Trafalgar Road (Regional Road 3)
Transportation Corridor Improvements
Class Environmental Assessment Study

Section 1 - Steeles Avenue to North of 10 Side Road

ENVIRONMENTAL STUDY REPORT

MMM GROUP

June 2016

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APPENDICES

PREAMBLE

In April 2014, the Regional Municipality of Halton initiated the Trafalgar Road (Regional Road 3) Transportation Corridor Improvements Class Environmental Study (Class EA) between Steeles Avenue (Regional Road 8) and Highway 7 in the Town of Halton Hills. The Class EA Study identified the problems and opportunities for the improvements on Trafalgar Road between Steeles Avenue and Highway 7 and considered a wide range of options for the improvements to satisfy future travel demands to 2031.

The Class EA considered a wide range of road improvements alternatives, including intersection improvements, active transportation and overall traffic operations. The alternatives were analyzed and evaluated based on factors in socio-economic environment, cultural environment, natural environment, transportation, as well as cost and constructability.

Consultation was a major component of the Class EA Study. Relevant stakeholders (including technical agencies, local residents, property owners, and members of the public) were consulted throughout the EA process. The preferred alternative was selected based analysis and evaluation of the alternatives, as well as input from stakeholders.

The EA Study is carried out in accordance with Schedule 'C' of the Municipal Class Environmental Assessment (October 2000, amended 2007, 2011, and 2015), which is approved under the Ontario Environmental Assessment Act. The planning process for the Trafalgar Road Class Environmental Study between Steeles Avenue and Highway 7 has been documented in two Environmental Study Reports and are filed separately to the Ministry of the Environment and Climate Change:

Section 1: Steeles Avenue (Regional Road 8) to north of 10 Side Road (Regional Road 10)

Section 2: North of 10 Side Road (Regional Road 10) to Highway 7

1 INTRODUCTION

1.1 Introduction and Background

Trafalgar Road (Regional Road 3) is a north-south major arterial Regional road which runs through Halton Region between Lake Ontario and 32 Side Road. It is a very important transportation facility in the existing and future Halton Region transportation network as it is one of the few Regional arterial roads that extend continuously between the south and north municipal boundaries. Trafalgar Road serves the movement of goods and people and distributes traffic to and from the Provincial freeway system, as well as providing access to residential, commercial and industrial land uses in the Towns of Oakville, Milton and Halton Hills. Beyond Halton Region, Trafalgar Road continues northerly in the Town of Erin within Wellington County.

Two earlier studies were carried out for improvements to Trafalgar Road corridor. The first one was the Trafalgar Road Class Environmental Assessment Study between 10 Side Road and Highway 7 which was initiated in 2003 but was discontinued in 2009 due to several other planning studies being initiated by Halton Region and other levels of governments. At that time, it was believed that findings of these other studies would potentially impact the future traffic volumes on Trafalgar Road. Subsequently, Halton Region carried out the Trafalgar Road Short-Term Intersection and Operations Review in 2011. Recommendations from that study included strategies for speed management and traffic operation improvements, as well as the widening of 5 Side Road intersection to 4 lanes.

On a Regional planning level, the need for improvements on Trafalgar Road between Steeles Avenue and Highway 7 (widening and grade separations at the CN and Metrolinx rail crossings) were identified in the Halton Region Transportation Master Plan to 2031 – The Road to Change (October 2011), as well as the Region's Active Transportation Master Plan to support road users of all modes. In addition, future developments are anticipated in the Town of Halton Hills, including Vision Georgetown bounded by Trafalgar Road, Eighth Line, 10 Side Road and 15 Side Road.

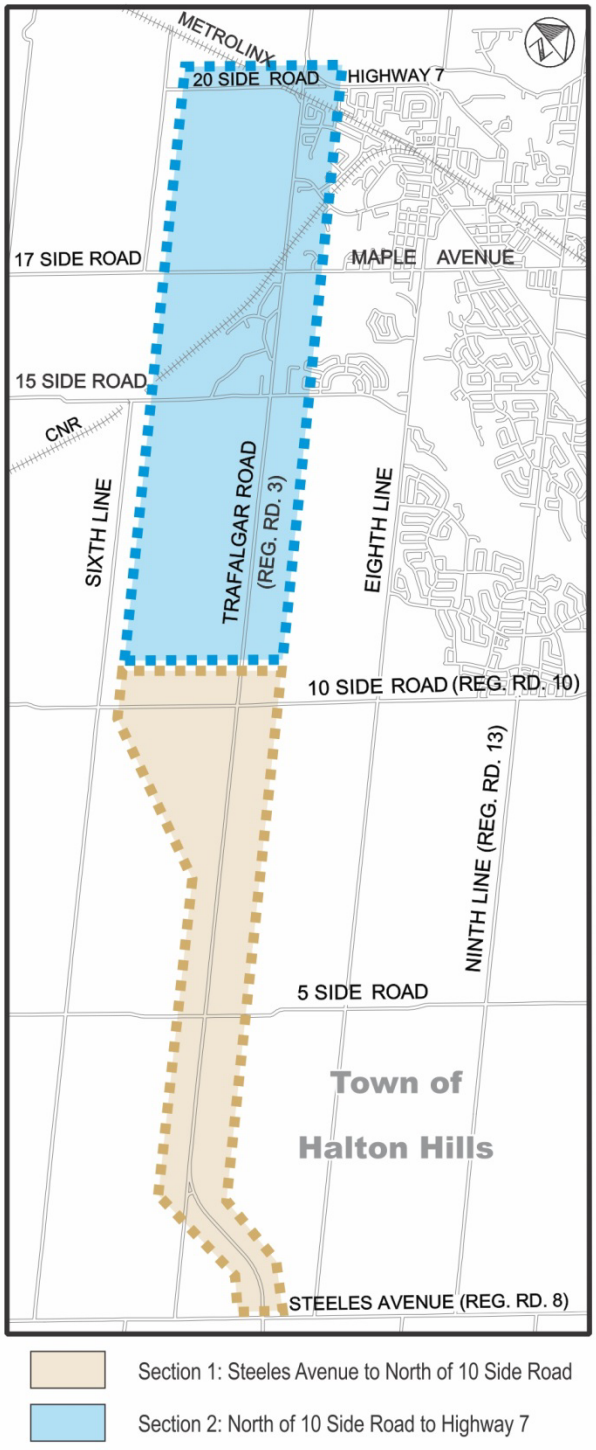
1.1.1 Current Class Environmental Assessment Study

Given the foregoing, Halton Region proceeded with a Class Environmental Assessment (Class EA) Study for improvements on Trafalgar Road between Steeles Avenue (Regional Road 8) and Highway 7 in order to support future traffic demand based on planned land uses. The Class EA Study was carried out in accordance with Schedule 'C' of the Municipal Class Environmental Assessment (Class EA) (October 2000, amended 2007, 2011, and 2015), which is an approved process under the Ontario Environmental Assessment Act.

The EA Study initially considered improvements for Trafalgar Road between Steeles Avenue and Highway 7; however, due to time constraints and co-ordination for the required Water and Waste Water infrastructure available for Vision Georgetown (greenfield development with anticipated 20,000 new residents) within the Town of Halton Hills, the study area between Steeles Avenue and Highway 7 is split into two sections with separate ESRs being filed for each:

- Section 1: Steeles Avenue to North of 10 Side Road (the subject of this report)
- Section 2: North of 10 Side Road to Highway 7 (see separate report)

Exhibit 1-1: Overall Study Area from Steeles Avenue to Highway 7



1.2 Study Area (Section 1)

The overall study area of approximately 13 km is shown in **Exhibit 1-2** and includes Trafalgar Road from Steeles Avenue to Highway 7 within the Town of Halton Hills. The southerly study limit will tie into the existing 4-lane section of Trafalgar Road north of Steeles Avenue, and the northerly limit will tie into the Highway 7 / Trafalgar Road intersection. The entire study area (of both Section 1 and Section 2) between Steeles Avenue and Highway 7 varies in width to include the existing Trafalgar Road corridor within a 500 m width corridor from Steeles Avenue northerly for approximately 5 km (i.e. between 5 Side Road and 10 Side Road). From that point northerly, due to the potential for a new alignment from that point north, the study area transitions to approximately 1.5 km in width.

The limit of this Environmental Study Report (Section 1) is between Steeles Avenue and north of 10 Side Road – see Exhibit 1-2.

1.3 Ontario Environmental Assessment Act

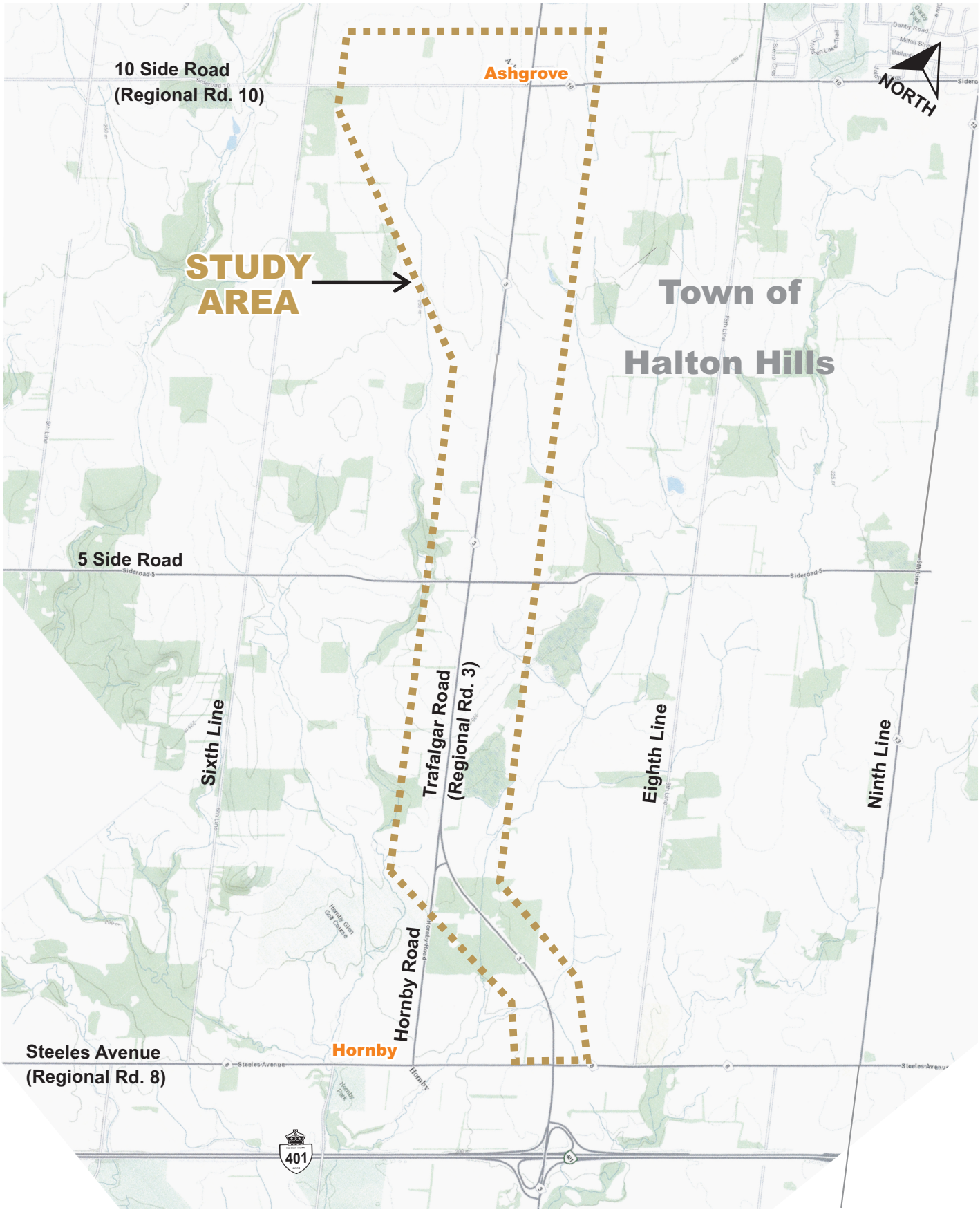
Municipal road projects are subject to the Ontario Environmental Assessment (EA) Act. The class environmental assessment process is an approved process under the EA Act for a specific group or "class" of projects. Projects such as these are therefore approved subject to compliance with an approved Class EA process.

The proponent for this study is the Regional Municipality of Halton. Accordingly, the study is being carried out in accordance with the requirements of the *Municipal Class Environmental Assessment* (2000, as amended 2007, 2011, and 2015) prepared by the Municipal Engineers Association.

1.3.1 Municipal Class Environmental Assessment (EA) Process

The Municipal Class Environmental Assessment (EA) is an approved class environmental assessment process which applies to municipal infrastructure projects including roads, water and wastewater. The Municipal Class EA outlines a comprehensive planning process which includes the following steps: problem definition; identification of alternatives (including "do nothing"); analysis and evaluation of their potential effects on the environment including the natural, social, economic and engineering; determination of a preferred alternative and associated mitigation measures; and, consultation with technical agencies and the public throughout the process. The Class EA process provides a rational planning approach to determining a preferred alternative for addressing the problem (or opportunity). The Municipal Class EA is an approved environmental assessment planning document which describes the process that proponents must follow in order to meet the requirements of the Ontario EA Act.

Providing the Class EA planning process is followed, a proponent does not have to apply for formal approval under the EA Act.



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TRAFALGAR ROAD CLASS EA STUDY (Section 1)
Steeles Avenue to North of 10 Side Road

Study Area
Steeles Avenue to North of 10 Side Road

Exhibit
1-2

The Municipal Class EA process is shown on **Exhibit 1-3** and includes:

- Phase 1 - identify the problem or opportunity
- Phase 2 - identify alternative solutions
- Phase 3 - examine alternative methods of implementing the preferred solution
- Phase 4 - prepare and file an Environmental Study Report
- Phase 5 - proceed to detailed design, construction and operation

The four types of projects or activities to which the Municipal Class EA applies are:

Schedule 'A'
- projects which are limited in scale, have no or minimal adverse environmental effects and generally includes the majority of municipal road maintenance, operational, and emergency activities
- *these projects are pre-approved and therefore a municipality can proceed without further approval under the EA Act*

Schedule 'A+'
- projects which are limited in scale, have no or minimal adverse environmental effects and generally includes the majority of municipal road maintenance, operational, and emergency activities
- *these projects are pre-approved, however, the public is to be advised prior to implementation*

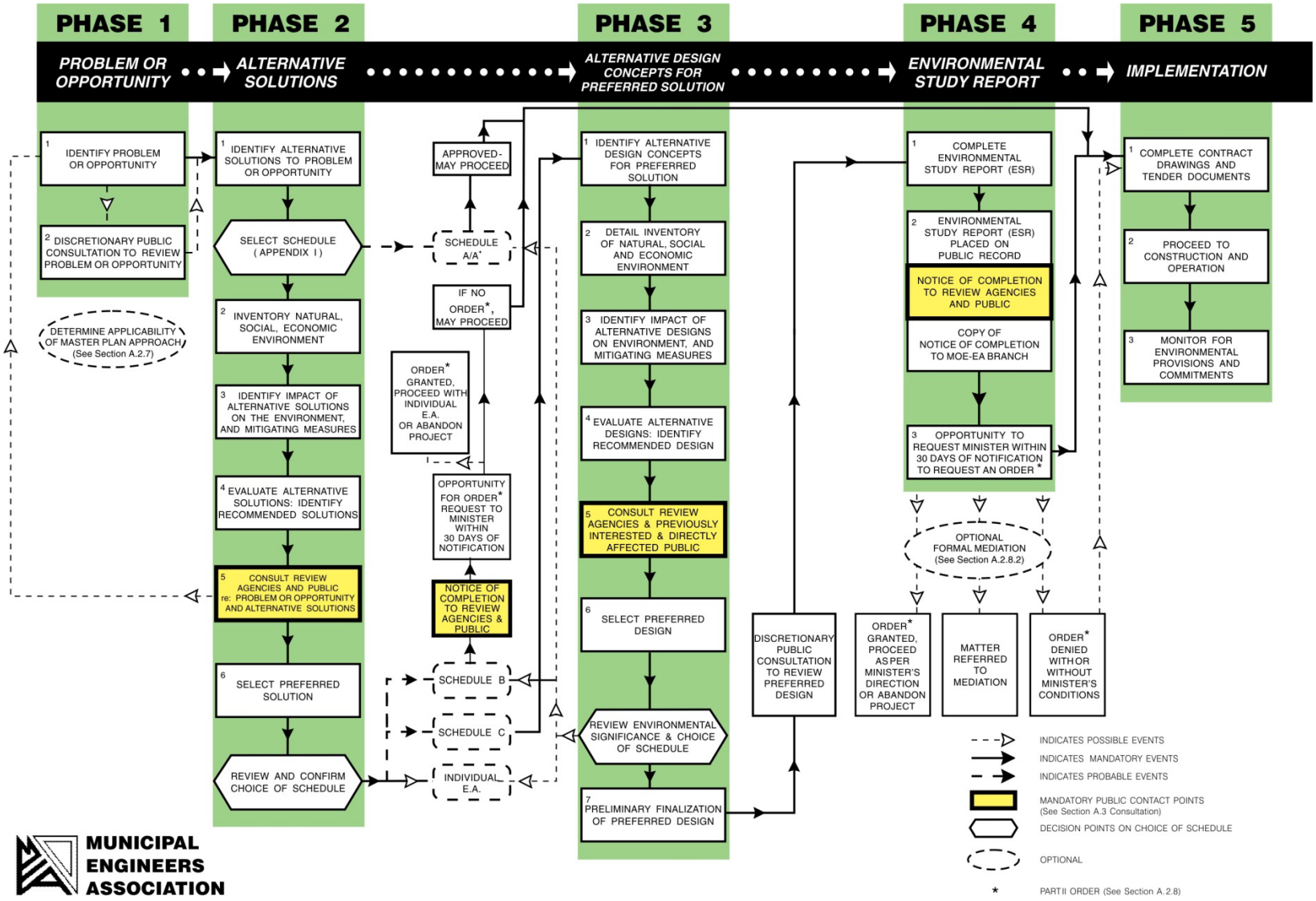
Schedule 'B'
- projects which have the potential for some adverse environmental effects and generally includes improvements and minor expansions to existing facilities
- *these projects are approved subject to a screening process which includes contacting directly affected public and relevant review agencies*

Schedule 'C'
- projects which have the potential for significant environmental effects. These projects generally include construction of new facilities and major expansions.
- *These projects must proceed under the planning and documentation procedures outlined in the Municipal Class EA document.*

1.3.2 Part II Order

The Municipal Class EA process includes an appeal provision to change the status of a project from being subject to the Municipal Class EA process to being subject to an Individual Environmental Assessment as per Part II of the Ontario EA Act. The latter requires the submission of an EA document to the Minister of the Environment and Climate Change (MOECC) for government review and approval.

Exhibit 1-3: Municipal Class Environmental Assessment Process



Source: Municipal Class Environmental Assessment, Municipal Engineers Association, October 2000, as amended in 2007, 2011, & 2015

It is recommended that all stakeholders work together to determine the preferred means of addressing a problem or opportunity. If concerns regarding a project cannot be resolved in discussions with the proponent, then members of the public, interest groups, First Nations, or technical review agencies may request the Minister of the Environment and Climate Change, by order, to require a proponent to comply with Part II of the EA Act before proceeding with a proposed undertaking which has been subject to Class EA requirements. The Minister of the Environment then decides whether to deny the request, refer the matter to mediation or require the proponent to comply with Part II of the EA Act.

Additional information regarding this appeal process may be obtained from the Halton Region website (http://www.halton.ca/EAprojects).

1.4 Study Approach

In order to fulfill the Municipal Class EA requirements, the study followed the Municipal Class EA process as shown in **Exhibit 1-3**. This process ensures a thorough understanding of the problem being addressed, the alternatives considered, their associated potential environmental impacts and mitigation measures. This process also includes consultation with the public and technical agencies.

1.5 Study Organization

The study organization reflects the general administrative and technical needs of the study as well as the study's consultation program. The latter has been developed to ensure that all of those with a potential interest in the study have the opportunity to participate and provide input during the process.

The study organization and overview of key study stages are shown in **Exhibit** 1-4 and **Exhibit 1-5**, respectively, and the project team, consultant team, and key project stakeholders are described in the following sections.

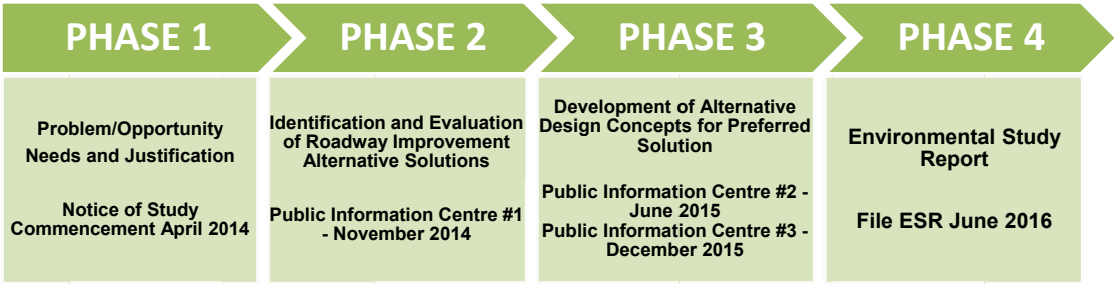
1.5.1 Project Team

The study has been carried out to date under the direction of the Project Team which included senior staff of Halton Region. Members of the Project Team include:

Member	Role
Mr. Jeffrey Reid, C.E.T.	Project Manager
Mr. David Simpson, P.Eng.	Manager Infrastructure Planning
Ms. Melissa Green Battiston, P.Eng.	Supervisor Transportation Planning
Mr. Patrick Monaghan, C.E.T.	Transportation Planner
Ms. Alicia Jakaitis	(Acting) Senior Transportation Planner

Exhibit 1-4: Study Organization

Exhibit 1-5: Key Study Stages



1.5.2 Consultant Team

The Consultant Team retained by Halton Region to assist in carrying out the study includes:

Consultant	Role
MMM (Transportation)	• Project Management / Consultation • Class EA Requirements • Transportation / Traffic Analysis • Roadway Design • Structure Design • Rail Grade Separation Design • Active Transportation Design • Stormwater Management • Fluvial Geomorphology • Hydrogeology • Utilities • Noise Analysis
MMM (Infrastructure & Environment)	• Natural Environmental Effects • Fisheries • Vegetation • Landscaping / Streetscaping
New Directions Archaeology	• Stage 1 Archaeological Assessment
Unterman McPhail	• Built Heritage Assessment
Thurber Engineering	• Geotechnical
Novus Environmental	• Air Quality
GLP*i*	• Independent Public Facilitation

1.5.3 Town of Halton Hills

The study area is located within the Town of Halton Hills. As such, the Town of Halton Hills has been a key agency throughout the EA Study to ensure coordination with other planning in the Town (see **Section 6.2.2**). Town of Halton Hills staff also attended the Technical Agencies Committee Meetings, Stakeholder Meetings, as well as in attendance at the Public Information Centres held throughout the EA Study. A number of Town Councillors also attended the Public Information Centres. Following is a list of meetings that have occurred to date.

Date	Purpose
May 6, 2014	To discuss project background, overall study schedule, consultation plan, key considerations, and next steps
February 24, 2015	To review study status and provide an overview of the functional plans for each design alternative
May 4, 2015	To review the evaluation of design alternatives
November 4, 2015	To discuss the Preliminary Plan of the Preferred Alternative

1.5.4 Conservation Authorities, Niagara Escarpment Commission, and Ministry of Natural Resources and Forestry

Recognizing the importance of retaining natural features throughout the study area and ensuring project planning was carried out to minimize impacts, Credit Valley Conservation (CVC), Conservation Halton (CH), the Niagara Escarpment Commission (NEC), and the Ministry of Natural Resources and Forestry (MNRF) were considered to be key agencies and were provided several opportunities to provide input during the study (see **Sections 6.2**). Representatives from CH, CVC and NEC also participated in the Technical Agencies Committee Meetings. Following are meetings that have occurred to date.

Date	Purpose
September 30, 2014	Meeting with CH and CVC to discuss project background, overall study schedule, existing conditions overview, natural environment key features, stormwater management and next steps
March 4, 2015	Meeting with CH and CVC to provide an overview of the proposed Trafalgar Road corridor improvements, functional plans for each design alternative, and discuss project schedule
April 14, 2015	Site walks with CVC and CH to discuss key natural features within the study area (See summary report in **Appendix B**)
April 28, 2015	Meeting with CH, CVC, and MNRF to review the evaluation of alternatives as they pertain to potential impacts on the natural environment
November 4, 2015	Meeting with CH, CVC, and NEC to discuss the Preliminary Plan of the Preferred Alternative
March 3, 2016	Meeting with CH, CVC and MNRF to discuss drainage assessment findings and proposed stormwater management strategies

1.5.5 Technical Agencies Committee

Technical agencies, including federal, provincial and municipal agencies and utilities, with a potential interest in the study or whose mandate may be affected, were contacted in April 2014 to ascertain whether or not they wanted to participate in the study, the appropriate contact, potential issues and concerns, and requested to provide technical input and to comment on the study's findings. The main points of contact are listed below and related correspondence and minutes of meetings are provided in **Appendix A** and **Appendix B**, respectively.

Date	Purpose
November 13, 2014	**Technical Agency Committee (TAC) Meeting #1:** To review the study background, study approach, existing conditions, alternative solutions, and to review high level conceptual corridor alternatives for the improvements to the Trafalgar Road corridor

Date	Purpose
June 9, 2015	**TAC Meeting #2:** To review proposed improvements on the Trafalgar Road corridor, including alignment alternatives developed within the three conceptual corridors that were presented at TAC Meeting #1 in November 2014. The analysis and evaluation of the alignment alternatives were also presented at the meeting
December 2, 2015	**TAC PIC Preview Session:** This preview session took place in the afternoon of December 2, 2015 prior to PIC #3 which was held later that evening. The purpose of this preview session was to provide TAC members with an opportunity to view and discuss the Preliminary Plan of the preferred alternative for improvements to Trafalgar Road with the Project Team

Agencies, utilities and First Nations invited to participate in the study are listed below.

Federal

- Aboriginal Affairs and Northern Development Canada
- Canadian Environmental Assessment Agency (CEAA)
- Canadian National Rail (CN)
- Environment Canada
- Fisheries and Oceans Canada

Provincial

- Infrastructure Ontario
- Metrolinx / GO Transit
- Ministry of Aboriginal Affairs
- Ministry of Agriculture Food and Rural Affairs
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources and Forestry
- Ministry of the Environment and Climate Change
- Ministry of Tourism, Culture and Sport
- Ministry of Transportation
- Niagara Escarpment Commission

Municipal

- Conservation Halton
- Credit Valley Conservation
- HAAC (Halton Agricultural Advisory Committee)
- Halton Catholic District School Board
- Halton District School Board
- Halton EEAC (Ecological & Environmental Advisory Committee)
- Halton Region Emergency Medical Services
- Halton Region Health Department
- Halton Region Infrastructure Planning and Policy
- Halton Region Legislative and Planning Services

- Halton Region Police Service
- Halton Region Public Works
- Town of Halton Hills
- Town of Halton Hills Chamber of Commerce
- Town of Halton Hills Fire Department
- Town of Halton Hills Infrastructure Services
- Town of Halton Hills Planning, Development, and Sustainability
- Town of Halton Hills Recreation and Parks

Utilities

- Bell Canada
- COGECO
- Enbridge
- Halton Hills Community Energy Corporation
- Halton Hills Hydro
- Halton Region Water Planning
- Hydro One
- Ontario One Call
- SouthWestern Energy Inc.
- TransCanada Pipelines
- Union Gas

First Nations

- Alderville First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Mississaugas of Scugog Island
- Mississaugas of the New Credit First Nation
- Mohawk Council of Akwesasne
- Oneida Nation of the Thames
- Six Nations Haudenosaunee Confederacy Council
- Six Nations of the Grand River
- The Mohawks of the Bay of Quinte First Nation
- Wahta Mohawks Territory

1.6 Public Consultation

A key component of the EA process is public consultation during the process. For this study, the main points of public consultation are:

- To notify the public that the study was commencing;
- To review and receive public input regarding the problem being addressed and discuss issues related to the project including alternative solutions, environmental considerations, conceptual corridors, and evaluation criteria;
- To review and receive public input regarding the design alternatives, evaluation of design alternatives, and identification of the preliminary preferred alternative;

- To review and receive public input regarding the evaluation of alternatives and the preliminary plan and profile of the preferred alternative including proposed mitigation measures; and
- To review the ESR upon filing on record.

Consultation events including Public Information Centres (**Section 1.6.1**) and Stakeholder Group Meetings (**Section 1.6.2**)

1.6.1 Public Consultation

Public Information Centres (PIC) are part of the public consultation process and are designed to involve stakeholders early and throughout the study process, to aid in identifying public concerns and to assist in the development of a preferred alternative. Three Public Information Centres were held as follows:

Date	Purpose
November 20, 2014	**Public Information Centre #1:** To provide members of the public with an opportunity to meet the Project Team and discuss issues related to the project, review the study scope, existing conditions along the Trafalgar Road corridor, proposed typical cross sections, conceptual corridor options (15 Side Road to Highway 7), evaluation criteria, and next steps. PIC #1 was held as a joint information centre with the Ninth Line EA Study (Highway 407 to 10 Side Road). See Halton Region website: www.halton.ca/EAProjects for more information about the Ninth Line EA Study.
June 17, 2015	**Public Information Centre #2:** To provide members of the public to review and obtain public input on the three (3) developed functional plans being considered (15 Side Road to Highway 7), the analysis of alternatives, identification of the preliminary preferred alternative and next steps.
December 2, 2015	**Public Information Centre #3:** To provide members of the public to review and obtain public input on the preliminary plan and profile of the preferred alternative, mitigation measures and next steps.

The comments received from the public are discussed in **Section 6.1.3** of this report. In addition, individual meetings with property owners are also summarized in **Section 6.1.4**.

Materials presented at the Public Information Centres can be found in **Appendix C** and on the project website at: www.halton.ca/EAprojects.

1.6.2 Stakeholder Group

A Stakeholder Group was established to provide a smaller forum for discussion and dialogue than is usually accommodated at a public meeting or information centre for the general public. Property owners within the Study Area were provided with the Stakeholder Group application form together with the Notice of Study Commencement at

the onset of the study. Those who were interested in participating in the Stakeholder Group were asked to submit the application form to the Project Team by April 25, 2014. To assemble a reasonable sized group that is representative of a range of interests and location in the community, a group of approximately 32 members was selected. The selection was based on those who reside within the immediate study area or directly adjacent to Trafalgar Road. In areas or for organizations where multiple applications were received, a representative of that area or organization was identified to participate in the Stakeholder Group.

Members of the Stakeholders Group were invited to attend four independently facilitated meetings, as listed below. Detailed summaries of these can be found in **Section 6.1.1**.

Date	Purpose
June 19, 2014	**Stakeholder Group Meeting #1:** To discuss collection of background information, study approach, existing conditions, alternative solutions, factors / criteria for analysis and evaluation and next steps.
November 6, 2014	**Stakeholder Group Meeting #2:** To provide an update on the collection of study area conditions information and to review the conceptual corridor options for improvements to the Trafalgar Road corridor.
June 2, 2015	**Stakeholder Group Meeting #3:** To review proposed improvements on the Trafalgar Road corridor, including alignment alternatives developed within the three conceptual corridors that were presented at Stakeholder Group Meeting #2 in November 2014. The analysis and evaluation of the alignment alternatives was also presented at the meeting.
November 17, 2015	**Stakeholder Group Meeting #4:** To present the preliminary plan of the preferred alternative for improvements to the Trafalgar Road corridor, including a review of the alignment alternatives that were presented at Stakeholder Group Meeting #3 in June 2015. The future study process was also discussed, along with the next steps in the project and construction timeline.

1.6.3 Filing of Environmental Study Report

The Environmental Study Report (ESR) for the Trafalgar Road Class EA Study Steeles Avenue to North of 10 Side Road (i.e. this report) documents the decision making process during the study. The Notice of Study Completion of this Class EA Study (issued on **June 2, 2016**) notifies members of the public and agencies that the ESR would be available for public review for a 45-day period. The ESR was made available for public review at the following locations during normal business hours:

- Regional Municipality of Halton
  Clerk's Department
  1151 Bronte Road, Oakville, Ontario
  Tel: (905) 873-825-6000
  Monday-Friday: 8:30am – 4:30 pm

- Town of Halton Hills
  Clerk's Department
  1 Halton Drive, Halton Hills, Ontario
  Tel: (905) 873-2601
  Monday-Friday: 8:30am – 4:30 pm

- Halton Hills Public Library – Georgetown Branch
  9 Church Street, Georgetown, Ontario
  Tel: (905) 873-2681
  Monday: 1:00pm – 8:30pm
  Tuesday – Thursday: 9:30am – 8:30pm
  Friday – Saturday: 9:30am – 5:00pm

2 PROBLEM AND OPPORTUNITIES

2.1 Introduction and Background

Phase 1 of the Municipal Class EA process involves the identification of the problem and/or opportunity being addressed by the study. For the study, this included:

- Reviewing the following:
  - Provincial Policy Statement (**Section 2.1.1**)
  - Growth Plan for the Greater Golder Horseshoe (**Section 2.1.2**)
  - Halton Region Official Plan (2006), ROPA 38 (December 2009) (**Section 2.1.3**)
  - Halton Region Transportation Master Plan (to 2031) – The Road to Change (2011) (**Section 2.1.4**)
  - Halton Region Active Transportation Master Plan Study (May 2015) (**Section 2.1.5**)
  - Town of Halton Hills Official Plan (2008) (**Section 2.1.6**)
  - Town of Halton Hills Cycling Master Plan (2010) (**Section 2.1.7**)
  - Vision Georgetown (Ongoing) and Other Developments (**Section 2.1.8**)
  - Related Studies (**Section 2.1.9**)
- Undertaking a traffic analysis (**Section 2.2**) including a review of:
  - Existing traffic conditions
  - Future traffic conditions, including "Do Nothing"
- Developing a statement of the problem being addressed by the study (**Section 2.2.4**)

2.1.1 Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS 2014) is issued under the Planning Act and supports the planning of land uses across the Province. The PPS provides policy direction for the use and management of land, as well as infrastructure while protecting the environment and resources and to ensure opportunities for employment and residential development. Section of the PPS that are applicable to the planning of transportation infrastructure include:

- *Part V Policies* – Specifically, Section 1.6.7 outlines the policies for infrastructure and public service facilities under transportation systems. The policies state that "Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs." A multimodal transportation system is to provide connectivity within and amongst the transportation systems. Improving connections across jurisdictional boundaries should be considered where possible. Land use patterns should be planned to minimize the length and number of vehicle trips, as well as to support existing and future active transportation and transit services.

2.1.2 Growth Plan for the Greater Golden Horseshoe

The planned growth to horizon year 2031 in Halton Region is allocated based on the *Provincial Growth Plan, Places to Grow (2006)*. Updates of the Growth Plan are currently under review.

To ensure sustainable growth, Section 3.2.2, Point 1 of Places to Grow addresses the infrastructure required to support growth, and states the following:

a) *Provide connectivity among transportation modes for moving people and for moving goods*

b) *offer a balance of transportation choices that reduces reliance upon any single mode and promotes transit, cycling and walking*

c) *be sustainable, by encouraging the most financially and environmentally appropriate mode for trip-making*

d) *offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services*

e) *provide for the safety of system users.*

The planning of Trafalgar Road improvements between Steeles Avenue and Highway 7 is consistent with planning directions in the Growth Plan, which is to provide connections between communities in the Town of Halton Hills and across Halton Region, support efficient transit services, support multi-modal uses through provisions to pedestrians and cyclists, increase efficiency and flexibility of the transportation network, reduce delays for residents and businesses, and support transportation needs on arterial roads.

2.1.3 Halton Region Official Plan (2006)

The Halton Region Official Plan was adopted by Regional Council in March 1994 and approved by the Minister of Municipal Affairs and Housing in November 1995. Between 2001 and 2004, a major review of The Regional Plan (1995) was undertaken in accordance with The Planning Act. This culminated in the adoption of Regional Official Plan Amendment 25 (ROPA 25) by Regional Council on June 23, 2004. The amendment was appealed and subsequently adjudicated by the Ontario Municipal Board in April-August 2006 with the issuance of a number of decisions.

This Office Consolidation of the Official Plan, referred to as Halton Regional Official Plan (2006), incorporates all modifications, subsequent approvals, and approved amendments to the Plan up to and including August 17, 2006.

Halton Region's Amendment No. 38 (December 2009) to the Region's Official Plan (ROPA 38) represents the completion of the second stage of the "two-stage" approach adopted by Regional Council to implement the results of the five year statutory comprehensive review of the Regional Official Plan as required under Section 26 of the Planning Act. ROPA 38 is based largely on the 13 Official Plan Directions contained in the "Towards Sustainability" report endorsed by Council in June 2009 and brings the Region's Official Plan into conformity with a number of Provincial initiatives including, the

Provincial Policy Statement (2014), the Growth Plan for the Greater Golden Horseshoe, and the Greenbelt Plan.

ROPA 38 identifies a 47 m right-of-way for the Trafalgar Road corridor from Highway 407 to 10 Side Road, and a 42 m right-of-way from 10 Side Road to Highway 7. The amendment also identifies Trafalgar Road as a Major Arterial Road.

The purposes of a Major Arterial Road as defined in the Official Plan are:

- Serve mainly inter-regional demands
- May serve as Intensification Corridor
- Accommodate all truck traffic
- Accommodate higher order transit service and high occupancy vehicle lanes
- Connect Urban Areas in different municipalities
- Carry high volumes of traffic
- Distribute traffic to and from Provincial Freeways and Highways
- Accommodate active transportation

2.1.4 Halton Region Transportation Master Plan (to 2031) – The Road to Change (2011)

Halton Region Transportation Master Plan (to 2031) – The Road to Change was conducted to meet Phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process (October 2000, as amended in 2007, 2011, and 2015). The purpose of the study was to develop a strategy that reflects Halton Region's transportation vision over the next 20 years to 2031, which would be a dynamic integrated transportation strategy that considers all modes of travel.

The study provides the Region with the strategies, tools and policies needed to manage traffic safely, effectively and cost efficiently, to offer a range of transportation choices to meet the needs of Halton Region residents, to identify and protect future transportation corridors, and to identify the estimated costs and timing of transportation improvements.

Elements of the Halton Region Transportation Master Plan have:

- Identified a 47 m right-of-way on Trafalgar Road between Steeles Avenue and 10 Side Road and a 42 m right-of-way from 10 Side Road to Highway 7
- Identified Trafalgar Road to be widened from 2 to 4 general traffic lanes

2.1.5 Halton Regional Active Transportation Master Plan Study (May 2015)

Halton Region Council has approved 'in principal' the Active Transportation Master Plan (ATMP) which recommends Regional Walking and Cycling Networks to support and encourage people to walk and bike around Halton. Active transportation is any form of human-powered transportation, including walking, cycling, rollerblading, skateboarding, and moving with mobility devices. An active transportation network includes sidewalks, multi-use paths, crosswalks, on-road bike lanes and off-road trails. The objective of the Active Transportation Master Plan is to create a network that will make it easier for people to walk, bike and roll around Halton. As part of the Trafalgar Road corridor

improvements, features of active transportation were considered. (See Halton Region website for more information: www.halton.ca/activetransportation.)

The following active transportation facilities are identified on Trafalgar Road:

- Paved shoulder (both sides) with boulevard multi-use trail: between Steeles Avenue and 10 Side Road

2.1.6 Town of Halton Hills Official Plan (2008)

The Town of Halton Hills Official Plan (Office Consolidation 2008) establishes the policies for the land use and growth in the Town of Halton Hills. Lands adjacent to Trafalgar Road between Steeles Avenue and north of 10 Side Road are largely rural agricultural areas, with intermittent residential uses along the corridor and some commercial uses at major intersections such as 10 Side Road.

2.1.7 Town of Halton Hills Cycling Master Plan (2010)

Town of Halton Hills developed a Cycling Master Plan to guide the Town in implementing a cycling network and associated supportive program throughout Halton Hills. Halton Hills Cycling Master Plan did not specify any proposed facilities between Steeles Avenue and 10 Side Road.

2.1.8 Vision Georgetown (Ongoing) and Other Developments

Vision Georgetown is a planning study within Halton Region that is currently underway. The two main components of the Vision Georgetown planning project include:

- A land use planning study (known as a secondary plan); and
- A subwatershed study which deals with all aspects of the natural environment.

The limits of the Vision Georgetown study are bounded by Trafalgar Road, Eighth Line, 10 Side Road and 15 Side Road.

Completion of the land use and subwatershed studies are intended to fulfill Phases I and II of the Environmental Assessment process required when planning for transportation and services.

This new community within Vision Georgetown will accommodate the Town's projected population growth to the year 2031 in conformance with the Provincial Growth Plan. The study area is 1,000 acres and is anticipated to be home to approximately 20,000 residents and 1,700 new jobs.

For more information, please visit the Vision Georgetown website: http://haltonhills.ca/VisionGeorgetown.

2.1.9 Related Studies

2.1.9.1 Ninth Line Class EA Study (Ongoing)

In June 2014, Halton Region initiated a Class Environmental Assessment (Class EA) study to consider a wide range of options for transportation corridor improvements to satisfy future travel demands to 2031 on Ninth Line from Highway 407 to 10 Side Road in the Town of Halton Hills. In order to best address travel demand along Ninth Line, a number of road improvement alternatives are being examined as part of the study including widening of the roadway, cross-sectional improvements, over-all traffic operations, as well as the impact of such improvements on the social, cultural, economic and natural environments.

The study is being conducted in compliance with Schedule C of the Municipal Class Environmental Assessment (October 2000, amended 2007, 2011, and 2015), which is approved under the Ontario Environmental Assessment Act. The study will define the problem, identify and evaluate alternative solutions, and determine a preferred solution in consultation with the Town of Halton Hills, regulatory agencies, and the public.

For more information, please visit the Region's website www.halton.ca/EAprojects.

2.2 Traffic Analysis

As part of the Trafalgar Road EA Study, a detailed traffic analysis was carried out for Trafalgar Road between Steeles Avenue and Highway 7 for the existing (2014) and future conditions (2031).

The Traffic Analysis Report in **Appendix D** provides detailed documentation of the methodology, existing (2014) and future conditions modelling results. A summary of the traffic analysis findings is provided in this section.

2.2.1 Existing Conditions (2014)

Trafalgar Road is an existing 2-lane rural road with posted speeds ranging from 60 km/h to 80 km/h. Recent improvements on Trafalgar Road includes 5 Side Road intersection widening to 4 lanes, as well as speed management measures from north of 15 Side Road and north of 17 Side Road. There are two at-grade rail crossings on Trafalgar Road (CN and Metrolinx) and there are few provisions for cyclists and pedestrians.

Existing signalized intersections on Trafalgar Road between Steeles Avenue and Highway 7 include:

- Steeles Avenue
- 5 Side Road
- 10 Side Road
- 15 Side Road
- 17 Side Road / Maple Avenue
- Princess Anne Drive
- Highway 7

Stop-controlled intersections on Trafalgar Road between Steeles Avenue and Highway 7 include:

- Hornby Road
- Stewarttown Road South
- Stewarttown Road North
- Thompson Drive
- Berton Boulevard
- 20 Side Road
- Lindsay Court

The existing weekday peak hour turning movement volumes are shown in **Exhibit 2-1**.

For all stop-controlled intersections on Trafalgar Road, all major street movements operate with levels of service (LOS) A[1] during the morning and afternoon peak hours. All side-street through and right-turn movements at these locations operate with LOS B or better and all side-street left-turn movements operate with LOS D or better with a few exceptions.

In addition, for all signalized intersections along Trafalgar Road, all through and right-turn movements operate with LOS C or better and all left-turn movements operate with LOS E or better with a few exceptions. Selected turning movements at the intersection at 10 Side Road are calculated to be operating near or at capacity in the morning and afternoon peak hour.

In summary, operating performance at 10 Side Road reflects capacity constraints during the morning and afternoon peak hours and on the basis of the afternoon peak hour impacts, supports the need for additional capacity on Trafalgar Road. The westbound double left turn movement from Steeles Avenue is approaching capacity during the afternoon peak hour and is operating at capacity during the morning peak hour. The most noticeable stop-control intersection level of service impacts under existing conditions include longer delays (LOS F) for left-turning traffic from Hornby Road.

2.2.2 Future Conditions

Traffic volume projections were established based on growth rates derived from the Region's 2011, 2016 and 2031 weekday afternoon peak hour demand forecasting models, which incorporate the final approved BPE v3.032 land use (Council approved in July 2011), as well as the final improvements phasing plan outlined in the Halton Transportation Master Plan – The Road to Change (2011). The most recent available intersection and mid-block traffic volume counts reflect conditions in 2014. Therefore, growth rates considered for the purpose demand forecasting were established relative to 2014 conditions so that they could be applied, accordingly. Predicted travel demand for 2014 was interpolated between the modelled 2011 and 2016 forecasts and compound average annual growth rates were established based on the interpolated 2014 demand and the modelled 2031 forecasts. These rates were applied to the existing (2014) turning

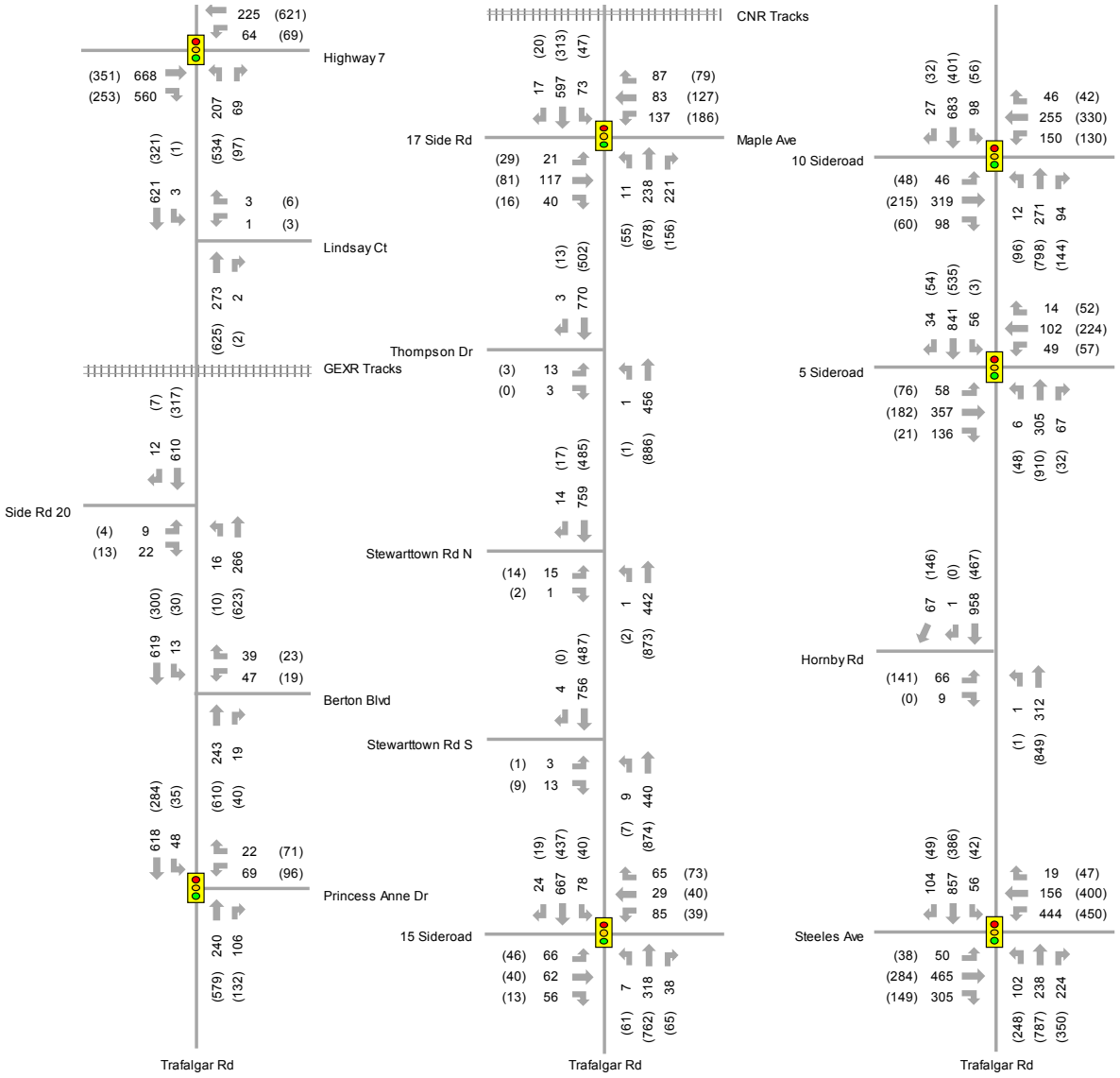
[1] Level of Service (LOS) A to C – Within Capacity; LOS D – Approaching Capacity; LOS E to F – At or Over Capacity

movement volumes to derive projected turning movement volumes to the project's 2031 planning horizon.

Growth rates were established on the basis of screenline travel demand forecasts as well as projected link volumes along Trafalgar Road.

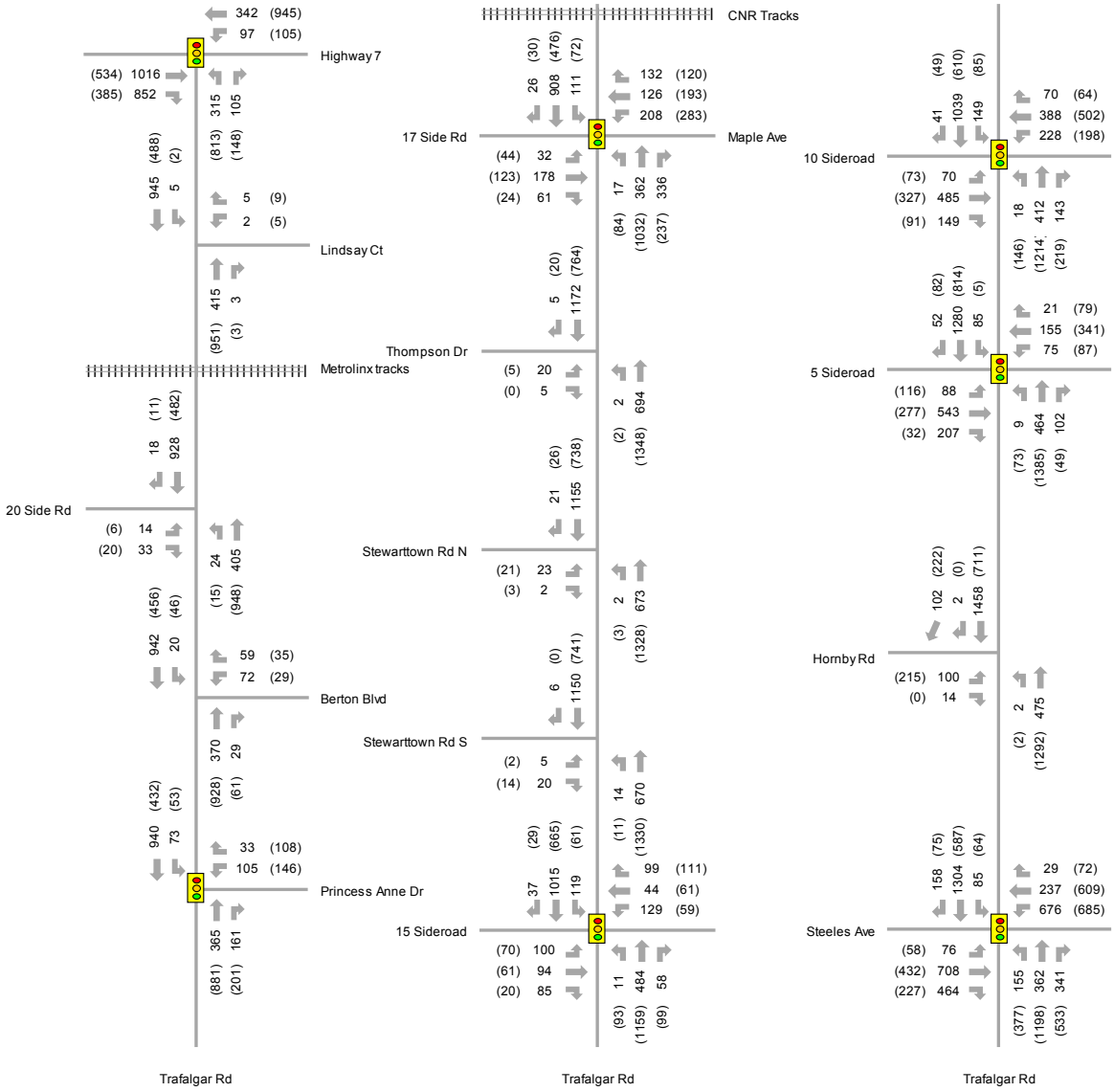
The 2031 turning movement volumes were projected throughout the project limits based on the adopted 2.5% compound average annual growth rate for the Trafalgar Road corridor. The corresponding 2031 turning movement forecasts are summarized in **Exhibit 2-2**.

Exhibit 2-1: Existing (2014) Weekday Peak Hour Turning Movement Volumes



Legend: XX = AM Peak Hour Turning Movement (approximately 7:30am to 8:30am)
(XX) = PM Peak Hour Turning Movement (approximately 4:30pm to 5:30pm)

Exhibit 2-2: 2031 Weekday Peak Hour Turning Movement Volumes



Legend: XX = AM Peak Hour Turning Movement (approximately 7:30am to 8:30am)
(XX) = PM Peak Hour Turning Movement (approximately 4:30pm to 5:30pm)

Note: During preliminary design, it was determined the Stewarttown Road South intersection will become a cul-de-sac due to grade differences between the new profile of Trafalgar Road and Stewarttown Road South.

2.2.2.1 Future (2031) Operating Performance: Do Nothing (Without Physical Improvements)

The existing conditions analysis summarized in **Section 2.2.1** confirms the requirement for additional capacity on Trafalgar Road at 10 Side Road on the basis of current capacity constraints during the afternoon peak hour. However, the level of service analysis for future conditions first considers potential traffic impacts on the basis of a *Do Nothing* scenario to assess the extent of future impacts without any physical improvement strategy. The operating performance reflects the existing lane geometry throughout the project limits with the exception of the planned and approved widening of Steeles Avenue to six lanes, which is programmed for completion by 2031. The analysis also incorporates suitable revisions to signal timings at currently signalized intersections. Detailed signalized intersection capacity analysis output is included in the appendix of the Traffic Analysis Report in **Appendix D**.

It is noted that as part of the network microsimulation, the predicted capacity constraints at 10 Side Road restrict traffic flow towards downstream intersections. As a result, the queuing and delay impacts at intersections north of 10 Side Road, particularly in the northbound direction, would not be fully represented as a portion of the forecast traffic volume is held up at 10 Side Road and does not reach those intersections. In order to fully represent the future impacts throughout the network, the analysis for the intersections north of 10 Side Road has been carried out assuming that the capacity constraint at 10 Side Road were to be relieved.

The analysis of a *Do Nothing* alternative has demonstrated that there is a need for the widening of Trafalgar Road to four lanes. A summary of the basis for this need is provided below:

- The afternoon peak hour northbound capacity constraint approaching 17 Side Road/Maple Avenue, without the widening of Trafalgar Road, results in prohibitive vehicle queues that extend more than 650 m beyond 15 Side Road.
- Supplementary analysis has demonstrated that local intersection improvement at 17 Side Road/Maple Avenue, including a dedicated eastbound left-turn lane, responds to side street operating constraints, but does not address Trafalgar Road capacity constraints and prohibitive northbound queuing during the afternoon peak hour.
- Supplementary analysis has demonstrated that local intersection improvements at 15 Side Road, including dedicated eastbound and westbound left-turn lanes, at least partially address side street operating constraints, but do not sufficiently address Trafalgar Road capacity constraints during the afternoon peak hour.

The analysis presented in **Section 2.2.2.2** identifies the predicted operating performance.

2.2.2.2 Future (2031) Operating Performance: Widen from Steeles Avenue to Highway 7 (With Physical Improvements)

The traffic analysis summarized in **Section 2.2.2.1** supports the need for additional through capacity on Trafalgar Road throughout the project limits. Based on these findings, the traffic analysis includes an assessment of future impacts with the widening of Trafalgar Road between Steeles Avenue and Highway 7 to confirm that a four-lane cross-section will adequately address the need for additional through capacity.

The analysis of impacts with the planned four-lane cross-section is based on the existing alignment, the existing intersections and the existing traffic control. Since the completion of the modelling, the preliminary design team has considered profile and alignment changes to accommodate the proposed widening and alignment shift from north of 15 Side Road to north of 17 Side Road/Maple Avenue. These changes have resulted in the Stewarttown Road South and Thompson Drive not being connected to the realigned Trafalgar Road and the extension of Stewarttown Road North to a signalized intersection with the realigned Trafalgar Road. The preliminary design also includes the introduction of traffic signal control at the Trafalgar Road intersection with Hornby Road.

The following key points outline the adequacy of the predicted intersection operating performance throughout the project limits based on a widening of Trafalgar Road to a basic four-lane cross-section between Steeles Avenue and Highway 7:

- Critical movements at the Trafalgar Road intersection with 10 Side Road are expected to operate at capacity during the morning and afternoon peak hours with volume-to-capacity ratios ranging between 0.95 and 0.98. All through and right-turn movements are expected to operate at LOS D or better with the exception of a LOS E for the morning and afternoon peak hour eastbound through movements and the morning peak hour eastbound right-turn movement. All left-turn movements are expected to operate at LOS E or better.
- Afternoon peak hour northbound and Morning peak hour southbound queuing impacts identified for 10 Side Road on the basis of the *Do Nothing* alternative are significantly reduced with the widening of Trafalgar Road.
- An afternoon peak hour capacity constraint on Hornby Road at Trafalgar Road results in eastbound left-turn delays of over 2 minutes and a corresponding LOS F. This analysis supports the preliminary design recommendation for the introduction of intersection traffic signal control at this location.
- All intersection movements at the signalized intersections from 15 Side Road northerly to Highway 7 are expected to operate to 2031 with acceptable volume-to-capacity ratios with the exception of an afternoon peak hour westbound through movement and northbound left-turn movement at Highway 7 which is approaching capacity.
- At 15 Side Road, the morning peak hour eastbound left-turn/through/right-turn volume-to-capacity ratio of 0.96 does not reflect the side road improvements referred to in **Section 2.2.2.1**. The addition of a protected eastbound left-turn lane will address the corresponding side road approach capacity deficiency. Despite adequate westbound operating performance without a westbound left-turn lane, best design practice is to provide an opposing left-turn lane if a turning lane is required on one of the approaches. The basis for this practice is to avoid a

configuration with off-set left-turn manoeuvres that introduce potential site line constraints to opposing through traffic.

- Despite the predicted adequacy of operating performance at 17 Side Road/Maple Avenue without a dedicated eastbound left-turn lane, providing this configuration opposing the existing westbound left-turn lane reflects best design practices as described above.
- All through and right-turn movements at intersections from 15 Side Road to Highway 7 are expected to operate with a LOS D or better and all left-turn movements are expected to operate with a LOS E or better with the widening of Trafalgar Road to four lanes.
- Thompson Drive will connect to a two-way stop-controlled intersection at 17 Side Road/Maple Avenue via the existing Trafalgar Road alignment, noting that Trafalgar Road will be realigned to the east at this location. It is reasonable to speculate that this intersection will operating with adequate levels of service based on the projected 17 Side Road/Maple Avenue travel demand west of Trafalgar Road.
- Stewarttown Road South will end in a cul-de-sac west of the existing Trafalgar Road alignment and traffic will be diverted to the alternative connection to 15 Side Road via Mill Pond Drive or to the Stewarttown Road North extension to a signalized intersection with the realigned Trafalgar Road. There will be sufficient capacity available at the Stewarttown Road North intersection to accommodate the combined side road approach volume of approximately 50 vehicles with the redistribution of traffic resulting from the closure of the Stewarttown Road South intersection.

The analysis of impacts to 2031 based on the recommended widening to a basic four-lane cross-section confirms that forecast turning movement volumes can be accommodated throughout the project limits between Steeles Avenue and Highway 7.

2.2.3 Railway Crossing

There are two existing at-grade rail crossings on Trafalgar Road – one at CN railway north of 17 Side Road / Maple Avenue and one at Metrolinx railway north of 20 Side Road.

A rail line grade separation is warranted if the calculated Exposure Index (EI) results in a value greater than 200,000. An EI is calculated by multiplying the annual average daily traffic (AADT) by the number of daily trains.

EI = AADT X No. of Daily Trains

The EI at the existing at-grade crossings along Trafalgar Road at CN and Metrolinx are calculated to determine if a grade separation at these rail crossing locations are warranted to address the delays which road users have been and will continue to experience in the future.

CN Railway Crossing

Assuming existing (2014) road traffic (AADT at 10,720) and rail demands (25 trains), the EI calculated at the CN crossing is as follows:

EI (CN) = 10,720 x 25 = 268,000

The calculated EI is more than the 200,000 threshold; therefore a grade separation is warranted even under existing conditions for the CN rail line which crosses Trafalgar Road north of 17 Side Road/Maple Avenue; the number of train and vehicles is expected to increase in the future.

Metrolinx Railway Crossing

The Metrolinx railway current support services of GO Transit Kitchener Line (4), VIA trains (6) and freight trains (2); a total of 12 trains daily.

Assuming existing (2014) road traffic (AADT at 9,640) and rail demands (12 trains), the EI calculated at the Metrolinx crossing is as follows:

EI (Metrolinx) = 9,640 x 12 = 115,680

While the calculated EI is less than the 200,000 threshold under existing conditions, the train frequency on the GO Transit Kitchener Line is expected to grow in the near future and the traffic volume on Trafalgar Road is also expected to increase. According to the Metrolinx website, the Kitchener Line service is expected to double in 2016. Assuming the future AADT would be approximately 14,700 and that the GO Transit train were to double (i.e. 16 trains daily in total), then the EI would be over 200,000:

EI (Potential Metrolinx Future) = 14,668 x 16 = 234,688

Therefore, a grade separation will be warranted for the Metrolinx rail line which crosses Trafalgar Road south of Highway 7 under future conditions.

2.2.4 Traffic Analysis Summary and Recommendation

The need for the widening of Trafalgar Road between Steeles Avenue and Highway 7 is supported by the traffic analysis described in **Sections 2.2.1 and 2.2.2**.

North of 17 Side Road/Maple Avenue, the need for a grade separation at the CN railway crossing and the Metrolinx railway crossing is warranted. The proposed grade separation would be constructed with a 4 lane cross section to accommodate future growth.

With development planned for Vision Georgetown, Stewarttown as well as within Georgetown north of Maple Avenue, and to best support the introduction of active transportation facilities along the corridor, widening of Trafalgar Road between Steeles Avenue and Highway 7 is recommended. This will result in a uniform driving condition for motorists and provide additional road safety benefits. The improvement will increase

travel efficiency, reliability and also accommodate left turns at intersections and better access to entrances.

Based on the foregoing, it is recommended that Trafalgar Road be widened from 2 to 4 lanes between Steeles Avenue to Highway 7, including the grade separations at the CN railway crossing (north of 17 Side Road) and Metrolinx railway crossing (north 20 Side Road).

2.3 Problem Being Addressed

Based on the review of existing conditions on Trafalgar Road, the analysis of existing traffic volumes, projected future travel demands and the findings and recommendations of related studies, the problem being addressed by the study was defined as follows:

- Existing Trafalgar Road is experiencing significant delays during peak periods at rail crossings and delays will increase at intersections in the future
- Future traffic is expected to grow by 2031
- To support future growth and travel demands, improvements to the Trafalgar Road corridor are required
- The improved corridor should support all modes of transportation (i.e. active transportation, GO Transit, interregional travel, agricultural vehicles, and goods movement)

Therefore, Halton Region carried out this study to address the foregoing in accordance with the Municipal Class EA process.