

1 INTRODUCTION

1.1 PURPOSE OF ENVIRONMENTAL STUDY REPORT

This Environmental Study Report (ESR) documents the planning and preliminary design components for the New North Oakville Transportation Corridor and Crossing of Sixteen Mile Creek Class EA Study. Several previous studies undertaken by the Regional Municipality of Halton (Halton Region) and others had identified the need for improvements to the Burnhamthorpe Road transportation corridor, referred to in this report as the New North Oakville Transportation Corridor (NNOTC). Consequently, Halton Region initiated this study in the fall of 2004 to identify existing and future transportation problems and opportunities in the Study Area and to determine the preferred solution for addressing them.

This ESR was undertaken in accordance with Schedule 'C' of the *Municipal Class Environmental Assessment, June 2000* which was the policy in effect at the project initiation. In 2007 the Municipal Engineers Association (MEA) completed a five year review of the Class EA and proposed a series of amendments that included a new component for municipal transit projects as well as revisions to existing schedules to reflect changes in legislation and planning practices. The amendments were approved by the Minister of Environment in September 2007. This Class EA and ESR are compliant with the amended Class EA document.

1.2 BACKGROUND

This study considered and built upon previous studies relating to the NNOTC including the:

- Halton Functional Road Network and North Halton Transportation Study, May 1999;
- Halton Region Transportation Master Plan November 1999 and June 2004;
- Halton Transportation Master Plan Update (2007) – PPW-36-08;
- Halton Region Road Needs Study;
- Oakville Transportation Master Plan, March 2007;
- North Oakville West Secondary Plan, Council approved May 25, 2009, Official Plan Amendment 289, By-law 2009014, appealed to the Ontario Municipal Board; and
- North Oakville East Secondary Plan, January 2008.

Some of the key issues identified include:

- Provision for all modes of travel in the corridor including automobiles, trucks, transit, pedestrians and cyclists;
- Provision of safe access to adjacent existing and planned commercial, institutional and residential developments;
- Consideration of impacts on Sixteen Mile Creek, Joshuas Creek and the Trafalgar Moraine;
- Consideration of aesthetics, streetscape, safety, noise, property impacts and other community issues;
- Recognition of transit opportunities along Burnhamthorpe Road; and
- Planned levels of population and employment growth for determination of future travel demand.

The following tasks were undertaken as part of the EA:

- Identify existing and long-term mobility requirements in the Burnhamthorpe Road corridor based upon realistic and achievable estimates for future growth within and adjacent to the Study Area. For the purpose of this study, the 2011 and 2021 planning horizons were considered;
- Examine the need and justification for transportation improvements in the Burnhamthorpe Road corridor to not only resolve existing traffic congestion but more importantly to efficiently and safely accommodate long term transportation demands for all modes of travel;

- Identify significant technical, environmental and public issues, concerns and constraints associated with the provision of additional vehicular capacity within the project limits;
- Identify a broad range of planning alternatives that recognize the contribution of various modes of travel (e.g. auto, walking, cycling, transit);
- Complete an assessment of alternative planning solutions and design concepts that incorporates the concerns and values of the public and affected agencies/Ministries, etc.;
- Identify measures needed to mitigate impacts and public concerns associated with the recommended improvements;
- Prepare a preliminary design for the improvements; and
- Prepare an Environmental Study Report (ESR) that documents all public input and comments and complies with the requirements of the Municipal Class Environmental Assessment, June 2000, amended 2007, for Schedule "C" undertakings.

As noted previously, the Class EA Study for the New North Oakville Transportation Corridor and Crossing of the Sixteen Mile Creek was initiated in the fall of 2004. The overall Study schedule was extended in order to better coordinate with the planning process for lands in North Oakville. The North Oakville East Secondary Plan was approved by the Ontario Municipal Board (OMB) in January 2008 while the North Oakville West Secondary Plan was approved May 2009 by Oakville Council.

Study analyses and results were documented as each phase of the Study was completed. Individual components were then assembled to form this ESR. This documentation process allowed for more timely review and endorsement of Study recommendations as each milestone was reached. Information distributed or presented to agencies, stakeholders and the public at Study milestones (appended to this ESR) occasionally make reference to studies, reports, plans or data that have since been updated. Although data and/or assumptions used in Study analyses were the most current available at the time the work was performed, in some cases such information has been revised or new data has become available. For example, future population and employment estimates (Region of Halton Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2007-2021) for North Oakville were revised subsequent to the completion of the Study Need and Justification component. Traffic count data on the area road network has also been updated as the Study progressed.

Other relevant studies completed over the course of this Class EA include the following:

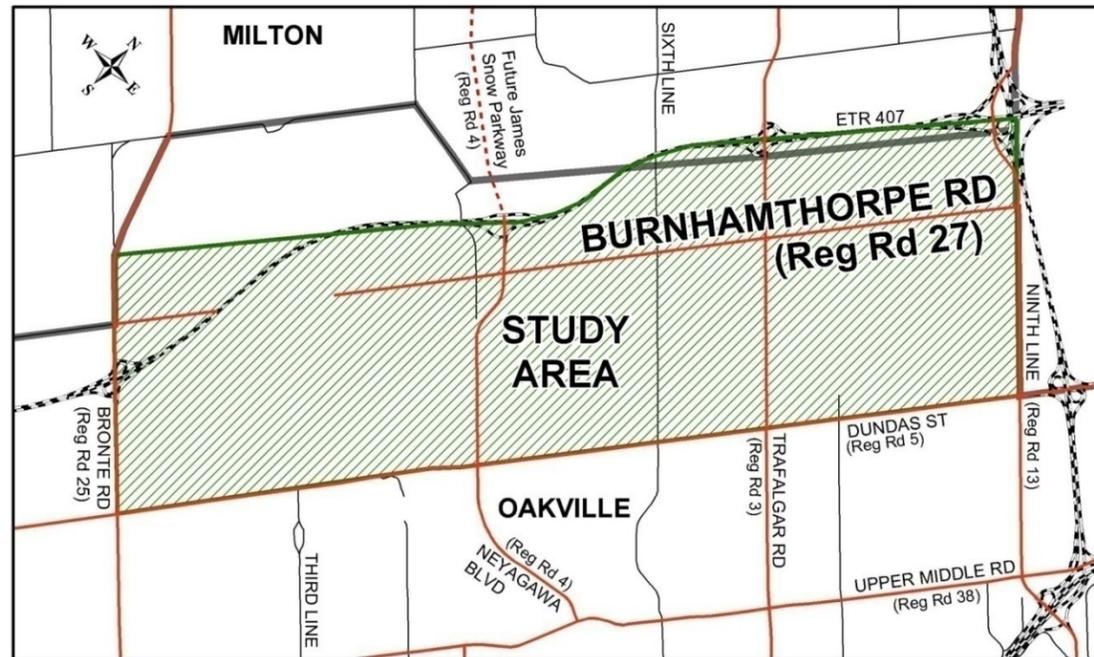
- Draft Town of Oakville North Oakville East Secondary Plan Transit Plan – November 2007
- Draft North Oakville East Cycling Strategy – April 25, 2008
- Draft North Oakville East Trails Plan – April 25, 2008
- North Oakville East Secondary Plan, Urban Design Guidelines – draft August 26, 2009

In order to ensure that Study recommendations and conclusions for the Need and Justification have remained valid, checks of critical assumptions have been made. Transportation and transit data, policies and plans and travel demand forecasts that were used to support the rationale for road network improvements have been rechecked with the data available in spring 2008. Report documentation has been updated where appropriate.

1.3 STUDY AREA

The Study Area, indicated on **Exhibit 1-1** was established at the initiation of the study by Halton Region and includes the area bounded to the north by 407 ETR, to the east by Ninth Line (Regional Road 13), to the west by Bronte Road (Regional Road 25), and to the south by Dundas Street (Regional Road 5).

Exhibit 1-1: Study Area



1.4 THE CLASS EA PROCESS AND SELECTION OF SCHEDULE

Municipal road projects are subject to the *Ontario Environmental Assessment Act* (EA Act). The Municipal Class EA process is an approved process under the EA Act and includes five phases, which are:

- Identification of the problem or opportunity;
- Assessment and evaluation of alternative solutions;
- Assessment and evaluation of the alternative design concepts for the preferred solution;
- Documentation in an Environmental Study Report; and
- Project Implementation.

These phases are illustrated in **Exhibit 1-2** which has been reproduced from the Municipal Class EA document for convenient reference.

The Municipal Class EA defines three types of projects and the process required for each. The selection of the appropriate type is dependent on the scope of the project and the anticipated environmental impacts. The selection of Schedule C is recommended when major expansion or construction of a new roadway is proposed. This particular study was identified as a Schedule “C” Municipal Class EA. The work program was developed to follow Phases 1 through 4 of the Class EA process.

The *Canadian Environmental Assessment Act* (CEAA) may be triggered by the proposed improvements for the North Oakville Transportation Corridor and crossing of Sixteen Mile Creek as described below:

- Fisheries and Oceans Canada (DFO) is the agency responsible for the implementation of the Federal Fisheries Act. The Act prohibits the Harmful, Alteration, Disruption and Destruction (HADD) of fish habitat as well as the release of substances deleterious to fish habitats. Where a HADD cannot be avoided, a Letter of

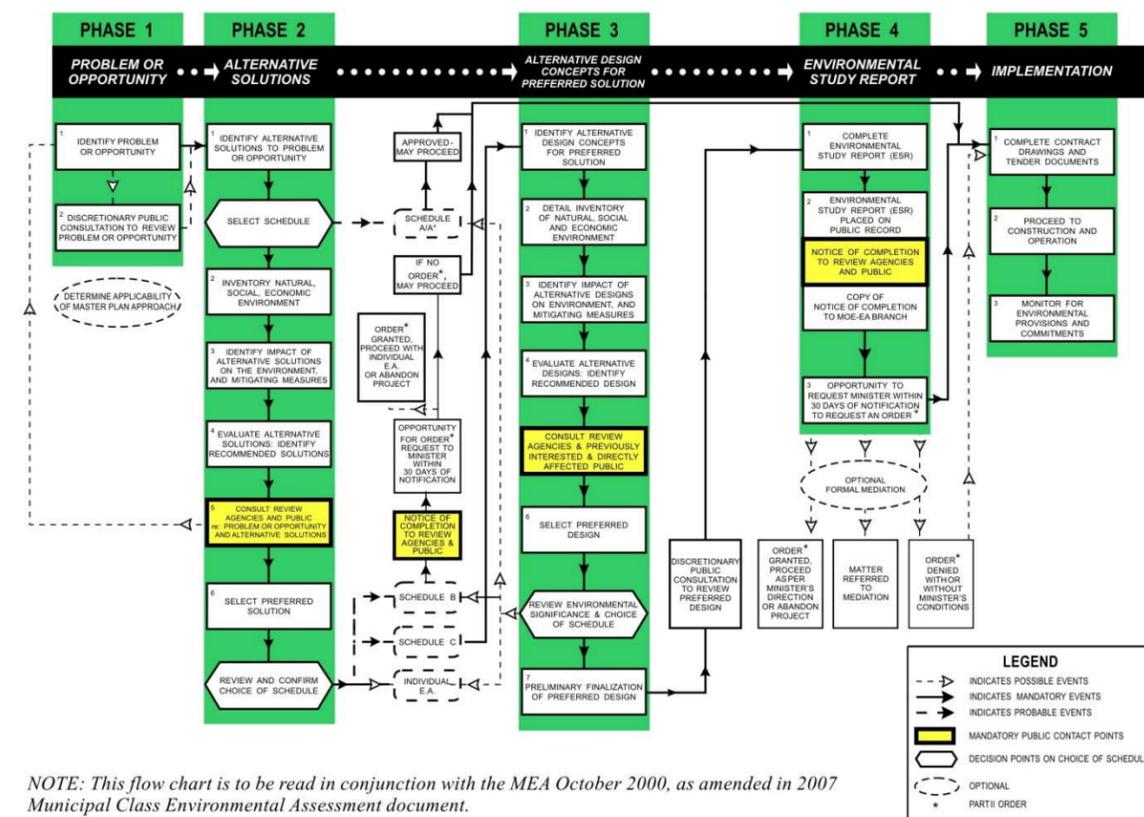
Authorization may be issued by the DFO detailing required mitigation and habitat compensation measures. The habitat compensation plan in support of an application for a *Fisheries Act* authorization from DFO will be developed during detailed design, if required.

- The crossing of Sixteen Mile Creek may require an application to Transport Canada for the Navigable Waters Protection Act, which is a CEAA trigger. A letter from Transport Canada dated November 23, 2004 was received indicating that the Navigable Waters Protection Act prohibits the construction or placement of any “works” in navigable waters without first obtaining approval from Transport Canada. No construction shall take place without approval under the Act.

Given that the expected implementation is to occur over an extended period of time, it has been recommended that CEAA approval as well as any other permits or approvals required for construction be obtained at the detailed design stage. The CEAA process and additional permits and approvals are therefore not being pursued as part of this Class EA.

Ministry of Natural Resources (MNR) approval may be required under the *Lakes and Rivers Improvement Act* for potential changes to the streams or creeks in order to incorporate stream restoration and mitigative initiatives. Exact requirements will be determined at detail design.

Exhibit 1-2: Class Environmental Assessment Process



NOTE: This flow chart is to be read in conjunction with the MEA October 2000, as amended in 2007 Municipal Class Environmental Assessment document.

The filing of this ESR completes the planning and preliminary design stage of the project. The ESR is placed on the public record and made available for review for a thirty (30) calendar day period. A public notice is published at the time of filing. Copies of the report are available for review and comment during normal business hours at the following locations:

Clerk's Office
Halton Region
1151 Bronte Road
Oakville, ON
L6M 3L1
Tel. (905) 825-6000

Clerk's Office
Town of Oakville
1225 Trafalgar Road
Oakville, ON
L6J 5A6
Tel. (905) 845-6601

Oakville Public Library
White Oaks Branch
1070 McCraney Street East
Oakville, ON
L6H 2R6
Tel. (905) 815-2038

Oakville Public Library
Glen Abbey Branch
1415 Third Line
Oakville, ON
L6M 3G2
Tel. (905) 815-2039

Oakville Public Library
Iroquois Ridge Branch
1051 Glenashton Drive
Oakville, ON
L6H 6Z4
Tel. (905) 338-4247

The Class EA process contains a provision that allows for changing the status of a project from a Class EA to an Individual Environmental Assessment. This is called a 'Part II Order'. Members of the public, interest groups, government agencies and others may request that an Individual Environmental Assessment be prepared for a specific project if they feel their concerns have not been addressed through the Class EA planning process. The Minister of the Environment determines whether or not this is necessary and the decision in this regard is final. If the 'Part II Order' is granted, the project cannot proceed unless an Individual Environmental Assessment is prepared. The Individual Environmental Assessment is subject to a formal government review and approval process and may result in a formal public hearing. Anyone wishing to request a 'Part II Order' of the New North Oakville Transportation Corridor and Crossing of the Sixteen Mile Creek Class Environmental Assessment Study must submit a written request by the end of the thirty (30) calendar day review period, to the Minister of the Environment at the following address, with a copy sent to Halton Region:

Ministry of the Environment address:

Honourable John Gerretsen, MPP
Minister of the Environment
12th Floor, 135 St. Clair Avenue West
Toronto, ON M4V 1P5

Halton Region address:

Regional Municipality of Halton
Attn: Ms. Melissa Green-Battiston, P.Eng.
Transportation Engineer, Transportation Services Public Works
1151 Bronte Road
Oakville, ON L6M 3L1

1.5 PROJECT TEAM

Halton Region retained Totten Sims Hubicki Associates (now AECOM) and their sub-consultants to undertake the Class Environmental Assessment for this study. The project team included representatives from Halton Region and AECOM. General direction was provided by Regional representatives with project team meetings held at key points in the process and prior to presenting the study findings to public and agency stakeholders.

The project team was comprised of representatives from the following organizations covering the broad range of noted specialties:

Halton Region

Project Management
Transportation Services
Engineering Services
Current Planning

AECOM

Project Management
Roadway Engineering
Transportation Planning
Traffic Engineering
Bridge Engineering
Noise Analysis
Land Use & Social Impact
Drainage & Hydrology

Sub-Consultants

Gartner Lee Limited (now AECOM) - Natural Environment
(Terrestrial, Fisheries, Wildlife and Hydrogeology)
Archeoworks - Stage 1 Archaeological Assessment
Unterman McPhail Associates - Cultural Heritage
Synectics Transportation Consultants (now AECOM) - Safety Advice
Parish Geomorphic - Fluvial Geomorphology
Golder Associates Ltd. - Geotechnical and Foundation Engineering
T.Y. Lin - Bridge Engineering Advice

The Class EA work was undertaken from 2004 to 2009.

2 CONSULTATION APPROACH

2.1 PURPOSE AND OBJECTIVES OF THE CONSULTATION EFFORTS

The involvement of the community – residents, stakeholders and those who may be potentially affected by a project – is an integral part of the Class EA process. The purpose of the EA Study consultation process is to provide an opportunity for stakeholder groups and the public to gain an understanding of the study process; contribute to the process for development and selection of alternatives; and provide feedback and advice at important stages in the EA process. Specifically, the consultation efforts had the following objectives:

- Generate awareness of the project and provide opportunities for involvement throughout the planning process; and
- Facilitate constructive input from public and agency stakeholders at key points in the EA process, prior to decision-making.

2.2 AGENCY INVOLVEMENT

The following external ministries, municipalities, agencies and authorities were contacted at the project initiation stage or through correspondence during the Study notifying them of the project commencement and requesting their comments and interest in participating in the Study. Relevant agency correspondence is included in **Appendix B**.

Federal Agencies:

- Canadian Coast Guard
- Department of Fisheries and Oceans, Bayfield Institute
- Canadian Environmental Assessment Agency
- Environment Canada
- Indian and Northern Affairs Canada
- CN Rail
- Transport Canada

Provincial Agencies:

- GO Transit
- Ministry of Agriculture and Food and Rural Affairs
- Ministry of Community and Social Services
- Ministry of Culture
- Ministry of Economic Development and Trade
- Ministry of Environment, Central Region
- Ministry of Environment, Environmental Assessment & Approvals Branch
- Ministry of Environment, Halton-Peel District Office
- Ministry of Environment, West Central Region
- Ministry of Health and Long-Term Care, Public Health Branch
- Ministry of Municipal Affairs and Housing, Plans Administration Branch, Central & Southwestern Region
- Ministry of Municipal Affairs and Housing, Provincial Planning Services Branch
- Ministry of Natural Resources, Aurora District
- Ministry of Natural Resources, Bronte Creek Provincial Park
- Ministry of Tourism, Heritage and Libraries Branch
- Ministry of Transportation Ontario (MTO)

- Ontario Provincial Police, Number 3 District Headquarters
- Ontario Realty Corporation
- Ontario Secretariat for Aboriginal Affairs (Ministry of Aboriginal Affairs)

Municipal Agencies and Authorities:

- City of Mississauga
- Conservation Halton
- Halton Catholic District School Board
- Halton Catholic District School Board - Transportation
- Halton District School Board
- Halton District School Board - Transportation Planning
- Halton Region Cycling Committee
- Halton Ecological and Environmental Advisory Committee (E.E.A.C.)
- Regional Municipality of Halton
- Regional Municipality of Halton Emergency Medical Services - Ambulance Services
- Halton Regional Police Services
- Member of Provincial Parliament Office - Oakville
- Niagara Escarpment Commission
- Oakville Chamber of Commerce
- Oakville Fire Department
- Region of Peel
- Town of Oakville

Utilities:

- Bell Canada - F3 Section Green
- Cogeco Cable Systems Inc.
- Inter Provincial Pipeline Ltd.
- Microcell
- Oakville Hydro Electricity Distribution Inc., Electrical Services Division
- Ontario Hydro - Central Territory
- Telus
- TransCanada Pipelines
- Trans-Northern Pipelines Inc.
- Union Gas
- 407 ETR

First Nations¹:

- Mississaugas of Scugog Island First Nation
- Mississaugas of the New Credit First Nation
- Hiawatha First Nation
- Curve Lake First Nation
- Alderville First Nation

¹ Note: Mohawks of Akwesasne First Nation, Oneida Nation of the Thames, Six Nations Haudenosaunee Confederacy Council, The Mohawks of the Bay of Quinte (Tyendinaga) First Nation, Wahta Mohawks First Nation and Six Nations of Grand River were added to the agency contact list towards the end of the project based on new information received through the Region's Archaeological Master Plan process.

- Six Nations of the Grand River
- Mohawks of Akwesasne First Nation
- Oneida Nation of the Thames
- Six Nations Haudenosaunee Confederacy Council
- The Mohawks of the Bay of Quinte (Tyendinaga) First Nation
- Wahta Mohawks First Nation

2.2.1 Technical Agencies Committee

A Technical Agencies Committee (TAC) was formed including federal, provincial and municipal agencies and utilities with a potential interest in the study or whose mandate may be affected by the undertaking. The following organizations were participants on the TAC:

- 407 ETR
- City of Mississauga
- Conservation Halton
- Halton E.E.A.C.
- Halton Planning and Transportation Services
- Ministry of Natural Resources
- Ministry of Transportation
- Oakville Hydro
- Town of Oakville
- Ontario Realty Corporation

The TAC met at key points throughout the Study (as outlined in **Exhibit 2-1** below) to provide input and technical advice to the Project Team. **Appendix B** provides the meeting summaries for all six TAC meetings.

2.3 FIRST NATIONS CONSULTATION

Contact with First Nations was initiated in July 2006 through letters to Indian and Northern Affairs Canada and the Ontario Secretariat for Aboriginal Affairs (Ministry of Aboriginal Affairs). Responses were received from two different branches of Indian and Northern Affairs Canada indicating that they are unaware of any First Nation land claims against Ontario that will impact this project; and that the current litigation under the responsibility of the Litigation Management and Resolution Branch was reviewed and their inventory does not include litigation that involves the area of this project.

In November 2006, the Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of the New Credit and the Mississaugas of Scugog Island were contacted via letter correspondence. A response dated December 13, 2006 from the Alderville First Nation indicated that the First Nation has no comments or concerns but to forward any new or additional information that may arise. A response dated April 12, 2007 from the Mississaugas of Scugog Island First Nation indicated that the lands involved are within the treaty lands of the Mississaugas of Scugog Island First Nation, and are within the lands claimed by the First Nation in an unresolved specific land claim presently before the Canada Indian Land Claims Commission. The First Nation requests that an archaeological resource survey of the lands involved in the project be performed by a specific archaeologist. In addition, the First Nation requested assurance that the subject lands will not be disturbed until they have completed consultations with the applicable government. Halton Region provided a written response to both First Nations indicating that a Stage 2 archaeological field assessment was recommended prior to construction activities and if any aboriginal remains or

significant aboriginal artifacts are uncovered during further assessment work, the First Nations would be contacted immediately.

Appendix C provides a copy of all First Nations correspondence.

2.4 PUBLIC INVOLVEMENT

Public stakeholder involvement is a key component in the development and completion of Class EAs. Local knowledge, issues, concerns and suggestions provide invaluable information for the process and ultimately the completion of this study with the best possible solution.

Four primary vehicles for consulting public stakeholders were used throughout the study:

- A Stakeholder Group;
- Public Information Centres (PICs);
- Individual meetings with specific property owners; and
- Notices and newsletters mailed to the project mailing list.

A summary of key points of contact is provided in **Exhibit 2-1**.

2.4.1 Stakeholder Group

Halton Region established a Stakeholder Group comprised of representatives of local residents, the business community, local ratepayers groups, etc. to provide input to the Project Team at key points during the EA. On November 2, 2004, landowners along Burnhamthorpe Road were invited to join the Stakeholder Group. The invitations were mailed to all property owners along Burnhamthorpe Road within the Study Area. The Project Team also contacted the Oakville Chamber of Commerce, Oakvillegreen Conservation Association, North Oakville Land Owners Association and Residents Association North of Dundas (RAND) to invite these organizations to participate.

Appendix D provides meeting summaries for all six Stakeholder Group meetings which includes the list of participants and a copy of presentation materials.

2.4.2 Public Information Centres (PICs)

PICs are an important part of consulting the public. These events have the capacity to address comments from any number of stakeholders using a one-on-one approach during the open-house portion while providing a larger overview and detailed update of the project during the presentation.

A public notice was issued prior to each of the two PICs. All pertinent information from both PICs can be found in **Appendix D**.

Public Information Centre #1

Public Information Center #1 was held on Thursday, June 9, 2005 from 6:00 p.m. to 9:00 p.m. A drop-in centre was held from 6:00 p.m. to 7:00 p.m. to allow the public time to view the information panels and ask questions of the project team. The presentation started at 7:15 p.m. followed by a question and answer period. The meeting was held in Oakville at the King's Christian Collegiate at the corner of Burnhamthorpe Road and Neyagawa Boulevard.

A notice advertising the Public Information Centre was published in the Oakville Today, on May 26 and June 2, 2005, the Oakville Beaver on May 27 and June 3, 2005 and the North Halton Compass on May 27 and June 3, 2005. The notice was mailed to property owners within the Study Area and abutting Dundas Street on May 26, 2005.

The purpose of the meeting was to:

- Introduce the Study to the public and outline the purpose for undertaking this Class Environmental Assessment;
- Present the existing conditions within the Study Area;
- Outline the need and justification (i.e. problem identification) for considering transportation improvements in North Oakville;
- Present the alternative solutions being considered to address the need;
- Obtain public comments and feedback on the assessment of the alternative solutions; and
- Identify future activities to be undertaken as part of the Class Environmental Assessment Study.

Sign-in sheets, comment sheets and presentation material were available at the PIC. One comment sheet was returned following PIC #1 and nineteen people signed the register. A copy of the summary containing the text panels is included in **Appendix D**.

Public Information Centre #2

Public Information Centre #2 was held on Thursday June 22, 2006 from 6:00p.m. to 9:00p.m. A drop-in centre was held from 6:00p.m. to 7:00p.m. to allow the public time to view the information panels and ask questions of the project team. The presentation started at 7:10p.m., followed by a question and answer period. The meeting was held in Oakville at the St. Volodymyr Cultural Centre on Dundas Street east of Bronte Road.

A notice advertising the Public Information Centre, was published in the Oakville Today, on June 8 and June 15, 2006, the Oakville Beaver on June 9 and June 16, 2006 and the North Halton Compass on June 9 and June 16, 2006. The notice was sent by mail/email to property owners within the Study Area and south of Dundas Street on June 7, 2006. A copy of the notice is contained within the summary provided in **Appendix D**.

The purpose of the meeting was to:

- Present and obtain feedback on the:
- Alternative design concepts considered for the preferred alternative solution;
- Environmental conditions fieldwork;
- Assessment of the alternative design concepts; and
- Preferred design concept.
- Identify future activities to be undertaken as part of the Class Environmental Assessment Study.

Sign-in sheets, comment sheets and presentation material were available at the PIC. Forty-one people signed the register and a summary of the PIC with questions and comments noted during the presentation and a copy of the text panels is included in **Appendix D**.

2.4.3 Stakeholder Mailing List

At the initiation of this study, a stakeholder mailing list was created from residents and businesses within the Study Area, as well as interested agencies. Throughout the study, this list was used to notify stakeholders of study milestones and upcoming public consultation events. The list was updated regularly.

2.5 SUMMARY OF KEY CONSULTATION EVENTS

Exhibit 2-1 below provides a chronological summary of the key points of contact with agencies and public stakeholders throughout the EA Study and the key issues raised. The issues raised were addressed as the Project Team worked through the Phases of this EA and the ESR documents this process.

2.6 NOTICE OF STUDY COMPLETION/FILING OF THE ESR

This ESR will be filed in the public record for 30 calendar days and the public notified by means of newspaper advertisements, a Halton Region website posting and mailings to agencies, interested individuals and adjacent property owners.

Exhibit 2-1: Summary of Key Consultation Events

Consultation Event	Date	Purpose of Consultation	Key Issues Raised
Technical Agency Committee Meeting #1	December 1, 2004	Introduction of the objectives and outline rationale and process of the study	<ul style="list-style-type: none"> • Coordinate EA with Oakville Secondary Plan process • Consider cumulative impacts on ecology, communities, air, etc. • Environmental issues, potential crossing of Sixteen Mile Creek • Impact of traffic on air quality and health • Property impacts and property values • Sustainability of existing neighbourhood • Effect of the ORC lands in terms of the recent announcement • Effect of the James Snow Parkway extension on traffic • Impact on existing businesses along Burnhamthorpe Road • Adjacent land uses in boundary municipalities and potential impacts re: new corridor and potential crossing • Heritage considerations – natural, built, cultural, etc. • Impact on King’s Christian Collegiate
Stakeholder Group Meeting #1			
Technical Agency Committee Meeting #2	April 12, 2005	Present existing and future transportation conditions and to identify transportation need, preliminary alternative solutions and assessment criteria	<ul style="list-style-type: none"> • Impact of Greenspace protection of the former Oakville Land Assembly lands • Add a screenline to measure volume to capacity ratio at Oakville / Mississauga boundary • Improvement to overall mode split • Consider land use and transportation perspectives when assessing Community Connectivity
Stakeholder Group Meeting #2	April 13, 2005		
Technical Agency Committee Meeting #3	June 1, 2005	Identify transportation need, alternative solutions, assessment criteria, the assessment of alternative solutions and the recommended solution	<ul style="list-style-type: none"> • Transportation issues and questions relating to the Study were raised including traffic, need for improvements, alternative solutions • Stakeholders are opposed to a widening of Burnhamthorpe on its existing alignment • Concern regarding the location of the Sixteen Mile Creek crossing
Stakeholder Group Meeting #3			
Public Information Centre #1	June 9, 2005	Introduce the study, present the existing conditions within the Study Area, outline the need and justification and present the alternative solutions being considered to address the need.	<ul style="list-style-type: none"> • Public and external agencies were generally supportive of the recommended solution presented • Questions and comments received related primarily to understanding the basics of the project, overall EA process and the assumptions used in the assessment work completed during Phases 1 and 2 of the EA process • Questions were raised regarding: the surrounding transportation system, how this new east-west arterial road in North Oakville will impact the existing system, whether or not this project would even be justified (i.e. proximity to Highway 407, Dundas Street widening, etc.)
Technical Agency Committee Meeting #4	July 5, 2005	Identify potential opportunities and constraints for alternative design concepts (route alignments)	<ul style="list-style-type: none"> • Coordination of the EA process with the Secondary Planning process • Northerly east-west route would be preferred in terms of natural heritage system connectivity • Intersection with Bronte Road should be approximately 400m from the next major intersection • Several issues pertaining to traffic and impacts • Consideration of a bridge on Upper Middle Road over Bronte Creek
Stakeholder Group Meeting #4	July 6, 2005		
Technical Agency Committee Meeting #5	January 26, 2006	Discuss the long list of route alternatives, the screening of the long list to generate a short list of route alternatives and the short-listed alternatives to be assessed	<ul style="list-style-type: none"> • Recommended that the bridge type (for Sixteen Mile Creek crossing) not be specified in the Class EA to allow for more flexibility in detail design • Consideration of impacts to cemetery lands on east side of Sixteen Mile Creek • Consider noise barriers for adjacent residential properties • Alternative E3 results in traffic being diverted through residential areas • Property impact issues • Natural environment impacts • Questions relating to the evaluation process
Stakeholder Group Meeting #5			
Technical Agency Committee Meeting #6	June 1, 2006	Review the assessment of route alternatives, selection of the preferred route and functional design	<ul style="list-style-type: none"> • It was agreed that the location of the new crossing of Sixteen Mile Creek, being close to the existing Lions Valley Park, has significant advantages from an environmental perspective • Issues regarding potential impacts to the Town’s park land west of Neyagawa. • Town of Oakville prefers a 3 m wide sidewalk on the new bridge to match other new bridges in the Town • 3 to 5 residences displaced by the Recommended Plan • Oakville Hydro requires space adjacent to the new roadway (3 m from the sidewalk) which will be reviewed during detail design. • TAC in general agreement with Preferred Alternative (E1/W6) • Lighting should consider impacts to sensitive core areas and shielding may be needed to minimize impacts • Ensure proper buffer area and drainage on the west side of the landfill site
Stakeholder Group Meeting #6			
Public Information Centre #2	June 22, 2006	Present the alternative design concepts considered for the preferred alternative solution, assessment of the alternative design concepts and preferred design concept.	<ul style="list-style-type: none"> • Questions and comments received related primarily to understanding the basics of the project, overall EA process and the assumptions used in the assessment work.

3 NEED AND JUSTIFICATION

3.1 DESCRIPTION OF EXISTING ROAD NETWORK IN STUDY AREA

Daily (24 hour) volumes for 2004, 2006 and 2007 on sections of roadways between intersections (*ADT Volumes*) are illustrated on **Exhibit 3-1**. The A.M. and P.M. peak hour link traffic volumes are illustrated on **Exhibit 3-2**. Note that study documents released as interim deliverables or presented to agencies and the public at Study Milestones were in some cases based on more dated traffic data than is presented below. Although data and/or assumptions used in Study analyses were the most current available at the time the work was performed, in some cases such information has been revised or new data has become available. Traffic count data on the area road network has been updated as the Study progressed. Although minor differences in analysis results have been noted, they do not affect the overall study results or recommendations.

Dundas Street (Regional Road #5)

Dundas Street is classified as an east-west inter-regional major arterial roadway under the jurisdiction of Halton Region. Dundas Street connects Halton Region with the City of Hamilton to the west, and Peel Region to the east. It is a primary commuter route to/from Mississauga and Toronto, and accommodates truck traffic within the Study Area. The lands to the south of Dundas Street are fully urbanized. While the lands to the north are still primarily rural in nature, they are designated for development between Bronte Road and Ninth Line as part of the North Oakville East and West Secondary Plans. The existing roadway consists of a four-lane semi-urban cross section with gravel shoulders and turning lanes at all major intersections. The average daily traffic (ADT) recorded in 2007 varied from 31,000 vehicles per day (vpd) at Bronte Road, to 41,000 vpd at Ninth Line with approximately 2 – 3% heavy trucks. Throughout the Dundas Street corridor all major intersections are controlled by coordinated traffic signals. The posted speed limit varies between 60 – 80 km/hr.

Burnhamthorpe Road (Regional Road #27)

Burnhamthorpe Road is classified as an east-west major arterial roadway under the jurisdiction of Halton Region. Within the Study Area, Burnhamthorpe Road is discontinuous at Sixteen Mile Creek, with no direct link between Bronte Road and Ninth Line. Burnhamthorpe Road continues east into Peel Region as a major arterial roadway. The roadway consists of a two-lane rural cross section with gravel shoulders and turning lanes at signalized intersections. The ADT in 2007 varied from 4,900 vpd at Neyagawa Boulevard to 9,200 vpd at Ninth Line. Intersections at Neyagawa Boulevard, Trafalgar Road and Ninth Line are controlled by traffic signals; all other intersections within the corridor are two-way or all-way stop controlled. The maximum posted speed limit is 60 km/h with a reduced load limit in effect all year.

Bronte Road (Regional Road #25)

Bronte Road is classified as a north-south intra-regional major arterial roadway under the jurisdiction of Halton Region. Bronte Road connects to the QEW, Highway 401, and Highway 407 ETR. The lands adjacent to Bronte Road (north of Dundas Street) are rural in nature on the west and rural residential on the east. Within the Study Area, the roadway consists of a two-lane rural cross section with gravel shoulders and turning lanes at signalized intersections. The maximum posted speed limit is 80 km/h and the roadway accommodates truck traffic within the Region. The ADT in 2007 was approximately 19,000 vpd with approximately 6 – 7% heavy trucks. The Halton Waste Management Site located on Bronte Road just north of Lower Base Line, generates an increased amount of heavily loaded vehicles utilizing the corridor. The intersections of Bronte Road at Dundas Street and the Highway 407 ETR ramps are controlled by traffic signals.

In 2006 Bronte Road was realigned north and south of Dundas Street to create a four lane by-pass of the Village of Palermo.

Neyagawa Boulevard (Regional Road #4)

Neyagawa Boulevard is classified as a north-south major arterial roadway under the jurisdiction of Halton Region. It connects with Dundas Street and with Highway 407 ETR. Future plans (beyond 2021) include the extension of Neyagawa Boulevard north of Highway 407 ETR to connect with the James Snow Parkway, providing a continuous link between Highway 407 and Highway 401. Within the Study Area, the adjacent lands are rural in nature and the roadway consists of a two-lane rural cross section with gravel shoulders. North of Burnhamthorpe Road the roadway expands to four-lanes, extending to Highway 407 ETR. The ADT in 2006 varied between 9,600 vpd north of Dundas Street, to 5,200 vpd in 2007 between Burnhamthorpe Road and Highway 407 ETR, with approximately 2% heavy trucks. The intersections of Neyagawa Boulevard at Dundas Street and Burnhamthorpe Road are controlled by traffic signals and turning lanes are provided. A new traffic signal north of Dundas Street (North Park) is to be in place in the spring 2010. The maximum posted speed limit within the Study Area is 80 km/h.

Sixth Line

Sixth Line is classified as a north-south arterial roadway under the jurisdiction of the Town of Oakville. Within the Study Area, the adjacent lands are rural in nature and the roadway consists of a two-lane rural cross section with gravel shoulders. The ADT in 2004 varied between 7,000 vpd south of Dundas Street, to 3,400 vpd north of Dundas Street. The maximum posted speed limit is 60 km/h (from Dundas Street to 800 metres north of Dundas Street), and increases to 80 km/h to the Oakville/Milton boundary. Sixth Line has a 5 tonne/axle load restriction north of Dundas Street.

Trafalgar Road (Regional Road #3)

Trafalgar Road is under the jurisdiction of Halton Region and is classified as a north-south major arterial roadway. It connects with the QEW, Highway 401, and Highway 407 ETR. The lands south of Dundas Street are fully urbanized, while the lands north of Dundas Street are primarily rural. The roadway consists of a four-lane rural cross section with gravel shoulders and turning lanes at signalized intersections. The ADT varied from 20,400 vpd in 2006 north of Dundas Street to 27,300 vpd in 2007 south of Highway 407 ETR, with approximately 4% heavy trucks. The intersections of Trafalgar Road at Dundas Street and Burnhamthorpe Road are controlled by traffic signals and the maximum posted speed limit north of Dundas Street is 80 km/h.

Ninth Line (Regional Road #13)

Ninth Line is a north-south major arterial roadway within the Study Area. Under the jurisdiction of Halton Region, Ninth Line represents the Halton-Peel boundary with Peel Region located immediately to the east. The lands adjacent to Ninth Line are rural in nature to the west, and completely urbanized (high-density residential/commercial) to the east. Within the Study Area, the roadway consists of a two-lane rural cross section with gravel shoulders and turning lanes at signalized intersections. The ADT was 11,500 vpd in 2006 north of Dundas Street and 13,800 vpd in 2007 south of Highway 407 ETR with 3% heavy trucks. The intersections of Ninth Line at Dundas Street and Burnhamthorpe Road are controlled by traffic signals and the maximum posted speed limit is 60 km/h.

3.1.1 Signalized Intersections

The operation of the signalized intersections within the Study Area was analyzed using procedures described in the Highway Capacity Manual (HCM) using 2004 traffic data. The analysis was updated in 2008 based on the availability of traffic count data from 2006-2007.

For signalized intersections, the analysis focused on performance measures such as intersection capacity utilization and level of service (LOS) for lane groups, intersection approaches and the intersection as a whole. Capacity utilization is determined from the ratio of traffic volume to capacity (v/c ratio), whereas LOS is determined from control delay per vehicle (in seconds per vehicle (sec/veh)). Control delay is the portion of the total delay attributed to traffic signal operation for a signalized intersection.

LOS is a qualitative measure of operational performance and is based on control delay. LOS is given in terms of six levels, from A to F inclusive. LOS A is representative of a control delay of less than 10 sec/veh, and is referred to as free flow operating conditions. LOS F is representative of a control delay of greater than 80 sec/veh and is referred to as restricted flow operating conditions.

In determining the LOS performance for the intersection, the average control delay per vehicle is estimated for each lane group and is aggregated for each approach and for the intersection as a whole. Acceptable intersection operations are normally taken to be LOS D or higher, with v/c ratios of 0.85 for overall operations and 0.95 for exclusive movements. Operations falling above these thresholds or queuing that exceeds available queue storage indicate the need to consider remedial measures.

Capacity analysis for the signalized intersections was completed using Synchro 6 software that incorporates HCM procedures. **Exhibit 3-3** and **Exhibit 3-4** summarize the performance measures for each intersection under the A.M. and P.M. peak hours, respectively.

The analysis indicated that in the A.M. peak hour, with the exception of the intersections of Dundas Street at Neyagawa Boulevard, Dundas Street at Ninth Line and Burnhamthorpe Road at Ninth Line, all signalized intersections within the Study Area are generally operating at or below capacity and with a LOS D or better under the most recent traffic count data available. The intersection of Dundas Street at Ninth Line is operating unsatisfactorily with an overall v/c ratio of 1.49, due to a high eastbound through volume as well as heavy left-turn movements from all approaches. The intersection of Burnhamthorpe Road and Ninth Line operates unsatisfactorily with a LOS E and an overall v/c ratio of 1.07, due to heavy eastbound and northbound through movements.

In the P.M. peak hour, considerably more intersections are experiencing unsatisfactory operating conditions with overall v/c ratios exceeding 1.0 or with a LOS E or worse. The intersections of Dundas Street with Bronte Road, Third Line, Neyagawa Boulevard, Trafalgar Road and Ninth Line are all operating at LOS E or worse or with overall v/c ratios greater than 1.00. Vehicles at these intersections are experiencing excessive delays and numerous movements are operating beyond capacity.

Exhibit 3-3: 2006-2007 A.M. Peak Hour Signalized Intersection Analysis

Intersection	V/C Ratio	Average Control Delay	Level of Service	Remarks
Dundas St. @ Bronte Rd.	0.94	43	D	Eastbound (EB) through lanes approaching capacity.
Dundas St. @ Third Line	0.98	53	D	Eastbound (EB) through lanes exceeding capacity.
Dundas St. @ Neyagawa Blvd.	0.95	61	E	Eastbound (EB) through lanes exceeding capacity.
Dundas St. @ Sixth Line	0.86	17	B	Eastbound (EB) through lanes approaching capacity.
Dundas St. @ Oak Park Blvd.	0.71	3	A	
Dundas St. @ Trafalgar Rd.	1.00	52	D	Eastbound (EB) through lanes approaching capacity.
Dundas St. @ Postridge Dr.	0.68	8	A	
Dundas St. @ Eighth Line	0.77	10	B	
Dundas St. @ Ninth Line	1.49	52	D	Eastbound (EB) through lanes exceeding capacity; southbound (SB) through lanes approaching capacity.
Burnhamthorpe Rd. @ Neyagawa Blvd.	0.68	14	B	
Burnhamthorpe Rd. @ Trafalgar Rd.	0.82	23	C	
Burnhamthorpe Rd. @ Ninth Line	1.07	62	E	Eastbound (EB) through lanes exceeding capacity; northbound (NB) through lanes approaching capacity and experiencing unsatisfactory delay.

Exhibit 3-4: 2006-2007 P.M. Peak Hour Signalized Intersection Analysis

Intersection	V/C Ratio	Average Control Delay	Level of Service	Remarks
Dundas St. @ Bronte Rd.	1.02	53	D	Westbound (WB) through lanes approaching capacity; southbound (SB) and northbound (NB) approaches experiencing unsatisfactory LOS.
Dundas St. @ Third Line	1.23	49	D	Westbound (WB) approach experiencing unsatisfactory LOS.
Dundas St. @ Neyagawa Blvd.	1.23	82	F	Eastbound (EB) through lanes approaching capacity; westbound (WB) and southbound (SB) through lanes exceeding capacity; all approaches experiencing unsatisfactory LOS
Dundas St. @ Sixth Line	0.77	25	C	
Dundas St. @ Oak Park Blvd.	0.75	15	B	
Dundas St. @ Trafalgar Rd.	1.21	59	E	Westbound (WB) through lanes approaching capacity; eastbound, (EB), northbound (NB), and southbound (SB), approaches experiencing unsatisfactory LOS.
Dundas St. @ Postridge Dr.	0.62	9	A	
Dundas St. @ Eighth Line	0.79	10	A	
Dundas St. @ Ninth Line	2.41	159	F	Westbound (WB) and southbound (SB) through lanes approaching capacity; northbound (NB) through lanes exceeding capacity; northbound and southbound approaches experiencing unsatisfactory LOS.
Burnhamthorpe Rd. @ Neyagawa Blvd.	0.68	24	C	
Burnhamthorpe Rd. @ Trafalgar Rd.	0.91	31	C	Westbound (WB) and northbound (NB) through lanes approaching capacity.
Burnhamthorpe Rd. @ Ninth Line	0.87	30	C	Westbound (WB) and northbound (NB) through lanes approaching capacity.

3.1.2 Unsignalized Intersections

The operation of the unsignalized intersections within the Study Area was analyzed using procedures described in the HCM under the most recent traffic count data available.

Unsignalized intersection analysis considers two separate measures of effectiveness (MOE): the v/c of the critical movement; and the LOS, which is based on average control delay per vehicle for various critical movements at the intersection. Both measures indicate how well an intersection is operating. The delay is an indicator of how long a vehicle must wait to complete a movement, and is represented by a letter from A to F, with F being the longest delay.

The volume to capacity ratio (v/c) is a measure of the degree of capacity utilized at the intersection. Both measures must be considered independently of each other.

Capacity analysis for the unsignalized intersections was completed using Synchro 6 software, which incorporates HCM procedures. **Exhibit 3-5** and **Exhibit 3-6** summarize the performance measures for each unsignalized intersection under the A.M. and P.M. peak hours.

Exhibit 3-5: 2005-2007 A.M. Peak Hour Unsignalized Intersection Analysis

Intersection	Stop Control	Delay	Level of Service	v/c
Bronte Rd. @ Burnhamthorpe Rd.	EB/WB Stop Controlled	51	F	0.08
Burnhamthorpe Rd. @ Sixth Line	All Way Stop	130	F	1.47
Bronte Rd. @ Henderson Rd.	EB Stop Controlled	27	D	0.45

Exhibit 3-6: 2005-2007 P.M. Peak Hour Unsignalized Intersection Analysis

Intersection	Stop Control	Delay	Level of Service	v/c
Bronte Rd @ Burnhamthorpe Rd	EB/WB Stop Controlled	48	E	0.10
Burnhamthorpe Rd @ Sixth Line	All Way Stop	39	E	1.01
Bronte Rd @ Henderson Rd	EB Stop Controlled	14	B	0.21

Analysis of the unsignalized intersections indicated that Bronte Road at Burnhamthorpe Road and Henderson Road experience long delays but the v/c ratio is low indicating a low number of vehicles making the movement. If volumes increase at the Burnhamthorpe Road/Bronte Road intersection (specifically in the east/west direction), full traffic signal installation may be warranted. The intersection of Burnhamthorpe Road at Sixth Line experiences long delays and v/c ratios for the critical movement exceed 1.00, indicating that further improvements may be required.

3.2 COLLISION HISTORY

At the time of this study, the Region maintained a hard copy of collision reports received from the Halton Region Police Service. Copies of collision reports for Study Area roadways and intersections for 2004 - 2007 were made available for analysis.

Traditionally, traffic operations and safety practitioners have used past collision history to determine the safety characteristics of a particular road location. Determining the collision frequency is the simplest technique for identifying high-hazard locations. Intersections or roadway segments of uniform lengths are simply ranked in order of the number of collisions that occurred during a given time period. Although this method is simple to perform, the reliance on collision frequency tends to bias the identification process in favour of higher volume roadway sections and intersections. As a result, this approach may not identify safety problems on low-volume roadways or intersections.

Collision rates are normally considered better indicators of risk than collision frequencies alone because they account for differences in traffic volumes and hence exposure.

Collision rates for intersections have been expressed in terms of collisions per million entering vehicles (MEV). **Exhibit 3-7** summarizes the collision rates.

Exhibit 3-7: Intersection Collision Rates

Intersection	Frequency	Volume Entering Intersection (vpd)	Rate
Bronte Rd. @ Dundas St.	2	48,976	0.022
Burnhamthorpe Rd. @ Sixth Line	3	8,570	0.192
Burnhamthorpe Rd. @ Ninth Line	2	19,256	0.057
Burnhamthorpe Rd. @ Bronte Rd.	6	17,050	0.193
Burnhamthorpe Rd. @ Trafalgar Rd.	10	28,063	0.195

* N/A – Volume data unavailable for time period.

Collision rates for midblock sections have been expressed in terms of collisions per million vehicle kilometres (MVK). **Exhibit 3-8** summarizes the collision rates.

Exhibit 3-8: Midblock Section Collision Rates

Roadway	From – To	Frequency	Section Distance (km)	ADT Volume (vpd)	Rate
Bronte Rd.	Dundas St. – Burnhamthorpe Rd.	10	2.2	18,210	0.137
Burnhamthorpe Rd.	East of Bronte Rd. to East Limits	1	1.5	500	0.731
	West of Bronte Rd.	1	2	1,144	0.239
	Sixth Line – Trafalgar Rd.	2	1.2	4,660	0.196
	Trafalgar Rd. – Ninth Line	5	5	9,251	0.059
Trafalgar Rd.	Burnhamthorpe Rd. – Highway 407	2	2	24,671	0.022

Based on the frequency and collision rate analysis, the following locations were flagged as potential problem areas:

- Burnhamthorpe Road at Trafalgar Road
- Burnhamthorpe Road at Sixth Line
- Burnhamthorpe Road from Sixth Line to Trafalgar Road

The above analysis of collision history on Burnhamthorpe Road provides a clear picture of past collision behaviour on the roadway, but it does so in accordance with its current discontinuous configuration. The future safety performance of Burnhamthorpe Road would be dependent on the type and extent of improvements recommended.

As part of the update to this report, updated collision data from 2004 to 2007 was reviewed to determine whether collision rates and characteristics had changed. Since the completion of the original report, Halton Region has adopted a Potential for Safety Improvement Index (PSI). The PSI of a road segment or intersection is the difference between its predicted long-term safety performance and its expected safety performance, taking into account the societal costs of collisions. Generally speaking, a PSI of 0.00 means the collision rate is typical for the environment and traffic volumes of the road segment or intersection and there is little potential for safety improvement.

The methodology incorporated the collision and traffic volume data maintained by Halton Region and the state-of-the-art “Safety Performance” quantitative traffic safety analysis. Specifically the approach used Safety Performance Functions (SPFs) and a network screening process and related software to identify “sites with promise” based on potential for safety improvements.

The state-of-the-art safety evaluation technique known as the Empirical Bayes method was used for deriving estimates of the long-term safety performance of a location. The expected safety performance was derived by using the appropriate SPF model for the characteristics/attributes of the location of interest, and computing the results.

Based on the PSI rankings for intersections and road segments within the Study Area provided by Halton Region, a number of road segments and intersections were identified for a collision analysis update as follows:

- Dundas Street & Third Line;
- Dundas Street & Neyagawa Boulevard;
- Dundas Street & Postridge Drive;
- Dundas Street from Meadowridge Drive to Ninth Line; and
- Burnhamthorpe Road & Regional Road 25.

Exhibit 3-9: Intersection Collision Experience

Intersection	Frequency	PDO	Injury	Fatality	PSI
Dundas St. @ Third Line	44	35	9	0	9.90
Dundas St. @ Neyagawa Blvd.	54	38	14	2	6.62
Dundas St. @ Postridge Dr.	22	13	9	0	5.01
Burnhamthorpe Rd & RR25	1	1	0	0	1.08

Exhibit 3-10: Midblock Collision Experience

Roadway 1	Between	Frequency	PDO	Injury	Fatality	PSI
Dundas St. E	Meadowridge Dr. – Ninth Line	20	15	5	0	3.55

In 2002, Halton Region undertook improvements at Dundas Street and Third Line to implement dual northbound left-turn lanes. These improvements have improved traffic operations from both a level-of-service and safety perspective at the intersection.

Halton Region has also completed an Operations and Safety Assessment for the intersection of Dundas Street and Neyagawa Boulevard. The report identified improvements that could be made to the intersection in order to improve traffic operations from a safety perspective. These comprised a conversion of the east-west left-turn phasing from protected-permissive to protected-restrictive and realignment of the left-turn lanes. However, given the potential negative impacts to the throughput of the intersection from the former improvement, it was recommended that implementation would not proceed until the planned widening and congestion relief at this intersection occurred.

Based on the updated data, the following intersections and road segments have been flagged as potential problem areas:

- Dundas Street & Postridge Drive
- Dundas Street between Meadowridge Drive and Ninth Line

However, there are future improvements planned including the widening of Dundas Street from Highway 403 to Oak Park Boulevard, where any safety issues will be addressed.

The intersections of Dundas Street & Third Line and Dundas Street & Neyagawa Boulevard have already been identified by the Region as problem intersections and improvements are currently underway or in the planning stages.

3.3 SPEED STUDIES

In conjunction with the automatic traffic recorder (ATR) studies undertaken in September 2007, speed and class studies were also undertaken throughout the Study Area during the same time period. The speed data was summarized to provide the 85th percentile operating speed (prevailing speed) for each section surveyed. **Exhibit 3-11** summarizes the prevailing speed of the east-west arterial roadways.

Exhibit 3-11: Speed Data Summary of East-West Arterial Roadways

Street	Limits		Posted Speed	Prevailing Speed
	From	To		
Dundas Street	Bronte Road	Sixth Line	80 km/h	93 km/h (EB) 91 km/h (WB)
Dundas Street	Sixth Line	Trafalgar Road	80 km/h	80 km/h (EB) 76 km/h (WB)
Dundas Street	Trafalgar Road	Eighth Line	80 km/h	71 km/h (EB) 77 km/h (WB)
Dundas Street	Eighth Line	Ninth Line	80 km/h	91 km/h (EB) 91 km/h (WB)
Burnhamthorpe Road	Neyagawa Boulevard	Ninth Line	60 km/h	82 km/h (EB) 81 km/h (WB)

Speed analysis indicates that speeds tend to decrease along Dundas Street where the south side is more urbanized and there is a greater concentration of commercial activity. The greatest speed reduction was observed between Sixth Line and Eighth Line, where observed speeds were at or below the maximum posted speed limit of 80 km/h. Observed speeds along Burnhamthorpe Road were generally 20 km/h above the maximum-posted speed limit of 60 km/h. The high operating speeds can be attributed to the rural nature of the roadway and low traffic volumes.

3.4 COMMERCIAL VEHICLE TRAFFIC

Exhibit 3-12 summarizes commercial traffic designation and usage on Study Area roadways².

Exhibit 3-12: Truck Use of Arterial Roadways in the Study Area

Roadway	Truck Usage	% Heavy Vehicles
Dundas Street	Trucks Permitted	4-5%
Burnhamthorpe Road	Load Restriction	n/a

² These results are based on limited field observations of truck movements.

Bronte Road	Trucks Permitted	6-7%
Neyagawa Boulevard	Trucks Permitted	2%
Trafalgar Road	Trucks Permitted	4%
Ninth Line	Load Restriction	3%

3.5 TRANSIT NETWORK

Halton Region does not operate transit services, however it provides and promotes the necessary infrastructure to accommodate the services provided by the lower tier municipalities as the majority of transit routes utilize the Regional arterial road network. Oakville is one of three local municipalities in Halton Region that offers transit service. The City of Burlington and Town of Milton also operate transit services.

Halton Region's largest transit system, Oakville Transit, operates standard buses, low floor buses and community buses (provided for the elderly). The service area is concentrated in the urban area of Oakville, south of Dundas Street, with inter-municipal connections to Burlington Transit and Mississauga Transit.

The North Oakville East Secondary Plan (NOESP) Transit Plan (draft August 2009) reflects the Town's Transit-First planning approach and provides a process to be applied in the design of future development in Oakville. The transit strategy and hierarchy of services in the North Oakville transit strategy relate directly to the land-use designations and road network in the Town's NOESP. The Draft Transit Plan suggests that to achieve the early introduction of transit, services need to be phased in so that initial services are convenient and timely, but cost-effective to deliver. As improvements to the Study Area are made in accordance with approved development plans, employment growth and activity centres will increase the need for local transit service and for connections at strategic locations on the inter-regional transit network to promote transit, particularly for work trips.

The Region's 2002 *Making Connections* transit report defined an inter-regional transit plan that allows for a variety of potential new transit elements in the inter-regional transit network, ranging from the incremental staging of Bus Rapid Transit (BRT) components to essential network support elements that together will make transit a more attractive personal mobility option and an alternative to the automobile. Some important components of this strategy include buses on high-occupancy vehicle (HOV) lanes and reserved bus lanes. The *Making Connections* report identifies primary inter-regional transit corridors that connect beyond the Region, as important links in the overall transit network in the GTA and Golden Horseshoe having the highest future transit market potential. Dundas Street is identified as a primary inter-regional transit corridor.

The *Town of Oakville's Transportation Master Plan* (March 2007) recommended a transit service concept is designed in two layers: corridor services, comprising primary and secondary corridors, and community services. Corridor services operate on a basic grid framework, providing inter-municipal connections and connections to the inter-regional network of transit services. Primary and secondary corridors are distinguished by the level of service they offer, and are usually consistent with the scope of the arterial or collector road on which they operate.

Primary transit corridors are intended to provide high-frequency service connections within Oakville, as well as inter-municipal connections and connections to the inter-regional network of services. Primary transit corridors are identified along Dundas Street and Trafalgar Road within Oakville.

Secondary transit corridors are similar to the primary corridors in that they would provide a high-frequency service, operate on the grid network of streets and provide cross-boundary connections. Secondary corridors are characterized by slightly lower service levels, in the 7 to 10 minute interval range, and somewhat restricted continuity, depending on the road network. In some cases, these services will provide cross-boundary connections to adjacent municipalities, where the road connections are available. Burnhamthorpe Road is identified as a secondary corridor.

Burnhamthorpe Road with a connection across Sixteen Mile Creek clearly serves as a significant regional and inter-regional travel corridor and is an essential component of the future road network that is needed to accommodate travel in areas of north and northwest Oakville.

3.6 PEDESTRIAN/CYCLING FACILITIES

The Town of Oakville recognizes the importance of a pedestrian-friendly and bike-friendly approach to land use planning in the development of the Secondary Plans for North Oakville, the North Oakville East Cycling Strategy and the Town's Active Transportation Master Plan.

Pedestrian and bicycle trails have been built through the valley system and link to community trails that run through the Town. The community trails are linkages that are designed in the master planning process of a new community. The five Heritage Trails – Sixteen Mile Creek Trail, Bronte Creek Trail, The Crosstown Trail, Joshua's Creek Trail and the Waterfront Trail – provide a 47 kilometre trail system of multi-use trails that link together all parts of the community. This network of trails includes pavilions, information columns and trail signage that tell the natural, human, and built heritage history of Oakville.

The Halton Region Transportation Master Plan, June 2004 (HTMP) consultation process revealed that cyclists are a vital and growing road user group within Halton. Cycling organizations in Halton Region include the Oakville Cycling Club and the Burlington Cycling (formerly Bikeways) Committee and the Halton Region Cycling Committee.

Cycling in Halton Region represents a small share of the modal split (a 2% share of the seasonal urban trips). The goal of the HTMP is to provide the incentives to increase this mode share. As the HTMP indicates, although cycling is not a transportation solution on its own, it will help reduce reliance on the automobile.

Provisions have been made to make Regional roads more cyclist-friendly. Some of the provisions, according to the HTMP are:

- As part of right-of-way dimension guidelines, regional roadways are to incorporate a minimum curb lane of 4.2m in urban settings and a 1.0m paved shoulder in rural settings; and
- A delineated cycling lane in an urban setting is an option for those roadways that are likely to have high cycling traffic and where delineation is seen as a beneficial measure to cyclists.

3.7 FUTURE CONDITIONS

The transportation analysis documented in this ESR was based on existing and future travel demand conditions. Inputs to the analysis included:

- Existing traffic counts in the Study Area;
- Existing travel patterns based on 2001 Transportation Tomorrow Survey (TTS), typical 24 hours travel behaviour survey of residents in the Greater Toronto Area;
- Future land use forecasts, population and employment at a municipal and traffic zone level of detail; and
- Future base transportation network assumptions, future planned improved network infrastructure inclusive and exclusive of the Study Area.

In order to ensure that Study recommendations and conclusions for the Need and Justification have remained valid, as the Study duration extended, checks of critical assumptions have been made. Transportation and transit data, policies and plans and travel demand forecasts that were used to support the rationale for road network improvements have

been rechecked with the data available in spring 2008. In order to ensure that the conclusions reached regarding future conditions remained valid, a sensitivity test was performed to assess the implications of the most significant change in the forecasting foundation, the revised future land use data for Halton Region, and particularly for the Study Area based on the Region of Halton Best Planning Estimates of Population Occupied Dwelling Units and Employment, 2007 to 2021 (2007). Although minor differences in analysis results have been noted, they do not affect the overall study results or recommendations. Report documentation has been updated where appropriate.

The following sections describe the inputs, analysis and results in more detail.

3.7.1 Land Use

Area Growth

The population and employment forecasts are based on the "Best Planning Estimate" (BPE) that was available at the time of the study process when this activity was undertaken in 2003. The forecasts were provided by the Halton Region Planning and Transportation Services Department. The population and employment forecasts are available at a traffic zone level of detail for the planning horizon years of 2006, 2011, 2016 and 2021. This level of detail is necessary as input to the travel demand forecasting model. **Exhibit 3-13** provides a summary of the population and employment by municipality as well as the population and employment assumptions for the Study Area used in the generation of volume forecasts for this study.

Exhibit 3-13: Final Land Uses Adjusted to BPE (2003) Totals

Municipality	Population					Employment				
	2001	2006	2011	2016	2021	2001	2006	2011	2016	2021
Oakville										
Study Area	730	1,003	9,131	29,045	40,768	580	668	9,716	14,498	18,172
TOTAL	144,738	161,500	186,400	215,000	231,800	74,040	85,940	98,540	110,420	118,830
Burlington										
TOTAL	150,836	163,800	172,300	178,900	184,500	77,130	85,470	90,960	97,680	106,390
Milton										
TOTAL	31,471	58,700	79,300	94,100	106,000	21,910	30,770	39,860	47,440	53,360
Halton Hills										
TOTAL	48,184	55,000	60,000	65,000	70,000	15,860	18,720	22,100	25,720	29,410
Region										
TOTAL	375,229	439,000	498,000	553,000	592,300	188,940	220,900	251,460	281,260	307,990

Ontario Realty Corporation (ORC) Lands

The Development Charges planning undertaken by the Town of Oakville assumed that the Employment Area east of Regional Road 25, north of Dundas Street (Regional Road 5) and west of the Sixteen Mile Creek would develop as industrial park/employment lands (ORC Lands). Some 6,000 employment opportunities were expected to develop in this area and are accounted for in the land use forecasts presented in **Exhibit 3-13**.

Full Build-out

The Best Planning Estimates for population and employment forecasts to 2021 at the time the travel demand forecasts were developed identified a population of between 45,000 and 55,000 in the ultimate or build-out condition within the North Oakville East Secondary Plan Area. The change in land use has been reflected in an ultimate demand scenario and assigned to the 2021 network. This scenario is referred to as the "Full Build-out" condition.

3.7.2 Transportation System Considerations

For the base 2021 network, improvements to the transportation infrastructure were included in the model consistent with the Region's Capital Works Program (widening, reconstruction and resurfacing projects) that was current at the time of the modelling work.

The Road Capital Projects list is regularly reviewed and updated as necessary to refine project priorities and add new projects as they come on stream. During the course of this Study, some adjustments were made to the program in terms of advancing or deferring the capital program year, removing completed projects or adding new projects. The changes are not considered to be significant in the forecasting of future travel demand in the Study Area as the changes were well removed from the area.

Role of Transit

The Region does not currently provide transit service. Transit service in the Region is provided by:

- The Town of Oakville, Oakville Transit;
- The City of Burlington, Burlington Transit;
- The Town of Milton, Milton Transit Service;
- GO Transit;
 - Lakeshore West GO Rail line;
 - Georgetown GO Rail line;
 - Milton GO Rail line; and
 - GO Bus service provides inter-regional express service through Halton, typically operating on major provincial and regional facilities.

Inter-regional and intra-regional transit will play a significant role in the growth of all communities.

Higher Order Transit

Halton Region's strategy for reducing public reliance on the private automobile, more specifically the single occupant vehicle is through the provision of wider curb lanes on major corridors (eg. Dundas Street) for the use of HOV and transit vehicles.

In Halton, the following Higher Order Transit Opportunities are being planned through the completion of Environmental Assessments:

- Along Trafalgar Road corridor, from Cornwall Road to Highway 407; and
- Along the Dundas Street corridor through Burlington and Oakville.

Role of Highway 407

Highway 407 Electronic Toll Route (ETR) is a major 6-lane (ultimate 10-lane) highway facility running primarily east-west through Halton connecting the QEW in Burlington to Highway 403 and 407 ETR in Mississauga. The facility parallels Dundas Street (Regional Road 5) and has interchanges at three key north-south arterial roadways in the Study Area: Bronte Road, Neyagawa Boulevard and Trafalgar Road.

As congestion in the Study Area network builds, Highway 407 provides alternative east-west capacity through, and access opportunities to, the Study Area. However, as a toll facility its role in local traffic management is limited. As traffic builds on the facility over time there will be a commensurate increase in the toll rate structure to ensure maximum efficiency and performance of the highway as an inter-regional facility.

3.7.3 Forecast Volumes

The Halton Model (Emme/2) was used to forecast to 2021 and Full Build-out peak hour traffic conditions. The peak hour demand was assigned to the base networks and traffic volumes plots for the Study Area were prepared to show the representative forecast traffic conditions.

Capacity Analysis

A screenline is a real or imaginary barrier within a Study Area, such as a road, river, rail line, or municipal boundary. Cumulative travel demands on the roadways crossing screenline barriers are evaluated. The crossing roadways can be considered to serve complementary travel demands due to their proximity within the subject transportation corridor. By comparing the total screenline capacity versus forecasted volumes, network deficiencies can be determined and options to address the deficiencies, such as road widening or new roads to increase capacity, can be identified.

In the case of link volumes, a level of service (LOS) is assigned on the basis of volume to capacity (v/c) ratios, where the volume of traffic is compared to the ability of the roadway to accommodate traffic flow. The v/c ratio provides a measure of traffic volume demand to the available capacity, with a capacity condition represented by a v/c ratio of 1.0 (i.e. volume equals capacity). **Exhibit 3-14** defines the correspondence between levels of service and volume/capacity ratios for use on the roadways in this study:

Exhibit 3-14: Level of Service

LOS A	<0.50	<i>Free flow</i>	LOS D	0.80 to 0.89	<i>Approaching unstable flow</i>
LOS B	0.50 to 0.69	<i>Stable flow</i>	LOS E	0.90 to 1.0	<i>Unstable flow</i>
LOS C	0.70 to 0.79	<i>Stable flow</i>	LOS F	>1.0	<i>Forced Flow</i>

Acceptable operations are generally considered to be LOS C or better, however, during peak hours in urban areas, LOS D is generally considered as the practical operating objective.

A screenline analysis was conducted to identify deficiencies in the future base road network for traffic conditions in 2021 and for the Full Build-out condition. The peak hour capacities used in the analysis correspond to those in the Region's model. Specifically, the capacity figures are 850 to 1,200 vehicles per lane per hour for arterial roads and 1,800 vehicles per lane per hour for freeways.

Exhibits 3-18 through 3-20 illustrate the screenlines that were used to analyze the existing and forecasted traffic volumes and provides a graphical indicator of the volume to capacity measure as summarized in tabular form on **Exhibit 3-18 to Exhibit 3-20**. The screenline locations are described below:

- East of Bronte Road (Regional Road 25);
- Sixteen Mile Creek;
- East of Neyagawa Boulevard (Fourth Line);
- East of Sixth Line; and
- East of Trafalgar.

Exhibit 3-15: Screenlines for Existing 2001 Conditions

Note: Based on 2001 Peak Hour Conditions

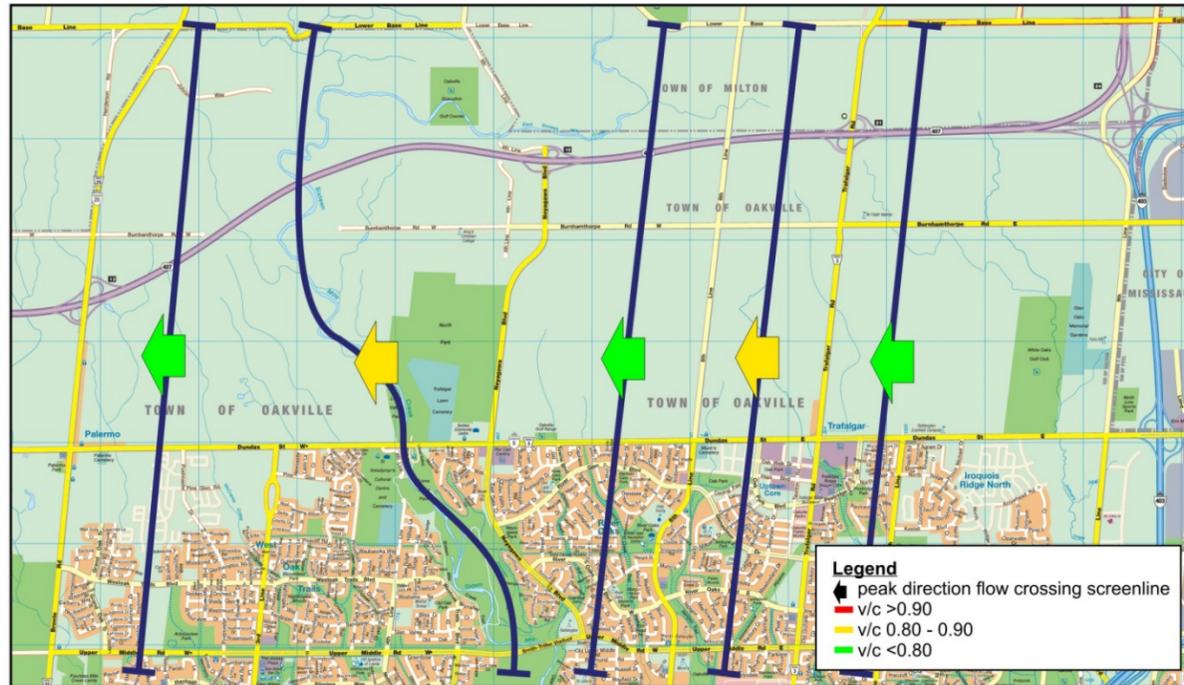


Exhibit 3-16: Screenlines for 2021 Forecasted Conditions

Note: Based on Best Planning Estimate Land Use and the 2021 Planned Network – Existing Burnhamthorpe Road

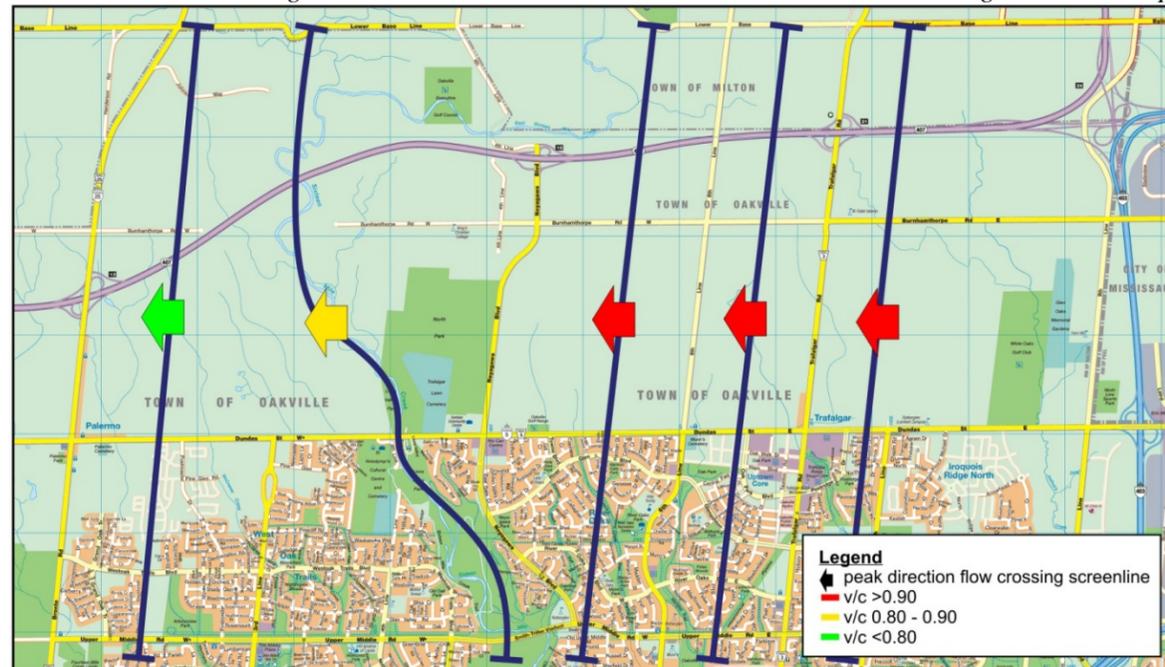
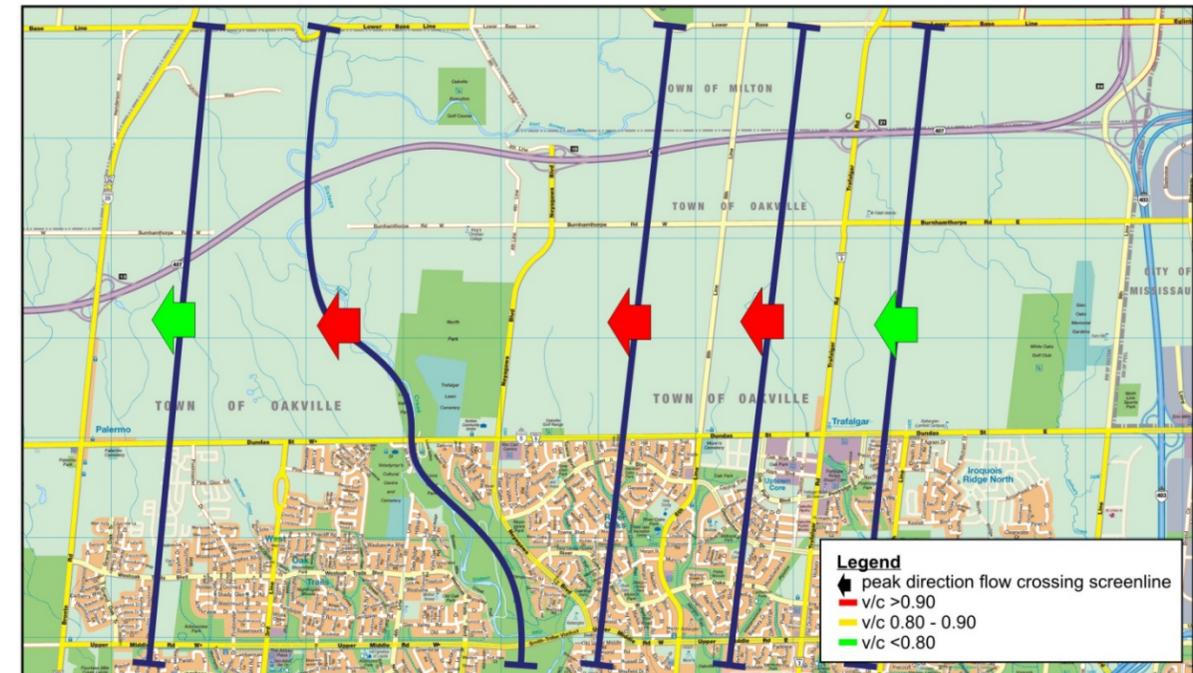


Exhibit 3-17: Screenlines for Full Build-out Conditions of North Oakville (Beyond 2021)

Note: Based on 2021 Planned Network - Existing Burnhamthorpe Road & James Snow Parkway extended to Neyagawa Boulevard



2021 Conditions

Exhibit 3-18 provides a summary of the screenline assessment forecasts for 2021 p.m. peak hour conditions. The year 2021 was selected as the planning horizon to correspond to the work completed for the Halton Transportation Master Plan (HTMP).

Exhibit 3-18: 2021 P.M. Peak Hour Screenline Assessment – Future Improved Network without Improvements to Burnhamthorpe

Screenline	Link	Northbound/Eastbound			Southbound/Westbound		
		Volume	Capacity	v/c	Volume	Capacity	v/c
East of Bronte Road (RR25)	Lower Base Line	21	400	0.05	25	400	0.06
	Highway 407	2,320	5400	0.43	3,930	5400	0.73
	Burnhamthorpe Road*	0	0	0.00	0	0	0.00
	Dundas Street (Regional Road 5)	1,915	2470	0.78	1,953	2470	0.79
	Upper Middle Road	874	1700	0.51	497	1700	0.29
	<i>Corridor</i>	5,130	9970	0.51	6,405	9970	0.64
	<i>Corridor south of Hwy 407</i>	2,789	4,170	0.67	2,450	4,170	0.59
East of 3rd Line	Lower Base Line	21	400	0.05	25	400	0.06
	Highway 407	2,320	5400	0.43	3,930	5400	0.73
	Burnhamthorpe Road	0	0	0.00	0	0	0.00
	Dundas Street (Regional Road 5)	2,727	2470	1.10	2,584	2470	1.05
	Upper Middle Road	1,505	1700	0.89	1,516	1700	0.89
	<i>Corridor</i>	6,572	9970	0.66	8,055	9970	0.81
	<i>Corridor south of Hwy 407</i>	4,231	4,170	1.01	4,100	4,170	0.98
East of Neyagawa Boulevard (4th Line)	Lower Base Line	28	400	0.07	34	400	0.08
	Highway 407	3,131	5400	0.58	5,452	5400	1.01
	Burnhamthorpe Road	453	850	0.53	798	850	0.94
	Dundas Street (Regional Road 5)	2,609	2470	1.06	2,764	2470	1.12
	Upper Middle Road	1,570	1700	0.92	1,815	1700	1.07
	<i>Corridor</i>	7,792	10820	0.72	10,862	10820	1.00
	<i>Corridor south of Hwy 407</i>	4,632	5,020	0.92	5,377	5,020	1.07
East of 6th Line	Lower Base Line	39	500	0.08	107	500	0.21
	Highway 407	3,131	5400	0.58	5,452	5400	1.01
	Burnhamthorpe Road	542	850	0.64	612	850	0.72
	Dundas Street (Regional Road 5)	2,223	2470	0.90	3,042	2470	1.23
	Upper Middle Road	1,412	1700	0.83	1,797	1700	1.06
	<i>Corridor</i>	7,348	10920	0.67	11,009	10920	1.01
	<i>Corridor south of Hwy 407</i>	4,178	5,020	0.83	5,450	5,020	1.09
East of Trafalgar Road	Lower Base Line	478	850	0.56	604	850	0.71
	Highway 407	3,077	5400	0.57	4,986	5400	0.92
	Burnhamthorpe Road	671	850	0.79	820	850	0.96
	Dundas Street (Regional Road 5)	2,082	2470	0.84	2,393	2470	0.97
	Upper Middle Road	1,185	1700	0.70	1,290	1700	0.76
	<i>Corridor</i>	7,493	11270	0.66	10,094	11270	0.90
	<i>Corridor south of Hwy 407</i>	3,938	5,020	0.78	4,504	5,020	0.90

- Notes:
- Highlighting represents links or screenlines where v/c > 0.9
 - 2021 Volumes updated using 2006/2007 traffic count data factored to 2021 using modelled screenline growth rates. See explanatory note in introduction of Section 3.7.
 - Burnhamthorpe Rd. east of Third Line has no data in the table as this road section is discontinuous across Sixteen Mile Creek.

Exhibit 3-19 provides a summary of the screenline assessment forecasts for Full Build-out p.m. peak hour travel demand assigned to a 2021 transportation network condition.

Exhibit 3-19 Full Build-out P.M. Peak Hour Screenline Assessment – Future Improved Network without Improvements to Burnhamthorpe

Screenline	Link	Northbound/Eastbound			Southbound/Westbound		
		Volume	Capacity	v/c	Volume	Capacity	v/c
East of Bronte Road (Regional Road 25)	Lower Base Line	12	400	0.03	22	400	0.05
	Highway 407	2,266	5,400	0.42	4,686	5,400	0.87
	Burnhamthorpe Road	195	850	0.23	211	850	0.25
	Dundas Street (Regional Road 5)	2,188	2,470	0.89	1,882	2,470	0.76
	Upper Middle Road	965	1,700	0.57	531	1,700	0.31
	<i>Corridor</i>	5,625	10,820	0.52	7,331	10,820	0.68
	<i>Corridor south of Hwy 407</i>	3,359	5,420	0.62	2,645	5,420	0.49
East of 3rd Line	Lower Base Line	12	400	0.03	22	400	0.05
	Highway 407	2,266	5,400	0.42	4,686	5,400	0.87
	Burnhamthorpe Road	0	0	0.00	0	0	0.00
	Dundas Street (Regional Road 5)	3,363	2,470	1.36	3,506	2,470	1.42
	Upper Middle Road	1,548	1,700	0.91	1,661	1,700	0.98
	<i>Corridor</i>	7,189	9,970	0.72	9,875	9,970	0.99
	<i>Corridor south of Hwy 407</i>	4,923	4,570	1.08	5,189	4,570	1.14
East of Neyagawa Boulevard (4th Line)	Lower Base Line	2	400	0.01	53	400	0.13
	Highway 407	2,198	5,400	0.41	4,423	5,400	0.82
	Burnhamthorpe Road	339	850	0.40	925	850	1.09
	Dundas Street (Regional Road 5)	2,347	2,470	0.95	2,693	2,470	1.09
	Upper Middle Road	2,125	1,700	1.25	2,556	1,700	1.50
	<i>Corridor</i>	7,011	10,820	0.65	10,650	10,820	0.98
	<i>Corridor south of Hwy 407</i>	4,813	5,420	0.89	6,227	5,420	1.15
East of 6th Line	Lower Base Line	213	500	0.43	212	500	0.42
	Highway 407	2,198	5,400	0.41	4,423	5,400	0.82
	Burnhamthorpe Road	822	850	0.97	961	850	1.13
	Dundas Street (Regional Road 5)	2,242	2,470	0.91	3,046	2,470	1.23
	Upper Middle Road	1,692	1,700	1.00	2,174	1,700	1.28
	<i>Corridor</i>	7,167	10,920	0.66	10,817	10,920	0.99
	<i>Corridor south of Hwy 407</i>	4,969	5,520	0.90	6,394	5,520	1.16
East of Trafalgar Road	Lower Base Line	611	850	0.72	607	850	0.71
	Highway 407	2,506	5,400	0.46	3,302	5,400	0.61
	Burnhamthorpe Road	456	850	0.54	666	850	0.78
	Dundas Street (Regional Road 5)	1,987	2,470	0.80	2,230	2,470	0.90
	Upper Middle Road	1,463	1,700	0.86	1,626	1,700	0.96
	<i>Corridor</i>	7,023	11,270	0.62	8,431	11,270	0.75
	<i>Corridor south of Hwy 407</i>	4,517	5,870	0.77	5,129	5,870	0.87

* Note: Highlighting represents links or screenlines where v/c > 0.9

3.7.4 Assessment

Base Case

Based on the long term demands identified on the future 2021 base network, excluding the additional east-west capacity in the Study Area, the following was observed:

- An east-west capacity deficiency exists on the following screenlines:
 - East of Third Line (Sixteen Mile Creek Crossing);
 - East of Fourth Line (Neyagawa Boulevard);
 - East of Sixth Line;
- Dundas Street has exceeded its 6 lane capacity throughout the Study Area;
- Upper Middle Road is at its theoretical capacity throughout the Study Area;
- Existing Burnhamthorpe Road has exceeded its two lane capacity from east of Neyagawa Blvd to east of 6th Line; and

- Additional east-west capacity is required through the Study Area to accommodate the interim development and long term build-out potential of the Study Area.

3.7.5 Sensitivity Testing

As noted previously, the transportation analysis undertaken to determine the need for capacity improvements in the Study Area was based on existing and forecasted future travel demand conditions. Over the course of the study, new information became available through additional data collection or through the evolving planning processes at the Regional and local municipal levels. In order to ensure that the conclusions reached regarding future conditions remained valid, a sensitivity test was performed to assess the implications of the most significant change in the forecasting foundation, the revised future land use data for Halton Region, and particularly for the Study Area based on the Region of Halton Best Planning Estimates of Population Occupied Dwelling Units and Employment, 2007 to 2021 (2007).

Land Use Updates

Since the transportation analysis was performed at an earlier phase of the EA Study process, Halton Region has actively continued with reviews of land use planning in order to conform to the Provincial Growth Plan population and employment targets. Halton Region has undertaken Sustainable Halton in response to Places to Grow in order to determine how the Region will grow to 2031.

Exhibit 3-20 below provides a comparison of the best planning estimates (BPE) land use assumed in the transportation analyses undertaken for determination of need for this Study in 2003 with the most recent BPE 2007 that was adopted for the Halton Transportation Master Plan/Development Charges By-Law Update. During the course of this Study the Town of Oakville also revised the Full Build-out population target for the North Oakville East Secondary Plan from 55,000 to 50,000.

Exhibit 3-20: Land Use Forecast Comparison – Best Planning Estimates 2003 & 2007

Municipality	Population				Employment			
	2011		2021		2011		2021	
	BPE				BPE			
	2003	2007	2003	2007	2003	2007	2003	2007
Burlington	172,300	175,800	184,500	182,000	90,960	97,000	106,390	108,000
Oakville	186,400	183,700	231,800	229,500	98,540	100,000	118,830	130,000
Milton	79,300	82,700	106,000	147,400	39,860	48,000	53,360	71,000
Halton Hills	60,000	61,400	70,000	70,000	22,100	24,000	29,410	31,000
REGION	498,000	503,600	592,300	628,900	251,460	269,000	307,990	340,000

In addition to the revised municipal targets, the allocation of the municipal level population and employment differs between scenarios. The adjustments to the population and employment forecasts result in revised trip generation and trip distribution characteristics across the transportation system. The potential effects of the population and employment refinements are discussed in the next section of this report.

Transportation Assessment

The alternative land use presented above was incorporated into Halton Region's transportation demand forecasting model. The trip generation, trip distribution, mode split and assignment modules of the model were re-calculated, resulting in revised long term forecasts. For sensitivity testing purpose only the 2021 horizon year was reassigned.

Base transportation network characteristics, and other model foundation information (ie. trip generation rates and trip distribution information), were maintained for the revised assignments.

Volume differences on the Study Area screenlines were compared and found to vary by an average of less than 10% depending on where in the network the comparison is made. Within the corridor, volume changes as follows:

- East of Bronte Road, revised forecasts are 10% higher in the peak direction
- East of Third Line, revised forecasts are 5% lower in the peak direction
- East of Neyagawa Boulevard, revised forecasts are 5% higher in the peak direction
- East of Sixth Line, revised forecasts are 4% higher in the peak direction
- East of Trafalgar Road, revised are forecasts 5% higher in the peak direction

The screenlines identified as capacity deficient in the ESR remain capacity deficient with the revised volume forecasts. The changes in land use therefore do not result in significantly different findings with respect to capacity requirements in and through the Study Area.

Conclusion

The following conclusions were reached with respect to the impact of the revised land use forecasts on the original conclusions of the transportation assessment:

- The land use forecasts at a regional level are different for both the ultimate and interim horizon years. However, population and employment forecasts for the Town of Oakville, and particularly for the North Oakville Secondary Plan Area are not significantly different between the two scenarios;
- The application of the more recent land use forecasts results in different volume forecasts for the Study Area screenlines; however the differences within the Study Area are not considered to be significant, since at a screenline basis they do not alter the conclusions with respect to capacity deficiencies or the need and justification for improvements to the transportation system.

3.8 SUMMARY OF THE NEED AND JUSTIFICATION

A review of existing and future conditions indicates:

- East-west travel across the Study Area is approaching capacity;
- Individual east-west roadways within the Study Area are already operating at or beyond capacity;
- Even with the implementation of planned transportation improvements in the Study Area (e.g. Dundas St. widening, James Snow Parkway extension (beyond 2021)) capacity deficiencies will occur with the approved level of development, unless additional improvements/capacity are provided; and
- The travel demand forecasting analysis was tested to account for revisions to population and employment forecasts. Results confirm the need for additional east-west capacity through the Study Area from Bronte Road to Ninth Line.

3.8.1 Problem and Opportunity Statement

As a result of approved growth generating additional travel demand across the Study Area and Provincial policy that has identified increased population and employment targets for Halton Region, travel demand forecasts indicate the need for transportation system capacity improvements in an east-west direction from Bronte Road to Ninth Line, including crossing Sixteen Mile Creek.