulting
Karl Gonnsen	Dave Mercer	Sherry Wheaton	Liz Nield, Lura Consulting
Barry Gunby	Derk Meyer	Lois Worrod	
Terry Harford	Bernadine Nabuurs	**Bousfields Inc.**	

APPENDIX C: DETAILED PARTICIPANT FEEDBACK (from written comments)*

October 26th, LaSalle Park Pavilion, Burlington

Focus Question #1: Think about the study area, and the sites/areas/features in the area that are of value to you. Make a list of the most valuable features.

- Built area downtown Waterdown - particularly Mill/Dundas intersection
- Mill Street south to Maintain through Waterdown Road
- Waterdown Road
  - A gorgeous semi-rural access road to Highway 5 that must be preserved as two lanes - no widening
  - Because its bordering the Bruce Trail and the escarpment therefore it should remain an environmentally sensitive area
- Plains Road - especially south of Pains to the west end of RBG
- King Road
- Kerns Road
- Developed area of Kerns Road
- Highway 6 to Kearns
- Uplands - North of highway #5 and East of Evans
- Pre-1950s Urban Design
- Heritage Buildings
- Quiet suburban streets
- Existing stable neighbourhoods
- Residential areas west of LaSalle Park
- North Waterdown
- North Parkside

- Lack of building density on smaller local roads provides for lower traffic densities thus prompting alternate transportation means - i.e. cycling
- Schools
- Existing land uses, such as the YMCA and schools should not be impacted by the transportation corridor
- My home
- My property south of 5th concession
- Rural North Aldershot, 403 to the escarpment
- North east escarpment - Waterdown Road to King Road
- OPA 28 has defined the proposed boundary of Waterdown north - this should be protected
- More road capacity will inevitably lead to more growth
- Aldershot is a community within a community. As such residents feel a strong sense of connection with neighbours and small retailers. Too much growth could jeopardize this. A precursor to uncensored growth is establishment of a transportation plan that does not address the character of the community

- Unique geographic features such as the Niagara Escarpment, existing public parklands
- Grindstone Creek
- Bruce Trail/Waterdown
- LaSalle Park Marine
- Niagara Escarpment
- Wetlands
- Trees
- Trails
- Water courses
- Waterfall
- Parkside Woodlot
- Kerncliff Park
- Joe Sanis Park
- Sassafras Woods in Burlington
- Green spaces as they exist
- Environmentally sensitive areas
- My neighbourhood green spaces
- Bozer's Creek is an important environmental feature.
- Expensive to cross a creek and adverse environmental impacts to Bozer's Creek

* Participants were given until Friday Nov 5, 2004 to provide comments. Comments received after this date were noted, but may not be included in this summary.

Focus Question #2: A number of recommendations have been made in the past regarding roadway improvements in the Waterdown-Aldershot area. While this study will explore a range of transportation options (including transit, land use, demand management, pedestrian and cyclist options, etc.) road improvements will be part of the study.

Participants were asked to review the list of road improvement options in the table and identify the major advantages and disadvantages of each option.

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Widen Highway 5 between Highway 6 and First St./Laurendale Ave.	• Uses existing route • Decreases traffic congestion on QEW • Increases Highway 6 access • No environmental issues exist • Existing ROW available • Province would pay, however they have limited funds • Already established as a major arterial • Could use signalization 2 lanes east AM, west PM, like Jarvis St. Toronto	• Widening will destroy Waterdown business-area & old buildings which is one of the few decent areas in Hamilton • Takes away old buildings • Will have to demolish old historic buildings • Speeding and traffic • Cannot put traffic through core of Waterdown • West Parkway Greenbelt areas NEPA #71 • Could require property acquisitions • Does not address key bottlenecks
Widen the North Service Road East of Kerns Rd.	• Widens with limited access- increase speed limit • Removes traffic from Plains Road • Relieves QEW congestion • Increases Brant Street access • Is already good • Exists no environmental issues • Will be necessary • Existing row available • No	• Needed anyway • Loss of green space • Opens the intersection at 403/Waterdown • West Parkway Greenbelt areas NEPA #71 • Only a short section area needed • Probably not feasible - Highway 407 and Brant intersection are at capacity

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity Continued		
Between Waterdown Rd. and Kerns Rd.	• Yes-limit access as much as possible • Raise speed limit • Removes traffic from Plains Road • Relieves QEW congestion • Lessens traffic flow before 403 • No • Will be necessary • Yes, with cycling lanes • Existing row available • No major community impact	• Needed anyway • Loss of green space • Yes • Only a short section area needed • ESA • Congestion on Waterdown Road. • West Parkway Greenbelt areas NEPA #71 • Does not address key bottlenecks
Create a NEW East-West roadway north of Parkside Dr. between Highway 5 (west of Highway 6) and Brant St./Cedar Springs Rd.	• Preferable to Dundas/Parkside option • Less disruptive to existing community • N/A • No enough already • Good plan because it leaves Parkside as is • Reduces traffic on Parkside and Highway 5 • Greenfield • Yes for Waterdown by-pass • No major community impact	• Many environmentally sensitive areas • Destruction of Parkside wood lots • Loss of farmland • Destruction of green spaces • Leads to more growth in future, up to new road boundary and likely beyond • Environment effects • West Parkway Greenbelt areas NEPA #71 • Extreme cost and environmental impacts • Too expensive to implement • Environmental impacts • Too lengthy to affect traffic

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity Continued		
Create a NEW South Service Road between Waterdown Road and King Road	• Diverts from Plains Road • Existing major corridor • None • Enhance access to lands between Plains Road and 403 • Opens up business development with out killing Plains Road • Reduces/removes truck and vehicular traffic from Plains Road • Yes, eliminates traffic jams on Plains Road • Employment lands now • Good option especially with GO train • Existing flow • No major community impact	• Nowhere to go east of King Road • Traffic congestion • Increased congestion at intersections leading to and from Service Road • None • Affects GO station • West Parkway Greenbelt areas NEPA #71 • Only a short section area needed • Does not go anywhere • No network improvement
Widen Parkside Dr. between Evans Rd. and Highway 6	• Improvement to 3 lanes- 4 lanes eventually • West of Centre Road has lots of room to widen to the North • No • No, too many present homes • Removes traffic from Highway 5 • No environmental issues exist • Too much congestion in town • Very simple and cost effective solution • Property can be acquired, since minimal building encroachment onto future r-o-w • None direct route	• Cannot move traffic faster than 50km/hr with driveways • Some demolition of existing homes • Major impact on present homeowners & just moves congestion to an established residential area • Affects exist residential and commercial • Poor short-term solution • West Parkway Greenbelt areas NEPA #71 • Nil • Major community impact

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity Continued		
Make intersection improvements on Parkside Drive	• Yes • Necessary for traffic flow • Safety • Ok • Very simple and cost effective solution • Partial up front funding available from developers • Need to introduce opportunity for H.O.V • Where?	• No, not needed • In town congestion • West Parkway Greenbelt areas NEPA #71 • Would this provide equivalent of 1 lane capacity? • Augments lane additions • Does not achieve major improvement

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
Widen Highway 6 by adding a truck climbing lane (for northbound traffic at the escarpment)	• Needed - see MTO study • Speeds up everything • No interface with residential • Yes • Improves flow of traffic moving at highway speed • Yes • Safety • There now • Likely needed in future • MTO already has plans the best • Already a cut through the escarpment • Would help left-hand turn at York • Addresses external traffic demand • Established highway	• No help to east Waterdown/Aldershot • None • None • None • Cut widens in NE • Province is in slow motion • Impacts on terrestrial and aquatic habitats • Too far west to address future growth demand
By adding a centre left turn lane north of Highway 5	• Would help allow increased speed • Yes • Yes • Safety • Ok • Addresses external traffic demand • None	• What for? • None • May need divided Highway in future • Province is in slow motion • Safety nightmare • No capacity improvement for the East/West 403 problem

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity Continued		
Widen Waterdown Road from Highway 403 to Dundas St.	• GO station there proposed AOS interchange • None • Improve safety and capacity • No • Intersection traffic to Waterdown • Most of road is bad alignment can't get any reasonable • Gets NS route • Better than King? • Addresses external traffic demand • Reasonably direct route	• ESA • No, too much green space destroyed • Kills a beautiful road • No, nice residential road • Cannot get through town • Impact to local residents • Cuts NE rural area that needs to be protected • Extends urban sprawl • Smokey hollow waterfalls not to be impacted • Province is in slow motion • Need 403 • Escarpment impact • Absolutely not!
Widen King Road between the North Service Road and Dundas St.	• Would not help get to GO • Maybe divert or new alignment to Waterdown Road north of Highway 403 • Less disturbance of residential areas • Less disruption to existing residences • Yes • No • Yes, very little homes probably cheaper • Removes traffic from other North/South routes • A good area to make North/South route and connect to Waterdown by-pass • Land requirements are minimal • ROW exists • Reasonably direct route	• Increased traffic • Cuts NE route • Destruction of Magnetic Hill • Central location not ideal • Major escarpment impact • Where does it connect to provide new capacity?

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity Continued		
Extend King Road with a connection to Parkside Dr. or to a new east-west roadway	• Would make sense as a secondary plan requirement • Less disruption to existing residences • Yes-takes 403 traffic off Plains Road • No • Yes, to new East/West road • A good area to make North/South route and connect to Waterdown by-pass • Land requirements are minimal • Sounds like a viable option • Direct connection by-pass	• Impacts on sensitive natural area • Steep hill • Central location not ideal • Environmental impacts through the escarpment • None
Widen Kerns Road between the North Service Rd. and Dundas St.	• Maybe divert at escarpment west to King Road • No • Land requirements are minimal • None	• Not economically feasible south of escarpment also bad planning. • Detrimental to Kerns Park and residential road • Too residential • Central location not ideal • Kills a good neighborhood • No • Too much congestion and residential road • Residential road, hilly with a number of disadvantages • Major impact on neighborhood and parklands • Still doesn't go anywhere

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity Continued		
Extend Kerns Road with a connection to Parkside Dr. or to a new east-west roadway	• Makes sense as opposed to using Evans Road • Little disruption to existing residential • No • Maybe north of Dundas • Land requirements are minimal • None	• Some environmental problems? • Too residential • No • Every road does not have to be widened. Pick one in the middle. • No • Houses in a 40km/hr area • Good location to serve as a by-pass • Doesn't do much to provide capacity
To Improve ACCESS to the 403		
Make interchange improvements at Waterdown Rd.	• Maybe make new full interchange between King Road and Waterdown Road at east end and GO? • At least 1 full interchange is necessary • Logical because of GO station • No • Possibly reduces traffic flow on Plains Road. • The local and GO train access to 403 from both directions • Yes • Most likely spot for Aldershot connection • Funnels traffic to provincial highway • Access to freeway network	• ESA • None if South service Road also built • Could lead to growth in immediate area • ESA in vicinity • Pave over the Sassafras Woods from ramps • No clover leafs - too dangerous • Could suck traffic off of provincial highway to clog Waterdown • Funnels westbound regional traffic • Need upgrade to Waterdown Road

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve ACCESS to the 403 Continued		
Make interchange (partial) improvements at King Rd.	• Better idea • Partial? • Possible if King is bigger • Funnels traffic to provincial highway-	• Too close to Brant Street, 403/407 • Yes • Too close to clover leaf • Too close to Waterdown • Too close to 403, 407, Toronto and Niagara QEW • Too close to Highway 407 • Could suck traffic off of provincial highway to clog Waterdown • Funnels westbound regional traffic • Connections to east one not feasible • Connections to west don't go anywhere

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS		
Create an alternate north/south road connecting King Road to North Service Road	Less intrusive to communities, protecting Waterdown Road and ESA	
King Road needs rail, over-under rail crossing		
Improved/enhanced modes of transit	Reduce use of automobiles, therefore curtailing need for expanded road network	Cost and education
GO/Rail	Reduce requirements of residents to use auto's for work	Cost and education
East/West more GO transit	Will take pressure off Highway 403	
All North/South	Improvements of all Bruce Trail crossing points	
North/South route 403 to Dundas	Near King Road-minor residential impact to North/South and close to Waterdown by pass	
403-Aldershot needs 4 way interchange	Either at Waterdown Road and/or towards King Road	
Mass transit and connecting public transit	Environment Don't need to build new highway and lanes of existing highway	Long-term cost need support of federal and provincial - inertia

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS CONTINUED		
All new residential development must have public transit	Derives demand for transit system	Integrating so many jurisdictions
Widen Highway 6 Widen Highway 403	Deals with external traffic to avoid this entering Waterdown and Aldershot	Province is slow to facilitate improvements
Rideshare create website for commuters to link up	Reduces number of cars on the road- potential dating service spin off	Safety concerns (population explosion possible)
HOV lanes on provincial roads	Encourages rideshare	Need province approval
One way streets-Dundas for Eastbound Parkside for Westbound	No cost solution	Disturbance and inconvenience to local residents
East/West move buses	Fairview/Plains to Hamilton is a great success	
Transit service to Aldershot GO, Hamilton CBO and Burlington CO		

Focus Question #3: The Project Team recognizes that there are significant issues related to many transportation options that will be explored through the Transportation Master Plan development process.

From your perspective, ***what are the most important factors that the Project Team should consider when evaluating different transportation options?*** *Please list those factors below, and identify which factors should take priority (if any).*

Factors	Note the Highest Priority Factors with a Star (*) in this column
• Maximize transit loop Burlington/Hamilton/GO	*
• Preserve existing hamlet of Waterdown	**
• Green spaces ESA	*
• Face the fact that any North/South solution will affect the escarpment and won't be popular - get over it and have the nerve to solve peoples problems	
• Existing residential areas	
• Green spaces!	
• Environmental areas!	
• Traffic be damned!	
• Aldershot West Resident!!	
• So this is Smart growth!!	
• Look at whether or not a new North/South road is only required to get people down to the Toronto bound QEW, because if it is, then improve the East/West corridor above the escarpment where commuters can then get to the QEW further East	
• Reduce use of automobiles! How about a focus on transit?	
• North/South Route	
• GO station access	
• Connect to Waterdown by-pass	
• Economic impacts on proposed development opportunity	
• Social impact on the community if decisions are not made in a timely fashion	
• Opportunity to implement a recommended option (politically, cost, environmental)	
• Options should be physically, legally and economically feasible - Some shown are not!	
• Minimize impact on established stable neighbourhoods	
• Minimize impact on unique natural environmental features	

October 28th, Flamborough Family YMCA, Waterdown*

Focus Question #1: Think about the study area, and the sites/areas/features in the area that are of value to you. Make a list of the most valuable features.

At the beginning of the meeting participants were also asked to take some of the blue stickers and attach them to the study area map to indicate the location of each valued site/area/feature. They were also asked to use one red sticker to identify what they feel is the MOST valuable site, and use a post-it note to label each site/area/feature, and attach it next to the sticker on the map.

• Kerns Road residential area • Future development lands • Schools • Waterfall • Woodlots • My home (lots) • Green spaces as they exist • Environmentally sensitive areas • Escarpment • Grindstone Creek • Vinegar Hill • GO Station • YMCA & High School • Village of Millgrove • Heritage Buildings • Parkside Road to Hwy 5 • South Waterdown	• Bruce Trail/Waterdown • Niagara Escarpment • Wetlands • Trees • Quiet suburban streets • Trails • North Waterdown • North Parkside (bypass) • Future Upcountry • King Road • Existing neighbourhoods • Farmlands • Downtown Waterdown • Children's Crosswalk • Mountain Brow Road • Small Side Roads • Millgrove Pond

Focus Question #2: A number of recommendations have been made in the past regarding roadway improvements in the Waterdown-Aldershot area. While this study will explore a range of transportation options (including transit, land use, demand management, pedestrian and cyclist options, etc.) road improvements will be part of the study.

Participants were asked to review the list of road improvement options in the table and identify the major advantages and disadvantages of each option.

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Widen Highway 5 between Highway 6 and First St./Laurendale Ave.	▪ Consider high level bridge or tunnel - First street to Hamilton Street ▪ Could put a tunnel through the same area ▪ Yes ▪ No ▪ Road already exists ▪ Increase business in Waterdown ▪ Makes use of existing corridor ▪ This should have been done years ago- it will be difficult to do now ▪ Reduces bottleneck on a road widening that's long overdue ▪ No environmental impact; no people easy to input ▪ Highway is already at the maximum possible width where and how would you widen in Waterdown ▪ It is being used already ▪ Direct route ▪ Greater bottlenecks ▪ Cheap-route 1km has to be fixed through Waterdown ▪ Alternate Lanes on Hwy 5 ▪ Reverse directional traffic in a.m. and p.m. ▪ Consider high level bridge - First street to Hamilton Street ▪ Could put a tunnel through the same area	▪ Can't be done downtown ▪ Non-Starter ▪ We want a slow downtown where people don't feel unsafe while walking ▪ Widening doesn't help. If there's an emergency traffic stops whether its 1 or 3 lanes ▪ Highway 5 should not be altered ▪ Too much traffic now ▪ Number of people affected ▪ None ▪ Impact on businesses ▪ Local heritage that is slowly eroding. Gone with the new Box stores. ▪ None ▪ Loosing our downtown ▪ Business impacts ▪ Historical sites ▪ Condo-old Waterdown high school ▪ Vinger hill- mill and first environment ▪ Cant do downtown ▪ No Hwy #5 through Waterdown would destroy the town. Must maintain intersection at Mill Street + Dundas Street. ▪ Will displace some houses ▪ Directs traffic to bottlenecks ▪ Destroys village character in the case of on vinegar hill ▪ Encourage additional traffic • Not enough room in Waterdown without removing buildings

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
		• Non-starter - already at maximum width in Waterdown; • Impact on businesses and High schools and historical sites.
Widen the North Service Road East of Kerns Rd.	▪ Yes ▪ None ▪ Close to 403/qew ▪ Speeds local traffic ▪ Seems to effect least amount of people ▪ No environmental impact; no people easy to input ▪ You can widen the road but where does it come from where does it go to ▪ Least disruptive to residents already zoned industrial ▪ Improve existing. Yes. ▪ Not very developed, easily handle traffic ▪ But change the speed limit ▪ Least disruptive to population ▪ Get to GO station ▪ Relieves traffic ▪ Use to take as much capacity as possible	▪ Yes ▪ Highway stops then the service road slows. Highway is already at capacity. ▪ 2 increased traffic desirable? ▪ Getting down to north service road from Waterdown ▪ Congestion at Brant Street. ▪ None ▪ No major disadvantages • Forces Kerns Road upgrades • Emergency Services concerns • Bottleneck at Brant Sreet • Cut off at King • Congestion on North Service Road
Between Waterdown Rd. and Kerns Rd.	▪ Yes ▪ Preferred option! Creating a new route which gives traffic a new option. If one road's closed you take the next. ▪ Much of traffic going through Waterdown is simply passing through ▪ Close to 403/QEW ▪ Speeds local traffic ▪ Seems to effect least amount of people ▪ No environmental impact; no people easy to input ▪ Least disruptive to residents already zoned industrial ▪ Service new waterdown/403 interchange and GO ▪ Not very developed, easily handle traffic ▪ Change the speed limit ▪ Least disruptive to population ▪ Take the volume which will increase dramatically ▪ Can take major traffic ▪ New by-pass ▪ Divert traffic from Hwy 5	▪ Environmentally sensitive areas ▪ Getting down to north service road to Waterdown ▪ None ▪ Won't solve anything where do you go from here, Hwy 403? • Yes • Forces Waterdown roads upgrades • Take business away from Downtown • No widening - destroy Waterdown, already under pressure from trucks; • Prime farmland; would create severances

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
	▪ Smooth traffic flow	
Create a NEW East-West roadway north of Parkside Dr. between Highway 5 (west of Highway 6) and Brant St./Cedar Springs Rd.	▪ This by-pass is absolutely necessary North-Service Road ▪ East W bypass N of Parkside ▪ None ▪ Close to 403/QEW ▪ Available option to place road before residential area is placed ▪ 2nd preferred option should connect to Brant Street for North/South connection to Burlington ▪ Reasonable choice-affect less people ▪ A great choice to plan now, to show & plan a road for the future so that the existing will not be effected abnormally ▪ Yes a Highway 5 by-pass from top of hill to west of Millpine Side Rd. -with only an interchange on highway 6 + Centre- bridge on Millpine Side. Road. ▪ It is already necessary and with future development and even more so ▪ Provide relief to Parkside/Hwy5 ▪ Bypass (best solution)-take business away from downtown area. Takes major traffic from heavy populated area, parks, schools, farmland wetland ▪ Smaller population possibly breaking up effected by this decision properties (farms). Creating natural severance ▪ Direct traffic from Hwy 5 and Parkside no driveways! Best allow for increased E-W traffic. Smaller flow. ▪ Yes because Waterdown must be kept quieter. Therefore reduce or eliminate truck traffic on Dundas Street. ▪ Find out where M.P.H is going first ▪ Avoids existing areas ▪ Will handle additional traffic particularly, whether are problem on the 403 ▪ Good idea! Can be central to needs of new residential areas ▪ Being a concession Road, Parkside Dr, offers the only opportunity to provide continuous east/west traffic relief for Dundas St. within the expanding village. It will serve as an important access route to the commercial centre,	• The East connection should have minimal impact on Environmentally sensitive areas • An easterly connection point near kerns would be better • Destroy Waterdown already • Truck traffic inside E/W corridor not Parkside • Highway stops then the service road slows. Highway is already at capacity. (Same as above) • Destruction of farmland and housing • Goes through valuable farm and wet lands • High cost • Environment/some sensitive areas • Environmentally sensitive areas • I live just north of proposed area and 5th concession, and centre road is already too busy. • Impact environment • Going through or close to wetlands, will destroy Waterdown • Environmental • Environmentally sensitive area (swamp and wood lot)

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
	to the secondary school, the YMCA, and to the major sports complex. As and when transit service is introduced, it will inevitably serve as a major east/west route. ▪ By pass north of Waterdown ▪ Road through new development; provide through-flow of traffic to deal with development ▪ Need to move traffic around Waterdown	
Create a NEW South Service Road between Waterdown Road and King Road	▪ None ▪ Close to 403/QEW ▪ Speeds local traffic ▪ Preferred option moves traffic south to Burlington quickly from Waterdown ▪ What use? ▪ No impact on people/houses ▪ What will it achieve ▪ No use, no advantage ▪ Takes traffic off Highway 5, and 403 ▪ Yes-because N is existing ▪ Would provide an alternative to 403, specially, when isn't turning ▪ Enhance Major E-W ▪ Already there - 403 to #6	▪ Environmental sensitive do not destroy ▪ Pedestrians, residential, education zones. Let's not create another killer highway! ▪ New roads not needed ▪ Getting down to South Service Road from Waterdown ▪ None ▪ No disadvantage ▪ Limited value ▪ Would still end up at Hwy 6 and Clappison's Corner where traffic is congested ▪ No advantages to handle OPA 28 not feasible. ▪ How to handle GO station. ▪ Wont address the need • Don't know • Rouge undertaking. Easier to widen North service road. • Not effective from emergency services perspective; • Not practical for additional traffic from new development and feasibility re: GO station
Widen Parkside Dr. between Evans Rd. and Highway 6	▪ This needs to be part of the overall project ▪ 3rd lane to address traffic ▪ Yes ▪ None ▪ Existing road ▪ Use existing corridor ▪ ABSOLOTELEY NO ADVANTAGE firmly opposed to this ▪ The biggest disaster for Waterdown residents. The traffic noise is bad enough already. ▪ Too many houses schools and "4"	▪ X re: schools ▪ Bad alternative ▪ New roads not needed ▪ Too much traffic now goes through residential area past 2 schools and YMCA ▪ Number of people affected ▪ Safety, schools, YMCA, pedestrians, old age home. Hoses too close to road with widening will ruin community feeling ▪ Total lack of future planning. Parkside will be

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
	▪ Easy to implement ▪ Parkside is a local access road it schools, churches a fire hall ▪ Never intended for heavy through traffic ▪ Is it already being used and needs repair ▪ 3rd lever to relief congestion from traffic turn left ▪ -None, only create more problems ▪ No-Parkside is part of the urban area of Waterdown, many driveways and children ▪ That has always been an option for 25 years ▪ Additional capacity to carry existing traffic, but not fragment ▪ According, it must be expected that, in the normal course, Parkside will be progressively improved structurally, and widened to four lanes with a full or at least partial urban cross section between Highway 6 and the North entrance to the future Upcountry development on the east side of the village. ▪ The required additional east/west lane in each direction will accrue simply by doing what should, indeed must, be done in any case to create a functional road system for the residents, businesses and institutions in the expanding settlement area. ▪ 3rd lane possible	the future centre of Waterdown. ▪ Impact on houses ▪ Disruptive to residents on kerns rd. ▪ Children pedestrian traffic ▪ Heavy traffic by public and high school, YMCA park school buses turning, many children walking ▪ Already extensively dev. No room! Driveways, quality of life and safety ▪ Evans Rd. not good- go further East ▪ Unrealistic given the current housing ▪ Traffic might migrate here destroying the character of the land • Too much residential • Pedestrian traffic • Schools • Not good alternative • Not room • Driveways • Safety plan

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve EAST-WEST Capacity		
Make intersection improvements on Parkside Drive	▪ Yes ▪ Not needed if road is not widened ▪ Will have to be done in the future anyway so don't waste time including this in the study. ▪ Centre Road and Parkside has always been a mess ▪ Easy to implement ▪ Needed improvements are being made as the area is developed ▪ Reminder this should be treated as a local road not as a by-pass ▪ Better visibility ▪ Turning lane ▪ Safer for all driving on this major road ▪ Already being taken care of ▪ Could help, but wont solve problem ▪ Density defeats any advantage of this when you are meeting the roads?	▪ Not necessary, bypass Parkside ▪ Concern that widening ▪ New roads not needed ▪ Too much traffic now, residential area ▪ Shouldn't be part of this study ▪ None ▪ Make + even street over ▪ We need more stoplights and stop signs to slow traffic ▪ The City is entitled to rely entirely on existing Parkside/Guelph Line (Highway 6) intersection. Should M.T.O. subsequently determine that a change should be made, M.T.O. can devise the solution, schedule it and pay for it. ▪ Whether or not Parkside should be continued down to Dundas St. at points west of Guelph Line and east of Upcountry can be decided when a preferred alignment for the mid-peninsula highway has been established ▪ Not necessary because of by-pass on Parkside ▪ Need more stop signs and would reduce capacity ▪ All intersections need advancement lights

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
Widen Highway 6 by adding a truck climbing lane (for northbound traffic at the escarpment)	▪ Yes ▪ Already being done ▪ None ▪ If needed ▪ Few existing residents or buildings that would be encroached upon ▪ Ease traffic ▪ Speeds traffic ▪ Reasonable choice ▪ Definitely needed for a safety issue ▪ Isn't this already being done? ▪ No impact on houses ▪ Already proposed planned and construction due to start on it ▪ Yes and enforce it ▪ Already in progress? ▪ Needed for safer Hwy 6 ▪ Good idea ▪ Absolutely no homes ▪ Already being done ▪ Already under construction?? ▪ Will provide less accidents (isn't this already done?) • Good for access West to Hamilton • Allow for quick access into Waterdown • Enhance to handle as much as possible • Use Brant as a major North South • Discourages traffic through Waterdown - will destroy it.	• Increase traffic on already dangerous highway • None • No disadvantage • Disruptive to residents • Redundant - MTO is already conducting works • Turning lanes - MTO in process of putting barriers up • No point
By adding a centre left turn lane north of Highway 5	▪ Already done ▪ None ▪ Yes ▪ As above already a high traffic flow route. ▪ Speeds traffic ▪ Again need for safety ▪ No impact on houses	▪ None ▪ Hazardous if used by trucks. When enters Waterdown major congestion again. • Very dangerous on a highway like this

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
	▪ Lets be ready-M.T.O is already in the process of putting up a centre barrier from #5 to Parkside ▪ Why are you studying it its been built ▪ Link to Waterdown bypass North of Parkside	
Widen Waterdown Road from Highway 403 to Dundas St.	▪ See comments on King Road below ▪ Connection to GO Station ▪ Should be done only if road can be straightened and flattened. ▪ None ▪ Good route into Burlington ▪ Land is available link to GO transit ▪ Speeds traffic ▪ Extending/widening Brant Street should also be considered an option- in conjunction with King Road ▪ No advantages ▪ Great if full interchange ▪ Is installed at Waterdown Rd and 403 ▪ Good idea ▪ Be sensitive what about the houses, ravines etc. ▪ Yes it is useful for getting to the GO and 403 ▪ No this is a beautiful rural residential area. ENVIRONMENTALLY SENSITIVE ARAES ▪ Need to integrate with sending development of GSA ▪ Superficially, may appear to be best access to GO/VIA station ▪ Allow Waterdown residents direct access to new community, less residential impact	▪ Destruction of valuable amenity ▪ A lot of turns, railroad bridge ▪ Affect on Grindstone Creek ▪ -Then where does the traffic go? ▪ Affect on homes ▪ Disruptive to residents and road is too winding ▪ -To population ▪ Environment ▪ Bad impact on environment ▪ -Existing homes grindstone valley impact downtown, impact on escarpment ▪ No widening of Waterdown Road ▪ Escarpment crossing, different road ▪ Disruptive to residents and damages rural character ▪ Disruptive to residents and damages rural character ▪ Impacts on existing homes ▪ Downtown; Grindstone Creek; Escarpment; Emergency Services problems ▪ Not feasible; no point in adding to the problem and increasing congestion ▪ Not feasible
Widen King Road between the North Service Road and Dundas St.	▪ Yes ▪ Less residential areas ▪ None ▪ Land is available ▪ Very few residents affected ▪ Leads right into Waterdown south ▪ Speeds traffic ▪ This is the preferred option by far! There are only a few homes on King Road impacted	▪ None ▪ King Road ends at Waterdown Road, too many turns getting to Kerns Road from Waterdown ▪ Destroy scenic route ▪ Then where does the traffic go? ▪ Necessary ▪ Natural will be destroyed • EW. Impact escarpment

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
	▪ Not unless going to be extended ▪ No other homes or other development ▪ This doesn't seem very feasible given the terrain of the area ▪ Not as developed with residents ▪ Routine with most potential least impact ▪ Affect fewer homes ▪ Possibly-but should use Hwy #6 and Brant Street ▪ Most logical choice. Minimal residential impact ▪ Least impact to existing development	• Escarpment access may be costly • Some environmental impact
Extend King Road with a connection to Parkside Dr. or to a new east-west roadway	▪ Not as much residential impact during design + construction ▪ Goes into next phases of residential development areas ▪ Yes ▪ Less residential ▪ Needs to be user friendly. Flatter and straighter. ▪ None ▪ Good not too many houses ▪ If connected into E/W passage creates a great link to? #7 if an interchange is built at King Road ▪ Both extensions to new east/west roadway allow greater traffic flow ▪ No homes or other development. ▪ King Road as is in now is not a high value road ▪ Needs to connect to GO ▪ Yes do it ▪ Needs to connect to E/W roads ▪ Make sense most new homes will be in this area -P.S.- ▪ Has possibilities as it could avoid the main geometric problems ▪ Little if any disruption to residents. Essential to new development areas. ▪ This will enable residents of new community direct access in to Waterdown	▪ Proximity of 403 interchange to 407 and 403 major interchange ▪ None ▪ Not to Parkside ▪ Necessary ▪ King Road is in environmentally sensitive area - would have t destroy escarpment. Should use Brant Street and HWY • Having to go through escarpment • Impact on environment and escarpment; • Would need to connect to east-west
Widen Kerns Road	▪ This doesn't seem to have many benefits due to amount of residential already there	▪ Need interchange on 403 to derive most benefit

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
between the North Service Rd. and Dundas St.	▪ Yes ▪ None ▪ Not unless to be extended to new east west roadway ▪ You mean put a speedway through a ▪ Residential area ▪ Connect to GO station ▪ Better access to Burlington, addresses N/S for East Waterdown ▪ Strongly against expansion of Kerns Road between Dundas and the North Service Road, mainly because the other options (expanding Waterdown Road and/or King Road) are more logical, safer, and likely more economical alternatives as I hope to convey below. ▪ The number of residents impacted by a possible road expansion is least on King Road and greatest on Kerns Road.	▪ No ▪ Cutting through residential land ▪ None ▪ Too many residential houses in Burlington ▪ Large residential area ▪ Children safety ▪ Parkland disruption ▪ Directs flow of traffic away from Waterdown businesses ▪ Residential too close ▪ Totally unacceptable! This is a key environmentally protected area through the north end. Even more important is the excessive vehicle ▪ Traffic through a quiet residential neighbourhood. This is a huge safety issue for small children on the street. ▪ Stops short of future needs extend around to new east west roadway ▪ Homes ▪ Residential interruption ▪ Dumps you in subdivision ▪ Impact housing ▪ No advantage - too much residential ▪ Residential disruption ▪ Traffic is already an issue, this is a collector road. The safety for residents will be the issue. This will ruin this beautiful residential neighbourhood. ▪ The number of residents impacted by a possible road expansion is least on King Road and greatest on Kerns Road ▪ 100 single family dwellings and 8 condo units on Kerns Road between Dundas Road and North Service Road ▪ Not feasible ▪ Approx 60. Single-family dwellings on Waterdown rd between Mountain Brow Rd. and

Option	Major ADVANTAGE of the option	Major DISADVANTAGE of the option
To Improve NORTH-SOUTH Capacity		
		North Service Rd. ▪ 3 single family dwellings on King Rd between Mountain Brow Rd and North Service Rd
Extend Kerns Road with a connection to Parkside Dr. or to a new east-west roadway	▪ Good option to create E/W by-pass ▪ Yes ▪ Only good to Dundas ▪ None ▪ The choice of Kerns or King is unknown to me but must go to new east west roadway ▪ Not justifiable gives the landscape and proximity to roads (Evans etc) ▪ No ▪ Better than using Evans Road.	▪ Residential land along burl's plans for major Leisure centre and nursing home plans along Kerns. ▪ None ▪ Not feasible - housing ▪ No advantage in Burlington too many residential dwellings ▪ Could increase flow through existing residential area ▪ Not to Parkside ▪ Homes ▪ Residential interruption ▪ Brant and Hwy 6 must be the major N/S • No incumbencies • King Road extension would be less disruptive

To Improve ACCESS to the 403		
Make interchange improvements at Waterdown Rd.	▪ Partly done need to add only 2 ramps to complete cloverleaf. ▪ Need better access to 403/QEW from Waterdown ▪ Already a partial interchange, low cost to complete connection to go transit ▪ Speeds trip to Toronto for bedroom community ▪ Cut down on highway 5 traffic if access off 403 at Waterdown Rd. ▪ Yes ▪ I believe Burlington is already working on this ▪ Takes traffic from heavily used Hwy 6, Clappison's ▪ Already grid locked on 403 at rush hour. Ease with better GO service. ▪ Yes in conjunction with increased capacity of North Service Road ▪ Burlington has already advanced this solution- why is it not being considered as a given? ▪ Would take traffic off the Service Road. ▪ Already planned, good idea ▪ Will allow access for residents to get new survey. Currently only exit point is Brant St. ▪ If 403 went back to original idea, with 407, would reduce traffic ▪ Would ease, and improve flow of traffic	▪ Would prefer to see other location. ▪ Any move that speeds access from area has overall negative impact. ▪ More traffic up Waterdown road, not enough capacity ▪ None ▪ Brings more traffic through heavily housed areas • Too many people on Waterdown Road.
Make interchange (partial) improvements at King Rd.	▪ Yes ▪ Makes most sense to use king rd and therefore would need interchange ▪ Only with extension of king road ▪ Good connection for a North/South linkup King Road ▪ Ok with N/S service roads ▪ Yes ▪ King Road 403, 407, N with service road- show much can you do in one place ▪ Excellent ▪ Burlington has already advanced this solution- why is it not being considered as a given? ▪ This will allow for direct access up King Rd. and discourage travel through residential neighbourhoods	• None • Congestion with 407 403 and QEW • Too close to 403/407/QEW • Costly? • Feasible? • Too close to major interchanges; too much on one stretch of road; don't need another repeat problem;

	▪ Works well with widened and extended King Road as above	

Option	Major ADVANTAGES of the option	Major DISADVANTAGES of the option
OTHER OPTIONS		
Transit Alternatives, Leave things as they are, save a decrease in housing/population increase because plan was approved does not mean it should or has to take place	▪ Already existing high traffic corridor	▪ Need to focus on transit alternatives; not considered at all in this plan
Our comments will be confined to the east/west component		▪ No need for a by-pass around the north and east sides of Waterdown to replicate the existing combination of Highway 6 and 403 around west and south sides.

- Widen Brant St south Hwy 5 as N-S corridor
- Plan through roads before development with after- get the mph and Waterdown by-pass and any ns road in before housing you in
- Have you take into corridor into impact of the "green belt"
- 407 added back to its original, 403 extensions no relief to QEW construction/tied into a (north)/west traffic in GTA development around development
- Rural GO station to - promote public transit
- Identify more transit alternatives
- Full interchange at 403 and hwy 6 would make sense of this is to be a new East West by-pass North of Parkside Drive.
- Need new access road North of Parkside Drive to the new power centre development area in the North East quarter of hwy 5 & 6 development area
- Improve parking at GO station in Burlington and Aldershot, or a shuttle to these areas from a new parking area in Waterdown.
- Collaboration with City of Burlington with entrance exit points through new park on the SE corner of Kerns
- It is pertinent that E.A. must ensure that prevision of the necessary additional east/west lanes takes place in an environmentally acceptable manner. However, it is also essential that the solution makes sense economically. Parkside Dr. can be widened and improved in sections, in pace with growth. A new East/West road on separate alignment north of and generally parallel to Parkside would have to be built in its entirety to be of any use whatsoever. It is simply not credible that the land and construction costs, and the injurious affection to properties along such an alignment, could be justified by the addition of merely two lanes, particularly when they can be provided within the existing Parkside Dr. road allowance with far less impact and yielding much greater and immediate community benefits.
- If these obvious points can be recognized, surely EA scheduled for the east/west component can be tightened up so the secondary plan for Parkside North can be completed with some dispatch. Servicing capacity is available and the shortage of building lots in Waterdown is becoming acute. It is therefore imperative that this tedious process be expedited.

Focus Question #3: The Project Team recognizes that there are significant issues related to many transportation options that will be explored through the Transportation Master Plan development process.

*From your perspective, **what are the most important factors that the Project Team should consider when evaluating different transportation options?** Please list those factors below, and identify which factors should take priority (if any).*

Factors	Note the Highest Priority Factors with a Star (*) in this column
Impact on Environmentally Sensitive Areas	*
Why not move an expressway up as far north as possible without destroying good farm land or E.V.S.L	*
Kerns Road is a great residential neighbourhood with many small children. Even as is the children are at risk with vehicle, traffic (too many, too fast). We need to find way to reduce traffic on this street to keep the road safe. Expanding/widening kerns road is a major safety issue!	*
Should widen hwy 6 all the way to 401 first	*
Impact on community life. Don't make major road in residential area like Parkside the total lack of the province to build or expand roads at their level & downloading has made things worse	*
Economic development	*
Environment! Sensitive areas + wildlife corridor	*
Safety of residents Parkside would be a very unsafe choice	*
Environmental-Wetlands, woodlots, watershed should be properly managed	*
Keep character of Waterdown Village lane and Vinegar hill	*
Hwy's generate area traffic to the North including new developing areas	*
Improve GO station parking	*
Ruining existing large volume residential neighbourhood (kerns rd. + Tyandaga) with road widening decreased safety for our residents	*
Residential impacts. Massive impact to Tyandaga streetscape with switch to 4-lane road. Waterdown + King have less residential impact.	*
Improve GO station parking	*

Widening Parkside would make road to close to houses.	*
Social-impacts to existing residents and businesses *	*
Farmland or E.V.S.L Use roads already existing improve all access to major roads.	
Widen #5 through Waterdown. Be fair with people and homes impacted.	
Need an alternate route not a wider one. If there is an emergency and road is closed (e.g. chemical spill on 403) alternate route is needed.	
Farm land must remain untouched	
Number of people affected	
Expanding kerns road and/or lengthening kerns road is a major safety concern.	
At the end of the day, check all the options. Follow route that causes least problems and disrupts fewest residents. Widening roads where houses are too close too road causes too many problems.	
Safety	
Congestion	
Cheaper to build new road	
Fewest population affected	
Takes traffic away from heavily populated areas.	
Most traffic is just traveling through Waterdown not to. Get it by passed safest	
Takes fast vehicles away from concessions hwy 5 and Parkside	
Make E/W by-pass part of North Waterdown development	
Most traffic going through town is not stopping in town. (E.g. quarry trucks) need to bring this traffic around town.	
Traffic should not be increased	
Quality of life should not deteriorate	

Rural character should be maintained	
Ease of adding roadway, re, is the area underdeveloped already	
Parkside Drive is not the road to use for all the traffic that just wants to pass by the entire down.	
Widen Hwy 5 through Waterdown second	
Should minimize new road corridors should maximize use of existing corridors	
Parkside Drive expansion is not a good choice for the huge change in noise & traffic that will affect residences.	
EW- Integrity of Waterdown	
NS-Impact on escarpment	
Need big improvements to #5 #6 intersection	
You do not know where the mid peninsula hwy is going yet	
the bypass around Waterdown has always been in place, but also has the widening of Hwy 5, and Parkside Drive.	
Parkside drive is too narrow to handle traffic to three schools plus YMCA	
No proper sidewalks	
Big box stores will be located at Hwy 5 and 6	
Tell taxpayers the cost of bypass around Waterdown	
Flamborough town last meeting voted to widen Hwy 5 and Parkside Drive simultaneously	
Growth/needed-Plan needs to support economic growth	
Rearrange that 403 East does not move most mornings and address the best /worst	
Traffic on the 403, North Service Road or South Service Road	
As a Burlington taxpayer I have nothing to gain. My property value will plummet.	
Traffic should be diverted away from existing residential neighbourhoods not into them.	
Public consultation. Nobody knows what is happening. This is a Hamilton driven project. If you do not read the papers you are out of the loop. There is not 1 resident who would agree that widening Kearns road is an advantage. The communication strategy has been poor, the process fast tracked + kept under the radar screen.	
The Tyandaga neighbourhood demographics are changing from primarily mature families, empty nesters, and retirees to having a much greater component of families with young children. Expanding Kerns Rd. and increasing traffic, especially during the same times when children will be boarding and departing school busses, puts large numbers of these new residents at significant risk	
Tyandaga residents have relatively recently argues for and won the right to limit traffic on both	

Kerns Rd. and Tyandaga Park Dr. by installing additional stop signs, speed reduction barriers and speed bumps. Widening Kerns Rd. and increasing traffic is obviously contrary to what has already been deemed to be the best practice for the area.	
Current access to and/or across Highway 403 is much better from Waterdown Rd. and King Rd. than from Kerns Rd.	
There are no bridges across Highway 403 at Kerns road, and no ramps on/off Highway 403 at Kerns Rd. (The south end of Kerns Rd. empties solely onto the North Service Rd.)	
King Rd crosses Highway 403 with a 2-lane bridge, but currently there are no ramps on/off Highway 403 at King Rd.	
Waterdown rd. also crosses Highway 403, but with a 5-lane bridge, and there are 2 ramps on/off Highway 403 at Waterdown rd.	
Upgrades to improve access points to/across Highway 403 would be much more feasible at Waterdown Rd and King Rd. than at Kerns Rd. both from a practical and economical point of view, because they already have significant infrastructure in place as described above.	
Given the timing constraints of the deadline for this reply following the public meeting, I will leave other comments to a future date. Kerns Road is appropriately sized for its planned purpose, that of providing access to residences of its residents—not to be a link between Waterdown and Burlington. Brant Street was designed for that purpose. King Road is relatively undeveloped and could similarly be designed for that purpose.	
E-W - integrity as a viable Town-Village (need by-pass)	
N-S - primary factor is environmental protection (rules out Waterdown, Kerns, King options, and leads to an enhanced highway 6 to Brant)	
Existing driveways are a key factor for E-W and N-S;	
Needs to be safest for people of Waterdown;	
Needs to be cost efficient (new vs. reconstruction)	
Emergency Planning	
Reduce traffic through Waterdown.	
E-W - integrity as a viable Town-Village (need by-pass)	

WATERDOWN/ALDERSHOT
TRANSPORTATION MASTER PLAN
INFORMATION RELEASE
NOVEMBER 30, 2004

The Waterdown/Aldershot Transportation Master Plan is following the Master Plan process of the Municipal Class Environmental Assessment. A previous study completed in April 2004 documented the nature of the transportation issues that need to be addressed. The conclusion from that study was that additional east-west and north-south capacity was required through the Waterdown/Aldershot area to serve the developing lands of Official Plan Amendment 28. Part of Phase 2 of the Master Plan process includes the identification of alternative solutions to solve the capacity deficiencies identified in Phase 1.

This information release documents the range of alternative solutions that are intended to be assessed and evaluated as part of the Waterdown/Aldershot Transportation Master Plan. The alternative solutions that will be considered include:

- walking and cycling;
- transit;
- transportation demand management;
- transportation systems management;
- widening of existing roads; and
- new road corridors.

While the ultimate solution will include a combination of some, or all, of these alternatives, it is expected that additional road capacity will be included among the alternative solutions. To that end, a number of alternative road solutions have been identified to provide additional north-south and east-west capacity. These alternative solution alignments are illustrated on the attached map.

It should be noted that while the alternative solution alignments identify very specific corridors, **the exact location of these alignments are in no way fixed**. The alignment solutions have been drawn to facilitate a comparative evaluation as part of the assessment of alternative solutions. At this stage of the planning process, the level of detail for drawing these alignments is not sufficient to rigorously confirm the alignment locations. These alignments may change for a number of reasons including the need to avoid or minimize impacts, minimize costs, or to improve transportation service. In addition, the balance of the Municipal Class EA process will need to be complete for any of the road

infrastructure improvements identified as part of the Transportation Master Plan (a separate project). As part of this process, alternative design concepts (Phase 3 of the Class EA) for the preferred solutions from the Phase 2 work will need to be complete. These design concepts for the alignments will be at a greater level of detail and could further refine the alternative solution alignments. Here again, minimizing impacts and costs while maximizing transportation service, will be considered in any of the mitigation requirements for the alternative design concepts.

Through the balance of the fall and winter, the project team will be undertaking a multi-discipline assessment and evaluation of the options to identify a recommended set of solutions. These recommended solutions will be presented at a Public Information Centre in the early spring to allow for input to the work carried out.

The range of alternatives identified in this information release is a culmination of previous work undertaken in the study area, work undertaken to-date by the study team, information obtained through the first round of public consultation, as well as information from various stakeholders in the community. The dialogue on the alternative doesn't end with this list and comments on the options presented, or others that could be considered, are welcomed. If you have any comments or questions, please contact us. The contact information is as follows:

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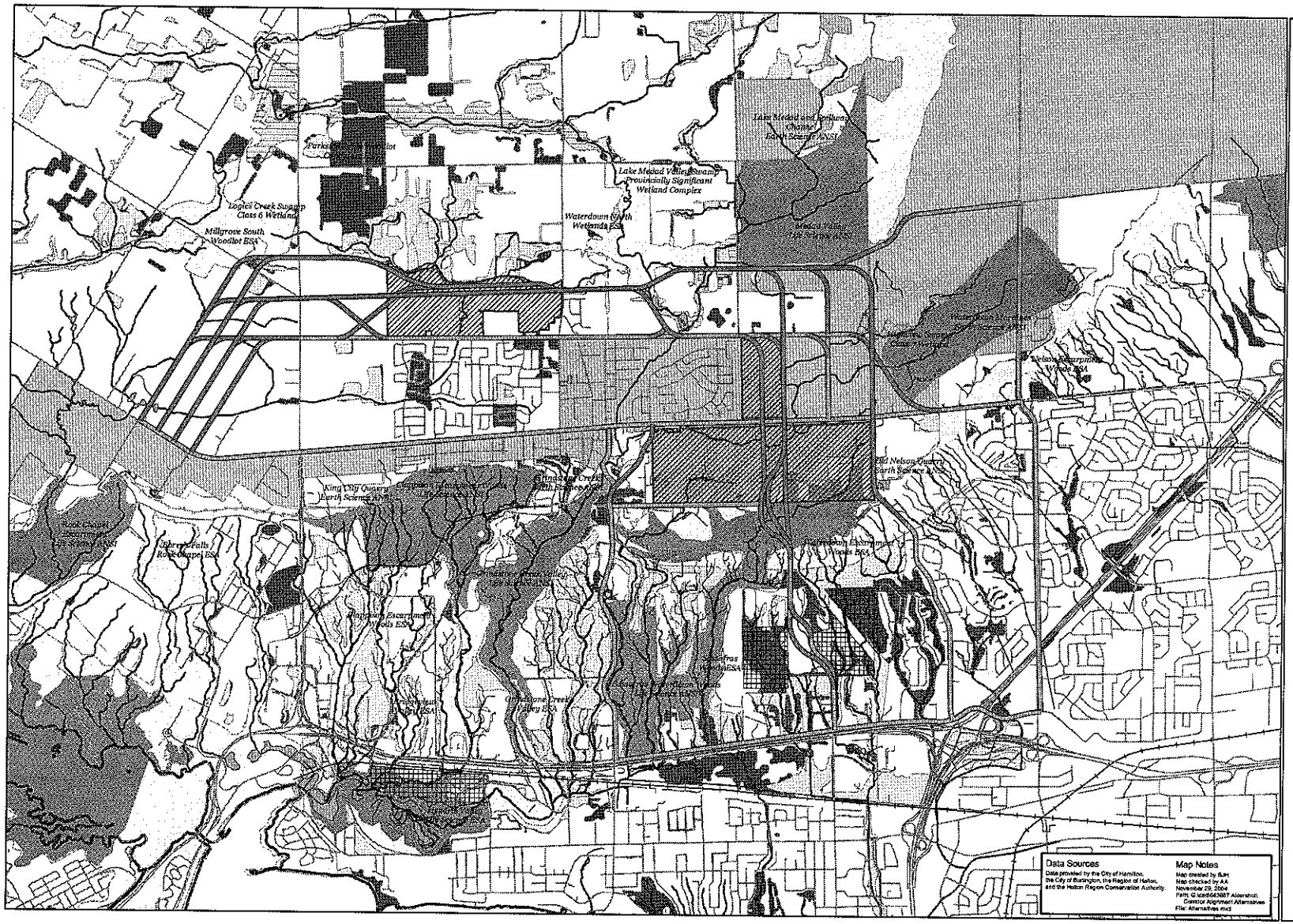

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WATERDOWN/ALDERSHOT TRANSPORTATION MASTER PLAN

Alternative Road Alignments and Environmental Constraints

Legend

- Potential New Road Corridors
- Potential Roadways to be Widened
- Future Residential Development
- Existing Roadways
- Watercourse
- Railway
- Trail/Footpath
- Brow of Escarpment
- Wetland
- MRE
- Wooded Areas
- Greenlands
- ESAs
- ANSIs
- Niagara Escarpment Commission

INFORMATION RELEASE
WATERDOWN / ALDERSHOT TRANSPORTATION MASTER PLAN

The Waterdown/Aldershot Transportation Master Plan is following the Master Plan process of the Municipal Class Environmental Assessment. A previous study completed in April 2004 documented the nature of the transportation issues that need to be addressed. The conclusion from that study was that additional east-west and north-south capacity was required through the Waterdown/Aldershot area to serve the developing lands of Official Plan Amendment 28. Part of Phase 2 of the Master Plan process includes the identification of alternative solutions to solve the capacity deficiencies identified in Phase 1.

This information release documents the range of alternative solutions that are intended to be assessed and evaluated as part of the Waterdown/Aldershot Transportation Master Plan. The alternative solutions that will be considered include:

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- transit;
- transportation demand management;
- transportation systems management;
- widening of existing roads; and,
- new road corridors.

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Through the balance of the fall and winter, the project team will be undertaking a multi-discipline assessment and evaluation of the options to identify a recommended set of solutions. These recommended solutions will be presented at a Public Information Centre in the early spring to allow for input to the work carried out.

The range of alternatives identified in this information release is a culmination of previous work undertaken in the study area, work undertaken to-date by the study team, information obtained through the first round of public consultation, as well as information from various stakeholders in the community. The dialogue on the alternatives doesn't end with this list and comments on the options presented, or others that could be considered, are welcomed. If you have any comments or questions, please contact us. The correct information is as follows:

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C2 Public Information Centre #2 Materials

Waterdown / Aldershot
Transportation Master Plan

Public Information Centres
April 2005

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Environmental Assessment Evaluation Process

The EA process followed includes the following steps:

- Step 1: Identify the nature of the problem to be resolved
- Step 2: Identify and assess all possible solutions
- Step 3: Identify road improvement options as part of the solution
- Step 4: Identify evaluation criteria
- Step 5: Establish criteria weights
- Step 6: Assess and evaluate alternative road improvement options

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Step 1: Determine the Problem to be Resolved

- Phase 1 confirmed the need for additional east/west and north/south capacity with the development of the OPA 28 lands
- The road network was modelled using estimated traffic volumes for the 2021 horizon year
- Based on the transportation demand modelling undertaken in Phase 2, it was confirmed that there would be roadway capacity deficiencies for both north/south and east/west directions
- Alternatives solutions to address these capacity deficiencies were then identified/reviewed

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Step 2: Identify and Assess Possible Solutions

- A number of possible transportation solutions to resolve the road capacity problem were identified including:

  1. Do-Nothing
  2. Improved Public Transit
  3. Transportation Demand Management
  4. New Roadway Capacity

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Step 2: Identify and Assess Possible Solutions

1. Do – Nothing – Without any road modifications or reductions in modal split or auto occupancy, peak period traffic on primary corridors in Waterdown will reach critical capacity before 2021 with the development of the OPA 28 lands. This option does not solve the problem and was therefore screened out

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Step 2: Identify and Assess Possible Solutions

2. Improved Public Transit – Improved public transit in the study area is included as part of the overall solution. It was assumed that a transit mode split of 5% could be achieved in the study area

3. Transportation Demand Management – TDM measures are intended to influence auto demands, promote ride sharing and promote other forms of transportation. TDM measures are included as part of the overall solution and was assumed that they could reduce road demand by 5%

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Step 2: Identify and Assess Possible Solutions

4. New Roadway Capacity – With assumed reductions in auto demand through improved transit and TDM policies, it was determined through the transportation demand model that roadway improvements would still be required to accommodate the 2021 traffic volumes

- **The preferred transportation solution was identified to be a combination of improved public transit, TDM measures and roadway improvements**

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Step 3 – Identify Roadway Improvement Options

- Several road improvement options were identified and considered in the evaluation
- Options that could not solve the problem were screened out:
  - Kerns Road between Dundas Street and North Service Road
  - Brant Street, between Dundas Street and the QEW
  - No. 1 Sideroad - Evans Road to Cedar Springs Road
  - Dundas Street to 4 lanes between Highway 6 and Brant Street (we did include a 4-lane / 6 lane Dundas Street widening option)
  - King Road on its own

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Rationale for Screening King Road (On its Own)

- Improving the existing 2-lane King Road as the only road improvement does not solve the capacity issue
- Widening King Road to 4-lanes would not provide a solution to the transportation problem:
  - Traffic, as demonstrated in the transportation model, would only be drawn to King Road when Waterdown Road was entirely clogged with congestion
  - King Road does not provide a direct route to Highway 403 via the Waterdown Rd. interchange
  - Less efficient connection to the Aldershot Transit Station
- An improved 2-lane King Road with an improved 2-lane Waterdown Road was included

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Step 3 – Identify Roadway Improvement Options

Roadway improvement options that were assessed and evaluated included:

North/South Alternatives

- **Option 1** – King & Waterdown Road - geometric improvements – no widening
- **Option 2 –** Waterdown Road widening to 4 lanes & geometric improvements
- **Option 3 -** Waterdown Road widening to 4 lanes & King Road geometric improvements

East/West Alternatives

- **Option 1** – New north road
- **Option 2** – Parkside Road widening
- **Option 3** – Dundas Street widening
- **Option 4** – Parkside Road widening (partial) and new north road (partial)

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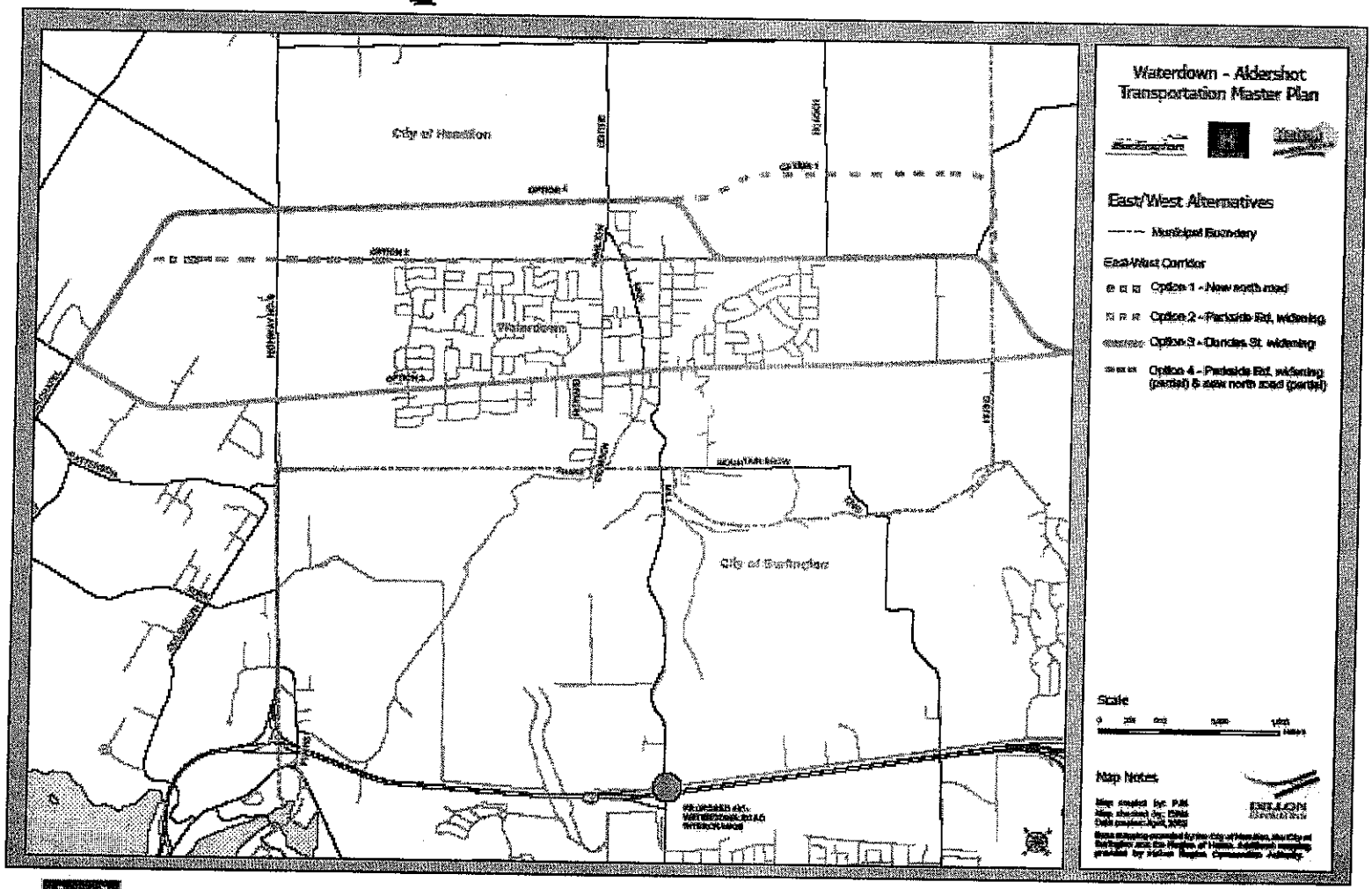
East-West Roadway Improvement Options Evaluated



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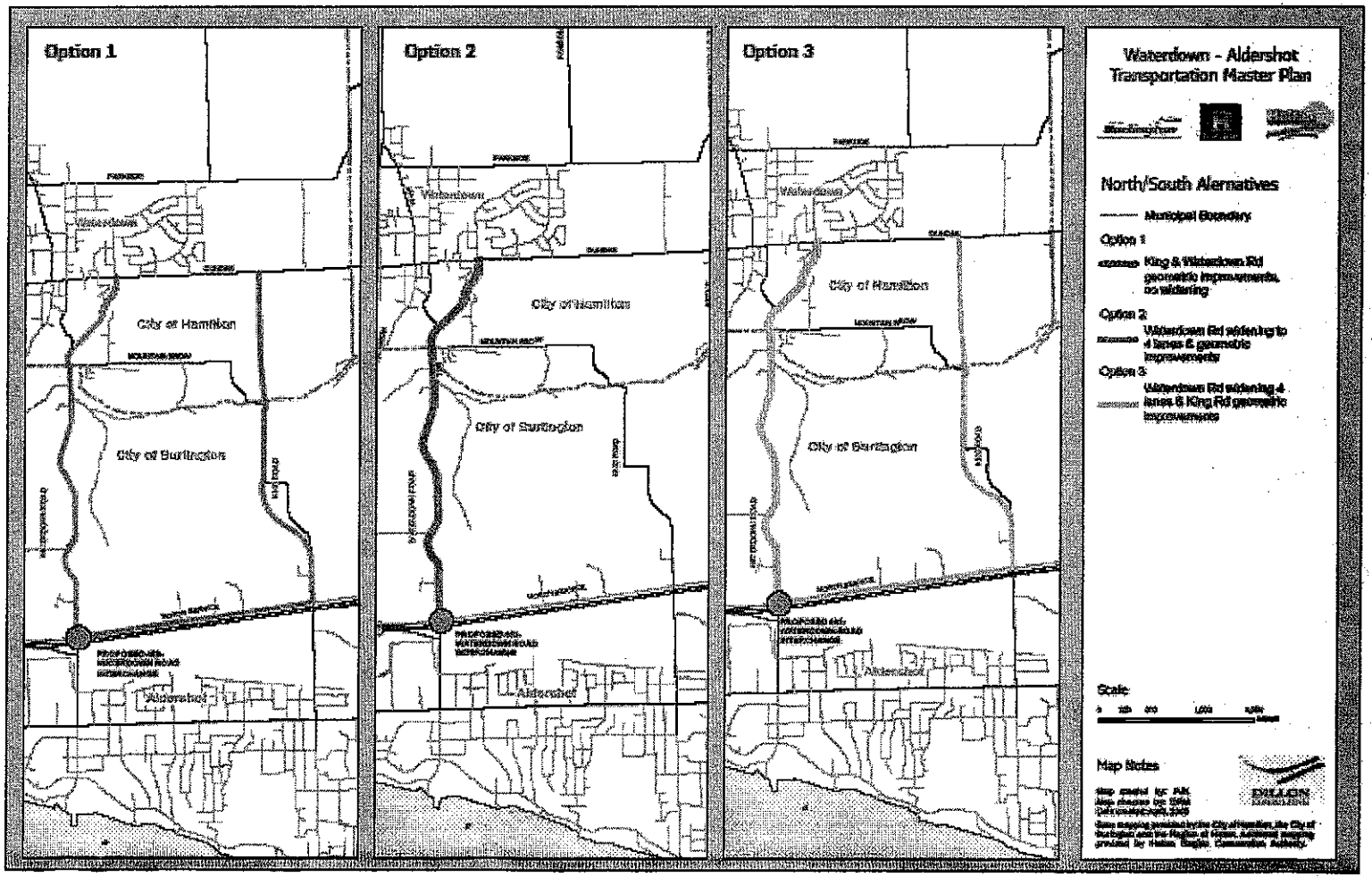
North-South Roadway Improvement Options Evaluated



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Step 4: Identify Evaluation Criteria

- The assessment and evaluation of the road improvement options was based on a set of criteria groups, criteria (as presented in the next board) and indicators
- For each criterion, one or more indicators were developed
- Input on the criteria and indicators was obtained from the Stakeholder Advisory Committee

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Step 4: Identify Evaluation Criteria

Evaluation Criteria	
Criteria Group	**Criteria**
Natural Environment	Potential for impact on terrestrial features
	Potential for impact on aquatic features
Social Environment	Potential for impact on residents
	Potential for community character impacts
	Potential for impact on community/recreation features
	Potential for impact on cultural features
Economic Environment	Potential for impact on business enterprises
	Potential for impact on downtown core business areas
	Potential for impact on future land use
	Potential for impact on agricultural land
Cost	Capital and land cost
Transportation	Change in level of transportation service
	Change in safety levels

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Step 5 – Establish Criteria Weights

- The relative importance of the criteria needed to be established for the comparative evaluation of the alternatives
- A criteria group weighting exercise was undertaken with members of the Stakeholder Advisory Committee
- Participants where asked to weight both the criteria groups and criteria out of a possible 100 points
- The following presents the weighting for the east-west options evaluation

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Step 5 – Establish Criteria Weights

(East-West Corridors)

Evaluation Criteria Weights			
Criteria Group	**Weight**	**Criteria**	**Weight**
Natural Environment	27	Potential for impact on terrestrial features	17
		Potential for impact on aquatic features	10
Social Environment	32	Potential for impact on residents	19
		Potential for community character impacts	5
		Potential for impact on community/recreation features	4
		Potential for impact on cultural features	4
Economic Environment	18	Potential for impact on business enterprises	6
		Potential for impact on downtown core business areas	5
		Potential for impact on future land use	3
		Potential for impact on agricultural land	4
Cost	10	Capital and land cost	10
Transportation	13	Change in level of transportation service	6.5
		Change in safety levels	6.5
Total Weight	100		100

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Step 6 – Assessment and Evaluation of Options

- The north/south and east/west corridor options were evaluated independently
- Data collected was quantitative (i.e. area, length, number), therefore a quantitative simple additive weighting (SAW) method was used to standardize the data to a common base score
- All of the options have advantages and disadvantages. The preferred options are those that have the least overall effect, which is influenced more by the highest weighted criteria
- The SAW results were confirmed through a qualitative review of the effects
- The selected options are representative corridors. The specific route alignments still need to be identified (beyond this study)

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Step 6 – Assessment and Evaluation of Options

East-West Preferred Corridor

- **Option 4**: Partial Parkside Road widening and a partial new northern bypass route was identified as preferred
- Has more natural environmental effects than Options 1 & 2, yet considerably less effects than Option 3. It does not result in the removal of any "core habitat"
- Has less social effects than Options 1 & 2, including the fewest residences to be displaced
- Results in few business displacements and has few businesses within 25 m and 50 m of the ROW. Requires more agricultural and development lands than Options 1 & 2
- Is the second least expensive option
- Was ranked second from a transportation perspective

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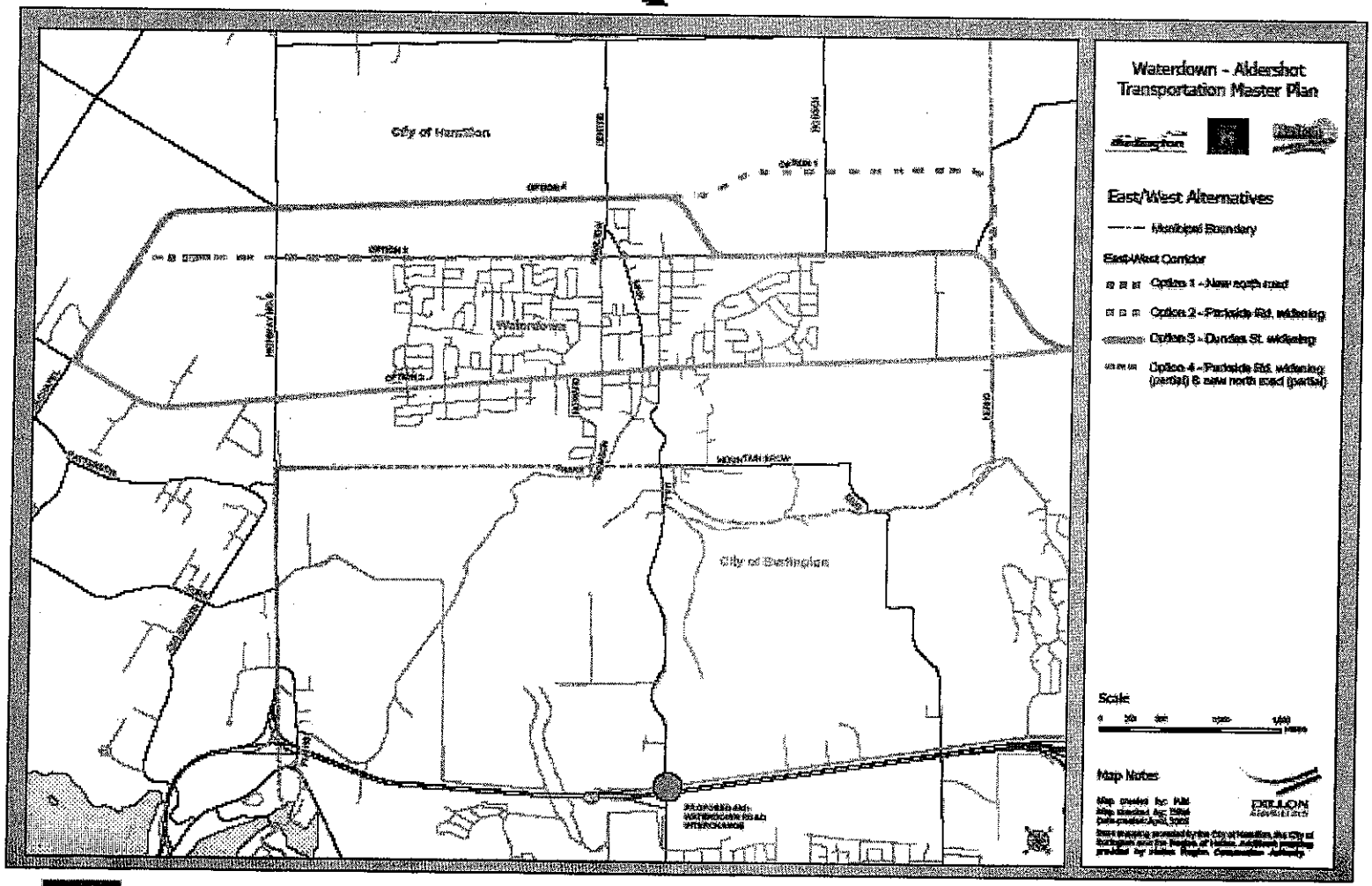
Step 6 – Assessment and Evaluation of Options



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Step 6 – Assessment and Evaluation of Options

Dundas to Parkside Connection Options

- Five route options to connect Parkside Road with Dundas Street where identified (see Figure)
- The five options were assessed and evaluated
- Option 2 was selected as preferred because:
  - Minimal natural environment effects (removes only 0.67 hectares of "other woodlot");
  - Only two residences could be displaced and least potential for disruption; and
  - Minimal effects to businesses and minimal agricultural land removed.

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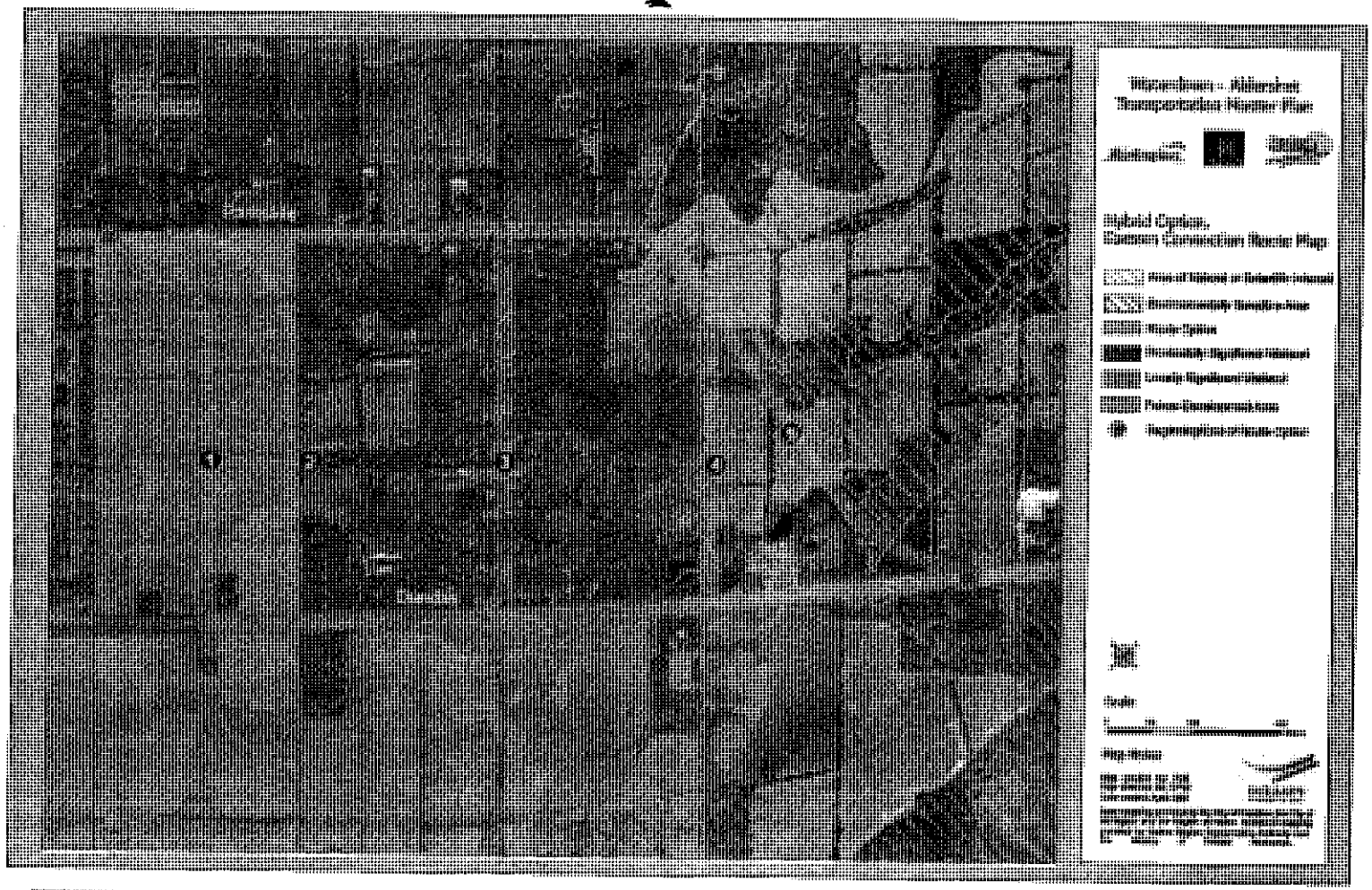
Step 6 – Assessment and Evaluation of Options



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Step 6 – Assessment and Evaluation of Options

North-South Preferred Corridor

- **Option 2:** Widen Waterdown Road to 4-lanes with geometric improvements was identified as preferred
- Has significantly less natural environment effects than Options 1 & 2. Options 1 & 2 which both involve improvements to King Road would result in the removal of a substantial amount of ANSI and ESA lands
- Improvements to King Road would also result in barrier effects to wildlife movement and the fragmentation of habitat

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Step 6 – Assessment and Evaluation of Options

North-South Preferred Corridor Cont'd

- All the options have a similar level of social effects. Option 2 does have the greatest number of potential residential displacements. It is hoped that many of these can be avoided though detailed route design
- Does not require commercial property and has the less potential for disruption effects on businesses
- Substantially less expensive ($14M vs. $24M)
- Preferred from a transportation service perspective, because it provides better capacity, is considered to be safer and provides a direct access to the Waterdown Road interchange

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Step 6 – Assessment and Evaluation of Options

Waterdown Road North Options

- Alternatives to the extension of Waterdown Road north of Mountain Brow Road were reviewed
- One alternative was identified that involves the widening of Mountain Brow Road and then extending a new ROW through the OPA 28 lands (see figure)
- The "Mountain Brow Road" widening option was identified as preferred for the following reasons:
  - Substantially less natural habitat removed
  - Results in less residential removals, less residential property required and less community features affected

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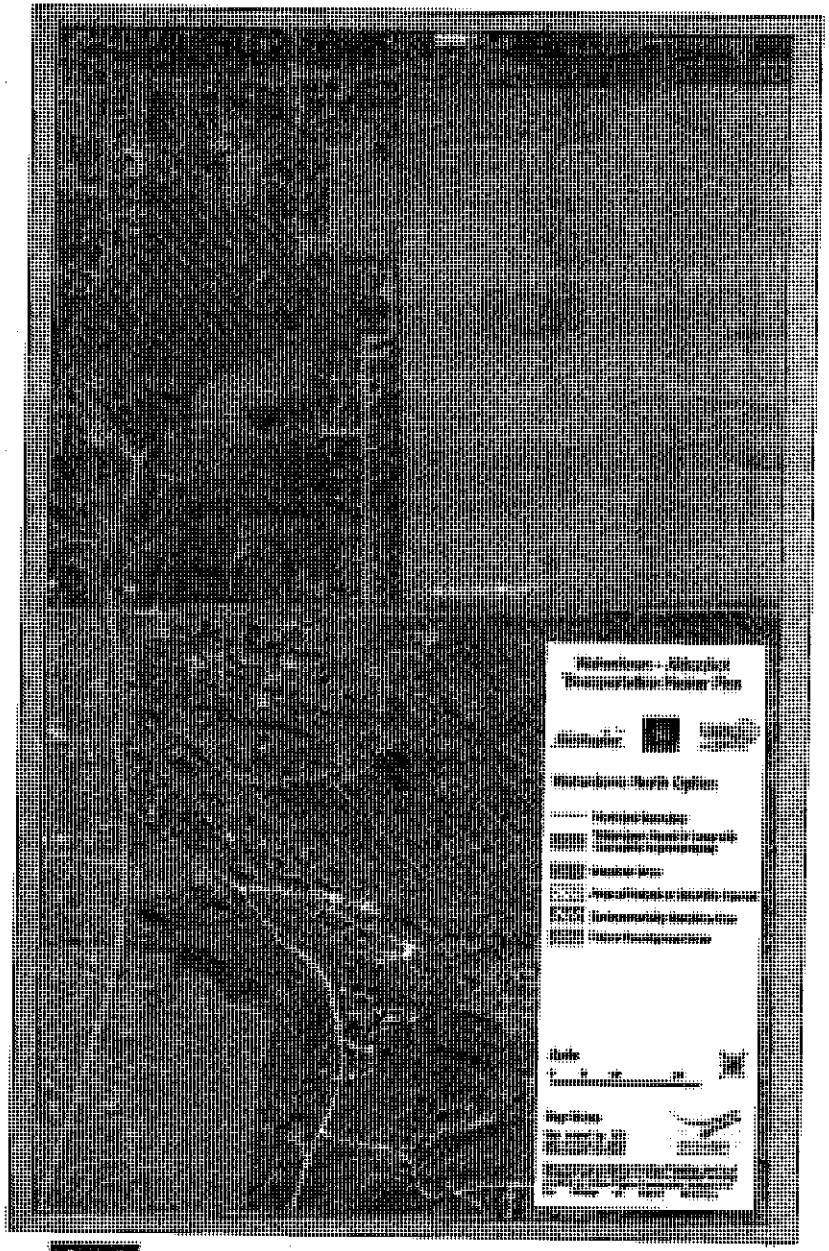

Step 6 – Assessment and Evaluation of Options

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THANK YOU FOR ATTENDING!

Your comments on the information presented would be appreciated

Please fill out a comment form and leave it in the comment box.

-OR-

Give us a Call to talk about the project

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WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRE #2

DRAFT MEETING SUMMARY

Wednesday April 20, 2005
LaSalle Park Pavilion
50 North Shore Blvd. E.
Burlington, Ontario

Thursday April 21, 2005
Bohemian Banquet Hall
215 Dundas St. East, (Hwy.#5)
Waterdown, Ontario

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WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRE #2

April 20th 2005, 6:00 - 9:30 P.M.
LaSalle Park Pavilion, Burlington

April 21st 2005, 6:30 - 9:30 P.M.
Bohemian Banquet Centre, Waterdown

1. ABOUT THE PUBLIC INFORMATION CENTRES

The Public Information Centres (PIC) were the second set of meetings held to discuss the Waterdown/Aldershot Transportation Master Plan (TMP). The PICs were co-hosted by the City of Hamilton, City of Burlington and Region of Halton to present the proposed preferred transportation network, to seek participant feedback on the proposed preferred network and to obtain advice on the overall plan.

The Transportation Master Plan was originally identified as a requirement of Official Plan Amendment (OPA) 28 for the City of Hamilton. Public consultation for this project is being undertaken to fulfill Municipal Class Environmental Assessment (EA) Planning and Design process requirements.

Specifically, the Public Information Centres were designed to:

1) Present the proposed preferred transportation network resulting from the environmental impact assessment;
2) Present recommended supporting policies; and
3) Receive public comment.

Approximately 204 people signed in at the meeting held at La Salle Park in Burlington on April 20th, and 198 at the meeting held at the Bohemian Banquet Centre in Waterdown on April 21st. The PIC agenda is attached as Appendix A.

This meeting report provides a summary of the proceedings at both meetings.

2. OPEN HOUSE

An Open House was held between 6:30 and 7:00. This provided an opportunity for people to review the results of the studies, and discuss issues and ideas with the Study Team. During the Open House participants were invited to review approximately 45 display boards which presented:

- The purpose of this round of pubic consultation
- -Background review of the study
  - OPA No. 28 - City of Hamilton
  - Municipal Class EA planning and design process
  - Recommendations from Phase 1
- Environmental assessment undertaken as part of Phase 2
- Preferred transportation network and supporting policies
- Next steps

The complete set of display boards is available on the City of Hamilton's Web site:
www.hamilton.ca/public-works/capital-planning/waterdown-&-aldershot-tmp.

3. WELCOMING AND OPENING REMARKS

At 7:00 p.m., a formal public meeting was convened at both locations. The purpose of this part of the Public Information Centres was to present the proposed preferred transportation network solutions, and to receive comments, input, questions and suggestions from the participants.

Sally Leppard, Lura Consulting, Moderator

Ms. Leppard welcomed all participants to the events and explained that Lura Consulting is acting as an independent facilitator to assist the Transportation Master Plan team with the public consultation component of this project.

Ms. Leppard reviewed the agenda and indicated that the meeting would provide more information about the transportation master plan, what studies have been done to date, the results, and next steps. The meeting would then be opened for participants' comments.

4. PRESENTATION

Don P. McKinnon of Dillon Consulting Limited, the Environmental Assessment Lead for the TMP, presented an update on the Waterdown - Aldershot TMP since the last PICs held in October 2004. He reviewed the core study area and OPA No. 28, indicating that the project is in Phase 2 of the Environmental Assessment, and reviewed the environmental process (Steps 1-6) and public input to date. A summary of the key presentation components is presented below. The presentation can be viewed as part of the display boards on the City of Hamilton's Web site (address above).

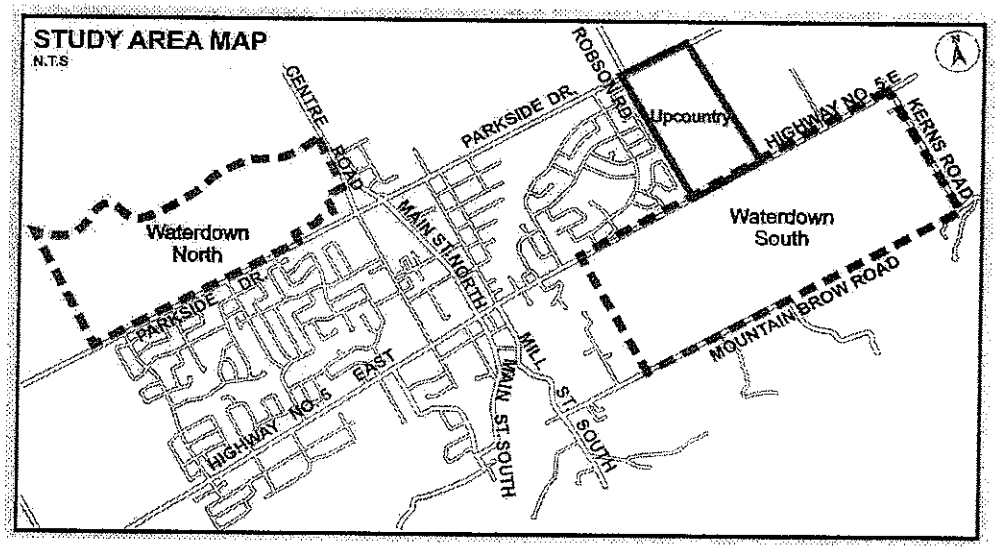
Update since the Last PIC - October 2004

Mr. McKinnon provided an update on the project and ongoing activities since the last PIC meeting. He indicated that the Study Team had: 1) Evaluated transportation alternatives which met the principles of the TMP; 2) Identified and evaluated impact of alternatives through a comprehensive evaluation process; 3) Where appropriate, incorporated public suggestions/comments into evaluation; 4) Consulted with the Stakeholder Advisory Committee and the study Steering Committee; 5) Responded to numerous inquiries from the public regarding the study; and 6) Met with Agencies, Development and Residents' Groups.

Official Plan Amendment (OPA) 28 and the Study Area

Mr. McKinnon provided an overview of OPA No. 28 and described the study area.

- OPA No. 28 was approved on June 19/02
- It allows the expansion of the Waterdown urban area to accommodate residential growth up until the year 2021
- Expected population growth of over 15,000 people at time of completion is expected
- OPA No. 28 was the approval for development based on mandatory conditions being met, such as completion of a Transportation Master Plan for the Study Area



Public Input to Date

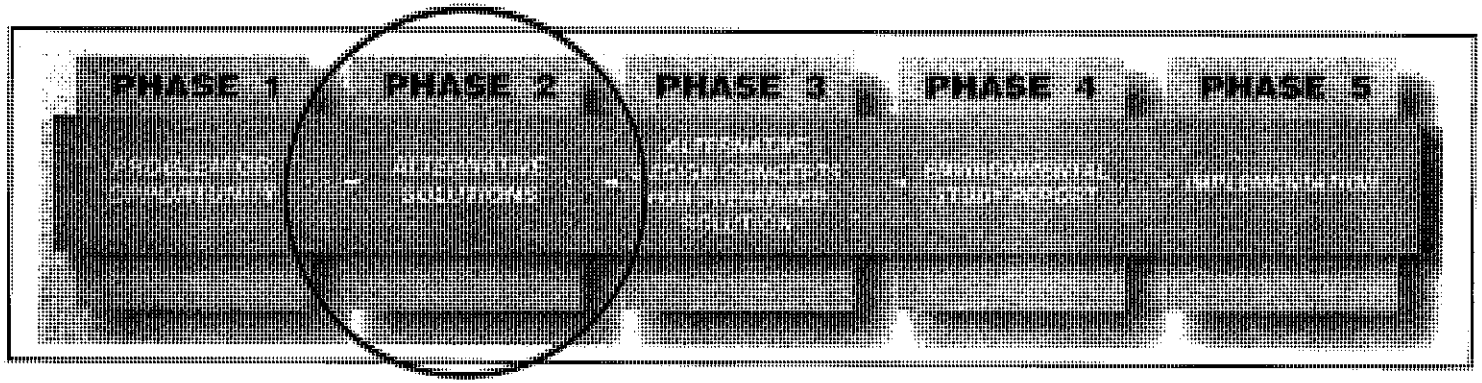
Mr. McKinnon summarized the public comments that had been received to date:

- Waterdown South Ratepayers' Association (WSRA) expressed social and environmental concerns about the new link of Waterdown Rd. between Mountain Brow Rd. and Dundas St.
- Request to close Main St. at Centre St. to prohibit traffic from infiltrating.
- Request to consider the extension of Britannia Rd. as an alternative to the proposed "north link".
- Request to remove Parkside Dr. from the list of options due to roadway safety concerns (children crossing).

Municipal Class Environmental Assessment Process

Phase 1 of the TMP Study was completed in April 2004. It was designed to identify the problem(s) and opportunities for improvement for the TMP and involved a review of the validity of the 1999 TMP study. The recommendations stemming from Phase 1 identified a need for additional East/West and North/South capacity with the development of OPA No. 28 lands. This would also include considering all options to provide additional capacity in the next phase of the study.

The process is currently in Phase 2 - identification of alternative solutions and designs.



The following steps were undertaken as part of the environmental assessment:

- Step 1: Determine the problem to be resolved
- Step 2: Identify and assess possible solutions
- Step 3: Identify road improvement options
- Step 4: Identify Evaluation Criteria
- Step 5: Establish Criteria Weights
- Step 6: Assess and evaluate alternative road improvement options

Mr. McKinnon provided an update on the results of each step to date:

STEP 1: DETERMINE THE PROBLEM TO BE RESOLVED

- Phase 1 confirmed the need for additional East/West and North/South capacity with the development of the OPA No. 28 lands.
- The road network was modeled using estimated traffic volumes for the 2021 horizon year.
- Based on the transportation demand modeling undertaken in Phase 2, it was confirmed that there would be roadway capacity deficiencies for both North/South and East/West directions.
- Alternatives solutions to address these capacity deficiencies were then identified and reviewed.

STEP 2: IDENTIFY AND ASSESS POSSIBLE SOLUTIONS

A number of possible transportation solutions to resolve the road capacity problem were initially identified. These included:

1. **Do Nothing** - Without any road modifications or reductions in modal split or auto occupancy, peak period traffic on primary corridors in Waterdown will reach critical capacity by 2021 with the development of the OPA No. 28 lands. This option was therefore screened out.

2. **Improved Public Transit** - Improving public transit in the study area is included as part of the overall solution. It was assumed that a transit mode split of 5% could be achieved in the study area.

3. **Transportation Demand Management (TDM)** - TDM measures are intended to influence auto demands, promote ride sharing and promote other forms of transportation. TDM measures are included as part of the overall solution, it was assumed that road capacity could be reduced by 5%.

4. **New Roadway Capacity** - With assumed reductions in auto demand through improved transit and TDM policies, it was determined through the transportation demand model that roadway improvements would still be required to accommodate the 2021 traffic volumes.

The preferred transportation solution was identified to be a combination of improved public transit, TDM measures and roadway improvements as solutions 2. and 3. did not solve the problem on their own.

STEP 3: IDENTIFY ROAD IMPROVEMENT OPTIONS

- Several road improvement options were identified and considered in the evaluation.

- Options that were screened but as they could not solve the problem included:
  - Kerns Rd. between Dundas St. and North Service Rd.;
  - Brant St., between Dundas St. and the QEW;
  - No. 1 Sideroad - Evans Rd. to Cedar Springs Rd;
  - Dundas St. to 4 lanes between Highway 6 and Brant St. (the Study did include a 4-lane/6-lane Dundas St. widening option); and
  - King Rd. (on its own).

- Widening King Rd. to 4 lanes was screened out as an alternative because:
  - 4-lane King Rd. would not provide a solution to the transportation problem. Traffic, as demonstrated in the transportation model, would only be drawn to King Rd. when Waterdown Rd. was entirely clogged with congestion.
  - King Rd. does not provide a direct route to Highway 403 via the Waterdown Rd. Interchange.
  - It was the least efficient connection to the Aldershot GO Transit Terminal.

Roadway improvement options that were assessed and evaluated included:

<u>North/South Alternatives</u>

- Option 1 - King Rd. & Waterdown Rd. - geometric improvements - no widening
- Option 2 - Waterdown Rd. widening to 4 lanes & geometric improvements
- Option 3 - Waterdown Rd. widening to 4 lanes & King Rd. geometric improvements

<u>East/West Alternatives</u>

- Option 1 - New north road
- Option 2 - Parkside Dr. widening
- Option 3 - Dundas St. widening
- Option 4 - Parkside Dr. widening (partial) and new north road

STEP 4: IDENTIFY EVALUATION CRITERIA

- The assessment and evaluation of the road improvement options was based on a set of criteria groups, criteria and indicators (opposite).
- For each criterion, one or more indicators were developed.
- Input on the criteria and indicators were obtained from the Stakeholder Advisory Committee.

Evaluation Criteria	
Criteria Group	**Criteria**
Natural Environment	Potential for impact on terrestrial features
	Potential for impact on aquatic features
Social Environment	Potential for impact on residents
	Potential for community character impacts
	Potential for impact on community/recreation features
	Potential for impact on cultural features
Economic Environment	Potential for impact on business enterprises
	Potential for impact on downtown core business areas
	Potential for impact on future land use
	Potential for impact on agricultural land
Cost	Capital and land cost
Transportation	Change in level of transportation service
	Change in safety levels

List of evaluation criteria that was considered

STEP 5: ESTABLISH CRITERIA WEIGHTS

- The relative importance of the criteria needed to be established for the comparative evaluation of the alternatives.
- A criteria group weighting exercise was undertaken with members of the Stakeholder Advisory Committee
- Participants where asked to weight both the groups and individual criterion within the groups out of a possible 100 points.
- The table opposite presents the weighting for the East-West options evaluation.

Evaluation Criteria Weights			
Criteria Group	Weight	Criteria	Weight
Natural Environment	27	Potential for impact on terrestrial features	17
		Potential for impact on aquatic features	10
Social Environment	32	Potential for impact on residents	19
		Potential for community character impacts	5
		Potential for impact on community/recreation features	4
		Potential for impact on cultural features	4
Economic Environment	18	Potential for impact on business enterprises	6
		Potential for impact on downtown core business areas	5
		Potential for impact on future land use	3
		Potential for impact on agricultural land	4
Cost	10	Capital and land cost	10
Transportation	13	Change in level of transportation service	6.5
		Change in safety levels	6.5
Total Weight	100		100

List of criteria weights that were established

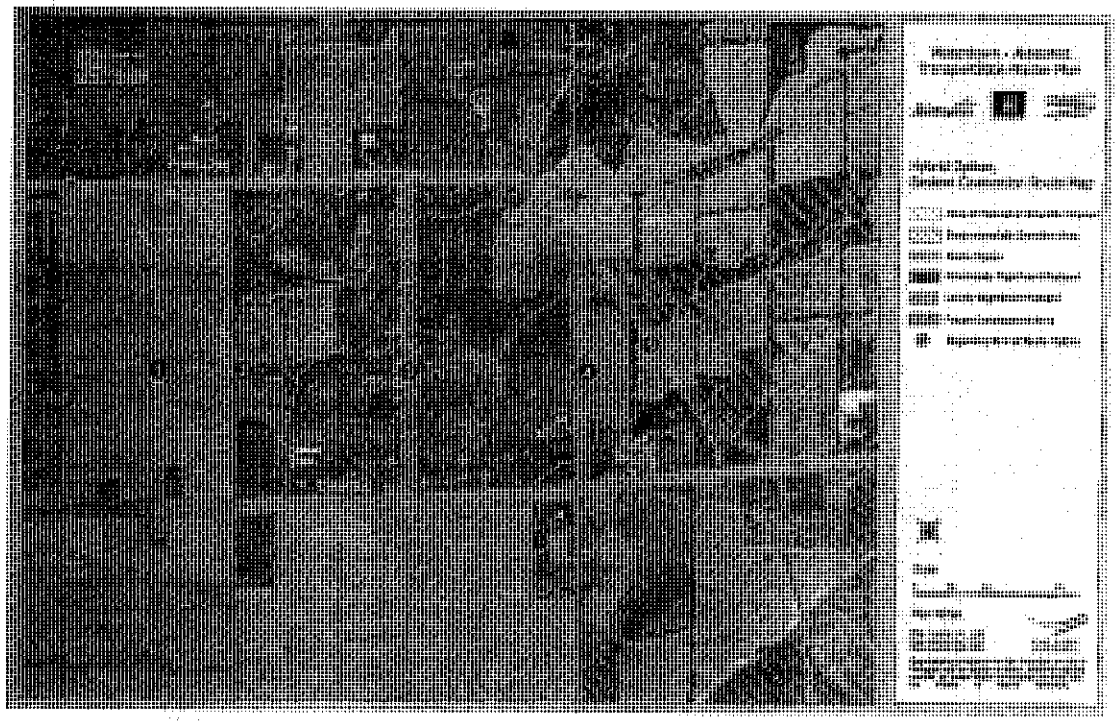
STEP 6: ASSESS AND EVALUATE ALTERNATIVE ROAD IMPROVEMENT OPTIONS

- The North/South and East/West corridor options were evaluated independently.
- Data collected was quantitative (i.e. area, length, number), therefore a quantitative Simple Additive Weighting (SAW) method was used.
- All of the options have advantages and disadvantages. The preferred options are those that have the least effect for the highest weighted criteria.
- The SAW results were confirmed through a qualitative review of the effects.
- The selected options are representative corridors. The specific routes within these corridors will need to be identified.

Mr. McKinnon then provided an overview of the preferred routes for the East-West and North-South corridors.

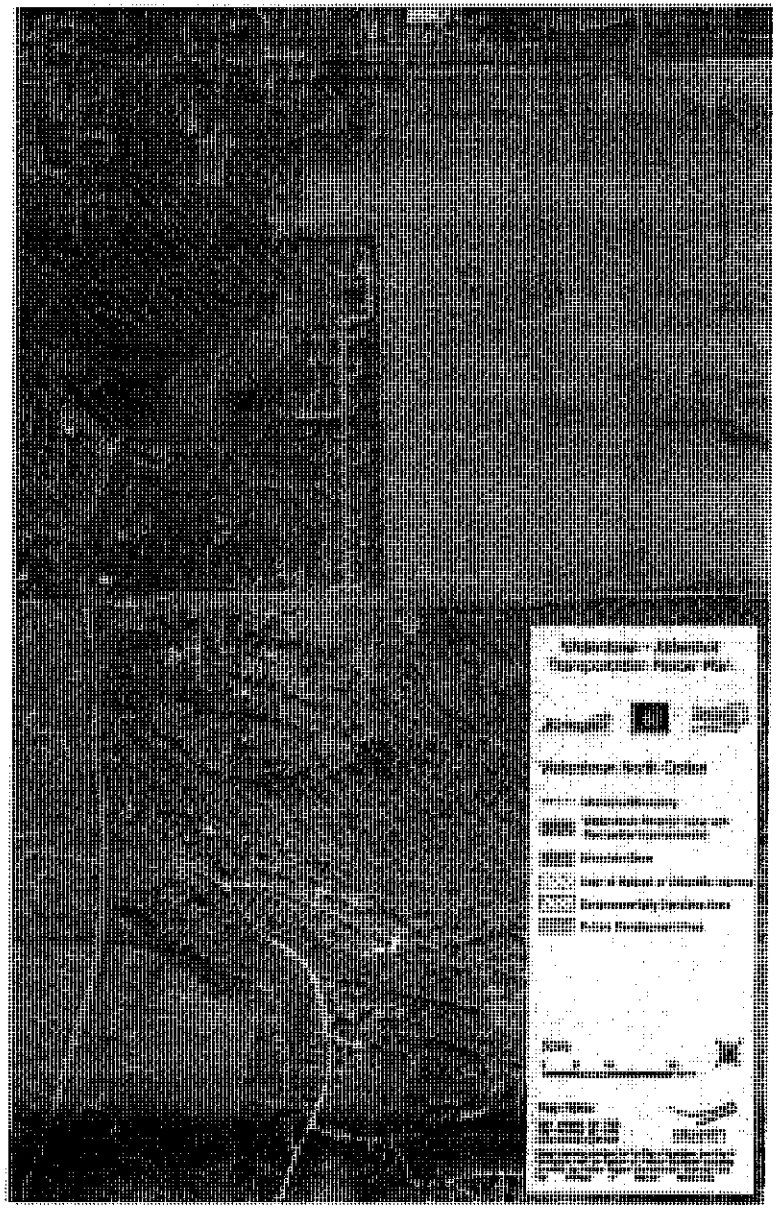
EAST-WEST PREFERRED CORRIDOR

- Option 4 (partial Parkside Dr. widening and a new northern bypass route) was identified as the preferred option.
- Have more natural environmental effects than Options 1 & 2, yet considerably less effects than Option 3. It does not result in the removal of any "core habitat".
- Have less social effects than Options 1 & 2, including the fewest residences to be displaced.
- Results in few business displacements and has few businesses within 25 m and 50 m of the right-of-way (ROW). Requires more agricultural and development lands than Options 1 & 2.
- Is the second least expensive option.
- Was ranked second from a transportation perspective.



Dundas St. to Parkside Dr. Connection Options

- Five route options to connect Parkside Dr. with Dundas St. were identified (see Figure).
- Five options were assessed and evaluated.
- Option 2 was selected as preferred because:
  - Minimal natural environment effects (removes only 0.67 of "other woodlot");
  - Only 2 residences could be displaced and it has the least potential for disruption; and
  - Minimal effects to businesses and minimal agricultural land removed.



NORTH-SOUTH PREFERRED CORRIDOR

- Option 2 (widen Waterdown Rd. to 4 lanes) was identified as preferred
- Have significantly less natural environment effects than Options 1 & 2.
- Options 1 & 2 which both involve improvements to King Rd. would result in the removal of a substantial amount of Area of Natural & Scientific Interest (ANSI), Environmentally Sensitive Areas (ESA) lands, and in particular it would involve a new cut in the Niagara Escarpment
- Improvements to King Rd. would also result in barrier effects to wildlife movement and the fragmentation of habitat
- Improvements to King Rd. did not solve the problem

Waterdown Rd. North Alternatives

- Alternatives to the extension of Waterdown Rd. north of Mountain Brow Rd. were reviewed.
- One alternative was identified that involves the widening of Mountain Brow Rd. and then extending a new road through the OPA No. 28 lands.
- The "Mountain Brow Rd" widening option was identified as preferred for the following reasons:
  - Substantially less natural habitat will be removed.
  - Results in less residential removals, less residential property required and less community features affected.

Transportation Policies to Support the Transportation Master Plan

Mr. McKinnon provided an overview of the following transit studies: 1) Transit Services Strategy; 2) Transportation Demand Management (TDM) Policies; 3) Cycling & Walking Strategy; and 4) Land-use / Urban design and explained how they are being used to analyze the transit option for Waterdown.

Costs Associated with the Preferred Network

Mr. McKinnon indicated that there are several components to the cost that affect and are included in the development of the preferred network: 1) Amend the City of Hamilton's Development Charges By-law to reflect infrastructure improvements required to support development in Waterdown; 2) Costs allocation to be based on extent of benefit between proposed development and existing community; and 3) Cost sharing agreement between the Cities of Hamilton & Burlington to be implemented to fund works in Burlington.

Next Steps

Finally, Mr. McKinnon provided an overview of next steps for the Waterdown/Aldershot Transportation Master Plan:

- Prepare a draft report for the Waterdown/ Aldershot Transportation Master Plan
- Make report available for public review by late Spring/early Summer
- Conduct a third Public Information Centre in September to present the Draft Transportation Master Plan
- Finalize the TMP

5. PARTICIPANT FEEDBACK

General Questions, Comments and Concerns:

Immediately following the presentation, participants were asked if they had any questions or comments about the project. The following identifies the participants' questions (identified with 'Q') or comments (identified with 'C'), are listed below with responses from the project team in *italics*.

Aldershot Meeting

Q: Suggest that the team considers a frequent transit service from Waterdown and Flamborough to the GO train; this would eliminate a lot of traffic, and parking capacity. *Use Aldershot as a hub, connect Plains Rd. service, 403 transit service into GO, and run local service from Waterdown. This would enable transit access to downtown Burlington, Hamilton and GTA. The study team has looked at transit and TDM to accommodate 10% of the demand.*

Q: Can the cost be assessed to the Developers? *Yes, the City of Hamilton development charges bylaw is city-wide. When the bylaw was passed about a year ago the exact cost was not determined, therefore $17 million was allocated towards road improvements in Waterdown. Now that there are better cost estimates, we will look at amending the bylaw to reflect true cost.*

Q: What is the purpose of the proposed route from Dundas St. - Parkside Dr.? Concern that it is unnecessary because Highway 6 can accommodate the demand. *The proposed N/S route is far removed from Hwy 6. The proposed route would run along the east boundary of Upcountry development lands, providing a route connection from Dundas St. to Parkside Dr. It would then become part of E/W route.*

Q: How do you get from Parkside Dr. to the new road? *New Road runs N/W from Parkside Dr. up to new E/W road through development lands.*

Q: Public Transit: Why are we adding houses to Waterdown without adding transit? *Proposal is to improve transit service, putting in a local service, improving frequency, and linking to hub at GO station.*

Q: Could you also plan for Public transit along Brant St.? *Brant was considered as an option, it is too far to the east. N/S corridor needed to be central. Waterdown Rd. is an option that offers central access to the GO station and for transit, and will eliminate congestion.*

Q: Where can we look at the options that were considered before phase 2? *A discussion paper will be available in the next 2-3 weeks; this paper will describe all of the options that were considered, and the screening and evaluation process. .*

Q: What will the road width be for the proposed widening of Parkside Dr.? *At this stage, the width of 4 lanes is being protected. This varies throughout the roadway and can be anywhere from 26-43 metres.*

Q: In your study have you had contact with Hamilton Hydro? There is a possibility that Hydro plans to install hydro lines on Parkside Dr. within the next year. *Hydro is planning for their purposes. This project is still in the planning phase. Timelines are not fully developed.*

Q: Does the development of Clappison's corners impact this project? *No, these roadway improvements are to serve the new residential development in the OPA No. 28 lands. There is capacity in the existing network for the Clappison's corners development.*

C: Evaluation Criteria - Environment and Social Impact. Regarding evaluation criteria, there is as much wildlife on Waterdown Rd. as there is on King Rd. In regards to social impact, there are only 3-4 houses on King Rd., and 77 on Waterdown Rd. *Both criteria groups were seen as (most) important. All three options involve some improvement to Waterdown. All three options involved approximately the same level of social impact.*

Q: Where can we obtain data on the evaluation criteria? *Data will be included in the discussion paper, which will be available in the next few weeks; the discussion paper will be available on the website.*

C: Concern that if you increase the traffic on Waterdown Rd., the traffic will also increase on King Rd.

C: North Service Rd. will be congested from traffic leaving GO station, and will likely need to be improved.

C: GO train station does not need to be located at a major intersection (e.g. Burlington station). Consider moving the GO station.

Q: What are the anticipated speed limits and truck traffic? *Speed limits will be defined in the next phase of the study, however it is estimated to be in the 60km/hr. range.*

C: Concern that most information requested is being referred to as being in a discussion paper that is not available for 2-3 weeks.

Q: Will Smokey Hollow Rd. remain open? Suggest that the team consider it for business reasons. *There are no plans in this phase of the study to close Smokey Hollow Rd. When we get into the next phase of the study - it could be considered as an option.*

Q: History of the project. How do we get steam rolled time and time again? *Councillor McCarthy provided an overview of the history of OPA28:*

- *It goes back over 20 years*
- *It is part of the Provincial Mandate for development requirements for Municipalities*
- *Provincial legislation states that the Municipality has a supply of land to accommodate growth for up to 17 years*
- *OPA NO. 28 took a long time to be approved*
- *Originally Town wanted it phased and controlled*
- *Town was superseded by Ontario Municipal Board (OMB) and cabinet, and bestowed with approximately 6500 homes with no plans for phasing. Two regulations were provided: 1) Fix roads; and 2) Capacity needs to be available at the Dundas Sewage treatment plant.*
- *We have to deal with this now - or we will deal with it later. If we don't deal with this at all then the OMB or cabinet will deal with it.*

C: Concern that the proposed solution does not consider the people who are affected. *City does not want to make decisions that are not what the majority of residents want - unless it is not viable to do anything else. King Rd. for example is an environmentally and financially prohibitive option.*

Q: Please explain what expropriation means and what that will do to the value of properties located on Waterdown Rd. *When designing the roads, in the next phase of the study, the City will deal with each impacted property owner individually. The City of Hamilton's approach with impacted property owners is to come to an amicable resolution of the acquisition of the property. The first step is to get an appraisal of the property; if resident disagrees we pay for property owner to have their own appraisal, if there is still no agreement there is a third party process that we can utilize. If an agreement cannot be met we have a statutory option for expropriation, however this is not our preferred approach. In most cases we have been able to acquire property through negotiation and come to an agreement.*

Q: Is the assessment on the property going to be completed before the plans for the road are approved? *Appraiser will provide a range of scenarios including the value of the property with the current road and the value with road improvements. The City of Hamilton is required to pay fair market value for the property.*

Q: Will the property owner receive this in writing? *Yes, upon request.*

Q: Why is there a difference between the 1999 Stantec Study (where it was concluded that King Rd. was the best option), and this study? *The 1999 Stantec work was not completed. The preferred option of King Rd. was not approved, and it was not endorsed by the Niagara Escarpment Commission or Conservation Halton. An interchange was proposed for King Rd. the freeman interchange and the 403; this interchange could not be approved by the MTO in accordance with their existing regulations.*

Q: Suggestion that there are many similarities between the King Rd. option and Waterdown Rd. option in regards to accessing the GO station. *The Waterdown Rd./Mountain Brow Rd. option is for a direct and central route in regards to the OPA28 growth area, the demand is for a centralized route, and the deviation from the central area will be greater for the King Rd. option.*

Q: Did the study team consider extending the North Service Rd. to Brant St.? *Yes, the study team did consider improvements to the North Service Rd. within the King Rd. option.*

Q: What is the Official Plan definition of arterial road as related to the dimensions of the affected roadway? An *arterial road is included within the regional policy that was adopted, not in the Official Plan. The dimension varies from 26-36 metres.*

Q: Concern that the decision on the preferred option was guided by cost, although it was one of the lowest priorities on the list of evaluation criterion. *Cost was the lowest rank criterion; however it played a small part in the evaluation.*

Q: For Councillor Craven, which option do you prefer? *Councillor Craven indicated that he felt that King Rd. was a better option for Aldershot for a variety of reasons. However based on the technical data there is a very strong case for Waterdown Rd.*

Q: For Councillor McCarthy, which option do you prefer? *Based on technical criteria and information - I will most likely support the engineering recommendation for Waterdown Rd.*

C: Money is a renewable resource - people, environment, land, and time are not renewable resources.

C: Thank you for protecting Waterdown's downtown.

C: We need to encourage businesses to come to Waterdown, and encourage people to both work and live in Waterdown.

C: Consider creative options to solve the problem (not just roads) on King Rd. *There were a range of options on King Rd., which would all still have impacts. If there is a specific option that you would like us to consider please provide it in your comment form.*

Q: Why didn't a provincial government representative attend this meeting to explain to Waterdown residents why they approved the development?

Q: Will the cost of $14 million include the properties that will be acquisitioned? Concern that all 77 properties will be acquisitioned. *Cost of land was factored into the evaluation. However, there is no assumption that a large number of properties will be acquisitioned.*

Q: Were provisions made to accommodate for doctors and hospitals? Concern that the existing infrastructure cannot accommodate new growth. *The provision of services (school, parks, hospitals, etc) for residents in Waterdown is a planning issue.*

Q: Did the study team consider the option to establish an economic development program for Waterdown? Why or why not? (Councillor Braden also requested that the study team provide him with back-up of their answers). *We are constrained by the existing planning policies in Waterdown, it is not within our mandate to look at changing those.*

Q: What effect will the predictable energy crisis have on commuting? *There was no direct evaluation or predictions made based on the change of commuting behaviour under that scenario. Study team did look at origin/destination change in travel patterns, transit and other measures based on database of travel behaviour, however not specific to energy crisis.*

C: Study team is in the process of documenting all of the information. The discussion paper will include information for the entire process to date, including some information from the second round of PICs. A draft report will be available in the summer of 2005, however the study is far from complete - the study team is following a standard process. Consulting the public is an important piece of the overall process.

C: Concern that the Stantec Study indicated that the project would cost $50 million. How can this project cost $17 million?

C: Province should be here to represent this decision and should commit financially to this project.

Q: Where is the increase in traffic coming from? *There are three primary areas that are part of OPA No. 28. 1) North side of Parkside Dr., east of Highway 6; 2) Between Dundas St. and Mountain Brow Rd. east of Waterdown Rd.; and 3) Upcountry lands on the north side of Dundas St.. All three equally contribute to the increase of traffic.*

Q: Will the new traffic need to access the north side of Waterdown? *Traffic is going from and coming to the new development areas, Hamilton, and the Greater Toronto Area (GTA).*

Q: Why weren't areas as far as Oakville looked at to accommodate growth. *The Study is based on the Phase 1 Study, that states there is a need for more capacity N/S and E/W of Waterdown - that is the area that we are looking at.*

Q: As a resident on Waterdown Rd., how can I find out what the impact will be on my property? *Suggest that the residents who live on Waterdown Rd. (77 properties) come and meet with the City on an individual basis.*

C: Concerned about the length of time it has taken to get enquires responded to. Called Claudio in February and heard back this week. *Claudio Covelli apologized for this.*

Q: Regarding the weighting exercise that the public participated in, there is an issue that the exercise did not refer to a specific N/E route, and concern that the results were skewed because it was not specific. *Criteria need to assess on the same basis in order to provide for fair comparison.*

C: Would like to hear from Federal government that there will be no increase in taxes to the residents.

Q: Developers have the right to supersede cities if the process is seen as causing them 'undue delay'. The concern is that if Cities of Hamilton and Burlington do not come to an agreement, the developers could "run right over this town" *The decision will be made by the OMB, Cities of Burlington, Hamilton and the residents. At this point the study team cannot predict what the OMB will decide, however the study team will ensure that the Cities are making the best decisions for Hamilton and Burlington residents.*

Q: What is classified as "undue delay"? *No definition, because it is not in OPA 28. OPA 28 sets out 5-6 criteria that need to be met for development to proceed in advance of the completion of planning studies. There is one application that is having a pre-hearing where they are trying to proceed in advance of the completion of the planning studies, and the City is going to state that the planning studies need to be complete. "Undue delay" is most likely going to be considered on a case by case basis.*

Q: The study team indicates that it is not their preferred option to expand King Rd., however many years ago Waterdown Rd. and Highway #6 were built through the escarpment. There is equipment that can do this work. *Yes, it is possible to build the road. However, we are basing our recommendation on the nature of the impact (e.g. escarpment blasting, King Road does not solve the problem).*

Q: Concern that this recommendation will bring traffic into the central core of Waterdown instead of diverting it around the Town. Suggest that the preferred option for Waterdown residents would be to divert traffic out of the core. Have there been any studies done on what residents prefer? *The study team has looked at all of those options, King Rd.; Kerns Rd.; Waterdown Rd.; Brant St. etc. All options were considered during the evaluation process. Looked to solve the problem with the solution that makes the most sense. Providing the capacity at a location where the demand seems to be is a large part of solving the problem.*

Q: How do you determine where the demand will be? *Can get fairly technical however, we have a transportation model that includes all roads in Waterdown and starts from a "no improvement" condition, to a condition with just traffic on roads from upcoming new development. This transportation model will be available publicly for review.*

C: In regards to the technical issues with extending King Rd., suggest that the study team consider building a bridge over the escarpment (e.g. Prince Edward Island, Chesapeake Bay).

C: Major concern that the residents of Waterdown Rd. are getting stuck with Hamilton's problem.

C: In regards to geometric improvement to Waterdown Rd. - vehicles currently travel at approximately 80km/hour, if the road is straightened and flattened vehicles could do up to 100km/hr on a residential street.

C: Concern that the Study Team is not sympathetic towards the residents of Waterdown Rd. In 1995 during the inter agency review, Waterdown Rd. was to be two lanes.

C: In regards to the plan for Mountain Brow Rd., if there will be a 90-degree turn with 4 lanes of traffic - concern that this will be difficult and dangerous to drive on in the winter. *The exact and final design is the subject of the next level phase, but we have looked at what we would need the geometry to be. The speed would have to be posted much lower than a straight road.*

Q: Has the study team considered the implications of sewage and installation of sewers on Waterdown Rd.? *Yes, this issue has been considered. Will look at the context of development around Waterdown Rd., sewers will be coming to that area. If the tile fields are impacted, we will then look at the option of expanding our sewer systems to deal with it.*

Q: Everything on the south side of Mountain Brow Rd. is ESA land. In the first phase of the study, it was indicated that there would be a 30m buffer zone for ESA lands. How is the ESA along Mountain Brow Rd. going to be buffered? *The purpose of this phase is to find a solution to the problem. The next phase will involve the specifics on where exactly the road will be.*

Q: Does the study include health impacts from air pollution, noise, and increased truck traffic? *This phase of the process has included capacity and overall need. This is possible however, it is not specific at this point. The study includes overall projected truck traffic but it is not specific to what percentage of trucks or what route.*

Q: Concern that truck traffic will increase and cut across residential streets. Are the same issues of trucks using residential streets, as anticipated by the Red Hill Valley Project, anticipated for this project? *Waterdown Rd. is not a high demand area for trucks, the trucks will likely continue to use Highway #6 and Dundas St.*

Q: Request that the study team commit to hold another public meeting when the discussion paper is released to discuss the project before the team makes a final decision and final recommendation. *Along with the discussion paper, a draft report will be released in June. This report will detail more documentation and draft recommendations. Another set of public meetings will be held in the fall of 2005 where participants will be invited to comment before the final decision is made. The study team will consider the request, however were not in a position to make the decision at the meeting. We will get back to the participant in a couple of weeks.*

Q: In regards to the Green Belt legislation, is there any impact on this project? *There is no impact. Urban boundary of Waterdown includes OPA28, green belt surrounds the urban area.*

Q: How does the planning for the Niagara GTA corridor affect this project? *This was looked at that in the Phase 1 review; the Niagara GTA corridor serves a different function than the roadway improvements in Waterdown. The majority of traffic improvement for Waterdown will be going East and South-East to Hamilton, Burlington, Halton and the GTA. The Niagara GTA corridor is an inter-regional provincial highway connecting Niagara to the GTA. Our modeling did not indicate that the highway would take any traffic away from this development.*

C: Concerns regarding air quality impacts from the road improvements in Waterdown and the Niagara GTA corridor.

C: Residents need to remember that wherever the roads and improvements are, there will be impacts on nearby areas. There are legitimate reasons why people would not want this development on King Rd.

Waterdown Meeting

C: The existing and additional roads that will handle additional traffic cannot be easily built because of the restrictions brought about by existing development and ESAs. There was a proposal ready for implementation in 1999. It would have put a North-South road from 403, which would have gone north to Highway 5, in the area of Evans and Kerns Rd. and would have continued north. We do need roads to accommodate future development. The present road system is at capacity and we immediately need a bypass for Waterdown highway. Let's deal with current problems before addressing needs for the future.

Q: What happened to the Stantec study? What criteria was used in coming up with the preferred corridors? *The analysis that we have done looked at the East-West and North-South needs in the study area and the community. The North-South demand on Waterdown Rd. is taken up through that development and up to Dundas St. We are proposing to connect it into the section that is 4 lanes on Dundas St. (east of downtown area). A lot of the demand in that area can make use of Highway 5. The combined solution can help solve the traffic problem.*

C: Comments on previous study (1999 Study) - This study showed King Rd. as the preferred North-South corridor. A few things have changed since 1999. The 1999 Study was not approved (particularly the North-South alternative). The agencies responsible (e.g. Niagara Escarpment Commission and Conservation Halton) did not approve that alternative and are against the types of improvements that were proposed. The interchange location was not approved by MTO. Another issue was the Aldershot GO train station.

C: There were 2 sets of criteria. The first were used to develop options that could satisfy the problem. The second group of criteria (referred to in presentation) were those that included all the components of the environment (as defined in the Environmental Assessment Act). These were used to assess the options and come up with a recommendation.

C: Are our political representatives looking after the interests of people living in the Niagara Escarpment area? To whose advantage is the development? We live in a world biosphere reserve. Our representatives are letting us down. Let's not destroy our area.

C: We challenge Councillor McCarthy's statement that the subdivision decision is set in stone. Governments change their mind at a whim - it doesn't mean the houses are going to be built. We are paying more taxes than anyone else in the area, but we don't get the services. Building houses out here will not revitalize the core of Hamilton. Why can't developers be given a tax break to clean up some of the brown fields in the city of Hamilton and build some condos? *The cabinet decision is not challengeable. The City challenged this development. We asked for controls to be implemented and took it to the Ontario Municipal Board but we lost. Cabinet made the decision. This is not what your representatives wanted, not what Flamborough wanted, not what your municipal councillor wanted either. It is easier to deal with the developments we have rather than with new developments.*

C: We know that we are going to get this development. We need economic development in the area, create more jobs here so that new residents are not going to work in Toronto. There is no public transit in Waterdown. What about a ferry from Waterdown to Toronto? You are assuming that 90% of the people who live in Waterdown are going to get on the 403. There has to be another option. I hardly use Highway 403. I always use King Rd. People are going to use King Rd. because it is a beautiful road to drive on.

Q: Are other transportation options being looked at? *We are not assuming that all of the people are going to get on the 403. There are a multiple number of routes in and out of Waterdown in all directions. We were emphasizing that for the demand that does want to go north and south, we provide that on Waterdown through an interchange. The traffic is dispersed. There are longer term plans for the widening of the 403 and the QEW. We have provided the increase in capacity to satisfy the increase in demand.*

C: There is growing anger among the electorate towards all levels of politicians. There is a need for East-West improvement and no need for North-South improvement. *Hamilton had nothing to do with the decision for development. There is no responsible way with which to appeal a cabinet decision. This is a local issue and cabinet will not reconsider. When this decision came up in 2001, Councillor McCarthy checked to see if there was an opportunity for challenging it. We have already appealed this to the Ontario Municipal Board and cabinet and we lost.*

C: With all of the recommendations that have been made by Hamilton, OPA NO. 28 should never have gone through. There was something wrong with the process. We should have every right to look at it and find out why it went through in the first place.

Q: The neighbours of Hunter Park put a petition together, and had it sent to the Study Team. Has the study team received it and read it? Can you tell us the location of Hunter Park? *The petition has been received at the City of Hamilton. When the study team went through the evaluations and route options the impacts to the Hunter Park area were taken into consideration. The area is the north side of Parkside Dr., in the center of our study area. It is a pocket of subdivision with an environmentally sensitive area.*

C: In the petition, we asked if the road can be located a minimum of 800 feet north of the survey. Do we have to redo this petition in order for you to identify this in your report? Are you aware of the proposal we made? *We looked at a range of routes that could go through that area. The option of 800 feet further north creates a lot of other impacts as well. We have looked at route options; there is some ability to move that road. The analysis that we have done so far puts it too far north for it to serve the function at the appropriate level of impact.*

C: Concern that the City does not have ESA information for all of Forest Creek and as such, the provincial impacts associated with crossing the Valley could not be determined.

Q: Has the City's Natural Heritage Planning staff completed the study of Forest Creek to determine the potential impacts on the environment? Has the City completed the study on the wetlands and woodlands of Forest Creek on the eastside of Center Rd? How can you show a road going through this area? *The Natural Heritage's work is on-going. We work very closely with our colleagues in the Planning and Development Department on these issues. The studies are complete; we do have good environmental information from the Planning Department as well as those from Conservation Halton, Hamilton Conservation Authority and the Niagara Escarpment Commission.*

C: It seems like your study is predicated on an interchange at Waterdown Rd. with the 403, I have a problem with OPA NO. 28. I have a problem with the way this was done at a cabinet level for approval. It should have been and is a local decision.

Q: What happens if the interchange at Waterdown Rd. doesn't occur? Will you put a hold on your current study if there isn't agreement on the interchange? What happens if an interchange isn't built (in terms of infiltration into Burlington)? Will you have to go back and look at your alternatives again? *This was a legal decision.*

Q: Did OPA No. 28 go through an Environmental Assessment? *No. OPA No. 28 went through the Planning Act process. Land use decisions are not subject to the Environmental Assessment Act.*

Q: Has the incident with OPA No. 28 ever happened before in Ontario (Where it has gone to cabinet and they have made this special decision)? *Yes, it is rare but it has happened before in Ontario. The Planning Act contains provisions that allow appeals of the OMB decision. The decision of the cabinet is final under the Act.*

Q: Why was OPA No. 28 an exceptional circumstance (where it had to go to this level of decision-making)? *Any OMB decision can be appealed. There were compelling and competing land owner interests as well as the interests of the Municipality.*

Q: What if the intersection of Highway 403 and Waterdown Rd. doesn't go ahead? *With regard to the 403-Waterdown interchange, the EA is approved. We made the assumption that improvements along Highway 6 would go forward, took into consideration long term plans for the widening of the 403 and the QEW. If those assumptions turn out to be wrong, there will have to be a re-evaluation of that.*

C: If those assumptions are incorrect, there is a potential that there will be some traffic impacts that people will have to live with. My concern is the traffic filtering into Burlington if the interchange doesn't happen.

Q: Concerns about the hydrogeology of the area. Has the potential impact of the wells going dry been considered? If this is the case, water and sewers will have to be moved to provide for those impacted? *That is a concern in the approval of OPA 28. There are sub-watershed studies being undertaken currently. One study is looking at the hydrogeology.*

Q: What is the time frame for the sub-watershed study? Will it be a public document? *The sub-watershed study is being led by the City of Hamilton Planning. It is not in the Planning Act, but it has to go through tests from the Conservation Authority and Ministry of Natural Resources. It will be available for public comment.*

C: There is a company that processes industrial waste by Parkside Dr. Part of the requirements to operate such a facility is to have access to a road north of their operation. Part of the purpose of these roads is to alleviate some of the congestion in the downtown core. With option 4 - commuters are going to use the path of least resistance.

Q: Are you aware of the company that processes industrial waste at an environmentally sensitive area? Are you aware of the requirement/provision? Have you taken that into consideration when making this decision? *If there is a requirement for us to accommodate that as part of the final design of the proposed road, those issues will be dealt with at the next level.*

C: I suggest that we "do nothing". Traffic can come up King Rd. and head north. The traffic will automatically go up King Rd. They can go straight up Highway #5. The traffic will eventually go this way. In that area, we have at least 5 families (who are senior citizens) - it will really impact those people.

C: Concern about the design on Mountain Brow Rd, and bending the road 90 degrees - there is a drop in elevation over short distance. Concern that this will be very dangerous (snow storms and accidents). If you go down further on Waterdown Rd. to Flat Rd. the road surface is sitting between 2 ESAs. I can't see how you are going to put 2 lanes in there. There is also a reservoir there - it is going to be expanded. The only way it can be expanded is to the east side of the reservoir. There are some bottlenecks there.

Q: Would there be any change to the width of the road from 4 lanes to 3? Or can it be left at 2? *If Waterdown Rd. is where we are going to make the improvements, all of the options will be considered. There is a whole range of options that would be possible. We are confident that we can achieve a design that meets current standards.*

C: Geometric improvements - how do you straighten/flatten a road like Waterdown Rd.? What about the speed limit? What about the people who live on the Waterdown Rd.?

C: We have heard that the existing roads are all over capacity and the new road networks are just a requirement. We do have morning and afternoon gridlock on Dundas St. I don't think 10% of the people are going to find alternate modes of transportation (bus, bike, ride-sharing). There are escalating smog levels, lack of services, rising taxes, etc.

Q: Have you identified the infrastructure requirements in your report? Should it not be fully funded and paid for before development begins? Why would we build 6500 new homes without looking at current problems? *Development should be supported by the infrastructure. Development should pay for itself. The infrastructure needs to be in place before the development takes place. There is a whole process that we are operating within. There is a Development Charges Act that*

speaks to how development is funded. The vast majority of this will be covered by development charges. We make our best efforts to time the construction of the roads to match the development levels.

C: But what you have given me in writing is that it is a requirement that we do the study that identifies the need for new roads. No one has told us that we have to act on this, just that the study has to be done. *The decisions that have been made have gone to cabinet. We are trying to come up with the best solution that is as locally acceptable as it can be.*

C: The roads should be paying for the services they require, the OPA 28 lands should be paying for the road improvements that they require.

C: The roads are not the only issue that we have. Development charges will not pay for the overall construction requirements. *The Development Charges Act identifies services that go beyond just roads. It does include community facilities, drainage, transit etc. The growth related costs should be paid for, that is the position we advocated to Council in 2004. There are services that are identified in the Development Charges by-law. We went through each service so that we made sure that growth related costs for all of those services were incorporated into our by-law under the Development Charges Act. The developers appealed our Development Charges by-law. They are charging too much for development that is why we didn't want this development. We are doing the best we can. I appreciate that you are concerned. This development is coming.*

Q: What mechanism is there exactly for them to pursue undue delay (to go ahead at the OMB level)? *They can make the argument that we are denying them the right that was granted in the cabinet decision.*

Q: If we state that we want to grow, but we want smart growth, we need schools for children. Is that seen as undue delay? *The schools are a responsibility of the school boards. That is not our responsibility.*

C: We want to grow, but we have to do it the right way. *Undue delay- The Ontario Planning Act allows anybody to make an application under the Act. There are timeframes where Council has to make a decision. The Act has changed to increase the timeframes. A developer can come in and file an application and then the OMB can make a decision without Council having dealt with that application. There are really firm timelines, the Board can make a decision without council - they have that right.*

Q: Density - why 6500 homes, why not 3,000 homes? How were the sizes of the housing lots decided? Why the high density? Why not reduce the impact? *When the OPA 28 was approved, the parameters were also approved within that.*

Q: Do you think that the preferred corridors are the best option? *Yes, however it was a difficult decision. There is going to be more traffic on Waterdown Rd. from the development. We have to improve Waterdown Rd. We have had discussions with Niagara Escarpment Commission and Conservation Halton around these issues. Both have expressed their support for this option. There*

are going to be impacts to property owners, but this is the right choice. We are not going to get the necessary regulatory approvals to undertake the King Rd. option. King Rd. has significant environmental impacts.

Q: What is the projected timeframe of this project? *We still have to complete the detailed design - this will be into 2006. Best estimate - beyond 2 years, or 5-7 years.*

C: This is a class EA - it should be bumped into a full EA - needs further in-depth investigation. Everything has to be on the table, agencies protect their own interests. *We looked at options that minimize impacts.*

C: I received no information or documentation to review until today. *We sent out invitations to the projects mailing list before the PICs. More detailed documentation will be available on the website. We will be releasing a draft report in the summer.*

Q: Will that report include the reasons why other routes were screened out? *Yes.*

C: The escarpment should remain an option, is big enough that it can afford to lose 80 feet.

Q: Can you notify us well in advance (of the summertime meetings)? Will we be able to reply to documents that are posted? *We will provide people with notice. We will not be holding meetings in the summer - we will be reconvening in the fall.*

C: This project will not impact me. I have watched this process take place. This is not about roads - it is about 6500 houses in this area with no regard to the children, or people who live in the area or the taxpayers. Only regard being taken is the builders. The only reason Waterdown Rd. is being selected is because it faces the GO station. People need to start political action against this.

6. NEXT STEPS

Sally Leppard thanked everyone for their participation and feedback at the public information centre on the Transportation Master Plan. She noted that the meeting was recorded and the information and advice from this meeting would be incorporated into a report to be circulated to all PIC participants.

Mary Lou Tanner expressed appreciation on behalf of the City of Hamilton and project team for the ideas and feedback provided by participants at this meeting.

APPENDIX A: AGENDA

Waterdown - Aldershot Transportation Master Plan Public Information Centre

April 20th 2005, 6:00 - 9:30 P.M.
LaSalle Park Pavilion, Burlington

April 21st 2005, 6:30 - 9:30 P.M.
Bohemian Banquet Centre, Waterdown

AGENDA

6:00 pm	**Open House and Review Displays**
7:00	**Introductions and Meeting Purpose** Sally Leppard, Moderator, Lura Consulting
7:05	**Presentation** Don McKinnon, Dillon Consulting Limited
7:20	**Comments and Questions** Participants & Moderator
8:55	**Next Steps**
9:00	**Adjourn**
9:05	**Open Discussion Forum**

APPENDIX B: DETAILED PARTICIPANT FEEDBACK (from written comments)

Question 1: Do you support the proposed preferred solutions?

YES	NO
11	34

i. If not, what are your major concerns?
ii. How would you like to see the proposed preferred solutions refined or changed?

- Concerns: the social impact on Waterdown Rd. and Mountain Brow Rd. Traffic backtracking through Waterdown. As this transportation plan is being developed for East Waterdown I believe King Rd. option would better serve this area, rather than bring traffic west. If Waterdown Rd. is only option there would still be increased traffic coming down Mountain Brow Rd. to King, which has not been addressed. East Waterdown residents getting on Eastbound GO would be more likely to go to the Burlington station. Not too many would be WB to Hamilton. Transit is a major issue, which has not been properly addressed.
- In our opinion, it is easier to move rocks on widening of King Rd. instead of forcing people off the Waterdown Rd. Build an additional GO station at King Rd. Please reconsider your proposals.
- In regards to the corridors for North end of Waterdown Rd. As a resident of Flanders Dr. I oppose any options that destroy the community of Flanders/Renwood/Rosecliff. I have a 9 month old and chose to raise him in this beautiful community. A four-lane highway would destroy the area as well as the habitat surrounding it which includes the Bruce Trail. I would like clarification about why King Rd. was not chosen as an option. At one point in this meeting (April 20th) it was stated it was due to technical/engineering issues. However, later on it was stated that it was because of the environmental impact. Which is it? I would argue that the impact on home owners outweighs the environmental impact.
- Look at the widening of Waterdown where there is not the same negative impact to residents (i.e. Geometric design) to minimize displacement/loss of homes.
- The rationale for not going up King Rd. (vs. Waterdown Rd.) is not logical. Environmentally, King Rd. sits on a dump and only affects three homes. There are as many deer (and other wild life) in the Waterdown Rd. area (and Mountain Brow Rd.) as in the King Rd. area. The environmental argument for not going up King is not strong. More homes are affected by Mountain Brow Rd. area than going up King Rd. King Rd. traffic will still increase and become a traffic hazard if traffic is encouraged to go up Waterdown/Mountain Brow Rd. GO transit station is not a strong argument. Traffic will be increased along N. Service Rd. regardless. Go up King Rd.
- Too low use of public transit (assumed 5% use of public transit). Especially N/S movement should force higher use of public transit. The $14 million cost of road sizing funds A LOT of heavily subsidized public N/S transit during peak times (commuter hours).

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- As was acknowledged at the meeting of April 20th, most traffic heading out Waterdown heads either East or West. Since it is proposed to direct traffic easterly (along Mountain Brow Rd. from Waterdown Rd.) anyway, from the proposed road coming South from Dundas St., why not head East on Mountain Brow Rd.. Then connect with a re-constructed King Rd., then West onto an improved North Service Rd. As was pointed out, King Rd. runs past a former dump, as well as an industrial subdivision. This proposal would minimize the social impact, which Dillon claimed was the highest priority, by avoiding any construction in front of the homes on Waterdown Rd. or Mountain Brow Rd. There is no need to reconstruct Waterdown Rd. /Mountain Brow Rd. as proposed. This option only benefits developers, ignoring the quality of life of all of the families currently enjoying living in the area. Among the attraction of living in the Waterdown Rd., Horning Rd., Mountain Brow Rd. area is the semi-rural character of the neighbourhood. For the most part, it's reasonably quiet; there are wonderful places to explore with kids or pets. We also enjoy terrific neighbours. All this would be destroyed if Waterdown Rd. is re-constructed. I urge you, please reconsider.
- I have lived here since 1964. I have been very happy here now. I'm very upset at what's going to happen to this special place, I suppose you call this progress! I have a plaque from Burlington to be a keeper of the Carrolmans Woods which I have done faithfully, fed and looked after the animals and the land. I'm so sad that these animals will be killed as they cross the road and they won't have a chance with a four-lane highway. I'm so sad my happiness will end for development and greed.
- No, the consultant who was asked about whether the road through Smokey Hollow would remain as is seems very vague as if this possibility had not been deemed important. This road section provides immediate west and north access to Mill St. to Parkside Dr., as well as easy access to Main St. to Parkside Dr. and, most importantly, Hamilton St. to Centre Rd. and points north (it also provides quick access to Main St. S and Snake Rd.). I believe this is a most important piece, since your proposed plan takes the traffic east along Mountain Brow Rd. and spears to dead end at Dundas St. I know Smokey Hollow cannot be widened but it must remain a vital part of the solution.
- Yes, only because it has the least environmental impact on the Niagara escarpment. In either proposed Waterdown South solutions our Bruce Trail, the longest. Oldest continuous trail in Ontario, built and maintained by volunteers will be severed by a four land road. Safety of our hikers and the many local residents using our trail is of prime importance and that is our major concern, not only for the immediate times but for the future after the 10,000 homes are built.
- Traffic lights at any pedestrian crossing of Mountain Brow Rd. or Waterdown Rd. must be specified to ensure the safety of all users.
- Yes, I believe that your presentations were excellent however it would appear that the people at the meting had one track mind like change to the problem over to King Rd., however that as you pointed out does not make sense environmentally and economically. I live in Aldershot and we have business that we operate out of Howard

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Rd. which sells wholesale Auto care products such as lifetime warranted rust inhibitor, undercoating products, polishes, car washes etc. We wholesale mainly to Daimler Chrysler dealers as well as most of the other top motor dealers. The most important access to 403 is the east bound access at Waterdown Rd. going east towards Toronto and then to Niagara. At present truck and auto traffic is funneled onto Plains Rd. and this causes extra traffic going east then to access at Brant and 403.

- I do not support the two new interchanges that will be created on Highway #5 as a result of the EW and NS routes because there will be a greater impact to existing residents regarding 2 extra bottlenecks on Highway #5 instead of a possible one. I would suggest that in order to minimize impacts of the two interchanges that they be joined; the EW to the NS one at the location where the EW access meets Highway #5. The NS route should continue south from this point in order to minimize congestion/traffic problems on Highway #5.
- I feel the assumption that King Rd. would not be utilized until Waterdown Rd. is at capacity is flawed. Widening Waterdown Rd. will lead to increased traffic flow on Mill St. S. which will ultimately require the widening of Mill St. and the destruction of Smokey Hollow and several historic buildings. The proposed route North of Mountain Brow Rd. to Highway #5 will dump traffic on Highway #5 and require travelers to turn West on Highway #5 or East to join up with the proposed EW bypass.
- At the moment, I have trouble crossing two lanes of traffic to get my mail as the cars, trucks, etc come down from Waterdown too fast. I don't think I can come out of my driveway, cross two lanes of fast traffic to make a left-hand turn to go to Plains Rd. I propose a service road on my side from Flatt Rd. up. This way we would have a chance getting into traffic. I'm sure this road will end up having lots of accidents especially in the winter. Another thought have you ever considered taking the road through the dump down to the North Service Rd.? This way people on Waterdown Rd. can keep their homes. I'm sure there's been lots of crying over this decision you've made. Their lives are turned upside down.
- Why is King Rd. not being widened to 4 lanes as a back up?
- Is there going to be a proper 403 exchange at Waterdown Rd.?
- How do you improve a non-existent public transit?
- Is there going to be an exchange for people in Brachead subdivision to alleviate this traffic from Parkside Dr.?
- What population density does an area need to have before it has public transit? Waterdown is now at 20,000. In the future, near 40,000 surely would qualify. Some small cities of less than 100,000 have their own public transit system.
- Waterdown Rd. is too winding and the bend at Smokey Hollow makes it impassable during a snow storm. How will this be improved?
- Spoils beauty of this area. Development not wanted - too much too fast. There is no good solution. The real problem is development imposed on local residents. Who benefits? Not the taxpayers.
- When is the EA expected to be completed and what is timing for expropriation and construction?

i. If not, what are your major concerns?
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- What is the function of the road? What is the volume of traffic anticipated? Is the road a 2-lane or 4-land road? What is the anticipated width of the r-o-w? Are residential driveways permitted access to the proposed road?
- If other municipalities are benefiting/using this road, they should contribute towards cost. Is the development charge area specific? Is $17 million in Hamilton D. C. sufficient? Have costs also been included in Burlington Development Charge? Is there a need for the road without development? What if no development occurs, who will use the proposed roads?
- Would there be a land use comparability problem with EW route through Waterdown North? Environmental preservation should not be valued higher than future residents.
- The proposed EW route should not connect to Highway 6. It will function to funnel traffic from the North through Waterdown. Should hug West limit of Waterdown North and go south to connect to Parkside Dr. What is % of traffic outside Waterdown expected on the EW section shown in transportation model?
- Have improvements to Concession 5 to Guelph Line for the EW route been evaluated and considered, rather than a new road? Can the proposed transportation alternatives be phased out during implementation?
- My major concern is the need to integrate the NS EW routes. It would appear that extending the Mountain Brow Rd. widening further East so it can continue North directly to the EW route would render the smoothest movement of traffic.
- Major concerns: destruction of environment at Mountain Brow Rd., Waterdown Rd., Parkside Dr., new EW corridor. NS corridor southbound Brant St. Leave Waterdown as is, 'improvement' will only bring increased traffic.
- Development of Waterdown Rd. is NOT an acceptable option! Widen King Rd. to 4 lanes. Head North all the way to Highway #5. Waterdown Rd. is too residential and Smokey Hollow is too sensitive for this development.
- In a few years, it will not be enough. Why ignore Millgrove Side Rd. to Highway 6. There is a traffic light there and can connect to Highway 6, the concession to Centre Rd. and beyond - it erases Highway 6 at this point. The fifth concession is too crowded at present - needs widening - so does Centre Rd. High school on 5th also Y and Gym. 6th Concession continues on past Robson Rd. On the 4th Concession West you have the end of Beverly Swamp. It, at present, has water back up - with no outlet. This happens every spring routinely. They have allowed backfill on the 4th to allow building. The east side of Millgrove Side Rd. is not used intensively for agriculture. There is an abandoned apple orchard that does absolutely nothing for the environment. Old dead trees - diseased, etc. should be removed Waterdown Rd. too populated. King Rd. better by far. GO train station on Waterdown Rd. - Waterdown Rd. could be improved to help traffic.
- I do not believe that the proposal to widen Waterdown Rd. is the way to go. The terrain and the existing development will fare too much disruption and desecration. If you do go ahead with the proposal, where will you put the traffic once it gets to #5? #5 is now at capacity. The road through Waterdown does not lend itself

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to widening - the "North of Waterdown route" cannot use existing roads, it must be a new corridor. It should not have any intersections or enhances or exits except at Centre Rd. and at each end. We need an alternate route around Waterdown just to accommodate current traffic. Additional development will only put further pressure on the existing roads to handle the added traffic. Cannot be easily built because of the restriction brought about by the existing development and the environment. As I understand we had a proposal ready to be implemented 4.5 years ago that would have put a NS road from 403, west of King Rd. East of Waterdown Rd. that would have gone North to #5, in the area of Evans Rd. and Kerns Rd., and then would continue North to North of Parkside Dr., then West to the vicinity of #6. What happened to this? Why was it scuttled? There is no denying that we need roads to accommodate future development. But let's be realistic. The present road system is at capacity and we immediately need through capacity from east of Waterdown to west of Clappison's Corner -basically a 'Waterdown Bypass" for Highway #5. Let's deal with the current problems before we address the needs of the future - let's be practical.

- Obviously the NS route of Waterdown Rd. makes the most sense re: cost, environmental concerns, space, etc. However, my objections start after Old Waterdown Rd. The proposed plan to take it to Mountain Brow Rd. at almost an 80 degree angle shows you those planners have NEVER lived here! This intersection has so many accidents because of weather and the hill. Safety concerns and the fact nobody goes 60 km on Mountain Brow Rd. should definitely being the proposed widening at a gentle slope way south of Mountain Bro (shown as one of your options). Only a tiny environmental area is concerned. We will fight!
- Living on Griffin St. (one block long) between Main and Mill one block south of Dundas St. We already are inundated with traffic as a short-cut avoiding traffic light at Dundas St. and Mill St. The Attridge Bus Parking Lot is on Mill St. South just before Dundas St. We have a problem every Thursday morning with buses lining up to be washed blocking traffic and spreading fumes. Traffic is also a problem because an arrow pointing to a left-turn to Dundas St. is located approximately 10 feet from our corner. We have had huge trucks unfamiliar with Waterdown thinking our street is the way to Dundas St., having difficulty turning around. If there is a cut off from this highway to upper Waterdown Rd. it will cause more traffic on a one-block street.
- In the North extension of Waterdown Rd. would it not make sense to extend it to link in the new EW route? Where the Northern extend of Waterdown Rd. is shown it looks like there are a number of alignment options, the one with the greatest room for future expansion should be chosen as this expansion of Waterdown Rd. to 4 lanes is just the first of many expansions as the area grows further.
- No, Dundas St. will expand to 6 lanes through Brant St. and Kerns Rd.
- The base recommendation should include 6 lanes through the intersections going North/South in Waterdown.
- The East/West corridors should not end at Hwy #6 it should go beyond to link back to Dundas St. Otherwise the bypass flow will not be smooth enough to keep flow from going directly through the centre of town.
- Maybe this component is not a cost to be paid by developers.

i. If not, what are your major concerns?
ii. How would you like to see the proposed preferred solutions refined or changed?

- The Waterdown Rd. situation works except for the sharp turn at Mountain Brow Rd. Considering the savings to use this route the turn should be taken to the South as one of your alternative - this should be the base recommendation even it id costs more or has a higher environmental impact.
- During the Phase 3 step of the EA process, we request the City to review the merits of providing a "T" intersection at Parkside Dr. as opposed to a "curved" road exiting the Upcountry Estate lands and merging with Parkside Dr. Upcountry Estates is anxious to work with the City to refine the preferred alternative in this regard.
- King Rd. is being used to a large extent to bypass the 403 Aldershot exchange. The morning and evening volume is growing quickly. The route should at least be upgraded to prevent serious accidents that will occur otherwise.
- I am going to comment only on the proposed North-South route. I feel that where it connects to Hwy. 5 should be further east from the proposed. I feel that it should connect at the same point where the proposed E/W bypass will join onto Hwy #5.
- Environmentally, I think it will have a profound impact going along Mountain Brow Rd. but really what other option is there.
- As we will be very much affected especially at our Parkside Farm we have many questions:
    1) Will this be a major express road?
    2) Will it access to our farm?
    3) Will it have access to Robson Place?
    4) We presently use Parkside Dr. with farm tractors, wagons.
- As we are improving, building etc. the sooner we know more details the better.
- Affects too many long time homeowners on Waterdown Rd. (social environmental - 32 rating).
- Affects too much wildlife including a major deer crossing corridor (natural environment - 27 rating).
- Negatively affects the safety of residents and their children, have a major 4 lanes thorough fare through the middle of an old, established residential neighbourhood.
- Most traffic is heading to Burlington and GTA therefore the most westerly route is not necessary.
- King Rd. route is a better choice. To minimize many effects.
- A 4-lane King Rd. from Dundas St. to the North Service Rd. east to Brant St. interchange and west to Waterdown Rd. interchange would have less negative effect and have a positive effect of distributing traffic flow eat and west to points of destination in those directions so that traffic density is a alleviated from that juncture (Kerns Rd./Service Rd.) on.
- The proposed preferred solutions as a result of the evaluation process for the Waterdown/Aldershot Transportation Master Plan prove that there is no viable solution for proper North-South access to facilitate the volume of traffic expected as a result of the proposed location of development's Waterdown South and the

i. If not, what are your major concerns?
ii. How would you like to see the proposed preferred solutions refined or changed?

Uplands/

- The major concerns of the proposed preferred solutions have been recognize through the evaluation and only conclude that the proposed location of the development's Waterdown South and the Uplands are not viable. The disadvantages of these locations not only far exceed any advantages, but also are incontestable unacceptable: 1) the residents that will loose their homes, or worse, suffer exorbitant loss of property value and be left having to reside on a highway; 2) the expenses of planning, designing/engineering, building, maintaining, and buying the properties for a sister Highway 6; 3) the unmanageable increase of traffic on and around Dundas St.; and 4) the destruction of the area's natural environment.
- Additional concerns that are not directly addressed through he evaluation or that are indirectly associated with the proposed preferred solutions but also, directly and detrimentally affect the quality of life for the people of Waterdown: 1) the destruction of this historic town, its character and charm, its wildlife and natural environment; 2) non-stop noise and air pollution during and as a result of ten years of continuous construction and increasing population density; 3) the loss of loyal, tax paying residents of Waterdown and Aldershot; 4) the increased traffic noise and emissions pollution; 5) the increased traffic accidents and fatalities; 6) the future impact on the remains of Waterdown i.e. further development and more expropriation and destruction of property to support that.
- The proposed solutions are not solutions, changing the locations for the proposed developments: Waterdown South and the Uplands is the unmistakable solution.
- I am pleased that Kerns Rd. is no longer on the preferred list nor on the candidate list.
- I still would like to see the Official Plan Policies etc. preclude any internal neighbourhood connection to Kerns Rd. I will also continue to encourage Burlington to install traffic calming along Kerns Rd. as part of the park development.
- Bring a member of the Niagara Parks and Bruce Trail, I would also like to see policies on larger (wider) barriers along the escarpment and preservation of wood lots.
- Simply place yourself living on the South/West corner of Parkside Drive and the CP rail line. With the Grindstone Creek splitting into two as it passes through our beautifully treed 8 are parcel of natures EDEN. This valley is an animal paradise. Please don't have the cars' headlights shine to or at the front of the house.
- The widening of Waterdown Road and Mountain Brow Road to a FOUR-LANE highway is only moving heavy traffic from Hwy 5 to what is now a purely residential area - thus impinging on the quality of life of many hundreds of people, many of whom have lived here for 40 years and now seniors hoping to reside in their present homes. This decision does not provide for this.

- I believe that King Road, while maybe more difficult to build, is a better alternative. There aren't any families to disturb and there is less of a safety factor for children. There are many children living on Waterdown Road;

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this enlarged 'highway' will be very dangerous. I have concerns for the grade or ramp turning onto Mountain Brow at Waterdown Road. My son and granddaughter live on the corner and every year there are one or two cars who do not make the turn and end up crashing through the trees on city property to end up in my son's side yard. Thankfully, this usually happens in the middle of the night! Increasing traffic load to four lanes feeding onto Mountain Brow Road would allow transport trucks, and trailers to use Waterdown Road because they then wouldn't have the problem of the railroad bridge. Will you guarantee a weight-restriction just as we have now?

- Changing a scenic and rural meandering road between ravines and environmentally sensitive areas to a four lane speedway down the escarpment will endanger both human lives and wildlife, e.g. deer, fox, coyote, crane and hawk
- Hamiton and Halton watershed - water table and runoff changes to Grindstone Creek
- MTO has not and may not approve the interchange at Waterdown Road - why route traffic there
- No answers seem available to immediate problems of road widening - ravines (filled on bridges) - streams - land requirements - homes - 3 wildlife corridors - the cost of above - and tax increases
- A need for an East-West road or 'bypass' has been identified for at least 40 years now. Until recently the area for the proposed route has never included the area along Parkside. In fact, the last study conducted by Stantec concluded that using Parkside was not the best option. Why all of a sudden is any stretch of Parkside being considered for this new road? Are you looking after the requests of a couple of 'special' interest groups at the expense of the community? Using part of Parkside for this new route is not viable for the following reasons: 1. there are many safety concerns as there are a lot of driveways over this stretch of road, there are railway tracks with an entranceway for heavy trucks adjacent to the tracks 2. Parkside is used for recreational purposes 3. Arrow on natural area (east of the tracks) attracts a lot of pedestrian traffic. 4. The preferred route cuts through the core of the village, adjacent to heavily populated areas. The preferred route will destroy the character of the surrounding neighbourhoods and divide the town. 5. Very little can be done to lessen the impact in this area due to the fact that when it was developed it was NOT planned for such a roadway 6. However, if the road is build north of Parkside at least there will be an opportunity to design it in a way that would not only be more effective but would minimize social impacts 7. as commuters generally choose the most direct route they will 'bypass' the bypass and continue to travel along Parkside which will create a bottleneck effect and additional safety and congestion concerns in the core of the village
- New residents in Waterdown are more likely to access the new proposed highway from Fort Erie to Burlington then go South to the already congested Aldershot Burlington area
- We would like to fix the problems in Waterdown, rather than starts something new. Especially not build 6,500 new homes before we have schools and roads.

i. If not, what are your major concerns?
ii. How would you like to see the proposed preferred solutions refined or changed?

- We are not in favour of widening Waterdown Road. Let's look at King Road once more for a possible solution, or alternate solutions.
- Why do we have to accept a decision that 6,500 homes be built in this area? Are we here to protect developers, or are we making decisions that benefit the citizens? Enough of a protest on our part can surely reverse a decision, especially since the environment also needs to be protected.
- The proposed preferred solutions are the least of the evils. I would prefer to see the East-West route moved further north and the connection to Highway 5 moved further to the East past Evans Road. I have no advice on the Waterdown North route.
- Extend option 2 from map pg. 29 across Parkside to part of Option 1 nicely drawn on 'Alternative Road Alignments and Environmental Constraints'. This would provide a new Northern entrance to Opta minerals and remove all the ill-placed large volume large-size truck traffic that is a safety issue for the entire centre of the town. Parkside should be more for people not traffic!
- Leave Waterdown Road and Mountain Brow Road as is and make whatever changes necessary to make King road a viable bypass. Also could turn out to be a scenic road.
- The upgrading of King Road may be costly, but not impossible. This is 2005, and more difficult roads were built in the past and now with facilities and equipment now available, this could be very possible
- We were told cost was not a factor, therefore spend what is necessary to make this road viable. The disruption of people will be minimal.
- Using a part of the escarpment will be little and should not destroy it, as compared to the destruction of Waterdown Road and Mountain Brow Road.
- Signs could be set at strategic points directing traffic to the west via Waterdown Road and traffic to the east via King Road
- This road will eliminate a lot of pollution - air, car, noise, etc. which will be caused by the increasing of the population by over 10,000 people - and leave a residential area as a residential area and not a FOUR LANE highway
- Today, Monday, May 9, 2005, I had occasion to go to Waterdown at 8:15 a.m. and again at 1:30 p.m. Waiting at Mill Street to cross Dundas Street, which was probably about 2 minutes, I encountered at least three or more large transport trucks going in both directions.
- This so called bypass, which will really become a major four lane highway, will divert this No. 5 highway (Dundas Street) traffic to what is now a residential road. What is to be gained? Except disrupting the lives of many home owners who have taken pride to the homes and now find it has been for naught.
- No one outlined how traffic going south on Waterdown Road wanting to turn left on Mountain Brow will be handled. This would be an across-traffic turn. Will there be a modified clover leaf? Will you take more houses and upset more people?!

i. If not, what are your major concerns?
ii. How would you like to see the proposed preferred solutions refined or changed?

- We would like to see King Road be reconsidered as the preferred option as was recommended in the 1990's study
- The only alternative is not to include Parkside in this new road. The road should be entirely north of Parkside as originally intended
- Not only does this make sense but it is also one of the requirements within the environmental company's (formerly BEI) certificate of approval to operate such a facility (issued for the Ministry of Environment)
- I find it ironic that 'environmental' concern were addressed for extending the road continuously north of Parkside and yet there is a company that stores and processes tons of industrial hazardous and non-hazardous waste on a 32acre facility right in the middle of the ?
- I would definitely oppose a widening of Parkside Drive. There are too many driveways accessing it. It is already too busy for residential direct access. Noise levels and danger to children at the park and high school are already very high. It will not take the volume of traffic needed.

Question 2:

Are there any additional opportunities and/or recommendations you would like the team to consider?

- A King Rd. primary with some improvements to Waterdown Rd. It is assumed full interchange will be built at Waterdown Rd. This has not yet been approved by MTO. While they (MTO) recognize the study findings, they still have final say based on other Highway improvements and may not agree with City/consultants.
- New subdivision proposed for Waterdown Rd. includes provision of a school. Is it feasible to build a school on a 4-lane highway? Will the safety/health of the children be considered? Also, there will be a speed impact on the N/S corridor (i.e. School zone)
- re: expropriation and fair market value before roads eroded the value: will need to consider noise pollution and increased traffic; cost for sound barriers; cost to improve landscape architecture when the trees are killed after digging for lines for infrastructure
- Impediment to our sleep cycle because of increased noise pollution. Aesthetic deterioration and compensation for this.
- Go up King Rd. You indicated people and environment are the most important criteria but the Waterdown Rd. option is a least costly option. Therefore, it has come down to a cost issue. This does not make sense and you are not following the criteria you set.
- On the N/S corridor - suggest installing traffic light with built-in speed monitoring on N/S corridor. If traffic speeds, the traffic lights automatically turn red. There is a posted sign warning drivers of such. (Used around USA and residential Virginia - it works!)

Are there any additional opportunities and/or recommendations you would like the team to consider?

- If some creative solutions to the King Rd. access could be arrived at, I prefer the option which left both Waterdown Rd. and King Rd. as 2 lanes with geometric changes. I have heard suggestion of 1) making use of the dump lands; 2) bringing the final road allowance through Paletta Lands neat Highway 5; 3) eventually liking up at Upper Kerns Rd.; or 4) making a Sydenham Rd. type access to the top.
- Yes, consider the best method possible for ensuring the safety of hikers, seniors, and children crossing Mountain Brow Rd. on the trail. Across walk, a flashing yellow light, large hiker crossing signs, and a safety island are all required. Please include these in your detailed plans.
- Also any bike routes or trails must be separate from the Bruce Trail which is for pedestrians only.
- Cancel the Waterdown South Development unless an acceptable alternative is identified.
- Introduce shuttle service from Waterdown to GO terminal in Aldershot. There is no public transportation from Waterdown to either Hamilton of Burlington. Flamborough is the only part of 'Hamilton' that has no public transportation.
- 5% increase in public transit. Seek to increase transit use by 50%
- Not sure if you looked at this yet. The Bruce Trail - Mountain Brow Side Trail runs along top of bank of Red Hill Creek Valley. There will be a connection to the upper portion of the east escarpment stairs up from the Rail Trail. An adequate buffer should be provided for if this portion of Mountain Brow Rd. is to be widened to 4 lanes.
- Consider King Rd. and the fewer number of houses, and 'social impacts' of that option.
- I am concerned about how the Mountain Brow Rd. expansion might affect safety and access to the Bruce Trail. Consideration should be given to making this route safe for hikers/cyclists.
- Look for another suggestion. Think future development. Big rigs and trucks now use Millgrove Side Rd. for Dundas St. to Highway 6. They avoid Clappison's this way.
- No
- Will Mill St. be closed? (From Mountain Brow Rd. to Dundas St.) If not, how will this 2 lane handle traffic off a 4-lane? Option #2 NS picks a 4-lane Waterdown Rd. How will air and noise pollution be accounted for and mitigated, especially since this new thoroughfare will turn into a truck corridor from Dundas St. to new 403 interchange? Also, how will this increase ease of car movement help us reduce our CO2 in accordance with Kyoto protocols? Simply put, we are making it easier to drive a car from Dundas St to 403 interchange, this only increases car use and subsequently CO2 emissions. Will the ESA areas on the south side of Mountain Brow Rd. be encroached upon by the proposed 26 - 36 4-lane road? If so, will Waterdown (City of Hamilton) be compensated for losing a piece of land that can never be replaced? How ill we address increased truck traffic that will result form option #2 NS; as this new route will be a faster, quicker and more efficient route for trucks coming North or South from Dundas St. to the 403. The proposed option #4 EW only adds more time and fuel costs to the truck drivers plate and therefore, instead of going up and over Waterdown using option #4 EW to Highway #6, trucks will use option #2 NS to go south to 403.
- Safety in planning - the Department has no idea what residents face with the weather, sliding through the stop

Are there any additional opportunities and/or recommendations you would like the team to consider?

sign in black ice, etc. Many accidents will be avoided by my proposed option.

- Block off Griffin St. at Mill St. Move Dundas St. sign up past Griffin St. (north of Griffin).
- Why no option of an LRT or similar with the expansion of Waterdown Rd. to get to/from Aldershot GO? Same for the EW route with a hub at the intersection point of the EW and NS new corridors.
- No, options appear to be good in terms of cost and impact.
- There have been numerous comments about "do nothing" in Waterdown ad many more about the need for a bypass around Waterdown. Although this EA effort is looking carefully at the OPA28 issues, more consideration needs to be given to the expansion (now & future) around Waterdown. I suggest bringing 6 lanes into the east side of Waterdown on Dundas St. and taking 4 lanes E/W north of Parkside Dr. NOW.
- Extra cost beyond OPA 28 development charges should be born by Hamilton tax payers. This is the cost pf preserving the core of Waterdown while our surroundings develop. Note that the most direct route E/W is through downtown. This will always be the case unless the bypass routes flow smoothly.
- What happens at the Mountain Brow Rd. and the Aldershot interchange? Your charts ignore the road connection. The elimination of a connection both North from Aldershot and west from Mountain Brow Rd. will be a huge inconvenience for people on Mountain Brow Rd. and Flanders Dr. etc. Also not good for Waterdown ambulance and fire connections.
- How will the watershed issue be addressed in Waterdown South?
- What will the bypass look like (4 lanes, speed limit, stoplights, stop signs, etc)?
- I would propose the speed limit to be 50km/hour with stoplights vs. stop signs, people do not always stop at stop signs.
- Will transport trucks be allowed to use the bypass, I propose that they not be allowed to use them.
- Has Concession 5 been considered? Our feeling is that Dundas St. should be widened to 4 lanes through the village, although to a popular alternative. Even historical buildings can be moved. Perhaps less expensive.
- The results of the evaluation for the Waterdown/Aldershot Transportation Master Plan conclude that the location of the Waterdown South and the Uplands developments must be re-evaluated and that a different location(s) must be selected.
- Utilize what already exists. Highways 403, 401, and Highway 6 already exist. They have been planned, engineered, built, and paid for. Highway 6 is slated to have improvements to both the interchange at the 403 and Plains Rd. and at Clappison's Corners, and could easily be improved upon further if or when required.
- The Waterdown South and Uplands developments should be located near Clappison's Corners: west of Hwy 6, north of Hwy 5, where there IS the space, road access, and amenities.

Are there any additional opportunities and/or recommendations you would like the team to consider?

- The residents of the future developments will be in ideal proximity to the two future Big-Box shopping malls, the recreation park, the Business Park, and schools. People can travel into and out of the area easily via the existing Hwy 6, north and south. South on Hwy 6 they will have access to the 403, East or West bound, and from there, they can easily cut off to get to the GO station if the choose. North on Hwy 6, they will have access to the 401 both east and west bound. Further still on Hwy 6, Guelph through Tobermory. They can travel to and from any direction from this location, without having to travel right through the heart of Waterdown to facilitate their commute. Furthermore, they will spend their shopping dollars in Waterdown, whereas, if they commute to and from the east side of Waterdown, they will not be inclined to travel through Waterdown, at rush hour to get to the Big-Box malls on the west side of town to get dinner and back through Waterdown to get home, rather, they will stop in the City or Town that they are commuting from or passing through on their way home.
- This is a practical location for both the future residents of the new developments and the future big-box malls. And is also practical for the residents and businesses of Waterdown as they exist today. The North-South road issue in the East end of Waterdown, which has no workable solution, becomes non-existent. This solution works for everyone's agenda: 1) Land developers/OPA 28 is satisfied; 2) New residents *will* spend their disposable income in Waterdown; 3) existing, tax paying residents on Waterdown Rd. can satisfy and/or not suffer exorbitant property value losses and will not have to live on a highway; 4) Dundas St. residents on or close to it will not be impacted with unrealistic traffic demands, noise and pollution; and 5) an improved Highway 6 delivers on right in the middle of the RBG satisfying Aldershot's desire to enhance tourism in that area.
- A solution to the CP train 'whistle' at Parkside Drive caused by the very large trucks and the poorly designed entrance to Opta Minerals at 407 Parkside Drive
- If the new route starts at the NW corner of Parkside and CP and tracks make the West side of Parkside a dead end. Reduce the grade across the creek to reduce engine exhaust especially bad for the health on a cold day in winter from truck traffic while shoveling snow
- NO WORK on any of the developments in Waterdown commence until funds required for roads, schools, recreational facilities, etc. are in the HANDS OF THE CITY, ETC.
- Our taxes in this area are substantial and we are not prepared to have to carry a greater burden to subsidize these facilities.
- As Councillor Margaret McCarthy said "one way or another it's going to happen." It's pretty easy to see that these people planning this widening of Waterdown Road don't live near it! Its amalgamation all over again!
- with King Road as an option an access road from King Road to the GO station north of the tracks would be a common sense solution
- King Road for decades was home to the city dump surely now it can not have achieved this much importance in preservation

Are there any additional opportunities and/or recommendations you would like the team to consider?

- our feeling is that we need to fix Waterdown's transportation problems and deny any further development until the situation is fixed
- As a guest at the latest Waterdown-Aldershot Transportation Master Plans Meeting, at the Bohemian Banquet Centre in Waterdown, I was greatly impressed first of all by the number of guests present, secondly by the clear presentation by the host panel and certainly by the very intelligent and informed inquiries put forth by the guests. The presentation by the host panel as I have mentioned was very clear but, ala, not very concise. I realize that at this time the particulars of the 'location' of these roadway could not be established as most of the people would have liked. Even as thorough as the presentation was, it left me with the feeling that this Transportation Plan was just a 'Red Herring'. The costs of the Transportation Master Plan seem astronomical compared to the assumed results of its forecasted solutions as mentioned by some of the speaker (i.e. ground water viability, routing of additional traffic lanes, environmental impact on fragile areas). At the beginning of the slide presentation the proposal numbers 1 to 4 were shown on the screen. One of the guest (floor mic) speakers said that she would recommend that proposal no. 1 be used. This was the one that proposed 'do nothing'. If you recall when this was proposed by the speaker, a unanimous approval was signified by the guests, thus spawning this collection of thoughts and ideas. The real problem facing these people was barely touched on at the beginning of the meeting. This being the Ontario government's so-called 'Community Development Areas Designation' (this still isn't clear to most of us). If this designation was the first in a series of steps towards community development it seems clear that at this time the problems of transportation corridors should have been looked at. It seems obvious from the maps and charts on that the locations of the development areas that developers have chosen, are the best areas in regards to 'workability' of the geography of the lands, as well as obvious closeness to the community core (lucky eh! To be at such a convenient location). It probably took a very short time and a minimum of lobbying to have these areas cleared as development locations, obviously forgetting the impact of transportation routing. I am not saying that these zoning acts were not made public, which I am sure they were. It's probably because at the time most of the good farm land was being quietly lost to 'yuppie' ownership (with no intentions of farming) which made it very difficult for the farmers in the area to be able to say no to the outlandish offers made for their land, and so the zoning probably wasn't all that noticeable and to some people quite welcome. Whatever happened to the 'Green Belt' Designation? From the reaction shown by the guests it would seem that some effort should be made in an attempt to reverse or 'freeze' the present zoning category of these proposed development proprieties to 'agricultural'. It seems that the rural population have become tired of this oppressed feeling living under the constantly present 'development cloud'. One of the speakers brought up a fairly significant subject regarding the fact that more emphasis should be placed on where the population works. We all know that a large portion of 'Waterdownites' work in or around Toronto if more people could find employment closer to our area it would seem logical to reduce the required time on the arteries in question. These development areas are no more than a 'lure' to Torontonians because of what they think is merely a short hop to work without realizing that with the forecasted cost of fuels this 'short

Are there any additional opportunities and/or recommendations you would like the team to consider?

hop' won't seem quite as short. As an afterthought: After a close look at the aerial photos in question it seemed to me that the talk about the 'Global Warming Effect' apparently brought on by the auto emissions (the burning of fossil fuels) and the promotion of ethanol fuels the new vacant farm land in this area could be brought to better use than being 'up for grabs' by developers. In southwestern Ontario at this time an 'Ethanol plant' has been built and by the introduction of only 10% addition of ethanol to standard gasoline this plant cannot keep up with the demand and, as a matter of fact, was too small the day it was completed. Other plants are now being planned for the Brantford area. What this means is that most of the farmers in these areas now have a pretty well guaranteed income of some level for their corn crops (the corn would become a 'hybrid' strand that wouldn't be available for animal or human consumption and so open the doors for experimental 'super' kernels). And so most of the vacant and unused farmlands that have shown up on the aforementioned aerial photos could consequently be brought back to productive use and therefore making crop farming in the area a viable occupation (government incentives could probably be easily introduced). This would be our small part in the battle against Global Warming. The scenario mentioned above could quite nicely fit into the answers that the people at the Transportation Master Plan Meeting are after. With this possible answer to their problems this Community Council could present the owners of the proposed development areas and the respective parties of the Ontario Government with a certificate stating - "Congratulations to Mr. Pallets, Mr. East Waterdown Holdings or Mr. North Waterdown Holdings - You are the proud owners of 23 acres of viable farmland". Realizing that the points made in this letter are somewhat favourable to this writer, I sincerely think that along with a lot of other people this could be one workable solutions to the adverse conceptions to the present "Waterdown-Aldershot Transportation Master Plan". Aside from the probably not too eloquent writing form, this letter has been written in all honesty, seriousness and hopefully one voice of many in favour of Proposal No. 1.

Question 3:

Additional Comments

- Whichever option is chosen it will attract truck traffic up to Highway 5/Dundas St. I am concerned about putting this through residential areas. There are frequent highway closures and interchange will encourage traffic off highway and up to 5 or through Aldershot.
- We have received notification of an OMB hearing re: this proposal on May 12/05
- How will the Mountain Brow Rd mitigate the ESA lands on the south side?
- How will increased air pollution and noise pollution be mitigated?
- how will this NOT be turned into a semi-truck corridor from Highway 5 to the Waterdown Rd./403 intersection/on ramp
- How will the increased pollution of an auto centric proposal like this accommodate Kyoto protocols?
- I would appreciate a response to my comments/concerns by email.
- We would like to have our land surveyed to find out exactly how much of our land on the corner would be expropriated. There may be options, i.e. take our house to preserve the people across the street or explore other options. Straight roads increase volume of speeders.
- Like that Smokey Hollow not being destroyed by this 'road improvement' project.
- I was pleased that at this meeting more attention was paid to public transportation instead of saying "well we tired it once for a couple of week"!! Everyone who decides to live up here knows that, right now, they must have two cars, at least, in their family. A short term test without input will not change patterns. Think it through; make it common sense and easy to use predictable and frequent public transit.
- Mitigation is the key to resolution of any environmental impacts. The more trees and other plantings you can use to muffle this 4 lanes monster, the more people will be willing to accept the new rebuilt and wider roadways.
- The issue of traffic must be dealt with now, I agree that if this is delayed it will only get worse later.
- Cannot understand how OPA 28 was approved. Poor planning. How can new development be approved when we can't support existing developments?
- We would appreciate your response to these questions. Thank you
- The process strikes me as a show. The recommended routes were settled on long before this examination was undertaken.
- There is a way to do this properly. It seems like the planners are going for the easier option. An interchange at Waterdown Rd. is not set in stone. There will be opportunities to improve access to the 403 and GO station if we set King Rd. as the focus of development.

Additional Comments

- Options appear to solve the problem, are cost effective, and the least intrusive to surrounding residence in the proposed area of study.
- Thank you for not disturbing the '23 acres'. I have learned through this process how valuable it is to animal migration, protecting rare grasses, etc. I realize planning never satisfies everyone - but please pay attention to the concern above.
- A good consulting recommendation should solve the OPA28 problem but should also speak to the picture beyond the boundary. The City of Hamilton can then decide to coordinate solutions where costs go beyond the scope of the original EA.
- You guys are doing a good job.
- It will also handicap merchants on the east end of Waterdown.
- An improvement of all roads may resolve many issues.
- King Rd. is a great alternative.
- We wish you much wisdom. You're going to need it.
- A South Service Rd. between Waterdown Rd. and Kerns Rd. is another option.
- We must use what we already have, what has already been planned, engineered, built, and paid for while maintaining as many of the aspects of Waterdown that its residents choose to reside here for.
- The Transportation Master Plan's study results fully support the fact that the proposed location of both the Waterdown South and the Uplands developments are like putting a square peg in a round hole: they just do not fit, they are absolutely not viable locations.
- Waterdown can grow; even to the degree that has been projected, without re-designing, re=-engineering, and re-building what already exists. It can be done without forcing several existing resident - who have been supporting their Town - out of Town, and the remaining residents with the desire to leave their Town. IT can be done with less expense and immeasurable better results then what is currently on the table. It is not necessary to damage/destroy the quality of life for the existing residents of Waterdown and Aldershot to improve progress and flourish.
- Pull into our driveway, a semi-circle, and picture the cars speeding over the hill (80km/hr) now add snowbanks 3 feet high on a good year. It can be scary.
- We would like to draw to your attention an urgent and concerning matter. We are writing today concerning the proposal to widen Waterdown Road. We have recently become aware of this situation and wish to express our displeasure with the proposal. We have spoken to many families and individuals living on Waterdown Road and we find it appalling that this idea could come to fruition. Waterdown Road has for decades been a protected environment, and a vital part of the Niagara Escarpment. As such, it is a part of the protected UNESCO World Biosphere Reserve and serves as a natural component to the quality of life for all of Burlington and Waterdown. Widening Waterdown Road would only serve to destroy the integral beauty and degrade the quality of life of this precious part of Burlington. In addition, the proposal will severely impact the Bruce

Additional Comments

Trail by bringing more traffic into the area and creating traffic congestion in Smokey Hollow. This area has long been a scenic and peaceful place for many locals and visitors. It would destroy Smokey Hollow to increase the amount of traffic to the area. As proposed, this plan does not seem to meet with the MAH's goals to protect the greenspace of Ontario. Widening Waterdown Road will destroy the community of the road, threaten the environment and contribute to continued sprawl. Finally, we find it completely unacceptable that the proposal includes widening the road such that 77 homes and properties are identified as 'required'. The idea that landowners who have lived on Waterdown Road for decades could be affected in this way does not seem fair. This does not seem to be an appropriate way to solve the problems of Hamilton's unconstrained urban sprawl. It is our opinion that the lives, fortunes, and histories of Waterdown Road's inhabitants are being turned over to the planners of yet another big-box commercial centre. As part of Hamilton's transportation plan, the residents of Waterdown Road should be considered for the social and environmental impact this proposal will have. We urge you to consider other options and respect the people and land of Waterdown Road by striking down this proposal.

- Many homes will be gone from Waterdown Road once it's widened. Is this a case of sacrifice of the few for the benefit of the many? Or should we be protecting our long-time residents?
- If, as stated in the presentation of April 20th, money is only 10% of the consideration, but people constitute 32% of the consideration how can the City justify destroying an existing community of 77 homes on Waterdown Road and Mountain Brow Road in order to create access to a brand new community? Perhaps the City, in its desire to create an area of new taxpayers, is ignoring the needs of the current taxpayers and their families. I understand the need for growth but responsible governance protects what exists in order to move forward. Let's create 'bridges' to the next stage not destroy and tear down what already exists. The King Road option allows this to happen. It makes use of land currently in disuse and reduces air and noise pollution on existing communities. It also feeds commuter traffic headed east (towards Toronto) in a much more direct route rather than taking the same traffic through the core area. If this is not about money than what is motivating the city to take this quicker and cheaper option? Perhaps it is pressure from developers and the need to create this new tax base.

Additional Comments

- MAJOR CONCERN Firstly, how can it be possible to have 77 driveways opening onto a major four lane roadway. Would this not be against the law? The potential for accidents and/or wait time to get onto a busy roadway would be tremendous. I have not seen any modern four lane roadways built that do not allow for collector roads from residential areas. Also, in studying the terrain and the preferred proposal, what kind of curve would there be between Waterdown Road and Mountain Brow Road that could be taken at a safe speed without removing a number of beautiful homes at great expense. This looks like a very dangerous situation to me. Secondly, how can you possibly say that there would be less residential property required by using the Waterdown Road and Mountain Brow road corridor, has anyone been to this area to have a look, the number of homes that would be affected is staggering. Also I'm sure that nay of the features that you are in reference to, i.e. the wag park, would not mind moving a short distance if need be or that they would not care if they were beside a roadway, they are only there for a short period of time on any given visit. Thirdly, I'm sure the commercial businesses would love to have more exposure to a busy roadway. That is why they are where they are, to be seen and have highway access. Fourthly, is this corridor preferred because the developer likes the fact that it is less expensive, since they are paying a good portion of the cost and want to see this happen as soon as possible, again taking the easy way. Fifthly, as the lands to the east of King Road are almost completely developed the effect on the wildlife would be minimal. I live in and walk this area more than most people, so I see first hand what happens to the wildlife and habitat. PROPOSED SOLUTION If there absolutely needs to be a roadway from the 403 to Highway 5, then, to me, it makes sense to take it through the empty lands from Waterdown Road and the 403 junction north east to King Road then straight north to Highway 5. At Highway 5 it could hook up with the new proposed Waterdown bypass. This proposal affects the least amount of residential properties, takes traffic day and night through the least populated area and has the most direct route to the desired area of Waterdown.

This meeting summary was prepared by Lura Consulting. It presents the key discussion points and outcomes from the April 20 and 21st, 2005 Public Information Centres for the Waterdown - Aldershot Transportation Master Plan and is subject to review by meeting participants. If you have Any questions or comments regarding the report, please contact either:

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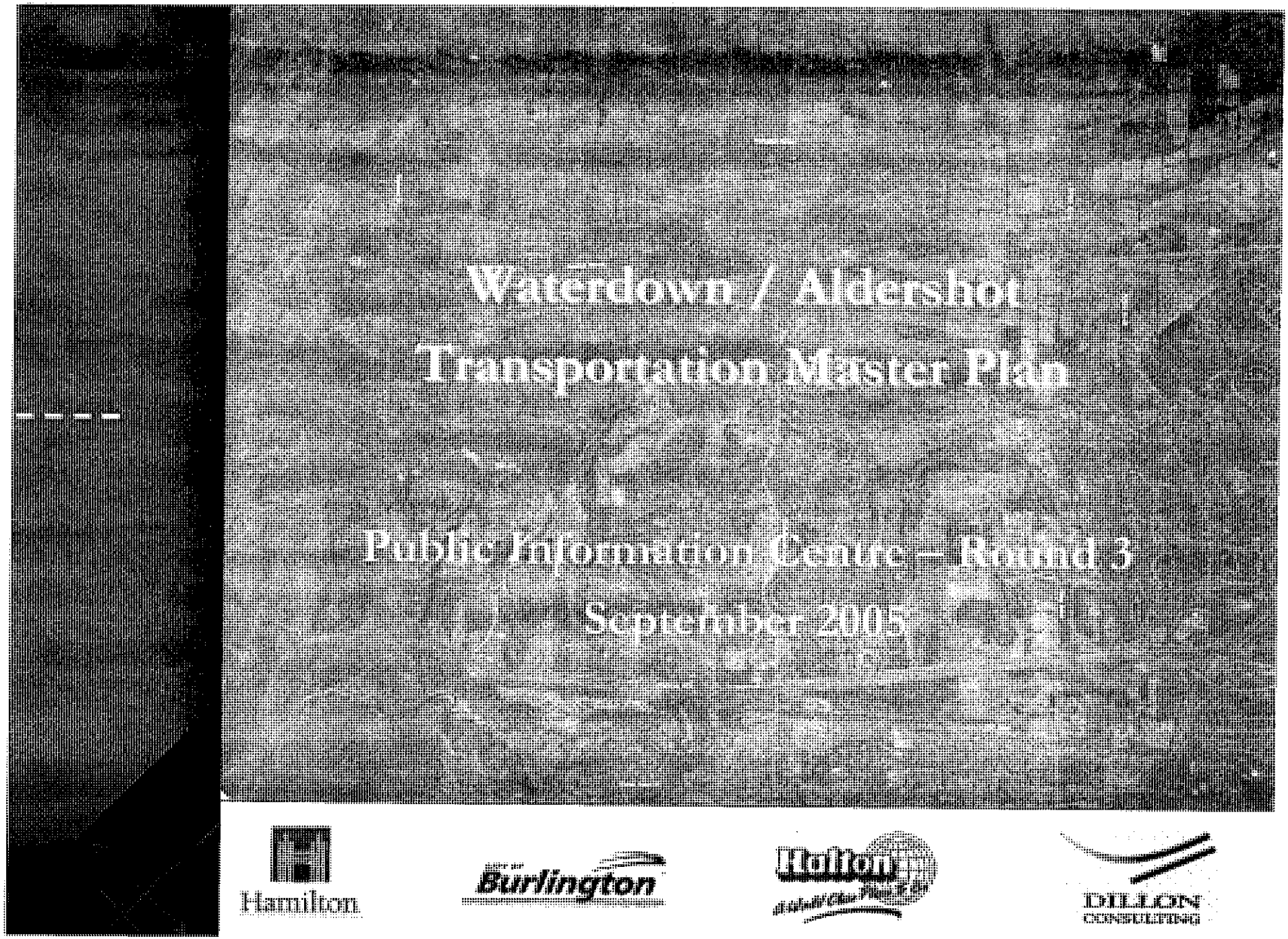
C2 Public Information Centre #3 Materials


Waterdown / Aldershot
Transportation Master Plan
Public Information Centre – Round 3
September 2005
Hamilton
Burlington
Halton
DILLON
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Purpose of this Round of Consultation

- Present draft report for the Waterdown/Aldershot TMP
- Receive public comment / input
- Outline the next steps

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Process To-Date

- ✓ Project Start-Up
- ✓ Data Collection & Review
- ✓ Traffic Demand Forecasting & Road Assessment Review
- ✓ Public and Consultation Meetings - Round 1 (October '04)
- ✓ Transportation Master Plan & Implementation Strategy
- ✓ Public and Consultation Meetings - Round 2 (April '05)
- ✓ Develop Draft Master Transportation Plan
- ✓ Public and Consultation Meetings - Round 3 (Today!)

- ➢ Receive Public Feedback
- ➢ Finalize Transportation Master Plan
- ➢ Presentation to Council (October 2005)

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What We Have Done Since the Last PIC – April 2005

- Where appropriate, incorporated public suggestions and comments into the environmental evaluation
- Consulted with the Stakeholder Advisory Committee and the study Steering Committee
- Responded to inquiries from the public
- Met with agencies, development and residents' groups
- Prepared a draft report on the Waterdown/Aldershot TMP
- Provided more detail through a concept design to indicate potential effects

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Recap of Recommendations

1. Implement the necessary transit service and transportation demand management measures to achieve a 10% reduction in single occupant automobile travel; consistent with the City-wide TMP TDM Policies and City-wide TMP Transit Services Strategy;
2. Construct a new east/west roadway generally between Parkside Drive and the greenbelt boundary from Highway 6 dropping to Parkside Drive and then following Parkside Drive to a new roadway along the east boundary of the Upcountry development area;
3. Undertake a north/south widening of Waterdown Road between Highway 403 and Mountain Brow, the widening of Mountain Brow Road to a new north/south link joining with Dundas Street, through the Waterdown South Secondary Plan area;

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Recap of Recommendations

4. Widen Dundas Street between the "new link" and Brant Street to a six-lane cross-section – or some other way to provide additional east/west capacity in this area;
5. Implement, in addition to the above specific improvements and operating targets, the City-wide Walking and Cycling Policies to increase awareness and promote these modes of transportation; and
6. Widen Highway 403 west of the Freeman Interchange.

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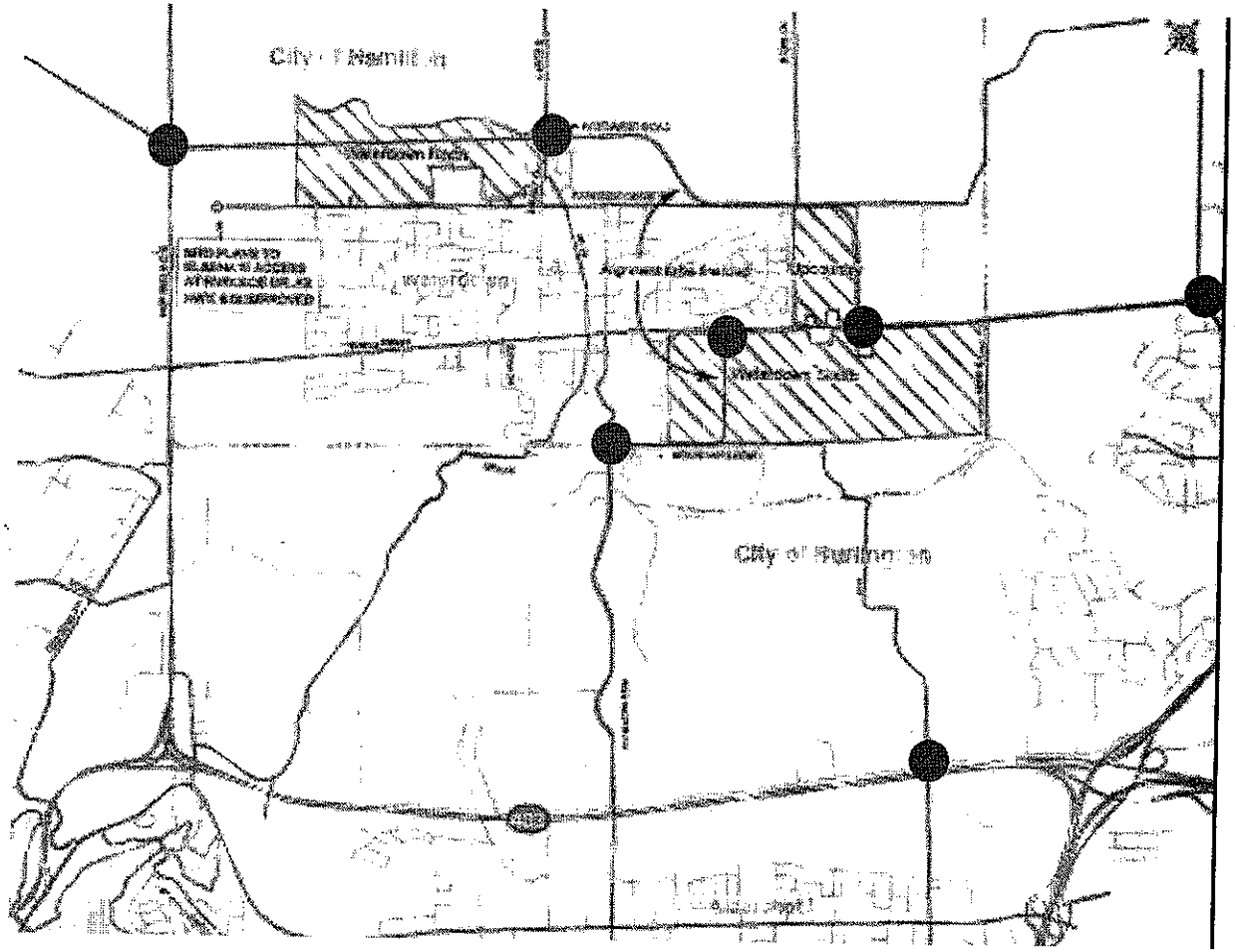
Recommended Transportation System



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Draft Report

- The Draft TMP Report is now available for review
- Released to the public via e-mail notice or post letter
- Available through project web site
- Hardcopies made available for review at:
  - City of Hamilton City Hall
  - City of Burlington City Hall
  - LaSalle Public Library
  - Waterdown Contact Centre (Flamborough Civic Centre)

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Draft Report Content

The report describes the following:

- ***Study Process*** – presents the MEA Class EA process, the study team that undertook this assignment and introduces the public consultation process;
- ***Identification of Problem or Opportunity (Phase 1)*** – discusses the process that led to the definition of "The Problem";
- ***Developing a Transportation Strategy to 2021*** – presents the various alternatives considered and evaluated and presents the recommended "system" for the Waterdown/Aldershot area;

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Draft Report Content

- ***Environmental Baseline Conditions*** – presents the current natural, cultural and socio-economic environment and presents the evaluation criteria and process undertaken to assess the alternative solutions;
- ***Public Consultation and Communications*** – details the public consultation process of the study;

- *The material to this point reflects what has been presented to the public up to Round 2*

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Draft Report Content - *"New" material*

- Concept Design for Waterdown/Mountain Brow
- ***Costing*** – discusses the costs of the preferred "system" and cost allocation;
- ***Staging Plan*** – presents a staging strategy for the implementation of the recommended infrastructure improvements;
- ***Other System Improvements*** – presents other options for consideration to improve the overall transportation system; and
- ***Next Steps*** – suggests action items stemming from this study.

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Costing Summary

Project	Category			Estimated Cost	Allocation % (1)		Allocation $$	
	Road Widening/ New Alignment	Transit	New Intersections/ Traffic Management		Growth	Non-Growth	Growth	Non-Growth
CAPITAL								
1 . New east/west link	✔			$ 12,600,000	100%		$ 12,600,000	$ -
2 . Widening of Waterdown Road between Highway 403 and Mountain Brow Rd	✔			$ 13,100,000	95%	5%	$ 12,445,000	$ 655,000
3 . Widening of Mountain Brow Rd / New link between Mountain Brow Rd and Dundas Street	✔			$ 5,100,000	98%	2%	$ 4,998,000	$ 102,000
4 . Widening Dundas Street between the "new link" and Hamilton/Halton boundary to a six-lane cross-section	✔			$ 3,500,000	95%	5%	$ 3,325,000	$ 175,000
5 . Widening Dundas Street between the Hamilton/Halton Boundary and Brant Street to a six-lane cross-section (2)	✔			$ 7,050,000	75%	25%	$ 5,287,500	$ 1,762,500
6 . Dundas/Brant Intersection (2)			✔	$ 1,850,000	95%	5%	$ 1,757,500	$ 92,500
7 . Dundas/New Link Intersection			✔	$ 1,200,000	95%	5%	$ 1,140,000	$ 60,000
8 . East/West Link/Highway 6 Intersection			✔	$ 1,200,000	95%	5%	$ 1,140,000	$ 60,000
9 . East/West Link/Centre Street Intersection			✔	$ 600,000	95%	5%	$ 570,000	$ 30,000
10 . King Road/North Service Road Intersection			✔	$ 1,438,000	97%	3%	$ 1,408,000	$ 30,000
11 . Traffic Management			✔	$ 250,000	95%	5%	$ 237,500	$ 12,500
				$ 47,888,000			$ 44,908,500	$ 2,979,500
TRANSIT								
12 . Transit - Capital		✔		$ 2,700,000	TBD	TBD	TBD	TBD
13 . Transit - Operating (annual)		✔		$ 897,219		100%	$ -	$ 897,219

(1) The growth/non-growth allocation has been estimated based on the transportation assessment. This may be refined as part of the
(2) Included in the Halton Region Development Charge
(3) A component of this is included in the Burlington Development Charge

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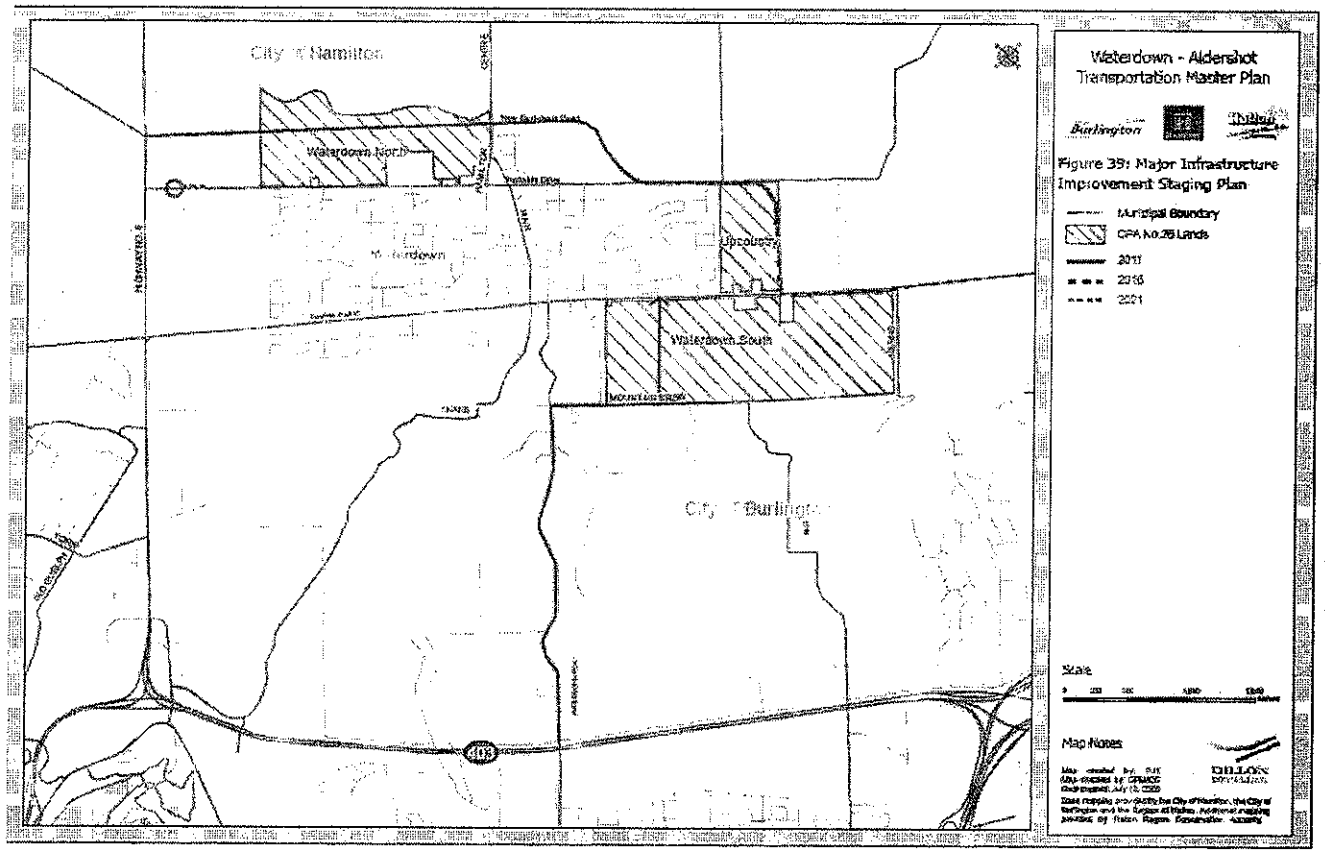
Staging Plan



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Other Issues

- Public Input requested:
  - Closure of Main Street at Centre Road
  - Options for treatment of King Road (to reduce through traffic)
  - Extension of Upper Middle Road west of Kerns Road

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Final Study Steps

- Draft TMP Report is being circulated for comments
- Comments on report are requested by October 15, 2005
- Report/recommendations to be revised where appropriate
- Finalize the TMP
- Present Study to Council by October 2005 meeting
- Development and Approval of a cost sharing agreement between Hamilton and Burlington

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Final Note

- New project website:

http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/CapitalPlanning/WaterdownAldershotTMP/

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THANK YOU FOR ATTENDING!

Your comments on the information presented would be appreciated

Please fill out a comment form and leave it in the comment box.

-OR-

Give us a Call to talk about the project

Andrew Head, City of Hamilton Project Manager

tel: (905) 546-2424 ext. 2433, fax: (905) 546-4435

email: ahead@hamilton.ca

Claudio Covelli, Consultant Project Manager

tel: (416) 229-4647 ext. 407, fax: (416)229-4692

email: ccovelli@dillon.ca

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Waterdown-Aldershot Transportation Master Plan

Public Information Centre #3

PARTICIPANT COMMENT FORM

Contact Information (Optional) Please Print

Name:

Affiliation/Organization:

Address:

Phone/Fax:

Email:

Monday September 26, 2005 **Waterdown** Bohemian Banquet Centre 215 Dundas St. East, (Hwy.#5)	**Tuesday September 27, 2005** **Aldershot** LaSalle Park Pavilion 50 North Shore Blvd. E., Burlington

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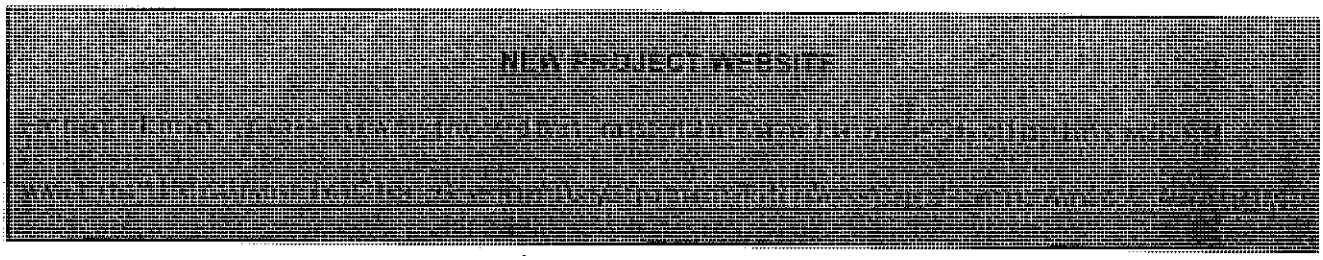
Waterdown/Aldershot Transportation Master Plan

6:00 to 9:00 p.m.

AGENDA

6:00	**Open House**
7:00	**Welcome** – Mary Lou Tanner, City of Hamilton
	Introductions and Purpose – Sally Leppard, Moderator
7:10	**Presentation – Draft Transportation Master Plan** – Don P. McKinnon, Dillon Consulting
7:25	**Discussion and Comments** – Sally Leppard
8:55	**Closing Remarks** – Mary Lou Tanner
9:00	**Adjourn**

NOTES:



1. **The presentation highlighted the recommendations proposed for The Cities of Hamilton, Burlington and Region of Halton's Waterdown/Aldershot Transportation Master Plan.**

   a. Do you have any comments on the Staging Plan?

   b. Do you have any comments on Other System Improvements?

c. Do you have any comments on Next Steps?

d. Are there any additional opportunities and/or recommendations you would like the team to consider?

2. **What do you see as the role for you and/or others in the community in ensuring this Transportation Master Plan is implemented successfully?**

3. **Additional Comments**

PLEASE RETURN completed comment forms by Friday October 14, 2005 to:

Andrew Head
Project Manager, City of Hamilton
Public Works Department
320 – 77 James Street North
Hamilton, ON L8R 2K3
ahead@hamilton.ca
Ph: 905-546-2424 ext. 2433
Fax: 905-546-4435

OR

Claudio Covelli
Consultant Project Manager, Dillon Consulting
235 Yorkland Blvd.
Suite 800
Toronto, ON M2J 4Y8
ccovelli@dillon.ca
Ph: 416-229-4647 ext. 407
Fax: 416-229-4692

Thank you!

WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRE #3

MEETING SUMMARY

Waterdown

Monday September 26, 2005
6:00-9:00pm
Bohemian Banquet Hall
215 Dundas St. East, (Hwy. #5), Waterdown

Aldershot

Tuesday September 27, 2005
6:00-9:00pm
LaSalle Park Pavillion
50 North Shore Blvd. E., Burlington

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This meeting summary was prepared by Lura Consulting. It presents the key discussion points and outcomes from the September 26 and 27, 2005 Public Information Centres for the Waterdown - Aldershot Transportation Master Plan and is subject to review by meeting participants. (Edited by Dillon Consulting, February 14, 2006) If you have any questions or comments regarding the report, please contact either:

Andrew Head - Project Manager
City of Hamilton
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Fax: 905-546-4435
Ahead@hamilton.ca

OR

Liz Nield
Lura Consulting
Phone: 905-527-0754
Fax: 905-528-4179
Lnield@lura.ca

OR

Claudio Covelli- Project Manager
Dillon Consulting Limited
Phone: 416-229-4647 ext.407
Fax: 416-229-4692
Ccovelli@dillon.ca

Lura CONSULTING

WATERDOWN - ALDERSHOT TRANSPORTATION MASTER PLAN
PUBLIC INFORMATION CENTRE #3

September 26 2005, 6:00 - 9:30 P.M.
Bohemian Banquet Centre, Waterdown

September 27 2005, 6:30 - 9:30 P.M.
LaSalle Park Pavilion, Burlington

1. ABOUT THE PUBLIC INFORMATION CENTRES

The Public Information Centres (PIC) represented the third set of meetings held to discuss the Waterdown/Aldershot Transportation Master Plan (TMP) with the general public. The PICs were co-hosted by the City of Hamilton, City of Burlington and Region of Halton to present the proposed draft Transportation Master Plan, and to seek participant feedback on the draft report.

The Transportation Master Plan was originally identified as a requirement of Official Plan Amendment (OPA) 28 for the City of Hamilton. Public consultation for this project is being undertaken to fulfill the Municipal Class Environmental Assessment (EA) Planning and Design process requirements.

Specifically, the Public Information Centres were designed to:

1) Present the draft report for the Waterdown/ Aldershot TMP
2) Receive public comment & input
3) Outline the next steps

Approximately 350 people signed in at the meetings held at the Bohemian Banquet Centre in Waterdown on September 26th, and at the meeting held at La Salle Park in Burlington on September 27th. The PIC agenda is attached as Appendix A.

This meeting report provides a summary of the proceedings at both meetings.

2. OPEN HOUSE

An Open House was held between 6:00 and 7:00. This provided an opportunity for participants to review the results of the studies, and discuss issues and ideas with the Study Team. During the Open House participants were invited to review the display boards which were further outlined in the presentation.

NEW PROJECT WEBSITE

For more information, please review the proposed draft Transportation Master Plan on the City of Hamilton's website at:

www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/CapitalPlanning/WaterdownAldershotTMP

3. WELCOMING AND OPENING REMARKS

At 7:00 p.m., a formal public meeting was convened at both locations. The purpose of this part of the Public Information Centres was to present the preferred transportation solution, and to receive comments, input, questions and suggestions from the participants.

Sally Leppard, Lura Consulting, Moderator

Ms. Leppard welcomed all participants to the events and explained that Lura Consulting is acting as an independent facilitator to assist the Transportation Master Plan team with the public consultation component of this project.

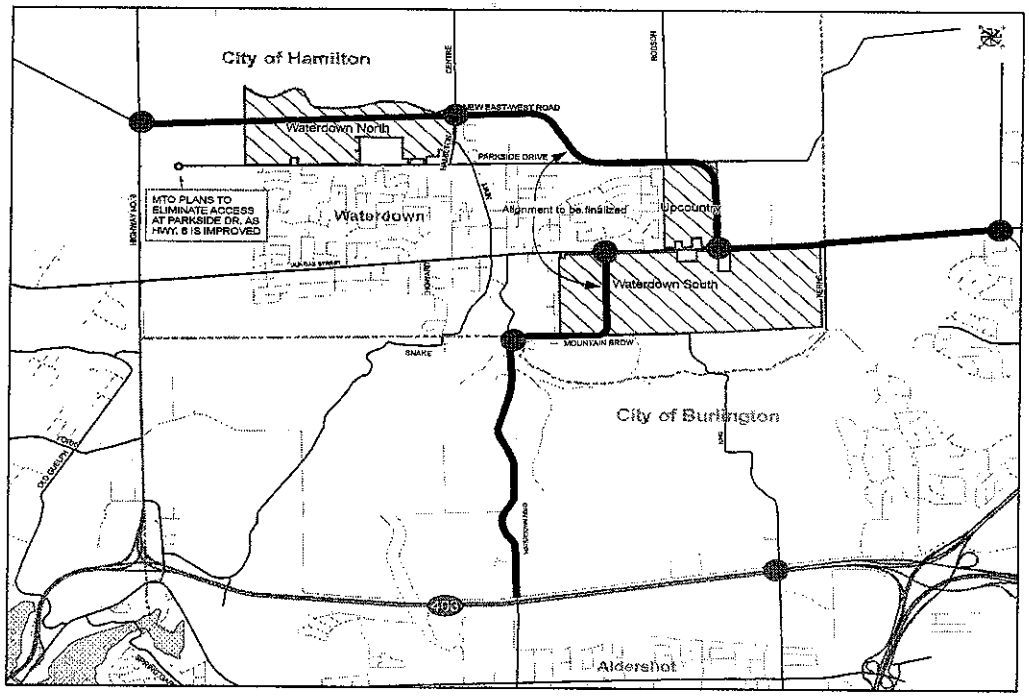
4. PRESENTATION

Don P. McKinnon of Dillon Consulting Limited, the Environmental Assessment Lead for the TMP, presented an update on the Waterdown - Aldershot Transportation Master Plan since the last PIC meetings held in April 2005. A summary of the key presentation components is presented below.

Update since the Last PIC - April 2005

Since that last set of Public Information Centres, Mr. McKinnon indicated that the study team had 1) consulted with the SAC and the study Steering Committee; 2) continued to respond to inquiries from the public; 3) met with agencies, development

and residents' groups; 4) where appropriate, incorporated public suggestions and comments into the evaluation; 5) prepared the draft transportation master plan; and, 5) prepared a concept design (Waterdown Road) to identify potential effects.



Draft Recommended Transportation System

Public Input to Date

Mr. McKinnon summarized the public comments that had been received to date:

- The proposed widening of **Waterdown Road** is creating a great deal of anxiety and opposition in the community.
- Many people indicated that the further development of **Waterdown Road/Mountain Brow Road** is not an acceptable option.
- These people prefer the widening of **King Road** to four lanes, despite the environmental impacts.

- There are also people/agencies that feel the option to widen King Road has too many environmental impacts.
- The plan for **public transit** needs to be significantly strengthened. Residents use cars to get to and from Waterdown.
- Need to integrate public transportation in a much stronger way - not just the GO train.
- Safety of **hikers and cyclists** on the Bruce Trail needs to be a priority.
- **Connect** N/S and E/W routes; this will reduce traffic congestion on Highway 5 and 6.
- Development is not welcome in Waterdown, concerns surrounding **OPA 28**.
- **Protect environmentally sensitive areas** and **wildlife.** Many participants support the decision to protect "23 acres".
- Need to **continue to involve** local residents in the planning process.

Draft Report Content

Mr. McKinnon indicated that the Draft TMP Report is now available for review -- the draft report describes the following:

Study Process - presents the MEA Class EA process, the study team that undertook this assignment and introduces the public consultation process followed throughout the study;

Identification of Problem or Opportunity (Phase 1) - discusses the process that led to the definition of "The Problem";

Developing a Transportation Strategy to 2021 - presents the various alternatives considered and evaluated, and the recommended "system" for the Waterdown/Aldershot area;

Environmental Baseline Conditions/Evaluation - presents the current natural, cultural and socio-economic environment and presents the evaluation criteria and process undertaken to assess the alternative solutions;

Public Consultation and Communications - details the public consultation process of the study;

Costing - discusses the costs of the preferred "system" and cost allocation;

Staging Plan - presents a staging strategy for the implementation of the recommended infrastructure improvements;

Other System Improvements - presents other options for consideration to improve the overall transportation system; and

Next Steps - suggests action items stemming from this study.

What is New - Costing

Mr. McKinnon provided the following overview about the new cost component in the Transportation Master Plan.

- Estimated capital costs of the recommended road works:
  - Waterdown Road Improvements - $18.2 million
  - New "east-west" alignment - $12.6 million
  - About $5 million for localized improvements

- Recommended Transit Strategy costing:
  - Six hours of peak service per day;
  - Weekday service between 5:45 am and 10:30 pm; (the need for weekend service to be examined); and
  - $2.7 million in capital costs and $900,000 per year operating costs.

- New Waterdown Road/Highway 403 interchange - total cost of the improvements is approximately $9 million, which will be shared by Province and Burlington.
- Most of the cost will be covered by development charges.
- Cost allocation by Municipality is still under discussion.

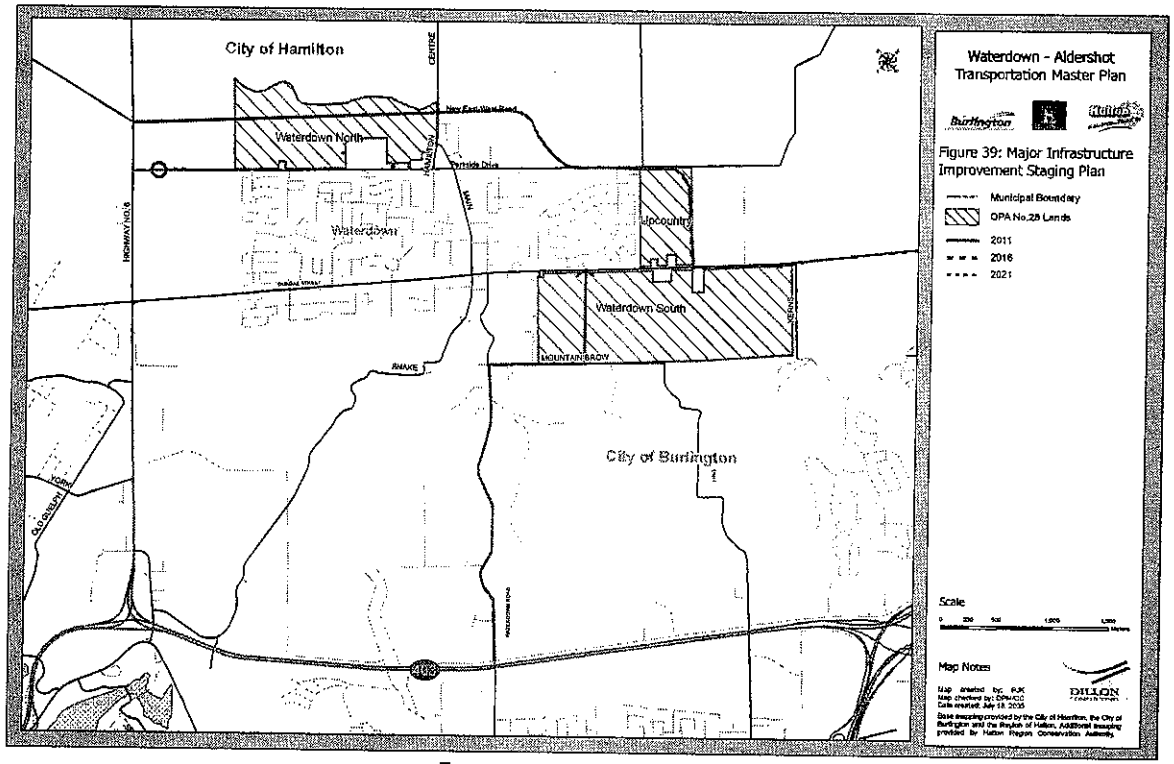
Next Steps

Mr. McKinnon provided a summary of the proposed next steps in the process.

- TMP Report outlines 0-5 year and 5-10 year actions including:
  - Complete Class EA work/Detailed Design for recommended road works
  - Develop Transportation Demand Management (TDM) measures
  - Transit Operational Analysis
  - Assessment of identified local road improvements
  - Construct Waterdown Road/Highway 403 interchange improvements

Staging plan

Mr. McKinnon reviewed the proposed Staging Plan (see map).



Proposed Staging Plan

Future Steps

Future Steps for this project include:

- Undertake Phase 3 and 4 of the Municipal Class EA process for the Waterdown Road/Mountain Brow Road and "East-west" option
- Phase 3 will:
  - Identify alternative design concepts
  - Detail inventory of existing conditions
  - Identify impact of alternative designs
  - Evaluate alternatives and identify recommended design

- Consult with review agencies and previously interested parties, as well as directly affected parties
- Complete Environmental Study Report (ESR)

Final TMP Study Steps

Finally, Mr. McKinnon provided detail regarding the final steps in Transportation Master Plan:

- Draft TMP Report is being circulated for comments
- Comments on report are requested by October 14, 2005
- Report/recommendations to be revised where appropriate
- Finalize the TMP
- Present Study to Council
- Development and Approval of a cost sharing agreement between Hamilton and Burlington

5. SUMMARY OF PARTICIPANT FEEDBACK

Immediately following the presentation, participants were asked if they had any questions or comments about the draft TMP. The following summary presents the highlights of the issues and concerns presented at the two Public Information Centres. The comments noted were raised by individuals, and as such do not reflect consensus of participants. For a detailed transcript of public input for both of the meetings please see Appendix B.

Overall Comments: Does the Transportation Master Plan demonstrate a good flow of traffic? It doesn't appear to be an efficient route; it is not a "system"; concern over the difference in results between the previous Stantec study and this draft TMP; has all the traffic from future commercial/retail traffic been taken into account? Opposition was expressed to both the east-west route, and the north-south route. Transit options need to be improved.

COMMENTS ON EAST-WEST ROUTE

Parkside Drive at Highway 6:

- MTO made no mention of dead-ending Parkside at Highway 6. Why is this planned?
- Impact on by-pass emptying onto a rural side road?
- Alternative: why not implement a by-pass with a cloverleaf at Centre Road?

Costs: The costs don't include major items such as the bridge over the Grindstone Creek, excavation for 10kms, etc. The $12 million quoted for the east-west corridor was challenged on this basis. It does not include property acquisition.

COMMENTS ON NORTH-SOUTH ROUTE

Closing of King Road: One participant expressed opposition to this idea.

Choice of Waterdown Road: The choice of Waterdown Road was continually challenged. Reasons given were: fewer residences on King Road; environmental assessment skewed; assessment didn't consider interchange at Waterdown Road, even though that appears to be the real reason that Waterdown Road was selected; could be double-counting of an ANSI and ESA on the Waterdown Road route, could be a provincially significant wetland; "looks like maze in a cornfield". Concerns re: Mill Street North - heritage district, library, Knox Church, school safety will be compromised. Concerns about emergency access were also raised.

Property Acquisition: People were unaware that only 1-2 properties would likely be affected, not the 19 originally identified (at the second PIC there was concern that 77 properties would be affected).

Road Alignment: The northerly alignment was criticized for the number of diversions, in particular the east turn along Mountain Brow Road, and then the north turn to Dundas; Waterdown Road should be continued north rather than going east at Mountain brow; Divert the Waterdown Road alignment west of current line (at bends - south of Mountain Brow Road) to avoid impact on housing - go through fields); don't understand why only 2 lanes through subdivision.

Detailed Design: - A traffic circle at Mountain Brow Road was challenged as inappropriate. Particular concern was raised about its' ability to divert traffic onto Mountain Brow Road, rather than traffic continuing north. What criteria was used to insert roundabout?

COMMENTS ON ALTERNATIVES

Alternatives: Kettles Proposal; proposal for new Option#5 East-West to be considered; Dundas Street widening would have lower costs, lower social impacts (half of the new homes are around Parkside Drive and Dundas Street, most people will use Dundas Street); need thorough assessment of King Road alone as an alternative, using creative mechanisms to cross the escarpment (costs, social impact); Evaluate Dundas/Brant Street option.

Need interchange at King Road and QEW

Request for another new EA - to compare King Road and Waterdown Road alternatives again.

Public Transit: TMP does not focus enough on public transit. Implement what it would take to attract users on a regular basis; stay away from buses - they detract users, think of light rail; focus on transit rather than roads -focus away from transit encourages urban sprawl.

OPA 28: Many people challenged the meaning of the conditions, and the timing of the development.

Cost Sharing: Questions were raised around what would happen if the City of Burlington refuses to fund the road.

Real Estate Values: Residents can't sell properties, and they are being assessed for pre-study values. Need assessment to be reduced to real value.

Future Development: Maps don't show real situation. Waterdown Road alignment will open up future lands to unwanted development.

- What criteria were used to establish the density in the approved OPA 28 lands?
- Can this density be lowered? If reduced to 3000 homes, then wouldn't need to do this.

Request that the Study team consider **third party peer** review at this stage.

6. NEXT STEPS

Sally Leppard thanked everyone for their participation and feedback at the public information centre on the Transportation Master Plan. She noted that the meeting was recorded and the information and advice from this meeting would be incorporated into a report to be circulated to all PIC participants.

Mary Lou Tanner expressed appreciation on behalf of the City of Hamilton and project team for the ideas and feedback provided by participants at this meeting.

APPENDIX A: AGENDA

Waterdown - Aldershot Transportation Master Plan Public Information Centre

AGENDA

6:00 pm	**Open House and Review Displays**
7:00	**Introductions and Meeting Purpose** Sally Leppard, Moderator, Lura Consulting
7:05	**Presentation** Don McKinnon, Dillon Consulting Limited
7:20	**Comments and Questions** Participants & Moderator
8:55	**Next Steps**
9:00	**Adjourn**
9:05	**Open Discussion Forum**

APPENDIX B: DETAILED PARTICIPANT FEEDBACK (General Questions, Comments and Concerns)

Immediately following the presentation, participants were asked if they had any questions or comments about the project. The following identifies the participants' questions (identified with 'Q') or comments (identified with 'C'), followed by the responses from the project team in *italics*.

WATERDOWN MEETING

C. Northlawn Ave should be identified on the map.

C. Suggest that our local MPP who sits at the cabinet table should advocate on the behalf of the Waterdown/Aldershot resident's behalf.

C. Suggest that two alternate routes of diverting traffic are considered: block off Grindstone Creek and block off part of Mountain Brow Road, this would force everyone to come down King Road. It would solve a lot of the social problems and wouldn't cause any problems with economic or environmental issues. This is an alternative and we are protecting the Bruce Trail and the Grindstone Creek area that is used very often.

C: Suggest that Ted McMeekin, MPP should be here.

C: Would like a copy of the presentation.

C. Suggest that roads are built in grid format - straight South-North and East-West (e.g. Guelph Line). Concern that the roads turn too many times - people will not follow these routes.

C. Concern that if Mill Street is closed it will take longer for emergency vehicles to get to people's houses.

C: Concern that the preferred alternative solution is not the answer; it is not a properly planned route to take the traffic around Waterdown off the 407 and for whatever reason.

C: Re: dead-ending of Parkside Dr. In a document from the city - 22-09-05, maps that were used in the last session held here identify certain points of significance - it indicated that there will be intersection improvements. There has been no mention of dead-ending Parkside Dr. - the option does not make sense.

C. Concern that all of the comments made by the public will just sit on a file, and don't go anywhere.

Q: Regarding Hamilton Natural Area No 47 does the map go through a designated provincially significant wetland on Northlawn Ave. (east on Centre road)? Suggest that project team look into the possibility.

A: *The area is a candidate to be a provincially significant wetland, however, it has not been designated by Conservation Hamilton; the area is considered a locally significant wetland. Potential wetland area exists to the north - the intention was to minimize the impact to wetlands through the corridor. Currently there are on going studies to determine whether it is a provincially significant wetland.*

Q: The Greenbelt Act indicates that a road will only be built through it if there are no other alternatives - has this been confirmed that the road can go through the Greenbelt? Is this area part of the Greenbelt Act?

A: Yes. The Greenbelt Act provides the abillty to put infrastructure through the Greenbelt area to service growth in the Greater Golden Horseshoe. We have had a number of discussions with provincial Municipal Affairs staff regarding this project and the Greenbelt plan when it was in its draft form as well as its current version. Due to the implications of this project, the advice that we have received and the discussions we have had with Ministry staff indicate that we have the ability to put infrastructure which includes roads, sewers as well as water mains through the Greenbelt to service growth for the Greater Golden Horseshoe

Q: What is the purpose of the City of Hamilton's Environmental Sensitive Areas Impact Evaluation Group (ESAIEG)? Is ESAIEG aware of this project?

A. *ESAIEG is an advisory group to the planning and development department at the City. They review development proposals as well as public works projects in and around Environmentally Sensitive Areas. ESAIEG is aware of the project - the standard operational procedure with class environmental assessment projects is that they comment on the environmental study reports -- for this project they will provide comments at the end of Phase 4.*

Q: Why haven't the concerns and questions from residents received throughout the 1999 Stantec study been addressed?

A. *The previous Stantec study was not formally endorsed. We re-initiated the Class EA process to look at all of the alternatives in detail, undertake a detailed analysis, and full consultation study.*

Q: Concern about bottlenecks - specifically on the potential impact to the core of Waterdown, Parkside Dr., and Bolting neighbourhoods during peak traffic periods (all addressed in Stantec study).

A: *In the design of the road improvements the movements of traffic through the community has been considered. The intent is to design a system that is going to work - there is no intention to create artificial bottlenecks in the community. We have heard the concerns about linking the improvements and that will be addressed.*

Q: Have the future big-box retail centers and subsequent traffic been taken into consideration in the planning process?
A. *Growth projections associated with development in this community were the starting point of our study - they were the problems and the needs. From those needs, we identified the transportation needs, a number of localized improvements have been identified as well to take into account developments in the area.*

Q: Suggest that the new box stores will attract people from other communities - concern that only the existing local needs are being considered.
A. *The transportation modeling that was done recognizes traffic through the community - this includes people within the community and those who are traveling through.*

Q: What are the average lot levies paid by developers to the city?
A. *The City of Hamilton development charges (aren't called levies any longer) are about $12,500 per single family residential home (and that is paid city-wide). In addition, for the OPA 28 lands, there is a special charge that was included in OPA 28. It started at $800 and it is indexed to inflation, it is now $1, 052 for a single family. The total is $13,500.00/lot. The City of Burlington's rate is based on their development charges study -- it is likely in the same ballpark, however this will have to be confirmed.*

Q: Suggest that if residents are opposed to OPA 28: the answer is at the political level. We need to contact the politicians at the provincial and municipal level who can then say "no" to the developers.
A: *Councillor McCarthy provided the following overview of challenges in regards to OPA28:*

- *Flamborough City Council appealed OPA28 to the Ontario Municipal Board (OMB), wanted growth phased and controlled.*
- *Flamborough City Council brought developers to the OMB, and lost. Then appealed that decision to cabinet -- lost again.*
- *If the population of Waterdown doubles -- and you don't allow for new transportation corridors, imagine what that will do to our existing road networks. Imagine what that will do to our existing development and the people who are living in this town right now.*
- *There is a demand for development because Waterdown/Aldershot is in the GTA.*
- *Waterdown/Aldershot will get the growth regardless of whether the Transportation Master Plan is not in place.*

Q: Why are we building these roads - for local residents? For through-traffic use -- or for the convenience of developers? Overall concern about the design of the system.

A: *The Purpose of this study is to develop a final Transportation Master Plan. The information gets pulled into the Class EA process as it continues into Phase 3. In many ways, the opportunity to review this continues throughout the Class EA process.*

Q: Who is paying for this development? At the community development council meeting held on September 12th in Burlington, the Burlington Councillors indicated that Burlington would not pay for the widening of Waterdown Road. According to Ontario laws, developers cannot pay for development charges that are in another Municipality - concern that Hamilton taxpayers are going to pay for Waterdown Road to be widened.

A: *The Development Charges Act does have provisions for municipalities to attribute costs to another municipality. The cost sharing agreement is a requirement in OPA 28. We have to get an understanding of what the costs are between Hamilton and Burlington. We are close to completing that with the release of this draft report. The second component of that is the determination of cost sharing and that hasn't been done but the discussions are currently taking place. The third point - take a look at Table 15 in the draft report - has our first recommendation on the attribution of cost. You will see that we are of the opinion that the road networks are required because of development and should be attributed to the development charges. How that gets borne out in our development charges by-law, in Burlington's and through the cost sharing agreement has not been determined. So, even though we don't have an answer for you tonight, we know that it is an important issue for you and for us as well and we are working to get it resolved - it will take some time to work through all the issues and the discussion with Burlington.*

Q: Environmental assessment for King Rd - how is King Road more environmentally sensitive than Waterdown Road? King Road has one ESA (Waterdown woods) that same ESA crosses Waterdown Road Waterdown Road has two other ESAs; two ANSIs; and 3 watersheds.

A: *For King Road to solve a large part of the transportation problem, it would need a new alignment- a very large area of sensitive and significant land would be displaced to accommodate a new alignment (compared to some of the other options that involve a widening of an existing roadway). The environmental affects associated with the widening of Waterdown Road are recognized in the environmental assessment.*

C: Consider King Road as the most sensible choice as it aligns itself to the new development.

A: *King Road only solution was not evaluated as part of the detailed evaluation. It was looked at but screened out **because** it would not solve the problem. We evaluated three alternatives. Two involve improvements to Waterdown Road and King Road. The option identified as 'preferred' requires improvements to Waterdown Road only.*

Q: Why wasn't King Road alone examined as an alternative?

A: *King Road on its own (there were other ones as well) does not solve the transportation problem. It doesn't move the vehicles where they are going to go and give us the network capacity that we need to provide a reasonable level of service - so it doesn't make the short list.*

When we began this project, the first thing we did was to go back and do the transportation modeling for Halton, Hamilton, Burlington and Waterdown. We did that because there had been some material changes in growth but also the road networks - e.g. Highway 407.

When we confirmed that we still had capacity deficiencies to support the growth for OPA 28, we then developed the long list of transportation alternatives. King Road on its own was in that long list.

The first question is, does it solve our transportation problem, if it doesn't, it comes off the list. We don't get to put in projects as options that we would never build. We don't get to put in projects that don't solve the problem. We have to look at reasonable and feasible options so the 2 tests are; do they solve the problem? Would we build it? In the case of King Road - on its own, it did not solve the problem - that is why it came off the table.

In previous studies, King Road was identified as a viable solution at that time; it was assumed that there would be a new connection, a new interchange at Highway 403, closer to where King Road would connect with the 403. Now we know that the new interchange is going to be at Waterdown Road. Where the traffic wants to go is effectively Waterdown Road and the 403. All of this has been done through a transportation modeling exercise that identifies where the demand is and where the traffic wants to move. The model is showing that Waterdown Road is the primary avenue in which to get to Waterdown Road and Highway 403.

C: I don't know how you can weigh the social impacts in any of these instances lower than the environmental impacts especially when we now hear the environmental sensitivities on Waterdown Road vs. King Road

Q: We keep hearing that OPA 28 requires 6500 units. What criteria were used to establish that number and why can't the density be lowered? Who is driving the density? Is it the City?

A. *Mary Lou Tanner provided an overview of the history of OPA28:*

- *2 appeals to OPA 28 - 1) to the OMB which issued an amendment; and 2) to the provincial cabinet (appeal body in this province).*
- ***Appeal to the provincial cabinet was actually a joint agreement between the Town of Flamborough, the City of Burlington and the parties to the hearing who were essentially the developers who owned property in the area.***

- *The minutes of that settlement specified a general form of development and general density provisions and laid out a revised OPA 28 that considered how much development would happen, what infrastructure was required and that the parties were all in agreement that this is how they wanted the development in Waterdown to proceed.*
- *The provincial cabinet approved those minutes of settlement and that became OPA 28.*
- *The 6500 number is in varying forms in OPA 28 speaking to density. The majority will be for single-family homes; there is not a lot of higher density housing specified in the amendment.*

Q: Can the approved density (from OPA 28) be revisited?
A: *The following two secondary planning processes are underway: 1) Waterdown North and 2) Waterdown South. Public meetings and open houses will be held later this fall. Suggest that people participate in those discussions to advocate the changes in density.*

Q: In your studies, were there any impact studies done on the by-pass entering onto a rural road (at Highway 6)? What is meant in the study by controlled intersection at Highway 6?
A: *We have envisioned this as a potential intersection with traffic signal control at Highway 6. This may only be an interim solution. There is potential depending on the usage of Highway 6 for this to be an interchange.*
Q: What is the date for completion?
A: The *transportation plan will be implemented prior to 2021, however, it will likely be sooner than that. Given the demand for development in Waterdown area, some improvements will be implemented in the 6-10 year time frame. The OPA 28 lands will be fully built by 2018 and the other transportation improvements have to be implemented before then to accommodate it.*

Q: Is the controlled intersection at Highway 6 part of this plan -- or is it separate?
A. An interchange at Highway 6 *would require an additional study (that hasn't happened). At this stage, an intersection with traffic signals is envisioned.*

Q: Concern with the widening of Waterdown Road and expansion of Waterdown to the north, the shortest route between the two is to continue through Smokey Hollow and then Mill Street south to Mill Street north. Mill Street north is home to schools, churches, the library and the elderly. How do you plan to discourage and restrict traffic from using the shortest route?
A: *The Study team realizes that a fair amount of the traffic will come from Waterdown South. Part of the next phase of development will examine these issues, including the use of Transportation Demand Management (TDM) measures*

and design treatments. There are different measures that can be implemented and will be examined at the next stage of the analysis.

Q: Regarding the cost estimate for widening Waterdown Road (Table 15 in the draft report) - the estimate is 12 Million. Concern that some improvements have been missed (e.g. bridge at Grindstone Creek) - and that the overall cost could be much higher. Although cost was not the most important criteria, and could be covered in the development charges act - was cost an important criteria and how much will this cost?

A. *Costs were weighted in the evaluation of the options but it was not the highest weighted criteria. Generally people felt that the natural environment and the social environment were more significant and wanted those weighted higher.*

It is important that the figures and cost estimates are correct in the evaluation, specifically for our cost sharing discussions with the City of Burlington. Cost is an important factor.

However, cost will be a moving target until the detailed design is complete. We have not completed the detailed design for all of the alternatives. Costs are developed as part of the development process and they will continue to evolve. They will be different from what they are at this point however; they will be in the same ballpark.

In preparing table 15, before the report was released, Dillon Consulting did the initial costing, the design and construction staff at the Public Works department in the City of Hamilton reviewed the costs to make sure they were accurate for our 2005 tender prices for road works, we then met with the City of Burlington, and Region of Halton staff to review their costs for their road works for similar types of projects to ensure that we were using current information to the best level of detail that we have based on our experience on 2005 construction.

Q: Why is there no link between the two intersection improvements through Waterdown south? 4 lanes on Mountain Brow Road would go to 2 lanes --it seems to negate the potential for a by-pass route or a traffic route. Why does it to go to 2 lanes in the middle of the subdivision?

A: *Ultimately it could be a 4-lane roadway - 2 lanes of which is required for the capacity for traffic travelling through the area and the other 2 lanes would serve as the collector roadway for the subdivision. The details will be defined in the next phase, as part of the detailed design phase, which looks at alternative designs and defines what the level of improvement will be for the area.*

Q: There is an application by Paletta for Waterdown South which is now out for public comment, it appears that the developer is proposing where the roads will go in a development - the developer seems to be dictating where the roads will go - please provide more detail.

A: *Paletta has filed an application for just over 1,000 residential units in the Waterdown South area (western half of Waterdown South). Any landowner in Ontario has the right to file an application under the Planning Act, for development of their property. Public Works has commented that the application is premature for three reasons: 1) The Transportation Master Plan is at a stage where the link from Mountain Brow Road to Highway 5, Dundas St have been defined; 2) current watershed study is not at a stage where it is complete enough; and 3) secondary planning is not complete. Two weeks ago the comments were signed back to the planning and development department. There are rights under the Planning Act and one of those is the right to an appeal. If council does not make a decision, developers have a right to appeal to the OMB as does any landowner.*

Q: OPA 28 lands were approved based on an approved transportation study and transportation links are in place. When can developers begin to develop in excess of the 500 residential unit limit that surpasses our traffic capacity (once road is in or not)?

A: *Developers cannot build all of the development without road improvements. We have provided comments to the Planning and Development Department - the existing road networks have capacity for 500 residential units. No development beyond the capacity of 500 will proceed without the agreement of the general manager of Public Works.*

As we work through the next phases of this project, we will be identifying a staging plan, so we know how much development can proceed and what road network improvements are required in order to support that development.

We do not want Waterdown to have a "clogged" road network because too much development has occurred without the appropriate infrastructure improvements.

Q: In regard to the proposed cost sharing agreement with Burlington and Hamilton -is there a mechanism for 3rd party mediation? Could either of the parties refuse to fund any portion of the Waterdown Road improvements? What would be the effects to Waterdown taxpayers?

A: *It is still too early to talk about 3rd party mediation. OPA28 requires all of the parties to come to a cost sharing agreement. We are currently in the fact-finding stage and have not had an opportunity to sit down and talk about cost sharing principles. It will come and we are committed to doing it.*

Q: If there is no agreement -- is the mechanism available for binding arbitration (when the parties want a third party to decide the outcome of their dispute)?

A: *We haven't had discussions with Burlington about what we would do if we can't come to an agreement. Unsure if there are mechanisms beyond the cost sharing agreement required in OPA 28. The position that City of Hamilton and Burlington are taking is that these road improvements are being driven by OPA 28 and those developers should pay for the majority those improvements.*

Q: In regard to the North/South route along Mountain Brow Road to Highway #5 - why can't that section go east and be aligned with the East/West bypass that goes to Highway #5 to the 4th Concession?

A: Although it is intuitively appealing, *there is not a necessity for the North/South and East/West routes to be linked. Each route serves different needs. Travelers from Waterdown South are focussed towards Highway 403 and the interchange at Waterdown Road for others; there will be movement to and from the community (east and westincluding those who are traveling through the community. We realized where the movements to, from and within the community are and developed a transportation system that is going to serve these needs; and will accommodate the demand as a result of OPA 28.*

Q: I have been told that the King Road option is too expensive and people would not use it. If the developer is to pay the majority of this road, why do we have to concerns ourselves with what it costs? In the presentation, Don made a comment about there not being too much displacement of houses on Waterdown Road- please clarify.

A: Cost is only one of the evaluation criteria that led to selecting an option of Waterdown Road over one that included King Road, and it was one of the least important. *Don McKinnon was referencing property acquisition. The comment was in reference to the conceptual design that Dillon has developed to illustrate that a 4-lane Waterdown Road alternative can be developed with minimal property removals.*

Q: In regards to cost - $12 million for the East/West route and $18 million for Waterdown Road - what roads will each amount cover?

A: *The $12 million cost is for the East/West alignment from Highway 6 extending down to Dundas Street. It is separate from the Waterdown Road improvement. The $18 million cost is Waterdown Road, Mountain Brow Road and the new alignment through the OPA 28 lands though to Dundas Street*

Q: Regarding the traffic circle at Mountain Brow Road and Waterdown Road - will Mill Street be closed at a certain point?

A: ***One of the intersection alternatives that is being considered is a traffic circle at Mountain Brow Road and Waterdown Road. The question of whether or not Mill Street will be closed will be reviewed during the next stage of the analysis.*** *Our operating assumption at this point is that it would remain open.*

Q: In regard to the comment that the north-south option could be done with minimal property displacement -- according to the previous report - the estimated number for expropriation was 19 - that number is not minimal. If you take those 19 properties, at about $400-500,000 each (that is 9.5 million dollars) is that 9.5 million dollars included in your 18.2 million dollar cost?

A: *When we did the original evaluation, we assumed a certain corridor. Based on that corridor, we inventoried the potential for impact, and undertook the evaluation and selected the 4-laning of Waterdown Road as being preferred - that is where those 19 potential displacements came from. That recommendation was made public; it generated a lot of concern. One of the responses to that concern was to look at the recommended improvement of 4-laning Waterdown Road in more detail. What is presented in the draft report is a more detailed examination of how to design a 4-lane roadway along the existing Waterdown Road alignment.*

We were able to determine that we could put 4 lanes of roadway along Waterdown Road with significantly less displacement than the 19. There are probably only 1 or 2 displacements, possibly zero as a result of looking at this more detailed analysis.

At this point, the costing does not reflect the removal of 19 residences. Again, this conceptual design is for illustrative purposes only. It is only to illustrate that a 4-laning of Waterdown Road can be accomplished with much less impact than what was originally assumed when we did the evaluation and that will be confirmed through the subsequent EA phases that needs to be undertaken.

Q: What is the lane tolerance for the distance between the road and houses?

A: *There is no hard and fast rule. When we discuss property acquisition with property owners it is a negotiation process. We need to know your concerns, your issues and your wants and needs as well. If a roadway is going to be in your living room, we will buy your whole property. Different people have different tolerance levels for how close or how far they can manage a roadway widening. That is where we get into the discussion of your wants and needs. This is specific to individual property owners and the discussions that take place. As soon as we know the property impacts in phase 3 and 4, we will be communicating them to the individual property owners in advance of any public release of the information. It is important to us that no property owner is going to be unaware - you will hear from us in advance of any public information release.*

C: Alternative to East/West Route: Another alternative has come up because in downtown Waterdown - you can't make it 5 lanes. However, you point out another alternative to going North-South. We now don't need that southern turning lane in downtown Waterdown. Even if you make it 5 lanes, you still have 3 lanes (the 2 outside lanes - there is going

to be parking during the day). Downtown Waterdown is not heavy rush hour all day - it is just in peak hours like all other roads are.

Would like to propose an idea that is under 10 million dollars and you can validate it. You can compare what your East/West route is - you can save somewhere between 7-20 million. Smart Growth - it falls within what provincial guidelines tells us to use existing infrastructure. Future growth - future traffic estimates that are put together - it is not a precise science. Should your figured growth show that it is greater than what you think it is, you could still put a northern route in. You are still coming off of Parkside. If your figures are wrong, you don't have to do anything, because the transportation network meets it. Maintenance - it is always nice to have fewer roads, less tax costs, to repair them all the time. Environmental issues -- widening of Dundas and Parkside, has been recognized as having the minimal environmental issues if compared to the recommended north-south route.

Regarding traffic, bus transportation - you have to have half decent roads for buses to go on. Hidden consultant and environmental assessment costs - if existing roads are used to handle the traffic, the time and costs the city will spend on outside consulting services to perform the associated EA processes, will be greatly reduced.

Q: It's an option #5. Will you take 2 existing roads (instead of separating the roads) - put them together and see what it can do for you. I will submit this in a report with all the numbers. Is there anything that will change this route? Will you consider looking at my idea?

A. *We are prepared to look at all suggestions and options. People need to understand that this is a process that we are going through. If you have suggestions or ideas that can help us get to a better solution, we are prepared to consider those. Yes, the Study Team will review this idea.*

Q: Are we allowed to contact you to get answers when we have specific questions?

A: *Yes, you are encouraged to do so.*

Q: Regarding the road that will go from Mountain Brow Road to Highway #5. This new road from Highway 403 all the way up to that particular point is going to be 4 lanes, when you get to the survey, it will be 2 lanes. If we can do that, then why bother making 2 lanes in the first place? The same people going up that route will be coming up the road that is being made 4 lanes and then ending up in 2 lanes. If you are going to have 2 lanes there - should be 2 lanes the rest of the way - or if you have 4 lanes, then continue 4 lanes all the way up. Why is it going to stop at Mountain Brow Road to become 2 lanes at the Survey?

A: *Mountain Brow Road will continue as 4 lanes. Then, very likely 4 lanes will continue to link up with Dundas Street.* The two lanes are the through lanes and the additional two lanes would serve the collector road function. The next phases of this study will work out the details of the actual designs.

Q: When will this occur?
A: *Initially, there may only be a need for 2 lanes, then as time continues, when the area fully develops, we will probably see 4 lanes.*

C: People coming up Waterdown Road, Mountain Brow Road and up that route, the same amount of people going up that road from Mountain Brow Road to Dundas Street. They are not all going to use that route. That road is there to carry them up along to Highway #5, Parkside Drive or elsewhere.

Q: The presentation commented that Waterdown Road - it was going to be 19 homes and now he is saying zero - that is a big difference.
A: *Councillor McCarthy provided the following information: I have been a part of this process for 12 years. This process was underway since before I became a councillor. The transportation corridors in this community have been anticipated for the last 30 years at least. They have been on the books in the City of Hamilton prior to that. Am I going to take the advice from the process that I've undergone from the beginning and weight all of the information that has gone on prior to that? Yes. Am I going to make a political decision because I'm afraid of making a contentious decision - you picked the wrong person to lead you. I'm going to make the decision that I think is in the best interest of this whole community given all of the information that has come forward If it ultimately transpires that this alignment is where city staff, the engineers, and the planning process takes us, I'll be supporting that.*

Q: Councillor McCarthy, you mentioned that the developer is trying to make it a high-density area in the subdivision behind Waterdown high school. We met with the developer and he disagreed. Can you please clarify?
A: *Actually no I can't. I would like to see that developer here because when he came into the planning process, he was told that the density was too high. He gave us a map of the area showing that he was in favour of lower density. I can tell you that I have never met a developer that has been in favour of lower density.*

Q: Regarding expropriation. I might be the house that gets paved over on Waterdown Road. Who is going to be notifying me, and who is going to be paying for my house?
A: *The process that all municipalities are required to follow is through the Expropriation Act. Our policy in the City of Hamilton is that we will enter into a discussion with affected property owners and we try to come to a mutually acceptable purchase of the property by the municipality.*

There is a whole process we follow of independent appraisal that the property owner is free to disagree with then we have 3rd party appraisals done by the appraiser of the property owners' choice. I can go into much more detail with you. Expropriation is actually the last option for the City of Hamilton. We have a very good track record of fair and successful negotiations.

Q: Would Hamilton expropriate a Burlington home? Or would Burlington expropriate a Burlington home?
A: *No, only the City of Burlington could expropriate a home in the city.*

C: Wanted to point out was that this was supposed to be a fair process. Tonight I was most disappointed when one of your options is now preferred and is now recommended to be closed - and that is King Road I want to put it on record that I oppose that and I have several neighbours that have come up with several options regarding King Road. There is no difference if you look at the map between Waterdown Road and King Road if King Road is improved. King Road can be improved, straightened and aligned to your east-west option. I have a proposal for you which was put forth by the Kettle's who live on Waterdown Road which also recommends that you could in fact split King Road and line it up to Kerns Road and still bring it out to Mountain Brow Road.

Q: At council, you said that you appealed this OPA study, and those lands are going to be developed whether we like it or not. Correct?
A: *We have got 2 decisions that overrule us - OMB and a cabinet decision. As we speak and as you know (we met last week) you asked me for a legal opinion, a written legal opinion, as to whether or not this could be challenged a third time. In fact, I'm getting that to see if we can challenge a third time. The danger of doing that is that we will get the development without the transportation corridors to deal with the kind of growth planned. Do you know why we'll get that? It is because they have 2 decisions that supersede the municipality on growth for this area. They have a reasonable argument at the OMB to say 'you're dragging your heals'. We gave you the order, we told you to develop those lands, the developers have been approved and now you are holding them back. You are going to get the development without the roads.'*

Q: Absolutely, I agree. I understand that we have appealed it twice and lost twice. We can't appeal on the lands being developed; but appeal to the OMB to have the intensification reduced from 6500 down to 2500 homes. It seems like a bad dream. We have enough roads to handle another 2500 or 3000 if we upgrade the roads we have.
A: *Anybody who has lived in this town for any period of time feels the pressure of the growth that has already taken place. Rick Brown has rightly identified the fact that this community has grown exponentially. What used to be a small town, heritage community, has absorbed an enormous amount of growth and transportation pressures. It's*

Irresponsible to suggest that these 2 board rulings can be ignored. That we can just say it's a bad dream. It's a dream that we are going to wake up from.

Q: I am not saying that these lands shouldn't be developed, and when you were appealing, you were appealing the OPA, correct?
A: *We were appealing the developing lands. Yes, all of it.*

Q: I am asking for council to appeal the OPA to reduce the intensification. This could be a bad dream - the roads we have now can't handle that much development.
A: *The OMB ruling, the cabinet decision put those lands in place with the intensity to a great extent. Mary Lou is more familiar with the wording of those decisions. Do you want to comment on that?*

There were corrections in the cabinet approved OPA 28 that specified densities in Waterdown South, Waterdown North, and the Upcountry lands. So it is in OPA 28 that was approved by cabinet what the general densities will be.

C: I understand. I don't know about the rest of the people in this group but I'm getting sick and tired of getting this stuck to me every year for the taxes (it goes up...). Appeal to the OPA to reduce the intensification - that is all I'm asking - not to appeal the land being developed.

ALDERSHOT MEETING

Q: In the presentation Don McKinnon alluded to the payment of the roadwork. Question number 1, what percentage do the developers pay? You alluded to 95%, what are they paying for in that 95%? Is it 95% of all the Waterdown Road and Mountain Brow roadwork -- and any other East-West and so forth?
A: *The attribution of costs is for all components of the projects so it's storm drainage, it's the roadway, it's the asphalt, it's the base, it's the curbs, lighting, all of that.*

Q: Can a developer apply to vary downward their application?
A: *It's not so much an individual developer making an application to vary their obligation. The way it's done is the cities, municipalities - Burlington, Halton Region - we all have development charges bylaws that specify our projects and they are passed by Council. Anybody can appeal that bylaw and an independent third-party will make a decision on that appeal. They can't really vary their individual obligation once the overall appeal of the bylaw is done. Once the bylaw's in place, the charge is the charge.*

Q: Expropriation is a fundamental requirement of the draft plan; what are the homeowners' and landowners' options?
A: *The property acquisition process that we use in the City of Hamilton is to negotiate with the property owners. Clearly what is tolerable to one individual or a family may not be tolerable to another. For example, if our infrastructure is going to eliminate your driveway so that you can't access your property or is going to be in your living room, then we would likely negotiate to acquire your whole property. If there is less of an impact where we would require some of the property (e.g. some of the front yard), and there are things we can do to mitigate the impact whether it's through landscaping or retaining walls, redesigning the driveway, relocating the driveway, providing triple-glazed windows or central air conditioning, then we would look at those options as well. Fundamentally it comes down to individual preference.*

Q: If OPA 28 had not been legislated, would this be happening? Why or why not?
A: *The roadway improvements are being done because of growth in Waterdown from OPA 28.*

Q: At one of the earlier consultations, you said that approximately 60% of Waterdown traffic will be going to the South and to the East, predominantly to the East, of the GTA. Why isn't a greater weight given to the East-West option, i.e. a North-South, via King Road and Kerns Road?
A: *We went through an evaluation of options for the North-South and East-West options. We needed an additional lane in each direction, the preference was to widen Waterdown Road for the North-South, and to follow a route that is mostly on a new alignment for the East-West route. The total of that additional capacity addresses the need, and the route choices are available to all residents that live in the community to get around to the origins and destinations that they are coming from and going to.*

Q: Regarding the Niagara Escarpment - does the Niagara Escarpment Commission approve of the preferred solution and is there a printed report that speaks to that approval (specifically regarding the potential impact on King Road).
A: Yes. *There were a number of pieces of correspondence and we've had discussions with the Niagara Escarpment Commission and Conservation Authorities on their views on the options and were part of a technical group where all of these issues were discussed.*

Q: Since the developer pays 95% of the cost for this approved roadwork, then why wasn't the cost of a bridge taken into account for King Road?
A: *We looked at the range of options for King Road in terms of what it would take to bridge the Escarpment. The impacts are unavoidable, whether they're on piers or whether it's on fill, there are going to be impacts, through construction, there's going to be impacts in perpetuity and on balance, our preference was to be on Waterdown Road. We did look at options of how you would look at accommodating an improvement to King Road.*

Q: In the draft plan, page 89, refers to, quote, "...this minimizes property impact..." Could you explain, or elaborate on, how 77 properties could be considered a minimum impact?

A: *The reference to the 77 properties would have been in the context of the original corridor that we identified as part of the evaluation process. That corridor was then substantially narrowed through our re-examination of the improvements for Waterdown Road, after it had been identified as the preferred corridor. Through that process we were able to determine that most of the property requirements could be avoided through this illustrative design that we've developed. At this point it is not to say that there will be no impacts but to illustrate that impacts can be greatly minimized over the original corridor that was identified in the evaluation.*

Q: On page 11 of the draft report it notes that a 'notice of completion' of this study had been issued; do you know when the notice of completion of study has been issued, and is that a fundamental notice of study that would prevent any appeals of this particular draft or this particular class EA?

A: *The notice of completion would only be issued after the class EA process has been completed. A notice of completion has not been issued - it is an error in the document.*

Q: Do you consider the loss of 460 trees a minimum impact in the area?

A: *I wouldn't consider it a minimum impact, no.*

Q: Can one Municipality, i.e. Hamilton, pay out of its development charges and/or other sources, roads, in another municipality's roads i.e. Waterdown Road (in Halton)? Is it legal for one municipality to pay other municipalities roadways?

A: *There are provisions in the Development Charges Act for one municipality to collect development charges for service provision in another municipality. It is not clear from our research to date as to the precedence where that's been used in Ontario. It's one of the things that we are having our development charges consultant review but, unfortunately, as of today, we don't have a clear answer on that.*

Q: Who is the City of Hamilton's development charge consultant?

A: *C.N. Watson and Associates which did the City of Hamilton's development charges, Burlington's development charges and Halton Region's development charges.*

Q: What is the timeline scenario for this road?

A: ***There are obviously a number of things that could influence the ultimate delivery of the infrastructure. If everything went smoothly it could be finished in three years, however it is more likely that this will take 4 or 5 years.***

Q: How can the landowners request a bump-up to a full Environmental Assessment at this time in this stage?
A: *The opportunity to request a bump-up is at the end of Phase Four when we issue a notice of study completion. There's already been a request to the Minister of the Environment around this issue and a request for clarification and the individual was directed to work with the City of Hamilton through to the end of Phase 4 of the Municipal Class EA process.*

Q: Is the notice of completion posted in the newspaper - is that all that is required?
A: *We are required to publish it twice in local media. Our practice in the City of Hamilton is to do that so we will publish it in the Spectator plus local newspapers and we also send it to anyone that has attended one of our public events and is on our mailing list so that they are aware of the completion.*

Q: Were the people who attended this meeting directed to make sure that they are on those mailing lists?
A: *Yes, absolutely. If you signed in tonight, you will be on our study mailing list so we encourage you to sign in.*

C: Regarding public transportation -- the draft report now focuses exclusively on the new roadway capacity as the primary solution to the problem. After the report recognizes that traveling by auto is not sustainable and that the study is responsive to Smart Growth planning initiatives which include public transit as a key component, the study provides only a 5% solution. Public transit has the potential to significantly reduce the need for more roads. We should not look at roads until we have looked at transit, a look that would embrace answering the question, 'What would it take in service level, to attract automobile users to public transit on a regular basis?
A: Regarding the *transit solution - currently there is some transit, people who drive to the GO station but for the most part in this part of Hamilton and Burlington, there is very little transit use. When we looked at trying to solve as much of the problem with other modes of transportation, other transportation solutions, it included transit, it included things like transportation demand management, our assessment was that with the combination of transit and transportation demand management solutions that could deal with about 10% of the problem. All of Hamilton is about 7% mode split. In this part, we're at zero. There is a long way to come to get 10% of people in this area including the new residents to use transit. It is a significant increase in transit. It has been accommodated through a number of potential services directly into the community, connections through the GO station, Burlington and Hamilton transit. There is information in the report that deals with the transit strategy on how to accomplish that as well as some of the other measures on transportation demand management. There was a fair bit of attention to that part of it. However, we need to be realistic in terms of how many people we can get into modes of transportation other than the automobile and our assessment was that no matter how far we push this realistically we need additional road capacity and so necessarily we had to focus on that part in a good chunk of the report to deal with the*

major impacts, regardless of where the solution ended up, major impacts that we were going to have to deal with. There is a commitment by Hamilton and Burlington and Halton to provide additional and better transit service and other programs to get people out of their automobiles.

Q: Regarding the North-South route solution - concern that the Waterdown Road widening will affect the natural and social environment along Waterdown Road (ANSIs and ESAs) - suggest that this has not been properly recognized in the draft report (or double counted). Option one could be modified to avoid Waterdown Woods and join up with Kerns Road.

A: *Unfortunately this planning process and the need for these improvements are really being dictated by OPA 28. The need to focus the improvements on, or the need to focus the transit improvements on, road improvements is really being driven by the densities that are being imposed within the lands and the locations of these lands that have been approved for development. With respect to having not seen the route for the King Road improvement, the proposed corridor that was recognized in the options and evaluated is presented in the report. The improvement that we recognize in the evaluation is effectively trying to follow the existing road right-of-way up to about the point just South of the Escarpment and then from that point effectively cutting through a new alignment largely because of the tight turns and steep grade that we encounter along the existing right-of-way. Cutting a new alignment up effectively through the Escarpment, up on top of the Escarpment, and then ultimately connecting into the Waterdown South lands and likely connecting into Dundas Street -- When we refer to King Road improvements, that's the option that we developed and assessed as part of the evaluation. There's a point made about the double-counting of ESA's and ANSI's, I can certainly look into it, that certainly wasn't the intention. They were treated as separate environmental components and assessed differently. The evaluation was done through a process of evaluation criteria; the criteria were available for public review and comment. The weights were developed through input from the public, they were made available for comment and that was the process that we used to come up with those alternatives. The impacts on Waterdown Road will continue to be assessed and examined as part of the class EA process and mitigation measures developed to minimize those effects and ultimately feeding into the design that hopefully minimizes impacts along that roadway and to the community as much as possible.*

Q: Have heard that an influx of about 15, 000 people is expected in the Waterdown area. At the present time, the only interchanges we have are at Brant and at Highway 6. You're recommending a four-lane highway on Waterdown Road and a traffic circle at Mountain Brow Road and Waterdown Road. What was the criteria that was used?

A: *With respect to the traffic circle, let me first state that that's not a done deal. It's illustrating a concept; there was a lot of desire in the community to understand what this road might look like. So, we went to the effort of saying what that might the road look like. A traffic circle is one option; a traffic signal might be another option.*

Q: If the traffic circle is not a done deal then why is it recommended?
A: *The recommended solution is the widening of Waterdown Road. The next phase of the study will get to the design; we haven't made a recommendation on the design of the road only that it should be a widening of Waterdown as opposed to an improvement of King Road. Once we've finished Phase 2 and we get further into the Class Environmental Assessment process and go to Phase 3, we'll then look at different ways to design Waterdown Road as a four-lane facility and in that level of detail we'll develop designs that look at whether it should be an intersection or whether it should be a traffic circle, what grades of the road need to change, how we tie into driveways, a whole other level of detail that we have not got to. So the recommendation of the preferred solution is a widening to four lanes not how we do the widening.*

Q: Is it possible to get the list of criteria that you're looking at in proposing, as one solution, a traffic circle?
A: *Certainly when we begin Phase 3 – a set of design criteria will be the starting point of what we're trying to achieve, so they will be available. Anything that we gave you now is not the definitive set; it was just one way to try to illustrate what this corridor might look like because of the intense interest in how it might affect people's properties. So I wanted to look and see how much we should try to mitigate that just by looking at one concept very quickly to minimize those impacts. There will be much more detail and the design criteria will be the starting point of what we're trying to achieve.*

Q: It seems that an electric light rail system might be something to consider and it could bring people to the point of being totally committed to a public transit system rather than a commitment of car and public transit -- is that sensible?
A: *We already have a light rail system; it's actually more than light rail, in the GO Transit service that runs in the corridor right through the community. So that really is our inter-regional transit service that we can hang a lot of other transit services off of to deal with that inter-municipal connection. In terms of having a light rail service to and from Waterdown, based on our assessment of the transit demand, we can accommodate that with buses essentially. There is a point in ridership where one would look at light-rail transit but under the scenarios that we're talking about right here, we can certainly service that demand with frequent bus service to and from the GO station to serve that demand, to hopefully prevent people from getting that second vehicle in the household and to get some of the trips on to transit just by having that bus service connecting to the GO station.*

C: I believe that a bus system is feeding some of the reasons why people don't use public transit and I'm suggesting this light-rail system might entice people to use public transit.

C: Resident read a letter to Parliament from a nine year-old resident of Waterdown Road, writing because she heard that there is a decision being made to widen Waterdown Road. The key message in this letter is "Let's save and protect North Aldershot for future generations".

Q: Assuming that Waterdown Road was to be widened, between Highway 403 and Mountain Brow Road, you can see two significant curves or bumps in the road. Has any consideration been given to continue the road straight to the next significant curve in the road and so you'd have the four lanes going straight (would also avoid fields and residences).

A: *That's precisely the kind of options that we would look at in Phase Three of the work. When we see the kinds of impacts that we would have on the alignment that we have illustrated, if there was another way to minimize it, those are the kinds of options that we would draft up and do a similar kind of evaluation to what we've done here, is do a very detailed evaluation-comparison to pick the option that best meets the needs of the community, the roads and everything else. So, it's a viable option but it's not one that we would look at this level of detail but it's one that we would look at once we confirm that Waterdown Road is the way to go.*

Q: My concern is that property values are based on historical values from sale of property. You can't sell a property on Waterdown Road right now. I am currently paying property tax on a property that was valued based on historical sales and the value of my property has been dramatically reduced since this past summer. What assistance is being offered by the City of Hamilton or Dillon Consulting or the City of Burlington to ensure that property values on Waterdown Road and affected areas are accurately represented? Personally, I feel that I am paying property tax on the historical valuation of a property from over a year and a half ago and I don't feel that's the value of my property today.

A: *The question of property values is a difficult one to answer as far as the impact of a two-lane versus a four-lane road going through your property. The City of Burlington has not found that property values decrease as part of road improvements. Certainly if the road was going closer to your property at an unacceptable distance, it could affect your property and at that point in time we would look at acquiring your entire property. Certainly the properties have to maintain an acceptable level of service for the property owner. We also found that in some instances after road improvements had been done such as improving a rural cross-section with things such as sidewalks, curbs and gutters - those property values increase.*

The City of Hamilton has had similar situations where roadways have not had an impact or the improvements have benefited the property owner. In terms of the property values, neither Burlington nor Hamilton actually set the property values, that is done through the assessment process by the Municipal Property Assessment Corporation (MPAC). If you received your recent assessment in the last couple of weeks, there is a very informative brochure attached to that and we would certainly encourage you to contact MPAC because they can answer the questions about property values where we can't.

As the taxing authority, we have a direct benefit from decisions by MPAC on your property assessments so we don't intervene in those circumstances to provide them with information as to whether we think it should be adjusted upward or downward. We will provide them with factual information as to local circumstances, so if MPAC asked for more information on the road issues, we would provide it to them, but we would not directly intervene in Hamilton.

Q: The interchange (Waterdown Road and Highway 403) is so integral to the City of Hamilton's plans to approve Waterdown Road to accommodate future development in the City of Hamilton. Why is the City of Burlington not working more aggressively with Hamilton -to ensure that this interchange is not fully funded by the taxpayers of the City of Burlington?

A: *The Waterdown Road interchange has been a high priority for the City of Burlington, particularly the Aldershot area for many years now and the City's been working closely with the Ministry of Transportation to complete the Environmental Assessment which has been done and we're now in the process of finalizing a cost-sharing agreement with MTO and we'd like to proceed very soon to the detailed design and, ideally, start construction hopefully sometime in 2006. Right now we're proceeding on the assumption that Hamilton is not contributing to the interchange however, we are in the process of negotiations with Hamilton as far as cost-sharing for the road improvements in this area and, so, those discussions will be finalized sometime this fall.*

Q: If Waterdown Road is widened, would it still be a restricted weight road?

A: *We don't foresee Waterdown Road becoming a major truck route in the future. Right now, the major North-South routes in Burlington from the QEW are Brant Street and Guelph Line which are both Region of Halton roads and Highway 6 is the other major North-South haul route between the Burlington and Waterdown area. Highway 6 is also being improved to include a North-bound truck climbing lane so those improvements will basically encourage truck traffic to use those major roads. Waterdown Road will be built to a standard that will allow some truck traffic that would serve the Waterdown Road area, but we do not foresee Waterdown Road to be a haul route for large trucks. In the event this became a problem, the City would look at putting some kind of restriction on Waterdown Road in the future.*

Q: The biggest item there is $18 million for Waterdown Road, that's in Burlington. You said the developer would pay 95% of the cost of the pavement and the curbs. Is that right?

A: *Almost. The 95% is for all of the road costs so its things like the asphalt, the road base, the curbs, the gutters, the lighting but it's all of the roadway costs associated with improving the road.*

Q: Are the development costs paid by the developer?

A: *Yes.*

Q: Regarding the $18 million for Waterdown Road -- Is that going to be paid by Burlington or Hamilton?
A: *That decision hasn't been made yet. One of the requirements in OPA 28 is that Hamilton and Burlington negotiate a cost-sharing agreement for roadway improvements. We have started the discussions but they're not complete and we expect that they'll be complete this fall. So, unfortunately, as of today, we don't have an answer on that but it's something that we're working on.*

Q: If you follow the law, as it exists, where a municipality can't pay for roads in another municipality, I don't see how that negotiation is going to satisfy Flamborough.
A: *There is a provision in the Ontario Development Charges Act for charging for services in another municipality. The City of Hamilton has requested C.N. Watson, which has done our development charges bylaw to provide us with advice on how we can enter into these cost-sharing discussions and come to an agreement. Similarly, Burlington has engaged Hemson Consulting to provide them with advice. I think the message and the information we want to provide is that we believe that growth should pay for the growth-related costs and I think that's something both Burlington and Hamilton believe.*

Q: Has the potential impact on traffic flow on the fairly significant East-West roads through Aldershot been factored in?
A: *When we looked at the transportation requirements in the area, clearly the new development in Waterdown is driving a lot of the need for the new capacity. But when we look at it, we look at the whole system. One of the other major improvements for additional capacity that is planned for this area that we haven't really talked about, is the widening of Highway 403, or the potential widening of the 403 from the QEW through to Highway 6 which would provide an additional lane in each direction through that area which would, provide much of that needed capacity to deal with some of the congestion that is occurring in that section. For the majority of the time the recommendation that we have included will address the future need. Are there going to be situations where there's an incident and something happens and the system is congested? Sure. But for the majority of the time, widening of the 403, the additional East-West capacity that we're providing for the North part of the study area and some of the other intersection improvements, should deal with the growth in the area.*

As soon as there's an incident on the QEW/Highway 403, it does have a huge impact on Burlington streets, and, basically, we hit a gridlock situation. The Region of Halton and City of Burlington and the MTO have an emergency response plan (Road Closure Action Plan) that is implemented for incidents on the QEW/Highway 403, to try to keep them on the City's arterial roads and we do appreciate the impact when some of that traffic does start to filter through our collector and local streets. It's certainly an issue that we have to deal with and, as Claudio mentioned,

the City has been strongly encouraging the MTO to proceed with the widening of both the QEW and Highway 403 for a number of years now and they are starting to do some of the initial, preliminary work. Hopefully before this OPA 28 development is complete, MTO will improve some of their provincial highway system through Burlington.

Q: Suggest that the developers put the money up front to pay for the development.
A: *We're looking into this as part of the cost-sharing and the implementation through the development applications that are coming forward for subdivisions.*

Q: On the recommended transportation system map - there is nothing highlighting the interchange at Waterdown Road (no dot) and Highway 403.
A: *That interchange was a given and is not highlighted on the map. The intersection at Dundas and Highway 6 is also not highlighted. The dot that is at King Road and what appears to be the 403 is actually the North Service Road, there's no interchange at the 403 and King Road, it is a minor intersection improvement to deal with additional traffic in that area.*

Q: Who is responsible at the Ministry of the Environment who will be reviewing this Environmental Assessment?
A: *Minister Garretson is the Minister of Municipal Affairs. James O'Mara, a staff person for the Minister responded. He is Director of the Environmental Assessments and Approvals Branch at the Ministry of the Environment.*

Q: Has the new East-West road in the new North development been approved? ?
A: *No, the East-West road that we're proposing through this process is still just that, we have to complete the rest of the Environmental Assessment process before construction can begin.*

Q: Will it be a four-lane highway?
A: *Right now, the design protects for four lanes. Certainly the Parkside Drive portion would be four lanes. Initially we would probably build two lanes but those are some of the design details that we would get into in the next phase.*

Q: Is the intent to widen Parkside Drive and continue over to Evans Road until Dundas?
A: *No, it's a brand new road. It would run along the East side of the Upcountry property on a brand new alignment.*

Q: Does Hamilton ever intend to go further? Does Burlington ever intend to widen Parkside Drive in the Hamilton area and then Number One Sideroad, which is the continuation of Parkside Drive? The reason I'm asking, in the spring, there was a study area identified that went from Highway 6 right over to Cedar Springs and it included the Burlington side of Number One Sideroad.

A: *Initially, we included an East-West alternative that did use Number One Sideroad when we had a very broad study area. As we refined our evaluation process we found that that option was not a good option and we dropped it.*

Q: Does Burlington intend to do something with Number One Sideroad?
A: *Burlington has no plans to widen Number One Sideroad.*

C: Why would we not improve the roads that we already have? Such as Parkside Drive, let's improve it. Let's widen it to what we need. If it needs to be a fast-lane road, let's make it so. But be sure that we deal with those folks that are impacted by that in a fair manner, buy their homes pay them well. We have concession roads laid out, why not use them. Instead you are going through my good farmland (Where I grow trees). Are we not talking out of two sides of our mouth when we say, yes. What is this impact you're talking about? I hate to see that the curve is going right through a farm that I am developing. I want to grow trees there, trees, wonderful for what we need, for what the little girl wants. There's a road right beside there, let's widen it, let's look after the folks that live along there and carry on. I really believe that's the answer.

C: Suggest that Brant Street remain a viable option.

Q: If you travel down Waterdown Road to get on Highway 403, concern that not everyone would want to go directly to the 403, if you are building that road just to get on the 403, that's a mistake. Where will the vehicles go, if you don't go on the 403, you continue down into Aldershot.
A: *When we look at the travel demand, we focus on the peak period, not the weekend, not the shopping trip, we're talking about the a.m. and p.m. peak periods where the majority of the travel is, and when we add 6,000 homes and whether that's 15 or 20, 000 people many of them are commuting in the peak periods and so that's the demand that we're trying to satisfy. And when we look at the system here and with the addition of that additional demand, we need an additional lane, North-South in each direction, an additional lane East-West in each direction. Getting to and from the 403, whether you're going to Hamilton or Burlington to work, or coming back from work, is a major destination corridor. The interchange is a point where people are trying to get to the 403 and throughout the region. That demand will be there and we need to be ready for it. And, so, that's the basis for the need for an additional lane North-South and East-West. We've gone through the process of describing the alternatives in the evaluation.*

Q: The developer plans to build approximately 600 homes and also a school. Were you aware that there was going to be a school built along Waterdown Road?
A: *Yes.*

Q: Are you aware that there was a school proposed?
A: *I am not aware of every single specific development but certainly I know that there are a number of homes that are being planned and I wouldn't be surprised if there was a school.*

Q: King Road would be more expensive to widen than Waterdown Road. Is that a fair statement?
A: *Yes.*

Q: Now linking the two together, 95% of X being a big number and 95% of Y being a big number, what muscle did our developers have in swaying your results?
A: *Absolutely none. This was a technical review by staff at the City of Burlington, the City of Hamilton, the Region of Halton, Halton Conservation Authority, and the Niagara Escarpment Commission overseeing Dillon Consulting. The development community has one representative on the stakeholder advisory committee; they've had representatives here tonight and last night although none of them chose to speak. They had absolutely no impact on the recommendations this team made.*

Q: In regard to Stantec's recommendation four years ago -- in its early phases, they said King Road. Now, this result is puzzling. It is because 1) either the developers didn't like that answer so they asked for a different consultant. Why would you spend the excess money, and not pick up where groundwork has already been laid in researching both King Road and Waterdown Road. In the criteria weightings, it was noted that there was a heavy weighting of environmental impacts to the King Road option and a heavy weighting on social impact on Waterdown Road. Four years ago Stantec obviously felt that the environmental impact wasn't enough in order not to recommend King Road as the preferred option. How can it change in four years?
A: *The Stantec study was completed in 1999, however, it was never approved by any of the required approval authorities, either the Town of Flamborough at the time or the City of Burlington, the Region of Halton, and the Region of Hamilton-Wentworth so that study has no status. It did not receive approval under the Environmental Assessment Act either. After the Cabinet decision was issued in 2002, the City of Hamilton, the City of Burlington and the Region of Halton sat down to look at our obligations to implement the cabinet decision (please note the Regional OPA 28 agreement was originally signed by the Town of Flamborough, City of Burlington, UpCountry Estates Ltd., North Waterdown Landowners, Palletta International, Salem Christian Mental Health Assoc., and Angelo Agro by: CIBC Trust Corp.) one of which was to complete the Waterdown-Aldershot Transportation Master Plan. When we looked at what had transpired in the intervening three years since Stantec had completed their study, there had been some significant changes in terms of the assumptions of that study. One was that the transportation information had been updated in 2001 as we all jointly participate in the transportation data collection in the Greater Toronto Area. The second was the opening of Highway 407 and the third was the planning of the Waterdown Road interchange. The*

Stantec report was based, in part, on an interchange in the vicinity of King Road. We knew in 2002 when we started the review, the Waterdown Road option for the interchange was being actively pursued. We also knew there had been changes in transportation issues in the area. Taking all of that together, it became very obvious that if we filed the Stantec report for approval, we would have serious challenges to it because of the time that had passed, the changes in the assumptions, and where development was proposed in the area. The prudent and wisest course of action that we all jointly decided upon was to start again. It wasn't an easy decision and it certainly wasn't influenced by any developer. They were not in the room and they were not party to the discussion. It was the project team, which includes staff at Conservation Halton and the Niagara Escarpment Commission, as well as the representatives of the three municipalities. For those reasons, we began again with Phase 1, which was completed probably about 18 months ago by SNC Lavalin, which is "What is the nature of the transportation problem? Do we still have capacity deficiencies?" and they confirmed that we did. That report was endorsed by all of the municipalities as well as Conservation Halton and the Niagara Escarpment Commission. We then moved on to Phase 2, which deals with where we're at tonight, starting approximately a year ago with "What are the issues? How are we going to address them?" The development community has an interest; they are not driving this process. This is to find the right transportation solution. I recognize that this is controversial but I do want people to understand that this is not being driven by development interests in terms of the solutions. The need for transportation solutions is because of growth in Waterdown.

Q: The weighting on the environmental issues on King Road should be zero because now with the reasons you gave me for the change to Waterdown Road predominantly around traffic flows and the location of the interchange. So, your assessment of the environmental impact on King Road is wrong. Because, what I've heard from Mary-Lou now, is the reason, and the sole reason, for changing to Waterdown Road is not because of an environmental impact as Stantec found as not an issue, but because we have an interchange.

A: *Mary Lou spoke to the context for starting again, not why we picked Waterdown Road over King Road. The selection of Waterdown Road over King Road was based on the reasons documented in the report. The weighting of natural environment versus the social versus transportation and cost are the same for each alternative. We don't change the weight based on the route. We evaluate each route on its merits with a certain weighting to the criteria that we put forward. And, in our view, where it came out was that Waterdown Road, on balance, taking everything into consideration is the best solution. Natural environment impacts are greater on King Road, social impacts are greater on Waterdown Road. But, on balance, in our view, Waterdown Road was the preferred solution.*

Q: Well, then either I've misunderstood the process so far, and possibly I'm the only one but I thought that the weightings were very specific to each roadway. Now, as I recall one thought process, you chose not to go with Stantec, I'm going to continually have a tough time believing that the developer had nothing to do with this, but Stantec obviously had

some very good groundwork that would have been usable and would have been very efficient to retain them to continue this project. So that is peculiar in itself. One person indicated last night that there are actually more environmentally sensitive areas on Waterdown Road than King Road. So, I got all these arrows pointing in the wrong direction and how do we address this going forward because it seems like you have these boards and you have the slides that acknowledge all the residents in the communities' issues. But, yet, they're there for show, and you continue on and press forward without any change in direction. And so the social impact has now been weighted approximately down to zero for Waterdown residents. I was just wondering how this process changes after a meeting such as this. Is this just smoke and mirrors and we press on?

A: *Let me speak to the issue of the selection of Dillon. It was done as an open Request for Proposals that was evaluated by Halton, Burlington and Hamilton. Stantec did not submit on it. So, that's how Dillon was selected.*

In terms of the weighting of the criteria, it's been consistent throughout. When we developed the criteria through the stakeholder advisory committee and through our discussions starting last October, it's been consistent in terms of how things are weighted, we haven't changed the weightings.

There have been changes to the project since we began. The initial map that we released last November 30 showed the Waterdown route going through what's known as the 23 acres in Smokey Hollow and after a lot of discussion around that issue, we did change that option. The information you provide in your comments, your concerns and your questions are very valuable to us in learning more about the community and the impacts and the issues and how we can try to resolve them. I can tell you that we have met with a number of you in this room about your individual properties and it is important information to us. We want to take the time to meet with you, we do go out after we meet with you to look at the properties again and so we have a better understanding of your concerns and we can work to address them.

If there are specific areas, or issues that people don't understand or don't agree with, then tell us where it's inaccurate and we will certainly look at it, and correct it, where it's found to be valid.

Q: I've attended many of these meetings as many people here have; I have not yet heard one person speak in favour of your proposed recommendation. At last night's meeting, with close to 250 people, not one person spoke in favour. They raised the same issues that are being raised here today. How seriously are you going to consider this?

A: *We do consider all the issues very seriously. This is a difficult project, we certainly appreciate that and we know you appreciate that as well. These are not easy answers, there are 6,500 homes coming to Waterdown. We are dealing with escarpment crossings in some of the most significant natural areas in the City of Hamilton and probably in the City of Burlington as well. Finding a solution is hard; I think we can all appreciate that. We're here to listen and*

we're here to learn. In the end we may not agree. But we hope, through this process, that we can gain a better understanding of your concerns so we can do better transportation planning in this area. We want you to know that your input is valuable and we're committed to providing you with meaningful responses to your concerns.

Q: Regarding the development charges act -- under normal conditions, would I be right in saying that they would go into the City coffers? Under normal conditions, if we didn't have this roadwork.
A: *No. The development charges are held in a separate reserve and they fund the growth related projects that we've identified in the Development Charges Bylaw. We can't use them for operating purposes and we can't use them for projects that we would fund through the Sewer and Water or Waste budget.*

Q: Does it still end up becoming the City's money, whatever it's used for?
A: *It is City money in that we collect it and we hold it but it is restricted in how we can use it.*

Q: Concern that the developers aren't paying for this, and that the City of Burlington will be paying.
A: *No, the way the process works is we identify the project. There's a whole series of projects. There are pumping stations, water mains, water booster stations, and water towers. We charge developers for all of that. Then we hold that money and when a project comes forward that is to be paid for by development charges, we take that money to pay for that project.*

Q: I was told in one of the earlier meetings that because of this development on Waterdown Road you'd be putting sewers in all the way up the length of the road because you'd be encroaching on septic systems.
A: *The issue of sewers was identified to us. We haven't come to a recommendation on that but we are certainly aware that a number of the septic systems are in the front yard and there's limited ability to relocate the septic systems for some of the properties. Provision of sewers is something that we are going to look at. How that is funded is also going to be determined. Note: Subsequent to the meeting, the Region of Halton advised that at this point there is no project identified in Halton's Capital Budget for the provision of wastewater mains on Waterdown Road. North Aldershot has been identified as a future growth area, so it is possible that developers may come forward and construct sanitary sewers as a condition of development approval. At this point there are no approved servicing studies to identify where these services will be constructed. There is also no firm timeframe to indicate when they will be built.*

Q: Aren't the developers paying for the sewers?
A: *If it's been identified in the Development Charges Bylaw and I don't know if it's in the Region of Halton's bylaw.*
Note: Following the meeting the Region of Halton noted that the future sanitary servicing for the North Aldershot area

falls below the size criteria that would make them "Development Charge" facilities. This means that Halton would not be constructing these services. It would be the responsibility of developers as conditions of development approval to construct the sanitary sewer system.

Q: When you develop the road I would imagine you would have to put in a upgraded water system because the main going up Waterdown Road is made out of concrete and it was probably put in around 30 years ago, 40 years ago, so that would have to go into your cost too, wouldn't it?

A: *I can't speak on that issue in particular, but the upgrade of that existing water main would be a Region of Halton long-term maintenance cost. The reconstruction of the road itself wouldn't necessarily trigger the improvement to their water system but if the Region of Halton is planning for that upgrade as part of their overall maintenance program, we would do that at the same time. Note: Subsequent to the meeting the Region of Halton advised that based on their records a 250 mm steel watermain was installed in 1972 on Waterdown Road from north of Craven Avenue to the Hamilton border. There is a 350 mm watermain and a 600 mm concrete main on Waterdown Road from Plains Road to just north of Craven Avenue. Records indicate the 600 mm main was constructed in 1981. There are no records for the 350 mm watermain. None of these watermains are scheduled to be replaced. There are some funds budgeted for relocations as part of the Waterdown Road interchange at Highway 403.*

Q: That's several kilometres of maintenance, and a large expense. Taxpayers shouldn't have to pay for this.

A: *If the water main needs maintenance, regardless, it would probably be done at the same time as the road works construction. If it needs expansion because of development that expansion cost would be the developer's. That's the principle the Region would follow regarding water mains. Phase Three will take a more detailed look at the cost estimates. Right now, we're looking at high-level cost estimates, Phase Three will drill down into more detail. Note: Subsequent to the meeting the Region of Halton advised that taxes do not pay for watermain replacements. Replacements are funded by water rates. Halton has an evaluation process based on the maintenance history of infrastructure which determines if and when it is replaced.*

Q: Regarding King Road, are you going to leave it at a lane and a half, or two lanes for the next twenty or thirty years? There's going to be a lot of pressure on it.

A: *In the report we propose a number of possible options. It could be one way, it could be closed, it could be left alone, some other restriction could be put on it. A number of things could be done to King Road. It will be dealt with in a future stage.*

Q: Please clarify the development charges - is it $12,000 for each home, or $12,000 plus the charges for the road?

A: *The $12,000 is the City's existing development charge per single-family home and it applies City-wide whether you develop in Binbrook or the Meadow Lands, Stoney Creek, or Waterdown. When we complete this study we will update that bylaw to include all the costs from this study so that charge is going to increase. Development in the OPA 28 lands will pay the increased charge. But because it's a City-wide charge and we're adding the Waterdown Road improvements, if you're developing in Binbrook, you're paying for improvements in Waterdown as well. Similarly, new homes in Waterdown will be making a contribution to the Red Hill Creek Expressway.*

It'll be the $12,000 plus what we add to the development charges bylaw for road improvements in Waterdown. In addition, there is a special charge for OPA 28 and it's $1,052 per unit and that's over and above the $12,000 and the additional road costs.

Q: There'll be the $12,000 plus the $1,000 plus the $20 million cost of the roads, is that correct?
A: *Yes.*

Q: Are the trees going to be replaced that are lost on Waterdown Road as a result of this construction?
A: *Yes we have considered it, it's part of the evaluation that landed us on Waterdown Road. As we get into Phases 3 and 4 of the work, we're going to try to minimize impacts. Some impacts are going to be unavoidable but mitigation plans will be put in place. The whole range of mitigation issues will be looked at. It will include what are we going to do to fix up the impacts that we cause.*

Q: Well, unfortunately, some of the trees that we've planted are probably on City property. Will they then be considered to be replaced some way or another?
A: *Yes. We'll be looking at finding ways to mend the impacts.*

C: I live beside the Waterdown High School where I have, on occasion, been called to help with deer collisions. I question that King Road is more of a habitat for wildlife than Waterdown Road. Surely, that East-West corridor which looks to me like a bypass around the village connected to a major highway, Highway 6 at the West end and Highway 5 at the East end, is going to be very attractive to trucks and they'll be dusting along in the backyards of Northlawn residents. Northlawn will have to be closed off because there is no safe turning distance between Northlawn and the proposed road. You need an approach to an intersection. The Highway Traffic Engineers stipulate about 6, 7, 800 hundred feet. Main Street will maybe have to be closed, that's the same kind of talk that we heard at the Waterdown High School in 1999. I spoke out about it then and I just cannot see the point of coming so close to the subdivision if it's going to be a noisy truck route. There's lots of room in the back field there to move further North with the road, get it out of the quicksand. The costs are going to be astronomical behind the high school (which is that open space with the hatching at

the top left of the map) there's quicksand there that has to be drained. There's wildlife in the bush there, deer, foxes, coyotes, you're going right through a wildlife habitat and you don't want to go down King Road. Now, you got one law for the West and another one for the South, and maybe more but there's no consistency. King Road, to me, was a dump when I was a kid, a garbage dump an it is environmental. Our land is flooded by environmental activists who can report to Oceans and Fisheries in Yellowknife and Victoria as well as the Burlington Bay. You are not going to get anywhere with your studies until the water is out of that hatched area North of Parkside.

C: I think we've heard a lot of the contention and appreciate all the input the panel has had and you've shown a lot of concern for our issues and the things that are faced in our community and you've heard a lot about the North-South roads. A lot of folks here have a lot of contention about the study and the analysis. Are we putting in a road that people really want to go east and we're sending them West? Are we displacing a number of residents when we don't need to? Are we spending a lot of money, a lot of time and not getting the results we want? So, I think the Dillon group has put together their report, a lot of people aren't agreeing with it, we're at a critical stage now where they're telling us that they're going to drill down into fine details. So, what I recommend, since we're at the stage where we need to decide if we're going to put tens of millions of dollars in this system, that we really take a look at what other options are available. Let's spend a little bit of money, and take it to a third-party to evaluate the report to date, to give a second opinion. So we can make sure that whatever we're building for the decades to come is proper, is well thought out and is money well spent. I'd like your comments please.

A: *We can certainly review your request but my initial comments are that the work has been reviewed internally by our Transportation engineering staff at the City of Hamilton, likewise at the City of Burlington and the Region of Halton. So, it has really had three peer reviews done by people who have expertise and knowledge in transportation engineering and planning. Because of the significant environmental issues staff at Conservation Halton and the Niagara Escarpment Commission have also done reviews on those components. So, I'm certainly prepared to have discussions with my colleagues about that.*

Q: If we want to proceed, how do we do that (If we want to drill down into that option)?

A: *It's certainly something we will take from tonight and have some discussion.*

Q: Is it coincidental that East-West is primarily on new right-of-way and North-South is primarily on an existing right-of-way?

A: *The quick answer is yes. The North-South piece that runs through Waterdown is through development lands so in the East-West as well has a large chunk. We had alternatives on Parkside and on Dundas.*

C: If you put a lot of the North-South on a new right-of-way, you might make a lot of people on Waterdown Road much happier. It'd be a fairly simple thing to do, turn that into a quiet residential street and make your new four-lane road either to the East or to the West.

Q: What I'm hearing now, through this whole process in both Waterdown and Aldershot is that we're sacrificing current communities and current residents for future growth. You have an opportunity to satisfy every single person in this room. You can propose a King Road and, yes, a little bit of a backtrack to Waterdown Road intersection which will satisfy every single person here, I would imagine, or very close to. I apologize for the couple of residences on King Road. And the people in Waterdown South, the new development, won't know the difference. You're solving two problems there. There's nothing stopping you from being creative, maybe going against the grain of typical planning to make this work. There's nothing from stopping you from proposing an equivalent to what you proposed for King Road being just a North-bound at the Escarpment area. There's nothing stopping you from maybe blocking traffic altogether coming in and out of Grindstone Creek. Turn that into what it was intended to be which is the Bruce Trail in a quasi-park and you can make it a dedicated park so now you've recaptured an environmentally sensitive area. You can potentially block part of Mountain Brow Road to protect Waterdown Road completely and you can force traffic eastward along Mountain Brow Road down King Road. You have the opportunity for creative thinking, creative implementation solving the current residential and community issues to maybe a slight cost to the environmental issues on King Road which didn't appear to be an issue for Stantec for a little bit of an inconvenience to go backtracking along Service Road which is all commercial and industrial so you have no social impact there along with not impacting any new development because nobody would know the difference. So, I appreciate you guys at least looking at that and commenting on that in any capacity. Not right now, you can do it as a follow-up.

Q: How do we begin the discussions about the tolerance threshold when it comes to negotiating acquisition with the City?
A: *Generally we will contact you about acquiring the property we will need for the roadway improvements. Let me give you an example from another project we worked on. It's a bridge program in North Hamilton and we acquired five homes. The first three we were in the homes closest to the embankment, the next one, we had completely cut off the driveway although we weren't in the house, and the last one we were able to leave a very short driveway and a small front yard. But in all of those cases, we acquired the entire property because the impacts were so severe. It's generally our practice that we will enter into discussions with property owners to come to a mutually satisfactory agreement. We have the maximum flexibility when we take that approach. There are dispute resolution mechanisms throughout the process for property owners, some are statutory. If we get to the situation where we're truly at an impasse and we simply can't agree, we will initiate expropriation. It really limits our options because the expropriation act only allows municipalities to acquire what they absolutely need for roadway purposes. So, if we're talking about your ten-feet example, we're stuck because we can only take what we require for the roadway and then*

we end up in a third-party situation, a third-party making the decision for us. So, that's why, in all of these situations, our preference is to negotiate a mutually satisfactory resolution because we both have maximum flexibility in that case.

Q: If bylaws and legislation is changing between municipalities for cost-sharing, what is the mechanism for us to find out? What mechanism can we find out when and how that legislation is changing so we can actually petition it if we're against it?

A: *The Development Charges Amendments for the City of Hamilton will be initiated sometime next year. I don't have a date for you unfortunately. The best thing to do is check the Friday ads in 'at your service' on the very last page of the front section of the Spectator. Amendments to the Development Charges bylaw require public notice, I believe they require public meetings too. In terms of the cost-sharing agreement between the City of Hamilton and the City of Burlington, it's the subject of ongoing discussions. At this point in time, we don't have C.N. Watson's report. I'm not sure when they're going to be completed and when they're going to be made public. I would suggest you just keep in touch and we can update you as that part progresses.*

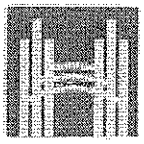
C 3 - Stakeholder Advisory Group Materials

Waterdown-Aldershot Transportation Master Plan

Stakeholder Advisory Committee

TERMS OF REFERENCE AND WORKPLAN

November 2004



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1.0 MANDATE

The Waterdown-Aldershot Transportation Master Plan Stakeholder Advisory Committee is established by the City of Hamilton, City of Burlington and the Region of Halton. Its mandate is to provide a forum for in-depth discussion of project issues with a representative group of interested citizens and stakeholders. In particular its role is to:

- Provide a balanced, inclusive discussion and advisory forum for community members and stakeholders;
- Review and provide comments on draft documents produced through the review process;
- Provide a forum for the discussion of issues, opportunities and solutions; and
- Discuss other relevant matters that the Project Team refers to the Stakeholder Advisory Committee feedback.

The Stakeholder Advisory Group reports through the TMP Project Team to the City of Hamilton, City of Burlington and the Region of Halton.

2.0 WORK PLAN

The following table outlines the key phases, purpose, action and timing of the Study consultation program.

Technical Steps	Public Consultation and Communications Steps
Task 1 and 2: Project Initiation and Strategic Overview	Develop public consultation plan Public Notice of Commencement Web Site
Task 3: Analysis - Transportation Demand Management - Problems or Opportunities - Generation of alternative solutions - Transit - Develop Evaluation Process and methodology	Input to Alternatives and Evaluation Criteria Public Information Centres – Waterdown and Aldershot; Stakeholder Advisory Committee (1 meetings)
Task 4: Plan Formulation - Identify strategic solutions - Environmental assessment - Develop network solutions and recommended solutions; - Financial assessment - Phasing - Alternative functional plans - Draft Transportation Plan	Review Results of Evaluation: Stakeholder Advisory Committee (1 meeting); Review Alternative Solutions/Functional Plans: Stakeholder Advisory Committee (1 meeting) Review evaluation and Alternative Solutions/functional plans Public Information Centres (2 meetings)
Task 5: Plan Confirmation and Documentation - Finalize Plan - Presentation to Council	Review Draft Transportation Master Plan -Public Information Centres (2 meetings) - Stakeholder Advisory Committee (1 meeting)

The following listing presents the Stakeholder Advisory Committee's meeting plan, which identifies the key work steps anticipated for the SAC over the course of the TMP.

SAC Meeting	Meeting Topics
SAC Meeting #1 **November 2004**	Role of the Stakeholder Advisory Committee Background to the Transportation Master Plan Summary of Public Meeting Advice Review of Transportation Alternative Solutions/Functional Plans SAC Advice on Transportation Alternative Solutions/Functional Plans
SAC Meeting #2 **January 2005**	Review and Advice on Evaluation Criteria to be used in evaluating alternatives, and selecting preferred transportation network solution(s)
SAC Meeting #3 **May 2005**	Review recommended alternative solutions/functional plans. Review recommended transportation network solution(s), programs and policies.
SAC Meeting #4 **September 2005**	Review of Draft Transportation Master Plan

3.0 MEMBERSHIP

The Stakeholder Advisory Committee shall be comprised of representatives from:

- Local Community –Waterdown North
- Local Community – Waterdown South
- Local Community – Aldershot
- Senior Citizen Organization representative
- Youth Organization representative
- Community at Large – Waterdown (2)
- Community at Large – Aldershot (2)
- Environment Organizations – Hamilton, Burlington and Halton
- Business Organizations – Waterdown and Aldershot
- Recreation and Tourism (2)
- Councillor Rick Craven, City of Burlington
- Councillor Margaret McCarthy, City of Hamilton
- Developer
- Cycling Committee
- Education
- Transit Users Group
- Safety Organization

4.0 TERM OF MEMBERSHIP

Membership on the Stakeholder Advisory Committee will commence on November 23, 2004 and be effective until the completion of the study process and the development of the Transportation Master Plan (expected to be Autumn 2005).

5.0 MEETINGS AND ATTENDANCE

The Stakeholder Advisory Committee will meet four times over the course of the study or as necessary, as determined by the Project Team and agreed to by the members. Members are encouraged to attend all meetings.

6.0 MEETING TIMES

Meetings of the group will normally take place between 7:00 p.m. and 9:00 p.m. on weekday evenings.

7.0 RULES OF CONDUCT

Decision-Making

As a feedback forum to the project team, the Stakeholder Advisory Committee should operate by consensus to the extent possible. Where differing viewpoints and opinions exist, these will be noted in the SAC meeting reports.

Roles and Responsibilities

As a Stakeholder Advisory Committee member, each participant agrees to:

i) Consider any matters, issues or information referred to them by Project Team relating to the TMP process, and provide advice and recommendations as requested.
ii) Liaise with the organization they represent (if applicable) and bring forward advice, issues or comments from their organization to the Stakeholder Advisory Committee.
iii) Strive to operate in a consensus mode, where participants openly discuss views and opinions, and seek to develop common ground and narrow areas of disagreement to the best of their ability.
iv) Ensure that the results of Stakeholder Advisory Committee discussions are accurately recorded in the meeting records, or in additional documentation that members may determine are needed.

8.0 MEETING AGENDAS

The agenda for the subsequent meeting will generally be set at the end of each meeting

Agenda items that are brought forward outside of Stakeholder Advisory Committee meetings will be dealt with at the beginning of the next meeting through the creation of a consensus agenda.

9.0 ADVISORS/EXPERTS

Advisors/experts will be invited to participate as needed to provide input and advice to the Stakeholder Advisory Committee on issues concerning the TMP. Advisors/experts will not be active participants on the Committee.

10.0 STAKEHOLDER ADVISORY COMMITTEE SUPPORT

Lura Consulting has been appointed by the Project Team to act as a neutral facilitator to the Stakeholder Advisory Committee. His/her role will be to liaise between the Stakeholder Advisory Committee and Project Team staff and assist with administration of the Committee.

A member of the consulting team will also be present at each meeting to take minutes. The minutes shall reflect the general discussion, any action items required and the individual/group responsible for addressing the action item. Any issues that are raised that are outside of the meeting agenda but that require future discussion will be tracked.

11.0 REPORTING RELATIONSHIP

The Stakeholder Advisory Committee is acting in an advisory capacity to the TMP study team, and is not responsible for the decisions made by the Project Team and partners. As such, all recommendations from the Stakeholder Advisory Committee to the Project Team shall be made through the Project Manager, Andrew Head. Stakeholder Advisory Committee members should direct any comments on reports or correspondence for consultants to the Facilitator who will forward the information.

WATERDOWN / ALDERSHOT TRANSPORTATION MASTER PLAN
STAKEHOLDERS ADVISORY COMMITTEE MEETING #1
NOVEMBER 23, 2004

Minutes of Meeting

The meeting commenced at 7:00 p.m., November 23, 2004, in the LaSalle Park Pavilion in Burlington.

In attendance:

Project team:

Andrew Head, City of Hamilton
Mary Lou Tanner, City of Hamilton
Allen Magi, City of Burlington
Claudio Covelli, Dillon
Brent Hooton, Dillon
Sally Leppard, Lura Consulting (facilitator)

Stakeholders:

Zach Beers, Waterdown resident / youth
Doug Brown, Burlington Cycling Committee
Jim Dwyer, Tyandaga resident
Mike Foley, Halton / Hamilton Homebuilders Association
David Gale, Region of Halton Ecological Advisory Committee
Elaine Hutchinson, Aldershot Community Council Traffic Committee
Martin Ince, Dundas-Flamborough Environment Committee
Hugh Johns, Aldershot Community Council Development Committee
Margaret McCarthy, City of Hamilton Councillor – Ward 15
Karen Pollard-Josling, Aldershot business owner
John Riveren, Waterdown BIA / Chamber of Commerce
Margaret Robertson, Waterdown BIA
Cathy Robitaille, Alexander Place
Shelley Scott, Flamborough Information and Community Services
Guy Sheppard, Burlington Sustainable Development Committee
Ed Stevenson, Waterdown resident
Bron Tregunno, Burlington Road Safety Committee
Dale Wood, Waterdown Parks and Recreation

Meeting Introductions / SAC Terms of Reference and Work Plan

Mary Lou Tanner, the Manager of Strategic and Environmental Planning for the City of Hamilton Public Works Department, welcomed the participants and introduced the project team.

An independent facilitator, Sally Leppard of Lura Consulting, moderated the meeting. Once the Stakeholders Advisory Committee (SAC) members had introduced themselves, Sally reviewed the draft SAC Terms of Reference and Work Plan. The following questions and comments were noted, with responses where provided:

Q: Will a Hamilton cyclist group be represented?
A: The SAC member may invite a representative if desired.

Q: Suggestion to reword the final paragraph ("Reporting Relationship"), in which it is noted that comments should be directed to the Facilitator for forwarding to the project team "as appropriate".
A: The reference is not intended to imply a screening of comments, and the words "as appropriate" will be deleted accordingly.

It was agreed that the Work Plan and Terms of Reference (modified as per the comment above) were considered to be acceptable.

Background to the Transportation Master Plan

Claudio Covelli, Project Manager for Dillon Consulting, gave a brief presentation on the project, including the background behind the study, the components of the current study, the schedule, and the next steps following this round of public consultation.

The following questions and comments were noted, with responses where provided:

Q: What role will the upcoming Highway 6 improvements play in addressing problems in Waterdown? (e.g., access control, new interchanges at York Road and at Highway 5, new northbound climbing lane, etc.)
A: (The improvements will be assumed to be a "given," and any north-south capacity constraints or solutions will be in addition to Highway 6 improvements.)

Q: How will the study examine the proposed Niagara-GTA Transportation Corridor (one of the alternative alignments skirts the northern edge of Waterdown)?
A: The Waterdown/Aldershot TMP will not be considering routings for the highway, but will consider its potential impact on traffic flows in the area. New corridors being considered for the Waterdown/Aldershot TMP will be to accommodate local traffic needs; the highway is considered to be a separate issue for handling longer-distance traffic.)

Q: What is the status of the Highway 403 / Waterdown Road interchange?
A: The City of Burlington, working with the Ministry of Transportation of Ontario (MTO), is wrapping up their EA study, which should be complete within a month. This study will deal with property implications, design, implementation, etc.

Q: I understand that MTO is not in favour of proceeding with the interchange expansion until improvements have been made to Highway 403.
A: The City of Burlington has been discussing construction timing with the MTO. The City would prefer the interchange be completed sooner rather than later.

Q: The OPA 28 area appears to be within the greenbelt area recently designated by the provincial government.
A: This is a cartographic error in the draft map; the OPA 28 lands are considered to be part of the Waterdown urban growth area.

Q: Does this study have a mandate to manage traffic demand by altering development patterns in Waterdown (e.g., location, extent, form of development)?
A: No. OPA 28 has already been approved; this study is required in order to determine how the community is prepared to accommodate the traffic demands created by those new development areas. However, transportation demand management (TDM) will be considered (e.g., transit use, ridesharing).

Summary of Public Meeting Advice

Sally Leppard summarized the comments received during the two Public Information Centres (PICs) held in October.

Q: Waterdown is expected to accommodate an additional 20,000 residents — that is a significant change.
A: OPA 28 was a Cabinet decision; it is known that transportation will be a major issue with that development. There is no option to not have a transportation network to accommodate that development; the development will occur regardless. The question is: "what is the most acceptable way to provide the necessary transportation infrastructure?"

Q: Is it a given that new or widened roadways will be required, or will you look at alternative modes of transportation?
A: We will, but there is a cultural preference to the private automobile that will not change overnight (e.g., 98% auto mode split in Flamborough).

Q: Does this mean there is no chance to change that auto dependency?
A: The project team will keep in mind the policies of GRIDS, Vision 2020, etc., but the introduction of transit will not likely negate the need for additional roadway capacity — even areas with a very high percentage of transit trips also have high traffic demands.

Q: Transit and other alternative modes of transportation require political will. This happened in Ottawa, which has seen a significant increase in transit usage. It's important to provide transit to Waterdown, particularly so that it is in place when residents move into the new developments, so that they can develop new commuting habits with transit in mind.

Q: Much of the traffic in Flamborough is "through"/non-local traffic, and is much less likely to switch to transit. In addition, the rural nature of Flamborough makes it difficult and costly to service with transit. Flamborough has area-rated taxes, and there is a low level of public support for tax increases to support the introduction of transit service.
Q: Students have difficulty getting around without transit service; many don't have access to a car, and many of those that do have access find that the high cost of driving is a deterrent.
Q: Alexander Place and other Waterdown businesses find it difficult to hire people or attract volunteers because they are not accessible by transit.
A: It is possible that the cost implications can be minimized through alternative technologies (e.g., TransCab service) or by limiting the service area (e.g., between Waterdown and the Aldershot GO station). The upcoming municipal budget is seeking to expand HSR service to Waterdown despite low ridership.

Q: Level crossings (e.g., on King Road) can cause significant back-ups and congestion.

Q: I understand there is development proposed at the GO station; can we get GO connector service between Waterdown and the Aldershot GO station?

Q: How do you propose to deal with east/west through traffic?
A: There are a number of options to provide additional east/west capacity. There is a long history behind the Waterdown by-pass option; the former Region of Hamilton/Wentworth identified a by-pass corridor but didn't allocate any funding.

Given the level of interest in transit issues, Sally Leppard moved that transit implementation be made a standing agenda item for future SAC meetings.

Update on Alignment Alternatives

Claudio Covelli presented a draft map of alternative alignments for new or widened roadways. He noted that it was a refinement of the wider corridor map, issued as a draft for discussion purposes only. He recognized that each of the various alignments has disadvantages, but that all will be brought forward for evaluation.

Q: Can we obtain a copy of the map?
A: We expect to have a copy on the project website by the following Monday or Tuesday.

Q: Alignment appears to dissect Alexander Place and walking pathways. Also has potential to impact Joe Sams Leisure Park, part of provincially significant wetlands.

Q: An alignment should connect to Brant Street to avoid cutting a new north-south alignment across the escarpment.
A: This alternative can be considered. It is noted that Brant Street is already close to capacity, and that this alignment is further from the centre of demand which may make it less effective.

Q: Burlington has previously made a commitment to not widen Waterdown Road.

Q: How many traffic lanes are required?
A: One east/west lane per direction, and one north/south lane per direction, are required. Transit/TDM may reduce demand slightly, but are unlikely to eliminate these lane deficiencies.

Q: What are the impacts to the bike and foot trails on Kerns Road?
A: We recognize that there likely will be significant impacts, and that none of the alternatives are particularly attractive.

Q: New or modified corridors should include sidewalks, bicycle lanes (or wide general-use curb lanes).

Q: Will a grade separation be provided at the King Road level crossing?
A: Burlington hosted an open house last week. An underpass pre-study has been initiated, and the issue is to be integrated with GO Transit's ongoing Lakeshore West expansion study. The GO expansion is a given; the City is endeavouring to incorporate their underpass plans into the GO construction work.

Q: Is there a "magic number" for widening thresholds?
A: No. Different qualities of road have different carrying capacities. A typical arterial lane can accommodate approximately 800 to 900 vehicles per hour, while a lower-standard roadway (e.g., King Road) can accommodate approximately 400 to 500 vehicles per hour.

Q: The broader corridor map indicates a potential interchange with Highway 403 at King Road; is this correct?
A: At the time the map was first introduced to the public, we were investigating the possibility of providing a partial interchange. Since that time, the MTO has stated that geometric limitations (i.e., proximity to adjacent interchanges) preclude the possibility of providing a partial interchange.

Q: Will the King Road overpass over Highway 403 be widened?
A: It is projected to be widened in the longer term; however, the usefulness of widening the overpass would be limited by the lower capacity on King Road north of Highway 403.

Q: Can the new Highway 403 South Service Road serve to provide the required east-west capacity for Waterdown? Can we use it to get more people to the Aldershot GO station?
A: It is required to service the employment lands in Aldershot and is not anticipated to solve the capacity deficiency in Waterdown.

Q: Can the North Service Road be extended west to Highway 6?
A: This would not likely solve the capacity deficiency due to the indirect routing that would be required (how far out of the way would traffic through Waterdown be willing to travel?). In addition, there are significant natural constraints (Grindstone Creek Valley; Royal Botanical Gardens; Highway 6 proposed control access south of Highway 5). There is a longer-term plan to provide an additional lane in each direction on Highway 403.

Q: How far along Highway 6 does MTO propose to control access?
A: MTO has plans to implement full access control from Highway 5 southerly to Highway 403, including new interchanges at Highway 5 and at York Road. North of Highway 5, they are discouraging further access and are obtaining property where possible. Possible control of access north of Highway 5 may impact the Parkside Drive / new east/west corridor alternatives (i.e., interchange spacing).

Q: There have been detailed roadway options provided; we also need detailed transit options (e.g., connecting Waterdown to the Aldershot GO station; suggestion to originate Halton Region's Dundas Street transit corridor in Waterdown; provide a route from Waterdown to Toronto).
A: The present focus on roadway alternatives is not necessarily an indication of priority, but rather of urgency (they are required in order to provide some level of certainty for development approvals). The emphasis on roads is not exclusive of transit.

Q: Suggestion to minimize impacts on north-south routes by providing an additional lane in one direction on Kerns Road, and an additional lane in the other direction on Waterdown Road (i.e., three-lane cross-section on each).

Q: Suggestion to avoid impacting the CBD by extending King Road north of the 3rd Concession (Mountain Brow Road) to Highway 5.

Q: It appears that of the three possible north-south alignments, two are non-starters (Kerns Road and Waterdown Road), which leads to one option (King Road). Similarly, of the east-west alignments, it appears that two are non-starters (Highway 5 through the CBD; Parkside Drive), which leads to a new by-pass.
A: All the alternatives have significant disadvantages; the recommended alternatives will depend on the issues raised by the public and by the priorities placed on various evaluation criteria (e.g., natural environment; community impacts; transportation service, etc.).

Q: What is the destination for the additional north-south capacity?
A: Primarily Highway 403, which can then disperse the traffic demand more widely.

Q: Do planners have any input on how to direct traffic from the new development areas?
A: For the Waterdown North and Waterdown South areas, there will be an opportunity at the Secondary Plan stage. The Secondary Plan will take its lead from this study (the TMP). For the Upcountry Estates development, there is less opportunity since only a plan of subdivision is required, which is being done by the landowners.

Q: If these roadways are required to serve the new development areas, will the developers contribute to their cost?
A: Yes, through development charges.

Q: Who has the final sign-off on the TMP?
A: Ultimately, Council will approve the study, which will then proceed to Phases 3 and 4 of the Class EA process.

Q: It appears that Waterdown Road is the most efficient north-south option, given its connection to the Highway 403 interchange and the Aldershot GO station node. Doesn't it make the most sense?
A: The ranking of alternatives depends on the criteria used to measure the alternatives (e.g., is the efficiency of the Waterdown Road alternative offset by the other impacts it would cause?).

Q: Is the "new corridor" east-west alternative proposed to be two or four lanes?
A: Only two lanes are required to the study horizon year, although a right-of-way may be protected for four ultimate lanes.

Q: When can we comment on the alignments presented?
A: The map shown is intended as a starting point for discussions. We are not evaluating options at this point; we are simply identifying possible alternatives. If there are additional possibilities we have not yet considered, we will certainly accept further contributions.

Conclusions

Closing remarks were made by Mary Lou Tanner. The meeting was adjourned at 9:00 p.m.

The next SAC meeting was tentatively scheduled for Tuesday, January 25, 2005.

WATERDOWN / ALDERSHOT TRANSPORTATION MASTER PLAN
STAKEHOLDERS ADVISORY COMMITTEE MEETING #2
FEBRUARY 10, 2005

Minutes of Meeting

The meeting commenced at 7:00 p.m., February 10th, 2005, in the LaSalle Park Pavilion in Burlington.

In attendance:

Project team:

Andrew Head, City of Hamilton
Mary Lou Tanner, City of Hamilton
Allen Magi, City of Burlington
Claudio Covelli, Dillon Consulting
Don P. McKinnon, Dillon Consulting
Dennis Kar, Dillon Consulting
Sally Leppard, Lura Consulting (facilitator)

Stakeholders:

Tim Langford, Community at Large, Waterdown
Doug Brown, Burlington Cycling Committee
Jim Dwyer, Local Community, Aldershot
Mike Foley, Halton / Hamilton Homebuilders Association
Martin Ince, Dundas-Flamborough Environment Committee
Hugh Johns, Aldershot Community Council Development Committee
Councillor Margaret McCarthy, City of Hamilton – Ward 15
Councillor Rick Craven, City of Burlington – Ward 1
Margaret Robertson, Waterdown BIA
Cathy Robitaille, Alexander Place
Guy Sheppard, Burlington Sustainable Development Committee
Ed Stevenson, Local Community, Waterdown South
Bron Tregunno, Burlington Road Safety Committee
Dale Wood, Waterdown Parks and Recreation
Elaine Hutchinson, Aldershot Community Council (Development Committee) Traffic Committee
Zach Beers

Other Observers

Mike Williams, Resident
S. Mercanti
John Taylor
Heng Lim

Greg Fraleigh, Enfield
Bill Fraleigh
Alfred A. Beck
Gary Deathe, Waterdown South Residents Association
Alex Bielak, Waterdown South Residents Association
Bill Fraser
Graham Thayer
Leslie MacMillan, Waterdown South Residents Association
Susan MacMillian, Waterdown South Residents Association

Meeting Introductions / SAC Terms of Reference and Work Plan

Sally Leppard of Lura Consulting, an independent facilitator, welcomed the participants and introduced the project team and moderated the meeting. Once the Stakeholders Advisory Committee (SAC) members and other members of the public had introduced themselves, Sally reviewed the agenda, and asked if there were any errors or omissions to the previous minutes. The following questions and comments were noted, with responses where provided:

Q: Please get the minutes of meeting out earlier so members have a chance to comment?
A: The project team committed to getting the minutes out within two weeks.

Q: There were some omissions to the last minutes which included the following points:
- The land use is pretty well set in Waterdown
- There are some employment lands in Clappison's Corner
- 80 percent of traffic in Highway 5 and Highway 6 comes from outside of Flamborough
- Development fees do not contribute to public transit.

A: Omissions have been noted.

Q: Do comments in the minutes carry any weight if they are not based on fact?
A: All comments are recorded for the record, but the SAC can challenge those comments.

Deputations

Dr. Alex Bielak of the Waterdown South Residents Association gave a deputation. The deputation was received by the Stakeholder Committee, and is attached to the minutes.

Presentation on the Progress of the Transportation Master Plan to Date

Claudio Covelli, Project Manager for Dillon Consulting, gave a brief presentation on the Transportation Master Plan study, including the background behind the study, the transportation modeling process and initial pre-screening of options, and transit and Transportation Demand Management Opportunities. A summary of the presentation is attached.

The following questions and comments were noted, with responses where provided:

Q: Currently, we do not have a north-south transportation problem. Are the only two north-south options left the Waterdown Road and King Road corridors?
A: These are the two north-south corridor options, but there are several alternatives within the corridors including a combined improvement option.

Q: Why is Waterdown Road an alternative if Burlington Council says it will not widen the road.
A: It is a realistic alternative that we need to assess.

Q: There is no good north-south alternative since both will go through the Escarpment. Why is there not an option where there is no north-south option? If OPA 28 is based on the condition of completing a Transportation Master Plan, then can't we tell the developers that they can't develop based on the results of the EA?
A: The development in Waterdown was provincially mandated. Cabinet approved all the lands to be developed. One of the decisions for development is that the identification of transportation corridors be underway. If we don't get started with the transportation master plan, the development industry has the ability to supersede us and continue with the development without a transportation plan in place. Therefore it is in our best interests to have a plan in place.

Q: Councillor Craven asked the following statement to be placed on the Record. Given the City of Hamilton will benefit from the interchange at Waterdown Road and Hwy 403, will the City of Hamilton contribute to the construction of the interchange required because of development?
A: Noted.

Q: You eliminated Brant Street and Kerns Road as options. What have you done about Waterdown Road? How do we remove the 23 acres as an option off of Waterdown Road (the connection to Dundas Street)
A: Brant and Kerns were eliminated because they do not solve the north-south transportation problem. We need to follow a defensible process and can't just remove options that have a potential of solving the transportation issue. If it is a bad option, it should fall off through the evaluation. If you have a concern with the evaluation, you can comment on it.

Q: What is the legal policy and procedures to be followed for the public to follow to object to a recommendation or to be notified?
A: There are a number of steps in the process. We will come to the next public meeting with a draft recommendation. After hearing and incorporating the public comments, we will bring our recommendation to Council in the Fall. At this point, there will be a 30-day review period and opportunity for the public to further comment or object to the TMP to the Ministry of the Environment.

Q: Does the Waterdown option through the 23 acres go through an ESA?
A: We will confirm.

Q: The modeling done is based on destinations. Where are the destinations?
A: The majority of the traffic is south and then east/west. More traffic goes east than west.

Q: What are the plans for bike paths?
A: This will be presented further into the study.

Q: Will you be talking to GO Transit and Burlington Transit to see if they will agree to alter their service to better serve Waterdown?
A: Yes.

Presentation and Working Session on Evaluation Process

Don P. McKinnon of Dillon Consulting summarized the evaluation framework, and provided an update on work completed to date. Don then led the group through an exercise to obtain suggested group/criteria ranks and weights to determine the criteria level of importance. This information is to be considered in the comparative

evaluation of the alternatives. A summary of the criteria ranks and weights as suggested by the Stakeholder Committee and others in attendance is attached.

The following questions and comments were noted, with responses where provided:

Q: Is there a measure of air quality and visual impact in the evaluation?
A: Not specifically as these effects are difficult to measure at this scale of analysis. Since air quality and visual impact are localized, the route that goes through an area with the least number of residents will have less impact. The number of residents in proximity to the route is used as a surrogate measurement.

Q: How are you addressing historical areas?
A: We have identified historical designated buildings that could be affected by the project.

Q: How much value is placed on this exercise? Have the SAC been the only people given this evaluation sheet to comment on?
A: To date, only the SAC has been asked for their input. We may consider other criteria weighting scenarios in the evaluation.

Q: Do we have an opportunity to comment on the comments themselves? What about land costs and expropriation costs?
A: We intend to consider land cost as part of the cost indication.

Q: Is there any check in the system to determine the accuracy of the data?
A: We have used information as provided by the Cities of Burlington/Hamilton. All data will be documented for the public to review.

Q: How do you know how many residents are affected?
A: Correction, we are measuring affected households, not residents. The wording the evaluation will be changed to provide further clarification.

Q: Should we not know the total number of households on the street to determine the percentage of households affected?
A: Noted.

Q: Does the modeling include the impact of having transit? If transit services were not to come to fruition, would these numbers be higher?
A: Yes.

After the completion of the criteria ranking/weighting exercise, Don McKinnon asked for a show of hands to see the priority people place on the evaluation criteria groups. The following rank the criteria order of importance based on the response, with 1 being the most important and 5 being the least important according to the responses by the participants.

Criteria	North-South Corridors	East-West Corridors
Natural Environment	2	2
Social Environment	1	1
Economic Environment	4	3
Cost	3	3
Transportation Service	4	3

Q: How would you handle significant impacts, such as if the YMCA were to be torn down?
A: We will consider not only the quantitative numbers that arise from the assessment/evaluation, but also consider the actual data impacts to determine if the evaluation results make sense.

Q: How do you propose to deal with east/west through traffic?
A: There are a number of options to provide additional east/west capacity. There is a long history behind the Waterdown by-pass option; the former Region of Hamilton/Wentworth identified a by-pass corridor but didn't allocate any funding.

C: We are starting to look early at opportunities for transit service, particularly with the development of the retail in Clappison's Corner. Discussions are underway to tap into new provincial and possibly federal funding to provide the service.

Q: What are the Environmental and technical challenges of King Road?
A: There are a number of natural features/habitats along King Road. It also requires the crossing of the escarpment which could require substantial filling to reduce the road grade.

Q: Regarding the assessment of evaluation criteria that took place during the meeting, some people assessed each route differently, and would like to have more sheets to assess each route.
A: The exercise is only to evaluate the north-south and east-west corridor criteria separately. Those that evaluated a specific corridor should note it on their evaluation sheet.

Q: Is there the possibility of putting a bridge to cross the escarpment. If may cost a lot, it would have only a small footprint on the Escarpment and may be a tourist attraction.
A: The assessment includes a conceptual design of the road. Future phases of the project will look at this in detail, if this corridor is selected.

Q: Members of the SAC would like to see materials out ahead of time before the next PIC.
A: Noted.

An observer at the meeting noted that they believed they were providing input on specific routes rather than providing input on comparative criteria between routes. Sally Leppard requested that those people who believed that they were providing input on specific routes note that on their criteria forms. In addition, she requested that participants write their names on their criteria forms, in order to differentiate between SAC input, and the input of observers.

Conclusions

Closing remarks were made by Sally Leppard. It was noted that the next Public Information Session would take place in April, and the public would be notified in advance of this meeting. The meeting was adjourned at 9:00 p.m.

Submission to the Stakeholders Advisory Committee
by the Waterdown South Residents Association (WSRA)
February 10, 2005

The WSRA

The Waterdown South Residents Association was formed in November of last year to provide us a collective voice relating to a variety of issues. We represent a substantive tax base in South Waterdown. Our members are interested in what happens to our community and work actively to make sure our concerns are addressed before any final approvals are given.

Current Concerns

Though they may not be within the direct purvey of the SAC, there are a number of issues that concern us and that we wish to raise by way of context to our submission:

1. Waterdown is under intense development pressures. The fields to the east of "23 Acres" are set for housing along with two other areas in Waterdown. This will increase the population by 50% or more. Large box store developments are actively being pursued. Both will have a huge impact on traffic, especially if they proceed before transportation options are settled and begun.
2. Even if development proceeds, we want Waterdown to retain its village character. While we welcome new neighbours, we do not want Waterdown to become simply a bedroom town for commuters.
3. Before development proceeds, social and environmental infrastructure needs to be addressed:
    - More houses mean more families. Waterdown schools are already at capacity, yet when we have asked if this is being considered in light of the development, we are told that it's up to the province and the school boards to build the schools. Has this been addressed? Or shall we wait for a crisis of overcrowding to plan the school, and then have to wait for years while the approvals are sought and the schools are built.
    - More families will also require more doctors. At last survey, there were no doctors in Waterdown accepting new patients. This issue needs to be addressed before more people arrive.
    - Higher population will also increase the need for recreational space, parks, playgrounds, bike and walking paths. Waterdown is perched on the edge of one of the greatest walking trails in the world, yet the integration of the communities around the Bruce Trail is lacking. Walking and biking paths in and around Waterdown are sketchy at best and must be considered as part of the transportation study and development plan. It should not be assumed that all of the new and current residents of our village use a car all the time. If we wish to do our part to work towards a more environmentally friendly lifestyle, then we must plan to allow people to live, work, shop and play within walking or biking distance. Especially since Waterdown does not have public transportation and will not likely have any either.

4. Our members are generally supportive of the Greenbelt legislation and have written to the Province indicating that. Further, we would like to see those areas that are not currently slated for development protected in the long term. We strongly support rolling NEPA-71 into the legislation.
5. In particular our members want to see a specific piece of land – referred to as the "23 Acres" protected. "23 Acres" should be explicitly made part of the "Grindstone Creek Nature Reserve" as mentioned in the NEPA 71 Section 8. This land is located opposite Smokey Hollow and generally bounded by Flanders Drive/Renwood Place to the East, George/Dundas Streets on the North, Mountain Brow on the South and Waterdown Road/Mill Street to the West. While it is currently administered by the Ontario Realty Corporation on behalf of the Crown, the physical and environmental characteristics of the land are such that future development should be out of the question. This wonderful natural setting borders on a new ESA, offers a beautiful view of the Dundas Valley and includes an already-protected pond, a good section of the Bruce trail and a tributary of Grindstone Creek. Under NEPA, "23 Acres" would be designated a mix of Niagara Protection and Natural Area overlain by Public Land (in Parks and Open Space System). It would be logical, and appropriate from a conservation standpoint, to boldly seize this opportunity to transfer the lands to the stewardship of the local conservation authority (Conservation Halton) for long-term park and open space protection. We understand this was completed for many other ORC lands in the Escarpment Link (Amendment No. 71) area in the early 1990's, and it is unclear why the "23 Acre" property was not part of the earlier land exchange.
6. Our members are also concerned that the infrastructure (schools, roads, parks etc) that will be built to accommodate the newcomers, will end up being paid for by the current residents. Waterdown already pays very high taxes. We seek assurances that the tax levy for the new infrastructure does not get added to our tax bills. The rate mentioned in a communication to us by Mayor Dilanni (re a legal agreement registered on the title of developer properties for a 'special' levy of $800 (indexed to inflation) to be paid <u>over and above</u> the normal development charge for 100% of the cost of new infrastructure in the Town) did not seem to be enough to cover these costs.
7. Concomitant with the housing and commercial developments, there will have to be an expansion of the transportation infrastructure as well.
    - We are extremely concerned over the North South transportation option identified as feasible up Waterdown Road and through the "23 Acres".
    - At the meeting regarding the transportation study we were told in response to a publicly-raised question that widening Mountain Brow was not being considered. We would like this to be confirmed.
    - Also at that meeting, many people considered the "23 Acres" and Smokey Hollow to be of great interest to be preserved. Has a summary of these comments been made available?
    - It is clear Dundas Street through Waterdown is very busy and the bottle neck where Dundas Street narrows to one lane coming in from the east is exactly where the new (23 Acre) Waterdown Road would join, making a bad situation even worse. This is clearly a poor choice and we would like this option removed from discussion as

soon as possible. Similarly widening Mill Street is not a viable option in our view.

- We would also like to see the City of Hamilton actively support the inclusion of the "23 Acres into the Greenbelt and the transfer of the land to a conservation group such as Conservation Halton. We strongly feel this would be in the best interest of the population of Hamilton. Members of the Waterdown South Residents Association were working to save this land long before it was identified as a transportation option, and the WSRA was formed prior to the options being tabled. Now we are even more concerned that the city is out of synch with the cultural and environmental priorities of the residents of this small rural village.

We understand that in any development process, there are many issues to be dealt with and many jurisdictions and agencies. However, with so many processes and studies underway, we do not want our specific concerns to slip through the cracks or get passed from one authority to another. ORC plans show the "23 Acres" as "PKW Escarpment Link". NEPA71 designates it protected/natural. Study maps for the "Waterdown North and Waterdown South Secondary Plan and Class Environmental Assessment did not consider it at all - even though the lands to be developed will impact the Grindstone Creek watershed running through "23 Acres". The transportation map shows the space as neither grass, nor woodland, though it is clearly a mix of both. Has a study been carried out on this parcel of land regarding its environmental sensitivity? The Greenbelt maps do not at this time specifically include the "23 Acres," but show the area as "Urban".

Specific Questions for response:

- Must the transportation options be clarified, accepted, and construction of new roads begun before construction of housing developments begins? Before Big Box development goes ahead?
- Is an assessment of the ecological and socio-cultural value of the "23 Acres" available. If not will one be carried out?
- Will you confirm that Mountain Brow road is not being considered as an East- West corridor?
- Given that the Waterdown Rd – 403 interchange study indicated that a criterion was that the rural nature of Waterdown Rd. be preserved why is it being considered as a N-S option?
- Can you make available a copy of the detailed comments relating to the transportation options, as gathered at the Open Houses held to date?
- Are bike path options being considered as part of the transportation plan?
- Are public transit options being considered for Flamborough residents?
- How do the current options identified fit with the Mid Peninsula Highway and its likely REDUCTION of South and South East Traffic Flow.
- Has there been any discussion re upgrading parts of HWY # 5 to 6 lanes and how it will impact/reduce demand on QEW/Waterdown road?

- Has there been any consideration to the reworking/rebuilding of the Freeman Interchange (Brant, Niagara,403 ,407) and tying that into a King Road Full Interchange which will then go North and tie into a Waterdown By Pass/Mid Penn.
- Has there been discussion of a 407 Interchange at Upper Middle and possible extension of Upper Middle Rd. (not at capacity at the western limit) through to the top of Kerns Road. Connect up with a Waterdown By Pass - future Mid Penn.
- Is there any indication of how committed the MTO is to a full interchange at Waterdown Road?
- If the transportation option through the "23 Acres" is dropped will the City support its inclusion in the Greenbelt? Will it go further and urge the Province to cede the land to a conservation authority?
- We seek confirmation that the WSRA will continue to be invited to participate in the SAC on an ongoing basis and be informed of any meetings regarding development in Waterdown.

Summary

The Waterdown South Residents Association would like to see the following.

1) Waterdown Road, Mountain Brow and the "23 Acres" removed from the list of possible transportation options and the "23 Acres" rolled into the Greenbelt. This land must be preserved in perpetuity for all to enjoy.
2) No new construction be permitted until the concerns raised above regarding transportation, schools, medical services, recreational facilities and taxation are dealt with.

Respectfully submitted,

Dr. Alex T. Bielak
(For) **Waterdown South Residents Association**
Bielak@sympatico.ca
905-689-7677

cc WSRA members

TRANSPORTATION MASTER PLAN UPDATE
ALTERNATIVE SOLUTIONS

INTRODUCTION

The following summarizes work that has been undertaken for the Waterdown/Aldershot Transportation Master Plan. The following process includes:

TRANSPORTATION MODELING

1. Phase 1, Identification of Problem or Opportunity, was completed in July 2004. The report identified a need for additional east/west and north/south road capacity in the study area network once the approved OPA 28 lands are developed.

2. Reviewed the transportation modeling to 2021 documented in the Phase 1 report, and updated the model based on current population and employment estimates.

3. Established a 2021 "do nothing" scenario to confirm the need for road capacity improvements. It was determined that additional north-south and east-west road capacity was needed to accommodate growth up to 2021.

4. The approach considered all modes of travel to solve the transportation problem prior to increasing the capacity on the road network. This included transit, Transportation Demand Management (TDM), cycling and walking.

5. Undertook a modeling scenario which reduced single occupant automobile travel in the study area by up to 15 percent through increased transit use and use of Transportation Demand Management measures. This did not solve the north-south or east-west transportation capacity deficiency.

6. Developed several roadway alternatives combined with increases in transit (5 percent) and TDM (5 percent) to determine which roadway alternatives would address the problem.

7. Conducted a prescreening of roadway alternatives based on their ability to solve the remaining transportation capacity problem. Alternatives that did not solve the problem were dropped from further consideration, including:
   a. Road improvements on Kerns Road between Dundas Street and North Service Road;
   b. Widening of Brant Street, between Dundas Street and the QEW;
   c. Widening of No. 1 Sideroad between Evans Road and Cedar Springs Road; and
   d. Widening of Dundas Street to 4 lanes between Highway 6 and Brant Street (we did include a 4-lane / 6 lane Dundas Street widening option).

8. Currently evaluating 4 east-west road improvement alternatives and 3 north-south road improvement alternatives, based on the following criteria: Natural Environment; Social Environment; Economic Environment, Cost; Transportation Service.

TRANSPORTATION MASTER PLAN UPDATE
ALTERNATIVE SOLUTIONS

TRANSIT

While transit alone will not solve the road capacity deficiency identified in the Phase 1 report, transit solutions will form a large component of the recommended solutions in the TMP.

Existing Transit Services

Although there are currently no transit services within the Waterdown area, local and interregional transit services exist in the community of Aldershot and adjacent to the study area. The following describes existing transit services by service providers in and adjacent to the study area:

1. **Hamilton Street Railway (HSR)** does not operate transit services in the community of Waterdown

2. **Burlington Transit** does not operate services in Waterdown, but does operate some service in Aldershot and adjacent to the study area:
   a) *Route 1 – Plains/Fairview West* operates along Plains Road connecting downtown Hamilton with the Burlington GO Station, with stops at Plains Road and King Road, Plains Road and Waterdown Road, and the Royal Botanical Gardens.
   b) *Route 7 – Tyandaga North* operates a residential feeder service from the Burlington GO Station along Kerns Road and Tyandaga Park Drive.
   c) *Route 2 – Brant North* operates a service along Brant Street, between Cavendish Drive (just south of Dundas Street) and the Burlington downtown transit terminal.

3. **GO Transit** operates GO Rail and Bus service on or parellel to Highway 403. Services include:
   a) *Lakeshore East GO Train* operates three eastbound trips from the Aldershot GO Station (located on Waterdown Road, just north of Plains Road) during the AM peak period, and 4 westbound trains during the PM peak period. During other times, the GO Train is supplemented by regular Train-Bus service between Burlington GO Station and Hamilton GO Centre.
   b) *Route 46 – Highway 407 West GO Bus Service* connects downtown Hamilton with York University, with stops at McMaster University, Mississauga City Centre, and Bramalea GO Station, operating along Highway 403/407. Currently, the service does not stop in the study area.
   c) *Route 15 – McMaster University Limited Service* operates express between Union Station and McMaster University with only one stop at the Burlington GO Station. Currently, the service does not stop within the study area.

4. **VIA Rail** operates out of the Aldershot Station, which shares its facilities with GO Transit. Several trains depart this station each day, including Toronto to London, Aldershot to Montreal/Ottawa, Toronto to Niagara Falls, Buffalo, and New York; and Aldershot to Toronto, Kingston, Toronto.

Transit Opportunities

Several transit opportunities are currently being examined to provide transit service in Waterdown and increase the transit mode split for both local and interregional trips. These include:

TRANSPORTATION MASTER PLAN UPDATE
ALTERNATIVE SOLUTIONS

1. **Create Interregional Terminal at Aldershot GO Station** - the area has a significant amount of interregional transit services, however, lacks an appropriate connection to Waterdown. The Aldershot GO Station would provide a good terminus for feeder services with connections to GO Rail, GO Bus, Burlington Transit, and VIA Rail.
   a. Provide local feeder services into Waterdown, north on Waterdown Road, with a terminus at the Aldershot GO Station, providing a local bus connection to GO Rail and VIA Rail services. This will also provide local transit services within Waterdown.
   b. Reroute Route 1 – Plains/Fairview West connects to Aldershot GO Station to provide direct access to downtown Hamilton and the Burlington GO Station.
   c. With the construction of a Waterdown Road ramp off of Highway 403, discuss opportunity to GO Transit to reroute the Hwy 407 GO Bus to stop at the Aldershot GO Station, providing a direct connection to stops along Highway 407 between York University and McMaster University.

2. **Extend Interregional Dundas Service** - The Halton Transportation Master Plan identified opportunities to provide interregional transit service along Dundas Street, connecting downtown Hamilton to Toronto. Through Waterdown, this service is anticipated to provide 15-minute headways during the peak on Dundas Street, and south on Hwy 6.

3. **Extension of Burlington Transit Routes** - opportunities exist to extend transit services from Burlington into Waterdown. These include:
   a. Extend Burlington Transit Route 7 – Tyandaga-North through Kerns to Waterdown South area.
   b. Extend Burlington Transit Route 2 Brant –Northwest along Dundas proving a direct downtown Burlington service for Waterdown residents.

TRANSPORTATION DEMAND MANAGEMENT ALTERNATIVES

Transportation Demand Management strategies attempt to delay, defer or even eliminate the need for significant capital investment in new transportation infrastructure by:

- influencing auto demands in the commuter peak periods;
- promoting walking and cycling as alternatives to travel by private auto; and
- promote public transit and ride sharing as alternatives to travel by private auto.

These measures are currently being developed as part of the Transportation Master Plan process, and could include policies that will help:

1. Eliminate trips –through appropriate land use planning and tele-working initiatives
2. Reassign trips – by encouraging the use of less congested corridors;
3. Reduce peak period trips – investigating opportunities to shift schedule start and end time of major employers
4. link trips – by mixed used land-use planning, thereby promoting walking between activities
5. increase transit use – through service and fare enhancements
6. increase vehicle occupancy – through ridesharing organizations.

East-West Corridor Alternatives - Evaluation Criteria Ranking and Weighting Summary

Criteria	Summary of Ranking and Weighting - All who attended						Summary of Ranking and Weighting - SAC Members					
	Ranks (1 through 5)					Weighting	Ranks (1 through 5)					Weighting
	1	2	3	4	5		1	2	3	4	5	
Natural Environment Summary	7	10	1	1	1	26.6	4	6	1	1	0	28.0
Potential for impact on terrestrial features	14	4	0	1	0	14.0	8	2	0	1	0	15.9
Potential for impact on aquatic features	7	11	1	0	0	11.6	2	8	1	0	0	12.2
Social Environment Summary	14	5	0	1	0	32.1	10	2	0	0	0	31.0
Potential for impact on residents	15	2	1	1	1	14.2	9	1	1	0	1	15.0
Potential for community character impacts	5	10	3	2	0	7.6	2	6	2	2	0	6.4
Potential for impact on community/ recreation features	1	9	7	3	0	4.8	0	6	3	3	0	3.9
Potential for impact on cultural features	2	6	9	3	0	6.0	1	3	6	2	0	5.8
Economic Environment Summary	2	3	12	2	1	18.3	1	2	7	1	1	18.6
Potential for impact on business enterprises	6	12	2	0	0	5.6	5	6	1	0	0	6.4
Potential for impact on downtown core business area	9	4	6	1	0	6.1	5	1	5	1	0	5.3
Potential for impact on future land use	2	8	6	4	0	3.7	1	4	4	3	0	3.4
Potential for impact on agricultural land	4	5	7	4	0	3.4	1	5	3	3	0	3.6
Cost Summary	2	1	1	3	12	10.0	1	0	1	1	8	9.7
Capital Cost	0	0	0	0	0	0	0	0	0	0	0	9.7
Transportation Service Summary	1	2	4	9	3	13.0	1	0	3	5	2	12.7
Change in Level of Transportation Service	9	8	1	0	0	6.6	6	5	0	0	0	6.2
Change in Safety Levels	8	9	1	0	0	6.7	6	4	1	0	0	6.5

North-South Corridor Alternatives - Evaluation Criteria Ranking and Weighting Summary

Criteria	Summary of Ranking and Weighting - All who attended						Summary of Ranking and Weighting - SAC Members					
	Ranks (1 through 5)					Weighting	Ranks (1 through 5)					Weighting
	1	2	3	4	5		1	2	3	4	5	
Natural Environment Summary	8	13	1	0	0	29.3	5	5	1	0	0	30.5
Potential for impact on terrestrial features	19	3	0	0	0	15.8	10	1	0	0	0	18.4
Potential for impact on aquatic features	8	14	0	0	0	13.5	3	8	0	0	0	12.2
Social Environment Summary	13	6	2	1	0	30.2	7	3	0	1	0	29.0
Potential for impact on residents	18	4	0	0	0	12.8	9	2	0	0	0	12.2
Potential for community character impacts	7	9	5	1	0	7.4	4	4	2	1	0	7.9
Potential for impact on community/ recreation features	4	6	9	3	0	5.8	0	4	5	2	0	5.1
Potential for impact on cultural features	1	3	12	6	0	4.4	0	2	6	3	0	3.8
Economic Environment Summary	0	2	13	4	3	16.4	0	1	5	3	2	16.6
Potential for impact on business enterprises	5	9	6	1	1	4.4	4	2	3	1	1	4.9
Potential for impact on downtown core business area	10	5	2	5	0	4.7	2	4	2	3	0	3.7
Potential for impact on future land use	5	6	5	6	0	3.6	2	3	3	3	0	3.7
Potential for impact on agricultural land	6	6	5	4	0	3.6	4	2	2	3	0	4.2
Cost Summary	2	1	1	6	11	10.5	1	0	1	2	6	9.5
Capital Cost	0	0	0	0	0	10.0	0	0	0	0	0	9.5
Transportation Service Summary	1	1	4	10	5	13.6	0	1	4	3	2	14.5
Change in Level of Transportation Service	9	9	1	1	0	6.5	4	5	0	1	0	6.7
Change in Safety Levels	15	5	0	0	0	7.6	8	2	0	0	0	7.9

Note: Data in the Ranks columns (1 through 5) represents the frequency of the response to the ranking of the evaluation criteria (i.e.7 of the SAC members thought the Social Environment Criteria was the most important component of the evaluation for the North-South Corridors. The last column in each table represents an average weighting of the evaluation criteria taken from responses from the Stakeholder Advisory Committee and other public participants at the SAC meeting.

C 4 - Public Consultation / Comments Summary

Waterdown/Aldershot Transportation Master Plan
Public Consultation and Communications

Master list of Issues and Ideas received for the period:

October 2004 – June 2005

LURA

LISTEN · UNDERSTAND · RELATE · ADVANCE

This document includes the comments received through the Public Information Centres and to the project team members in the Phase 2: Waterdown/Aldershot Transportation Master Plan from October 2004 to June 2005.

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

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This document includes the comments received through the Public Information Centres and to the project team members in the Phase 2: Waterdown/Aldershot Transportation Master Plan from October 2004 to June 2005.

October 2004 – January 2005

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
NORTH-SOUTH	
Suggestion to include the option to **close Main Street North** at Centre Road in the EA assessment. A petition which requested that the closure of Main St. at Centre Rd. be reviewed was submitted from residents/local stakeholders during Phase 1 of the study. Participants have expressed concerns that this option will not be considered. The petition was supported by the Regional Municipality of Hamilton Wentworth and the City of Hamilton.	**ACTION:** City Staff have indicated that this option was not included in Phase 1 because reviewing the 'network option' was not part of that phase. City Staff have suggested that the review of Main Street should be included since it is an outstanding item, and there was a petition brought forward from the residents. The Study team takes all feedback and comments into consideration, and documents the input.
Support the **Waterdown Rd.** extension. Provides a direct route to the GO station, is least disruptive of Environmentally Sensitive Areas (ESA), and could promote public transit. Establish a transit route along this road. Maintain heritage and character of "Old Waterdown". Waterdown Rd. should maintain its rural character.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Concerns regarding the option to *widen* **King's Rd.** It passes through the Niagara Escarpment. King's Rd. should have a crossing to improve flow and reduce wait times during rail car shunting. Should be improved, but only to a maximum of three lanes (2 up, 1 down). Extend to join Mountain Brow Rd. with Hwy 5. Extend King Rd. from the top of the escarpment to Hwy 5.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Extend **Hwy. 6**. Widen Hwy 6 Add a slow moving truck lane.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Concerns regarding the option to widen **Kerns Rd**., this is a residential street. Suggest that the Kerns Rd. option be dismissed as a North-South option. Suggest that Kerns Rd. could be closed at the top of the Niagara escarpment to prevent traffic flow into the residential area. Consider options for traffic control (street calming). Speeding on Kerns Rd. is a major concern. Residents have reported speeds in excess of 100km/h; consider installing speed bumps and pinched intersections to reduce traffic flow. Realign Kerns Rd. along the south perimeter of the park, this would remove the "directness" to/from Hwy 5	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Concern that all of the options presented will increase traffic in the centre of Waterdown, unless the new East-West road is built north of Parkside Dr, and improvements are made to Hwy 6 interchange.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider widening **Robson Rd**. Extend Robson Rd. south to connect with King Rd.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider making Tayandaga Rd. one-way at the north end.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
EAST-WEST	
Concerns about the proposal to widen **No. 1 Sideroad**, and the effect of increasing traffic. Concern that it would reduce the properties of adjacent homeowners. Concern that if widened, the increase in traffic and pollutants would affect the health of residents on No. 1 Sideroad.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

Summary of Issues/Suggestions/ Questions Raised	**Action Taken/Information Provided by:**
	City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Support to build a **bypass** north of Parkside Dr. Should have capacity to handle by-pass traffic around Waterdown. Should have easy and direct access to Hwy. 6 and King Rd. Do not support the option to build a bypass north of **Parkside Dr.** Concern that because this does not benefit Waterdown as a whole (Waterdown North developments) this will promote drivers to use Parkside Dr. as the main artery in Waterdown. Concern that the bypass would ruin the natural access to the new school and Church from the South. Bypass will not help public transit system in Waterdown. Bypass is another road to be maintained, concern that it could increase taxes.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Extend **Britannia Rd.** from Milborough Line to Centre Rd., and as population increases extend to Hwy. 6.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider widening **5th Concession**.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Consider widening part of **Parkside Dr.** Include safe crossings for pedestrians, wheelchairs, strollers, and multi-use paths in both directions. This is the least intrusive option, and will protect the integrity of the Village of Waterdown including the residents. Will reduce traffic in front of schools on Parkside Dr. and Centre Rd. Provide a numbered description of each of the proposed changes to Parkside Dr. Consider repairing Parkside Dr., and widening to a four lane road. However, Parkside Dr. should not permit truck traffic.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider widening **North Service Rd.** (between Brant St. and Waterdown Rd. or as far as Hwy. 6)	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider widening **Evans Rd**.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Keep truck traffic on **Hwy. 5.**	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider a western extension of **Upper Middle Rd**. to Kerns Rd.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
HIGHWAY 403	
Make interchange improvements at **Waterdown Rd.** for east-bound access and west-bound exit.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider a partial interchange at **King. Rd.** allowing east-bound access and west-bound exit.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Improve the **Hwy 6 interchange** before developing anything else.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
OTHER	

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Consider conducting a license plate study to identify where travelers are coming from.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Consider installing and marketing car pool lots for travelers outside of Waterdown. Potential sites could be at Clappisons Corners, Peter's Corners, Freelton, or Carlisle Rd.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Transit Consider extending the proposed Halton Dundas St. public transit through Waterdown Consider Rrunning a small shuttle bus from centre of Waterdown to the Aldershot GO Station Consider providing parking or drop-off point for shuttle bus to GO Station Consider pooled private transportation to large employment areas similar to what Money Mushrooms or Vachons does in Burlington. Consider using the rail line in Waterdown as a transportation option. Transit should be a priority, and link to Aldershot GO Station.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Conduct a comprehensive survey of all residents in Waterdown and Aldershot, concern that PICs are not enough public consultation.	**ACTION:** The Study team takes all feedback and comments into consideration.
Concern that the map from December 14, 2004 shows stream errors at the corner of Waterdown Rd. and Mountain Brow Rd. The stream on the map only exists when there is a rapid thaw or huge downpour. Rarely, if a large flow occurs, the water disappears into the escarpment, sometimes flooding the backyards of two houses at the foot of it. Concern that if storm sewers are connected to this stream the flooding will be more frequent.	**ACTION:** The Study team takes all feedback and comments into consideration.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by:
	City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Concern that some residents were not directly contacted regarding the first PIC. Request to be added to the mailing list.	**RESPONSE:** Contact information of interested residents was added to the database. All new listed stakeholders received future notification and updates.
Request to be added as a representative of the Stakeholder Advisory Committee (SAC).	**RESPONSE:** SAC membership will not be amended. Associations or residents that express interest in the SAC will be invited to attend the SAC meeting, and given the opportunity to speak as a delegate.
Ensure that ESAs (Niagara Escarpment, "23 Acres", and Grindstone Creek Nature Reserve) are taken into consideration when designing the Transportation Master plan.	**ACTION:** The project team took careful consideration of ESAs when conducting the analysis for the Phase 2 Transportation Master Plan report. .
Request for updated maps after November 30, 2004.	**RESPONSE:** Maps have not been updated since the November 30 release of the alternative roadway solutions.
What is the preferred network solution/option?	**RESPONSE:** The preferred network solution will be presented to the public in late March/early April as part of the second round of Public Consultation for this study.
Concern since residents of Kerns Rd. and the Tayandaga community were not directly informed of the PICs, therefore there was a lack of representation and attendance.	**ACTION:** A small meeting was held on November 30, 2004 for the residents of Kerns Rd. and Tayandaga Rd. to receive input from residents about their traffic concerns and issues, and discus the Waterdown/Aldershot TMP (suggestions from that meeting are included in this report).
Want URL for Study Web Page	**ACTION:** The Study team promoted the project website URL in its outreach materials and distributed the URL to those who requested. .
Is the Study team respecting the principles of the draft Green Belt plan?	**ACTION:** The Study team takes all feedback and comments into consideration.
Request that PIC material is available before the next PIC.	**ACTION:** The Study team indicated that they will discuss this suggestion with the Steering Committee.
Minimize environmental impacts and concerns, but maintain the priority for least disruption to residents.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

All study suggestions and concerns raised were noted by the project team and considered in the recommendation of the preferred solution.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by:
	City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (OCTOBER – JANUARY 2005)	
Consider the "bigger picture". Highway 403 is already overloaded with commuters. This must be considered as part of this Study.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Provide easy access to Hamilton, Burlington, Toronto, and Niagara.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Set strict speed limits in Waterdown.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Protect Environmentally Sensitive Areas (ESAs). Build communities around ESAs and Parks.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Report that mapping has errors relating to ESAs/Greenbelt mapping in the north Aldershot Policy Area Eastern Sectors. Lands are marked as green land when they should be shown as agricultural fields with development zoning.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

February – March 2005

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by:
	City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
WATERDOWN ROAD	
Many residents expressed strong concerns and about the **widening of Waterdown Road**. The comments received included: Resident who were strongly opposed to the option of widening Waterdown Road. Concern that too many homes will be affected. Concerns about the rumour circulating that the Waterdown Road has been picked as the preferred option for the North/South corridor. Many of the front yards on the road have septic beds in them. Road	**ACTION:** The following response was sent to each resident who submitted concerns on March 30, 2005: Thank you for your inquiry about the Waterdown/Aldershot Transportation Study. We are currently in the process of assessing the alternative solutions as part of the environmental assessment component of the study and we will be presenting our findings to the public at an upcoming public consultation meeting in mid-April. We will forward a copy of the meeting notice to you directly, as we have added you to our study contact list. At the meeting we will be presenting the

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
widening could lead to damage or complete shut down of these beds, which would increase the chances of water pollution in the area (including well water). It would also pollute well water in the area. Most of this road is bordered by ditches. Widening the road would eliminate this ditch system making a need for a storm sewer system. This would in turn put more run off into the ESA steam system. (Winter road salt) Concerns that in order to link Waterdown Road with Highway 5 it will have to use the Smoky Hollow route and cross through several ESA's. If the Road uses Mountain Brow Road other problems arise. The road would have to take a sharp 90 degree bend closely followed by a steep grade, and not good for winter driving. Request to consider various wildlife in the area, and the risk of more road kill. Concerns about high speeds in residential areas. Residents do not want to move, concerned that they might be expropriated. Residents were told that this Road would not be widened. Was any consideration given to the improving of Waterdown Rd, only to the point of Mountain Brow Rd and turning East to meet up with the proposed subdivision? Can you share how much emphasis was placed on displacing residents from their homes as opposed to the cost of upgrading and building a King Rd extension? What is the number of residences affected that reside within Burlington boundaries as opposed to Waterdown?	environmental assessment process and the recommended roadway network improvements and corresponding policies required to support growth in the area to the year 2021. We will then identify a preferred overall solution and document the study findings in a draft report for public review by the end of June. We expect to finalize the report in September/October. At this stage in the study, a preferred solution has not been identified and there has not been any detailed engineering undertaken. Further, the transportation network may be subject to revisions based on feedback from the above noted consultation session. We look forward to you participation at the upcoming public meeting.
STAKEHOLDER ADVISORY COMMITTEE (SAC)	
Request to re-do the weighting exercise	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request to canvass SAC on the level of involvement.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request that the Waterdown South Residents Association will be represented on the SAC.	**ACTION:** Membership of the WSRA will be discussed at the April 5 Steering Committee meeting.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
Request that the Waterdown South Residents Association (WSRA) receive an electronic copy of the Terms of Reference of the SAC.	
Concern that the ranking exercise and some ranks (e.g. Environmental Impacts) could be easily be mis-represented.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
KING ROAD	
Many residents indicated that they preferred the option of extending **King Road**. There are a limited number of residential homes Making a cut here would probably use less of the escarpments face then the existing roadway. Many people already use this road as an alternative to the Watertown Rd. and Brant Street during rush hour. The road could link with #5Hwy where it is four lanes wide outside the Village of Waterdown. This would also place it close to the area where the much talked about "Waterdown Bypass" maybe. On the other end of Kings Road is the same service road and 403 Hwy that Waterdown road intersects. The land below the escarpment along Kings road is already being used for light industrial and office space. A 4lane route to # 5 Hwy would probably be a benefit to employers in this area.	**ACTION:** The following response was sent to each resident who submitted concerns on March 30, 2005: Thank you for your inquiry about the Waterdown/Aldershot Transportation Study. We are currently in the process of assessing the alternative solutions as part of the environmental assessment component of the study and we will be presenting our findings to the public at an upcoming public consultation meeting in mid-April. We will forward a copy of the meeting notice to you directly, as we have added you to our study contact list. At the meeting we will be presenting the environmental assessment process and the recommended roadway network improvements and corresponding policies required to support growth in the area to the year 2021. We will then identify a preferred overall solution and document the study findings in a draft report for public review by the end of June. We expect to finalize the report in September/October. At this stage in the study, a preferred solution has not been identified and there has not been any detailed engineering undertaken. Further, the transportation network may be subject to revisions based on feedback from the above noted consultation session. We look forward to you participation at the upcoming public meeting.
OTHER	

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
Request to see maps from PIC#1.	**ACTION:** Scanned pictures of the boards were forwarded to the resident.
Concern that the 23 Acres proposed route appears to go through one or more Environmentally Sensitive Areas.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request that the environmentally sensitive areas that were not identified on the dot maps be included.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request that the data for the 'worse case scenario' split out and provided to interested parties for each of the King road and Waterdown road options.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request that the Waterdown South Residents Association is informed specifically which properties have been identified as impacted in the Waterdown Road.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request for legal requirements for informing the public of the various consultation sessions etc.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Concern that there are no good North-South transportation options.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request for exact location, boundaries and status of the following ESA's: located between the top of Flanders Drive, Rosewood Court and George Street, with another potentially between Waterdown South Development and Dundas Street the exact location and whether the proposed road would cut through or impinge on any of them.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Requests for traffic data presented at previous public meetings.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request for information about anticipated road usage levels if initiatives like transit were not able to be enacted.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
Requests for supporting documents as to how the study team deducted traffic numbers, assuming these initiatives to be successful and other similar towns where this has occurred.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Requests for bids/quotes that may have been supplied to you in the process or similar infrastructure initiatives undertaken in other communities.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
What provisions there are in the scope of your study, to further protect a currently protected pond, two existing ESAs (environmentally sensitive areas) and the Grindstone Creek running alongside or would that fall to another agency, once you have made you recommendation.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Will issues like traffic congestion and smog levels rise, fall or be indifferent to 3000 new homes being started before new access routes are identified, agreed upon, funded and built?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
WATERDOWN ROAD RESIDENTS ASSOCIATION	
Indicate that neither Waterdown Road nor King Road are desirable options. Request that "23 Acres" is transferred to the local conservation authority for long-term park and open space protection. Any new developments in Waterdown should not proceed until provision for new schools, and other infrastructure (including new roads, walking and bike paths) is made and funded without further increasing the tax burden on Flamborough residents.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Submission to the Stakeholders Advisory Committee This group was formed in November of last year to provide us a collective voice relating to a variety of issues. We represent a substantive tax base in South Waterdown. Our members are interested in what happens to our community and work actively to make sure our concerns are addressed before any final approvals are given. **Current Concerns**	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** A response was sent to the WSRA – please see Page 21.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
Though they may not be within the direct purvey of the SAC, there are a number of issues that concern us and that we wish to raise by way of context to our submission: **Specific Questions for response**: . Must the transportation options be clarified, accepted, and construction of new roads begun before construction of housing developments begins? Before Big Box development goes ahead? . Is an assessment of the ecological and socio-cultural value of the "23 Acres" available. If not will one be carried out? . Will you confirm that Mountain Brow road is not being considered as an East- West corridor? . Given that the Waterdown Rd – 403 interchange study indicated that a criterion was that the rural nature of Waterdown Rd. be preserved why is it being considered as a N-S option? . Can you make available a copy of the detailed comments relating to the transportation options, as gathered at the Open Houses held to date? . Are bike path options being considered as part of the transportation plan? Are public transit options being considered for Flamborough residents? . How do the current options identified fit with the Mid Peninsula Highway and its likely REDUCTION of South and South East Traffic Flow. . Has there been any discussion re upgrading parts of HWY # 5 to 6 lanes and how it will impact/reduce demand on QEW/Waterdown road? Has there been any consideration to the reworking/rebuilding of the Freeman Interchange (Brant, Niagara, 403, 407) and tying that into a King Road Full Interchange which will then go North and tie into a Waterdown By Pass/Mid Penn. . Has there been discussion of a 407 Interchange at Upper Middle and possible extension of Upper Middle Rd. (not at capacity at the western limit) through to the top of Kerns Road. Connect up with a Waterdown By Pass - future Mid Penn. . Is there any indication of how committed the MTO is to a full interchange at Waterdown Road? . If the transportation option through the "23 Acres" is dropped will the City support its inclusion in the Greenbelt? Will it go further and urge	

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (FEBRUARY – MARCH 2005)	
the Province to cede the land to a conservation authority? We seek confirmation that the WSRA will continue to be invited to participate in the SAC on an ongoing basis and be informed of any meetings regarding development in Waterdown. **Summary** We would like to see the following. Waterdown Road, Mountain Brow and the "23 Acres" removed from the list of possible transportation options and the "23 Acres" rolled into the Greenbelt. This land must be preserved in perpetuity for all to enjoy. No new construction be permitted until the concerns raised above regarding transportation, schools, medical services, recreational facilities and taxation are dealt with.	

April-June 27, 2005

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (APRIL – JUNE 27, 2005)	
NORTH-SOUTH	
As members of the Waterdown South Association we are very concerned about the widening of Waterdown Road/Mill Street to be considered as a N/S solution. How many homeowners on Waterdown Road/ Mill Street will be expropriated? We want the area called “23 acres "/Smoky Hollow, with its wildlife and beautiful natural environment which is important to residents of Waterdown, to be protected. It should not be destroyed. Also, development in Waterdown South should not occur until alternative routes N/S and E/W are funded without taxpayer’s expense, and new schools should be approved prior to development. **We strongly oppose the expansion of Waterdown Road**!	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** March 29, 2005, Office of Mayor Di Ianni wrote a response thanking the resident for their participation, and answering their questions. On March 31, 2005, the City of Hamilton Project Manager wrote a follow-up to Mayor Di Ianni’s response, adding that public consultation is an extremely valuable aspect of a project such as this.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (APRIL – JUNE 27, 2005)	
The number of residences impacted by the proposed Waterdown By-Pass - over100 plus approx. another 100 indirectly. The number of residences impacted by the King Road By-Pass - approximately 4. Concern that approximately 6000 homes will be impacted. Upgrading of King Road to a 4-LANE HIGHWAY would impact the escarpment to a lesser degree than the proposed Waterdown Road route. The flora and fauna do not need protecting - they will survive under the toughest conditions. It is the people that need to be protected. The increase volume of traffic in a residential area will amount to air pollution, road pollution, and noise pollution. You state - there are natural areas adjacent to Waterdown Road, including steep ravines on the east side - Is this not of concern? I think this is sufficient reason for not making Waterdown Road and Mountain Brow Road a 4-LANE HWY. You state - There is an existing residential community on Waterdown Road; King Road does not have an existing residential community similar to Waterdown Road. This is certainly true, so why are we disrupting a residential community as opposed to the absence of no residential community? We are not requesting upgraded roads, they are being pushed on us. You state - The transportation modelling for Waterdown road and Mountain Brow shows that these roads must be improved even if King Road was improved and straightened. If these roads must be improved, does it have to be a 4-LANE HWY?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** Originally, four routes were examined: Waterdown Road, King Road, Kerns Road, and Brant Street. Kerns Road and Brant Street were eliminated as potential solutions as they did not take enough of the traffic to warrant the expense and impacts of widening them. King Road alone will not solve the transportation problem for moving people in and out of Waterdown. It does not attract enough of the traffic volumes to address the transportation need. Even if King Road was built to a four lane capacity, there would still be a need to improve Waterdown Road. King Road would have to be straightened and a new 80 metre wide cut of the Niagara Escarpment would be required. This is a significantly greater Escarpment impact than Waterdown Road. There are high priority natural areas for protection on King Road. Waterdown Road will have a new interchange per the approved City of Burlington Environmental Assessment for this project. Waterdown Road will have a new interchange per the approved City of Burlington Environmental Assessment for this project. The Aldershot GO Station is at the intersection of Waterdown Road and Highway 403. There are natural areas adjacent to Waterdown Road, including steep ravines on the east side. King Road does not have an existing residential community similar to Waterdown Road. When all of the above factors are taken together, Waterdown Road is preferred for reasons of natural heritage impact (being minimal) and transportation routing (optimal). Of course we recognize that Waterdown Road has impacts on the existing community greater than King Road. In addition, our work with the Niagara Escarpment Commission and Conservation Halton has lead to those agencies concurring with the recommendation of Waterdown Road. The growth in Waterdown was approved by the provincial cabinet in June of 2002. The City of Hamilton, together with our partners in Burlington and Halton, are working to implement the requirements of the provincial cabinet. We are also committed to excellence in transportation planning and mitigating the impacts of new roadways. Unfortunately there is no solution without impacts and we will work with residents of Waterdown Road to address their concerns to the best of our collective abilities.

Summary of Issues/Suggestions/ Questions Raised	Action Taken/Information Provided by: City/Dillon/Lura
QUESTIONS/COMMENTS/CONCERNS (APRIL – JUNE 27, 2005)	
The rural streetscape protects our lawns from the run-off coming down from the Escarpment. Our lawns support our wells and septic systems. Not everyone has access to municipal water and we all have septic systems. Changing this rural streetscape, by increasing the impervious surface increases the risk of the run-off getting into our wells and septic systems. It would also fragment the wildlife corridors connecting the 3 ESAs and ANSI in this area. The increase in noise, vibration and lights would also have a negative impact on the social and natural environment. Waterdown Rd and King Rd. are both historic roads, limited by dramatic topography. They were built as local access roads, not in this forecasted role. The limiting capacity of both Waterdown Rd. and King Rd. is Smokey Hollow, in Waterdown. Because of the 'dramatic topography', it has been our experience that even a minor accident, will stop the flow of traffic in both directions on both Waterdown Rd. and King Rd. One of the reasons King Rd was identified as the North/South route in 1999, was that in an Emergency Response situation, vehicles would have access on both of these roads. Therefore any accident in Smokey Hollow would not block access, to and from Waterdown, on both Waterdown Rd and King Rd. Even without any improvements, drivers are already using King Rd as a through road, all this in spite of the sign posted at the Service Road, telling through traffic to use Waterdown Rd. It also recognized that the unused capacity on Waterdown Rd was able to accommodate the traffic from the OMB-approved housing application in North Aldershot for 600 houses and said this traffic would be more sensitive to local conditions and the community than through traffic. There is yet a second OMB Hearing pending, because the developer is asking for a 62% increase in housing numbers in part of this proposed development. Is the option to widen Waterdown Road being weighted by the City not prepared to defend not only their planning policy but also the OMB Decision?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
The expansion of the GO Station has been touted as a pressure to provide additional road capacity for the proposed population increase in Waterdown. If this is the case, will the information on the public transit component of the study be presented at the April PIC?	Yes. Change transit strategy will be incorporated in the final report.
Aside from the obviously immense impact on almost 100 families who live on Waterdown Rd., there are also safety concerns. There are more than 85 driveways that enter onto Waterdown Rd. and about 6 on King Rd. Students in North Aldershot are bussed to no fewer than 9 schools. The students are bussed, not because of the distances to the	These matters have been taken into account as part of the environmental assessment.

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schools, but because the Boards recognize the safety concerns. These buses do not go down the side streets but pick up the students at 'bus stops' on Waterdown Rd. Widening of this road will only increase the danger. While there appears to be no clear-cut choice for a North/South route, I think there is a better choice and I believe that it is still King Road.	
Objection to the widening of Waterdown Rd: One is the obvious problem of being populated over much of its' length, far more so than the alternate King Rd. As well, and most importantly, it is bordered along it's eastern side by Sassafras Woods, one of 38 "critical natural areas" identified in 1984 by Carolinian Canada. Any interference with Sassafras Woods would be a blow to conservation in this region. Neither Waterdown Rd. nor King Rd. would be easily widened for increased traffic. Although the King Rd. choice would also be challenging, it must be better than funnelling a large increase in traffic volume down through the area of the waterfalls, under the railroad bridge and up to the intersection of Hwy.5 and Mill St.!! If this traffic volume includes the cars leaving a proposed new interchange at Waterdown Rd. and the 403, and travelling north, it is hard to imagine that this route could ever be adapted successfully. Please do not allow the widening of Waterdown Road.	**ACTION:** These questions/points were addressed at the PIC held in April 2005.
Many questions about whether a new bridge will be built over the river and whether the tracks will have an overpass and whether the road will be 4 lanes in front of my house. My greatest concern however, is that I will not be able to get out of my driveway safely. The grade of the hill west of my home is such that I have NO VISIBILITY with even 6" of snow. I am very afraid of the result with more traffic if this factor is not taken into the planning. I was told at the Open House that there would be a way for me to be involved in the more micro planning regarding how exactly the road will be designed in front of my house. Could you please tell me how I can become more involved because I feel my safety could be jeopardized?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Issues of these details are address with affected homeowners at "kitchen table" meetings during Phase 3 of the Class EA process.
Why is Waterdown Road preferred over King Road? Request for proof of the decision that this is the correct decision when all other studies to date have preferred King Road. With the implementation of an interchange and the possible widening of Waterdown Rd. to 4 lanes, how will the rural	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. All of these questions were addressed in the PIC presented materials.

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character of the road and areas be maintained? How will this happen without displacing the majority of the original community?	
How will wildlife safely cross between the ANSI's and ESA's in the area, will they now have to cross a busy four-lane highway and become road kill?	
How will more pavement from widening roads and new developments resulting in water runoff affect area watersheds (3 of them)/creeks?	
How will more traffic and pollution affect the area watersheds and the ANSI/ESA areas? How can we continue to protect these species if we are constantly pitting them in more danger? Why can't we use the hydro cut on King Road as a new traffic corridor) bury the hydro wires like most other countries do)?	
How were the "weight values" decided or distributed according to presentation at the April 20th meeting? What research has been done to estimate total costs of widening the road? Costs such as storm sewers, road reconfiguring, moving existing infrastructures, acquiring property etc. and has this been done also for King Road what are the comparisons and please don't quote the 14M vs. the 24 M again as those figures are very unrealistic. Again where are the details and explanations? We want answers.	
If widening is done, who is paying the costs? You can't expect us as taxpayers to pay for something we DO NOT WANT!!! Infrastructure required to support growth will be paid by the development community.	Growth related costs will be paid by the development community.
What is the position of the City of Burlington when it comes to widening Waterdown Road? We were told couple of years ago that Waterdown Road was not going to be widened. Has the City position changed? The City of Burlington, adopted the study findings to-date at the C&CS Committee Meeting on June 20, 2005.	
Why was the public not informed about the June 9th SAC meeting? Why are area residents continually NOT informed about meetings that directly affect their whole life.	The SAC meetings are not publicly announced as they are focus group meetings with community stakeholders; however Public members were able to attend SAC meetings as observers.
I CAN NOT SUPPORT THE WIDENING OF WATERDOWN ROAD OR FURTHER DEVLOPMENT TO THE AREA that will harm the existing rural character of North Aldershot.	

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EAST-WEST	
I live at 138 at the corner of Duncan between Centre Road and Highway Six. Is this part of the area to be widened? I couldn't tell from the display last night or from the web site. How wide would you actually make Parkside Drive? My second question regards compensation to adjacent homeowners. Obviously, if you widen Parkside or other streets you will decrease the property value of the adjacent homes. Is there a plan in the works to expropriate entire properties at fair market value so that homeowners will not suffer financial losses. Also, what is the timetable for construction? Since we are planning some major improvements to our home we would obviously require the answers to these questions before we proceed with our plans. I would appreciate your prompt reply to these questions.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** Dillon Consulting responded with the following e-mail: The preferred east-west corridor recommended as presented at the PIC and displayed on the project website is Option 4. Starting at the west, this option consists of a new 2-lane North Link "By-pass" ROW from Dundas Street West at Hwy 6 continuing as a new northern "by-pass", then swinging south past Centre Street to connect with Parkside Drive east of Churchill Avenue. Widening Parkside Drive to 4 lanes will occur between Churchill Road to the eastern edge of the Upcountry lands, just west of Evans Road. Then a new link from this point will connect with Dundas Street. The portion of Parkside Drive between Highway 6 and Churchill Road (which includes 138 Parkside Drive) is not a part of the preferred option and is therefore not recommended for widening. Based on the recommended plan, there is no need to acquire any property in the portion of Parkside Drive you are referring to. For properties east of Churchill Road that may be affected, the City of Hamilton will begin negotiations with property owners to acquire portions or all of a property affected at a fair market value once the details of the roadway improvements are known. There is no clear timetable for construction at this point. Currently, this Environmental Assessment (EA) is at Phase 2 of the process. The purpose of Phase 2 is to identify alternative solutions to the problem. This is likely to be completed in the fall of this year. Phase 3 through 5 of the EA process will follow, which will involve alternative design concepts for the preferred solution, drafting an Environmental Study Report, and implementation.
ENVIRONMENTALLY SENSITIVE AREAS	
A letter was written by a resident of Waterdown expressing her disdain about the plan to expand Waterdown rd. and go through the 23 acres. This resident expressed that she and her family had enjoyed the area for many years, and that it would be devastating to let it go.	**RESPONSE:** Response was sent from the office of Mayor Di Ianni; thanking the resident for their input, and assuring them that the team was working towards the best possible solution for everybody.
The Niagara Escarpment Commission concurs with the recommendation of Waterdown Road.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.

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TIMING OF REPORTS & RESPONSES	
At the April 20th and 21st Public information presentations, it was stated that the details of the Consultants report will be published within 2 weeks on the Hamilton City Planning Departments web site. It is now 4 weeks later and still no publications. At the same presentations you have asked for feedback by May 18th. I, like many other people have been waiting for the detail reports from the consultant before I make my comments. Where is the Consultants detailed report? Once it is published you then must allow a reasonable amount of time for the public to reply back to it. If the details of the report are not going to be published to the public, please advise so I can still state my comments on what was presented so far! Request to know how long residents have to make final comments?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** The Alternative Solution Evaluation Report is now available on the Project Website. This report documents the results of the process undertaken to identify, evaluate and select a preferred transportation solution for the Waterdown-Aldershot study area. The website address is: www.city.hamilton.on.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/default.asp As always, please let me know if you have any further questions or concerns. In response to the final e-mail, Liz Nield wrote The next round of PICs will be held in the Fall, the final decision will be made after that time. In regards to a deadline for comments, the Study Team is accepting comments until July 5. We have documented all of your comments, ideas and concerns.
I also asked in the Aldershot meeting if they will have another group meeting 2 weeks after they publish they details. The intent of the question was that at the meeting, it was our first opportunity to see their recommendations. However, without their detail report/data it was hard to ask relevant questions. Now with the details we can ask better question and give better advise to them. If they do not let us publicly comment on these details within the next few weeks it will be too late. Their next planned meeting is Sept when they will release their final recommendations/report. So much for public input at that time!!! If you can look into this, we would appreciate it.	
Concern that no response had been received in regards to the original request and questions sent on February 14.	**RESPONSE:** Lura replied and assured that the resident would receive a response. Dillon sent a response to the resident with detailed answers to the questions about the project.

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Request to add new email addresses to contact list, and noted that H-TUG would attend the 3rd SAC meeting.	**RESPONSE:** Lura replied and sent minutes, also indicated that Study Team has been contacting H-TUG since the beginning of the project.
Concern that responses and reports are not distributed in enough time.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input.
Request for SAC members list Request to know who hired Lura Consulting.	**ACTION:** Lura sent resident the SAC members list, and indicated that Lura has been hired by the City of Hamilton and Dillon Consulting.
PUBLIC TRANSIT	
Overall concern with the direction of the Transportation Master Plan. While references have been made to transportation demand management and improvements to transit and cycling, the majority of additional capacity appears to have been directed towards automotive use. During the June 2005 SAC meeting, when asked about what elements of public transit would be considered within the study area, Dillon Consulting claimed that a shuttle like service connecting Waterdown to the Aldershot GO station could also loop around Waterdown to service trips within Waterdown. The primary function of this system would be servicing intercity trips, and is unlikely that this would provide a level of service close to that of a typical transit system. If Dillon Consulting considers this service an effective means for providing intra-city trips, we would ask that they provide some supporting evidence. We believe the focus on car based solutions may be flawed in that several important issues were overlooked in the planning to date. While some discussion of these issues has taken place in past meetings of the SAC, we do not believe they have been fully resolved. <u>Air Pollution</u> Air pollution effects were not incorporated into the evaluation of transportation alternatives. During the June 2005 SAC meeting, Dillon Consulting stated this exclusion was due to all road capacity alternatives having the same projected increase in air pollution. However, if transit was eliminated as an alternative to road capacity expansion, it would have been without consideration of transit's lower impact on air quality.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** The solution was not car focused, however, in order to accommodate the demand, additional automobile capacity is required in concert with TDM and transit. A transit only solution was eliminated; however Transit service was not eliminated as part of the solution.

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Accessibility There has been little discussion of how current and future residents of Waterdown without access to a car will be accommodated. While most adults in Waterdown likely have access to a car, the young, elderly and disabled population may not. These groups do not appear to have been adequately represented in the planning process. Increasing Energy Costs Few would disagree that the car is becoming a less viable mode of transportation. During the June 2005 SAC meeting, Dillon Consulting stated that predicting increases in energy costs was too difficult to include in their modeling. We appreciate that modeling has practical limits, but at the very least, all limitations should be stated out right, in order to allow for an informed interpretation of the results. Public Support The residents of Waterdown have expressed a number of concerns which are in opposition to the proposed Waterdown road expansion, including expropriation of property, the loss of village character and the adverse environmental and social impacts associated with increased car usage. These concerns should be considered when evaluating public support for introducing public transit. We respectfully request that the issues discussed in this letter be addressed. We look forward to continuing an open, constructive discussion.	
WATERDOWN SOUTH RESIDENTS ASSOCIATION	
It only came to our attention after the Waterdown public meeting, and after the road option through the 23 Acres was first identified, that the proposed route appears to go through one or more Environmentally Sensitive Areas. These areas were not identified on the dot maps at the meeting, and if they are indeed located between the top of Flanders Drive, Rosewood Court and George Street, with another potentially between Waterdown South Development and Dundas Street, they should be added to the "areas of concern" map. We would appreciate confirmation from either of you about the exact location, boundaries and status of these ESA's and whether the proposed road would cut through or impinge on any of them. We have serious concerns relating to the "Criteria Weighting Exercise" we were asked to contribute to (some people declined to submit their "rankings" because of these concerns). We want to reiterate a point made by several people (including by at least one SAC member) during the	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. **RESPONSE:** A photograph of the display board was forwarded by e-mail on March 1, 2005. A PDF of the Stakeholder Advisory Committee TOR were provided to the WSRA on April 18, 2005 by e-mail. The exact location, boundaries and status of these ESA's and whether the proposed road would cut through or impinge on any of them is available in the project web-page at Page 32of the PIC 2 presentation slides: http://www.hamilton.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/PDF/Waterdown-Aldershot-PIC-2-Boards.pdf It is important to note that ESAs and other natural areas have been avoided as much as possible in corridor routing and in Phases 3 & 4, further attempts will be made to avoid effects in

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meeting and have several issues to register and/or seek a response to. We would like to have the data for the 'worse case scenario' split out and provided to interested parties for each of the King road and Waterdown road options. We request this be split out as per the tabular values used at the meeting on Table NS-1. We would also request being informed specifically which properties have been identified as impacted in the Waterdown Road scenarios, including which specific 77 residential properties could be "required," which others are within the 25m, 25-50m of the corridor etc, for each of the categories. We request the same information for the King Rd. scenarios. **North South Routes** When Waterdown and King were examined, the following information was determined: King Road alone will not solve the transportation problem for moving people in and out of Waterdown. It simply does not attract enough of the traffic volumes to address the transportation need. In fact, even if King Road was built to a four lane capacity, there would still be a need to improve Waterdown Road. King Road would have to be straightened and a new 80 metre wide cut of the Niagara Escarpment would be required. This is a significantly greater Escarpment impact than Waterdown Road. There are high priority natural areas for protection on King Road Waterdown Road will have a new interchange per the approved City of Burlington Environmental Assessment for this project. While we heard your explanation of how you propose to use the information gathered, it seems clear the ranking exercise is seriously flawed from any empirical standpoint and the results wide open to interpretation. For instance several of our members felt by ranking environmental concerns highest, they were doing so in relation to the 23 Acres. Such a ranking could easily be mis-represented. This point was reiterated by several people in relation to other factors such as the cost weighting. That element could be ranked high or low depending on the tax impacts to residents. We therefore respectfully repeat the request by several parties that a similar ranking exercise be undertaken for each of the King road and Waterdown road options separately.	developing the design of the roadway. Information about the weighting criteria exercise was presented at the second round of Public Consultation and documented in the Alternative Solutions Evaluation report, which can be found in the study's web page at: http://www.hamilton.ca/public-works/capital-planning/waterdown-&-aldershot-tmp/reports.asp It is our opinion that the criteria ranking and weighting exercise was undertaken in a legitimate manner consistent with approaches we have followed for other EA studies. The study team considered the input obtained from the workshop participants and developed criteria group and criteria weights to assist in the evaluation of corridor options. These weights have been made publicly available at the PICs and documented in the recently released discussion paper. To date, we have received no other concerns regarding the recommended criteria weights. Should you feel that the criteria weights as recommended are inappropriate, we would be pleased to discuss these concerns with you. In assessing the alternative road corridors, we identified the potential for the removal of up to 19 residences along Waterdown Rd. Since that evaluation was undertaken, we have further refined the need for property along Waterdown Rd and expect that at least half of these residential removals can be avoided. A further refined corridor is to be presented in the Transportation Master Plan Report, which will be available in late summer 2005. The need for residential removals will not however be confirmed until Phases 3 & 4 of the Class EA process when alternative designs are identified, assessed and evaluated. This work is to commence in late 2005 As stated above, the process to develop the criteria group and criteria weights was undertaken in a legitimate and supportable manner. All the road corridor options that were considered have the potential for varying levels of effect on various components of the "environment". The potential for effects from each of these options was presented to the participants at the workshop. This was done to provide the participants with a general sense of the range of effects associated with the options. You note concerns regarding the ranking and weighting of the natural environment criteria group as "high importance" by some of the workshop participants due to concerns with the "23 acre" woods. We see no problems with this and view it as a legitimate reason for assigning a high level of importance to the natural environment criteria group. Again, the purpose of the exercise was to obtain input on what the public views to be the most important considerations in selecting a preferred option. It is important to recognize that not all of the effects can necessarily be avoided in the selection of the preferred alternative. Again,

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We would appreciate confirmation of what the legal requirements are for informing the public of the various consultation sessions etc. We would like to register our dismay at your public confirmation that there are no good North-South transportation options and we simply need to make the best of a bad situation, based on the fact that development was approved by the previous government. We would also like to ensure that your statement is recorded in the minutes of the meeting. Now that the Kerns Road alternative has been eliminated, we more than ever consider our association deserves full status on the SAC. Mr. Stephenson, who should certainly remain as a member of the SAC, is identified as a "representative" for the "Local Community -Waterdown South." He lives on the 3rd Concession East, bordering Kerns and right on the eastern boundary of Waterdown. As Waterdown Road is now one of two remaining options, our association representing residents around the Waterdown Road, 23 Acres should be on the committee.	the process is about making tradeoffs so as to select on balance, the option with the most advantages and least disadvantages. We believe that the criteria weights that were ultimately selected are reasonable and represent the range of concerns and effects associated with road improvement options in the study area. In reference to your final point, to assist in the evaluation of the options, one set of criteria weights is developed, not separate sets for each option selected. The Waterdown-Aldershot TMP is being undertaken to meet Phases 1 and 2 of the Municipal Class EA process. For Phase 2, there are two mandatory points of public contact including: towards the end of Phase 2 inviting comment on the selection of the preferred alternative solution and when the project is completed a notice of project completion is to be issued, again inviting comment on the recommended solution. These notices will be issued once the study has reached these points in the process. The Cities of Hamilton and Burlington have well exceeded public notice and consultation requirements of the Class EA. Additional notices/events have included: a project initiation notice, notices to attend PICs (two held to date and a third planned for September), the issuing of interim study reports for public review and holding Stakeholder Advisory Committee meetings. The WSRA was invited to become a member of the SAC through our April 15, 2005 response to your "Submissions to the Stakeholder Advisory Committee" (page 11).
Concern about timing of response to questions posed from February through to April.	**ACTION:** Dillon Consulting offered an apology for the delay in response.
Your staff report to the Public Works, Infrastructure and Environment Committee appears to indicate that part of the NS option recommendation is: "Geometric improvements and widen Waterdown Road to 4 lanes from Hwy 403 to Dundas Street". WSRA indicated that they thought that the proposal was 4 lanes up to Mountain Brow only? Request that the Discussion Paper is mailed directly to the WSRA.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. The Study team will check the report and correct as required. In terms of e-mailing a copy of the report, the City's standard practice is that the agenda is posted on the FRIDAY before the committee meeting. My commitment to you was to e-mail the report when it became available, which I had indicated was on the Friday before the committee meeting. It appears the agenda was posted early which was unknown to me when I left the office yesterday.

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ADDITIONAL OPTIONS TO CONSIDER	
Heard and read several times that the City of Hamilton is running out of space for expansion. If this is the case would it not be prudent to save the space we now have available for expansion in the city for future citizens of the city to live and work. If that makes sense, does it make sense to build a bypass of Waterdown so that people that want to work in Toronto have better access to Toronto? Parkside Road has been designated as a 4-lane road in the transportation plans for many years. That certainly is the first and hopefully the only step that should be taken to provide a road for those that wish to travel to Toronto. What makes the most sense of all to help people travel to Toronto is not by car, but by Go Train from Aldershot.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC.
I presently live on Boulding Ave and the back of my house (master bedroom window) backs onto Parkside Dr no further than about 30 meters. I estimate that about 1000 cars speed by my home during the morning and afternoon rush hours each working day. The noise is very high and stressful at times. Reduce the speed of Parkside in areas that are currently posted at 60 km/hr to 50 km/hr. Western portions of Parkside Dr are posted already at 50 km/hr, but for some reason, the area behind our subdivision still remains at 60 km/hr. There is also a safety concern here at the intersection of Boulding and Parkside Drive which I use to leave my survey. It is often very difficult to enter Parkside Dr due to the volume and speed of traffic at 60 km/hr. **Create an East West Road, north of Parkside Dr that the majority of cars would use instead of Parkside Dr.**	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC.
It goes without saying that human nature would definitely welcome an exit ramp at Waterdown Road so that those poor trapped commuters could exit and avoid this daily inconvenience of traffic. Unfortunately, for some unknown reason, none of your scenarios, or any other previous traffic studies have ever addressed this daily occurrence. The implementation of an	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. .

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exit ramp for the westbound traffic would ultimately put Aldershot, Plains Road West, Waterdown Road and downtown Waterdown into gridlock every time that there was a backup on the Highway. Add to this the GO station traffic exiting onto Waterdown Road that already creates substantial gridlock even at the best of times and the scenario is complete. None of the traffic studies address this occurrence either. OPA 28 in Waterdown was a provincially sanctioned directive to expand for future population growth. This EA is a study to accommodate that growth which also includes the east / west "Waterdown bypass". The Aldershot portion mainly addresses the north / south component. The existing main north / south routes are Brant Street and Highway No. 6 which is already being upgraded and which will become more efficient. Previous planning studies concluded that Waterdown Road would reach capacity in any scenario even if it were widened to six lanes. So where is the solution to this dilemma? Simple common sense. This province already has an existing highway that could carry the QEW / Waterdown bound traffic with minimal upgrades, no expropriations, no widening or upgrading the north / south arterial roads and no full interchange required at Waterdown Road. Why was this existing component entirely overlooked?	
Highway 407 from the QEW to Highway No. 5 is part of a toll road that the provincial powers decided to sell. Since the provincial powers also sanctioned development that requires a solution, they should also become responsible for that solution. The short stretch between the QEW and Highway No. 5 could be dealt with easily enough. Buy it back or expropriate it if need be. It would be far less costly to reclaim this section of a few kilometres and introduce access ramps from the westbound QEW and even east bound too, then it would be to implement any of the other scenarios presented so far. Please become sustainable.	The Highway 407 was considered in the overall network analysis. Two independent studies concluded there is a need for the equivalent of one lane of traffic per direction in the east/west and north/south directions to service OPA 28 lands.
OTHER	
When is the EA expected to be completed and what is timing for expropriation and construction? What is the function of the road? What is the volume of traffic anticipated? Is the road a 2 lane or 4 lane road? What is the anticipated width of the r-o-w? -Are residential driveways permitted access to the proposed road?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC.

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If other municipalities benefiting/using this road, they should also contribute towards cost. Is the development charge area specific? Is $17 million in Hamilton development charge sufficient? Have costs also been included in Burlington development charge? Is there a road for the road without development? What if no development occurs, who will use the proposed roads? Would there be a land use compatibility problem with E/W route through Waterdown North? What is the percentage of traffic outside Waterdown expected on the E/W section shown in transportation model? Have improvements to Concession 5 to Guelph Line for the E/W route been evaluated and considered, rather than a new road? Can the proposed transportation alternations be phased during implementation?	
Will this be a major express road? It will be an arterial roadway. Will it access to our farm? Will it have access to Robson Rd? We presently use Parkside with farm tractors, wagons…? Has Concession 5 been considered?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC.
To what degree has King Rd been accounted for in your design conclusions? Who is co-coordinating this and has final approval before making your submissions to both Hamilton and Burlington Councils? We would like to know who in the MTO Administration has full and final say on this issue. Is the MTO part of the study's Steering Committee? Has a full Environmental Assessment taken place or is it being considered, if no why not? This study is being undertaken under the Municipal Class Environmental Assessment Process. What is the evaluation criteria for people/drivers	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC.

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backtracking easterly on Mountain Brow and Hwy #5?	
Suggested that a preliminary route analysis should be conducted on Waterdown Rd. in order to show the public that the proposed route will likely not expropriate all 77 houses.	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. This will be provided in the draft report.
With the serious nature and costs of the proposed Waterdown Road expansion can you confirm with me which city is paying for the Waterdown road 4-lane proposed road expansion?	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. Most of these questions/points were addressed at the PIC. Cost allocation will be presented in the draft report. Infrastructure required to support growth will be paid by the development community.
On the website, option 1 goes through the greenbelt area. I have talked to a representative at the Halton Conservation a number of times in the past when Stantec was doing the same study in 1989. Stantec picked the same route as Option 1. She told them they cannot go the Provincially Significant areas (i.e.-Grindstone creek) but that was still their recommendation. I would say this time they listened to her and therefore did not choose Option 1. However I have not heard anything from the Hamilton Conservation Group. I know the Mayor of Burlington was on the Greenbelt committee that drafted the wording - "not to go through these PSW unless no other alternative can be found".	**ACTION:** The Study team takes all feedback and comments into consideration, and documents the input. .

Waterdown/Aldershot Transportation Master Plan: Phase 2

Summary of Public Input

July 2005 to December 2007

LURA
LISTEN · UNDERSTAND · RELATE · ADVANCE

This document summarizes the issues that have been received from public stakeholders during the Waterdown/Aldershot Transportation Master Plan – Phase 2 and the responses from the study team.

For more information, please contact:

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FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
Natural Environment			
Aquatic			
Watersheds/Wetlands	*Watersheds*	• Concern regarding the impact of new roads on watersheds	• Will be examined in Phases 3 and 4
Terrestrial			
Air Quality and Climate Change	*Vehicle Emissions*	• Concern over increased traffic increasing air emissions	• Examined in Phases 3 and 4, and have recommended transit
		• Suggests offsetting emissions with increased tree planting	• Suggestion will be looked at in Phases 3 and 4
Designated Lands	*Environmentally Sensitive Areas*	• Concern over the impact of new roads on these areas	• Detailed alignment will occur in Phases 3 and 4
		• Suggests that Mountain Brow Road does not get extended beyond King Road from Waterdown Road, so have less traffic down King Road.	• Will be looked at in Phases 3 and 4
		• Suggests that an extension of Upper Middle Road will affect the environmentally sensitive areas	• Will be addressed in Phases 3 and 4
	Greenbelt	• Concern over impact of new roads on the Greenbelt	• The Greenbelt Act was taken into consideration – impacts will be mitigated through detailed design
		• Suggests that the Barnes and Connor lands, while officially within the Greenbelt, are not natural, and therefore a more logical location	• This option was evaluated
		• The Phase 2 Draft Report does not highlight that the recommended route passes through the Greenbelt	• Is noted in Section 5.1 of the Phase 2 Draft Report

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• The Greenbelt Act does not allow the recommended route, as there are other 'reasonable alternatives'	• The Greenbelt Act does not prohibit crossing the Greenbelt • The recommended route has the least overall impacts on the Greenbelt • The Project Teams interpretation of the Act has been confirmed by Ontario Ministry of Municipal Affairs and Housing staff • The design stage will work to even further minimize the impact
		• The Phase 2 Report claims the recommended route does not affect the Greenbelt	• The report says the Greenbelt legislation has no affect on the route, not that environmental features have no effect
	Provincially Significant Wetland Designation	• Concern over impact of new roads on Provincially Significant Wetlands	• The area in question is not a Provincially Significant Wetlands, therefore it was evaluated as an environmentally sensitive areas, and the Ontario Ministry of Environment was written for clarification

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• The Waterdown North Wetland Woods is an 'overlooked' Provincially Significant Wetland	• The area is an Environmentally Sensitive Area, and a candidate Provincially Significant Wetlands • Even if re-weighted as a Provincially Significant Wetlands, the recommended route does not change • Routing and mitigation will occur in Phase 3
		• Due to the size of the Provincially Significant Wetland and the size of the project, re-weighting will not factor this change to the degree necessary	• Used the same weighting technique as for the rest of the analysis, a level appropriate for a Phase 2
		• The report was not based on good environmental information	• The natural environment criteria were terrestrial and aquatic features, regardless of the presence of a designation on the land
Wildlife and Wildlife Habitat	*Migration*	• Asked about the effect of the expanded roads on wildlife migration	• The potential for effects to wildlife movement will be considered in Phase 3.
Woodlands/Vegetation	*Trees*	• Questioned the impact of the proposed roads on existing trees	• The impact will be examined in Phase 3
Socio-Cultural Environment			
Community			
Aesthetics/Community Character	*Rural character*	• Concern over the impact of the roads on the character of the area	• They are working to provide answers, but detailed design will occur in Phases 3 and 4
		• Questioned why Dillon was not told to 'retain the character' of Waterdown, as Stantec was told	• Measures to minimize the effects on the character of the affected areas will be considered in Phase 3.

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
Public Infrastructure	*Hydro Infrastructure*	• Questioned the location and safety of hydro lines	• Location is determined during development – referred to Horizon Utilities
	Sidewalks	• Questioned the location of new sidewalks	• Determined in Phases 3 and 4
	Streetscape	• Wondered about the streetscape designs	• Will be dealt with in Phases 3 and 4
	Trails	• Support of pedestrian and bike trails	• This issue falls under Phases 3 and 4
		• Suggests grade separating the trail running northerly from Parkside to the new park areas	• Will be explored in Phases 3 and 4
		• Questioned the impact on the trail from Parkside to Flamborough Wetland Park	• Re-evaluated, and will be noted in the final report
Cultural			
Built Heritage and Cultural Landscapes	*Waterdown*	• Wondered how the Transportation Master Plan has been tied into the 'Future Vision Statement' for Waterdown	• Available 'vision statements' in the study area were considered in the Transportation Master Plan.
		• Wondered about the effects on heritage properties/areas	• Will be addressed in Phases 3 and 4
Residential			
Access	*Driveway*	• Concern over new driveway grading effecting sight lines	• Effects on driveway sightlines will be considered in Phase 3.
		• Concern over safety of backing out of driveways onto the newly busy roads	• Will be addressed in Phases 3 and 4
	Mail Delivery	• Will there be room for rural mailbox delivery?	• Will be addressed in Phases 3 and 4

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
Nuisances	*Noise*	• Suggests signs to show that Flanders Drive is not a through street, thus avoiding unnecessary traffic	• Falls under Phases 3 and 4
		• Suggests noise mitigation needed for Flanders Drive residents	• Falls under Phases 3 and 4
		• General concern over increased traffic noise	• Will be examined in Phases 3 and 4
	Safety	• General concern over the safety of the increased roads, in regards to vehicles and pedestrians	• Will be addressed in Phases 3 and 4
		• Concern over the traffic circle, which appears in certain figure, as being an unsafe option	• The traffic circle was only illustrative, and all designs will be looked at in Phase 3
		• Concern over safety at Mountain Brow and Flanders Drive, therefore suggests a stoplight	• Falls under Phases 3 and 4
		• Resident was looking for additional details of what will happen in front of her house near Mountain Brow and Waterdown Road	• The Phase 2 Transportation Master Plan provides relatively detailed plans for the roadway improvements. Further details will be developed in Phase 3.
	Visual	• Wondered what would be done with the hydro poles recently installed	• Addressed in Phases 3 and 4
Property	*Encroachment*	• Concerned about encroachment policy and its effects	• Prefer to negotiate with homeowners • Generally only acquire the minimum, and only if access and/or buildings are affected • Will be looking at ways to mitigate, through routing, in Phase 3 and 4

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Suggests a way to mitigate is to straighten portions of Waterdown Road, and put the houses on a new side road	• Detailed design in Phase 3
		• Wondered what the process is for deciding what is fair value regarding compensation, and if they will be compensated for property value loss	• Property requirements have not yet been defined
	Impacts	• Questioned what to do if construction damaged property	• It is up to the contractor to verify, but suggests that residents take photos
		• Questioned effect of construction on well systems	• Explained the plan for municipal water servicing
		• Questioned effect of construction on Septic systems	• Dealt with in Phases 3 and 4
		• One resident wondered about the effect of the East/West route on his farming operations	• Will be examined in Phases 3 and 4
Technical Considerations			
Cost			
Project	*Full Cost of Preferred Route*	• Questioned who pays for the maintenance of new roads	• Tax levies, not development charges
		• Questioned if developers will pay for the streetscaping of the new roads	• Developers do not pay beyond the 'ten year average' used in the municipality – therefore this will be addressed in Phases 3 and 4
		• Wondered about the cost of this new study	• Costing for the roadway improvements were considered and are documented in the Transportation Master Plan Report.

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Wondered who pays for expropriations	• It is part of the project cost
		• Wondered when developers pay the development charges	• They pay at the time of building permits
		• Questioned how the road changes will be paid	• The majority will be development charges, as the intention is for growth to pay for growth. Are also working on a financial agreement between Burlington and Hamilton
		• Questioned the justification weighting/criteria, specifically relating to cost and the monitoring of costs	• Explained the multiple factors used in the justification table, not simply cost. Detailed costing will go to Council in Phase 3, and beforehand if necessary
		• Wondered about Development Charges being able to cover the increased cost	• The current $17 million is all for roads. The process is that Council has to approve any adjustments • Please see Table 15 of the draft report
		• When will upgrading costs be added, as they would affect the route selected	• When development is complete - the study identifies improvements to major corridors
Engineering			
Construction	*Timing*	• Suggested that development be staged in conjunction with road improvements	• They will proceed in stages

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
Project Management			
Consultation	*Hamilton Conservation Authority*	• The Hamilton Conservation Authority has not been involved	• Hamilton Conservation Authority was on Steering Committee, and received a copy of the Report
	Public Feedback	• City planners are using the recommended route as if it is the final route	• Planning needs to incorporate reasonable roadway infrastructure, based on the best information available
		• Project team is proceeding before public input is received and investigated	• Public input has been considered throughout the Transportation Master Plan process.
		• Information was not given to the public in a reasonable timeframe	• Information was provided to the public as soon as possible, and replies to questions can take time to research
		• The people should be able to have a meeting with City staff to discuss issues about the project without the City's consultants present.	• Private meeting held with stakeholders, and concerns to be addressed with feedback from consultants.
	Stakeholders	• Suggested public input is not respected	• Input is valuable and will continue to be sought
		• Suggested the public is not being properly informed	• Noted the effect made by the Public Information Centres and the Stakeholder Advisory Committee
		• Suggests a summary of the final Phase 2 report should be distributed to all residents	• The Final Phase 2 Report is being made available to the public.
		• Wondered about the influence of developers in the decision-making process	• Explained the study team, and how only 1development representative on the Stakeholder Advisory Committee

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Did not find out about the Environmental Assessment until late in the process	• Explained how they advertised/involved the public
		• Suggested the study team is not exploring or presenting all options	• All reasonable and feasible options were explored
		• Request to be consulted before decisions made	• Process described to resident. He was advised that as an affected property owner he would be kept informed and invited to participate.
	Stakeholder Advisory Committee	• Suggest that the Stakeholder Advisory Committee was not representative	• The team did not know at the outset what the issues were going to be, and members were not meant to represent certain areas, and the Public Information Centres were available for the public at large
		• Representatives commented on issues outside of their locale, distorting evaluations	• The team did not know at the outset what the issues were going to be
EA Process	*Draft Phase 2 Report Accuracy*	• Provided editing comments for the Phase 2 Draft Report	• Reviewed in the final Phase 2 report
		• Suggests past studies are not being respected (NAIAR, Stantec, etc…)	• The consultant reports have no status, as were not approved by Council, and changes have occurred since the other reports
		• Questioned the estimated costs of the project	• Explained how costs derived, how they were compared to other areas in the Greater Toronto Area, and how a 30% contingency was added. Will be further refined in Phase 3.

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Questioned the criteria/weightings used to evaluate the options, in regards to cost, social, and environmental	• Explained the weightings/criteria, that need to look at all factors, and that the solution needs to solve the capacity problem
		• Disagrees that the Ontario Ministry of Transportation says Parkside Drive will be closed to Highway 6	• Have been told, as part of the Ontario Ministry of Environment's corridor improvement program, that it will be closed • Have been told, due to intersection spacing requirements when Highway 6 is upgraded, will be either closed or a flyover – gave Ontario Ministry of Environment contact information. Regardless, the outcome will not affect the recommended route.
		• Suggested that the only need is to widen Dundas Street between Hamilton Street and First Street	• This option does not solve the capacity issues
		• Addition errors for cost of recommended route	• Acknowledged and updated. The updated costs did not change the route selected
		• There are multiplication and other mathematical errors in the justification/evaluation tables	• Any discrepancies are due to rounding • Meeting held to review perceived errors.
		• Missing environmental analysis for widening of Dundas Street between the new North-South route and Brant Street	• The section was common in all options, therefore not examined. A detailed review will occur in Phases 3 & 4.

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Suggests different standards were used to evaluate the North-South route than to evaluate the East-West route	• The same evaluation process was used
		• Incorrectly added cost of Highway 6/Dundas Street interchange, as is a provincial responsibility	• Only the costs and impacts of adding an additional lane through the corridor were calculated
		• Incorrectly included widening Dundas Street from Berry Street to Pamela Street, when 1.1 km of the section is already 4 or 5 lanes	• The report should have described a widening to 4 lanes west of First Street, instead of near Pamela Street. It therefore slightly underestimated impacts.
		• Evaluation numbers are skewed, as a larger network was examined than was needed	• Impacts were evaluated, regardless of the jurisdiction under which those impacts fell
	Support for Phase 3 and 4	• The Niagara Escarpment Commission supports the March 15, 2007 staff recommendation to proceed with Phase 3 and 4 of the Environmental Assessment Study	• None required
	General Inquiries	• The project is not following Class Environmental Assessment guidelines	• The project is following and has exceeded requirements
		• Requested a copy of the 'Notice of Completion'	• Is not required until the completion of Phases 3 and 4
		• Requested a full Environmental Assessment by done by Ontario Ministry of Natural Resources	• Ontario Ministry of Natural Resources is not the proponent, therefore cannot undertake an Environmental Assessment

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Asked when the Ontario Ministry of Environment would become involved	• If there is an objection to City Council's decision
		• Inquired about an individual Environmental Assessment	• There is no difference in the amount of study involved, but rather in who decides (Council or Ontario Ministry of Environment)
		• Suggested the study team is not exploring/presenting all options	• Their obligation is to present solutions that solve the problem - all comments are valued
		• Requested a status update on the project	• Provided update. Name added to the stakeholder list
		• Asked where a copy of the Final Phase 2 report for the Waterdown/Aldershot Master Transportation study could be found	• The availability of the Final Phase 2 Transportation Master Plan is being publicly advertised.
		• Inquiry regarding the stages and timeline for the Waterdown/Aldershot Transportation Master Plan	• Described Waterdown/Aldershot Master Transportation study process
		• Inquired about Waterdown Road, with respect to cost-sharing.	• The City of Hamilton and the City of Burlington are working on a cost-sharing agreement.
	Timing	• Questioned the approval and timing of Phase 3	• The process is prescribed, but approval does not prejudge the preferred solution

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Questioned the timing requirements of the process	• Section 8 of OPA 28 obligate the municipality to proceed with the studies expeditiously • Re: Bill 51 development applications can appeal if the process takes too long – developers would then pay based on the $17 million assessment, not the $52 million.
		• A person would like to sell their home but is unable to with the current uncertainty. Inquired about when a decision would be made of how much front yard might be taken in order to know how much the residence might be impacted.	• Phases of the Environmental Assessment process and the current status of the project were described
		• Questioned when the Phase 2 Report would be released and if the public would be given a chance to review it.	• The final Phase 2 Report will be presented at two final Public Information Centres and at the final Stakeholder Advisory Committee.
Transportation			
Capacity	*Modified Route: Option 5*	• Option 5 involved expanding Dundas Street in portions, and not widening the downtown section through removing parking spaces, and restricting left turns at peak periods. This would increase capacity from 1000 cars per hour to 1600 cars per hour	• The option was analyzed, but not pursued due to issues of capacity and safety, all of which would decrease capacity to 600 vehicles per lane per hour. • As such, costs of this option were not analysed
		• No formula exists for analysis that sees Option 5 resulting in reduced capacity.	• Reiterated capacity and safety issues

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Questioned why Waterdown Road widening would result in more capacity than downtown Dundas Street widening	• Listed capacity issues (lane width, side friction, green time and snow storage)
		• Suggested all that needs widening is the 1km downtown core of Dundas Street, and the section of Dundas Street on the east side of Waterdown Road that joins the proposed north-south link	• Described how the traffic modelling concludes that an additional lane of capacity in each direction through the entire corridor was warranted - the solution must solve the problem of capacity
	Option 5	• Suggested a by-pass to the North	• The option was analyzed, but came second, and that does not include business displacement costs
		• Suggested if look at the criteria their suggestion may come in first	• Resident was told that a meeting to discuss this will occur
	Preferred Route	• Wondered if an expanded Waterdown Road would lead to a bottleneck at Highway 403	• The Ontario Ministry of Environment is expanding the interchange
		• Wondered if improving current roads was considered	• Existing roads cannot handle projected traffic • Improvements are waiting until the study is completed
		• Concern regarding overflow onto surrounding rural roads	• It is not expected, but if so will be accommodated through the City's road programs
		• Wondered about over-capacity of traffic in the city core	• Can be addressed in Phases 3 and 4

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Suggests that not all of Dundas Street from Pamela to Evans needs to be widened to 6 or 7 lanes, therefore costs are exaggerated in the evaluation tables	• Option 3 includes an additional lane on Dundas Street in each direction through the entire corridor, a need indicated in Phase 1
		• Is traffic demand based on existing or future traffic	• Both
		• The route does not improve downtown Dundas Street capacity	• The issues may be examined in Phase 3, but is of a different scope. This issue is substandard widths, and thus it bottlenecks at peak times.
		• Will Parkside be upgraded	• A section of Parkside Dr. is proposed for improvement.
		• If the primary flow of traffic from Waterdown Road is diverted along Mountain Brow Road towards the new development land to the east, what about the impact of increased traffic flow into downtown Waterdown via Mill Street?	• The Waterdown/Mountain Brow/North-South link will carry the "through" traffic to/from Dundas Street. The next phase in the environmental assessment will undertake detailed traffic engineering assessments at these intersections. It has never been the intention for Mill Street to carry heavy traffic flows.
Routing	*Modified Route: Option 5*	• Suggests this option minimizes all potential effects, as the team did by refining Waterdown Road option	• The further refinement of Waterdown Road was illustrative for landowners, due to property impact concerns. More detailed refinement will occur in Phases 3 and 4
	Preferred Route	• Questioned if the route is a by-pass	• The need is due to development, not a by-pass

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• What will happen to Waterdown north of Mountain Brow Road?	• Will be addressed in Phases 3 and 4 and Secondary Plans
		• Questioned why King Road is not to be expanded	• Using King Road requires new alignment, not just widening, and it does not solve the capacity problem
		• Questioned the justification for using any portion of Parkside Drive	• The route was based on a comprehensive evaluation
		• Question on how will traffic be routed if there is a problem on Highway 403	• There is no easy answer – Hamilton and the Ontario Ministry of Environment do have an emergency plan
		• Wondered about the connection between the North/South and the East/West	• Will be explored in Phases 3 and 4
		• Wondered if both King Road and Kerns Road would be closed off from Mountain Brow	• Not decided – will require an environmental assessment
		• Questioned if Boulding Avenue Will terminate at the north end or if it will connect to the bypass as a 3 way intersection Asked about the possibility of the North/South route that ends at Highway 5 and Dundas Street to go instead north through the hydro parkland to connect with the new East/West corridor being considered	• Phase 3 will determine the detailed alignment of the East/West corridor as well as the North/South corridor. It is not proposed to extend the North/South corridor north of Dundas Street along the hydro corridor.
		• Concern of perceived errors and discrepancies in the technical work of the Waterdown/Aldershot Transportation Master Plan-Phase 2 Draft Report	• Individual data and calculation concerns were explained

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
	Hwy 403/Waterdown Rd Interchange	• Resident does not want service road going past home and proposed alternative design to Highway 403/Waterdown Road interchange.	• The interchange is not part of the Waterdown/Aldershot Transportation Master Plan
	General Inquiries	• Is an East/West route being considered?	• The Waterdown/Aldershot Transportation Master Plan-Phase 2 Draft Report outlined a suite of measures to improve transportation capacity in the study area
	Suggestions	• Suggestion of a new road south of the Mountain Brow/Waterdown Road intersection	• Will be examined in the next phases of the study
		• Suggest use the hydro cut	• The suggestion is not reasonable or feasible to solve the problem
		• Suggests extending the East/West end of Highway 6	• Traffic volumes do not warrant this extension
		• Suggests extending the East/West road to Concession #5	• This could not be justified at this time
		• Wondered if the route of Concession #5 had been considered	• Was analysed, but not considered reasonable or feasible to solve the problem
		• Suggest buying back Highway 407 to act as a North/South route	• Highway 407 formed part of the road network in the modelling
		• Suggests a new North/South between King Road and Waterdown Road	• Considered, but not found to be reasonable or feasible
		• Suggests an intersection at Highway 6, a wide-curve intersection at Highway 5, and bypasses with bridges at through roads	• All reasonable options were explored

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Suggests that the design include a barricade for both Burke Street and Boulding Avenue	• Option to be looked at as part of Phase 3
Traffic Modelling	*Preferred Route*	• Would the route handle truck traffic?	• Waterdown Road is not envisioned as a truck route – although the final study will address it
		• Questioned the need for an additional lane on Dundas Street	• Due to the system as a whole, and future additional entry points
		• How will the route affect the Certificate of Approval for Barnes (which is tied in to a driveway re-location, which can only occur with a northern route)	• Assessed during Phase 3, and are in discussions with the Ontario Ministry of Environment
		• Questioned how future 'Big Box' development at Clappison's Corners was analyzed	• If development is approved, upgrades will then be triggered • Traffic modelling included the development • The April 06 Marshall Macklin Monaghan study was not a part of this modelling

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
		• Questioned a Northern Route, when the westbound traffic goes west or south	• Explained how traffic flow is modelled, and while the majority of P.M. peak traffic will go south, vehicles can also turn north or west. • The recommended route is not intended to serve as a by-pass • Criteria besides traffic performance were also considered when selecting the preferred route • The capacity is needed to support approved growth
	Suggestions	• Maintain access from Flanders Drive to Mountain Brow Road	• These issues fall under Phases 3 & 4
		• Would like to stop use of Boulding Ave. and Burke St. for traffic cut-through – suggests the new north/south route intersect Dundas Street east of Pamela, or merge the new east/west route with Parkside east of Boulding	• Phases 3 and 4 will look at such details
Transit Alternatives	*Buses*	• Costs undervalued due to missing items, including bus infrastructure	• The level of detail is consistent with a Phase 2 Environmental Assessment, and estimates were reviewed against 2005 construction tenders • Bus costs will depend upon the routing chosen
		• Suggests parking lot, at either Clappison corners or Highway 5 for a general area for vehicles, so people can commute by bus or with someone to the GO Station	• Will be considered in Phase 3 of the project along with all other transit issues

FACTOR	TOPIC	QUESTION/CONCERN	RESPONSE
	General	• Wondered why the report only uses a 5% transit mode split	• Even a 15% split did not solve the capacity issue, but a %5 split is realistic compared to the rest of the Greater Toronto Area
		• General support for transit, even light rail	• This report recommends that Burlington and Hamilton undertaken a transit operations analyses – to study routes, hours and frequency

C5 - Detailed Responses

From: Tanner, Mary Lou
Sent: February 10, 2006 8:24 AM
To: 'Al Seferiades'; aalmuina@dillon.ca
Cc: steve.oliver@cogeco.ca; Head, Andrew
Subject: RE: Waterdown Transportation

Good Morning Al

I'm pleased to have provided you with Alvaro's letter yesterday at our meeting; allow me to clarify based on the letter and our discussions yesterday.

1. My understanding is that the City has received the petition.

2. Yesterday you spoke of the difference between the Stantec study being "voted on" and "approved". To be clear, neither happened. As Councillor McCarthy indicated, Flamborough Council did not vote on the Stantec study. Beyond Council voting, there is a regulatory approval process that must be followed. Any person or agency can request the Minister of Environment to review Class Environmental Assessments. It is the Minister's decision to approve the EA or not. The Stantec study was never filed on the public record for review as it was never voted on. Thus, in addition to it not being voted on, it was also never approved. Please note that both the Niagara Escarpment Commission and Conservation Halton opposed the recommendations of this study. How the Ministry of Environment would have dealt with these objections cannot be stated because the report was never filed on the public record for approval.

3. We recognize there are concerns about the proposed use of the East West route as a truck route. We have committed to reviewing this in the current report as well as during Phases 3 and 4 of the study (which have not yet been started).

4. The level of detail and planning being done during Phase 2 assesses a number of factors, including commercial accesses. This identifies potential business impacts; the class of business is not necessary at this point in the study.

5. As indicated yesterday, the issues with the Barnes property are numerous including potential contamination, business loss costs for any property acquisition, and liability that the municipality may take on.

I hope this information clarifies the City's perspective on the points you raise. As always, please don't hesitate to contact me should you require further information or clarification.

Regards,

Mary Lou Tanner, MCIP, RPP
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February 2, 2006

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Waterdown/Aldershot Transportation Master Plan Phase 2
Proposal from the North East Parkside Drive Residential Community – Option 5

Dear Ms. Tanner:

This letter presents our response to the presentation received on Friday, December 16, 2005, from the North East Parkside Drive Residential Community representatives.

The issues raised by the community representatives included:

1. The Consensus of the Parkside Community;
2. The history of Parkside Drive;
3. Concerns about increased traffic and safety;
4. The current operation of Barnes Environmental;
5. Proximity of homes to the Parkside ROW;
6. Alternative east-west corridor – "Option 5"; and
7. Access to Highway No. 6.

We have addressed each of these matters below in the same order.

1. The Consensus of the Parkside Community

The presentation referred to a petition that was being circulated to Parkside Community residents in opposition to the preferred east-west corridor recommended in the Waterdown/Aldershot Transportation Master Plan – Phase 2 study. We have not yet received a copy of this petition but understand it is in the process of being submitted to the City. It was suggested the Parkside Community did not have advanced notice of the study and that it was not represented throughout the study process.

…cont'd

The study exceeded its requirements with regard to public communication and consultation – a fact of which we are very proud. We had significant involvement from the community at all public consultation sessions and residents from all corners of Waterdown and Aldershot participated/commented on the study and process. A number of Parkside Residents spoke to yours truly during the consultation process about the study. The opposition presented by the community representatives was not evident through the public consultation process.

2. The history of Parkside Drive

Reference was made to the "history" of Parkside Drive in terms of previous transportation studies and its current rural characteristics. Reference was specifically made to the Master Plan Study undertaken by Stantec Consulting Limited (September 1999) and the Town of Flamborough Transportation Master Plan.

The status of the Stantec study was clearly presented by you at the meeting and we will not comment further. With regards to the Town of Flamborough Master Plan study referenced, it is important to note that ***this study recommended that Parkside Drive be widened to 4 lanes throughout Waterdown to the eastern limit at the then proposed "Waterdown by-pass"***. Further, the Town of Flamborough Official Plan (and current City official plan documents) identifies Parkside Drive as a "regional" roadway. Typically these roadways consist of 26 to 36 metre right-of-ways and accommodate up to four lanes of through traffic.

It is clear that the "history" of Parkside Drive has always identified this roadway as a key link in the area roadway network and has been designated from the outset for higher order traffic movement.

3. Concerns about increased traffic and safety

Many of the concerns expressed with regards to traffic volumes and safety should be addressed in the future Phases of the class environmental assessment process – mainly Phases 3 and 4. In these phases, detailed analyses will be undertaken to ensure that preferred corridor (Option 4) is designed and constructed in accordance with the classification and function of the roadway. These take into account roadway safety issues for all roadway users (pedestrians, cyclists, motorists) and roadway operations (driveway access/egress, intersection operations).

We do not share the concerns expressed.

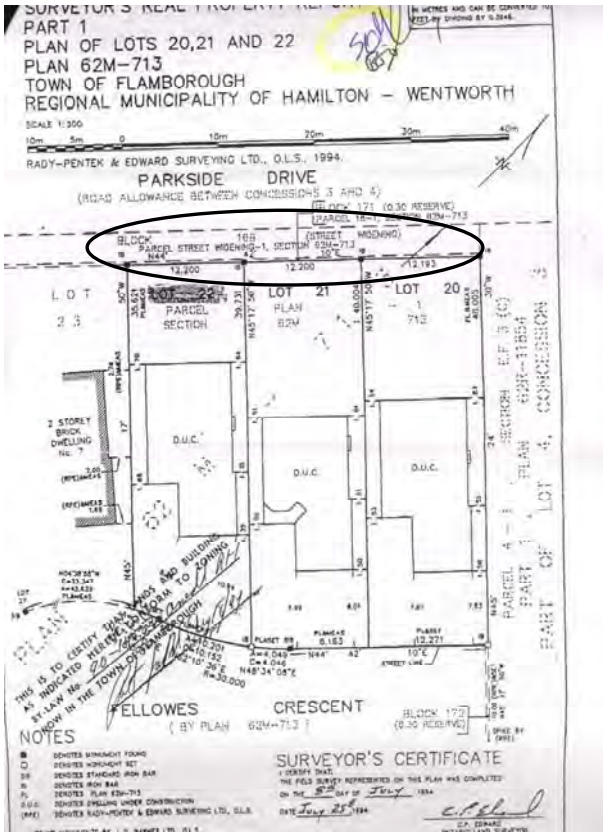
…cont'd

4. The current operation of Barnes Environmental

Concern was expressed about the current operation of Barnes Environmental – both the business itself and truck access/egress at Parkside Drive. As for the business operation, this does not have an impact on the study process or recommendations. We cannot comment on this matter further other than it is a legally operating business. As for access/egress issues, any issues identified will be addressed in Phase 3 of the study process for the preferred corridor (Option 4).

5. Proximity of homes to the Parkside ROW

Concern was expressed that homes are too close to Parkside Drive. A property plan was also presented showing the house layouts relative to the Parkside Drive right-of-way. As we indicated in our comments on Item 2 above, Parkside Drive has been designated as a higher order roadway for a long time. Further, it is important to note that in the property plan submitted by the community representatives, the plan clearly indicates property was taken from the subdivision developer of Fellowes Crescent for right-of-way widening of Parkside Drive, as presented in the graphic below.



…cont'd

Further, as the study team presented the concept drawing for Option 4 to the community representatives, it was pointed out that over time, the City has been taking additional right-of-way on the north side of Parkside Drive as property owners made applications for site plan modifications, hence the "saw tooth" pattern of the north side right-of-way limit of the road.

Having homes backing or fronting onto major roadways is not an uncommon urban design in the GTA.

6. Alternative east-west corridor – "Option 5"

An alternative corridor was presented by the Parkside Community representatives – "Option 5". This option was evaluated by Dillon and the results indicate that Option 5 would be ranked second overall. It is not surprising to see that two options would be similar since for most of the route they are the same. Option 5 was ranked second in the Data Standardization Method 1 and tied for first with Option 4 for Data Standardization Method 2. Therefore we ranked it second overall. However, what the analysis does not include is the business displacement cost associated with Barnes Environmental and the nursery. If these costs were included, the "tie" that resulted from Method 2 (Data Standardization Method) would easily be broken in favour of Option 4. In addition, there is a potential for the lands to be contaminated and an extra cost and risk associated with the Barnes Environmental property.

7. Access to Highway No. 6

Concern was expressed about access to Highway No. 6 from Parkside Drive. It was noted at the meeting that as the MTO makes improvements to Highway No. 6 between Highway No. 5 and Highway No. 401, access to the Highway No. 6 will be controlled. In the interim, it will be possible to have at-grade access on Parkside Drive and the proposed east-west corridor. However, as the MTO moves north on the corridor with its improvements, the intersection of Highway No. 6 and Parkside Drive will be closed and the at-grade intersection at the east-west corridor will have to be grade separated.

***

…cont'd

I trust the above addresses the matters raised by the North East Parkside Community.

Yours sincerely,

DILLON CONSULTING LIMITED

Alvaro L. Almuina, M.Eng., P.Eng.
Associate

cc: A. Head – City of Hamilton
C. Covelli – Dillon Consulting Limited
D. McKinnon – Dillon Consulting Limited

ALA:mf
Our File: 04-3687

Waterdown/Aldershot TMP
Preliminary East/West Routes Comparative Evaluation
Table 5: East/West Evaluation - Data Standardization Method [1]

						Option 1: New North Road			Option 2: Parkside - 4 lanes			Option 3: Dundas			Option 4: New North Road Hybrid			Option 5: New North Road Alternative		
Criteria Group	Criteria Group Weight	Criteria	Criteria Weight	Indicators	Indicator Weight[2]	Data	Standardized Data	Weighted Data	Data	Standardized Data	Weighted Data	Data	Standardized Data	Weighted Data	Data	Standardized Data	Weighted Data	Data	Standardized Data	Weighted Data
Natural Environment	27	Potential for impact on terrestrial features	17	Area of provincially significant wetland removed (ha)	6	1.38	0.67	4.04	0	0.00	0	0	0	0	0.20	0	0.59	0.47	0	1
				Area of core ANSIs removed*(not including provincially significant wetland)* (ha)	-	0			0			0			0			0		
				Area of edge ANSIs removed*(not including provincially significant wetland)* (ha)	3	0.64	0.24	0.71	0.78	0.29	0.86	0	0.00	0	0.64	0.24	0.71	0.64	0.24	1
				Area of core ESAs removed*(not including provincially significant wetland)* (ha)	2	0.051	0.09	0.18	0.00	0.00	0.00	0	0.00	0.00	0.051	0.09	0.18	0.471	0.82	1.64
				Area of edge ESAs removed*(not including provincially significant wetland)* (ha)	2	2.87	0.55	1.10	0.37	0.07	0.14	0.12	0.02	0.04	1.11	0.20	0.41	0.85	0.16	0.31
				Length of corridor adjacent to ESAs & ANSIs*(on both sides of new road corridor)* (m)	2	2244.70	0.37	0.74	446.27	0.07	0.15	606.00	0.10	0.20	1122.90	0.19	0.37	1608.86	0.27	0.53
				Area of other woodlots removed (non ESA/ANSI) (ha)	1	2.01	0.34	0.34	1.56	0.26	0.26	0.02	0.00	0.003	1.25	0.21	0.21	1.13	0.19	0.189
				Area of wetland removed (ha)	-	0			0			0			0			0		
				Area of other natural habitat removed (ha)	1	0.82	0.26	0.26	0.71	0.22	0.22	0	0.00	0	0.82	0.26	0.26	0.82	0.26	0
				Number of new Niagara Escarpment crossings	-	0			0			0			0			0		
		Potential for impact on aquatic features	10	Number of watercourses crossed	10	21	0.30	2.96	13	0.18	1.8	5	0.07	0.7	14	0.20	2.0	18	0.25	2.5
Natural Environment Total								10.32			3.46			0.95			4.70			7.56
Social Environment	32	Potential for impact on residents	19	Number of residences displaced	7	4	0.13	0.88	3	0.09	0.7	17	0.53	3.7	3	0.09	0.7	5	0.16	1.1
				Number of residences within 25 m of the corridor *(widening of existing road)*	3	0	0.00	0.00	206	0.45	1.4	194	0.43	1.3	53	0.12	0.4	0	0.00	0.0
				Number of residences within 25 m of the corridor*(new road corridor)*	5	8	0.24	1.18	9	0.26	1.3	0	0.00	0.0	11	0.32	1.6	6	0.18	0.9
				Number of residences within 25-50 m of the corridor (widening of existing road)	1.5	0	0.00	0.00	279	0.63	1.0	88	0.20	0.3	73	0.17	0.2	0	0.00	0.0
				Number of residences within 25-50 m of the corridor (new road corridor)	1.5	20	0.26	0.39	12	0.16	0.2	0	0.00	0.0	26	0.34	0.5	19	0.25	0.4
				Number of residential properties required[3]	-	3			139			37			46			6		
				Area of residential properties required (ha)	1	1.039	0.14	0.14	2.64	0.36	0.4	0.34	0.05	0.0	1.39	0.19	0.2	1.968	0.27	0.3
		Potential for community character impacts	5	Length of route through existing residential communities (km)	5	0.300	0.04	0.19	3.700	0.46	2.31	2.70	0.34	1.69	1.000	0.13	0.63	0.300	0.04	0.19
		Potential for impact on community/ recreation features	4	Number of community/recreation features displaced (e.g. schools, churches, parks, etc.)	-	2			0			0			2			2		
				Number of community/recreation features within 25 m of the corridor	3	1	0.07	0.20	8	0.53	1.60	4	0.27	0.8	1	0.07	0.20	1	0.07	0.2
				Number of community/recreation features within 25-50 m of the corridor	1	0	0.00	0	0	0	0	3	1.00	1.00	0	0.00	0	0	0.00	0.00
		Potential for impact on cultural features	4	Number of cultural features removed	2	1	0.11	0.22	1	0.11	0.22	5	0.56	1	1	0.11	0.22	1	0.11	0
				Number of cultural features within 25 m of the corridor	2	2	0.10	0.20	2	0.10	0.20	12	0.60	1	2	0.10	0.20	2	0.10	0
Social Environment Total								3.39			9.22			11.15			4.82			3.42
Economic Environment	18	Potential for impact on business enterprises	6	Number of businesses displaced	3	2	0.09	0.27	2	0.09	0.27	12	0.55	1.64	2	0.09	0.27	4	0.18	0.55
				Number of businesses within 25 m of the corridor	2	2	0.02	0.03	6	0.07	0.14	73	0.85	1.70	2	0.02	0.03	3	0.03	0.07
				Number of businesses within 25-50 m of the corridor	0.5	2	0.14	0.07	8	0.57	0.29	0	0.00	0	2	0.14	0.07	2	0.14	0
				Number of commercial properties required[3]	-	1			6			48			2			4		
				Area of commercial properties required (ha)	0.5	0.18	0.06	0.03	0.31	0.10	0.05	0.54	0.18	0.09	0.18	0.06	0.03	1.78	0.59	0.30
		Potential for impact on downtown core business area	5	Length of route through downtown core business areas (m)	5	0	0.00	0.0	0	0.00	0	895	1.00	5.00	0	0.00	0	0	0.00	0.00
		Potential for impact on future land use	3	Area of land designated for development removed (ha)	3	4.90	0.29	0.87	1.86	0.11	0.33	0.002	0.00	0.0003	5.21	0.31	0.93	4.90	0.29	0.87
		Potential for impact on agricultural land	4	Area of agricultural land designated for agriculture/ rural removed (ha)	4	24.70	0.32	1.26	14.20	0.18	0.73	0.34	0.00	0.02	20.06	0.26	1.03	18.93	0.24	0.97
Economic Environment Total								2.55			1.81			8.44			2.87			2.82
Cost	10	Capital Cost (million	10	Estimated capital cost	10	$15.2	0.18	1.76	$24.4	0.28	2.82	$29.0	0.34	3.36	$17.8	0.21	2.06	$17.9	0.21	2.07
Transportation Service	13	Change in Level of Transportation Service	6.5	Critical screen line volume/capacity ratio - screen line 11	1.5	0.33	0.17	0.26	0.43	0.22	0.33	0.52	0.27	0.40	0.34	0.17	0.26	0.33	0.17	0.26
				Critical screen line volume/capacity ratio - screen line 12	1.5	0.73	0.20	0.30	0.79	0.22	0.32	0.71	0.19	0.29	0.69	0.19	0.28	0.73	0.20	0.30
				Mean network speed	-	56			57			57			56			56		
				Average network volume/capacity ratio	3.5	0.56	0.20	0.69	0.61	0.21	0.75	0.57	0.20	0.70	0.56	0.20	0.69	0.56	0.20	0.69
		Change in Safety Levels	6.5	Number of residential property access points	3	0	0.00	0.00	156	0.58	1.75	71	0.26	0.79	41	0.15	0.46	0	0.00	0.00
				Number of commercial property access points	2	0	0.00	0.00	11	0.12	0.25	78	0.88	1.75	0	0.00	0.00	0	0.00	0.00
				Number of roadway access points	1.5	13	0.13	0.20	20	0.20	0.30	40	0.40	0.60	14	0.14	0.21	13	0.13	0.20
Transportation Service Total								1.43			3.70			4.54			1.90			1.43
Total	100		100		100			19.46			21.01			28.44			15.85			17.31

Note:
[1] Standardized data = data / sum of data values for all options
[2] No weight was assigned to indicators where no features are present, or where all options have the same level of effect.
[3]-For information only. Effect was measured through the area of residential/commercial

February 13, 2006

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Waterdown/Aldershot Transportation Master Plan – Option 5 Analysis

Dear Mr. Breznik:

Thank you for your continued interest in this study. We have received and reviewed in detail your correspondence to the City and the consulting team. These include your:

- proposal dated September 29th, 2005 regarding a modified transportation route for the East-west corridor on the Dundas Street corridor;
- email dated October 5th, 2005 with attached letter;
- email dated November 5th, 2005;
- email dated November 24th, 2005; and
- email dated November 28th, 2005.

Based on these five correspondences, we offer the following response. For ease of clarification, I have included your original comments in italics, followed by our response/clarification.

Email dated October 5th

"...Hamilton Conservation Authority who has jurisdiction over the majority of the environmentally sensitive lands that the East-West route travels through, has not been involved in any of the technical analysis of picking the East-West route."

As stated in the letter to you dated November 1, 2005 by Mary Lou Tanner, City of Hamilton, "Conservation Hamilton has been a member of the study's Steering Committee from the outset of the study and have had the opportunity to provide feedback throughout the study, as well as at our Steering Committee meetings." A member of Conservation Hamilton did attend Steering Committee meetings on this project and provided input. While Hamilton Conservation continued to be invited to meetings, they did not attend any additional meetings after October 2004. A copy of the Draft Report has been provided to the Conservation Authority and the areas that might be of interest have been discussed with them. Any comments received will be incorporated into the Final Report.

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"Over 1000 trees (through a 2.2 acres route path) will be removed from Joe Sams Park in Waterdown if the recommended East-West road is allowed to go through the same Provincially Significant Wetlands/Greenbelt area."

In selecting the alternative corridors, we attempted to minimize effects on the environment as much as possible. In fact, an entire northern corridor was initially considered but excluded due to effects on the natural environment. In some cases though, to avoid effects on an important natural/social feature, we had to route the corridor through/near a different natural/social feature. The route selection and evaluation process requires that trade-offs be made. Where it was not possible to entirely avoid important natural features, we attempted to route the corridor along the edge of a feature rather than through the middle of it. In Phase 3 of the MEA Class EA process, we will refine the route relocation and develop mitigation measures so as to minimize environmental and social effects as much as possible. It is our intention to work with the community, the Conservation Authorities, and our project team to develop these mitigation measures.

"The phase 2 preliminary report talks about the Provincial Greenbelt Area and how under certain conditions, road infrastructure may be built through the Greenbelt. The report does not highlight that its recommended route passes through the Provincial Greenbelt. It should state this"

Greenbelt legislation is discussed in Section 5.1 of the Draft Report, including the conditions that would warrant developing infrastructure through a section of the Greenbelt Plan. When the Environmental Study Report is completed to fulfill Phase III and IV of the EA process, a statement regarding the final alignment passing through the Greenbelt will be included.

"On Page 58 the reports talks about ESA's. It states that the Waterdown Wetland area is only an ESA. The document Flam 47 from the City of Hamilton has an OMNR evaluation of Provincially Significant Wetland for the area. In further discussion with both City of Hamilton and Conservation Halton, I have been told that the specific area of the Waterdown Wetland Area that is North of Northlawn Ave and East of Centre Road (Borers creek headwater area) is not officially registered as a Provincially Significant Wetland and therefore ***was only recorded and evaluated in the Phase 2 report as an ESA."***

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It is important to note that the Waterdown North Wetland Woods is an Environmentally Significant Area and a **candidate** to be classified as Provincially Significant Wetland. There has been no designation by MNR. The City of Hamilton has asked MNR to consider addressing this issue. The designation will remain as an ESA unless otherwise directed by the MNR.

However, Dillon Consulting did conduct a sensitivity analysis to determine whether changing the ESA in question to a PSW would affect the outcome of the overall evaluation. The results of this re-evaluation show no change from the recommended east-west corridor as indicated in our Draft Report.

"A clarification in writing is required by the Provincial Government on the interpretation of the Greenbelt Act that permits the route to pass through a Provincially Significant Wetland in the Greenbelt area, when 2 other reasonable alternative routes were identified that do not affect the Greenbelt."

The entirety of Section 4.2.1 of the Greenbelt Plan reads as follows:

1. *All existing, expanded or new* infrastructure *subject to and approved under the* Canadian Environmental Assessment Act, *the* Environmental Assessment Act, *the* Planning Act, *the* Aggregate Resources Act, *the* Telecommunications Act *or by the National or Ontario Energy Boards, or which receives a similar environmental approval, is permitted within the Protected Countryside, subject to the policies of this section and provided it meets one of the following two objectives:*

    a) *It supports agriculture, recreation and tourism, rural settlement areas, resource use or the rural economic activity that exists and is permitted within the Greenbelt; or*

    b) *It serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate* infrastructure *connections among urban growth centres and between these centres and Ontario's borders.*

1. *The location and construction of* infrastructure *and expansions, extensions, operations and maintenance of* infrastructure *in the Protected Countryside, are subject to the following:*

    a) *Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such infrastructure;*

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b) Planning, design and construction practices shall minimize, wherever possible, the negative impacts *and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;*

c) Where practicable, existing capacity and coordination with different infrastructure *services is optimized so that the rural and existing character of the Protected Countryside and the overall urban structure for southern Ontario established by Greenbelt and any provincial growth management initiatives are supported and reinforced;*

d) New or expanding infrastructure *shall avoid* key natural heritage features *or* key hydrologic features *unless need has been demonstrated and it has been established that there is no reasonable alternative; and*

e) *Where* infrastructure *does cross the Natural Heritage System or intrude into or result in the loss of a* key natural heritage feature *or* key hydrologic feature, *including related* landform features, *planning, design and construction practices shall minimize* negative impacts *and disturbance on the features or their related functions, and where reasonable, maintain or improve connectivity.*"

Based on the entirety of the policy referenced above, the recommended corridor improvements "*serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate* infrastructure *connections among urban growth centres and between these centers...*"

Further, the recommended corridor minimized the amount of Greenbelt crossed and the negative impact and disturbance on key natural features.
It was concluded from the overall analysis of the environmental impacts that the recommended corridor has the least overall impact.

This is why a portion of the recommended corridor is in the vicinity of Northlawn Avenue; the majority of this corridor is not in the Greenbelt. At this stage of the project, the impact of the road is 0.2 ha of edge habitat of the Waterdown North Wetland Woods. However, through detailed design (yet to come) it is anticipated that the impact of the corridor can be further minimized. Policy 4.2.1 2d) is not a prohibition on crossing the Greenbelt.

...cont'd

Email Dated November 5, 2005

1) Involvement of Hamilton Conservation Authority. *Instead of just admitting that your team forgot to keep Hamilton Conservation Authority in the loop as an active participant in your teams decision planning, you have twisted your reply to make it sound like they were involved by stating they were a member of the steering team. If you want to play that game of simply not admitting to an error, then please provide proof that the Hamilton Conservation Authority was actively involved in the study as part of the steering committee since Sept 2004 by supplying a copy of all their correspondence.*

> Hamilton Conservation Authority was asked to participate in the Steering Committee at the commencement of this project. Their participation in this process was voluntary. Our team invited the Hamilton Conservation Authority to all the steering committee meetings and provided minutes of the same. Further, the Draft Report was circulated to all members of the steering committee (including Hamilton Conservation Authority). Any comments received will be incorporated into the final report.

2) Misleading the public:

1) *In Oct 2004 you said you will follow the policies of the Greenbelt Act.*
2) *In April 2005 you said the proposals do not affect the Greenbelt.*
3) *In April 2005 you said you had good environmental information.*
4) *In April 2005 you also said you had good environmental information from Hamilton Conservation*

All false statements to the public. *From April up to September (when the draft Phase 2 report was finally released to the public), your team had the public believing they were meeting all the natural environmental issues. If your team had followed the Greenbelt Act like they said they would, since your Recommended East-West route does go through the Greenbelt, they should have done their homework and contacted the Ministry of Natural Resources in early 2005. You would have discovered that sections of your preferred route are going through a wetland area that was officially "overlooked" by the OMNR and never properly assessed as a Provincially Significant Wetland. Instead the public believed they did not have to make an issue of this point to you since your team said they were on top of it!*

> Your comment that the Study Team has misled the public on this study is not one that we can agree with. The *Greenbelt Act* is documented in Section 5.1 of the Draft Report. The Act does not preclude the selection of a route that crosses a portion of the Greenbelt. Every effort was made to select a route

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that minimizes the impacts to the natural environment in accordance with the Greenbelt Plan.

Further, we did not suggest that the preferred route would not have an impact on lands that fall within the Greenbelt. What we stated was that the Greenbelt legislation itself is not specifically captured by any criteria and therefore has no impact on the selection of the preferred route. The environmental features that make up the Greenbelt were captured by the natural environment criteria.

Options were evaluated based on the natural environment criteria that captured the potential impacts on terrestrial features and aquatic features. An impact is evaluated the same whether it occurs within the Greenbelt or outside of the Greenbelt.

From time to time, despite the best efforts of all involved, issues such as this one that you pointed out occur. As indicated above, at your request and that of Mr. Art Timmerman, Dillon Consulting has re-evaluated the east west corridor alternatives based on the re-designation of the Wetland/ESA located to the east of Centre Road and north of Parkside Drive to a Provincially Significant Wetland. The results of this re-evaluation show no change from the recommended east-west corridor as indicated in our Draft Report.

At that same PIC meeting in April 2005 the following 3 questions and answers were given:

Question: Where can we look at the options that where considered before Phase 2?

Answer: A discussion paper will be available in the ***next 2-3 weeks****: this paper will describe all of the options that were considered and the screening and evaluation process.*

Question: Where can we obtain data on the evaluation criteria?

Answer: Data will be included in the discussion paper which will be available in the ***next few weeks****; the discussion paper will be available on the website.*

...cont'd

Question: Request that the study team commit to hold another public input meeting when the discussion paper is released to discuss before the team makes a final decision and final recommendations.

Answer: ***Along with the discussion paper, a draft report will be released on June.*** *This report will detail more documentation and draft recommendations. Another set of public meetings will be held in the fall of 2005 where participants will be invited to comment* ***before the final decision is made.*** *The study team will consider the request, however were not in a position to make the decision at the meeting. We will get back to the participant in a few weeks.*

Your team requested written public comment to the April 20th/21st meetings by May 18th. However, the discussion paper was not issued to the public until June 6th 2005.

Only after reviewing the Phase 2 draft report in Mid Sept, that included all the detailed background information and appendices, did we realize your team has been misleading of the public. The East-West route is going through the Greenbelt even though you told us it isn't.

The answer to these questions is provided in our previous responses above.

The 3rd PIC meetings were held in late in Sept. With the detailed draft report in hand, we have started advising your team of the environmental issues and errors in the September report / recommended route.

- Your East-West route is going through the Greenbelt. You told us you would follow the Greenbelt policies. (The polices say you can only put infrastructure through the Greenbelt (that has a PSW) ***if there is no other reasonable alternative.*** *Of your 4 alternative options that were considered, 2 of them did not affect the Greenbelt. In fact even in your reply letter back to me you state in the last paragraph on page 2 that "The project team has worked diligently through the Municipal Class EA process with our partner agencies to* ***develop reasonable and feasible options,*** *to assess those options within an evaluation framework reviewed and supported by the study team and agencies and in compliance with the Municipal Class EA, and to complete a rigorous assessment of the transportation option."* ***So you do recognize that the 2 other options were reasonable and feasible. Therefore your recommended route is in violation of the Greenbelt Act section 4.2.1 section 2d).***

Yes, the options we developed all have the potential to resolve the identified problem. However, the Greenbelt legislation is not intended to be an exclusionary criterion in the routing of linear infrastructure, even when alternatives outside the Greenbelt are available. At no time did the study

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team indicate through the course of the study that the Greenbelt would be treated as exclusionary.

- We gave you a contact name with the Ontario Ministry of Natural Resources and asked you to have the specific area of the "overlooked" PSW investigated and officially rated. Only within the last 2 weeks has this person at OMNR finally been contacted by your team. I also believe that the Consultants may have also mistakenly mislead this contact person to believe that this study pre-dated the Greenbelt Act, therefore the results of their assessment of rating the area as a PSW would be irrelevant to your current recommended route. Furthermore, I believe your teams intent to satisfy this issue is to simply change the "weighting factor" of this section of the road from the current ESA rating to a PSW rating in your justification/evaluation tables. We both know that due to the ratio size of the affected area (0.25km) in comparison to the full 10km route, the weighting factor will not make any significant change to the final evaluation numbers. ***This is not how you handle the Greenbelt issue, by changing numbers. Instead of pushing for a request to evaluate the specific area as we requested, your team appears to be "glossing over" the issue.***

Our response regarding the potential PSW area has been answered earlier in our letter. Further Dillon has not mislead the OMNR regarding this study. We are not clear on your point in the second half of this paragraph. Our evaluation of the alternative corridors was based on a measurement of effect (e.g. a number or area). An impact score was generated by multiplying the effect measurement by the weight of that indicator. If a particular feature was reinterpreted to represent a different type of feature (e.g. an ESA to a PSW), the only way to represent this change in the evaluation is through the application of the appropriate indicator weight. We have not "glossed over the issue" but re-examined the feature in the context of the evaluation approach that was developed. Finally, the Greenbelt was not used as a specific indicator. Rather, we measured the specific natural features (e.g. PSW, ESA, ANSIs, other woodlots, agriculture, etc.) potentially affected and developed weights to reflect the importance of these features.

- You will also be removing over 1000 trees of the "Carolinian Forests" in this 0.25km section. (Only trees with a truck diameter over 4" have been counted. There are many more of a smaller size that wall also be removed.)

We cannot confirm your statement that 1,000 trees will be removed in the noted 0.25 km section. The potential for effects in the route evaluation was based on the number and area of features removed/disturbed. This is considered to be an acceptable level of detail to satisfy Phase II of the Class EA process. In fact, many of the TMP studies are considerably less detailed

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than the Waterdown-Aldershot TMP, as many only consider qualitative data and involve no direct measurement of effects.

- We advised you of the obvious "addition" errors of the costs of your recommended East-West route ($13.9M not $12.5M)

There was an addition error within the spreadsheet used for the estimation of the east west link option. We have corrected the error. We have also reviewed all of the costing estimates and updated them where necessary. There has been no change to the overall results.

- We advise you that these same costs were undervalued because they did not include basic such as bridges, grading, tree removal, railroad crossings, excavation ...

Each of the corridor options were evaluated at a level of detail that is consistent with Phase 2 of the Municipal Class EA process. The cost sheets that you reference in Appendix D of the Draft Report did not form a part of the evaluation of alternative corridors. These were more detailed cost that were completed for the recommended options. The cost estimate of the preferred options will be looked at in even more detail in Phase 3 and 4 of the Municipal Class EA process as the facility design is developed.

The reference that a grade separated rail crossing is required and excluded from the cost estimates was also explored. The crossing is on the preferred east-west option on Parkside Drive on CP Rail's Hamilton Subdivision. CP Rail was contacted to determine the number of train movements along this subdivision over a 24-hour period. CP indicated that on average 5 to 10 trains use this subdivision, passing Parkside Drive over a 24-hour period. Based on this volume of train movements, and the anticipated volume of traffic on Parkside Drive with the development of the preferred option, it was determined that a grade-separated facility is not required on Parkside Drive at the CP Rail Hamilton subdivision.

We have reviewed the cost estimates against 2005 tenders for construction works in the City of Hamilton to develop benchmarked costs for roadworks (including drainage, curbs, lighting etc). We also requested the City of Burlington and the Region of Halton staff to review these benchmarked costs to assess whether they were similar to costs in Burlington's and Halton's experience with 2005 tenders. We have used the most up to date cost benchmarks from three municipalities and are satisfied that these reflect the most current and accurate information available.

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- There are even multiplication errors in your justification/evaluation tables.

Inconsistencies identified appear to be a result of rounding data values. Dillon's evaluation displays data rounded to two or three decimal points due to space restrictions. The calculations in the spreadsheet use the full value - without rounding.

If we knew this detailed report information back in April when we requested it, we would have been asking these questions back then. Instead, your group has proceeded with pushing your preliminary East-West route as the final route back in June 2005. By pushing your recommendations through Hamilton Planning Sub-committee in late June 2005, (which allowed other sub-planning processes to proceed based on your recommended route), any public consultation since then has simply appeared to have been lip service or to cover yourselves for the errors we have advised you of since then.

We are not too late in our questions and issues to make changes. The problem is your team has pushed ahead without the required public input.

It is important to note that the level of public consultation provided in this project exceeded the requirements of the Municipal Class EA process. Information was provided to the public as soon as possible. Information regarding the evaluation of the corridors and the selection of the preferred network was also provided in the *June 2005 Waterdown-Aldershot TMP Alternative Solutions Evaluation Discussions Paper*. Currently, no decision has been made by Council regarding the recommendations of the report, and the study team has continued to listen to comments made by the public and make revisions to the draft report where appropriate.

The project was taken to Hamilton's Public Works, Infrastructure, and Environment Committee in June of 2005 to provide an update to this committee and Council on the status of the project. This was an important point in the process for the City of Hamilton as it is Hamilton Council that will make the transportation decisions for the City. Prior to June of 2005 Hamilton City Council had received the Phase I results (the need for additional east-west and north-south capacity) but had not been presented with the options or evaluation criteria. Council is an important stakeholder in this process and discussions with Council on the project and its issues are necessary at certain points in the study. We felt the summary of the April public sessions, the options, and evaluation criteria were necessary at that point. However, we were also clear with Council that we would be coming back to Public Works Committee for a final decision on Phase II once we had completed further consultation.

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3) Following the EA process:
They say that "Successful public consultation is a key component of the EA process. Mandatory consultation enables potentially significant issues to be identified early in the decision-making process and enables the proponent to justify any restrictions in the scope of the EA". However, one of the largest problems with a Class EA project is that because it's focus with the public consultation is on the initial abstract and non-controversial task of drafting the guidelines, the public does not understand their effects until they see the results.

In April, your team showed us the results, but did not show us how you took these guidelines to come up with these results. The detailed information (phase 2 draft report) was not issued to the public (or Hamilton Conservation Authority) in a *reasonable time frame in order for them to review, research, question and comment on it with any hope of making any required changes.*

You say your process is following the required steps of a Class EA. I do not have a copy of the required class EA steps therefore, until I find them, I may have been wrong in making this statement. But I am not wrong in stating that your team is definitely not following the intent of providing detailed information to the public in a timely manner, and is definitely proceeding with final decisions before the public information is received and thoroughly investigated.*

> We disagree with these statements. The discussion paper mentioned above was made available in June 2005, which outlined the majority of details that led to the decision of the preferred transportation corridors. This was made available to the public in as timely a manner as possible. A draft report was then made available to the public in August 2005 to allow the public to comment on the draft recommendations and the process used. The public continues to have an opportunity to comment on this report. As such, we will continue to take into account and respond to all comments received and revised the recommendations and the draft report where appropriate.

4) Status of Phase 3: *In the June 2005 Hamiltons' Public Works, Infrastructure and Environmental Committee meeting report 05-011 from the June 20th meeting, section 9c) states: "That the City of Hamilton in coordination with the city of Burlington and the region of Halton, proceed with the Phase 3, 4, 5 of the Waterdown/Aldershot Transportation Master plan."*

This tells me that your team has the greenlight to proceed with the phase 3 study even if you may not have officially started it.

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The same reports also states: "That staff be authorized to present the conclusions of the phase 2 study dated May 2005, at a public information centre to be held jointly with the staff from the city of Burlington and Region of Halton In Sept."

The conclusions of the study were published in May 2005?? Again, the public asked for the detailed information of this report in April but did not receive it until Sept.

> While we have the approval to proceed with the next phases of the study, this approval does not prejudge what the preferred solution should be. The Draft Report identifies draft recommendations that will be presented to Council. These recommendations are subject to change based on comments received from agencies and the public. Council can accept, or reject the recommendations of the report.

5) Are there outstanding items that I have presented that have not been answered by the study team? YES

a) A reply to the 11 page EAST-WEST Option 5 report that I presented and sent to the Committee.

> This reply is included below in this letter.

b) A reply to my presentation and handout sheet at the Oct 5th SAC meeting advising of that your teams recommended East-West route violates the Greenbelt Act.

> This reply was included above in this letter. We also acknowledged at the time we were asked the question that we were working on this reply.

c) Copies of the questions and answers from the 3rd PIC meetings in Late September and the last SAC meeting in early Oct.

> These will form part of the final report.

d) NEW - A copy of the letter from the Ontario Ministry of Transportation that states that Parkside Drive will be closed at Highway 6, as you have shown in your study.

> The Ministry of Transportation has advised the City that as part of their long-term corridor improvement program, Parkside Drive will be closed at Highway 6. You may wish to contact the MTO for their official position through Greg Roszler at (416) 235-5124.

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e) NEW - A letter or email confirming when your team has published their "Notice of Completion".

Since the recommended alternatives are identified as Schedule C projects, a Notice of Completion is not required until the completion of Phase 3 and 4 of the Municipal Class EA process. A Notice of Completion, therefore, has not been issued.

Email sent September 29th, 2005 Regarding "Option 5: An Effective Waterdown – Aldershot EAST-WEST Transportation Route"

The proposal for the Dundas Street corridor suggested a modification of Option 3 presented in the Waterdown/Aldershot Transportation Master Plan Draft Report. This option does not require the widening of Dundas Street in the downtown area between Hamilton Road and the bridge just east of Mill Street. This is accomplished through the removal of parking lanes and prohibiting left turning movements during the peak periods. This proposal recognizes the section of Dundas Street, between the Bridge and First Street would need to be widened to achieve a four-lane cross section required to accommodate the increased demand by 2021.

The first step in this analysis was to determine whether the option was reasonable and feasible as required by the Municipal Class EA process. This was done by looking at the ability of the option to solve the traffic problem, and assessing any other concerns regarding the safety of the facility and overall impact on the community.

It was determined that while there would be room for four lanes of traffic, they would be at a less than desirable width and there would be no room for boulevards. In this stretch of road buildings abut the sidewalk, which immediately abut the road. This poses certain safety concerns and a need for slower speeds. The combination of the features of this design has the effect of restricting capacity to the equivalent of 600 vplph (vehicles per lane per hour). This capacity assumption is supported by:

- Substandard lanes widths (11 feet maximum due to the existing substandard parking lane width);
- Slower speed limits due to safety concerns regarding a lack of separation between road and sidewalk with the removal of on-street parking and boulevards;
- Numerous access points causing right turn friction;
- Trucks in the traffic stream on narrower lanes;
- Restriction of turns creating other traffic problems, as vehicles align with Mill Street, therefore requiring additional north-south green time at the intersection; and

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- Snow storage and plowing affecting capacity during the winter.

Using the lane capacity described above in the downtown area, along with the lane capacity used in Scenario 3 for the remaining sections of Dundas, this proposal was assessed using the AM peak period transportation model used for the other options to determine if it would solve the transportation problem.

The east-west screenline that passes through the downtown area (which includes Parkside Drive) was examined. It was concluded that this screenline would operate at a v/c ratio of 0.85, which sits at the point where an additional lane would be required. This volume is expected to be higher during the PM peak hour, which tends to be busier than the AM peak period. There are also non-peak hour issues.

Based on these safety concerns, and the fact that the option does not solve the problem, it is our opinion that this option not be pursued further. The City of Hamilton staff concur with this opinion.

Email sent November 24th, 2005 following our meeting with you on November 21st, 2005

We asked the Consultant - ***"Are you going to pursue the investigation to confirm that the area North of Northlawn Ave and East of Centre Road is a PSW (i.e. Key Natural Hydrological area)?".***

Their answer was ***"NO"****. Their report will continue to call the area an ESA. They did offer to change the evaluation factor in their justification tables to rate the area as a PSW. (However this means nothing. Since the area is only 0.25km long compared to a 10KM route, it would make little difference after the fact.)*

> The area identified is the Waterdown North Wetland Woods. It is an Environmentally Significant Area and a **candidate** to be classified as Provincially Significant Wetland. There has been no designation by MNR as a Provincially Significant Wetland. The City of Hamilton has asked MNR to consider addressing this issue. We have spoken to MNR staff who indicate that the evaluation may take place but it cannot be pre-supposed that the area is a PSW.
>
> Once again, as a result of your concerns, our team went back and re-evaluated all road options as if Waterdown North Wetland Woods was a PSW. The outcome of the evaluation did not change. The level of detail that the evaluation was conducted is also appropriate for a Phase 2 Municipal

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Class EA. Further detailed evaluation will be completed in Phase 3 and 4 of the Municipal Class EA process.

*We asked the Consultant - **"When it is finally evaluated by the OMNR and recognized as a PSW, will that change the recommended route because of the requirements of the Greenbelt act section 4.2.1. 2d)?".***

*Their answer again was **NO**. This is because <u>their interpretation</u> of the Greenbelt Act says they can go though it. They also said they have talked to staff in the Ministry who advised them they can put the road through the area. When we asked for written proof that the Ministry said they could go through the area, but they said they do not have any formal documents, it was just a conversation. Please remember, if they asked the question without knowing the specific area was a PSW and only indicated it to be an ESA, the answer from the Ministry would be quite different.*

The entire text of Section 4.2.1 of the Greenbelt Plan related to infrastructure was previously cited; please see our earlier answer on this matter.

The growth in Waterdown serves the Greater Golden Horseshoe in accordance with the policies above. Further, our project team has worked to minimize the area of the Greenbelt impacted and the key natural features. This is why a portion of the recommended corridor is in the vicinity of Northlawn Avenue; the majority of this corridor is not in the Greenbelt. At this stage of the project, the impact of the road is 0.2 ha of edge habitat of the Waterdown North Wetland Woods. However, through detailed design (yet to come) we anticipate being able to further minimize this impact. Policy 4.2.1 2d) is not a prohibition on crossing the Greenbelt.

*We have given the consultants the exact wording 4.2.1. 2d) of the Greenbelt Act that states they cannot build infrastructure through the Greenbelt if there are other reasonable alternatives. They did not show us the wording in the Greenbelt Act that allows them to **interpret** that they can go through a PSW (Key Natural hydrologïcal area) in the Greenbelt. Please note - anytime someone has to **interpret** a rule, you know there is a concern! As I have already shown from the minutes of the PIC meetings in Oct 2004, the Consultants advised the public that they will be following the policies of the Greenbelt act. We do not see how "following the policies" of the Greenbelt act means finding a loophole out.*

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The implications of the Greenbelt Act is not a simple issue that can be dealt with through one Ministry. There are three Provincial Ministry's involved: the Ontario Ministry of Natural Resources (proper assessment of the area), the Ministry of the Environment (the review of the EA process) and the Ministry of Municipal Affairs and Housing (the Greenbelt Act). Due diligence would dictate that the consultant should have pre-dealt with each of these Ministry's to identify the effects of infrastructure through the Greenbelt very early in the initial stages as the original East-West options were being considered. The consultant has instead proven that they did not pre-deal with these issues. It is only after being specifically questioned on the issues (early Oct 2005) that have they backtracked to see how they can find a loophole out of the Greenbelt Act

> The Act allows infrastructure to go through the Greenbelt, subject to certain conditions. Your interpretation of the Greenbelt indicates that there is a "prohibition" on infrastructure through the Greenbelt. The Greenbelt policies allow infrastructure through the Greenbelt, subject to certain conditions or tests. The City is fulfilling those conditions and meeting those tests.
>
> The project team has been aware of the infrastructure issues relative to Waterdown and OPA28 at the time the draft Greenbelt maps and plan were released by the Ministry of Municipal Affairs. We discussed the implications for Waterdown with the MAH staff working on the Greenbelt Plan so that we had clear direction on what would and would not be allowed. MAH staff confirmed the interpretation that the road corridors could cross the Greenbelt to service growth in Waterdown.

I have to ask the council to get involved with this issue as soon as possible. Since June 2005, (well before the preliminary Phase 2 report was issued to the public in Sept. 2005,) the Hamilton Planners had already advised the Hamilton Secondary planning groups for Waterdown North and Waterdown South and Upcountry Estates, to proceed with their community planning based on their recommended route.

> These studies are occurring in parallel with the Waterdown/Aldershot Transportation Master Plan. They have proceeded based on the best information available. Final approval of secondary plans for the OPA 28 lands are still dependent on the outcome of this Transportation Master Plan.

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Email sent November 28th, 2005 following our meeting with you on November 21st, 2005

1) Option 5, EAST- WEST

This was an option route that we presented to the consultants over 1-1/2 months ago. It was an 11 page report / analysis using the information from their report, to "Widen Dundas Street through the 1km downtown core of Waterdown to 4 lanes and widen Parkside Drive to 1 lane". The logic behind the idea was that a rush hour turning lane is not required at the intersection of Mill Street/Waterdown Road at Dundas street because the new Waterdown Road intersection will be 1 KM east of Downtown.

As stated in their Draft Phase 2 report, Dundas Street in the 1km downtown core, with its current 2 lanes with turning lanes has a current capacity of 1000 cars/hr per lane. In our meeting, the Consultants advised us that widening this section of Dundas Street to 4 lanes will only increase the total capacity to 1200 cars per hour (600 cars per lane) per direction. This is actually a decrease in capacity per lane. Their logic was that without the turning lanes, the traffic per lane actually slows down.

There is a problem with the answer they gave us based on conflicting information they presented in their report.

Of the 3 intersections in Waterdown, one (Hamilton Street) is already at 5 lanes with a turning lane, centre meridian and a width of over 55 feet. The second intersection (Main Street) is also 5 lanes with a turning lane (no meridian) but at a smaller width of 50 feet wide. The whole issue is the one intersection (Mill Street /Waterdown Road) that is currently used for the North-South traffic to Aldershot. This intersection (see attached picture) is currently 4 lanes (one each direction with turning lanes) that is 44* feet wide. This is the intersection that we said does not require the turning lanes (during rush hour) because they are moving the North-South route to Aldershot 1km east of this intersection. (*Note, the road widths are actually 2 feet wider but we removed the 2 feet to allow a 1 foot from the Curb allowance on each side.)*

We cannot believe that "4 through lanes" over " 2 lanes with turning lanes" would actually slow the capacity of the road down when its speed through town is already 50 km/h.

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When we asked - "How is the 600 cars/hr per lane (1200 cars per direction) calculated?" They said it is an ***"educated estimate"*** *based on their experience. There is no formula to it.*

In our meeting, we identified a number of factors that would result in a reduction of the capacity to 600 vehicles per lane per hour through the downtown area if Option 5 were implemented. This capacity assumption is supported by:

- Substandard lanes widths (11 feet maximum due to the existing substandard parking lane width);
- Slower speed limits due to safety concerns regarding a lack of separation between road and sidewalk with the removal of on-street parking and boulevards;
- Numerous access points causing right turn friction;
- Trucks in the traffic stream;
- Restriction of turns creating other traffic problems, as vehicles align with Mill Street, therefore requiring additional north-south green time at the intersection; and
- Snow storage and plowing affecting capacity during the winter.

These are standard factors each of which will reduce the capacity of a roadway and were assessed based on a careful review of your option.

On the Consultants North-South Waterdown road evaluation, the existing 2 lane Waterdown Road has a capacity of 800 cars per lane per hour. (It reduces to 500 per car per lane through Crooks Hollow / Grindstone Creek). Yet when they perform their recommended widening of Waterdown Road to just 4 lanes (no centre lane for turning) Waterdown Road's capacity increases to 1800 cars per hour per direction (or 900 cars per lane (on page 81 of their report)). Waterdown Road has over 80 residential driveways and 6 intersections between the 403 and including Mountain Brow road. Yet the same widening of Dundas Street to 4 lanes through the Downtown core, gives a capacity of only 1200 cars per direction. ***This makes one question the effort the Consultant actually gave the idea, when their answer to us indicates conflicting "educated estimates".***

As mentioned above, there are a number of factors that determine the capacity of a roadway. Your example of the road improvements to Waterdown Road for the recommended north-south option has a higher vehicle per lane per hour (vplph) capacity than the downtown section of Dundas Street that you provided to us in our proposal for a number of reasons. These include:

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- Less lane friction due to increased lane widths;
- Less side friction due to wider ROW, greater distance of sidewalk and buildings from the street;
- Majority of the green time at each signalized intersection on Waterdown Road;
- More abundant room for snow storage;
- Low volume access points (residential driveways) instead of higher volume commercial driveways on Dundas Street.

2) <u>Movement of traffic:</u>

We also asked about the movement of traffic, specifically the existing traffic that moves East to West.

*In the afternoon rush hour period, when the large volumes of West bound traffic on Dundas street goes through Waterdown and eventually reaches Highway 6; we asked "What direction does it go from there - North, South or continues West? Their reply was **"They go everywhere"**.*

*We pointed out the numbers from the road volume tables (Page 26 of their report) that shows the traffic volumes at the intersection of Dundas Street and Highway 6. The volume of traffic going North before and after this intersection actually drops from 1688 to 1179. This means that the majority of West bound traffic on Dundas Street does not turn North at this intersection. The traffic either continues West or turns South. When we asked, "... then why are you putting in a NORTHERN bypass route, when the West bound traffic (the heaviest of traffic volumes in the afternoon) on Dundas Street needs to go straight West or South. Their answer again was, **"traffic goes everywhere"**.*

*They explained to us how they use the GTA models and do a random 5% sample test of existing volume against the model to verify it. They then update the model to the expected volumes to get the required road capacity requirements. But yet when we asked them again, where the traffic is going, they kept repeating **"traffic goes everywhere"**. We would think this would be a key factor in the analysis of any transportation route to know the breakdown of where the traffic is coming from and where it is going in order to properly evaluate a route that satisfies traffic movement.*

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Is their answer that "traffic goes everywhere" a reflection of their "educated estimates" on traffic volumes / capacities?.

Also: For all the time and effort we have put into analysing their report and advise them of mistakes, issues and concerns, for the Consultant to repeated make a statement like that ("traffic goes everywhere"), we were insulted. However this just reflects the arrogance shown in their replies to the public's questions throughout this process.

While the east-west route can serve through trips, it is also intended to service local trips that will be generated by the existing community and the OPA 28 lands (Waterdown North, Waterdown South, and UpCountry).

Our traffic model is based on existing and projected population and employment in Waterdown, the Greater Toronto Area and City of Hamilton. We utilize survey data collected by the Transportation Tomorrow Survey (a standard source of data for all long-range transportation plans conducted in the GTA and Hamilton) and through this data and modelling projected trips are assigned to a network of transportation facilities. This projection of future travel over a 20-year time horizon measures link volumes on road corridors, not detailed turning movements. Once again, this is a standard process for all transportation master plans in the GTA done at this level. Therefore, our answer that "traffic goes everywhere" is based on the fact that when westbound traffic reaches the intersection of Highway 6 and Dundas Street, it can make a number of movements, including north, south, or west. Since detailed turning movements are not forecasted at the 20 year time frame, it is difficult to predict which direction traffic will turn. However, it was noted to you at the meeting that the majority of PM peak hour traffic would head south.

There must also be a clear understanding that the problem identified in Phase 1 of this Municipal Class EA was the need to add an additional lane of north-south and east-west traffic due to the development of OPA 28 lands. Thus, the purpose of the new east-west route is not to serve as a 'by-pass', but to accommodate an increase in traffic due to the development of OPA 28 lands. The recommended east-west route will serve this function.

It should also be noted that transportation performance is only one criterion that was evaluated in the assessment of both east-west and north-south corridor options. All options were deemed to solve the transportation problem. A pre-screening was completed of a number of options, and those that did not solve the transportation problem were dropped from the detailed

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evaluation. Therefore other factors such as impact on social, economic, and natural environment, as well as cost were also taken into consideration when selecting the preferred alternative.

3) The Consultants original East-West Option 3 route of widening Dundas Street: *Option 3 was one of the consultants 4 original reasonable options that were considered to handle the expected future volumes of traffic.*

From Page 35 of their report they state:
(Year) 2001 Network: ***There is an existing capacity deficiency on Dundas Street east of Hamilton Street in the centre of Waterdown.***
(Year) 2021 do nothing network: ***Dundas street through the centre of Waterdown is significantly over capacity. Dundas street is also at or over capacity both East and West of Brant street in Burlington***

Their report states that the current and future capacity deficiencies are ***in the centre of Waterdown.*** *We all agree with that statement from the obvious existing layout of Dundas Street. It is 4/5 lanes on each the East and West sides of the 3 lane, 1km downtown core area. We have a bottle neck downtown because it is only 3 lanes.*

From their report, the capacity of the existing 4/5 lanes on Dundas Street, both East and West of Downtown Waterdown is 2000 car hour per direction or 1000 cars per hour per lane. This capacity along with the existing 800 cars per hour per lane on Parkside Drive adds up to 2800 cars/hour capacity in either direction. Their analysis shows we only need a future capacity of 2600 cars per hour per direction to meet our future needs in the year 2021. Therefore on both the East and West sides of Downtown Waterdown, we have more than enough capacity.

So as their analysis states, the problem is the Downtown core.

In the Consultant's evaluation of Dundas Street as a reasonable option, they said (on page 48) that simply widening the existing route from Highway 6 to Brant Street to 4 lanes would not meet the capacity requirements. ***This statement is true but also extremely misleading.***

The Consultants created Option 3 as adding a full extra set of lanes in each direction to Dundas street. This means that not only would the over capacity 1 km downtown core be widened to 4/5 lanes (which is the real deficiencies according to their analysis), but they would widen the existing 4/5 lanes on both the East and West sides of the Downtown core to 6/7 lanes.

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Why do we need to widen the existing 4/5 lanes to 6/7 lanes when according to the numbers in their report, we already have more than enough capacity on the East and West sides of Downtown Waterdown for the future?

The reason is that from their analysis as stated on Page 35 of their report, in the year 2021: ***"Dundas street is also at or over capacity both East and West of Brant street in Burlington.***
Even though the existing capacity of Dundas Street East of the Downtown core is 2000 car per hour per direction (1000 cars per lane), once the East bound traffic from Parkside Drive moves south on Evans Road to join and mix with Dundas Street to continue West, we loose the 800 cars per lane capacity of Parkside drive. Therefore, in the future, east of Evans Road, (or where ever the future North-South road between Dundas Street and Parkside Drive is), Dundas Street needs to be widened to 6/7 lanes all the way to Brant street in Burlington to meet the minimum 2600 cars per hour per direction. This is why the consultants have an additional $8.46 million dollars to widen Dundas Street from Evans Road to Brant Street. They also have an addition $4.2 million dollars to widen Dundas Street from Evans Road east to their proposed North South road through Upcountry estates to join Dundas Street to Parkside Drive.

Final proof of our correct evaluation of existing road capacities of Dundas Street is in the new intersection of the proposed New North-South Route from Aldershot at Dundas street. (Although the exact placement of the intersection is not yet defined it appears it will be between 1/4 to 3/4 of a km east of the new proposed North south link from Parkside Drive to Dundas Street.) At this section on Dundas street, with its existing 4/5 lanes, the Consultant does not give a requirement for additional widening of Dundas Street either side of this intersection. It is only farther East when the new proposed North south link from Parkside Drive to Dundas Street intersects, that Dundas Street needs to be widened. Therefore the Consultants numbers indicated that the existing 4/5 lane capacity of Dundas Street is already widen enough in the area to handle the future traffic from Aldershot.

Therefore, the Consultant's statement in their report "...that simply widening the existing route from Highway 6 to Brant Street to 4 lanes would not meet the capacity requirements" is very misleading. They only need to widen the 1 km downtown core** and **the section of Dundas street on the East side of Waterdown that joins to the new proposed North-South link from Parkside Drive to Dundas street, eastward to Brant street.

As discussed in our meeting, an AM peak hour traffic model was used to forecast 2021 travel demand and assess transportation impacts based on roadway network options. Generally, the PM peak period is busier than the

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AM peak period, which will add additional traffic on Dundas Street. Traffic impact studies completed for the commercial development in Clappison's Corner also indicate a need for a basic six lane cross section on Dundas Street in the vicinity of the Commercial development. Based on analyses at this planning level, our conclusion was that an additional lane in each direction through the entire corridor was warranted.

*By the way - **Where is the Environmental Analysis (natural, social, economical, transportation costs..) for widening the section of Dundas street between the new North-South Road and Brant Street that is required in a Phase 2 report ?***

This section of the roadway between the connection of the recommended east-west route to Dundas Street and Brant Street was common in all four east-west options that were evaluated. Therefore, a comparative evaluation was not required for this section at the Master Plan level. A detailed review of this section of Dundas Street will be completed in Phase 3 and 4 of the Municipal Class EA process.

4) Mis-representation of information that has skewed the numbers in the evaluation tables that were used to select their recommended route:
Evaluation tables were created for each of the 4 road options. These evaluation tables evaluated the Natural Environmental effects, the Transportation effects, the Social effects and the Economic effects and the Cost effects for each road option. The Consultant then compared the total results of the numbers from these evaluations tables and choose the route with the lowest numbers as their preferred route.
The problem is that the information they used in their Option 3 evaluation tables was skewed because they evaluated a road system that was much bigger than was required to solve the transportation route deficiencies on Dundas street:

In the Consultant's evaluation of Option 3 they stated they would also widen Dundas Street west of Highway 6 to Rock Chapel road (an additional 1.8 km). This section of Dundas Street is still a Provincial Highway. Any widening of that section of road would have to be evaluated by the Province and paid for by them. But they went and added the Costs, the Natural Environmental effects, the Transportation effects, the Social effects and the Economic effects all into their Option 3 evaluation tables for this section of road.

Who owns the road and who pays for the road improvement was not a consideration in the comparative evaluation. Also, impacts to the natural environment, social environment, economic environment, cost, and transportation service will occur regardless of jurisdiction and must be

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accounted for. Representatives from the Ministry of Transportation are also part of the Steering Committee and are aware of the process and recommendations of this study.

All of the options were evaluated fairly.

The intersection of Dundas Street and Highway 6 is actually already 6/7 lanes wide. The Province is already designing a new intersection in this area. All the costs associated with the improvements to this intersection, along with the EA evaluation of how it affects the Natural, Social, Economic issues will be looked after by the Province. Again, the consultants added all the Natural Environmental, the Transportation, the Social, the Economic effects and Costs all into their Option 3 evaluation tables for this section of road.

The Province is designing a new grade separated interchange at this existing intersection. The costs that were calculated for this option did not include the interchange, but only the cost and impacts of adding an extra lane of travel through the corridor.

- Their Option 3 includes widening Dundas street from Highway 6 East to Berry Hill from 4/5 lane to 6/7 lanes. They do not need this 2.35 km section widened when its capacity is already 2000 cars per hour per direction which when added to Parkside drive capacity of 800 cars per hour is more than our future volumes require. But again the consultants added all the Natural Environmental, the Transportation, the Social and the Economic effects and all the Costs into their Option 3 evaluation tables for this section of road.

Please see the response above.

- Their Option 3 evaluation tables also include widening Dundas street from Berry Hill, east to Pamela street to 4 lanes. Well, of this 2.1 km distance that they want to widen to 4 lanes, 1.1 km of it is already 4/5 lanes. Therefore again they have added all the Natural Environmental, Transportation, Social, Economic and costs into their Option 3 evaluation tables for this section of road that is already 4/5 lanes and would not be affected at all.

The analysis included the addition of one lane in each direction through the entire corridor. In the section you refer to, the widening should have been described as a widening to four lanes west of First Street instead of near Pamela Street. The R.O.W. impact was assessed at 30 m to just beyond Pamela, so in effect we have slightly underestimated the impacts associated with the section between west of First Street and Pamela Street.

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- Their Option 3 evaluation also includes widening of Dundas Street from Pamela Street to Evans Road, from 4/5 lanes to 6/7 lanes. Again, as the consultants information shows, only the section from the new North-South link between Parkside Drive and Dundas Street east to Evans Road needs to be widened to 6/7 lanes. (Also, since this section of widening on Dundas street, was not added in any of the other 3 options and is a stand alone issue, it should not be added at all to the Option 3 evaluation.) But again the consultants added all the Natural Environmental, Transportation, Social, Economic effects and Costs, all into their Option 3 evaluation tables for this section of road.

> Option 3 includes an additional lane in each direction on Dundas through the entire corridor. Any mention of connections to Dundas from the North-South portion of Option 2 and 4 have no bearing on the assessment of Option 3.

All these un-needed or incorrectly assessed sections of road widening are not required to meet the future capacity requirements of Dundas Street in accordance to their report information. The Option 3 table, if properly evaluated for the required widening of Dundas Street, which is just the 1km downtown core, would give the lowest evaluation table values, making it the "preferred route". The fact that the consultants has added an additional 6.4 km of effects on the Dundas Street that are not required has wrongly skewed the Evaluation table for Option 3 making it appear like the worst option.

	Option 1	*Option 2*	*Option 3 Dundas Street*	*Option 4*	*Option 5 Modified Dundas Street & Parkside*	*Re-evaluated Option 3 Dundas Street*
Natural Environment	*14.22*	*4.57*	*1.344*	*7.28*	*0*	*0*
Social Environment	*4.06*	*10.09*	*13.45*	*5.54*	*9.705*	*9.705*
Economic Environment	*3.43*	*2.36*	*9.03*	*3.21*	*4.23*	*6.24*
Costs	*1.76*	*2.82*	*3.4*	*2.1*	*0.4134*	*0.4134*
Transportation Service	*1.73*	*4.04*	*5.02*	*2.175*	*2.1347*	*2.3147*
Total	*25.2*	*23.88*	*32.244*	*20.305*	*16.4831*	*18.6731*

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*The Option 3 evaluation table must be **fairly** regenerated.*
As such:
*The estimated cost of the re-evaluated Option 3 is just over $3.5 million dollars not $30 million. **That is a major saving!** (This is also a major savings over the $12.6 of their recommended route.)*
The potential Environmental effects are zero. (The bridge crossing Grindstone creek is already 5 lanes)
The potential Transportation effects of "Change in Safety levels" also drops more than half.
The potential Social effects are reduced because less residences are affected.
The potential Economic effects for option 3 are lower because less businesses are affected.

This is why we came up with the Option 5 alternative to minimize these potential Economical effects.

We respectfully disagree with your conclusion that an extra travel lane in each direction is not required on the entire length of the Dundas corridor in the study area.

The consultant has spent time on trying to minimize the effects of their widening of Waterdown Road in their North-South Route. Originally they were going to be effecting over 70 properties. Through further analysis they are now saying they are reducing the number to less that 15 properties. This is why we came up with the Option 5 alternative to minimize all the potential effects. This is what the Consultants need to do with Option 3 and 5 - further refinement to reduce the possible impacts.

In summary, option 3 needs to be properly and fairly evaluated.

This further refinement of Waterdown Road was completed on the recommended alternative and represents a level of detail that will be completed in Phase 3 and 4 of the Municipal Class EA process. It was completed to illustrate that more detailed design can reduce the property impacts in the proposed road corridor. This information was not incorporated into the comparative evaluation. It was done because of the high level of concern for property impacts in the corridor. All options were evaluated fairly and consistently.

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5) <u>Traffic movements:</u>

The Consultant's report states "MTO plans to eliminate access at Parkside Drive as Highway 6 is improved". We asked the Consultants in our meeting for a copy of the letter from the MTO that states this. Again they do not have such a letter, it was again from a "conversation". Any changes that the Province performs along Highway 6 will be to ***re-align traffic routes*** *(i.e. - Parkside Drive), not to close them off. The volumes of traffic already on Parkside dictates that it cannot simply be eliminated. The Consultants have again mis-lead us.*

> The option to widen Parkside Drive was assessed as if it would remain an at grade intersection. In the long-term, MTO plans on turning Highway 6 through Waterdown to a controlled access highway. Based on standard interchange spacing criteria, putting in place an interchange at Highway 6 and Parkside is not a feasible location given its close proximity to the proposed interchange at Highway 6 and Dundas Street. Therefore, it is anticipated that Parkside will either be converted as a flyover or closed, and a new interchange will be placed further north.

Going back to our original question we asked the Consultants: "Where are the Afternoon West bound cars on Dundas street going at the intersection of Highway 6?" Their own data shows they travel West or South, not North. Yet they are recommending a Northern East-West route.
- Look where all the new BIG BOX stores will be at the intersection of Dundas Street and Highway 6.
- Look at the Spaghetti loops of roads that the Consultant is recommending.
Now look at their recommended route. ***Nothing flows.***
Yet they tell us this meets the transportation needs. Theoretically yes, based on their V/C (Volume to Capacity) ratios from the information they have presented, it will work. So do the V/C rating of the other 3 options work. So does Option 5 work if they use the same logic they used for the capacity estimate of widening Waterdown Road to 4 lanes.

Consider the opposing arguments the consultant is using in their own evaluation of the recommended routes: On one hand, with the North-South route, the Consultants say it is impractical to widen King Road due to the higher costs and higher environmental effects. Yet on the East-West route they turn around and do the opposite: their recommended route costs more and it has higher environmental effects that Option 2, 3, or 5.

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The same evaluation process was followed when evaluating the north-south and the east-west options. All factors were considered when selecting a recommended option.

Other Requests

In response to other requests for information/detail, we have attached the following:

- Model output for preferred network (***Attachment 1***);
- Model output for Mr. Breznik's "Option 5" (***Attachment 2***); and
- Copy of Minutes from PIC No. 3 (***Attachment 3***).

Yours sincerely,

DILLON CONSULTING LIMITED

Claudio Covelli, M.A.
Partner

cc: Andrew Head, City of Hamilton
Mary-Lou Tanner, City of Hamilton
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DAK:mf
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