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1. INTRODUCTION AND BACKGROUND

1.1 Introduction and Project Context

Amendment No. 9 to the Region of Hamilton-Wentworth Official Plan (ROPA 9) redesignated approximately 190 hectares (470 acres) of land in the Rymal Road Secondary Planning Area to allow urban development. The subject lands are located on the south side of Rymal Road East (Highway No. 53), east of Trinity Church Road and north of the hydro corridor, in the former Township of Glanbrook. The Rymal Road Secondary Plan requires that all municipal services receive necessary approvals and financial commitment prior to development of the area. Several transportation, sewage works and waterworks improvements are required as a result of growth in the area, and require Class Environmental Assessment (EA) approval.

On August 13, 2003, the City of Hamilton Council approved the recommendation to initiate a Master Plan Class Environmental Assessment in accordance with Section A.2.7 of the Municipal Engineers Class Environmental Assessment (June 2000) for the Rymal Road Secondary Planning Area. This would include Environmental Assessment studies for infrastructure improvements to service the planning area, including all necessary transportation, water and wastewater (sewer) improvements. The Master Plan may also include new collector roads within the lands to be developed by draft plans of subdivision.

In October 2004, the City of Hamilton retained iTRANS Consulting Inc. to carry out the “ROPA 9” Lands Master Plan Class Environmental Assessment. Special Policy Area ‘C’, an area bounded by Winterberry Drive to the east, Paramount Drive to the south, the new Red Hill Creek / Mud Street interchange to the west, and the Lincoln Alexander Parkway-Mud Street West to the north, was subsequently included as part of the EA.

The iTRANS team consists of a number of multi-discipline leading specialists. These include municipal (water and wastewater), drainage and stormwater management, natural environment, noise, heritage, and archaeology. The Study will allow for a comprehensive assessment of the potential impacts of alternatives.

Completion of this Master Plan Class Environmental Assessment is part of the process to enable the City to address both the short-term and long-term infrastructure and service needs for the Rymal Road Planning Area, and for Special Area ‘C’.

This report documents Phases 1 and 2 (as per the Municipal Class EA process) of the Master Plan Study. The report provides information on the background of the Study, infrastructure and service needs, problem statement, identification and evaluation of planning alternatives and selection of preferred planning alternatives.
A number of studies form part of Phases 1 and 2 of this Master Plan Class EA. The flow chart below provides a summary. Further discussion on the studies is provided in later sections of the report.

The identification and evaluation of design alternatives and the selection of preferred design alternatives will be documented in Phase 3 and 4 reports for the appropriate projects, as identified in the flow chart above, after these phases have been completed.

The water and wastewater assessments for ROPA 9, and for Special Policy Area ‘C’ will be included in the City Water and Wastewater Master Plan as part of the City’s Growth Related Integrated Development Strategy (GRIDS) program.
1.2 **Background**

1.2.1 **Regional Official Plan Amendment No. 9 and the Rymal Road Secondary Plan**

On June 6, 2001, the Ontario Municipal Board issued an interim decision approving Amendment No. 9 to the Region of Hamilton-Wentworth Official Plan (ROPA 9), to redesignate approximately 190 hectares (470 acres) of land from rural to urban, to allow residential and related urban development. On March 20, 2002 the Ontario Municipal Board proceeded to approve Amendment No. 36 to the Former Township of Glanbrook Official Plan, comprised of the Rymal Road Secondary Plan, to set out the detailed policy framework for development of the subject lands for urban purposes.

The Amendment is to allow future development of the Rymal Road Secondary Planning Area for a mix of land uses including approximately 3,590 residential units and 21.4 hectares (53 acres) of land for local, general and neighbourhood commercial uses. The Secondary Plan also designates land for stormwater management facilities and establishes a proposed collector road system. Secondary plan policies require that all municipal services to service the planning area, or specific phases of development, including transportation infrastructure, sanitary sewers, water, and stormwater management facilities, have received all necessary approvals and financial commitment prior to development.

As a first phase of development, the Secondary Plan allows for the construction of up to 500 residential units and 19,000 m$^2$ of general commercial space prior to the completion of certain condition precedents that are specifically set out in the Secondary Plan. Draft plans of subdivision have been approved accounting for the allotted 500 residential units (some 1,924 units have been approved). Subsequent to these draft plans of approvals, Council approved a minor increase of 50 units to the phasing cap of 500 units, for a total of 550 units which could be registered. A draft plan of subdivision has also been approved that would allow development of 19,000 m$^2$ of general commercial space.

Though more than the allowed 550 residential units have been draft approved, conditions have been imposed to ensure that no more than a maximum of 550 units could be registered prior to requirements in the Secondary Plan policy being fulfilled. As a result, no additional residential or general commercial development may occur within the Secondary Plan area until the required environmental assessments and respective capital budgets are finalized, funding mechanisms are approved for cost recoveries, and improvements are included in the capital budget, where required, or, until the required specific studies (e.g. individual traffic impact study, etc) have been approved, as per policy B.3.7.2.1 (d) and (e).
1.3 **Special Policy Area ‘C’**

A second development area was considered in the Master Plan Study given its proximity to ROPA 9. Special Policy Area ‘C’ (SPA ‘C’) is a proposed mixed use area including 4.7 ha of commercial and residential lands. The City has received applications for the development of these lands, which is also known as the Heritage Green Development. While the SPA ‘C’ application has not been approved at the time of this Master Plan Study, it was seen as prudent to identify the anticipated infrastructure needs as part of the Master Plan.

1.4 **Project Location and Study Area**

The project is located within the City of Hamilton, and spans three municipalities - the former City of Stoney Creek, the former Township of Glanbrook and the former boundaries of the City of Hamilton. The project Study Area is shown in Exhibit 1-1.

The Rymal Road Planning Area extends along Rymal Road from Upper Centennial Parkway (Highway 20) – Regional Road 56 (Highway 56) to Trinity Church Road.

Special Policy Area ‘C’ is identified as the area bounded by Winterberry Drive to the east, Paramount Drive to the south, and the Lincoln Alexander Parkway – Mud Street West to the north, and the new Red Hill Creek / Mud Street interchange to the west.

1.5 **Study Scope and Objectives**

1.5.1 **Study Scope**

Based on previous studies, there were four anticipated transportation improvements, sewage pumping station, water booster station, and improvements to an existing reservoir and/or an existing pumping station that are necessary to service the ROPA 9 area that require approval under the Municipal Engineers Class Environmental Assessment (June 2000). In addition, there are new collector roads proposed which require Class Environmental Assessment approval. The goal is to facilitate development of lands within the Rymal Road Planning Area, and Special Policy Area ‘C’. The Rymal Road Planning Area consists of approximately 190 hectares (470 acres) of land, to allow urban development including approximately 3,590 residential units and 21.4 hectares (53 acres) of commercial uses. The Special Policy Area ‘C’ area consists of approximately 20.5 hectares (51 acres) (with 12.5 hectares (31 acres) west of Upper Mount Albion Road, and 8.25 hectares (20 acres) east of Upper Mount Albion Road), to allow urban development including commercial and residential uses.
The potential sewage pumping station, water booster station, and improvements to an existing reservoir and/or an existing pumping station will be included in the City-wide Water and Wastewater Master Plan as part of the City’s Growth Related Integrated Development Strategy (GRIDS) program. These studies are being carried out as per the requirements of the Municipal Class Environmental Assessment process.

1.5.2 Study Objectives and Approach

The objectives of this project are:

1. To fulfil policy B.3.7.2.1(b) of the Rymal Road Secondary Plan, by finalizing the required Class Environmental Assessment studies and approvals for the transportation improvements.

2. To fulfil requirements of the municipal Class Environmental Assessment of completion of studies for changes to the road network.

The Class Environmental Assessment process allows the Master Plan approach to be used for a group of related works or undertakings. Council has approved the Master Plan approach for the group of infrastructure improvements, in accordance with Section A.2.7 of the Municipal Engineers Class Environmental Assessment process. In keeping with this approach, all of the transportation projects will be combined into one study. This will allow for a comprehensive plan including a single Master Plan Environmental Study Report, and a single decision by Council.

As a result, a Master Plan Class Environmental Assessment is being undertaken for these projects, as per the guidelines of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment, June 2000. The Master Plan Class Environmental Assessment will follow Approach #2 as outlined in Appendix 4 of the MEA June 2000 document. This approach will fulfill Phases 1 and 2 of the Municipal Class EA process for all Schedule A, B and C projects.

1.6 Related Studies

1.6.1 Growth Related Integrated Development Strategy (GRIDS) Program

GRIDS is part of the City of Hamilton’s Smart Growth strategy. It is a planning process that helps to determine where the future growth of the City will take place, over the next thirty or more years. This unique planning tool integrates land use, transportation, water, wastewater and stormwater planning into one project. For more information on GRIDS, please visit www.vision2020.hamilton.ca.
1.6.2 North Glanbrook Industrial Business Park Transportation Master Plan

The City of Hamilton is undertaking a Transportation Master Plan for the North Glanbrook Industrial Business Park. The North Glanbrook Industrial Business Park is defined by an area bounded by the north side of the Hydro Corridor on the north, Trinity Church Road on the east, Dickenson Road on the south, and beyond Nebo Road (in the vicinity of Upper Ottawa Street) on the west. The Study will identify a transportation network within the North Glanbrook Industrial Business Park Secondary Plan area to support planned future development. This Transportation Master Plan study is on-going. The first public information centre was held in June 2005, where the transportation needs and area road network were identified. These needs have been taken into consideration in this ROPA 9 Master Plan Study. A second public information centre was held in May 2006, which presented the preferred transportation network, details of the Schedule “B” projects, the future Study Areas for the Schedule “C” projects, and Dartnall Road Extension alignment alternatives (Schedule “C”).

1.6.3 City Transportation Master Plan

The City of Hamilton is undertaking a City-wide Transportation Master Plan under its’ GRIDS program. This City-wide Transportation Master Plan will develop policies and strategies for the City’s transportation network over the next 30 years. It will also serve as a support document for the City’s capital budgeting and its long-range strategic planning study, GRIDS. This City-wide Transportation Master Plan is ongoing.

As part of the City-wide Transportation Master Plan process, in November 2004, Hamilton City Council approved a new set of policies to guide the development of the transportation system. These polices are centered on four cornerstones:

- Promoting a strong and vibrant economy;
- Building liveable communities;
- Providing a balanced transportation network; and
- Improving public transport.

Any proposed transportation projects/network improvements required for the Rymal Road Planning Area will be consistent with these Transportation Policy Papers.

1.6.4 City Water and Wastewater Master Plan

The City of Hamilton is undertaking a City-wide Water and Wastewater Master Plan under the GRIDS program. This City-wide Water and Wastewater Master Plan will develop policies and strategies for the City’s water and wastewater servicing over the next 30 years. This Study includes the lake based water distribution system, and combined sewer and sanitary sewer systems. It will also serve as a support document for
the City’s capital budgeting and its long-range strategic planning GRIDS program. This City-wide Water and Wastewater Master Plan is ongoing.

Given the coordination of the water / wastewater component for the ROPA 9 lands and for Special Policy Area ‘C’ with the on-going GRIDS City Water and Wastewater Master Plan Study, it has become necessary to report the water / wastewater needs for ROPA 9 and for Special Policy Area ‘C’, in conjunction with completion of the City-wide Master Plan Study. This Study is anticipated to be completed in the fall of this year (2006).

1.7 Project Team

The ROPA 9 Environmental Assessment Study is being carried out by a consulting team led by iTRANS Consulting Inc., on behalf of the City of Hamilton. The Study team is outlined below:

City of Hamilton:
- Christine Lee-Morrison (City Project Manager) – Environmental Planning
- Mohan Philip – Strategic Planning
- Leanne Ryan – Traffic Engineering & Operations
- Mark Robinson – Plant Capital & Planning
- Lisa De Angelis – Plant Capital & Planning

Consulting Team:
- Ray Bacquie (Consultant Project Manager) – iTRANS Consulting
- Liza Sheppard (Consultant Project Coordinator) – iTRANS Consulting
- Suzette Shiu (Transportation Planning) – iTRANS Consulting
- Perry Perera / Jerry Tan (Road Design) – iTRANS Consulting
- Nathalie Baudais (Project Coordination) – iTRANS Consulting
- Christine Hill (Water and Wastewater) – XCG
- Li Wong (Stormwater Management) – XCG
- Grant Kauffman (Natural Environment) – LGL
- Richard Unterman (Cultural Heritage) – Unterman McPhail Associates
- Robert Pihl (Archaeology) – Archaeological Services Inc.
- John Emeljanow (Noise) – Valcoustics Canada Limited

1.8 Class Environmental Assessment Process

This Environmental Assessment (EA) is being undertaken in accordance with the guidelines of the Municipal Engineers Association Municipal Class Environmental Assessment, June 2000. The Environmental Assessment is being conducted in compliance with the guidelines for Schedule “A”, “B”, and “C” projects for the transportation infrastructure components. A brief description of each schedule follows:

- A Schedule “A” project is limited in scale, has minimal adverse environmental effects, and includes a number of municipal maintenance and operational activities.
Schedule “A” projects are pre-approved and the proponent may proceed to implementation without following the full Class EA process.

- A schedule “B” project has the potential for some adverse environmental effects. Schedule “B” projects generally include improvements and minor expansions to existing facilities, and the proponent is required to undertake a screening process.
- A Schedule “C” project is one that generally entails the construction of new facilities and major expansions of existing facilities, for a total design and construction cost of greater than $1.5 million for roads. Schedule “C” projects have the potential for significant environmental impact.

This Study will complete the first two phases of the five-phase Class Environmental Assessment Process. Exhibit 1-2 illustrates the sequence of activities within the approved Class Environmental Assessment process leading to project implementation. The encompassing phases for this Study are described below:

- **Phase 1 (Schedule “A”, “B”, and “C” projects)** – Identify the problem (deficiency) or opportunity.
- **Phase 2 (Schedule “B” and “C” projects)** – Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution taking into account public and review agency input.

This Class EA Master Plan will fulfill all Phases 1 and 2 requirements for each project schedule.

The Class EA Master Plan will be used as input into further Class EA studies and ESR, which will finalize Phases 3 and 4 requirements for the Schedule “C” projects.

- **Phase 3 (Schedule “C” projects)** – Examine alternative methods of implementing the preferred solution, based on the existing environment, public and review agency input, anticipated environmental effects, and methods of minimizing negative effects and maximizing positive effects.
- **Phase 4 (Schedule “C” projects)** – Document in a Master Plan Environmental Study Report (ESR) a summary of the rationale, and the planning, design, and consultation process of the project.

Phase 5 (Schedule “A”, “B” and “C” projects), which involves detail design, preparation of contract drawings and tender documents, construction, operation, and monitoring, is not part of this Study.

The Class EA Master Plan summarizes the work completed for the Study including: 1) background to the Study; 2) the problem statement 3) alternative solutions; 4) a description of the preferred alternative solutions and the rationale for the identification of the preferred alternative solutions; and 5) the public consultation process.
MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

PHASE 1
- PROBLEM OR OPPORTUNITY
- GENERATE ALTERNATIVE SOLUTIONS TO PROBLEM OR OPPORTUNITY
- SELECT AN ALTERNATIVE (PREFERRED)
- PREPARE PROJECT AND ENVIRONMENTAL EVALUATION
- PREPARE MAJOR PHOTOGRAMMETRIC SURVEY OR DATABASE
- PREPARE MAJOR PHOTOGRAMMETRIC SURVEY OR DATABASE

PHASE 2
- ALTERNATIVE SOLUTIONS
- SELECT THE BEST ALTERNATIVE
- PREPARE ENVIRONMENTAL ANALYSIS
- PREPARE PROJECT DESIGN
- PREPARE PROJECT DESIGN

PHASE 3
- ALTERNATIVE DESIGN
- PREPARE PROJECT DESIGN
- PREPARE PROJECT DESIGN
- PREPARE PROJECT DESIGN
- PREPARE PROJECT DESIGN

PHASE 4
- ENVIRONMENTAL STUDY REPORT
- PREPARE ENVIRONMENTAL STUDY REPORT
- PREPARE ENVIRONMENTAL STUDY REPORT

PHASE 5
- IMPLEMENTATION
- IMPLEMENTATION
- IMPLEMENTATION
- IMPLEMENTATION
- IMPLEMENTATION

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

Class Environmental Assessment Process

June 2006
Upon completion of the Class EA Master Plan, the report will be presented to City Council for approval. Upon Council approval, the Class EA Master Plan will be placed on public record for a minimum of 30-calendar days for review by the public and interested agencies/groups. At the time the report is filed, a Notice of Completion of the Class EA Master Plan will be advertised, to advise the public and other stakeholders where the Class EA Master Plan may be reviewed, and how to submit public comments. The submission of the Class EA Master Plan and Notice of Completion will apply to only the Schedule “B” projects resulting from the Study. Any Schedule “C” projects resulting from the Study will undergo Phases 3 and 4 of the Class EA process, resulting in an Environmental Study Report which will be filed upon completion of those additional studies. The Master Plan will provide the documentation of Phases 1 and 2 for the Schedule “C” projects, as shown in the flow chart in Section 1.1.

The Notice will also advise the public and other stakeholders of their right to request a Part II Order, and how and when such a request must be submitted. Under the Environmental Assessment Act, if it is felt after consulting with the proponent (the City of Hamilton) that serious environmental concerns remain unresolved, members of the public, interest groups, agencies, and other stakeholders may submit a written request to the Minister of the Environment to require the proponent to comply with Part II of the Environmental Assessment Act before proceeding with the proposed undertaking. Part II of the EA Act addresses Individual Environmental Assessments. Any Part II Order request must be made with respect to specific project(s) subject to the Class EA. A Part II Order Request cannot be submitted with respect to the Master Plan as a whole.

The request for a Part II Order must be copied to the proponent at the same time it is submitted to the Minister. Written requests for a Part II Order must be submitted to the Minister within the 30-calendar day review period, after the proponent has filed the Master Plan ESR and has issued the Notice of Completion of the Study. The decision to issue a Part II Order rests with the Minister of the Environment. Requests after the minimum 30-calendar day review period will not be considered by the Minister of the Environment.

### 1.9 Agency / Stakeholder Consultation

A list of agency stakeholders, including federal and provincial ministries, City of Hamilton departments, local groups, conservation authorities, utilities, and developers and their consultants was prepared at the project initiation. The opportunity for these parties to participate in the project was provided through the distribution of a Study Commencement notice. Further opportunity was also provided through announcement of two formal Public Information Centres (PICs). The following is a summary of the agencies contact list.
Federal Agencies

- Canadian Wildlife Services
- Canadian Environmental Assessment Agency
- Department of Fisheries and Oceans
- Environment Canada
- Parks Canada

Provincial Agencies

- Ontario Realty Corporation
- Ontario Provincial Police - Burlington Detachment
- Ministry of Agriculture, Food & Rural Affairs
- Ministry of Culture / Ministry of Tourism and Recreation
- Ministry of Community and Social Services
- Heritage and Libraries Branch, Ministry of Culture
- Ministry of Natural Resources
- Ministry of the Environment
- Ministry of Transportation
- Ministry of Health and Long Term Care
- Niagara Escarpment Commission

City of Hamilton Departments

- Corporate Services
- Economic Development
- Hamilton Emergency Services
- Hamilton Police Services
- Mayor's Office / Council
- Planning and Development
- Public Health and Community Services
- Public Works

Conservation Authorities

- Hamilton Conservation Authority
- Niagara Peninsula Conservation Authority

Local Groups / Stakeholders

- Citizens for a Sustainable Community
- Hamilton Chamber of Commerce
- Hamilton-Wentworth Catholic School Board
- Hamilton-Wentworth District School Board
- Local Architectural Conservation Advisory Committee
- Ontario Archaeological Society
- Canadian Center for Inland Waters - Remedial Action Plan (RAP)
- Resident's Group: Upper Mount Albion Road

Developers and their Consultants

- SmartCentres
- Counterpoint Engineering
- Multi-Area Developments Inc.
- A.J. Clarke and Associates Ltd.
- LEA Consulting Ltd.
- Loblaw Properties Limited
- Delcan Corporation
- J. Beume Real Estate Ltd.
- Mr. Joseph Maziarz
- Mr. Jack Pelech
- Mr. Nimigan
- Silvestri Investments
- BA Consulting Group Ltd.
Utilities

- Bell Canada
- Cogeco Cable Inc.
- Enbridge Pipelines Inc.
- Hydro One
- Hamilton Hydro Incorporated
- Hamilton Community Energy
- Hamilton Utilities Corporation
- Fibrewired Network - Hamilton
- Source Cable Limited
- Ontario Power Generation
- Union Gas Limited
- Trans Northern Pipeline
- TransCanada Pipelines Limited
- Mountain Cablevision
- Allstream (formerly ATT & Unitel)
- Canadian National Railway
- Canadian National Railway - Engineering & Environmental Services
- Canadian Pacific Railway
- Imperial Oil Products & Chemical Division
- Sun Canadian Pipeline

Correspondences with agencies are provided in Appendix A.

1.10 Summary of Public Consultation Process

A comprehensive public consultation program was conducted for the Study, with the following components:

- **Mailing Lists** – A number of mailing lists were established for the Study. These included an agency mailing list as mentioned above and a mailing list which consisted of all members of the public within and adjacent to the Study Area, in addition to others who wrote, telephoned, emailed, or filled in comment sheets during the Study. People on the mailing list were sent letters prior to each of the public meetings. Opportunities for public input were provided throughout the process, including public meetings, telephone inquiries, letters, email and faxes.

- **Stakeholder and Technical Committee Meetings** – A Stakeholder and Technical Committee was established as part of this Study. Three meetings were held with this group during the course of the Study. The first meeting was held prior to Public Information Centre (PIC) No.1 and the second prior to the newsletter mailout for Special Policy Area ‘C’. The stakeholders consisted of representatives of local groups and businesses, and developers. City of Hamilton staff and consultants comprised the technical representatives. Additional Stakeholder and Technical Committee Meetings will be held prior to finalizing the Environmental Study Reports for the Schedule “C” projects resulting from the Class EA Master Plan Study.

- **Developers and their Consultants** – A list of developers and their consultants was prepared at the project initiation. The opportunity for these parties to participate directly in the project was provided through the distribution of a Study Commencement notice. Further opportunity was provided as part of the Stakeholder
and Technical Committee Meetings and through announcement of two formal Public Information Centres (PICs).

- **Public Information Centres (PICs)** – Two formal meetings were held during the Study. They consisted of a public open house with display panels. A brief presentation was made at each of the PICs. Attendees were asked to sign-in when they entered the public open house. A handout consisting of key display panels was made available. Comment forms were available to provide the public another opportunity for input to the Study. Members of the project team were on hand to respond to questions and concerns. Issues raised by the public during and after each meeting were recorded by the consultant team and subsequently addressed.

- **Newsletters** – Two newsletters were sent out to those on the mailing lists during the course of the Study. The first newsletter was sent out prior to the notice of the second PIC to update the public on the Study progress. The second newsletter was sent out after the second PIC to obtain public input on the findings for Special Policy Area ‘C’.

- **Newspaper advertisements** – At least one and a half weeks prior to each public meeting, a newspaper advertisement was placed in two separate editions of the *Hamilton Spectator*, in the *At Your Service* section, and in one edition of each of the following Brabant Newspapers: *Mountain News, Glenbrook Gazette* and *Stoney Creek News* to announce the date, time, and location of the meetings. The newspaper advertisements invited the public to attend the meetings and to provide input. The advertisements provided information on contact names, telephone numbers, and addresses.

- **Additional notification** – At least one and a half weeks prior to each public meeting, a notice of the public meeting was mailed out to area residents and businesses on the project mailing lists. Notification letters were also mailed to utility companies and external agencies.

- **Project email address** – Through the newspaper advertisements and comments sheets, the public was invited to send comments by email to both the City and consultant team project managers.

- **Project website** – Prior to the second PIC, a project website was launched to provide the public with an additional means to obtain information about the project. The project website was advertised in the second PIC notice and display materials, and also in the second newsletter.

Further details on the public consultation process are documented in other sections of the report. A summary of the Public Meetings is provided in Appendix B.

Major events in the public consultation process are summarized below:
- Study initiation
- Notification letters to utility companies and external agencies, area businesses, and residents
- Newspaper advertisement of Study Commencement
- Meeting No.1 with Stakeholder and Technical Committee
- Notification letters to utility companies, external agencies, area businesses, residents and other stakeholders for Public Information Centre #1
- Newspaper advertisement of Public Information Centre #1
- **1st Public Information Centre**
  - Newsletter to residents and other stakeholders
  - Notification letters to utility companies, external agencies, area businesses, residents and other stakeholders for Public Information Centre #2
  - Newspaper advertisement of Public Information Centre #2
- **2nd Public Information Centre**
  - Newsletter to residents and other stakeholders
  - Meeting No.2 with Stakeholder and Technical Committee
  - City of Hamilton Council
  - Notice of Study Completion (Phases 1 and 2)
2. EXISTING STUDY AREA CONDITIONS

This section describes the features of the existing socio-economic, cultural, and natural environment, and the transportation infrastructure in the Study Area.

2.1 Socio-Economic Conditions

2.1.1 Existing Land Use

The existing land uses in the Study Area are shown in Exhibit 2-1. Land use in the Study Area is predominantly agricultural and residential; comprising of agricultural fields, residential dwellings and businesses. Active development is occurring within the Study Area.

The land uses along the north side of Rymal Road consist of residential and commercial uses, with fewer residential dwellings on the south side of Rymal Road. Commercial uses include an existing retail commercial plaza, located in the northwest quadrant of the Rymal Road / Upper Centennial Parkway intersection. A pocket of industrial uses is located within the Rymal Road / Swayze Road / Upper Centennial Parkway boundary. The Rymal Road Community Church is located at 1957 Rymal Road opposite Fletcher Road. Active development is occurring on the south side of Rymal Road in the vicinity of Fletcher Road.

Several residential dwellings are also located along the Trinity Church Road corridor, particularly on the west side of the roadway. The Trinity United Church and Cemetery is located along this corridor at 10 Trinity Church Road.

Existing land uses in Special Policy Area ‘C’ are comprised of residential and agricultural uses. Residences are located on both sides of Upper Mount Albion Road that traverses through Special Policy Area ‘C’

2.1.2 Designated Land Use

The lands to the north of Rymal Road between Trinity Church Road and Upper Centennial Parkway fall under the jurisdiction of the former City of Stoney Creek. The City of Stoney Creek Official Plan designates a large portion of these lands to the north of Rymal Road as residential zoning. Other portions of the lands north of Rymal Road are designated as institutional, shopping centre, highway commercial, general commercial, open space, and service commercial.

The lands south of Rymal Road between Trinity Church Road and Upper Centennial Parkway are within the former Township of Glanbrook jurisdiction. The Rymal Road Secondary Plan area (Amendment No. 36 to the Official Plan of the former Township of Glanbrook) is bound by Rymal Road to the north, Trinity Church Road to the west, the hydro corridor to the south and Upper Centennial Parkway / Regional Road 56 to the
Exhibit 2-1
Existing Land Uses
east. The land use designations for the Rymal Road Secondary Plan Area are residential, institutional, and commercial. The Rymal Road Secondary Plan is attached in Appendix C.

The west side of Trinity Church Road and to the north of the Hydro corridor is in the jurisdiction of the former boundaries of the City of Hamilton. These lands are designated for industrial, commercial, and open space uses.

### 2.1.3 Official Plan Policies

The former Region of Hamilton-Wentworth Official Plan states that the movement of people and goods is vital to the prosperity of the Region. An integrated transportation system (combining transit, vehicles, bicycles, air and water transport and pedestrian movements) which stresses easy pedestrian, transit and vehicular access to all basic needs and supports a sustainable development pattern, is required.

Policies based on the Official Plans of the local municipalities vary within the Study Area. The following municipal policies apply:

- **Former City of Stoney Creek**: To provide a safe and efficient Road Network that will accommodate anticipated traffic volumes at a reasonable level of service, fully integrated with the City of Hamilton, Region of Hamilton-Wentworth and Province of Ontario Road Systems.

- **Former Township of Glanbrook**: The movement of people and goods is an important consideration in the planning for the future development of the Township, within both the local and regional context. The transportation policies and the road system are intended to facilitate the satisfactory movement of both people and goods within the Township of Glanbrook and to ensure the orderly movement of through traffic.

- **City of Hamilton**: The general intent of this Plan is to ensure the development and maintenance of an effective circulation and movement system that will maximize accessibility in all parts of the City and reduce conflicts between pedestrian and vehicular circulation. The circulation and movement system will consist of a road network, public transit, parking, pedestrian and bicycle circulation, and rail, marine and air services which will link the various land use designations in the Plan.
2.1.4 Archaeology and Cultural Heritage

2.1.4.1 Archaeology

Archaeological Services Inc. (ASI) conducted a Stage 1 archaeological resource assessment as part of this Study. Three sources of information were consulted: the site record forms for registered sites housed at the Ontario Ministry of Culture; published and unpublished documentary sources; and the files of ASI. A field review was also conducted on March 13, 2005. This section provides a summary of the findings to date.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (O.A.S.D.) maintained by the Ontario Ministry of Culture. According to the O.A.S.D., numerous archaeological assessments have been conducted within and in the vicinity of the Study Area. These have produced at least 55 archaeological sites within 2 km of the Study Area. These sites reflect a lengthy occupation of the area from the Paleoindian Period (ca. 9,000-7,000 B.C.) to historic times. Most of the pre-contact sites are small campsites or findspots, but also includes one probable lithic workshop. The Euro-Canadian sites are usually farmsteads (or isolated middens), but one tavern and the community of Mount Albion Crossroads are also listed. While none of the registered sites are located within or immediately adjacent to the Study Area, 12 are located within Special Policy Area “C” (Leslie 1977; New Direction Archaeology 2003).

Potable water is the single most important resource necessary for any extended human occupation or settlement. Distance from water has been one of the most commonly used variables for predictive modeling of site location. The Ontario Ministry of Culture Primer on Archaeology, Land Use Planning and Development in Ontario (1997: 12-13) stipulates that undisturbed lands within 300 m of a primary water source, and undisturbed lands within 200 m of a secondary water source, are considered to exhibit archaeological potential.

The Study Area is intersected by various tributaries of Sinkhole Creek and Red Hill Creek, and these watercourses and springs were probably important foci for pre-contact settlement. In addition, many of the streams feed through a complex of sinkholes and springs which occur as part of the Eramosa Karst Area of Natural and Scientific Interest (Buck et al 2002). The surrounding feeder area also exhibits karst features. For example, springs are known to occur in the vicinity of Trinity Church Road: one south of the cemetery and another north of Rymal Road (MNR website). These aquatic features offer an additional attraction for prehistoric and historic activity in the area (ASI 2002).

Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of pre-contact archaeological remains within the Study Area. Local nineteenth century land use suggests that the Study Area also has potential for the identification of historical archaeological sites.
A field review confirmed the lack of topographic relief over most of the eastern portion of the Study Area that would make better-drained locations and springs more attractive. While most of the existing road rights-of-way are disturbed, development has been minimal and there is potential for sites on the adjacent agricultural lands. On the scattered residential properties, disturbance due to grading and landscaping is likely. A number of the structures indicated on the historic atlas mapping probably correspond to extant structures. Two cemeteries are also noted within the Study Area. One on the west side of Trinity Church Road south of Rymal Road (Trinity United Church and Cemetery – 10 Trinity Church Road), and the other on the north side of Rymal Road east of Fletcher Road (Rymal Road Community Church – 1957 Rymal Road).

Special Area ‘C’ includes lands on either side of Upper Mount Albion Road between the Lincoln Alexander Parkway and Stone Church Road. Single-family residences line both sides of Upper Mount Albion Road with the lands behind them in active cultivation. A section of the lands west of Upper Mount Albion Road were subject to archaeological assessment, and two sites were located, thus demonstrating the potential for sites in this vicinity (Leslie 1977).

Further details can be found in the Stage 1 Archaeological Assessment report, provided in Appendix D.1.

### 2.1.4.2 Cultural Heritage

Unterman McPhail Associates conducted a cultural heritage assessment as part of this Study. This section provides a summary of the findings to date. Identified existing cultural and built heritage features are shown in Exhibit 2-2.

A field survey of the Study Area was undertaken on March 10, 2005. A number of residences identified as built heritage features and a farm complex of 40 years or older are located along Rymal Road East within the Study Area. The intersection of Trinity Church Road is also identified as sensitive to change.

The historical community of Elfrida was located on the township line between Binbrook and Saltfleet Townships, to the west of the intersection of the former Highways 20, 53 and 56. Originally known as Swayze’s Corners and then Clinesville, it was renamed Elfrida in 1865 when its post office was opened. Elfrida had two hotels, general store and Quance’s mill south of the settlement on Highway 20 in the middle-to-late 1800s. A Methodist church was built on the Saltfleet Township side of the township road in 1856 and rebuilt in 1881. An Orange Hall stood across the road opposite the church. It later became the head office for the Binbrook and Saltfleet Fire Insurance Company. Only the former church building and the residence located at No. 2190 Rymal Road East remain of the community.

The identified built heritage features and cultural heritage landscapes have been assessed for heritage significance with the City of Hamilton. All identified built heritage features and cultural heritage landscapes have a local interest designation.
**Exhibit 2-2**

*Existing Built Heritage and Cultural Features*

Note: BHF = Built Heritage Feature  
CHL = Cultural Heritage Landscapes
Two buildings identified within the Study Area are listed in the Hamilton’s Heritage Volume 2: Inventory of Buildings of Architectural and/or Historical Interest, namely, No. 10 Trinity Church Road (Church) and No. 31 Trinity Church Road (Residence).

Further details on the Study Area build heritage and cultural landscape can be found in the cultural heritage assessment report, provided in Appendix D.2.

2.1.5 Noise

A noise assessment for the Study Area will be undertaken to determine the impacts on noise sensitive areas adjacent to the project area. Land uses designated as noise sensitive by the MOE include buildings that have outdoor recreational / living areas associated with residential units. This includes residential developments, hospitals, nursing / retirement homes, schools, daycare centres, etc. The definition excludes buildings such as vacant residential buildings, commercial, offices and light industrial establishments. The noise assessment will be documented in the ROPA 9 Schedule ‘C’ projects Phases 3 and 4 reports.

2.2 Natural Environment

LGL Limited undertook a natural sciences investigation of the Study Area as part of this Study. A field reconnaissance was undertaken on June 2 and 14, 2005. Exhibit 2-3 shows the natural features within the Study Area. A summary of the findings is provided below. Further details can be found in the LGL Natural Sciences report, found in Appendix D.3.

2.2.1 Physiography and Soils

The Study Area is situated atop the Niagara Escarpment within the Haldimand Clay Plain physiographic region of southern Ontario. At one time, Glacial Lake Warren covered this area and deposited clay over much of the underlying till (Chapman and Putnam 1984: 156-157). The loam and silt soils are generally well drained in the west portion of the corridor, with the exception of the low area north of the intersection of Trinity Church Road and Rymal Road. To the north of the low area the land rises sharply to a high point between Stone Church Road and Highland Road. To the east along Rymal Road, soils are imperfectly drained and there is little topographic relief (Presant et al 1965).

2.2.2 Designated Natural Areas

No Environmentally Significant Areas (ESAs) or Evaluated Wetlands are located within the Study Area. The Red Hill Valley ESA is located along the main branch of Red Hill Creek to the west of the Study Area.

The Eramosa Karst Area of Natural and Scientific Interest (ANSI) spans Rymal Road between Upper Mount Albion Road and Second Road West in the Study Area.
Exhibit 2-3
Natural Environment
The majority of land in the Study Area is designated ‘Urban’ according to the Regional Municipality of Hamilton-Wentworth Official Plan. Land designated ‘Rural Area’ surrounds Regional Road 56 south of Rymal Road and land beyond the urban boundary south of Rymal Road is considered ‘Prime Agricultural Land’. Land designated ‘Business Park’ is located to the west of the proposed extension of Trinity Church Road at the western limit of the Study Area.

### 2.2.3 Vegetation and Vegetation Communities

Land use in the Study Area is predominantly agricultural and residential; comprising agricultural fields, residential dwellings and businesses, and much of the vegetation in the Study Area is anthropogenic in origin. Active development is occurring in a number of locations in the Study Area.

Natural/semi-natural vegetation communities in the Study Area include a Fresh-Moist Oak-Sugar Maple Deciduous Forest (FOD9-1), located north of Rymal Road just west of Regional Road 56, and a Cattail Mineral Shallow Marsh (MAS2-1) and Pondweed Submerged Shallow Aquatic Community (SAS1-1) within and surrounding a tributary of Sinkhole Creek which crosses Regional Road 56 south of Rymal Road.

Cultural vegetation communities in the Study Area include a Dry-Moist Old Field Meadow (CUM1-1) located southwest of the Rymal Road/Regional Road 56 intersection, a Gray Dogwood Cultural Thicket (CUT1-4) north of the current northern terminus of Trinity Church Road, and a Mineral Cultural Woodland (CUW1) located between Stone Church Road and the Lincoln Alexander Parkway.

The vegetation communities identified within the Study Area are considered common and widespread throughout Ontario and secure globally.

No provincially significant plant species were identified during the June 2005 field reconnaissance.

### 2.2.4 Wildlife and Wildlife Habitat

The wildlife habitat in the Study Area comprises roadside ditches, agricultural fields, hedgerows, a cultural thicket, a few small creeks and one roadside woodlot. Some of the wildlife species in these areas are habituated to human activity but many species are not, and therefore are considered sensitive to disturbance.

A total of 54 wildlife species were recorded during the June 2005 field investigations. The habitat types found within the area, and secondary source information, suggests that a total of 65 wildlife species (four herpetofauna, 48 birds and 13 mammals) are potential residents of the area.
None of the species recorded in the Study Area or potentially occurring there are considered to be of conservation concern by Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or the Ontario Ministry of Natural Resources (OMNR)/Committee on the Status of Species at Risk in Ontario (COSSARO).

The *Fish and Wildlife Conservation Act* regulates 10 of the 13 mammal species recorded, plus one herpetofauna and three bird species. The *Migratory Birds Convention Act* regulates 38 of the 48 bird species. Fourteen of the bird species that could potentially nest in the Study Area are recommended by Bird Studies Canada as priority species for conservation in Hamilton-Wentworth.

### 2.2.5 Fisheries and Aquatic Ecosystems

The western and central portions of the Study Area are located within the Red Hill Creek watershed and the Hannon Creek and Upper Davis Creek subwatersheds. The eastern portion of the Study Area is located within the Twenty Mile Creek watershed and the Sinkhole Creek subwatershed.

A total of five tributaries of Red Hill Creek pass through the Study Area, including one which crosses Trinity Church Road and three which cross Rymal Road. A total of two tributaries of Sinkhole Creek pass through the Study Area, one which crosses both Rymal Road and Regional Road 56, and one which crosses only Rymal Road.

Historical fish sampling records for tributaries of Red Hill Creek suggest this watershed supports a warmwater baitfish community, with species such as brook stickleback and goldfish (Cam Port 1997). Historical fish sampling records for tributaries of Sinkhole Creek suggest this watershed supports a warmwater sport and baitfish community, with species such as largemouth bass, pumpkinseed, brook stickleback and fathead minnow (ESG 2001).

Tributaries of Red Hill Creek in the Study Area are intermittent and were dry at the time of the June 2005 field investigations. One tributary of Sinkhole Creek in the Study Area is permanent, and water was present in one location at the time of the June 2005 field investigations.

Habitat conditions for this watercourse include warm, slow-moving water, with dense growths of slender pondweed. Species sampled at this location include brook stickleback and fathead minnow, both warmwater baitfish species (LGL Limited 2005).
2.3 Existing Transportation Facilities

2.3.1 Road Classification

The existing road network and classifications based on the current City’s Official Plan designations are illustrated in Exhibit 2-4. The current Official Plan road network is shown in Appendix E. The official plan definitions of the road classes and designated right-of-way are noted in Table 2-1. The appropriate volume for the different classes is based on the 1999 Geometric Design Guide for Canadian Roads by the Transportation Association of Canada (TAC) and represents the 24-hour two-direction volume thresholds.

Table 2-1: Official Plan Definitions of the Road Classes

<table>
<thead>
<tr>
<th>Current Designation</th>
<th>Definition</th>
<th>Designated Right-of-Way</th>
<th>Volume for Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>Strategic links in the road network, the main functions of which are to carry relatively high volumes of long distance traffic within, between or through the City and surrounding Area Municipalities and/or to provide access past major geographic barriers and to inter-regional highways.</td>
<td>26 to 36 m</td>
<td>&gt; 5,000 &lt; 30,000</td>
</tr>
<tr>
<td>Collector</td>
<td>Function as connecting road links between Arterial and Local Roads. They generally carry lower traffic volumes than Arterial Roads and may provide direct access to abutting properties.</td>
<td>20 to 26 m</td>
<td>&lt;8,000</td>
</tr>
<tr>
<td>Local</td>
<td>Provide direct access to abutting properties and carry traffic predominantly of local nature.</td>
<td>20 m</td>
<td>&lt;1,500</td>
</tr>
</tbody>
</table>
Legend
- Arterial or Inter-Regional Highway (previous Regional Road)
- Collector Road
- Schematic of Karst Core Boundary
- Posted Speed Limit
- School/Church
- 1500 24-hour Traffic Volumes (2-way)

Not to Scale

June 2006

Exhibit 2-4
Existing Road Network and Classifications
2.3.2 Road Capacity

Arterial roads carry relatively high volumes of long distance traffic, and are expected to have mostly uninterrupted traffic flow characteristics. The functional capacity of arterial roads ranges from 5,000 to 30,000 daily, based on TAC guideline.

Collector roads provide connection between arterial and local roads, serving both through traffic and local traffic. Daily traffic volumes on collector roads are generally expected to be below the environmental capacity of 8,000 vehicles associated with collector roads, according to TAC guideline.

Local roads are used almost exclusively for access to abutting properties. Daily traffic volumes on local roads are generally expected to be below its environmental capacity of 1,500 vehicles, according to TAC guideline.

“However, the volume range for each classification is wide and overlaps that of other classifications.” (TAC Guideline)

The traffic demands on a certain class of road are associated with the road features, including adjacent land uses, availability of alternative routes, road continuity, number of travel lanes, horizontal and vertical alignment, road width, intersection control devices, road accessibility, and etc. Generally, the better provision of road continuity, width, geometric alignment and etc. are associated with higher traffic demand, and vice versa.

The traffic demand on a certain class of road should be within the associated road capacity. Demands over the functional capacity of roads will result in congestion and delays, and demands over the environmental capacity of roads will have negative impacts to the designated road users and neighbourhood land users, such as noise, congestion, difficult accessibility, speeding, and safety implications.

2.3.3 Road Network and Characteristics

The Study Area roads and intersection lane configurations are illustrated in Exhibit 2-5, and described below.
Exhibit 2-5

Existing Study Area Roads and Lane Configurations

June 2006
Rymal Road – Rymal Road is an east-west inter-regional highway, with a two-lane, paved rural cross-section and a posted speed limit of 80 km/h. It intersects with a number of north-south collector and arterial roads. Rymal Road will also provide new collector road connections to the Rymal Road Planning area. Rymal Road has several residential and commercial accesses. No sidewalks are provided along the roadway.

Parallel east-west roadways north of Rymal Road include Mud Street West and Highland Road East. Golf Club Road parallels Rymal Road to the south of the Study Area.

Exhibit 2-6: Rymal Road Westbound (approaching Fletcher Road)

Exhibit 2-7: Rymal Road Westbound (approaching Swayze Road)
**Trinity Church Road** – Trinity Church Road is a two-lane north-south arterial south of Rymal Road with a rural cross-section, no shoulders and a posted speed limit of 50 km/h. Trinity Church Road currently terminates at Rymal Road. The vertical geometry of Trinity Church Road is rolling. A future interchange for the Red Hill Valley Parkway is currently aligned with an extension of Trinity Church Road. Trinity Church Road provides north-south access for the lands in Glanbrook to the south of ROPA 9. There are residential driveways along Trinity Church Road. No sidewalks are provided on either side of the roadway. There is a load restriction (5 tonnes per axle) in effect on Trinity Church Road from March 1 to April 30.

![Trinity Church Road Northbound (approaching Rymal Road)](image-url)
**Fletcher Road** – Fletcher Road is a north-south collector road connecting Rymal Road to the south. Fletcher Road has a rural cross-section and a posted speed limit of 60 km/h. No sidewalks are provided along Fletcher Road. There is a load restriction (5 tonnes per axle) in effect on Fletcher Road from March 1 to April 30.

Exhibit 2-9: Fletcher Road Southbound (south of Rymal Road)
Regional Road 56 / Upper Centennial Parkway – Regional Road 56 / Upper Centennial Parkway is an inter-regional highway and is currently the primary north-south link in eastern Hamilton that provides a crossing of the Niagara Escarpment and serves the Village of Binbrook to the South. Upper Centennial Parkway will provide one access point to the Rymal Road Planning area. Upper Centennial Parkway has rural cross-section with gravel shoulders. No sidewalks are provided on either side of the roadway.

Exhibit 2-10: Regional Road 56 northbound (approaching Rymal Road)
Upper Mount Albion Road – Upper Mount Albion Road is a local road which extends from Mud Street to Rymal Road, and is discontinuous at the Lincoln Alexander Parkway. The road provides direct access to residential properties but has provided an arterial road function in the past. It is anticipated that Upper Mount Albion Road will serve more of a local road function (as designated) in the future. Upper Mount Albion Road has a posted speed limit of 60 km/h. The road has a rural cross-section with an average pavement width of approximately 7.5 m and no sidewalks. Upper Mount Albion Road has a rolling terrain. There are several residential accesses and frontages along Upper Mount Albion Road. There is a load restriction (5 tonnes per axle) in effect on Upper Mount Albion Road from March 1 to April 30.

Exhibit 2-11: Upper Mount Albion Road Northbound (north of Rymal Road)
Second Road West – Second Road West is a collector road between Rymal Road and Gatestone Drive, and a local road north of Gatestone Drive. Second Road West has an urban cross-section and an average pavement width of approximately 10 m south of Gatestone Drive and 8.5 m north of Gatestone Drive. The posted speed limit is 50 km/h. There are several residential driveways and frontage along Second Road West. A sidewalk is provided on the east side, south of Gatestone Drive, no sidewalk is provided between Gatestone Drive and Fairhaven Drive, and a sidewalk is provided on the west side north of Fairhaven Drive.

Exhibit 2-12: Second Road West Northbound (north of Gatestone Drive)
Whitedeer Road – Whitedeer Road is a collector road connecting Rymal Road and Highbury Drive. Whitedeer Road has an urban cross-section and an average pavement width of approximately 14.5 m. An elementary school (St. Mark’s Elementary School) is located on the southwest corner of the intersection with Highbury Drive. There are several residential accesses and frontage on Whitedeer Road. A sidewalk is provided on the east side of Whitedeer Road, near Rymal Road and on both sides of Whitedeer Road, near Highbury Drive. The posted speed limit is 50 km/h but reduces to 40 km/h near the school.
Highland Road – Highland Road is a collector road. It has an urban cross-section east of Winterberry Drive and a rural cross-section with an average pavement width of approximately 6.5 m west of Winterberry Drive. There are residential accesses and frontage along Highland Road, which becomes more dense east of Winterberry Drive. A high school (Saltfleet Secondary School) is located on the northwest corner of the intersection with Highbury Drive. Municipal bus stops are provided on Highland Road, east of Gatestone Drive. A sidewalk is provided on the north side of Highland Road, east of Winterberry Drive. The posted speed limit on Highland Road is 50 km/h, reducing to 40 km/h near Highbury Drive.

Exhibit 2-14: Highland Road Eastbound (between Pritchard Road and Upper Mount Albion Road)

Exhibit 2-15: Highland Road Eastbound (east of Winterberry Drive)
**Highbury Drive** – Highbury Drive is designated a collector road and has an urban cross-section with an average pavement width of approximately 11.5 m. Sidewalks are provided on both sides of Highbury Drive. An elementary school (St. Mark’s Elementary School) is located on the southwest corner of the intersection with Whitedeer Road. A high school (Saltfleet Secondary School) is located on the northwest corner of the intersection with Highland Road. The posted speed limit on Highbury Drive is 40 km/h near the elementary school (at Winterberry Drive) and increases to 50 km/h near Foxmeadow Drive. Highbury Drive has several residential accesses and frontage. Municipal bus stops are provided on Highbury Drive.

*Exhibit 2-16: Highbury Drive Westbound (at Whitedeer Road)*
**Gatestone Drive** – Gatestone Drive is a collector road with an urban cross-section and an average pavement width of approximately 10 m. Several residential accesses and frontage are provided along Gatestone Drive. Sidewalks are provided on both sides of Gatestone Drive. An elementary school (Gatestone Elementary School) is located on the west side of Gatestone Drive, near Foxtrot Drive. The posted speed limit on Gatestone Drive is 50 km/h. Municipal bus stops are provided on Gatestone Drive.

Exhibit 2-17: Gatestone Drive Northbound (north of Highbury Drive)

Exhibit 2-18: Gatestone Drive Eastbound (east of Second Road West)
**Stone Church Road** – Stone Church Road is an east-west arterial which provides access to Mud Street. Stone Church Road has an urban cross-section west of Pritchard Road, a rural cross-section with paved shoulders east of Upper Mount Albion Road, and a rural cross-section with gravel shoulders between Upper Mount Albion Road and Pritchard Road. A sidewalk is provided on the south side of Stone Church Road, near Winterberry Drive. Bike lanes are provided on Stone Church Road west of Pritchard Road, and east of Upper Mount Albion Road. No bike lanes currently exist between Pritchard Road and east of Upper Mount Albion Road.

Exhibit 2-19: Stone Church Road Westbound (east of Pritchard Road)

Exhibit 2-20: Stone Church Road Eastbound (at Winterberry Drive)
Winterberry Drive – Winterberry Drive is designated a collector road. Winterberry Drive has an urban cross-section south of Stone Church Road, and a combination of rural and urban cross-section north of Stone Church Road. There are several residential accesses and frontage on the southern portion of Winterberry Drive. At the intersection with Stone Church Road, an elementary school (Janet Lee Elementary School) is located at the southwest corner and a church (Salvation Army Church) is located on the northeast corner. The posted speed limit is 50 km/h and reduces to 40 km/h near the school. Sidewalks are provided on both sides of Winterberry Drive, south of Stone Church Road, and on the east side north of Stone Church Road. Municipal bus stops are provided along Winterberry Drive.

Exhibit 2-21: Winterberry Drive Southbound (approaching Stone Church Road / Paramount Drive)
**Paramount Drive** – Paramount Drive is a collector road with an urban cross-section. Sidewalks are provided on both sides of Paramount Drive for most of the corridor. Between Old Mud and Mud Streets, a sidewalk is provided on the east side of the road. There are several commercial accesses along Paramount Drive. There are also several institutional facilities along Paramount Drive, including schools, churches, and a library. A bicycle lane is provided along Paramount Drive, except for the section between Old Mud Street and Mud Street. The posted speed limit on Paramount Drive is 50 km/h and reduces to 40 km/h near the schools. Municipal bus stops are provided on Paramount Drive.

Exhibit 2-22: Paramount Drive Northbound (approaching Mud Street)

### 2.3.4 Truck Routes

The following roads in the Study Area are designated for use by heavy traffic:
- Rymal Road;
- Upper Centennial Parkway - Regional Road 56;
- Upper Mount Albion Road; and
- Stone Church Road.
2.3.5\hspace{1em}**Transit Service**

Currently, transit service is not available on Rymal Road within the Study Area. The Hamilton Street Railway Company operates two routes in the community to the north of Rymal Road:

- Route 43-Stone Church via Winterberry Drive, Paramount Drive, Gordon Drummond Avenue, Isaac Brock Drive, Gatestone Drive, Highbury Drive, Highland Road, First Road West, and Mud Street.
- Route 11-Parkdale via Winterberry Drive and Paramount Drive

The existing transit network is illustrated in Exhibit 2-23.

2.3.6\hspace{1em}**Pedestrian and Bicycle Network**

Within the Study Area, pedestrian and bicycle accommodation is limited. Sidewalks or designated bike routes do not currently exist along Rymal Road. Details on the locations of sidewalks within the Study Area can be found in Section 2.3.3. Bicycle lanes are provided along Stone Church Road and Paramount Drive.

A trail for the Red Hill Valley Open Space Replacement Strategy is proposed south of Highland Road (east-west) which crosses Upper Mount Albion Road and then heads north across Highland Road.

The existing bicycle network is illustrated in Exhibit 2-24.

2.4\hspace{1em}**Surface Runoff**

The Study Area falls into two different watersheds. The westerly side drains into the Red Hill Creek, which is under the jurisdiction of the Hamilton Region Conservation Authority. The easterly side drains into the Sinkhole Creek, which is a tributary of Twenty Mile Creek and is under the jurisdiction of the Niagara Peninsula Conservation Authority. The locations of watercourses and tributaries are shown on the Natural Environment exhibit - Exhibit 2-3.

Surface runoff from the western portion of the Study Area travels through a variety of tributaries and watercourses into Hannon Creek (west of Trinity Church Road) or Upper Davis Creek (north of Rymal Road) that eventually connect to Red Hill Creek. In contrast, the eastern portion of the Study Area drains easterly to the Twenty Mile Creek Watershed via the Sinkhole Creek.
Exhibit 2-23
Existing Transit Network

Legend

- Existing Transit Routes
- Schematic of Karst Core Boundary
- Future Development

City of Hamilton
Rymal Road Planning Area (ROPA 9)
Master Plan Class Environmental Assessment

June 2006
There are currently four storm drainage outfalls available for the sub-catchments in the Study Area. The locations of the storm outfalls and their associated predevelopment sub-catchment areas are presented in Exhibit 2-25. Exhibit 2-26 presents the post-development sub-catchment areas. Proposed stormwater management facilities are proposed as part of development in the Study Area. A portion of the sub-catchment is outside of the Study Area boundary. Characteristics of the storm outfalls are summarized in Table 2-2.

Table 2-2: Storm Outlet Description of Study Area

<table>
<thead>
<tr>
<th>Storm Outlet #</th>
<th>Outlet Description</th>
<th>Post-development Area Draining to Outlet</th>
<th>Proposed Stormwater Management Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (temporary)</td>
<td>- Outlets to Hannon Creek</td>
<td>• 8.34 ha</td>
<td>Temporary wet pond facility</td>
</tr>
<tr>
<td>1</td>
<td>- Drains westerly via a 450 mm diameter culvert under Trinity Church Road into Hannon Creek</td>
<td>Remaining area west of Upper Mt. Albion Rd. in the Study Area</td>
<td>Wet pond facility</td>
</tr>
<tr>
<td>2A³</td>
<td>- A 1.55m x 1.55m box culvert and a second culvert, 0.91m x 0.91m direct drainage from the Study Area south of Rymal Road to Phoenix Creek</td>
<td>• 33.3 ha  • 6.6 ha³</td>
<td>Extended detention wetland facility is proposed to have a max depth of 1.27 m with a total storage volume of 18,200 m³. It is designed to consist of the following:  a) Two sediment forebay; and b) A permanent pool with 5:1 side slopes.</td>
</tr>
<tr>
<td>2B²</td>
<td>- Two culverts of 800 mm diameter direct drainage from south of Rymal Road to Stewart Creek</td>
<td>• 19.68 ha</td>
<td>Extended detention wetland facility is proposed to be +1.0 m deep and is to have a volume of 0.82 ha.m. It is designed to consist of the following:  a) A sediment forebay; and b) A permanent pool with 7:1 side slopes</td>
</tr>
<tr>
<td>3³</td>
<td>- A 1.83 m x 0.91 m culvert located under Swayze Road at Portside Street drains easterly and discharges to Sinkhole Creek</td>
<td>• 104.72 ha  • 8.43 ha³  • Deerfield SWM Facility drainage³</td>
<td>Extended detention wetland facility is proposed to be 1.0 m deep with a storage volume of 2.64 ha.m. It is to have the following:  a) A sediment forebay, and b) A permanent pool with 7:1 side slopes</td>
</tr>
</tbody>
</table>

Notes:
3. Area located outside the Rymal Road Study Area.
A review of the Rymal Road Planning Area Master Servicing and Drainage Plan (A.J. Clarke and Associate, March 2002) revealed that the preliminary preferred recommendation for local storm drainage in the Study Area includes the construction of a series of storm sewers along the road network to one of the three suitable outfalls described above.

Opportunities to provide storm drainage for roadways exist since the storm outfalls are conveniently located along the main roads.

Further details on future drainage conditions will be provided in the appropriate Phases 3 and 4 reports.

2.5 Utilities and Other Services

A number of utilities are located within the immediate Study Area, including Union Gas, Hamilton Hydro, Hydro One, Bell Canada, and Source Cable. A summary of the information collected to date is provided in this section. More detailed information will be assembled and presented during Phases 3 and 4 of the EA process.

2.5.1 Union Gas

Union Gas facilities are located throughout the Study Area.

2.5.2 Hamilton Hydro

Hamilton Hydro facilities within the Study Area are located on the north side of Rymal Road. This includes several buried facilities to service the residences in that neighbourhood. There are also overhead cables along both sides of Rymal Road.

2.5.3 Hydro One

Hydro One facilities are located on the south side of Rymal Road in the Study Area. There are buried and overhead facilities on Trinity Church Road, Swayze Road, and Highway 56.

2.5.4 Bell Canada

Bell Canada has buried telephone cables which are generally on the north side of Rymal Road throughout the corridor. There are also buried Bell Canada telephone cables on the south side of Rymal Road between Swayze Road and Upper Centennial Parkway.
Exhibit 2-25

Location of Pre-development Sub-Catchment Areas

Not to Scale
June 2006
Exhibit 2-26

Location of Post-development Sub-Catchment Areas

June 2006
2.5.5 **Source Cable**

Source Cable lines are located on Hamilton Hydro poles on the west side of Trinity Church Road and south side of Rymal Road. There are no buried Source Cable lines within the Rymal Road corridor.

2.5.6 **Other Services**

Street lamps are located throughout the Study Area, along the west side of Trinity Church Road, east side of Upper Mount Albion Road, west side of Second Road West, and both sides of Whitedeer Road. Rymal Road has street lamps at nearly all intersections in the Study Area (Trinity Church Road, Upper Mount Albion Road, Fletcher Road, Second Road West, Whitedeer Road, and Upper Centennial Parkway / Regional Road 56).

Sewer and water services are also provided throughout the Study Area. There is a 6 inch water main on the north side of Rymal Road. A water main is also present on the west side of Trinity Church Road, the west side of Upper Mount Albion Road, the east side of Second Road West, the east side of Fletcher Road (which crosses Rymal Road), and the west side of Swayze Road.
3. NEEDS AND OPPORTUNITIES – RYMAL ROAD PLANNING AREA

3.1 Anticipated Growth

Within the Rymal Road Planning Area, substantial growth is projected to occur. Table 3-1 summarizes the anticipated land uses in the secondary plan area. Land use plans for the Study Area consist of residential subdivisions with a mixture of low- to mid-density units and commercial land uses.

Table 3-1: Rymal Road Secondary Plan Land Use

<table>
<thead>
<tr>
<th>Land Use Designation</th>
<th>Hectares</th>
<th>Units</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Density</td>
<td>50.5</td>
<td>1,110</td>
<td>3,110</td>
</tr>
<tr>
<td>Low-Medium Density</td>
<td>58.3</td>
<td>1,630</td>
<td>4,560</td>
</tr>
<tr>
<td>Medium Density</td>
<td>4.0</td>
<td>220</td>
<td>620</td>
</tr>
<tr>
<td>Medium-High Density</td>
<td>8.4</td>
<td>630</td>
<td>1,370</td>
</tr>
<tr>
<td>Total Residential</td>
<td>121.2</td>
<td>3,590</td>
<td>9,660</td>
</tr>
<tr>
<td>Parkland</td>
<td>9.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional</td>
<td>17.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Commercial</td>
<td>11.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbourhood Commercial</td>
<td>4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Commercial</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service (Recreational) Commercial</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Commercial</td>
<td>21.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stormwater Management</td>
<td>9.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector Roads</td>
<td>11.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>188.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Rymal Road Secondary Plan, March 2002

The Trinity and Highland Neighbourhoods of the Heritage Green Secondary Plan are north of Rymal Road. At full build-out, these neighbourhoods were previously estimated with a population of 11,770 and 18.63 ha of commercial land uses. (Source: City of Stoney Creek Official Plan, 2001). However, given the discovery of the Karst features, and the subsequent Karst designation of some of the lands, a reduced population, and commercial land use estimate can be expected. This is currently under review by the City as part of the land use review for the Trinity Neighbourhood.

Additionally, Special Policy Area ‘C’ includes 20.5 ha of commercial and residential land uses, which is also known as the Heritage Green Mixed Use Centre.
3.2 **Existing Conditions**

3.2.1 **Traffic Data**

Traffic volume counts on Rymal Road were commissioned by the City of Hamilton during the week of April 25th to April 29th, 2005. Our initial review of the counts indicated that the counts were significantly lower than counts from previous years.

McCormick Rankin (MRC) conducted the travel demand modelling for the area and was the City’s consultant for the data analysis. As noted in MRC’s memo on *Clarification of RRPA traffic data memo dated June 13, 2005* (refer to Appendix F.1), Rymal Road was undergoing construction for watermain replacement between Upper Mount Albion Road and Dartnall Road during the count period. The construction, which was specifically in the vicinity of Glover Road during the count period, also impacted traffic at Dartnall Road, Pritchard Road and Trinity Church Road. The construction activity would have influenced general traffic patterns, leading to lower vehicle volumes on Rymal Road than in previous years' counts.

Therefore, the existing traffic counts were synthesized by MRC to reflect more typical traffic volumes on Rymal Road based on historical traffic growth and patterns.

3.2.2 **Traffic Capacity Analysis**

*Table 3-2* presents the existing link traffic volumes for the AM peak hour on Rymal Road. *Table 3-3* presents the screenline volumes north of Rymal Road. For analysis purposes, a conservative link capacity of 900 vph per lane (rural arterial road) was applied to the existing link volume to assess a volume to capacity ratio for Rymal Road. For the screenline analysis, a link capacity of 500 vph per lane was applied to collector roads and 300 vph per lane was applied to Upper Mount Albion Road which is designated a local road. Upper Mount Albion is currently providing an important role and function as a north-south link between Rymal Road and Stone Church Road. As such, it is operating more as an arterial roadway function, although it is designated a local road.
Table 3-2: Link Operations on Rymal Road – Existing Conditions (AM)

<table>
<thead>
<tr>
<th>Rymal Road</th>
<th>Eastbound</th>
<th></th>
<th>Westbound</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>vph</td>
<td>v/c[1]</td>
<td>vph</td>
<td>v/c[1]</td>
</tr>
<tr>
<td>Trinity Church Road to Upper Mount Albion</td>
<td>625</td>
<td>0.69</td>
<td>655</td>
<td>0.73</td>
</tr>
<tr>
<td>Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Mount Albion Road to Fletcher Road</td>
<td>605</td>
<td>0.67</td>
<td>840</td>
<td>0.93</td>
</tr>
<tr>
<td>Fletcher Road to Second Road</td>
<td>615</td>
<td>0.68</td>
<td>820</td>
<td>0.91</td>
</tr>
<tr>
<td>Second Road to Whitedeer Road</td>
<td>520</td>
<td>0.58</td>
<td>790</td>
<td>0.88</td>
</tr>
<tr>
<td>Whitedeer Road to Upper Centennial Parkway</td>
<td>510</td>
<td>0.57</td>
<td>750</td>
<td>0.83</td>
</tr>
</tbody>
</table>

1. assumed link capacity of 900 vphpl for Rymal Road

Table 3-3: Screenline Operations – Existing Conditions (AM)

<table>
<thead>
<tr>
<th>Screenline</th>
<th>Northbound</th>
<th></th>
<th>Southbound</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>vph</td>
<td>v/c[1]</td>
<td>vph</td>
<td>v/c[1]</td>
</tr>
<tr>
<td>North of Rymal Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Mount Albion Road (local)</td>
<td>287</td>
<td>0.96</td>
<td>108</td>
<td>0.36</td>
</tr>
<tr>
<td>Second Road, south of Gatestone</td>
<td>32</td>
<td>0.06</td>
<td>73</td>
<td>0.15</td>
</tr>
<tr>
<td>(collector)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitedeer Road (collector)</td>
<td>83</td>
<td>0.17</td>
<td>125</td>
<td>0.25</td>
</tr>
<tr>
<td>Upper Centennial Parkway (4-lane arterial)</td>
<td>756</td>
<td>0.42</td>
<td>561</td>
<td>0.31</td>
</tr>
<tr>
<td>Screenline Total</td>
<td>1158</td>
<td>0.37</td>
<td>867</td>
<td>0.28</td>
</tr>
</tbody>
</table>

1. assumed link capacity of 900 vphpl for arterial, 500 vphpl for collector, and 300 vphpl for local roads.

The maximum existing v/c ratio on Rymal Road is 0.93 for the westbound direction during the AM peak hour. This indicates that Rymal Road is currently operating close to capacity within the Study Area. Additional capacity would be required to accommodate anticipated background traffic growth and the development of the ROPA 9 lands.

The north-south roads are currently operating below the typical capacity of rural arterial and collector roads. However, given the local designation of Upper Mount Albion Road, existing volumes are approaching the typical capacity of a local road.

### 3.2.3 Route Alternatives

Given the existing road network and the committed Red Hill Valley Parkway, route alternatives were plotted for traffic that would originate from the ROPA 9 area destined
to the North and West (based on most direct routing). Exhibit 3-1 illustrates the route alternatives. As shown in Exhibit 3-1, there are a limited number of North-South connections.

### 3.2.4 Truck Volumes

A review of the 2005 and historical counts on Rymal Road indicated that truck volumes account for 6-10% of the AM peak hour peak direction traffic and approximately 3% of the PM peak hour traffic. Over the 7-hour period (3-hour AM, 1-hour midday and 3-hour PM), the average truck percentage on Rymal Road is approximately 8%.

It was noted that during the AM peak hour there is an additional 1 to 2% bus traffic along Rymal Road which may be attributed to the school bus depot located on Swayze Road.

The City of Hamilton recognizes the importance of goods movement through the following policy for the Transportation Master Plan Policy Papers:

*Maintain, protect and enhance the existing goods movement network in Hamilton to support the economic development strategy.*

A description of the goods movement network in the Study Area is included in Table 3-4.

**Table 3-4: Goods Movement Network**

<table>
<thead>
<tr>
<th>Designated Heavy Traffic Road</th>
<th>Goods Movement Network Connections</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rymal Road</td>
<td>City of Hamilton’s eastern border to Upper James Street and further west</td>
<td>Provides good east-west connectivity and the geometry of the roadway is suitable for this type of use.</td>
</tr>
<tr>
<td>Upper Centennial Parkway - Regional Road 56</td>
<td>QEW to the City of Hamilton’s southern border</td>
<td>Provides good north-south connectivity and the geometry of the roadway is suitable for this type of use.</td>
</tr>
<tr>
<td>Upper Mount Albion Road</td>
<td>Rymal Road to Stone Church Road</td>
<td>Does not provide good connectivity due to lack of connection to Mud Street/Lincoln Alexander Parkway. The geometry of the roadway is not desirable for this type of use because of the rolling vertical geometry, narrow pavement width and a lack of shoulders.</td>
</tr>
<tr>
<td>Stone Church Road</td>
<td>Upper Mount Albion Road to Upper James Street</td>
<td>Provides good east-west connectivity and the geometry of the roadway is suitable for this type of use.</td>
</tr>
</tbody>
</table>
Route Alternatives

Legend

Route alternatives
Schematic of Karst Core Boundary

Note: Current opportunities for trips destined to North and West

Exhibit 3-1
Route Alternatives

Rymal Road Planning Area (ROPA 9)
Master Plan Class Environmental Assessment

City of Hamilton

June 2006

Not to Scale
3.2.5 Transit Service

The City of Hamilton recognizes the importance of transit service through the following policies for the Transportation Master Plan Policy Papers:

Provide a more balanced transportation system where walking, cycling, transit and shred-ride transportation are attractive and competitive to travel by private automobiles.

Increase opportunities for all residents and employees of the City of Hamilton to have access to the transit system.

The existing transit service in the Study Area does not provide connections to the Rymal Road Planning Area. The existing routes service the Trinity Neighbourhood and the area surrounding the Special Policy Area ‘C’ lands.

3.2.6 Pedestrian and Bicycle Network

The City of Hamilton recognizes the importance of walking and cycling through several of the policies for the Transportation Master Plan Policy Papers, such as:

Provide a more balanced transportation system where walking, cycling, transit and shred-ride transportation are attractive and competitive to travel by private automobiles.

Continue to improve and expand the existing network of pedestrian and bicycle infrastructure.

The Policy Papers also recognize that these uses should be considered in the establishment of the right-of-way, and in the design of new roads and the reconstruction of existing roads.

There is a lack of sidewalks in the Study Area. Rymal Road and Regional Road 56 do not have any sidewalks throughout the Study Area.

3.3 Future Conditions

MRC collected existing (2005) traffic data on Rymal Road and forecasted future traffic demands within the Study Area using the City’s EMME/2 model. The needs assessment in this Study is based on the traffic forecasts provided by MRC in their memo dated June 13, 2005 (which is included in Appendix F.1) and modifications to reflect growth within Binbrook.

Various network scenarios were modelled for the AM peak hour. Four main scenarios were evaluated for the planning horizon years of 2011 and 2021. The scenarios included the following:
With and without the ROPA 9 development on the existing road network
With and without the ROPA 9 development on the future road network

The detailed assumptions regarding the traffic forecasts are provided in Appendix F.1.

### 3.3.1 Background Traffic Growth

Background traffic growth was developed based on a review of the City’s travel demand forecast volumes. The anticipated growth rates on Rymal Road, without any development of the ROPA 9 planning area, are summarized in Table 3-5.

**Table 3-5: Background Growth**

<table>
<thead>
<tr>
<th>Period</th>
<th>Growth per annum</th>
<th>Average Annual Growth</th>
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<tbody>
<tr>
<td>2005-2011</td>
<td>2.6%</td>
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<tr>
<td>2011-2021</td>
<td>0.3%</td>
<td>1.2%</td>
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### 3.3.2 Planned Road Improvements

The Red Hill Valley Parkway (previously known as the Red Hill Creek Expressway) is a four-lane north-south facility connecting the Lincoln Alexander Parkway to the QEW. The facility is currently under construction and is scheduled to open in the fall of 2007.

### 3.3.3 Future Link / Midblock Analysis

With projected traffic volumes, link capacity analysis was undertaken on Rymal Road throughout the corridor based on the existing conditions in the Rymal Road corridor. **Table 3-6** indicates the anticipated traffic conditions with planned road improvements including the construction of the Red Hill Valley Parkway. **Table 3-6** indicates that by 2011 peak hour volumes will exceed demand of a 2 or 3 lane facility on Rymal Road.
### Table 3-6: Future Link Operations – without widening Rymal Road (2 travel lanes)

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</table>
3.3.4 Screenline Analysis

Screenline analysis was undertaken to assess the adequacy and appropriateness of the operating conditions for north-south components of the transportation network. Arterial road links were assessed in terms of their carrying capacity, and local / collector roads were assessed in terms of their functional capacity. Table 3-8 summarizes the results.

An extension of Trinity Church Road north of Rymal Road as a 4-lane arterial would be reasonably well utilized with an estimated 1,300 vph in 2011 and 1,650 vph in 2021.

The forecasted volumes for Upper Mount Albion Road will exceed the typical threshold of a local road. If Upper Mount Albion Road was to be closed, it is anticipated that most traffic would divert to the adjacent Trinity Church Road extension. A 4-lane extension of Trinity Church Road north of Rymal Road would have sufficient capacity to accommodate the additional traffic demand (maximum link v/c of 0.68).

3.3.5 Future Intersection Operations

The operations of the Study intersections were analyzed for the future horizon years using the HCM analysis methodology in Synchro v6. A minimum four-lane cross-section was assumed on Rymal Road based on the results of the link/mid-block analysis, with appropriate turn lanes at the intersections. Forecasted turning movement volumes are presented in Exhibit 3-2 and Exhibit 3-3 for the 2011 and 2021 horizons.

The existing major unsignalized intersections within the Study Area are assumed to be signalized or roundabouts under future conditions based on the forecasted volumes and the widening of Rymal Road. Signal timings and phasings were optimized, with cycle lengths from 60 to 120 seconds, to best accommodate the traffic volumes. The phasing of the existing signalized Rymal Road / Upper Centennial Parkway intersection was retained for future year analyses.
Exhibit 3-3

2021 Turning Movement Forecasts

Rymal Road Corridor
## Table 3-8: Screenline Operations North of Rymal Road – Future Conditions (AM)

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<tbody>
<tr>
<td>North of Rymal Road</td>
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<tr>
<td>Trinity Church Road (4-lane arterial)</td>
<td>N/A</td>
<td>730</td>
<td>0.41</td>
<td>565</td>
<td>0.31</td>
<td>785</td>
<td>0.44</td>
<td>860</td>
<td>0.48</td>
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<tr>
<td>Upper Mount Albion Road (local)</td>
<td>300</td>
<td>410</td>
<td><strong>1.36</strong></td>
<td>160</td>
<td>0.54</td>
<td>430</td>
<td><strong>1.44</strong></td>
<td>170</td>
<td>0.57</td>
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<td>Second Road West, south of Gatestone (collector)</td>
<td>500</td>
<td>130</td>
<td>0.26</td>
<td>135</td>
<td>0.27</td>
<td>135</td>
<td>0.27</td>
<td>140</td>
<td>0.28</td>
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<tr>
<td>Whitedeer Road (collector)</td>
<td>500</td>
<td>105</td>
<td>0.21</td>
<td>140</td>
<td>0.28</td>
<td>110</td>
<td>0.22</td>
<td>150</td>
<td>0.30</td>
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<tr>
<td>Upper Centennial Parkway (4-lane arterial)</td>
<td>1800</td>
<td>1390</td>
<td>0.77</td>
<td>950</td>
<td>0.53</td>
<td>1575</td>
<td>0.88</td>
<td>1125</td>
<td>0.63</td>
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<td>Screenline Total</td>
<td><strong>3100</strong></td>
<td><strong>2765</strong></td>
<td><strong>0.56</strong></td>
<td><strong>1950</strong></td>
<td><strong>0.40</strong></td>
<td><strong>3035</strong></td>
<td><strong>0.62</strong></td>
<td><strong>2445</strong></td>
<td><strong>0.50</strong></td>
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1. assumed link capacity of 900 vphpl for arterial, 500 vphpl for collector, and 300 vphpl for local roads
2. without Trinity Church Extension or equivalent north of Rymal Road
Table 3-9 and Table 3-10 summarize the future intersection operations and levels of service for the Study Area signalized intersections. Detailed level of service calculations are provided in Appendix F.2.

The City of Hamilton’s Level of Service Policy Paper recommends a level of service (LOS) “D” as the desired minimum standard for planning decisions for all modes. The policy paper recognizes the need for flexibility in applying this standard at a screenline level as it may not always be possible, or appropriate, to meet this standard for individual corridors.

**Table 3-9: 2011 Signalized Intersection Operations**

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<th>Location</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
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<td>Rymal Road / Trinity Church Road</td>
<td>0.62 (C)</td>
<td>0.87 (D)</td>
</tr>
<tr>
<td>Rymal Road / Upper Mt. Albion Road</td>
<td>0.73 (B)</td>
<td>0.75 (B)</td>
</tr>
<tr>
<td>Rymal Road / Fletcher Road</td>
<td>0.61 (B)</td>
<td>0.60 (B)</td>
</tr>
<tr>
<td>Rymal Road / Second Road</td>
<td>0.58 (B)</td>
<td>0.47 (B)</td>
</tr>
<tr>
<td>Rymal Road / Whitedeer Road</td>
<td>0.48 (B)</td>
<td>0.77 (B)</td>
</tr>
<tr>
<td>Rymal Road / Upper Centennial Parkway</td>
<td>0.92 (D)</td>
<td>0.67 (C)</td>
</tr>
<tr>
<td>Regional Road #56 / New Collector Road</td>
<td>0.39 (B)</td>
<td>0.45 (B)</td>
</tr>
</tbody>
</table>

v/c - volume to capacity ratio  
LOS – level of service

**Table 3-10: 2021 Signalized Intersection Operations**

<table>
<thead>
<tr>
<th>Location</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rymal Road / Trinity Church Road</td>
<td>0.68 (C)</td>
<td>1.01 (E)*</td>
</tr>
<tr>
<td>Rymal Road / Upper Mt. Albion Road</td>
<td>0.75 (B)</td>
<td>0.83 (B)</td>
</tr>
<tr>
<td>Rymal Road / Fletcher Road</td>
<td>0.63 (B)</td>
<td>0.71 (B)</td>
</tr>
<tr>
<td>Rymal Road / Second Road</td>
<td>0.61 (B)</td>
<td>0.59 (B)</td>
</tr>
<tr>
<td>Rymal Road / Whitedeer Road</td>
<td>0.49 (B)</td>
<td>0.80 (B)</td>
</tr>
<tr>
<td>Rymal Road / Upper Centennial Parkway</td>
<td>0.94 (D)</td>
<td>0.88 (C)</td>
</tr>
<tr>
<td>Regional Road #56 / New Collector Road</td>
<td>0.47 (B)</td>
<td>0.61 (B)</td>
</tr>
</tbody>
</table>

v/c - volume to capacity ratio  
LOS – level of service  
* dual southbound left-turn required to accommodate forecast volumes
The Rymal Road / Trinity Church Road intersection will have an overall v/c ratio of 1.01, and individual movements with v/c ratios which exceed capacity at 2021. Based on projected demands, additional intersection capacity is recommended (a dual southbound left-turn lane could be a potential improvement). The recommended road network configuration to accommodate future traffic demand is illustrated in Exhibit 3-4.

### 3.3.6 Collector Roads and Area Access

The proposed accesses to the ROPA 9 lands and the collector road system are illustrated in Exhibit 3-5. The collector road system layout was assessed to determine:

- The appropriate configuration of intersection connections to the arterial road system, and
- The operational requirements of collector roads that may affect the road design.

Based on the intersection level of service analysis, the recommended intersection lane configurations are summarized in Exhibit 3-4. Capacity equivalent to two-lanes per direction plus exclusive left and right turn lanes are necessary to accommodate projected demands on Regional Road 56 at the new collector road connection south of Rymal Road.

It is the City’s policy that all roads within the urban boundary are built to urban standards with full municipal services. The design of the collector road system should be consistent with the City of Hamilton’s Development Engineering Guidelines.

The City’s Official Plan states that collector roads should have sufficient right-of-way to accommodate transit operations including pick-up and drop-off areas.

### 3.3.7 Trinity Church Road Extension and Upper Mount Albion Road Closure

Additional model runs and review of the spreadsheet assignments were performed to assess the need and timing for the extension of Trinity Church Road northerly from Rymal Road and the potential closure of Upper Mount Albion Road. The extension of Trinity Church Road would provide additional north-south capacity to accommodate increasing traffic demands. The potential closure of Upper Mount Albion Road at Rymal Road would limit traffic growth on the facility and maintain its local road function.

Upper Mount Albion Road is designated a local road with the primary function of serving abutting land uses. The ITE Guidelines for Residential Subdivision Street Design indicates that typical average daily traffic (ADT) for residential local roads ranges from 100 to 1,500 vehicles per day. The AM peak hour traffic is approximately 7-8% of the ADT and the PM peak hour traffic is approximately 10% of the ADT. Similarly, the TAC Geometric Design Guide for Canadian Roads indicates the typical ADT for a rural local road or residential urban local road is less than 1,000 vehicles per day (approximately less than 100 vph during peak hours).
Notes:
*1 Consideration of southbound dual lefts.
*2 Potential future closure of Upper Mount Albion Road north of Rymal Road.
Exhibit 3-5

Proposed Accesses & Collector Roads

Source: Streetscape Manual: Rymal Road Secondary Plan, June 2003
The existing traffic volumes on Upper Mount Albion Road are approximately 400 vehicles per hour (2-way) during the AM peak hour and 350 vehicles per hour (2-way) during the PM peak hour. The existing traffic volumes on Upper Mount Albion Road already exceed the functional capacity of a local road. Upper Mount Albion is currently providing an important role and function as a north-south link between Rymal Road and Stone Church Road. As such, it is operating more as an arterial roadway function, although it is designated a local road.

The traffic forecasts for various scenarios with and without Upper Mount Albion Road and Trinity Church Road were provided by MRC in their memo dated July 19th, 2005 which is included in Appendix F.3.

The following network alternatives were considered for 2011 and 2021:

- Network alternative 1: with Upper Mount Albion Road open and with the Trinity Church Road extension in place
- Network alternative 2: with Upper Mount Albion Road open and without the Trinity Church Road extension in place
- Network alternative 3: with Upper Mount Albion Road closed and without the Trinity Church Road extension in place
- Network alternative 4: with Upper Mount Albion Road closed and with the Trinity Church Road extension in place

As detailed in the MRC memo, the EMME/2 modelling indicated that the closure of Upper Mount Albion Road would divert traffic to Trinity Church Road as well as other north-south corridors such as Dartnall Road, and Upper Centennial Parkway. The model also indicated that without the Trinity Church Road extension, traffic would mainly utilize Upper Mount Albion Road and Pritchard Road. A discussion on the results of each alternative is provided in Appendix F.3.

The preferred alternative, from a network perspective, is alternative 4 – to close Upper Mount Albion Road with a Trinity Church Road extension in place. Under a worst-case scenario where all traffic is diverted to Trinity Church Road, a 4-lane cross section on Trinity Church Road is needed to accommodate traffic demands up to 2021. Dual left turn lanes may be required to accommodate the high southbound left turn volumes at the Trinity Church Road / Rymal Road intersection by 2021.

### 3.4 Non-auto Network

As development of the ROPA 9 area proceeds, transit and pedestrian improvements will be required to serve the community. It is the City’s policy to provide sidewalks on both sides of arterial roads such as Rymal Road.

The City of Hamilton’s Walking and Cycling Policy Paper has recommended that the existing network of pedestrian and bicycle infrastructure should be improved and expanded. Currently, designated bicycle and pedestrian routes are not available in the...
Rymal Road corridor. With the reconstruction of Rymal Road and the construction of new collector roads, there is an opportunity for the implementation of wider lanes or separate bike lanes on these facilities.

### 3.5 Road Safety Considerations

A safety review for the Rymal Road corridor was undertaken to review the collision history at the intersections and mid-block sections in the corridor. The City of Hamilton provided four years (2001-2004) of intersection and road segment collision history for Rymal Road between Trinity Church Road and Upper Centennial Parkway. The following is a summary of the key issues identified by the safety review.

A summary of the collision history of the Rymal Road corridor is provided in Table 3-11 and Table 3-12, and in Appendix G.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rymal Road / Upper Centennial Parkway (Highway 20 / Highway 56)</td>
<td>0</td>
<td>16</td>
<td>10</td>
<td>26</td>
<td>6.5</td>
</tr>
<tr>
<td>Rymal Road / Swayze Road</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Rymal Road / Whitedeer Road</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Rymal Road / Second Road West</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0.75</td>
</tr>
<tr>
<td>Rymal Road / Fletcher Road</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Rymal Road / Upper Mount Albion Road</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Rymal Road / Trinity Church Road</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Although the number of collisions for the time period is not high, a significant number of the total collisions involved an injury. A large portion of the intersection collisions are attributed to turning movements.
Table 3-12: Road Segment Collisions Summary for Rymal Road (2001 to 2004)

<table>
<thead>
<tr>
<th>Rymal Road Segment</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swayze Road to Upper Centennial Parkway</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>Whitedeer Road to Swayze Road</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Second Road West to Whitedeer Road</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Fletcher Road to Second Road West</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Upper Mount Albion Road to Fletcher Road</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>Trinity Church Road to Upper Mount Albion Road</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The Swayze Road to Upper Centennial Parkway road segment experienced 10 collisions, which were a combination of the following vehicle collision patterns: turning (5), single-motor vehicle (2), sideswipe (1), intersection 90 degrees (1), and rear end (1). The Upper Mount Albion Road to Fletcher Road road segment experienced 10 collisions, which were mostly single motor vehicle (6) and rear end (3) collision patterns. The eight collisions that occurred on the road segment between Fletcher Road and Second Road west were various collision patterns, single motor vehicle (1), head on (3), rear end (3) and left-turn (1). No collision patterns are identified.

Property damage only (PDO) collisions account for over 50% of the total collisions (18/35).

### 3.6 Summary of Needs and Opportunities

#### Rymal Road Widening

Based on link analysis, sections of the Rymal Road corridor are approaching capacity under existing traffic conditions. Additional east-west traffic capacity (equivalent to one travel lane per direction) is needed as early as 2006 (v/c = 1.0 between Upper Mount Albion Road and Fletcher Road). A 4-lane Rymal Road can accommodate the anticipated growth in the ROPA 9 area beyond 2021.

#### Upper Mount Albion Road Closure and Trinity Church Road Extension

Existing traffic volumes on Upper Mount Albion Road are at the functional capacity of a typical local road. Upper Mount Albion is currently providing an important role and function as a north-south link between Rymal Road and Stone Church Road. As such, it
is operating more as an arterial roadway function, although it is designated a local road. Future traffic volumes are anticipated to exceed the capacity of a local road under 2011 and 2021 conditions. Traffic management measures to limit or reduce traffic levels on Upper Mount Albion Road and to keep its local road function, would be appropriate by 2011. However, additional north-south capacity at the west end of the Study Area would be required to accommodate the diverted traffic, and should therefore be coordinated with construction of a new roadway to provide this capacity.

At the same time, there is also insufficient north-south capacity in the Study Area road network to accommodate future traffic demands. Additional north-south capacity (equivalent to 2 lanes per direction) is needed in the Trinity Church Road Corridor by 2011. A 4-lane extension of Trinity Church Road north of Rymal Road would have sufficient capacity to accommodate future traffic demands, including diverted traffic, should Upper Mount Albion Road be closed to through traffic.

The North Glanbrook Industrial Business Park Master Plan has identified a need for a longer-term extension of Trinity Church Road to continue south of Rymal Road to service the Business Park and to allow flexibility for a potential future connection to the airport.

It is important for the intersection of the 4-lane extension of Trinity Church Road and Rymal Road to operate adequately prior to any extension / widening of Trinity Church Road south of Rymal Road. Accommodation is required at this intersection for high southbound left turn demands at Rymal Road from the freeway network by 2021.

**Regional Road 56**

As development of the ROPA 9 area proceeds, a collector road network will be established with a connection to Regional Road 56. Additional traffic capacity equivalent to one additional travel lane per direction will be needed to accommodate the additional traffic from the collector road connection.

Improving services for transit usage, and facilities for cycling and pedestrian usage to serve the community, as development of the Rymal Road Planning Area proceeds, is required.
4. NEEDS AND OPPORTUNITIES – TRINITY NEIGHBOURHOOD

A Trinity Neighbourhood Traffic Assessment was also undertaken to incorporate a greater network perspective into the ROPA 9 Master Plan. Exhibit 4-1 shows the Study Area of this assessment.

Exhibit 4-1: ROPA 9 Study Area (with identification of Trinity Neighbourhood)
As part of the Trinity Neighbourhood Traffic Assessment, the study of several issues for the Trinity Neighbourhood was undertaken, including:

- A review of the existing transportation system and services,
- A review of existing road network discontinuities,
- A review of existing traffic level of service for road links and intersections,
- A review of access points and collector road needs,
- An assessment of future traffic levels of service for road links and intersections, and identification of transportation needs,
- A review of collision history of the roads,
- Identification of opportunities for traffic management measures, and
- Recommendation of transportation management measures and appropriate implementation schedule.

### 4.1 Existing Study Area Conditions

#### 4.1.1 Land Uses

Existing land uses in the Trinity neighbourhood are predominately residential uses, with associated schools, churches, and fire station within the neighbourhood.

The Gatestone Elementary School is located on the west side of Gatestone Drive. A blue school zone advance warning sign is provided on Gatestone Drive. A blue school zone crossing sign and pavement markings are provided at the crossing on Gatestone Drive. A crossing guard is provided at the crossing.

St. Mark’s Elementary School is located on the southwest corner of the intersection of Whitedeer Road and Highbury Drive. The posted speed limit is reduced to 40 km/h in the vicinity of the school on both Whitedeer Road and Highbury Drive. A crossing guard is provided at the corner of Whitedeer Road and Highbury Drive.

#### 4.1.2 Truck Routes

Collector roads and local roads in residential neighbourhoods are designated for passenger and service vehicles only, according to TAC guideline. Heavy trucks should normally be routed on arterial roads, excepted for areas of industrial or commercial uses.

Upper Mount Albion Road, although a designated local road, is currently designated a Regional truck route. The appropriateness of Upper Mount Albion Road as a truck route will be reviewed as part of the truck route study which is being undertaken by the City.

#### 4.1.3 Emergency Services Routes

The fire station which services the Trinity Neighbourhood is Station 17, which is located at Mud Street and Isaac Brock Drive.
The station uses Upper Mount Albion Road and Trinity Church Road to access communities to the south of Rymal Road, as far as Trinity Church Road and Golf Club Road. Fire truck operators expressed concerns over a potential closure of Upper Mount Albion Road, which would cause them to reroute to Upper Centennial Parkway, Pritchard Road, and Fletcher Road to access the communities to the south of Rymal Road. This would greatly increase the fire truck response time.

The station uses Second Road West as a route to access the Trinity Neighbourhood. Fire truck operators also expressed concerns over a potential closure of Second Road West, which would divert the current routing to Highland Road and to Gatestone Drive. Fire truck operators generally try to avoid school zones when responding to emergencies.

## 4.1.4 Transit Service

The City of Hamilton recognizes the importance of transit service through the following policies for the Transportation Master Plan Policy Papers:

*Provide a more balanced transportation system where walking, cycling, transit and shred-ride transportation are attractive and competitive to travel by private automobiles.*

*Increase opportunities for all residents and employees of the City of Hamilton to have access to the transit system.*

The existing transit service in the Trinity Neighbourhood services a portion of Gatestone Drive, Highland Road and Highbury Drive.

### 4.1.5 Pedestrian and Bicycle Network

There is a lack of pedestrian and bicycle network connectivity in the Trinity Neighbourhood. Upper Mount Albion Road does not have any sidewalks, and Second Road West has some sections with sidewalks on both sides, some sections with sidewalks on only one side of the roadway and the sidewalk is discontinuous.

The City of Hamilton recognizes the importance of walking and cycling through several of the policies for the Transportation Master Plan Policy Papers, such as:

*Provide a more balanced transportation system where walking, cycling, transit and shred-ride transportation are attractive and competitive to travel by private automobiles.*

*Continue to improve and expand the existing network of pedestrian and bicycle infrastructure.*

The Policy Papers also recognize that these uses should be considered in the establishment of the right-of-way, and in the design of new roads and the reconstruction of existing roads. There are opportunities to improve the existing conditions.
4.1.6 Design Conditions of Road Network

Table 4-1 summarizes the design conditions of the existing road network, including vertical geometry and setback, within the Trinity Neighbourhood with their designated road classifications. Other road features including posted speed limit, general pavement width, the type of cross section, and the provision of sidewalks are also summarized.

Table 4-1: Comparison of Roadway Design Conditions

<table>
<thead>
<tr>
<th>Street</th>
<th>Designation</th>
<th>Posted Speed Limit</th>
<th>Pavement Width (~m)</th>
<th>Vertical Geometry</th>
<th>Cross-Section / Setback</th>
<th>Sidewalk</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Road West (north of Gatestone)</td>
<td>Local</td>
<td>50</td>
<td>8.5</td>
<td>Generally flat</td>
<td>Urban 10 to 20 m setback</td>
<td>varies</td>
</tr>
<tr>
<td>2nd Road West (south of Gatestone)</td>
<td>Collector</td>
<td>50</td>
<td>10.0</td>
<td>Generally flat</td>
<td>Urban 15 m setback</td>
<td>one side (east)</td>
</tr>
<tr>
<td>Gatestone Drive</td>
<td>Collector</td>
<td>50/40</td>
<td>10.0</td>
<td>Generally flat</td>
<td>Urban 15 m setback</td>
<td>both sides</td>
</tr>
<tr>
<td>Whitedeer Road</td>
<td>Collector</td>
<td>40</td>
<td>14.0</td>
<td>Generally flat</td>
<td>Urban 10 to 15 m setback</td>
<td>one side (east) both sides at school</td>
</tr>
<tr>
<td>Highbury Drive</td>
<td>Collector</td>
<td>40/50</td>
<td>11.5</td>
<td>Generally flat</td>
<td>Urban 10 to 20 m setback</td>
<td>both sides</td>
</tr>
<tr>
<td>Upper Mount Albion Road</td>
<td>Local</td>
<td>60</td>
<td>7.0</td>
<td>Rolling</td>
<td>Rural 15 to 30 m setback</td>
<td>none</td>
</tr>
</tbody>
</table>

4.2 Existing Conditions

4.2.1 Volume to capacity

The existing 24-hour traffic volumes on the north-south roads in the Trinity Neighbourhood connecting Rymal Road and Highland Road were obtained from the City of Hamilton. The traffic volumes were collected between August 18th and November 14th, 2005.

Table 4-2 summarizes the designated road classes and the associated environmental capacities according to the 1999 Geometric Design Guide for Canadian Roads by the Transportation Association of Canada (TAC). The existing two-way 24-hour traffic...
volumes were compared to the road capacity in the table; the road sections that have a demand over capacity are underlined. The acceptability of the existing road geometry for the daily traffic volumes is also summarized in the table.

Table 4-2: Existing Traffic Demand vs Road Capacity in the Trinity Neighbourhood

<table>
<thead>
<tr>
<th>Street</th>
<th>Designation</th>
<th>Environmental Capacity (24-hr)</th>
<th>Existing Demand (24-hr)</th>
<th>Demand/Capacity</th>
<th>Acceptable for Road Design Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Road W</td>
<td>Local</td>
<td>&lt;1,500</td>
<td>2,200</td>
<td>Over</td>
<td>Second Road West has a generally flat, urban cross-section; however, the pavement width north of Gatestone is narrow for these daily volumes.</td>
</tr>
<tr>
<td>N of Gatestone</td>
<td>Collector</td>
<td>&lt;8,000</td>
<td>2,300 / 3,000</td>
<td>Under</td>
<td></td>
</tr>
<tr>
<td>S of Gatestone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gatestone Drive</td>
<td>Collector</td>
<td>&lt;8,000</td>
<td>1,450 / 4,400</td>
<td>Under</td>
<td>Gatestone Drive has a generally flat, urban cross-section and pavement width which make the road geometry adequate for these daily volumes.</td>
</tr>
<tr>
<td>Whitedeer Road</td>
<td>Collector</td>
<td>&lt;8,000</td>
<td>4,000</td>
<td>Under</td>
<td>Whitedeer Road has a generally flat, urban cross-section with a very wide pavement width, making the geometry acceptable for these daily volumes.</td>
</tr>
<tr>
<td>Highbury Drive</td>
<td>Collector</td>
<td>&lt;8,000</td>
<td>1,700 / 1,900</td>
<td>Under</td>
<td>Highbury Drive has a generally flat, urban cross-section and pavement width which make the road geometry acceptable for these daily volumes.</td>
</tr>
<tr>
<td>Upper Mount Albion Road</td>
<td>Local</td>
<td>&lt;1,500</td>
<td>1,750 (N of Rymal) 1,400 (N of Highland)</td>
<td>Over</td>
<td>Upper Mount Albion Road has a rolling vertical geometry and a very narrow pavement width, which makes the geometry undesirable for these volumes.</td>
</tr>
</tbody>
</table>

The existing 24-hour traffic volumes on the north-south roads in the Trinity Neighbourhood range from 1,400 to 4,400 vehicles per day, with the highest volume (4,400) observed on Gatestone Drive north of Highbury Drive.

The existing traffic demand and capacity assessment indicates that the existing traffic demands on the collector roads are generally under the associated capacity of 8,000 vehicles per day, ranging from 1,450 to 4,400.
The traffic demands on the two designated local roads, Second Road West north of Gatestone Drive, and Upper Mount Albion Road, are over the associated local road capacity of 1,500 vehicles per day, with 2,200 observed for Second Road West and 1,750 for Upper Mount Albion Road.

Upper Mount Albion Road has a rolling vertical geometry and a narrow pavement width, which makes the geometry undesirable for these volumes. Upper Mount Albion is currently providing an important role and function as a north-south link between Rymal Road and Stone Church Road. As such, it is operating more as an arterial roadway function, although it is designated a local road.

### 4.2.2 Travel Speeds

#### 4.2.2.1 Second Road West

Second Road West is a two-lane collector road for the south section between Rymal Road and Gatestone Drive, and a local road north of Gatestone Drive. The posted speed limit is 50 km/h.

Motor vehicle speed distribution data on Second Road West were provided by the City of Hamilton. The data were collected for the north section (local road) between Fairhaven Drive and Shadetree Crescent for the northbound and southbound directions, by each hour from July 14\(^{th}\) to July 16\(^{th}\), 2003. The directional average daily speed distribution data are summarized in Table 4-3.

#### Table 4-3: Average Daily Speed Distribution on Second Road West (Fairhaven to Shadetree)

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;91</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB</td>
<td>463</td>
<td>219</td>
<td>223</td>
<td>163</td>
<td>75</td>
<td>34</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1,203</td>
</tr>
<tr>
<td>SB</td>
<td>428</td>
<td>226</td>
<td>186</td>
<td>107</td>
<td>62</td>
<td>23</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>11</td>
<td>1,060</td>
</tr>
<tr>
<td>Total</td>
<td>891</td>
<td>445</td>
<td>409</td>
<td>270</td>
<td>137</td>
<td>57</td>
<td>19</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>20</td>
<td>2,263</td>
</tr>
</tbody>
</table>

Source: City of Hamilton, July 14 to July 16, 2003 average.

The 85\(^{th}\) percentile speed on Second Road West fell into the range of 51 to 55 km/h. The data in the above table indicated that large numbers of vehicles were traveling over the posted speed limit of 50 km/h, for both the northbound and southbound directions. An average total of 248 vehicles were observed speeding (as designated by italics in Table 4-3), which accounts for 23% of the total average daily volume of 2,263 vehicles. 20 vehicles were observed traveling at excessive high speeds of over 90 km/h on this section of local road.
Additional motor vehicle speed distribution data on Second Road West were provided by the City of Hamilton for the midday hour. The data were collected for the north section (local road) between Fairhaven Drive and Shadetree Crescent for the northbound and southbound directions, by each hour for August 19th, 2004. The directional average midday hour speed distribution data are summarized in Table 4-4.

### Table 4-4: Average Midday Hour Speed Distribution on Second Road West (Fairhaven to Shadetree)

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;91</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB and SB</td>
<td>39</td>
<td>15</td>
<td>30</td>
<td>14</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>84 (76%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26 (24%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>77 (100%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Hamilton, NB and SB, 10:00 – 11:00 AM, August 19, 2004.

The 85th percentile speed on Second Road West was observed to be 53 km/h during the observed midday hour from 10:00 to 11:00 AM on August 19th, 2004. A compliance rate of only 76% was observed. 26 vehicles were observed to be speeding (as designated by the italics in Table 4-4). No vehicles were observed to travel at a speed of 10 km/h higher than the posted speed limit.

Daily motor vehicle speed distribution data on Second Road West was taken again in September, 2005 by the City of Hamilton. The data were collected for the north section (local road) between Fairhaven Drive and Shadetree Crescent for the northbound and southbound directions, by each hour from September 13th to September 14th, 2005. The directional average daily speed distribution data are summarized in Table 4-5.

### Table 4-5: Average Daily Speed Distribution on Second Road West (Fairhaven to Shadetree)

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;81</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB</td>
<td>583</td>
<td>279</td>
<td>120</td>
<td>35</td>
<td>9</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td>1,036</td>
</tr>
<tr>
<td>SB</td>
<td>739</td>
<td>284</td>
<td>115</td>
<td>29</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td></td>
<td>1,186</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,322</td>
<td>563</td>
<td>235</td>
<td>64</td>
<td>18</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td></td>
<td></td>
<td>2,222</td>
</tr>
<tr>
<td></td>
<td>2,120(95%)</td>
<td></td>
<td>102 (5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,222 (100%)</td>
</tr>
</tbody>
</table>

Source: City of Hamilton, September 13 to September 14, 2005, 24-hour.

The 85th percentile speed on Second Road West was observed to be 46 km/h during the observed 24-hour on September 13th to 14th, 2005. A compliance rate of 95% was observed. 38 vehicles were observed speeding (as designated in italics in Table 4-5) which accounts for 5% of the total average daily volume of 2,222 vehicles.

The number of vehicles travelling at excessively high speeds of over 90 km/h may have some safety implications on Second Road West, which has residential driveways and frontage along it.
4.2.2.2 Upper Mount Albion Road

Upper Mount Albion Road is a two-lane local road. The posted speed limit on Upper Mount Albion Road between Rymal Road and Paramount Drive is 60 km/h. Motor vehicle speed distribution data on Upper Mount Albion Road were provided by the City of Hamilton. The data were collected for the section between Highland Road and Paramount Drive for the northbound and southbound directions, by each hour from January 19th to January 20th, 2006. The directional average daily speed distribution data are summarized in Table 4-6.

Table 4-6: Average Daily Speed Distribution on Upper Mount Albion (Highland to Paramount)

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;91</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB and SB</td>
<td>173</td>
<td>232</td>
<td>389</td>
<td>289</td>
<td>132</td>
<td>33</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1255</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1255 (100%)</td>
</tr>
</tbody>
</table>

Source: City of Hamilton, NB and SB, 15:45 – 16:45 PM, January 10, 2005.

The 85th percentile speed on Upper Mount Albion Road was observed to be 56 km/h. A compliance rate of 97% was observed. 40 vehicles were observed speeding (as designated in italics in Table 4-6) which accounts for 3% of the total average daily volume of 1255 vehicles.

Additional motor vehicle speed distribution data on Upper Mount Albion Road were provided by the City of Hamilton for the section between Rymal Road and Highland Road for the northbound and southbound directions, by each hour from January 19th to January 20th, 2006. The directional average daily speed distribution data are summarized in Table 4-7.

Table 4-7: Average Daily Speed Distribution on Upper Mount Albion (Rymal to Highland)

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;91</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB and SB</td>
<td>28</td>
<td>37</td>
<td>96</td>
<td>205</td>
<td>300</td>
<td>347</td>
<td>234</td>
<td>141</td>
<td>53</td>
<td>22</td>
<td>13</td>
<td>5</td>
<td>1481</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1481 (100%)</td>
</tr>
</tbody>
</table>

Source: City of Hamilton, NB and SB, 15:45 – 16:45 PM, January 10, 2005.

The 85th percentile speed on Upper Mount Albion Road was observed to be 71 km/h. A compliance rate of 45% was observed. 815 vehicles were observed speeding (as designated in italics in Table 4-7) which accounts for 3% of the total average daily volume of 1481 vehicles.
The City of Hamilton also provided speed survey data on this road section during the PM peak hour, as summarized in Table 4-8.

**Table 4-8: PM Peak Hour Speed Distribution on Upper Mount Albion (Rymal to Highland)**

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>1-40</th>
<th>41-45</th>
<th>46-50</th>
<th>51-55</th>
<th>56-60</th>
<th>61-65</th>
<th>66-70</th>
<th>71-75</th>
<th>76-80</th>
<th>81-85</th>
<th>86-90</th>
<th>&gt;91</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB and SB</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>11</td>
<td>17</td>
<td>16</td>
<td>11</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 (26%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57 (74%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>77 (100%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Hamilton, NB and SB, 15:45 – 16:45 PM, January 10, 2005.

The 85th percentile speed on Upper Mount Albion Road was observed to be 76 km/h during the PM peak hour. A compliance rate of only 26% was observed. 57 vehicles were observed speeding (as designated in italics in Table 4-8) which accounts for 74% of the total average peak hour volume of 77 vehicles. There were 16.9% of vehicles observed to travel at a speed of 15 km/h higher than the posted speed limit.

### 4.2.3 Road Safety Considerations

The City of Hamilton provided collision data for the road segments within the Trinity Neighbourhood for 4 years (2001 – 2004). **Table 4-9** summarizes the total number of intersection collisions, and **Table 4-10** summarizes the total number of road segment collisions by severity type.

The number of collisions per year were reviewed to determine the existing level of safety.

**Table 4-9: Intersection Collision Summary for Trinity Neighbourhood (2001 to 2004)**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Road West / Rymal</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0.75</td>
</tr>
<tr>
<td>Gatestone Drive / Second Road West</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Whitdeeer / Highbury</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
</tr>
<tr>
<td>Whitdeeer / Rymal</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Highland / Second Road West</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Upper Mount Albion / Highland</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Upper Mount Albion / Paramount</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Upper Mount Albion / Rymal</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0</strong></td>
<td><strong>4</strong></td>
<td><strong>10</strong></td>
<td><strong>14</strong></td>
<td></td>
</tr>
</tbody>
</table>
A total of 14 collisions were reported at intersections during the four-year period for the five major north-south roads in the Trinity Neighbourhood. Property damage only (PDO) collisions account for 70% (10/14) of the total collisions.

There were no collisions reported at the Gatestone Drive / Second Road West, or at the Highland Road / Second Road West intersections.

The collision history of the road segments is summarized in Table 4-10.

**Table 4-10: Road Segment Collision Summary for Trinity Neighbourhood (2001 to 2004)**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Road West</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Highland Rd to Rymal Rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gatestone Drive</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.50</td>
</tr>
<tr>
<td>Second Rd W to N Isaac Brock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitedeer Road</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Highbury to Rymal Rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highbury Drive</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.50</td>
</tr>
<tr>
<td>Highland Rd to Gatestone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Mount Albion Road</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
</tr>
<tr>
<td>Paramount to Rymal Rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

A total of 5 collisions were reported on road segments during the four-year period for the five major north-south roads in the Trinity Neighbourhood. Property damage only (PDO) collisions account for 60% of the total collisions (3/5).

There were no collisions reported on Second Road West and on Whitedeer Road (segments).

**4.3 Future Conditions**

Concerns were raised by local residents within the Trinity Neighbourhood regarding the potential increase of traffic on the local roads due to the future development in the ROPA 9 area. Second Road West north of Gatestone Drive, and Upper Mount Albion Road are designated local roads, according to the City of Stoney Creek Official Plan. As assessed in Section 4.2.1, the current daily traffic demand on these two local roads is currently over the associated environmental capacity. With the increase of future ROPA 9 traffic, which is mainly destined to the North and West, an increase in traffic demands are
anticipated for these local roads, resulting in further impaired traffic operation conditions and impacts to the residential neighbourhoods.

A comprehensive strategic traffic management plan is required with the anticipated future growth in ROPA 9, taking both the ROPA 9 lands and the Trinity Neighbourhood into consideration.

The objective of the traffic management plan is to ensure that successful transportation service is provided for the whole area, supporting the future development, while minimizing negative impacts to the existing conditions. This will require appropriate road network planning for the area, providing sufficient capacity and convenient accesses to accommodate increasing future traffic demands throughout the road network. Meanwhile, traffic should be managed and directed to appropriate routes to maintain appropriate road functions, with long distance travel mainly on arterial roads, and local roads mainly serving local trips. Road network implementation strategy and timing are key to ensure the success of traffic operations on the whole network. Road network safety, the accessibility for emergency vehicles, impacts / benefits to communities and other traffic related factors should all be taken into consideration in the traffic management plan.

4.4 Summary of Needs and Opportunities

The traffic demands on Second Road West north of Gatestone Drive, and on Upper Mount Albion Road are over the volumes typically associated with local roads of 1,000 to 1,500 vehicles per day. Second Road West is observed to be carrying approximately 2,200 vehicles per day, and Upper Mount Albion Road approximately 1,750 vehicles per day.

The pavement width of Second Road West, north of Gatestone Drive is narrow for the daily traffic volumes it currently experiences. Upper Mount Albion Road between Rymal Road and Highland Road has a rolling vertical alignment at the north section, and a very narrow pavement width, which makes the geometry undesirable for the volumes it is currently experiencing.

There is a potential that future development of the ROPA 9 lands will exacerbate the existing traffic conditions on roadways within the Trinity Neighbourhood. As a result, solutions are necessary to address these issues.
5.Needs and Opportunities - Special Policy Area ‘C’

Special Policy Area ‘C’ includes 4.7 ha of commercial and residential lands, which is also known as the Heritage Green Development. The City has received applications for the development of these lands.

The City of Hamilton and iTRANS undertook a review of the traffic forecasts prepared by the Heritage Green developer in the September 2005 Updated Traffic Study, prepared by Delcan Consulting. This study assessed future conditions and impacts of traffic generated by Special Policy Area ‘C’ (SPA ‘C’). These forecasts were compared to projections from McCormick Rankin Corporation (MRC) developed for the North Glanbrook Industrial Business Park (NGIBP) study, and estimates prepared by the City.

The following summarizes the assessment of the forecasts and presents the basis for traffic projections. The analysis takes into account the effects of the Red Hill Valley Parkway (RHVP), and the proposed new arterial connection from the RHVP ramps at Stone Church Road to Rymal Road, commonly referred to as the “Trinity Church Road extension”. These forecasts were analysed to determine the adequacy of the road network to accommodate the SPA ‘C’ traffic.

5.1 Existing Study Area Conditions

5.1.1 Land Uses

The Janet Lee Elementary School is located on the southwest corner of the intersection of Winterberry Drive and Paramount Drive. A blue school zone advance warning sign is provided on Winterberry Drive.

The Salvation Army Church is located on the northeast corner of the intersection of Winterberry Drive and Paramount Drive.

Residential properties exist on Upper Mount Albion Road, north of Paramount Drive.

5.1.2 Truck Routes

Collector roads and local roads in residential neighbourhoods are designated for passenger and service vehicles only, according to TAC guideline. Heavy trucks should normally be routed on arterial roads, excepted for areas of industrial or commercial uses.

Stone Church Road is currently designated a Regional truck route.
5.1.3 Transit Service

The City of Hamilton recognizes the importance of transit service through the following policies for the Transportation Master Plan Policy Papers:

Provide a more balanced transportation system where walking, cycling, transit and shared-ride transportation are attractive and competitive to travel by private automobiles.

Increase opportunities for all residents and employees of the City of Hamilton to have access to the transit system.

The existing transit service in Special Policy Area ‘C’ services a portion of Winterberry Drive and Stone Church Road – Paramount Drive.

5.1.4 Pedestrian and Bicycle Network

There is a lack of pedestrian and bicycle network connectivity in the vicinity of Special Policy Area ‘C’. Stone Church Road does provide bicycle lanes, but they are discontinuous in the vicinity of Upper Mount Albion Road. Winterberry Drive has sidewalks on the east side of the roadway only. Paramount Drive has sidewalks on the south side of the roadway partially between Upper Mount Albion Road and Winterberry Drive, and on both sides east to Mud Street. There are opportunities to improve current conditions.

5.2 Existing Traffic

The existing 2004 / 2005 turning movement volumes in the developer’s traffic study were adopted as base year volumes.

5.3 Traffic Forecasts

Based on the review of traffic forecasts from the above-mentioned sources, the future traffic conditions in the Study Area were assessed for the AM and PM peak hour conditions, as described below.

5.3.1 2012 Background Traffic Forecast

The future 2012 total background traffic was developed consisting of background through traffic growth, and traffic diversion as a result of the RHVP / LINC and Trinity Church Road extension (with Upper Mount Albion Road closed).
5.3.1.1 Background Growth

A screenline analysis of the EMME/2 model forecast volumes for the road network in the SPA 'C' Study Area was carried out to determine background traffic growth rates. It was observed that the growth rate on Stone Church Road, Mud Street, and Winterberry Drive were approximately 0% from 2001 to 2011. The future increased traffic demands on the east-west roads were mainly traffic diverted by the anticipated Rymal Road widening. Major north-south arterial roads (including Trinity Church Road extension) were observed to carry most of the increased north-south traffic demand.

Therefore, a 0% background growth rate was deemed appropriate and as a result, no background traffic growth was applied to Stone Church Road, Mud Street or Winterberry Drive.

5.3.1.2 Background Traffic Diversion Due to RHVP / LINC

The anticipated RHVP / LINC connection to Stone Church Road would significantly increase the traffic demands on Stone Church Road and on the LINC west of the RHVP, from the west to the north via the new expressway. These travel patterns were demonstrated in the EMME/2 model assignments. The new Stone Church Road / RHVP intersection would experience considerable eastbound left and southbound right turning demands.

The new connection is expected to attract much of the traffic currently using circuitous routes via Upper Mount Albion Road – Winterberry Drive – Mud Street or Stone Church Road (to/from the west). Winterberry Drive may experience decreased traffic due to the new parallel connection.

5.3.1.3 Background Traffic Diversion Due to Trinity Church Road Extension and Closure of Upper Mount Albion Road

The latest updated EMME/2 model runs with and without the Trinity Church Road extension were reviewed to determine the magnitude of north-south traffic demands that could be anticipated on the Trinity Church Road extension. Upper Mount Albion Road is assumed to be closed upon extension of Trinity Church Road. The closure of Upper Mount Albion would result in notable traffic diversion to the Trinity Church Road extension.

Approximately 1,300 peak direction volumes were estimated for the Trinity Church Road extension south of Stone Church Road during the AM peak hour, incorporation traffic diversion and background traffic growth including the Rymal Road Planning Area.
5.3.2 Site Traffic

The developer’s traffic study estimated SPA ‘C’ site traffic volumes were adopted to estimate the future total volumes with full build-out of SPA ‘C’. The estimated site traffic volumes were found to be reasonable.

5.4 Future Total Traffic

The future total traffic is the summation of the future background traffic and site generated traffic. Higher east-west through traffic volumes are noted on Stone Church Road and on Mud Street within the Study Area, and higher turning and through movement traffic volumes are estimated at the Stone Church Road / Trinity Church Road extension intersection, compared to the developer’s traffic study estimates.

The estimated future total traffic volumes (2012) are shown in Exhibit 5-1 Synchro analyses were carried out for the future total traffic conditions to determine the future road network requirements. The analysis results are summarized in Table 5-1 for the signalized intersections, and in Table 5-2 for the unsignalized intersections. Detailed level of service calculations are provided in Appendix F.
Exhibit 5-1
2012 Turning Movement Forecasts
Special Policy Area ‘C’
### Table 5-1: SPA’C Area Signalized Intersection Operations: 2012

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Critical Movement</th>
<th>AM Peak Hour v/c (LOS)</th>
<th>PM Peak Hour v/c (LOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone Church Rd / RHVP Ramp</td>
<td>Overall</td>
<td>0.93 (D)</td>
<td>0.88 (C)</td>
</tr>
<tr>
<td></td>
<td>EBL</td>
<td>0.94 (E)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>WBT</td>
<td>0.91 (E)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>WBR</td>
<td>0.90 (D)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>NBL</td>
<td>-</td>
<td>0.90 (F)</td>
</tr>
<tr>
<td></td>
<td>NBT</td>
<td>0.96 (D)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Dual SBL</td>
<td>0.92 (F)</td>
<td>0.99 (E)</td>
</tr>
<tr>
<td>Stone Church Rd / Upper Mt Albion Rd&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Overall</td>
<td>0.54 (B)</td>
<td>0.39 (B)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Paramount Dr / Winterberry Dr</td>
<td>Overall</td>
<td>0.59 (C)</td>
<td>0.60 (B)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Winterberry Dr / Entrance Road&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Overall</td>
<td>0.35 (A)</td>
<td>0.38 (A)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mud St / Winterberry Dr</td>
<td>Overall</td>
<td>0.91 (C)</td>
<td>0.77 (C)</td>
</tr>
<tr>
<td></td>
<td>WBTR</td>
<td>0.94 (D)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>NBL</td>
<td>0.92 (D)</td>
<td>-</td>
</tr>
<tr>
<td>Old Mud St / Winterberry Dr</td>
<td>Overall</td>
<td>0.27 (B)</td>
<td>0.40 (B)</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note:  
1. Critical Movement: movement that has a v/c ratio greater than 0.90  
2. v/c: volume to capacity ratio; LOS- Level of Service  
3. Traffic signal or roundabout required under future traffic conditions

As shown in Table 5-1, dual southbound left turn lanes will be required at the Stone Church Rd / RHVP Ramp intersection. This will be a heavily utilized movement, with the anticipated volumes almost reaching capacity in the PM peak hour by 2012 (v/c of 0.99). Other movements will operate with v/c ratios of 0.96 or less.
Table 5-2: SPA’C Area Unsignalized Intersection Operations: 2012 Total

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Key Movement</th>
<th>AM Peak Hour v/c (LOS)¹</th>
<th>PM Peak Hour v/c (LOS)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone Church Rd / Existing Driveway - Access B</td>
<td>NBLR</td>
<td>0.12 (C)</td>
<td>0.07 (C)</td>
</tr>
<tr>
<td></td>
<td>SBR</td>
<td>0.01 (C)</td>
<td>0.16 (B)</td>
</tr>
<tr>
<td></td>
<td>WBL</td>
<td>0.01 (A)</td>
<td>0.02 (B)</td>
</tr>
<tr>
<td>Stone Church Rd / Access A</td>
<td>EBL</td>
<td>0.10 (B)</td>
<td>0.24 (B)</td>
</tr>
<tr>
<td></td>
<td>SBR</td>
<td>0.09 (B)</td>
<td>0.34 (B)</td>
</tr>
<tr>
<td>Stone Church Rd / Egress E</td>
<td>SBR</td>
<td>0.05 (B)</td>
<td>0.11 (B)</td>
</tr>
</tbody>
</table>

Note: 1, v/c: volume to capacity ratio; LOS- Level of Service

As shown in Table 5-2, all of the unsignalized intersections will operate at acceptable levels of service.

5.5 Road Safety Considerations

A safety review of the Special Policy Area ‘C’ corridor was undertaken to review the collision history at the intersections and mid-block sections. The City of Hamilton provided four years (2001-2004) of intersection and road segment collision history. A summary of the collision history is provided in Table 5-3 and Table 5-4.

Table 5-3: Intersection Collisions Summary for SPA ‘C’ (2001 to 2004)

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Mount Albion / Paramount</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Paramount / Winterberry</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>1.75</td>
</tr>
<tr>
<td>Stone Church / Pritchard</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
</tr>
<tr>
<td>Paramount / Mud</td>
<td>0</td>
<td>17</td>
<td>5</td>
<td>22</td>
<td>5.5</td>
</tr>
<tr>
<td>Mud / Winterberry</td>
<td>0</td>
<td>15</td>
<td>12</td>
<td>27</td>
<td>6.75</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>36</td>
<td>25</td>
<td>61</td>
<td></td>
</tr>
</tbody>
</table>

The Paramount Drive / Mud Street intersection has a high proportion of injury collisions. Most of these are rear end or left turn (opposite through) collision patterns. The Mud Street / Winterberry Drive intersection also has a high proportion of injury collisions.
Most of these injury collisions are left turn (opposite through) collision patterns. The City has implemented signal timing and operational changes at these two intersections in an effort to improve user safety and traffic flow.

**Table 5-4: Road Segment Collisions Summary for SPA ‘C’ (2001 to 2004)**

<table>
<thead>
<tr>
<th>Road Segment</th>
<th>Fatalities</th>
<th>Injuries</th>
<th>Property Damage Only</th>
<th>Total</th>
<th>Annual Collisions (collisions per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone Church (Pritchard to Winterberry)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0.75</td>
</tr>
<tr>
<td>Winterberry (Mud to Highland)</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

The Stone Church road segment experienced 3 collisions which were all single motor vehicle collision pattern. Four collisions occurred on the Winterberry Drive segment. Each of these were different collision patterns, one single motor vehicle, one head on, one left-turn, and one right-turn. No collision patterns are identified.

**5.6 Summary of Needs and Opportunities**

The analyses indicated that with the development of Special Policy Area ‘C’, travel demand will exceed capacity on Stone Church Road, at the Red Hill Valley Parkway ramps, at Stone Church Road / Upper Mount Albion Road and at Winterberry Dr / Entrance Rd as unsignalized intersections, and for queuing on Winterberry Drive at Mud Street. Therefore, based on the results of the analyses, additional capacity will be needed on the road network in the vicinity of Special Policy Area ‘C’.

Opportunities to provide facilities for pedestrians, cyclists and transit services could be realized with the development of Special Policy Area ‘C’.
6. PROBLEM AND OPPORTUNITY STATEMENT

Development will occur within the ROPA 9 lands and within Special Policy Area ‘C’ lands. It is acknowledged that there are growth management mechanisms within the ROPA 9 Secondary Plan to manage the rate of development within the ROPA 9 lands consistent with transportation infrastructure and that development within Special Policy Area ‘C’ has not yet been approved and must demonstrate that an adequate transportation system must be in place to support it. And while the rate of development in ROPA 9 and magnitude of development in SPA ‘C’ is to be determined, there are needs and opportunities within the Rymal Road Study Area, Trinity Neighbourhood Study Area, and Special Policy Area ‘C’ Study Area based on the City’s current understanding of growth potential. As such, the problem statement entails finding transportation solutions, which support Municipal Official Plans, and are necessary to:

1. Address projected capacity deficiencies in the Rymal Road corridor

2. Accommodate projected demands on Regional Road 56 at the new collector road connection south of Rymal Road

3. Provide additional north-south capacity to accommodate future traffic demands

4. Better accommodate service for autos, commercial vehicles, transit vehicles, pedestrians, and cyclists through the area.

5. Manage traffic impact on local roads adjacent to the Study Area, including:
   a. Ensure successful transportation service for the ROPA 9 lands, the Trinity Neighbourhood, and Special Policy Area ‘C’ lands with future development, while minimizing negative impacts to existing conditions.

   b. Provide sufficient capacity and appropriate access to accommodate increasing traffic demands throughout the road network.

   c. Manage and direct traffic to appropriate routes to maintain designated road functions, with arterial roads serving long distance travel, and local roads mainly serving local trips.

   d. Implement and time a road network strategy to ensure the success of traffic operations on the whole road network.
7. EVALUATION OF PLANNING ALTERNATIVES – RYMAL ROAD PLANNING AREA

The class environmental process requires the examination of all reasonable alternatives, including alternatives to the undertaking, referred to as planning alternatives. A formal evaluation methodology is used to ensure that the process is traceable and reproducible, and that the process takes into account technical, as well as economic, social, and natural environmental issues. This section of the report provides a discussion of the development and evaluation of the planning alternatives.

Alternatives to the undertaking are different means of addressing the problem. The problems identified for this project are described in Section 3 of this report. The advantages and disadvantages of each planning alternative were identified and evaluated for the corridor, to determine the best functional solution to the problem. This is discussed below.

7.1 Development and Evaluation of Planning Alternatives

7.1.1 Development of Planning Alternatives

The following planning solutions to the undertaking were considered:

- “Do Nothing”;
- Travel Demand Management (Promote ride sharing / carpooling);
- Upgrade Other Routes / Build Other Routes;
- Operational Improvements (Provide localized link or intersection improvements);
- Widen Rymal Road to provide additional lanes throughout the Study Area;
- Extend Trinity Church Road to connect to the Red Hill Valley Parkway; and
- Widen Regional Road 56 to provide additional lanes.

Each planning alternative is described in further detail below.

7.1.1.1 “Do Nothing” Alternative

This alternative was included in the assessment to provide a benchmark against which the other alternatives could be compared. Under this planning alternative, no changes or improvements to the existing transportation network are considered.

7.1.1.2 Travel Demand Management Alternative

This alternative involves methods to modify existing and future travel demand to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as
designated HOV lanes, public transit services, carpooling programs and parking facilities, and accommodation for pedestrians and cyclists.

7.1.1.3 Upgrade Other Routes / Build Other Routes Alternative

This option involves constructing new east-west corridors or north-south corridors and/or widening existing east-west or north-south corridors in the vicinity of the Study Area.

7.1.1.4 Operational Improvements Alternative

This alternative includes methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, and adding or changing exclusive turn lanes at intersections.

7.1.1.5 Widen Rymal Road Alternative

This alternative involves providing additional lanes on Rymal Road throughout the Study Area.

7.1.1.6 Trinity Church Road Extension Alternative

This alternative involves extending Trinity Church Road to connect with the Red Hill Valley Parkway intersection at Stone Church Road.

7.1.1.7 Regional Road 56 Widening

This alternative involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m.

7.1.2 Planning Alternatives Evaluation Criteria

A detailed assessment of the alternative transportation planning solutions was completed based on the criteria listed below. The criteria were developed as per requirements and guidelines of the Municipal Class EA document. The criteria were also developed to be able to evaluate potential adverse impacts for each identified alternative.
### Transportation Service
- Corridor Capacity and Level of Service
- Traffic Safety
- Access to/from Rymal Road and to/from Regional Road 56
- Transit Operations
- Accommodation for Pedestrians and Cyclists

### Socio-Economic Impacts
- Noise Impacts
- Residents Impacts
- Dwellings displacement / property requirements
- Business impacts
- Institutional impacts
- Recreational Facilities adjacent to the corridor
- Archaeological/Cultural Heritage Resources
- Visual/Aesthetics
- Adjacent Local Roads (Potential for Traffic Infiltration)
- Air Quality
- Potential for Contamination

### Natural Environment
- Vegetation
- Wildlife
- Aquatic Habitat
- Eramosa Karst
- Stormwater

### Costs
- Utility Relocation
- Capital Costs
- Operating Costs
- Property Acquisition

### 7.1.3 Evaluation of Planning Alternatives
The Planning alternatives were evaluated based on the ability of the alternative to address the problem statement, including impacts to transportation, anticipated property impacts, and environmental impacts and the list of criteria provided above. The evaluation was completed with input from the project team, the project Stakeholders Committee, and the public.

Following the evaluation, a recommendation was made on which Planning Alternatives would be carried forward to the next stage. Table 7-1 contains the evaluation of the alternative transportation planning solutions and a summary of the impacts and recommendations for the Study Area.
<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DO NOTHING</th>
<th>TRAVEL DEMAND MANAGEMENT</th>
<th>UPGRADE OTHER ROUTES / BUILD OTHER ROUTES</th>
<th>OPERATIONAL IMPROVEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network.</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved public transit services, accommodation for pedestrians and cyclists.</td>
<td>Involves constructing new east-west, or north-south corridors, and/or widening existing east-west or north-south corridors in the vicinity.</td>
<td>Involves methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections.</td>
<td></td>
</tr>
<tr>
<td>TRANSPORTATION SERVICE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corridor Capacity and Level of Service</td>
<td>No increase to corridor capacity, however, slight decrease in peak hour auto demand</td>
<td>Increase to corridor capacity with potential for less traffic congestion</td>
<td>Slight increase to corridor capacity</td>
<td>Significant increase to corridor capacity and to overall Study Area roadway capacity</td>
</tr>
<tr>
<td>Traffic Safety within the study corridors</td>
<td>No change from existing</td>
<td>Potential increased safety due to the potential for less traffic congestion</td>
<td>Localized improvement in safety performance</td>
<td>Potential for improvement in safety performance along length of study corridor</td>
</tr>
<tr>
<td>Access to/from Rymal Road and to/from Regional Road 56</td>
<td>No change from existing</td>
<td>Improvement for cross streets accessibility with potential for less traffic congestion on Rymal Road</td>
<td>Potential improvement with new traffic signals facilitating access to/from Rymal Road and to/from Regional Road 56</td>
<td>Improvement for cross streets accessibility with less traffic congestion, however, additional lanes to cross when turning left</td>
</tr>
<tr>
<td>Transit Operations within the study corridor</td>
<td>No current transit operations within the study corridor; potential for transit service in the future could be hampered by traffic congestion.</td>
<td>Potential for slight reduction in transit delays as a result of decrease in corridor auto demand. Transit service could be considered for Rymal Road as well as the collector road network for the Rymal Road Planning Area.</td>
<td>Potential for slight reduction in transit service be considered as a result of increase in corridor capacity</td>
<td>Potential for slight reduction in transit service within the study corridor</td>
</tr>
<tr>
<td>Accommodation for Pedestrians and Cyclists within the study corridors</td>
<td>No bicycle routes or sidewalks currently exist within the study corridors. The impact of Do Nothing will be the worsening of conditions for pedestrians and cyclists because of the increase in traffic and the fact that no improvements to the pedestrian/cyclist network will be done.</td>
<td>Would improve as a result of a focus on the pedestrian/cyclist network.</td>
<td>Could result in new pedestrian/cyclist routes. Could also result in sidewalks being built as a result of the policy recommendations from the TMP City-wide Phase 2 in regard to Upgrading of routes and new construction. Note: This is not in the study corridor. These improvements however, would not improve conditions within the ROPA 9.</td>
<td>No specific accommodation for pedestrians/cyclists. Though operational improvements can result in a safer network for pedestrians / cyclists and transit users.</td>
</tr>
<tr>
<td>Table 7-1: Evaluation of Planning Alternatives for ROPA 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ryumal Road Widenning**
- Involves providing additional lanes on Rymal Road throughout the Study Area.

**Trinity Church Road Extension**
- Involves extending Trinity Church Road to connect with the Red Hill Valley Parkway interchange at Mud Street.

**Regional Road 56 Widenning**
- Involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m.
<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DO NOTHING</th>
<th>TRAVEL DEMAND MANAGEMENT</th>
<th>UPGRADE OTHER ROUTES / BUILD OTHER ROUTES</th>
<th>OPERATIONAL IMPROVEMENTS</th>
<th>RYMAL ROAD WIDENING</th>
<th>TRINITY CHURCH ROAD EXTENSION</th>
<th>REGIONAL ROAD 56 WIDENING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network.</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved public transit services, accommodation for pedestrians and cyclists.</td>
<td>Involves constructing new east-west, or north-south corridors, and/or widening existing east-west or north-south corridors in the vicinity.</td>
<td>Involves methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections.</td>
<td>Involves providing additional lanes on Rymal Road throughout the Study Area.</td>
<td>Involves extending Trinity Church Road to connect with the Red Hill Valley Parkway interchange at Mud Street.</td>
<td>Involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m.</td>
</tr>
</tbody>
</table>

### SOCIO-ECONOMIC IMPACTS:

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise Impacts</td>
<td>Increase in noise levels with future traffic growth. Potential reduction in noise levels with slight decrease in peak hour auto demand. Increase in noise levels with future traffic growth. Increase in noise levels with future traffic growth. No anticipated noise impacts on existing residents. Potential noise impacts on any future residents within the study corridor. Increase in noise levels with future traffic growth.</td>
</tr>
<tr>
<td>Residents Impacts</td>
<td>No direct impact to residents – Encourages positive impacts of active lifestyle. No direct impact to residents. Potential negative impact to residents along new / widened corridors. No direct impact to residents. Potential negative impact to residents with corridor widening. No anticipated impact to residents with corridor widening.</td>
</tr>
<tr>
<td>Dwellings displacement / property requirements</td>
<td>No impact to existing dwellings / property. Potential impact to existing dwellings / property along new / widened corridors. Potential impact to existing property at intersections. Potential impact to existing dwellings / property along Rymal Road. Impact to property along a Trinity Church Road extension. Potential impact to property along Regional Road 56.</td>
</tr>
<tr>
<td>Business Impacts</td>
<td>No impact to existing businesses. No changes to existing private driveways. Potential impact to existing businesses along new / widened corridors. No impact to existing businesses. No changes to existing private driveways. Potential impact to existing businesses and private driveways along Rymal Road. New corridor, no impact to existing businesses. No anticipated impact to existing businesses.</td>
</tr>
<tr>
<td>Institutional impacts</td>
<td>No institutions currently located along corridor. No institutions currently located along corridor. Potential impact on institutional uses along new / widened corridors. No institutions currently located along corridor. No institutions currently located along corridor. No institutions currently located along corridor. No institutions currently located along corridor.</td>
</tr>
<tr>
<td>Recreational Facilities adjacent to the corridor</td>
<td>No recreational facilities adjacent to the corridor. No recreational facilities adjacent to the corridor. Potential impact on recreational facilities along new / widened corridors. No recreational facilities adjacent to the corridor. No recreational facilities adjacent to the corridor. Potential connection to proposed bicycle routes (Regional OP). No recreational facilities adjacent to the corridor.</td>
</tr>
<tr>
<td>Archaeological/Cultural Heritage Resources</td>
<td>No impacts to existing archaeological / cultural heritage resources. No anticipated impact to archaeological / cultural heritage resources. No anticipated impact to archaeological / cultural heritage resources. Potential for impact on archaeological / cultural heritage resources. Potential for impact on archaeological / cultural heritage resources. No anticipated impact on archaeological / cultural heritage resources.</td>
</tr>
<tr>
<td>Visual/Aesthetics</td>
<td>No change to existing aesthetics. Existing aesthetics could be improved by the addition of sidewalks, cycling lanes and landsc. Impact on aesthetics, due to increased pavement width along widened corridors. However, No anticipated significant impact on aesthetics, though increased pavement width at Rymal Road. However, Impact on aesthetics due to increased pavement width on Regional Road 56; however,</td>
</tr>
</tbody>
</table>
### Table 7-1: Evaluation of Planning Alternatives for ROPA 9

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DO NOTHING</th>
<th>TRAVEL DEMAND MANAGEMENT</th>
<th>UPGRADE OTHER ROUTES / BUILD OTHER ROUTES</th>
<th>OPERATIONAL IMPROVEMENTS</th>
<th>RYMAL ROAD WIDENING</th>
<th>TRINITY CHURCH ROAD EXTENSION</th>
<th>REGIONAL ROAD 56 WIDENING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network.</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved public transit services, accommodation for pedestrians and cyclists.</td>
<td>Involves constructing new east-west, or north-south corridors, and/or widening existing east-west or north-south corridors in the vicinity.</td>
<td>Involves methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections.</td>
<td>Involves providing additional lanes on Rymal Road throughout the Study Area.</td>
<td>Involves extending Trinity Church Road to connect with the Red Hill Valley Parkway interchange at Mud Street.</td>
<td>Involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m</td>
</tr>
</tbody>
</table>

#### SOCIODEMNOGRAPHIC IMPACTS (cont'd):

<table>
<thead>
<tr>
<th>Adjacent Local Roads (Potential for Traffic Infiltration)</th>
<th>Potential for traffic infiltration due to increased traffic congestion</th>
<th>Potential for slight reduction in traffic infiltration as a result of decrease in corridor auto demand</th>
<th>Potential for reduction in traffic infiltration due to potential for less traffic congestion</th>
<th>Potential for traffic infiltration due to increased traffic congestion, though slight increase to corridor capacity</th>
<th>Less potential for traffic infiltration as a result of increase in corridor and overall study capacity</th>
<th>Less potential for traffic infiltration as a result of increase in corridor and overall study capacity</th>
<th>Less potential for traffic infiltration as a result of increase in corridor and overall study capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
<td>No improvement to air quality. Congestion will continue to degrade air quality with increased vehicle emission due to increased congestion in the Study Area as development proceeds.</td>
<td>Potential for slight air quality improvement with decrease in auto traffic.</td>
<td>Moderate air quality improvement with decrease in congestion in the Study Area.</td>
<td>Potential for slight air quality improvement with less traffic congestion in the Study Area.</td>
<td>Moderate air quality improvement with less traffic congestion in the Study Area.</td>
<td>Moderate air quality improvement with less traffic congestion in the Study Area.</td>
<td>Moderate air quality improvement with less traffic congestion in the Study Area.</td>
</tr>
<tr>
<td>Potential for Contamination</td>
<td>No change</td>
<td>Not applicable</td>
<td>Potential for contamination, depending upon locations.</td>
<td>Potential for contamination, due to commercial uses (e.g. services stations). Further investigations may be required</td>
<td>Potential for contamination, due to agricultural uses. Further investigations may be required</td>
<td>Potential for contamination, due to previous uses (e.g. commercial, agricultural). Further investigations may be required</td>
<td></td>
</tr>
</tbody>
</table>

#### NATURAL ENVIRONMENT IMPACTS:

<table>
<thead>
<tr>
<th>Vegetation</th>
<th>No anticipated impact on vegetation</th>
<th>No anticipated impact on vegetation along new / widened corridors</th>
<th>No anticipated impact on vegetation</th>
<th>Potential for impact on vegetation / trees along Rymal Road, potential for planting</th>
<th>Impact on vegetation / trees along a Trinity Church Road extension, potential for planting</th>
<th>Potential for impact on vegetation along Regional Road 56, potential for planting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife</td>
<td>No anticipated impact on wildlife</td>
<td>No anticipated impact on wildlife along new / widened corridors</td>
<td>No anticipated impact on wildlife</td>
<td>No anticipated impact on wildlife</td>
<td>No anticipated impact on wildlife</td>
<td>No anticipated impact on wildlife</td>
</tr>
<tr>
<td>Aquatic Habitat</td>
<td>No anticipated impact on aquatic habitat</td>
<td>No anticipated impact on aquatic habitat along new / widened corridors</td>
<td>No anticipated impact on aquatic habitat</td>
<td>Potential for impact on aquatic habitat with several Creek crossings</td>
<td>Potential for impact on aquatic habitat, due to potential water crossing</td>
<td>Potential for impact on aquatic habitat with a Creek crossing</td>
</tr>
</tbody>
</table>
Table 7-1: Evaluation of Planning Alternatives for ROPA 9

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DO NOTHING</th>
<th>TRAVEL DEMAND MANAGEMENT</th>
<th>UPGRADE OTHER ROUTES / BUILD OTHER ROUTES</th>
<th>OPERATIONAL IMPROVEMENTS</th>
<th>RYMAL ROAD WIDENING</th>
<th>TRINIY CHURCH ROAD EXTENSION</th>
<th>REGIONAL ROAD 56 WIDENING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network.</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved public transit services, accommodation for pedestrians and cyclists.</td>
<td>Involves constructing new east-west, or north-south corridors, and/or widening existing east-west or north-south corridors in the vicinity.</td>
<td>Involves methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections.</td>
<td>Involves providing additional lanes on Rymal Road throughout the Study Area.</td>
<td>Involves extending Trinity Church Road to connect with the Red Hill Valley Parkway interchange at Mud Street.</td>
<td>Involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m.</td>
</tr>
<tr>
<td>Eramosa Karst</td>
<td>No anticipated impact on Karst features</td>
<td>No anticipated impact on Karst features</td>
<td>Potential for impact on Karst features along new / widened corridors</td>
<td>Potential for impact on Karst features at localized improvement areas</td>
<td>Potential for impact on Karst features</td>
<td>No anticipated impact on Karst features</td>
<td>No anticipated impact on Karst features</td>
</tr>
<tr>
<td>Stormwater</td>
<td>No anticipated additional impact on stormwater quality or quantity</td>
<td>No anticipated additional impact on stormwater quality or quantity</td>
<td>Potential impact on stormwater quality and quantity along new / widened corridors</td>
<td>No anticipated impact on stormwater quality or quantity</td>
<td>Impact on stormwater quality and quantity</td>
<td>Impact on stormwater quality and quantity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COSTS</td>
<td>Utility Relocation</td>
<td>No anticipated impact on utilities</td>
<td>No anticipated impact on utilities</td>
<td>Potential relocation of utilities along new / widened corridors</td>
<td>Potential relocation of utilities</td>
<td>No anticipated impact on utilities</td>
<td>Potential relocation of utilities</td>
</tr>
<tr>
<td></td>
<td>Capital Costs</td>
<td>No anticipated capital costs</td>
<td>Capital costs of developing and implementing TDM program (Showcase)</td>
<td>High capital costs for road improvements</td>
<td>Anticipated minor capital costs for operational improvements</td>
<td>High capital costs for road improvements</td>
<td>High capital costs for road improvements</td>
</tr>
<tr>
<td></td>
<td>Operating Costs</td>
<td>Potential for increase in operating cost with higher roadway maintenance costs, due to road surface and road base deterioration</td>
<td>Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents.</td>
<td>Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents along new / widened corridors</td>
<td>Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents at localized improvement areas</td>
<td>Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents along the new corridor</td>
<td>Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents along the corridor</td>
</tr>
<tr>
<td></td>
<td>Property Acquisition</td>
<td>No anticipated property acquisition, therefore no property cost</td>
<td>No anticipated property acquisition along new / widened corridors</td>
<td>Anticipated high property acquisition costs for operational improvements</td>
<td>Potential minor property acquisition costs along Rymal Road</td>
<td>Potential moderate property acquisition costs along Regional Road 56</td>
<td>Potential moderate property acquisition costs along Regional Road 56</td>
</tr>
<tr>
<td>RECOMMENDATION</td>
<td>The current Study Area road network is insufficient to meet the current traffic demand. With future development planned, improvements must be made to meet the future demand.</td>
<td>Travel Demand Management initiatives will contribute to reduced vehicular traffic in the corridors, but these will not address capacity or operational conditions within the study corridors. As such, they are recommended for further consideration, but it is recognized that they cannot address the problems alone.</td>
<td>Constructing new east-west corridors and/or widening existing east-west corridors has an overall potential high impact on the socio-economic and natural environments, and is associated with potentially very high capital costs.</td>
<td>Operational improvements on their own will not address all of the existing and future capacity and operational concerns within the study corridors. As such, they are recommended for further consideration, but it is recognized that they cannot address the problems alone.</td>
<td>Widening Rymal Road provides for additional capacity on the roadway, and allows for safety and operations improvements within the corridor.</td>
<td>Extending Trinity Church Road provides for additional capacity in the Study Area.</td>
<td>Widening Regional Road 56 provides for additional capacity on the roadway, and allows for safety and operations improvements within the corridor.</td>
</tr>
</tbody>
</table>
### Table 7-1: Evaluation of Planning Alternatives for ROPA 9

<table>
<thead>
<tr>
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<th>RYMAL ROAD WIDENING</th>
<th>TRINITY CHURCH ROAD EXTENSION</th>
<th>REGIONAL ROAD 56 WIDENING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved public transit services, accommodation for pedestrians and cyclists</td>
<td>Involves constructing new east-west, or north-south corridors, and/or widening existing east-west or north-south corridors in the vicinity</td>
<td>Involves methods to increase the capacity of the existing road network, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections</td>
<td>Involves providing additional lanes on Rymal Road throughout the Study Area</td>
<td>Involves extending Trinity Church Road to connect with the Red Hill Valley Parkway interchange at Mud Street</td>
<td>Involves providing additional lanes on Regional Road 56 from Rymal Road southerly for approximately 900 m</td>
</tr>
<tr>
<td>Not Recommended</td>
<td>Recommended in conjunction with the preferred solutions</td>
<td>Not Recommended</td>
<td>Recommended in conjunction with the preferred solutions</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Recommended</td>
</tr>
</tbody>
</table>
7.1.4 Preliminary Preferred Planning Alternative

Rymal Road is an important east-west transportation corridor. Rymal Road connects many north-south roads, including Upper Centennial Parkway / Regional Road 56. A north-south link from the Red Hill Valley Parkway to south of Rymal Road is crucial to the broader road network within the City, and would also serve the local community. Providing adequate capacity in these corridors is critical to planning for the economic growth and well-being of the City. The Regional Official Plan recognizes this need, and has designated a right-of-way for Rymal Road of 36 m to 45 m throughout the Study Area to provide for future growth and has highlighted a future extension of Trinity Church Road to the Red Hill Valley Parkway. Regional Road 56 is an important north-south transportation corridor, serving inter-regional traffic. It is important to provide adequate capacity on this highway.

Based on the assessment and evaluation of the Planning Alternatives, the preferred and recommended planning solution to address existing and future capacity issues is to:
- Widen Rymal Road from Trinity Church Road to Upper Centennial Parkway / Regional Road 56;
- Extend Trinity Church Road northerly to Stone Church Road;
- Widen Regional Road 56 south of Rymal Road;
- Encourage travel demand management (TDM); and
- Implement operational improvements.

The recommended planning solution is illustrated in Exhibit 7-1. Preliminary conceptual alignments of a Trinity Church Road extension (new north-south link between Rymal Road and the Red Hill Valley Parkway) are shown in Exhibit 7-2. Alternative alignment options will be assessed in detail in a separate Phases 3 and 4 Trinity Church Road Corridor Environmental Assessment Study for this new arterial roadway. A preferred alignment will be identified through this Study.

Based on the anticipated effectiveness of the other options in the Study Area, it was determined that these initiatives would contribute to reduced vehicular traffic, or improved operations, but in themselves, would not completely address capacity and operational conditions within the Study Area.

7.1.5 Timing of Rymal Road Planning Area Infrastructure

The timing of transportation improvements in support of the Rymal Road Planning Area are recommended as follows:
- The widening of Rymal Road is seen as needed now to accommodate approved development and to facilitate turning movements into the Rymal Road Secondary Plan area through the provision of exclusive turn lanes and a wider pavement surface. The additional capacity on Rymal Road is also seen as desirable to facilitate truck movements in the area as development proceeds.
Potential Capacity Improvement

Potential New Link

Design and alignments of preferred solutions to be examined in Phase 3.

Exhibit 7-1

Conceptual Alternative Transportation Solutions
Exhibit 7-2

New North-South Arterial Conceptual Alignment Options

Legend
- Alternative 1
- Alternative 2
- Alternative 2a
- Alternative 2b
- Alternative 3
- Alternative 4
- Alternative 5
- Special Policy Area “C”
- Schematic of Karst Core Boundary

To be completed in 2007
The widening and reconstruction of Regional Road 56 (from Rymal Road south to the intersection with the new collector road within ROPA 9) will be required in advance of the provision of the new collector intersection to accommodate development growth, and to minimize traffic impacts of construction.

Further development beyond that permitted under the Rymal Road Secondary Plan (current allocation) is not recommended until the infrastructure identified in Section 7.1.4 can be accommodated or, unless other solutions can be identified through a traffic study acceptable to the City of Hamilton.

### 7.2 Public Consultation

The public consultation process and public reaction during the Problem Statement and Planning Alternatives Phases are summarized in this section of the report. Additional details on the public consultation process are contained in Appendix B.

#### 7.2.1 Public Consultation Process

During the Problem Statement and Planning Alternatives phases, the public consultation process for ROPA 9 involved the following activities:

- Study Commencement Notice: March 4, 2005
- First Stakeholder Committee Meeting: September 19, 2005
- Advertisement of First Public Information Centre: September 16 & 23, 2005
- First Public Information Centre: October 3, 2005

**First Stakeholder Committee Meeting (SC#1)**

Representatives of the City and the consultant team met with the Stakeholder Committee once during this phase of the project. These meetings provided the SC members an opportunity to meet the project team, gain preliminary information on the project, and discuss any issues relating to the project. At the first meeting, 10 members of the SC were present. Many items were discussed, including:

- How the EA process works and the role of the SC, City of Hamilton, and the consultant team in this process;
- SC Terms of Reference;
- Other studies being carried out in the vicinity of the Study Area which may pertain to this Study;
- Problem Statement;
- The preliminary list of evaluation criteria was reviewed. The following criterion was added: Adjacent Local Roads (Potential for Traffic Infiltration)

Meeting minutes are provided in Appendix B.4.
First Public Information Centre (PIC#1)

The first Public Information Centre (PIC#1) was held on Tuesday, October 3rd, 2005 from 6 p.m. to 9 p.m., at the Salvation Army Church Gym, 300 Winterberry Drive (at Paramount Drive), in the City of Hamilton. The purpose of PIC#1 was to provide information about the Study to the public and at the same time obtain public input. Twenty-four panels were displayed. The information panels included the following:

- Welcome and Study Area
- Description of the Study background, Study goal and scope
- Chart of the EA process and class EA requirements
- Description of the public consultation plan
- Summary of the needs and opportunities for the Study for transportation, water, and wastewater
- Problem statement for transportation, water, and wastewater
- Existing official plan policies and other applicable policies
- Description of existing conditions
- Description of 7 transportation alternative solutions
- Description of 5 water alternative solutions
- Description of 3 wastewater alternative solutions
- Description of alternative solution assessment criteria
- Evaluation tables of the transportation, water, and wastewater planning alternatives
- Identification and description of the preferred transportation, water, and wastewater planning alternatives
- Future actions
- Contact information

As with all of the public information centres, the public was advised about the meeting through advertisements in the local paper. Advertisements were placed in the Hamilton Spectator on Friday September 16, 2005 and Friday September 23, 2005, and in the Brabant papers (Mountain News, Glanbrook Gazette and Stoney Creek News) on Friday September 16, 2005. Notification letters were also mailed out to property owners within the Study Area, to other individuals who had responded with an interest in the Study since its commencement, to conservation authorities, Federal and Provincial agencies, and utility companies. A copy of the advertisement is provided in Appendix B.1.

The format was an informal drop-in centre from 6:00 to 7:00 PM to meet the project team and to view the display panels and drawings. There was a presentation at 7:00 PM, followed by a question and answer period. The PIC continued until 9:00 PM, which provided participants the opportunity to further discuss the project with the Study team. Attendees were asked to sign-in and were invited to fill-in comment forms at their convenience within a 3-week time frame.
Approximately 122 members of the public attended the PIC. Representatives from the City of Hamilton, iTRANS, and XCG attended the PIC to discuss the details of the project and answer questions of the public. A summary of issues and questions is provided below in Section 7.2.2. A full summary of the PIC is provided in Appendix B.2.

7.2.2 Public Comments and Project Team Responses

The consultant team compiled comments and questions received from the public via comment sheets, verbal questions, letters, e-mail, telephone calls, or faxes. Key public comments presented via PIC No.1 are as follows:

**Rymal Road Widening** – Comments on the need for improvements (long overdue), the need for widening of Rymal Road to James Street, timing for improvements, concerns regarding geometry of Rymal Road at Trinity Church Road, and increased traffic impact with the development of the ROPA 9 area.

**Trinity Church Road Extension** – Comments on the need for a new north south link between Rymal Road and the Red Hill Valley Parkway/Stone Church Road ramps, timing for improvement, alignment alternatives and potential impacts of a new north-south roadway on adjacent properties, suggestions for consideration of other routes.

**Special Policy Area ‘C’** – Comments suggesting no approval of development before the required road network is in place, concerns regarding increased traffic impacts as a result of the proposed development.

**Traffic Operations on Local Roads and Road Closures** – Comments on operational issues (increased traffic volumes, speeding, safety) on Second Road West, and on Upper Mount Albion Road, suggestions to close these roads.

**Transit** –Suggestions for improvements to transit service in the Study Area.

Complete summaries of the public meetings, along with project team responses to questions / issues are provided in Appendix B.2. All comments were taken into consideration in the analysis and evaluation of options, and additional reviews (such as the Trinity Neighbourhood Study) were undertaken as appropriate.
8. EVALUATION OF PLANNING ALTERNATIVES – TRINITY NEIGHBOURHOOD

The class environmental process requires the examination of all reasonable alternatives, including alternatives to the undertaking, referred to as planning alternatives. A formal evaluation methodology is used to ensure that the process is traceable and reproducible, and that the process takes into account technical, as well as economic, social, and natural environmental issues. This section of the report provides a discussion of the development and evaluation of the planning alternatives for the Trinity Neighbourhood review.

8.1 Development and Evaluation of Planning Alternatives

Alternatives to the undertaking are different means of addressing the problem. The problems identified for this component of the Master Plan are described in Section 4 of this report. The advantages and disadvantages of each planning alternative were identified and evaluated, to determine the best functional solution to the problem. This is discussed below.

8.1.1 Development of Planning Alternatives

The proposed traffic management plan alternatives include the following:
- “Do Nothing”
- Enhanced Traffic Control
- New Road Connections; and
- Potential Road Closures.

Each planning alternative is described in further detail below.

8.1.1.1 “Do Nothing” Alternative

This alternative was included in the assessment to provide a benchmark against which the other alternatives could be compared. Under this planning alternative, no changes or improvements to the existing transportation network are considered.

8.1.1.2 Enhanced Traffic Control

This alternative involves methods of enhancing traffic control to local roads, Second Road West and Upper Mount Albion, such as:
- Additional Signage
- Painted stop bars
- Painted cross-walks at stop controlled intersections
- Roadway edge pavement markings
- Physical traffic calming (e.g. speed humps, diverters)

### 8.1.1.3 New Road Connections

This option involves constructing new north-south corridors in the vicinity of the Study Area:
- Trinity Church Corridor (from Stone Church Road / Red Hill Valley Parkway to Rymal Road),
- New collector road between Rymal Road / Second Road West and Highland Road.

### 8.1.1.4 Potential Road Closures

This alternative involves closing some of the roads in the area road network:
- Upper Mount Albion Road
- Second Road West (north of Gatestone Drive)
- Gatestone Drive
- Whitedeer Road.

### 8.1.2 Planning Alternatives Evaluation Criteria

A detailed assessment of the alternative planning solutions was completed based on the criteria listed below. The criteria were developed as per requirements and guidelines of the Municipal Class EA document. The criteria were also developed to be able to evaluate potential adverse impacts for each identified alternative.

<table>
<thead>
<tr>
<th>Appropriateness of Network Plan</th>
<th>Traffic Operational Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency with Road Designation</td>
<td>Volume/Capacity</td>
</tr>
<tr>
<td>Network Continuity</td>
<td>Speed</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Collisions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impacts on other Routes</th>
<th>Emergency Services Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversion Volumes</td>
<td>Routes</td>
</tr>
<tr>
<td>Turning Demand</td>
<td>Response Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
<th>Impacts / Benefits to Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>Noise Impacts (effect of traffic-related noise)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Residents</td>
</tr>
<tr>
<td></td>
<td>Dwellings/property</td>
</tr>
<tr>
<td></td>
<td>Accessibility</td>
</tr>
<tr>
<td></td>
<td>Schools</td>
</tr>
<tr>
<td></td>
<td>Air Quality</td>
</tr>
</tbody>
</table>

June 2006
8.1.3 Evaluation of Planning Alternatives

The Planning alternatives were evaluated based on the ability of the alternative to address the problem statement, including impacts to transportation, anticipated property impacts, environmental impacts, and the list of criteria provided above. The evaluation was completed with input from the project team, the project Stakeholders Committee, and the public.

Following the evaluation, a recommendation was made on which Planning Alternatives would be carried forward to the next stage. Table 8-1 contains the evaluation of the alternative planning solutions, and a summary of the impacts and recommendations for the Study Area.
Table 8-1: Evaluation of Planning Alternatives for Trinity Neighbourhood

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>1-DO NOTHING</th>
<th>2-ENHANCED TRAFFIC CONTROL</th>
<th>3-BUILD NEW ROAD (RYMAL ROAD TO STONE CHURCH ROAD)</th>
<th>4-BUILD NEW COLLECTOR ROAD (RYMAL ROAD TO HIGHLAND ROAD)</th>
<th>5-POTENTIAL CLOSURE OF UPPER MOUNT ALBION ROAD</th>
<th>6-POTENTIAL CLOSURE OF SECOND ROAD WEST</th>
<th>7-POTENTIAL CLOSURE OF GATESTONE DR. / WHITDEER RD.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPROPRIATENESS OF NETWORK PLAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistency with Road Designation</td>
<td>Applicable to local roads, though some measures have limited use for local rural roads; Intent of the Official Plan to have a complete road network is not met</td>
<td>Comply with the intent of the Official Plan to complete the Arterial road network</td>
<td>Comply with the intent of the Official Plan to complete the Collector road network</td>
<td>Closure is consistent with a local road designation</td>
<td>Closure is consistent with the local road designation north of Gatestone Dr.</td>
<td>Closure is not consistent with a collector road designation</td>
<td></td>
</tr>
<tr>
<td>Network Continuity</td>
<td>Same as Option 1</td>
<td>Provides good network continuity with good north-west connection</td>
<td>Provides north-south connection from Highland Road to Rymal Road</td>
<td>Will impact network continuity with limited north-south routes.</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
<td>Same as Option 1</td>
<td>Enhanced accessibility between ROPA 9 and areas to the north and west</td>
<td>Enhanced north-south accessibility</td>
<td>Road closure will impact local traffic accessibility</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td></td>
</tr>
<tr>
<td><strong>TRAFFIC OPERATIONAL ISSUES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume / Capacity</td>
<td>Potential to reduce / maintain capacity</td>
<td>Provides additional north-south capacity to accommodate future traffic demand, and potentially reduce through traffic on neighbourhood roads</td>
<td>Same as Option 3</td>
<td>Closure will resolve high volume issues since roadway use limited to adjacent residents and businesses</td>
<td>Same as Option 5</td>
<td>Roadway use limited to adjacent residents, no volume or capacity issues expected</td>
<td></td>
</tr>
<tr>
<td>Operating Speeds</td>
<td>Current speeding issues will persist on area local roads</td>
<td>Operating speeds on new corridor could be controlled through appropriate roadway designation, geometry, etc.</td>
<td>Same as Option 3</td>
<td>Closure will address speeding issues since roadway use limited to adjacent residents and businesses</td>
<td>Same as Option 5</td>
<td>Roadway use limited to adjacent residents, no speeding issues expected</td>
<td></td>
</tr>
<tr>
<td>Overall Safety</td>
<td>Potential for increased safety for pedestrians and motorists</td>
<td>No anticipated safety issues with new corridor, also, a new corridor could improve safety for pedestrians and motorists on other routes with traffic diverted to the new route</td>
<td>Same as Option 3</td>
<td>Potential for increased safety for pedestrians and motorists with a reduction in traffic volumes</td>
<td>Same as Option 5</td>
<td>Same as Option 5; however traffic diversion could have safety implications on other routes</td>
<td></td>
</tr>
<tr>
<td><strong>IMPACTS ON OTHER ROUTES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic Diversion</td>
<td>Minor traffic diversion may occur from local roads with enhanced traffic controls</td>
<td>New corridor will accommodate diverted traffic from area roads such as Upper Mount Albion and Second Road West.</td>
<td>Same as Option 3</td>
<td>Potential for significant traffic diversion to other area roads, with new alternative routes provided. However, if implemented after new alternative routes (e.g., Options 1 and/or 4) are implemented, no adverse impacts anticipated</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td></td>
</tr>
<tr>
<td>Turning Demand</td>
<td>Same as Option 1</td>
<td>Significant improvement and</td>
<td>The new collector will result in</td>
<td>Closure could result in an</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td></td>
</tr>
</tbody>
</table>
### Table 8-1: Evaluation of Planning Alternatives for Trinity Neighbourhood

<table>
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<tr>
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<th>6-POTENTIAL CLOSURE OF SECOND ROAD WEST</th>
<th>7-POTENTIAL CLOSURE OF GATESTONE DR. / WHITETEER RD.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>intersection will experience excessive southbound left and westbound right turning volumes; Turning demands at local road intersections could increase</td>
<td>balance of the turning demands resulting from the ROPA 9 development, particularly at Dartnall Road / Rymal Road intersection</td>
<td>acceptable turning movements at the intersections of the new collector road with the existing roads</td>
<td>increase in turning volumes at other intersections</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### EMERGENCY SERVICES IMPLICATIONS

<table>
<thead>
<tr>
<th>Routing of Emergency Services (Ambulance, Fire, Police)</th>
<th>Same as existing</th>
<th>Same as Option 1</th>
<th>Additional route choice</th>
<th>Additional route choice to local community</th>
<th>The existing fire station is located north of Trinity (Mud/Isaac Brock); Closure at the south end will have little impact on residents on Upper Mount Albion Road. However, communities south of Rymal Road would now be accessed via Fletcher Road and Upper Centennial Parkway</th>
<th>The existing fire station is located north of Trinity (Mud/Isaac Brock); Closure at the south end will have little impact on residents on 2nd Road West. However, communities south of Rymal Road would now be accessed via Gatestone Drive where an elementary school is present.</th>
<th>Impact to available routes for emergency vehicles since these roads are designated emergency routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Time</td>
<td>Same as existing</td>
<td>Varying types of traffic control could impact response time.</td>
<td>Potential for improved response time with an additional route</td>
<td>Same as Option 3</td>
<td>Potential increase in response times to the communities south of Rymal Road</td>
<td>Same as Option 5</td>
<td>Potential increase in response times to access local communities</td>
</tr>
</tbody>
</table>

#### NATURAL ENVIRONMENT

| Vegetation | No anticipated impact on vegetation | Same as Option 1 | Impact on vegetation / trees | Impact on vegetation / trees, potentially including small woodlot | Same as Option 1 | Same as Option 1 | Same as Option 1 |
| Wildlife | No anticipated impact on wildlife | Same as Option 1 | Potential for impact on wildlife | Potential for impact on wildlife | Same as Option 1 | Same as Option 1 | Same as Option 1 |
| Eramosa Karst | No anticipated impact on the Eramosa Karst | Same as Option 1 | No anticipated impact on Karst features | Potential impact on Karst features | Same as Option 1 | Same as Option 1 | Same as Option 1 |

#### COSTS

| Capital | No capital cost | Low cost to implement control devices | Potentially high construction costs | Potentially moderate construction cost | Low construction cost for road closure | Same as Option 5 | Same as Option 5 |
| Maintenance | Potential for increase in maintenance cost, due to road surface and road base deterioration created by higher volumes | Low increase in maintenance costs over existing | Will require relevant maintenance | Same as Option 3 | Lower maintenance costs due to less traffic volumes on closed road, but notable traffic diversion could increase maintenance needs on other roads | Same as Option 5 | Same as Option 5 |

#### IMPACTS / BENEFITS TO COMMUNITIES (SOCIO-ECONOMIC)

| Traffic Noise | Potential increase due to increased traffic volumes | Noise conditions may improve on roads with enhanced traffic controls | No significant noise impacts anticipated | Same as Option 3 | Improved noise conditions on closed road, but could increase noise impact on other roads due to traffic | Same as Option 5 | Same as Option 5 |
### Table 8-1: Evaluation of Planning Alternatives for Trinity Neighbourhood

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>1-DO NOTHING</th>
<th>2-ENHANCED TRAFFIC CONTROL</th>
<th>3-BUILD NEW ROAD (RYMAL ROAD TO STONE CHURCH ROAD)</th>
<th>4-BUILD NEW COLLECTOR ROAD (RYMAL ROAD TO HIGHLAND ROAD)</th>
<th>5-POTENTIAL CLOSURE OF UPPER MOUNT ALBION ROAD</th>
<th>6-POTENTIAL CLOSURE OF SECOND ROAD WEST</th>
<th>7-POTENTIAL CLOSURE OF GATESTONE DR./ WHITEDEER RD.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>Impacts to residents along local roads may become worse</td>
<td>Diversion of traffic to new route from adjacent local roads will benefit residents</td>
<td>Same as Option 3</td>
<td>Elimination of through traffic on closed road will benefit local residents; however may impact residents on other roads due to traffic diversion</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
</tr>
<tr>
<td>Dwellings/property</td>
<td>No anticipated property or dwelling impacts</td>
<td>New alignment may require property acquisition</td>
<td>Same as Option 3</td>
<td>Potential for property impact with closure design</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
</tr>
<tr>
<td>Driveway Access</td>
<td>Driveway access on local roads</td>
<td>Potential for improved driveway access on local roads with diversion of traffic to the new corridor</td>
<td>Same as Option 3</td>
<td>Enhanced driveway access along closed road; however may impact residents on other roads due to traffic diversion</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
<td>Same as Option 5</td>
</tr>
<tr>
<td>Schools</td>
<td>No anticipated impacts on schools</td>
<td>Same as Option 1</td>
<td>Same as Option 1</td>
<td>Same as Option 1</td>
<td>Same as Option 1</td>
<td>Potential for higher traffic exposure on Gatestone Elementary School, and St Mark’s Elementary School will be impacted</td>
<td>Accessibility of Gatestone Elementary School, and St Mark’s Elementary School will be impacted</td>
</tr>
<tr>
<td>Air Quality</td>
<td>No overall improvement to air quality in the general Study Area. Congestion will continue to degrade air quality with increased vehicle emission due to increased congestion in the Study Area. Potential for slight improvement to air quality for residents on local roads where enhanced traffic control may be implemented, and result in traffic volumes reducing or levels maintained.</td>
<td>Potential significant improvement to air quality as traffic redistributes to new routes and congestion is relieved.</td>
<td>Potential significant improvement to air quality as traffic redistributes to new routes and congestion is relieved.</td>
<td>No overall improvement to air quality in the general Study Area. Congestion in the Study Area will continue to degrade air quality with increased vehicle emission due to increased congestion in the Study Area. Potential improvement to air quality for local residents on Second Road West as traffic volumes are reduced.</td>
<td>No overall improvement to air quality in the general Study Area. Congestion in the Study Area will continue to degrade air quality with increased vehicle emission due to increased congestion in the Study Area. Potential improvement to air quality for local residents on Second Road West as traffic volumes are reduced.</td>
<td>No overall improvement to air quality in the general Study Area. Congestion in the Study Area will continue to degrade air quality with increased vehicle emission due to increased congestion in the Study Area. Potential improvement to air quality for local residents on Second Road West as traffic volumes are reduced.</td>
<td></td>
</tr>
<tr>
<td>RECOMMENDATION</td>
<td>Road network improvements are required to accommodate existing and future development. The Do Nothing Option will not address these requirements, and will designate the traffic network deficiencies.</td>
<td>Enhanced Traffic Control will provide short-term solution for traffic issues on local roads; additional road network improvement will be required for the long-term</td>
<td>A necessary high order road link to accommodate future long distance north-south traffic demands</td>
<td>Closure of Upper Mount Albion Road will allow it to functions as designated - a Local Road. Closure is however only feasible in conjunction with a new north-south connection</td>
<td>Closure of Second Road West will allow it to functions as designated - a Local Road. Closure is however only feasible in conjunction with a new collector road that provides</td>
<td>Closure of Gatestone Drive or of Whitedeer Road is not recommended, since closure is not consistent with a Collector Road designation. Also, closure will impact emergency</td>
<td>Closure of Gatestone Drive or of Whitedeer Road is not recommended, since closure is not consistent with a Collector Road designation. Also, closure will impact emergency</td>
</tr>
</tbody>
</table>

June 2006
Table 8-1: Evaluation of Planning Alternatives for Trinity Neighbourhood

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>1-DO NOTHING</th>
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<th>7-POTENTIAL CLOSURE OF GATESTONE DR./WHITEDEER RD.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Recommended</td>
<td>Recommended for Phase 1 Implementation</td>
<td>Recommended for Phase 2 Implementation</td>
<td>Recommended for Phase 2 Implementation</td>
<td>Recommended for Phase 2 Implementation</td>
<td>Recommended for Phase 2 Implementation</td>
<td>Not Recommended</td>
</tr>
</tbody>
</table>

- **2-ENHANCED TRAFFIC CONTROL**
  - Recommended for Phase 1 Implementation
  - Recommended for Phase 2 Implementation

- **3-BUILD NEW ROAD (RYMAL ROAD TO STONE CHURCH ROAD)**
  - Recommended for Phase 2 Implementation

- **4-BUILD NEW COLLECTOR ROAD (RYMAL ROAD TO HIGHLAND ROAD)**
  - Recommended for Phase 2 Implementation

- **5-POTENTIAL CLOSURE OF UPPER MOUNT ALBION ROAD**
  - Recommended for Phase 2 Implementation

- **6-POTENTIAL CLOSURE OF SECOND ROAD WEST**
  - Recommended for Phase 2 Implementation

- **7-POTENTIAL CLOSURE OF GATESTONE DR./WHITEDEER RD.**
  - Not Recommended

- Between Rymal Road and Stone Church Road which will provide the capacity for future growth and traffic diverted from a closed Upper Mount Albion Road connection between Rymal Road and Highland Road. If a new collector is not feasible due to the Karst Area or other constraints, a closure will be dependent on implementation of an additional north-south route such as a new link between Rymal Road and Stone Church Road routes.
8.1.4 Preliminary Preferred Planning Alternative

Based on the evaluation of the options, the recommended alternative solution is to implement a number of solutions in two phases. These included to build new connections such as the Trinity Church corridor and a new collector road through the Trinity Neighbourhood, and to close Second Road West and Upper Mount Albion Road. Since these conditions cannot be implemented immediately, interim traffic control measures should be implemented on the local roads to minimize the impacts of increasing traffic volumes. The preferred and recommended planning solutions are therefore as follows:

8.1.4.1 Phase 1 Solutions

As an interim solution to manage the traffic demand and traffic operations issues such as speeding and safety implications, enhanced traffic control devices are recommended for the designated local roads in the Trinity Neighbourhood, namely Second Road West (north of Gatestone Drive) and Upper Mount Albion Road.

Second Road West

- Implement enhanced traffic control (additional signage, painted stop bars) on Second Road West, north of Gatestone Drive as phase 1 measures to enhance the visibility of the stop-controlled intersections.

- Implementation of physical traffic calming measures on Second Road West does not currently meet the City policy requirements (speed thresholds have to be met), and is therefore not recommended as a potential solution at this time. However, the City will continue to monitor Second Road West for the appropriateness of physical traffic calming measures in the future, prior to any road closure.

Upper Mount Albion Road

- Consideration of enhanced traffic control measures (pavement markings, aggressive police enforcement and gateway features) for Upper Mount Albion Road as phase 1 solutions, appropriate for a rural cross-section.

- Implementation of physical traffic calming measures on Upper Mount Albion Road is not consistent with the City policy requirements for PRIMARY emergency / fire services routes, and is therefore not recommended as a potential solution, at this time. However, the City will continue to monitor roadway operations on Upper Mount Albion Road and if conditions change, physical traffic calming measures will be re-investigated.

Additional Future Phase 1 Solutions – Physical Traffic Calming Measures

As noted above under the Second Road West discussion, the City will continue to monitor Second Road West for the appropriateness of physical traffic calming measures in the future,
prior to any road closure. However, all current City policy requirements must be met, before consideration is given to traffic calming. This includes meeting a speeding threshold of the 85th percentile speed (the speed at which 85% of the vehicles travel at or below) being at least 8 km/h above the posted speed limit.

Consideration may also be given to additional measures on Upper Mount Albion Road, if the implemented Phase 1 solutions are not effective. Future measures on Upper Mount Albion Road are limited given the Primary emergency / fire services route designation. However, centreline rumble strips, which will not compromise the movement of emergency vehicles, or other measures identified as feasible by the City can be considered. All current City requirements and criteria for implementation of traffic calming measures would have to be met before any consideration would be given to traffic calming.

If the closure of either Second Road West, or of Upper Mount Albion Road has occurred or is imminent, traffic calming measures will not be implemented. Therefore, traffic calming will not be implemented in combination with road closures.

Potential physical traffic calming measures for consideration include, but are not limited to, the following:

- Second Road West – speed humps, chicanes, directional closures / diverters
- Upper Mount Albion Road – centerline rumble strips, other measures identified as feasible by the City

Any or all of these measures will need to be approved by the City of Hamilton before implementation.

8.1.4.2 Phase 2 Solutions

As a longer term solution to address the traffic operations issues within the Trinity Neighbourhood, wider network management is required. One of this Master Plan assessment findings and recommendations is that the anticipated traffic growth due to the planned development in ROPA 9 and surrounding areas will require additional north-south road link capacity in the Trinity Neighbourhood. It is also recommended that a new road link be built from Stone Church / Red Hill Valley Parkway ramps to Rymal Road. The following are the Phase 2 recommendations:

- Implement new road connections as soon as possible to provide additional north-south capacity
  - A new collector road in the Trinity Neighbourhood
  - New roadway from Stone Church Road / Red Hill Valley Parkway to Rymal Road (referred to as the Trinity Church Road extension)

- Implement road closure on Second Road West north of Gatestone Drive, and on Upper Mount Albion Road
City of Hamilton

Rymal Road Planning Area (ROPA 9)
Master Plan Class Environmental Assessment
Phases 1 & 2

Closure of Second Road West should be coordinated with the construction of the new collector road
Closure of Upper Mount Albion Road should be coordinated with a new north-south link from Stone Church Road to Rymal Road

New Collector Road

A new collector road in the Trinity Neighbourhood has been identified in the Former City of Stoney Creek Official Plan (Schedule A3). This collector was planned as an extension of Winterberry Drive to connect to Second Road West at Gatestone Drive. The results of this Master Plan analyses concur with the Official Plan recommendations. This planned collector road, together with Second Road West south of Gatestone Drive, will provide important future north-south connection between Rymal Road and Highland Road.

With the traffic growth in the ROPA 9 area, and the anticipated major origin-destination (O-D) patterns to the north and west, a new collector road is expected to carry a notable amount of future traffic demands from ROPA 9. The construction of a new collector road would divert most of the through traffic currently on Second Road West and some from Upper Mount Albion Road. This is of benefit to the adjacent local roads to better perform their designated functions of which the major role is to serve the local communities.

With the discovery of the Karst features south of Highland Road, the environmental needs to protect the Karst core area limit the potential to construct a new collector road linking Rymal Road and Highland Road. Alignments for the new collector road are currently under investigation. Preliminary conceptual alignments of the new collector road are shown in Exhibit 8-1. Alternative alignment options will be assessed in detail in a separate Phases 3 and 4 Collector Road and Trinity Neighbourhood Improvements Environmental Assessment Study for this new collector roadway. A preferred alignment will be identified though this Study.

New North-South Arterial Road

Direct extension of the existing Trinity Church Road could be one of the road alignment options considered for this new north-south arterial road. Preliminary future traffic demands on the Trinity Church corridor are assessed in Section 3, in association with the potential changes of the adjacent road network. Preliminary conceptual alignments of the new link are shown in Exhibit 7-2. Alternative alignment options will be assessed in detail in a separate Phases 3 and 4 Trinity Church Road Corridor Environmental Assessment Study for this new arterial roadway. A preferred alignment will be identified though this Study.

Road Closures

Similar to the former City of Stoney Creek Official Plan recommending the extension of Winterberry Drive to Second Road West, Second Road West and Upper Mount Albion Road were both planned to be closed as part of the Trinity Neighbourhood Plan adopted by the
Exhibit 8-1

New Collector Road Conceptual Alignment Options

Legend

- OUTSIDE AGS LIMITS
- AGS CORE BUFFER
- AGS CORE AREA
- AGS FEEDER AREA
- AGS FEEDER CREDX
- PROPOSED ROADWAY

Not to Scale
June 2006
former City of Stoney Creek Council in the early 1990's. The extension of Winterberry Drive to Second Road West is also included in this Neighbourhood plan. The results of this Master Plan analyses concur with the Trinity Neighbourhood Plan recommendations.

8.1.4.3 Identification of Closure Details

Second Road West

Since the closure of Second Road West is recommended to be coordinated with the construction of a new collector road between Rymal Road / Second Road West and Highland Road, it is appropriate that the identification of closure details be linked to the process of determining the details for a new collector road. As such, it is recommended that the details for the closure of Second Road West be determined in the Phases 3 and 4 Collector Road and Trinity Neighbourhood Improvements Environmental Assessment Study, which is currently on-going.

Consideration can be given to close Second Road West north of Gatestone Drive (an ideal location). The south section of Second Road West from Gatestone Drive to Rymal Road is designated a collector road. This section of Second Road West would remain open to Rymal Road to allow for a continuous Collector Road system with Gatestone Drive and a planned new collector road west of Second Road West. If Second Road West was closed at Rymal Road, the opportunity for through traffic to use Second Road West via Gatestone Drive would continue to exist, and would not fully mitigate the existing problems.

It is recommended that the new collector road be built as soon as possible, and for Second Road West to be closed at Gatestone Drive as soon as the new collector road is in place.

Upper Mount Albion Road

Similarly, the closure of Upper Mount Albion Road should be coordinated with a new north-south roadway linking Stone Church Road / Red Hill Valley Parkway to Rymal Road. As such, it is recommended that the details for the closure of Upper Mount Albion Road be determined in the Phases 3 and 4 Trinity Church Corridor Environmental Assessment, which is currently on-going.

8.1.4.4 Timing of Trinity Neighbourhood Infrastructure

Current traffic conditions on the local road network north (downstream) of the ROPA 9 lands are undesirable as noted in Section 4.4. As a result, the Trinity Neighbourhood Collector Road and the new road link from the Red Hill Creek Expressway ramps to Rymal Road (commonly referred to as the Trinity Church Extension) are seen needed now.
Further development beyond that permitted under the Rymal Road Secondary Plan (current allocation) and Special Policy Area ‘C’ is not recommended until the infrastructure identified in Section 8.1.4.3 can be accommodated (particularly the Trinity Neighbourhood Collector Road and road closures implemented), unless other solutions can be identified through a traffic study acceptable to the City of Hamilton. As noted, the proposed road closures are not recommended until the new road links can be provided to accommodate capacity, circulation, and emergency services.

8.2 Public Consultation

The public consultation process and public reaction during the Problem Statement and Planning Alternatives Phases for Trinity Neighbourhood are summarized in this section of the report. Additional details on the public consultation process are contained in Appendix B.

8.2.1 Public Consultation Process

During the Problem Statement and Planning Alternatives phases, the public consultation process for Trinity Neighbourhood involved the following activities:

- Newsletter Update: December 20, 2005
- Advertisement of Second Public Information Centre: January 13, & January 20, 2006
- Second Public Information Centre: January 26, 2006

Newsletter

To update the public of the project status, a newsletter was sent to those on the mailing list.

The newsletter provided members of the public with a summary of the recommendations presented at PIC #1 for ROPA. It also provided members of the public with information regarding the Trinity Neighbourhood Traffic Study that the City was undertaking to address concerns expressed by residents adjacent to the ROPA Study Area at PIC#1.

The newsletter also informed members of the public that the second Public Information Centre would be held in January 2006, rather than December 2005, due to the additional work undertaken for the Trinity Neighbourhood Traffic Study.

Contact information was included in the newsletter. A copy of the newsletter is included in Appendix B.3.

Second Public Information Centre (PIC#2)

The second Public Information Centre (PIC#2) was held on Thursday, January 26th, 2006, from 6:00 to 8:00 PM at the Salvation Army Church Gymnasium, 300 Winterberry Drive (at
Paramount Drive), in the City of Hamilton. Members of the community in the vicinity of the ROPA 9 lands had expressed concerns regarding traffic operations in the area, specifically, traffic infiltration (resulting in increased traffic volumes on neighbourhood streets), travel speeds, traffic control compliance, and safety for pedestrians and cyclists. The purpose of PIC#2 was to present to members of the community, options that were identified and assessed in an attempt to address these concerns, and to gather public input. Twenty-six panels were displayed. The information panels included the following:

- Welcome
- ROPA9 Study information and Study Area
- Background to the meeting
- Overall project context
- Trinity Neighbourhood Study Area
- Road network and road classifications
- Description of existing conditions
- Future traffic conditions
- Problem/opportunity statement
- Description of 4 alternative transportation solutions
- Description of alternative solutions assessment criteria
- Evaluation tables of the transportation alternatives
- Recommended solutions
- Future actions
- Contact information

Advertisements informing the public of the PIC, were placed in the Hamilton Spectator on Friday, January 13th and on Friday, January 20th, 2006, and in the Stoney Creek News, Mountain News and Glanbrook Gazette (Brabant) on Friday, January 13th 2006. Notification letters were also mailed out to property owners in an area bounded by Pritchard Road to the west, Mud Street-Winterberry Drive-Highland Road to the north, the Hydro corridor to the south, and Whitedeer Road - Regional Road 56 to the east. Other individuals who had responded with an interest in the Study since its commencement, and conservation authorities, Federal and Provincial agencies, and utility companies were also notified. A copy of the public notice is provided in Appendix B.1.

The format was an informal drop-in centre from 6:00 to 6:30 PM to view the display panels and drawings, and to have discussions with the project team. There was a presentation at 6:30 PM, followed by a question and answer period. The PIC continued until 8:00 PM, which provided participants the opportunity to further discuss the project with the Study team. Attendees were asked to sign-in and were invited to fill-in comment forms at their convenience within a 2-week time frame.

Approximately 114 members of the public attended the PIC. Representatives from the City of Hamilton, iTRANS, and XCG attended the PIC to discuss the details of the project and answer questions of the public. A summary of issues and questions is provided below in Section 8.2.2. A full summary of the PIC is provided in Appendix B.2.
8.2.2 Public Comments and Project Team Responses

The consultant team compiled comments and questions received from the public via comment sheets, verbal questions, letters, e-mail, telephone calls, or faxes. Key public comments presented via PIC No.2 included the following:

**Phase 1 Improvements** – Timing for the improvements and effectiveness of the traffic control measures.

**Phase 2 Improvements** – Timing for the improvements.

**Road Closures** – Trucks and cars cut through the Second Road West and Upper Mount Albion Road; suggestions to close the roads.

**Trinity Church Road Extension** – Timing for the improvement. Alignment for the improvement.

**Impacts to Other Streets** – Impacts of road closures on adjacent streets such as Highland Road and Gatestone Drive.

Complete summaries of the public meetings, along with project team responses to questions / issues are provided in Appendix B.2.
9. EVALUATION OF PLANNING ALTERNATIVES – SPECIAL POLICY AREA ‘C’

The class environmental assessment process requires the examination of all reasonable alternatives, including alternatives to the undertaking, referred to as planning alternatives. A formal evaluation methodology is used to ensure that the process is traceable and reproducible, and that the process takes into account technical, as well as economic, social, and natural environmental issues. This section of the report provides a discussion of the development and evaluation of the planning alternatives for Special Policy Area ‘C’.

9.1 Development and Evaluation of Planning Alternatives

Alternatives to the undertaking are different means of addressing the problem. The problems identified for this component of the Master Plan are described in Section 5 of this report. The advantages and disadvantages of each planning alternative were identified and evaluated for the corridor, to determine the best functional solution to the problem. This is discussed below.

9.1.1 Development of Planning Alternatives

The proposed traffic management plan alternatives include the following:
- “Do Nothing”
- Travel Demand Management and Transit Initiatives
- New Major Infrastructure and Road Widenings; and
- Operational Improvements.

Each planning alternative is described in further detail below.

9.1.1.1 Do Nothing

The Do Nothing alternative represents the continuation of existing conditions and would involve no changes or improvements to the existing transportation network.

9.1.1.2 Travel Demand Management and Transit Initiatives

This alternative involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling, improved transit service, accommodation for pedestrians and cyclists.
9.1.1.3 New Major Infrastructure and Road Widений

New major infrastructure and road widenings involves constructing a new north-south corridor, such as a north-south connection between Rymal Road and Stone Church Road, and widening existing east-west (such as Stone Church Road) or north-south (such as Winterberry Drive) corridors in the vicinity of the Study Area.

9.1.1.4 Operational Improvements

Operational improvements involves methods to increase the capacity of the existing road network, such as localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections, changes to traffic signal timing and phasing.

9.1.2 Planning Alternatives Evaluation Criteria

A detailed assessment of the alternative planning solutions was completed based on the criteria listed below. The criteria were developed as per requirements and guidelines of the Municipal Class EA document. The criteria were also developed to be able to evaluate potential adverse impacts for each identified alternative.

<table>
<thead>
<tr>
<th>Effect on Transportation System</th>
<th>Effect on Natural Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Corridor Capacity</td>
<td>▪ Vegetation</td>
</tr>
<tr>
<td>▪ Traffic Safety</td>
<td>▪ Wildlife</td>
</tr>
<tr>
<td>▪ Access to/from Surrounding Roads</td>
<td>▪ Aquatic Habitat</td>
</tr>
<tr>
<td>▪ Transit Operations</td>
<td>▪ Stormwater</td>
</tr>
<tr>
<td>▪ Accommodation for Pedestrians and Cyclists</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect on Socio-Economic Environment</th>
<th>Cost Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Noise Impacts</td>
<td>▪ Capital Costs</td>
</tr>
<tr>
<td>▪ Residents Impacts</td>
<td>▪ Operating Costs</td>
</tr>
<tr>
<td>▪ Dwellings Displacement / Property Requirements</td>
<td>▪ Property Acquisition</td>
</tr>
<tr>
<td>▪ Business impacts</td>
<td></td>
</tr>
<tr>
<td>▪ Future Land uses</td>
<td></td>
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<tr>
<td>▪ Institutional Impacts</td>
<td></td>
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<tr>
<td>▪ Recreational Facilities</td>
<td></td>
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<tr>
<td>▪ Archaeological/Cultural / Heritage Resources</td>
<td></td>
</tr>
<tr>
<td>▪ Air Quality</td>
<td></td>
</tr>
</tbody>
</table>

9.1.3 Evaluation of Planning Alternatives

The Planning alternatives were evaluated based on the ability of the alternative to address the problem statement, including impacts to transportation, anticipated property impacts, and
environmental impacts and the list of criteria provided above. The evaluation was completed with input from the project team, and the project Stakeholders Committee.

Following the evaluation, a recommendation was made on which Planning Alternatives would be carried forward to the next stage. **Table 9-1** contains the evaluation of the alternative planning solutions and a summary of the impacts and recommendations for the Study Area.
### Table 9-1: Evaluation of Transportation Planning Alternatives – Special Policy Area ‘C’

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO NOTHING</td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network</td>
<td>TRAVEL DEMAND MANAGEMENT AND TRANSIT INITIATIVES</td>
<td>NEW MAJOR INFRASTRUCTURE AND ROAD WIDENINGS</td>
<td>OPERATIONAL IMPROVEMENTS</td>
</tr>
<tr>
<td>Effect on Transportation System</td>
<td>No increase to corridor capacity; expected increase in traffic congestion; potential for significant traffic infiltration on area local roads such as Upper Mount Albion Road, south of Stone Church Road</td>
<td>No increase to corridor capacity; however, slight decrease in peak hour auto demand; potential for significant traffic infiltration on area local roads such as Upper Mount Albion Road, south of Stone Church Road</td>
<td>Significant increase to corridor capacity and to the overall Study Area roadway capacity</td>
<td>Significant increase to corridor capacity resulting in less traffic congestion within Study Area; potential for traffic infiltration on area local roads such as Upper Mount Albion Road, south of Stone Church Road</td>
</tr>
<tr>
<td>- Corridor Capacity</td>
<td>Access to/from surrounding roads could become more difficult with increased traffic congestion from traffic growth</td>
<td>Minor improvement for cross streets accessibility with potential for less traffic congestion on Stone Church Road and on Winterberry Drive</td>
<td>Improvement for cross streets accessibility with potential for less traffic congestion on Stone Church Road and on Winterberry Drive Drive</td>
<td>Improvement with new traffic signals or roundabouts facilitating access to / from Stone Church Road, and to / from Winterberry Drive</td>
</tr>
<tr>
<td>- Traffic Safety</td>
<td>Existing safety conditions may worsen with increased traffic congestion from traffic growth</td>
<td>Potential increased safety due to the potential for less traffic congestion</td>
<td>Potential increased safety due to the potential for less traffic congestion</td>
<td>Localized improvement in safety performance</td>
</tr>
<tr>
<td>- Access to/from Surrounding Roads</td>
<td>Potential for future transit service (transit service currently along Winterberry Drive, and Stone Church Road) to be hampered by traffic congestion</td>
<td>Potential for minor reduction in transit delays as a result of minor increase in corridor capacity</td>
<td>Potential for reduction in transit delays as a result of increase in corridor capacity</td>
<td>Potential for reduction in transit delays as a result of increase in corridor capacity</td>
</tr>
<tr>
<td>- Transit Operations</td>
<td>Potential to implement bike lanes and sidewalks on Stone Church Road for a continuous bike network across Stone Church Road, and sidewalks on Winterberry Drive to better accommodate pedestrians</td>
<td>Could result in new pedestrian/cyclist routes. Could also result in sidewalks being built as a result of the policy recommendations from the City-wide Phase 2 TMP in regard to upgrading of routes and new construction.</td>
<td>No anticipated direct impact to residents; potential impact (displacement) to residents in existing traffic conditions</td>
<td>Ability to implement bike lanes and sidewalks on Stone Church Road and Winterberry Drive to accommodate pedestrians</td>
</tr>
<tr>
<td>- Accommodation for Pedestrians and Cyclists</td>
<td>No bicycle lanes or sidewalks currently exist on Stone Church Road between Pritchard Road and Winterberry Drive. An asphalt sidewalk is currently located only on the east side of Winterberry Drive between Mud Street and Paramount Drive. Bike lanes exist on Stone Church Road west of Pritchard Road and east of Winterberry Drive.</td>
<td>Potential to implement bike lanes and sidewalks on Stone Church Road for a continuous bike network across Stone Church Road, and sidewalks on Winterberry Drive to better accommodate pedestrians</td>
<td>Potential impact (displacement) to residents in existing traffic conditions</td>
<td>Accessibility improvements for pedestrians and cyclists</td>
</tr>
</tbody>
</table>

**Effect on Socio-Economic Environment**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Increase in noise levels with future traffic growth</td>
<td>Potential reduction in noise levels with slight decrease in peak hour auto demand.</td>
<td>Increase in noise levels with future traffic growth</td>
<td>Increase in noise levels with future traffic growth</td>
</tr>
<tr>
<td>Noise</td>
<td>No direct impact to residents, though</td>
<td>No direct impact to residents – Encourages</td>
<td>Potential impact (displacement) to residents in</td>
<td>No anticipated direct impact to residents; potential impact</td>
</tr>
</tbody>
</table>

June 2006
### Table 9-1: Evaluation of Transportation Planning Alternatives – Special Policy Area ‘C’

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents Impacts</td>
<td>Increased vehicle emission (potentially poor air quality) is anticipated with increased congestion</td>
<td>Positive impacts of active lifestyle</td>
<td>Impact to existing property along new corridor; potential minor impact to existing property along widened corridor for increased right-of-way; property for widening at development related locations along existing corridors would be dedicated to the City under the Planning Act, at the time of development approvals</td>
<td>Potential minor impact to existing property at intersections to accommodate turn lanes; property for widening at development related locations would be dedicated to the City under the Planning Act, at the time of development approvals</td>
</tr>
<tr>
<td>Dwellings</td>
<td>No impact to existing dwellings / property</td>
<td>No impact to existing dwellings / property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Displacement / Property Requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Land uses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Impacts</td>
<td>No impact to existing businesses. No changes to existing private driveways</td>
<td>No anticipated impact to existing businesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreational Facilities</td>
<td>Anticipated significant impact on potential for future development with no improvements to the transportation network</td>
<td>Minor change in allowance for future development (i.e. direct access could still be limited) with improvements in travel demand management and transit initiatives</td>
<td>Significant improvements to the transportation network will allow for future development</td>
<td>Operational improvements to the transportation network will allow for future development</td>
</tr>
<tr>
<td>Archaeological/Cultural Heritage Resources</td>
<td>No impact to school or church within Study Area</td>
<td>No anticipated impact to institutions within the area</td>
<td>No anticipated impact to institutions within the area</td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td>No recreational facilities adjacent to the corridors</td>
<td>No anticipated impact on recreational facilities</td>
<td></td>
<td>No recreational facilities adjacent to the corridors</td>
</tr>
<tr>
<td>No impacts to existing archaeological / cultural heritage resources</td>
<td>No impacts to existing archaeological / cultural heritage resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No impacts to existing archaeological / cultural heritage resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No recreational facilities adjacent to the corridors</td>
<td>No anticipated impact on recreational facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No impacts to existing archaeological / cultural heritage resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

June 2006
### Table 9-1: Evaluation of Transportation Planning Alternatives – Special Policy Area ‘C’

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DO NOTHING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRAVEL DEMAND MANAGEMENT AND TRANSIT INITIATIVES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved transit service, accommodation for pedestrians and cyclists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEW MAJOR INFRASTRUCTURE AND ROAD WIDENINGS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involves constructing a new north-south corridor, such as a north-south connection between Rymal Road and Stone Church Road, and widening existing east-west (such as Stone Church Road) or north-south (such as Winterberry Drive) corridors in the vicinity of the Study Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OPERATIONAL IMPROVEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involves methods to increase the capacity of the existing road network, such as localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections, changes to traffic signal timing and phasing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Effect on Natural Environment

- **Vegetation**
  - No anticipated impact on vegetation
  - No anticipated impact on vegetation
  - No anticipated impact on vegetation along new corridor; potential for minimal impact on vegetation / trees along widened corridors; opportunity for replanting
  - No anticipated impact on vegetation along Winterberry Drive, and along Stone Church Road; opportunity for replanting

- **Wildlife**
  - No anticipated impact on wildlife
  - No anticipated impact on wildlife
  - No anticipated impact on wildlife along new corridor
  - No anticipated impact on wildlife along widened corridors

- **Aquatic Habitat**
  - No anticipated impact on aquatic habitat
  - No anticipated impact on aquatic habitat
  - No anticipated impact on aquatic habitat along new corridor
  - No anticipated impact on aquatic habitat along widened corridors

- **Stormwater**
  - No anticipated additional impact on stormwater quality or quantity
  - Potential for impact on stormwater quality and quantity along new corridors; no anticipated impact on stormwater quality or quantity along widened corridors

#### Cost Effectiveness

- **Capital Costs**
  - No anticipated capital costs
  - Capital costs of developing and implementing TDM program (Showcase)
  - High capital costs for road improvements, however, growth related improvements would be covered under development charges
  - Anticipated moderate capital costs for operational improvements

- **Operating Costs**
  - Potential for increase in operating cost with higher roadway maintenance costs, due to road surface and road base deterioration
  - Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents
  - Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents
  - Maintenance costs related to roadway, sidewalks and cycling lanes to better respond to the needs of the residents

- **Property Acquisition**
  - No anticipated property acquisition, therefore no property cost
  - No anticipated property acquisition, therefore no property cost
  - Anticipated high property acquisition along new corridor; potential minor property
  - Potential minor property acquisition costs in locations that are not development related.
Table 9-1: Evaluation of Transportation Planning Alternatives – Special Policy Area ‘C’

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO NOTHING</td>
<td>Represents continuation of existing conditions and would involve no changes or improvements to the existing transportation network</td>
<td>TRAVEL DEMAND MANAGEMENT AND TRANSIT INITIATIVES</td>
<td>NEW MAJOR INFRASTRUCTURE AND ROAD WIDENINGS</td>
<td>OPERATIONAL IMPROVEMENTS</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>Involves methods to modify existing and future travel demand, to reduce the growth of single-occupant vehicular travel during the peak travel periods, such as carpooling programs and parking facilities, improved transit service, accommodation for pedestrians and cyclists</td>
<td>Involves constructing a new north-south corridor, such as a north-south connection between Rymal Road and Stone Church Road, and widening existing east-west (such as Stone Church Road) or north-south (such as Winterberry Drive) corridors in the vicinity of the Study Area</td>
<td>Includes methods to increase the capacity of the existing road network, such as localized roadway section and intersection geometric improvements, adding or changing exclusive turn lanes at intersections, changes to traffic signal timing and phasing</td>
<td></td>
</tr>
<tr>
<td>Alternative 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RECOMMENDATION

<table>
<thead>
<tr>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Recommended</td>
<td>Recommended in conjunction with the preferred solutions</td>
<td>Recommended</td>
<td>Recommended</td>
</tr>
</tbody>
</table>

The current Study Area road network is insufficient to meet future traffic demand. With development planned, improvements must be made to meet the future traffic demands.

Travel Demand Management initiatives will contribute to reduced vehicular traffic in the corridors, but these will not address capacity conditions within the study corridors. As such, they are recommended for further consideration, but it is recognized that they cannot address the problems alone.

With development planned, infrastructure improvements will be needed to meet future traffic demands. The need for additional north-south network capacity, and roadway section widening are required, to meet these future traffic demands. It is recognized that these are needed in combination with operational improvements.

Localized operational improvements on their own will not address all of the existing and future capacity and operational concerns within the Study Area. As such, they are recommended as a component to the overall road network capacity improvements, but it is recognized that they cannot address the problems alone.

property for road widening in development related locations would be dedicated to the City under the Planning Act at the time of development approvals.
9.2 Preliminary Preferred Planning Alternative

The preliminary preferred planning alternative includes a combination of travel demand management and transit initiatives, new major infrastructure (a new north-south roadway between Rymal Road and Stone Church Road), and road widenings and operational improvements. The following are the specific recommended transportation solutions for Special Policy Area ‘C’, in conjunction with the improvements stated above:

Along Mud Street:
- Provision of an eastbound right turn lane at the intersection with Winterberry Drive

Along Stone Church Road - Paramount Drive:
- Provision of an eastbound left turn lane entering the site at Access A
- Provision of eastbound and westbound left turn lanes at Upper Mount Albion Road
- Provision of a westbound left turn lane at the existing entrance to 800 Paramount Drive
- Provision of traffic controls (signals or roundabouts) at the intersection with Upper Mount Albion Road
- Provision of a westbound right turn lane at the Red Hill Valley Parkway Ramp/Stone Church Road intersection. This westbound right turn lane is recommended to commence from Upper Mount Albion Road, and would become a “forced” right turn lane at the RHVP ramps
- Provision of an eastbound left turn lane at the RHVP Ramp/Stone Church Road intersection, with minimum storage of 100 m.
- Widening of eastbound Stone Church Road east of the interchange ramps to two lanes, to receive dual southbound left turn lanes from the ramps, and to carry the two eastbound lanes beyond Upper Mount Albion Road
- Provision of an eastbound through lane and a shared eastbound through-right turn lane on the west approach at the intersection with the RHVP Ramps, to match the two receiving lanes on the east

Along Winterberry Drive:
- Extension of the existing northbound left turn lane at the intersection with Mud Street
- Provision of a northbound left turn lane at the intersection with the proposed Entrance Road to the SPA ‘C’ site
- Provision of traffic controls (signals or roundabout) at the Entrance to the SPA ‘C’ site
- Provision of a southbound right turn lane extending from Mud Street to the proposed Entrance Road to the SPA ‘C’ site
- Provision of a southbound right turn lane at the intersection with Mud Street

Along Upper Mount Albion Road:
- Provision of left turn lanes at Stone Church Road
- Provision of an exclusive southbound right turn at Stone Church Road to better accommodate the outbound right turn demands
Red Hill Valley Parkway Ramps / Stone Church Road Intersection:
- Provision of dual southbound left turn lanes. This will also provide more storage to reduce potential queue lengths that might queue back towards the RHVP southbound off ramp
- Provision of an exclusive southbound right turn lane

It is necessary to coordinate development with infrastructure requirements.

The proposed future road network in the SPA ‘C’ Study Area is shown in Exhibit 9-1.

9.3 Timing of Special Policy Area C Infrastructure

Development of SPA ‘C’ should not proceed until the infrastructure identified in Section 9.2 can be accommodated (particularly the Trinity Church Extension) and road closures implemented, unless other solutions can be identified through a traffic study acceptable to the City of Hamilton. This will be determined through the development approval process.

9.4 Public Consultation

The public consultation process and public reaction during the Problem Statement and Planning Alternatives Phases for Special Policy Area ‘C’ are summarized in this section of the report. Additional details on the public consultation process are contained in Appendix B.

9.4.1 Public Consultation Process

During the Problem Statement and Planning Alternatives phases, the public consultation process for Special Policy Area ‘C’ involved the following activities:
- First Public Information Centre October 3, 2005
- Newsletter Notification April 21, 2006
- Second Stakeholder Committee Meeting April 27, 2006

First Public Information Centre (PIC#1)

The first Public Information Centre (PIC#1) for the Class EA Master Plan Study which includes Special Policy Area ‘C’, was held on Tuesday, October 3rd, 2005 from 6 p.m. to 9 p.m., at the Salvation Army Church Gym, 300 Winterberry Drive (at Paramount Drive), in the City of Hamilton. The purpose of PIC#1 was to provide information about the Study to the public and at the same time obtain public input. Twenty-four panels were displayed. The information panels included the following information for Special Policy Area ‘C’:

- Welcome and Study Area
- Description of the Study background, Study goal and scope
- Chart of the EA process and class EA requirements
Not to Scale

June 2006

Legend

- **Existing**
  - No. of Lanes
  - Signalized Intersection
  - Right Turn
  - Through
  - Left Turn
  - Stop Control

- **Future**
  - No. of Lanes
  - Signalized Intersection or Roundabout
  - Right Turn
  - Through
  - Left Turn
  - Stop Control
  - Turning Channel

Notes:
*1 Extend northbound left turn lane.
- Description of the public consultation plan
- Summary of the status of the needs and opportunities
- Existing official plan policies and other applicable policies
- Description of existing conditions
- Future actions
- Contact information

The needs and opportunity assessment for Special Policy Area ‘C’ was not completed at the time of PIC #1 and was presented to the public via a newsletter, discussed below.

The public was advised about the meeting through advertisements in the local paper. Advertisements were placed in the Hamilton Spectator on Friday September 16, 2005 and Friday September 23, 2005, and in the Brabant papers (Mountain News, Glanbrook Gazette and Stoney Creek News) on Friday September 16, 2005. Notification letters were also mailed out to property owners within the Study Area, to other individuals who had responded with an interest in the Study since its commencement, to conservation authorities, Federal and Provincial agencies, and utility companies. A copy of the advertisement is provided in Appendix B.1.

The format was an informal drop-in centre from 6:00 to 7:00 PM to meet the project team and to view the display panels and drawings. There was a presentation at 7:00 PM, followed by a question and answer period. The PIC continued until 9:00 PM, which provided participants the opportunity to further discuss the project with the Study team. Attendees were asked to sign-in and were invited to fill-in comment forms at their convenience within a 3-week time frame.

Approximately 122 members of the public attended the PIC. Representatives from the project team attended the PIC to discuss the details of the project and answer questions of the public. A full summary of the PIC is provided in Appendix B.2.

**Newsletter**

To notify the public of the findings of the needs assessment for Special Policy Area ‘C’, a newsletter was sent to those on the study mailing lists, on Friday, April 21st, 2006. The newsletter documented the results of the Transportation needs for Special Policy Area ‘C’. A brief summary of the existing conditions was included for completeness, although the information was presented at PIC #1 for the Master Plan Study. The newsletter documented:
- proposed land uses
- transportation needs assessment
- problem statement
- identification of planning alternatives
- evaluation criteria for planning alternatives, and
- recommended solutions.
A copy of the newsletter is provided in Appendix B.3. Members of the public were referred to the project website and to the City of Hamilton’s office by contacting Christine Lee-Morrison, to review the detailed evaluation tables. Contact information and the project website were included in the newsletter.

A comment form was included with the newsletter and the public was invited to submit their comments via mail, fax, email and/or telephone within a 2-week time-frame. Contact information and a pre-paid return envelope were included in the newsletter. Public comments were still received after the 2-week period.

**Second Stakeholder Committee Meeting #2 (SC #2)**

Representatives of the City and the consultant team met with the Stakeholder Committee during the SPA ‘C’ problem statement and planning alternatives phase of the project. This meeting provided the SC members an opportunity to discuss the status of the Master Plan project, and the results of the transportation assessment for SPA ‘C’. Nine members of the SC (not including the project team members) were present at the meeting. Many items were discussed, including:

- Project update;
- Summary of PIC #1 (ROPA 9) and PIC #2 (Trinity Neighbourhood);
- SPA ‘C’ needs assessment; and
- SPA ‘C’ public notification.

Meeting minutes are provided in Appendix B.4.

**9.4.2 Public Comments and Project Team Responses**

The consultant team compiled comments and questions received from the public via returned comment sheets and e-mail. Key public comments provided on the SPA ‘C’ needs assessment included the following:

**Special Policy Area ‘C’** – Comments suggesting no approval of development before the required road network is in place. Concerns regarding increased traffic impacts as a result of the proposed development, access points / entrances to the development, traffic noise impacts to residential areas. Concerns regarding traffic operations (volumes, safety, etc.) in the vicinity of Janet Lee School.

**Rymal Road Widening** – Comments on the need for improvements (long overdue), timing for improvements, concerns regarding Fletcher / Rymal intersection and reducing speed limit on Rymal Road.

**Trinity Church Road Extension** – Comments on the need for a new north south link between Rymal Road and the Red Hill Valley Parkway/Stone Church Road ramps, timing for improvement, and alignment alternatives.
Traffic Operations on Local Roads and Road Closures – Comments on operational issues (increased traffic volumes, speeding and safety) on Second Road West, Highland Road and on Upper Mount Albion Road, suggestions to install traffic signal at Rymal Road / Upper Mount Albion Road intersection.

Transit – Suggestions for improvements to transit service in the Study Area.

Accommodation of Pedestrians and Cyclists – Comments on the plans for sidewalks and connections to the Karst area.

Complete summaries of the public meetings, along with project team responses to questions / issues are provided in Appendix B.2.
10. RECOMMENDATIONS

Given the coordination of the water/wastewater component for this Class EA Master Plan Study with the on-going GRIDS City Water and Wastewater Master Plan Study, it became necessary to report the water/wastewater needs for the Study, in conjunction with completion of the City wide Master Plan Study. This Study is anticipated to be completed in the fall of this year. Therefore all recommendations in this Phase 1 and 2 Class EA Master Plan report, are for the transportation component.

10.1 Summary of ROPA 9 Study Recommendations

The following are the planning recommendations for the Rymal Road Planning Area:

- Widen Rymal Road from Trinity Church Road to Regional Road 56;
- Widen Regional Road 56 from Rymal Road to approximately 900 m to the south;
- A new road link from Stone Church Road / Red Hill Valley Parkway ramps to Rymal Road (on an alignment to be determined);
- Travel demand management; and
- Operational improvements, such as changes to traffic signal timing and phasing, localized roadway section and intersection geometric improvements, adding or changing turn lanes at intersections.

The applicable Class EA Schedule for each of the ROPA 9 recommendations is summarized in Table 10-1.
Table 10-1: Preferred Solutions for ROPA 9 Lands

<table>
<thead>
<tr>
<th>Project</th>
<th>Class EA Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td></td>
</tr>
<tr>
<td>1. Widen Rymal Road from Trinity Church Road to Regional Road 56</td>
<td>C</td>
</tr>
<tr>
<td>(required as early as 2006)</td>
<td></td>
</tr>
<tr>
<td>2. Widen Regional Road 56 from Rymal Road to approximately 900 m</td>
<td>C</td>
</tr>
<tr>
<td>to the south, and provision of a new signalized collector road</td>
<td></td>
</tr>
<tr>
<td>intersection with appropriate turn lanes in this location</td>
<td></td>
</tr>
<tr>
<td>3. A new road link from Stone Church Road / Red Hill Valley Parkway</td>
<td>C</td>
</tr>
<tr>
<td>ramps to Rymal Road (on an alignment to be determined, required by</td>
<td></td>
</tr>
<tr>
<td>2011 or sooner).</td>
<td></td>
</tr>
<tr>
<td>4. Travel demand management</td>
<td>N/A</td>
</tr>
<tr>
<td>5. Operational improvements, such as changes to traffic signal timing</td>
<td>Separately, an A</td>
</tr>
<tr>
<td>and phasing, localized roadway section and intersection geometric</td>
<td>or B, but will be</td>
</tr>
<tr>
<td>improvements, adding or changing turn lanes at intersections.</td>
<td>implemented in conjunction with</td>
</tr>
<tr>
<td></td>
<td>the Schedule C</td>
</tr>
<tr>
<td></td>
<td>studies.</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td></td>
</tr>
<tr>
<td>6. Upgrade the HD007 Pumping Station and HDR07 Reservoir (on existing</td>
<td>A, to be merged</td>
</tr>
<tr>
<td>City site).</td>
<td>with City-wide</td>
</tr>
<tr>
<td></td>
<td>Master Plan**</td>
</tr>
<tr>
<td><strong>Wastewater</strong></td>
<td></td>
</tr>
<tr>
<td>7. Construct a new Sanitary Sub-trunk to Red Hill Creek Interceptor</td>
<td>A, to be merged</td>
</tr>
<tr>
<td>(existing ROW)</td>
<td>with City-wide</td>
</tr>
<tr>
<td></td>
<td>Master Plan**</td>
</tr>
</tbody>
</table>

**Refer to details included in Section 1.6.4**

The City of Hamilton’s *Promoting Public Transit Policy Paper* states that a goal of providing at least 90% of residents and employees within the City with transit service within 400 metres (5 minute walk) should be established. Transit improvements will be required to service the ROPA 9 community. As development proceeds, transit service should be considered along Rymal Road with potential new transit stops at the intersections with Upper Mount Albion Road and Fletcher Road; along Trinity Church Road, with potential new transit stops at intersections with Stone Church Road, Highland Road, proposed trail head for the Red Hill Valley Open Space Replacement Strategy, and Rymal Road; and along Regional Road 56, with potential new transit stops at intersections with Rymal Road and the new collector road from the ROPA 9 community. Transit service could also be considered within the ROPA 9 community. The opportunity for transit service will need to balance the operational cost-effectiveness, strategic objectives, and providing a service to the community.
The City of Hamilton’s *Walking and Cycling Policy Paper* has recommended that the existing network of pedestrian and bicycle infrastructure be improved and expanded. It also recognizes that these uses should be considered in the establishment of the right-of-way and the design of new roads and the reconstruction of existing roads. As such, as development of the ROPA 9 area proceeds, pedestrians and cyclists improvements will be required to serve the community. Sidewalks should be provided on both sides of Rymal Road, with consideration for transit stops. Sidewalks should also be provided within the ROPA 9 lands.

Although not identified in the *Shifting Gears* Bicycle Network Master Plan, Rymal Road should be considered for a potential bike route with bicycle racks, since it was identified as a desirable connection in the Rymal Road Planning Area *Urban Design Guidelines*. This will be considered in greater detail in Phases 3 and 4 for the ROPA 9 Study. Bicycle routes should also be considered within the ROPA 9 lands. Sidewalks and bicycle routes should also be considered for Regional Road 56 and the Trinity Church Road extension. Bicycle routes for consideration are illustrated in *Exhibit 2-24*. The road design for the Trinity Church Road Corridor will need to consider the crossing for the Red Hill Valley Open Space Replacement Strategy Trail which is proposed south of Highland Road.

The City of Hamilton’s *Managing Travel Demand Policy Paper* recommends actively considering Travel Demand Management as a component of other initiatives intended to increase walking, cycling, transit use and carpooling, particularly to and from major travel destinations. To improve travel options for the communities in the vicinity of the Study Area, a carpool lot should be considered along the Trinity Church Road extension, due to its proximity to the Lincoln Alexander Parkway and the Red Hill Valley Parkway. This will be studied in greater detail in Phases 3 and 4 for the Trinity Church Road Corridor Study.

The City of Hamilton’s *Good Movement Policy Paper* identified a need to find “missing links” in the goods movement network. The Trinity Church Road Corridor would provide a valuable north-south link in the goods movement network and should be considered for truck route designation. It would provide good access to the North Glenbrook Industrial Business Park and East Mountain Industrial Business Park from the Lincoln Alexander Parkway and the Red Hill Valley Parkway. The establishment of the Trinity Church Road Corridor as a truck route would also provide the opportunity to remove the truck route designation from Upper Mount Albion Road.

Due to the potential impacts of the Trinity Church Road Corridor on Highland Road, potential opportunities for improvements should be reviewed for Highland Road (such as urbanization) between Pritchard Road and Winterberry Drive. Highland Road from Winterberry Drive easterly is identified in the *Shifting Gears* Bicycle Network Master Plan as a bicycle route. There would be the potential to continue this bicycle route along Highland Road from Pritchard Road to Winterberry Drive if improvements were implemented on this section of Highland Road. This will be examined in further detail during the Phase 3 and 4 Study for the Trinity Neighbourhood Collector Road.
10.2 Summary of Trinity Neighbourhood Study Recommendations

The following are the planning recommendations for the Trinity Neighbourhood area:

10.2.1 Phase 1 Solutions

Second Road West

- Implement enhanced traffic control (additional signage, painted stop bars) on Second Road West, north of Gatestone Drive to enhance the visibility of the stop-controlled intersections.

- Implementation of physical traffic calming measures on Second Road West does not meet the City policy requirements, and is therefore not recommended as a potential solution at this time. However, the City will continue to monitor Second Road West for the appropriateness of physical traffic calming measures in the future, prior to any road closure.

Upper Mount Albion Road

- Consideration of enhanced traffic control measures (pavement markings, aggressive police enforcement and gateway features) for Upper Mount Albion Road, appropriate for a rural cross-section.

- Implementation of physical traffic calming measures on Upper Mount Albion Road is not consistent with the City policy requirements for PRIMARY emergency / fire services routes, and is therefore not recommended as a potential solution, at this time. However, the City will continue to monitor roadway operations on Upper Mount Albion Road, and if conditions change, physical traffic calming measures, aggressive police enforcement and gateway features will be re-investigated.

Additional Future Phase 1 Solutions – Physical Traffic Calming Measures

The City will continue to monitor Second Road West for the appropriateness of physical traffic calming measures in the future, prior to any road closure. All current City policy requirements must be met, before consideration is given to traffic calming. This includes meeting a speeding threshold of the 85th percentile speed (the speed at which 85% of the vehicles travel at or below) being at least 8 km/h above the posted speed limit.

Consideration may also be given to additional measures on Upper Mount Albion Road, if the implemented Phase 1 solutions are not effective. Future measures on Upper Mount Albion Road are limited given the Primary emergency / fire services route designation. However, centreline rumble strips, which will not compromise the movement of emergency vehicles, or
other measures identified as feasible by the City can be considered. All current City requirements and criteria for implementation of traffic calming measures would have to be met before any consideration would be given to traffic calming.

If the closure of either Second Road West, or of Upper Mount Albion Road has occurred or is imminent, traffic calming measures will not be implemented.

Potential physical traffic calming measures for consideration include, but are not limited to, the following:

- Second Road West – speed humps, chicanes, directional closures / diverters
- Upper Mount Albion Road – centerline rumble strips, other measures identified as feasible by the City

Any or all of these measures will need to be approved by the City of Hamilton before implementation.

10.2.2 Phase 2 Solutions

- Implement new road connections as soon as possible to provide additional north-south capacity. These include:
  - A new collector road in the Trinity Neighbourhood
  - New roadway from Stone Church Road / Red Hill Valley Parkway to Rymal Road (on an alignment to be determined)

- Implement road closure on Second Road West north of Gatestone Drive, and on Upper Mount Albion Road
  - Closure of Second Road West should be coordinated with the construction of the new collector road
  - Closure of Upper Mount Albion Road should be coordinated with a new north-south link from Stone Church Road / Red Hill Valley Parkway to Rymal Road

10.2.3 Closure Details

Since the closure of Second Road West should be coordinated with the construction of a new collector road between Rymal Road / Second Road West and Highland Road, it is appropriate that the identification of closure details be linked to the process of determining the details for a new collector road. As such, it is recommended that the details for the closure of Second Road West be determined in the Phases 3 and 4 Collector Road and Trinity Neighbourhood Improvements Environmental Assessment, which is currently on-going.

Similarly, the closure of Upper Mount Albion Road should be coordinated with a new north-south roadway linking Stone Church Road / Red Hill Valley Parkway to Rymal Road. As such, it is recommended that the details for the closure of Upper Mount Albion Road be
determined in the Phases 3 and 4 Trinity Church Road Corridor Environmental Assessment, which is currently on-going.

The applicable Class EA Schedule for each of the Trinity Neighbourhood Study recommendations is summarized in Table 10-2.

### Table 10-2: Preferred Solutions for Trinity Neighbourhood

<table>
<thead>
<tr>
<th>Project</th>
<th>Class EA Schedule</th>
<th>Phases 1 or 2 Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Second Road West</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Enhanced traffic control, north of Gatestone Drive as measures to enhance the visibility of the stop-controlled intersections</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>2. Monitor for the appropriateness of physical traffic calming measures in the future, and implementation of traffic calming measures if required, prior to any road closure</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td><strong>Upper Mount Albion Road</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Consideration of enhanced traffic control measures (pavement markings), appropriate for a rural cross-section</td>
<td>A</td>
<td>Phase 1</td>
</tr>
<tr>
<td>4. Monitor for the appropriateness of physical traffic calming measures (e.g. rumble strips) in the future, and implementation of traffic calming measures if required, prior to any road closure</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>
### Project Class EA Schedule Phases 1 or 2 Implementation

<table>
<thead>
<tr>
<th>Project</th>
<th>Class EA Schedule</th>
<th>Phases 1 or 2 Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>New road connections as soon as possible to provide additional north-south capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. A new collector road in the Trinity Neighbourhood connecting Rymal Road to Highland Road</td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>6. New roadway from Stone Church Road / Red Hill Valley Parkway ramps to Rymal Road (alignment to be determined, project no. 3 for ROPA 9 lands, Table 10-1 above)</td>
<td></td>
<td>C</td>
</tr>
</tbody>
</table>

#### Road Closures

<table>
<thead>
<tr>
<th>Road Closures</th>
<th>Class EA Schedule</th>
<th>Phases 1 or 2 Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Closure of Second Road West, to be coordinated with the construction of the new Trinity Neighbourhood collector road</td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>8. Closure of Upper Mount Albion Road, to be coordinated with the new roadway from Stone Church Road / Red Hill Valley Parkway ramps to Rymal Road</td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>

The City of Hamilton’s *Promoting Public Transit Policy Paper* states that a goal of providing at least 90% of residents and employees within the City with transit service within 400 metres (5 minute walk) should be established. Transit improvements will be required to service the Trinity Neighbourhood community. As development proceeds, transit service should be considered along the new collector road with potential transit stops at the intersections with Rymal Road, Gatestone Drive and Highland Road. The opportunity for transit service will need to balance the operational cost-effectiveness, strategic objectives, and providing a service to the community.

The City of Hamilton’s *Walking and Cycling Policy Paper* has recommended that the existing network of pedestrian and bicycle infrastructure be improved and expanded. It also recognizes that these uses should be considered in the establishment of the right-of-way and the design of new roads, and the reconstruction of existing roads. As such, as development of the Trinity Neighbourhood proceeds, pedestrians and cyclists improvements will be required to serve the community. Sidewalks should be provided on both sides of the new collector road, with consideration for transit stops. Sidewalks should also be provided where discontinuous in the existing pedestrian network.
Although not identified in the *Shifting Gears* Bicycle Network Master Plan, Upper Mount Albion Road should be considered for a potential bike route with bicycle racks when it is urbanized since it would provide a good north-south connection in the bicycle network from Stone Church Road to the ROPA 9 lands. This connection in the bicycle network would also provide opportunities to connect to the Hamilton Conservation Authority Karst lands and trail network. Although Upper Mount Albion Road will be closed in the future, accommodation could be made to allow bicycle access. This will be considered in greater detail in Phases 3 and 4 for the Trinity Church Road Corridor Study. Bicycle routes for consideration are illustrated in Exhibit 2-24.

The City of Hamilton’s *Good Movement Policy Paper* identified a need to identify locations where road geometry could present a problem for trucks, and to develop routing and/or infrastructure options to address these issues. The appropriateness of Upper Mount Albion Road as a truck route will be reviewed as part of the truck route study which is being undertaken by the City. Consideration should be given to transferring the designated truck route from Upper Mount Albion Road to the Trinity Church Road Corridor which would provide good access to the North Glanbrook Industrial Business Park and East Mountain Industrial Business Park from the Lincoln Alexander Parkway and the Red Hill Valley Parkway.

### 10.3 Summary of Special Policy Area ‘C’ Study Recommendations

The following are the recommended transportation solutions for Special Policy Area ‘C’, in conjunction with Travel Demand Management initiatives, and a new north-south roadway between Rymal Road and Stone Church Road / Red Hill Valley Parkway (RHVP) ramps:

- Exclusive turn lanes at: Stone Church Road / Upper Mount Albion Road, Winterberry Drive/Proposed site access, Winterberry Drive/Mud Street, RHVP ramps / Stone Church Road;
- Dual southbound left turn lanes at RHVP ramps / Stone Church Road;
- Traffic controls (signals or roundabout) at Stone Church Road / Upper Mount Albion Road;
- Widening of Stone Church Road to 4 lanes from the RHVP ramps to Upper Mount Albion Road;
- Traffic controls (signals or roundabout) at Winterberry Drive / Site access; and
- Extension of the existing northbound left turn lane on Winterberry Drive at Mud Street.

It is necessary to coordinate the Special Policy Area ‘C’ development with infrastructure requirements.

The applicable Class EA Schedule for each of the Special Policy Area ‘C’ Study recommendations is summarized in Table 10-3.
Table 10-3: Preferred Solutions for Special Policy Area ‘C’.

<table>
<thead>
<tr>
<th>Project</th>
<th>Class EA Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Exclusive turn lanes at: Stone Church Road/Upper Mount Albion Road,</td>
<td>Separately, an A or B, but will be part of the Schedule C studies.</td>
</tr>
<tr>
<td>Winterberry Drive/Proposed site access, Winterberry</td>
<td></td>
</tr>
<tr>
<td>Drive/Mud Street, Red Hill Valley Parkway (RHVP) ramps/Stone Church Road</td>
<td></td>
</tr>
<tr>
<td>2. Dual southbound left turn lanes at RHVP ramps/Stone Church Road</td>
<td>Separately, an A or B, but will be part of the Schedule C studies.</td>
</tr>
<tr>
<td>3. Traffic controls (signals or roundabout) at Stone Church Road/Upper</td>
<td>Separately, an A or B, but will be part of the Schedule C studies.</td>
</tr>
<tr>
<td>Mount Albion Road</td>
<td></td>
</tr>
<tr>
<td>4. Widening of Stone Church Road to 4 lanes from the RHVP ramps to</td>
<td>C (cost expected to be &gt;$1.5 million)</td>
</tr>
<tr>
<td>Upper Mount Albion Road</td>
<td></td>
</tr>
<tr>
<td>5. Traffic controls (signals or roundabout) at Winterberry Drive/Site</td>
<td>Separately, an A or B, but will be part of the Schedule C studies.</td>
</tr>
<tr>
<td>access</td>
<td></td>
</tr>
<tr>
<td>6. Extension of the existing northbound left turn lane on Winterberry</td>
<td>Separately, an A or B, but will be part of the Schedule C studies.</td>
</tr>
<tr>
<td>Drive at Mud Street</td>
<td></td>
</tr>
</tbody>
</table>

The City of Hamilton’s *Promoting Public Transit Policy Paper* states that a goal of providing at least 90% of residents and employees within the City with transit service within 400 metres (5 minute walk) should be established. Transit improvements will be required to service the Special Policy Area ‘C’ lands. As development proceeds, the existing transit service should be re-examined along Winterberry Drive and along Stone Church Road. Additional stops could be provided within the Special Policy Area ‘C’ lands. The Special Policy Area ‘C’ lands provide a strategic location for a potential transit hub due to its vicinity to the Lincoln Alexander Parkway, Red Hill Valley Parkway, ROPA 9 lands, and North Glanbrook Industrial Business Park. The opportunity for transit service will need to balance the operational cost-effectiveness, strategic objectives, and providing a service to the community.

The City of Hamilton’s *Walking and Cycling Policy Paper* has recommended that the existing network of pedestrian and bicycle infrastructure be improved and expanded. It also recognizes that these uses should be considered in the establishment of the right-of-way and the design of new roads, and the reconstruction of existing roads. As such, as development of Special Policy Area ‘C’ proceeds, pedestrians and cyclists improvements will be required to serve the lands. Sidewalks should be provided on both sides of Stone Church Road and Winterberry Drive, with consideration for transit stops. Stone Church Road is identified in the *Shifting Gears* Bicycle Network Master Plan, and as such, the bicycle lanes should be maintained and made continuous from Winterberry Drive to Pritchard Road. Bicycle routes for consideration are illustrated in Exhibit 2-24.
10.4 **Further Studies Required**

Based on the Study approach, three Phase 3 and 4 Class EA studies will follow finalization of the Master Plan. This will entail alternative design concepts for the preferred solution and the Environmental Study Report (ESR). The studies will include:

- ROPA 9 and SPA ‘C’ Transportation Improvements (projects 1, 2 and 5 from Table 10-1: Preferred Solutions for ROPA 9 Lands and projects 1 to 6 from Table 10-3: Preferred Solutions for Special Policy Area ‘C’);

- Trinity Church Road Corridor, and Closure of Upper Mount Albion Road (project 3 from Table 10-1: Preferred Solutions for ROPA 9 Lands and phase 1 and 2 conclusions for the Trinity Church Road Corridor south of Rymal, from the North Glanbrook Industrial Business Park Master Plan; and project 8 from Table 10-2: Preferred Solutions for Trinity Neighbourhood); and

- Trinity Neighbourhood Collector Road, and Closure of Second Road West (projects 5 and 7 from Table 10-2: Preferred Solutions for Trinity Neighbourhood).