SPECIAL POLICY AREA ‘C’
TRANSPORTATION IMPROVEMENTS
CLASS ENVIRONMENTAL ASSESSMENT
STUDY REPORT
PHASE 3 AND 4

City of Hamilton

April 2007
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Rymal Road Planning Area (ROPA 9) Master Plan (June 2006)
1. INTRODUCTION AND BACKGROUND

1.1 Introduction and Project Context

Special Policy Area ‘C’ is a planning area defined in the Stoney Creek Official Plan. It is an area bounded by Winterberry Drive to the east, Paramount Drive to the south, the new Red Hill Valley Parkway / Mud Street interchange to the west, and the Lincoln Alexander Parkway-Mud Street West to the north. Special Policy Area ‘C’ includes 4.7 ha of lands proposed for commercial and residential development (known as the Heritage Green Development). The study area is illustrated in Exhibit 1-1.

The Rymal Road Planning Area (ROPA 9) Master Plan Class Environmental Assessment documents Phases 1 and 2 (as per the Municipal Class EA process, June 2000) of the recommended transportation improvements necessary to support the Rymal Road Secondary Plan area and the Special Policy Area ‘C’ planning area. 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.

Completion of the 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 Policy Area ‘C’. The Master Plan was approved by the City Council in June 2006.

A number of studies formed part of Phases 1 and 2 of the Master Plan Class EA. The flow chart below provides a summary and the relation of the Special Policy Area ‘C’ study in relation to the Master Plan.
Exhibit 1-1: Study Area

[Diagram showing the Study Area with Rymal Road Planning Area highlighted]
This report documents the Phases 3 and 4 of the Class EA process for transportation improvements for Special Policy Area ‘C’, including the identification and evaluation of design alternatives and the selection of preferred design. This report should be read in conjunction with the Rymal Road Planning Area (ROPA 9) Master Plan (June 2006), which documents Phases 1 and 2 of the Class EA process.
1.2  Study Scope and Objectives

1.2.1  Findings of the ROPA 9 Master Plan Class EA

The preferred planning alternative identified in the ROPA 9 Master Plan includes a combination of the following:

- travel demand management,
- transit initiatives,
- new major infrastructure (a new north-south roadway between Rymal Road and Stone Church Road),
- road widenings, and
- operational improvements.

The following are the specific recommended transportation solutions identified in the ROPA 9 Master Plan 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 lane would commence from Upper Mount Albion Road as a through lane with right turns permitted at access points, 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
- Provision of bike lanes on Stone Church Road

**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 1-2**.

### 1.3 **Project Team**

The Special Policy Area ‘C’ Environmental Assessment 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
• Harold Groen – Functional Planning
• Gavin Norman – Development Engineering

**Consulting Team:**
• Ray Bacquie (Consultant Project Manager) – iTRANS Consulting
• Liza Sheppard (Consultant Project Coordinator) – iTRANS Consulting
• Nathalie Baudais (Assistant Project Coordinator) – iTRANS Consulting
• Suzette Shiu (Transportation Planning) – iTRANS Consulting
• Perry Perera / Greg Perry (Road Design) – iTRANS Consulting
• Christine Hill (Stormwater Management) – XCG
• Grant Kauffman (Natural Environment) – LGL
• Richard Unterman (Cultural Heritage) – Unterman McPhail Associates
• Robert Pihl (Archaeology) – Archaeological Services Inc.
Exhibit 1-2
Future Road Network
Special Policy Area ‘C’

City of Hamilton

Not to Scale

April 2007

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.
1.4 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.

The Class EA Master Plan summarized the work completed 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. The Class EA Master Plan was endorsed by Hamilton City Council on June 14, 2006.

This Study will complete the third and fourth phases of the five-phase Class Environmental Assessment Process. Exhibit 1-3 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 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 an 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 Schedule “C” projects resulting from the Master Plan Study which will be documented in this Environmental Study Report are shown in Exhibit 1-4. A Notice of Completion will 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.

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 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.
Exhibit 1-3
Class Environmental Assessment Process
Notes:
* Extend northbound left turn lane.
### 1.5 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 announcement of the Phase 3 and 4 Public Information Centre (PIC). The following is a summary of the agencies contact list.

<table>
<thead>
<tr>
<th>Federal Agencies</th>
<th>Provincial Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Canadian Wildlife Services</td>
<td>- Ontario Realty Corporation</td>
</tr>
<tr>
<td>- Canadian Environmental Assessment Agency</td>
<td>- Ontario Provincial Police - Burlington Detachment</td>
</tr>
<tr>
<td>- Department of Fisheries and Oceans</td>
<td>- Ministry of Agriculture, Food &amp; Rural Affairs</td>
</tr>
<tr>
<td>- Environment Canada</td>
<td>- Ministry of Culture / Ministry of Tourism and Recreation</td>
</tr>
<tr>
<td>- Parks Canada</td>
<td>- Ministry of Community and Social Services</td>
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<tr>
<td></td>
<td>- Heritage and Libraries Branch, Ministry of Culture</td>
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<td></td>
<td>- Ministry of Natural Resources</td>
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<td>- Ministry of the Environment</td>
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<td>- Ministry of Transportation</td>
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<td>- Ministry of Health and Long Term Care</td>
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<td></td>
<td>- Niagara Escarpment Commission</td>
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<table>
<thead>
<tr>
<th>First Nations</th>
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<table>
<thead>
<tr>
<th>City of Hamilton Departments</th>
<th>Conservation Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Corporate Services</td>
<td>- Hamilton Conservation Authority</td>
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<tr>
<td>- Economic Development</td>
<td>- Niagara Peninsula Conservation Authority</td>
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<tr>
<td>- Hamilton Emergency Services</td>
<td></td>
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<tr>
<td>- Hamilton Police Services</td>
<td></td>
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<tr>
<td>- Mayor's Office / Council</td>
<td></td>
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<tr>
<td>- Planning and Development</td>
<td></td>
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<tr>
<td>- Public Health and Community Services</td>
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<tr>
<td>- Public Works</td>
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</tbody>
</table>
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.
- Urbex
- Ontario Realty Corporation

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.

1.6 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 Master Plan Study and were maintained for the Phase 3 and 4 Class Environmental Assessment 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 the Master Plan Study and was maintained for the Phase 3 and 4 Class Environmental Assessment Study. One meeting was held with this group during the Phase 3 and 4 Study. The meeting was held prior to the Phase 3 and 4 Public Information Centre (PIC). The stakeholders consisted of representatives of local groups and businesses, and developers. City of Hamilton staff and consultants comprised the technical representatives.

- **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 Stakeholder and Technical Committee Meetings and through announcement of the Phase 3 and 4 Public Information Centre (PIC).

- **Public Information Centre (PIC)** – A formal meeting was held during the Phase 3 and 4 Study. It consisted of a public open house with display panels. 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.

- **Newspaper advertisements** – At least one and a half weeks prior to the Phase 3 and 4 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*, *Stoney Creek News*, and *Glanbrook Gazette* to announce the date, time, and location of the meeting. The newspaper advertisements invited the public to attend the meeting 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 the Phase 3 and 4 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** – As part of the Master Plan Study, a project website was launched to provide the public with an additional means to obtain information about the project. The project website was maintained during the Phase 3 and 4 Study and the website was advertised in the PIC display materials.

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 A.3**.

Major events in the public consultation process are summarized below:

- Meeting with Six Nations Council: June 6, 2006
- Meeting with Stakeholder and Technical Committee: October 2, 2006
- Notification letters to utility companies, external agencies, area businesses, residents and other stakeholders for Public Information Centre: September 29, 2006
- Newspaper advertisement of Public Information Centre: September 29, 2006
- **Public Information Centre**: October 12, 2006
- City of Hamilton Council Approval: September 27, 2006
- Notice of Study Completion (Phases 3 and 4)

### 1.6.1 Master Plan Public Consultation Process

During the Problem Statement and Planning Alternatives phases of the ROPA 9 Master Plan, 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) 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’:
  - Study background,
  - Chart of the EA process and class EA requirements
  - Public consultation plan, and
  - Existing conditions.

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.

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.

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.

**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.

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 (SC) 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.

Key public comments provided on the SPA ‘C’ needs assessment included the following:

- 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.

Note that more detailed documentation of the Phase 1 & 2 process is found in the Master Plan.

### 1.6.2 Phase 3 and 4 Consultation

The public consultation process and public reaction during the Design Phase for Special Policy Area ‘C’ are summarized in Section 5.2 of this report. Additional details on the public consultation process are contained in Appendix A.
2. TIMING OF SPA ‘C’ INFRASTRUCTURE

Conclusions of the ROPA 9 Master Plan indicated that development of SPA ‘C’ should not proceed until the infrastructure identified in Section 1.2.1 can be accommodated 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.

The needs analysis of the ROPA 9 Master Plan identified operational constraints that include the environmental capacity of Upper Mount Albion Road, intersection capacity along Stone Church Road, capacity and queue storage along Winterberry Drive, the queue capacity for southbound traffic on the Red Hill Valley Parkway Ramps.

It is recognized that traffic patterns will change in 2007 upon the opening of the Red Hill Valley Parkway. Traffic will increase on roads down stream from the terminus of the expressway. Traffic volumes on Stone Church Road and Upper Mount Albion Road will increase until a new north-south arterial connection between the ramps and Rymal Road are completed.

Notwithstanding this point, components of the required improvements would be beneficial as early as feasible following the opening of the Red Hill Valley Parkway. It is anticipated that the southbound left turn queues on the Red Hill Valley Parkway Ramps at Stone Church Road will be very long and mitigation in the form of dual left turn lanes would be desirable as soon as possible. However a widening of Stone Church Road would be required to be in place to receive the dual left turn lanes.
3. EXISTING STUDY AREA CONDITIONS

This section describes the features of the existing transportation infrastructure in the study area. For information on the existing socio-economic environment, natural environment, surface runoff and utilities, please refer to the Master Plan document.

3.1 Existing Transportation Facilities

3.1.1 Road Classification

The existing road network and classifications based on the current City’s Official Plan designations are illustrated in Exhibit 3-1. The official plan definitions of the road classes and designated right-of-way are noted in Table 3-1. For specifics on any road in the City’s road network, refer to the appropriate Official Plan for right-of-way designations. 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 3-1: 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>

For roads in the City of Hamilton, road right-of-way designations can reach up to 60 m and volumes may exceed 30,000 per day.
3.1.2 Road Network and Characteristics

The Study Area roads are described below.

**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 provides an arterial road function in the study area road network. 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 3-2: Upper Mount Albion Road Northbound (north of Rymal Road)
Stone Church Road – Stone Church Road is an east-west arterial which provides access to Mud Street via Paramount Drive. 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 near the intersection with Winterberry Drive. No bike lanes currently exist between Pritchard Road and east of Upper Mount Albion Road.

Exhibit 3-3: Stone Church Road Westbound (east of Pritchard Road)

Exhibit 3-4: 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 3-5: 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 3-6: Paramount Drive Northbound (approaching Mud Street)

3.1.3 Transit Service Accommodation

The Hamilton Street Railway Company operates two routes in the vicinity of Special Policy Area ‘C’:

- 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

3.1.4 Pedestrian and Bicycle Network

Within the Study Area, pedestrian and bicycle accommodation is limited. Bicycle lanes are provided along Paramount Drive. Bike lanes are also provided on Stone Church Road west of Pritchard Road, and near the intersection with Winterberry Drive. No bike lanes currently exist on Stone Church Road between Pritchard Road and east of Upper Mount Albion Road.
4. PREFERRED PLANNING ALTERNATIVE

The Class Environmental Assessment process requires the examination of all reasonable alternatives, including alternatives to the undertaking, referred to as planning alternatives. Through the Master Plan Study, planning alternatives that addressed the problem statement were developed and evaluated and presented to the public. The following transportation improvements were part of the preferred alternatives for the SPA ‘C’ lands, 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 5 lanes from the RHVP ramps to east of 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.

The ROPA 9 Master Plan (Phase 1 and 2) Study also recommended that:

- Transit service be considered along the Winterberry Drive and Stone Church Road corridors with potential new transit stops or a potential transit hub within the SPA ‘C’ lands;
- Sidewalks be considered for Winterberry Drive and Stone Church Road; and
- Bicycle routes be considered for Stone Church Road.
5. EVALUATION OF DESIGN ALTERNATIVES

The Class Environmental Assessment process requires the examination of alternative methods of implementing the preferred undertaking by considering design alternatives. This section of the report provides a discussion on the development and evaluation of the design alternatives for the Special Policy Area ‘C’ transportation improvements.

5.1 Development and Evaluation of Design Alternatives

The preferred planning alternatives were determined during the Master Plan Study and are summarized in Section 4 of this report. For the recommended planning alternative, there were a number of methods to implement the undertaking. Design alternatives reflect specific design decisions for implementing the preferred planning alternative. The advantages and disadvantages of each design alternative were identified and evaluated to determine the best implementation of the undertaking. This is discussed below.

5.1.1 Development of Design Alternatives

The proposed traffic management plan design alternatives include the following:

- Alternative alignments for widening Stone Church Road (based on offset to the north, to the south and about the centreline of the road),
- Warrants and appropriateness for traffic control devices (traffic control signals or roundabouts) for the Upper Mount Albion Road/Stone Church Road intersection and the Winterberry Drive/Heritage Green Development Entrance intersection,
- Provision of urban or rural drainage, and
- Storage requirements for auxiliary lanes.

Additional roadway enhancements / improvements could include:

- Enhanced pedestrian environment
- Improved pavement structure
- Streetscaping, where feasible

Each design alternative was developed and assessed in recognition of the criteria outlined 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>Traffic Safety</td>
<td>Vegetation</td>
</tr>
<tr>
<td>Access to/from Surrounding Roads</td>
<td>Wildlife</td>
</tr>
<tr>
<td></td>
<td>Stormwater</td>
</tr>
</tbody>
</table>
Each design alternative is described and assessed in further detail below.

5.1.1.1 Stone Church Road Alignment Alternatives

The three options identified and assessed all involve widening Stone Church Road to a 5-lane cross-section between the Trinity Church Corridor and Upper Mount Albion Road, and considered widening based on an offset to the north, to the south, or about the existing centreline of Stone Church Road. The three options are as follows:

1. **Offset to the North**
   Involves widening Stone Church Road all to the north of the existing centreline to accommodate 4 travel lanes (2 per direction) and a centre left-turn lane.

2. **Offset to the South**
   Involves widening Stone Church Road all to the south of the existing centreline to accommodate 4 travel lanes (2 per direction), and a centre left-turn lane.

3. **Widen Equally on Both Sides based on Centreline**
   Involves widening Stone Church Road on both the north and south sides of the existing centreline to accommodate 4 travel lanes (2 per direction), and a centre left-turn lane.

5.1.1.2 Traffic Control Devices

The traffic control options identified and assessed for the Upper Mount Albion Road/Stone Church Road intersection and the Winterberry Drive/Heritage Green Development Entrance intersection are listed below:

1. **Traffic Signals**
   Involves the provision of traffic signals and exclusive turning lanes.

2. **Roundabouts**
   Involves the provision of a roundabout with pedestrian splitter islands.

5.1.1.3 Urban or Rural Drainage Design

The cross-section options identified and assessed for Stone Church Road and Winterberry Drive are as follows:
1. **Rural Cross-section**  
   Involves the provision of ditches which require storm water outlets.

2. **Urban Cross-section**  
   Involves the provision of storm sewers, curb and gutter and an outlet.

### 5.1.2 Evaluation of Design Alternatives

The evaluation of the design alternatives and recommendations were based on the criteria outlined in Section 5.1.1. Reasoned Argument Method was used to evaluate the design alternatives. The reasoned argument can be defined as the art of getting from one sentence to another sentence by valid moves only, using the rules of logic. The Reasoned Argument Method focuses on those criteria that generate a measurable difference between each alternative.

#### 5.1.2.1 Stone Church Road Alignment Alternatives

Based on the design alternatives considered for Stone Church Road, the recommendation is Option 3 which is to widen about the existing centreline, based on the following:

- **Option 1:** Offset to the north is not desirable since it impedes on development opportunities in the area.
- **Option 2:** Offset to the south is not desirable since it would have significant impacts to the town house development east of Upper Mount Albion Road.
- **Option 3:** Widen Equally on Both Sides based on Centreline equitably distributes required land dedication to both sides of the roadway, allows for proper lane alignment at intersections entering and leaving the study area, and standard utility locations.

#### 5.1.2.2 Traffic Control Devices

**5.1.2.2.1 Stone Church Road / Upper Mount Albion Road**  
A traffic signal is identified as the required intersection control at the Stone Church Road/Upper Mount Albion Road intersection. A roundabout would result in property impacts on all four quadrants of the intersection, and the driver expectation is for signals due to the existing traffic signals at Paramount Drive/Winterberry Drive and Stone Church Road/RHVP ramp.

**5.1.2.2.2 Winterberry Drive / Proposed Heritage Green Development Access**  
A traffic signal is preferred for this intersection since the spacing for a modern roundabout between the existing signals at Mud Street and at Paramount Drive is not enough to allow a roundabout to operate properly. A roundabout would also require additional property and impact the Salvation Army Church access on Winterberry Drive.
5.1.2.3 Urban or Rural Drainage Design

5.1.2.3.1 Stone Church Road
An urban cross-section is the preferred design alternative for Stone Church Road. A rural cross-section would reduce the rate of conveyance to the storm water receiver, but would have significant property and grading impacts. An urban cross-section would minimize property and grading impacts and would maintain consistency with the cross-section of Paramount Drive, east of Winterberry Drive. An urban cross-section allows utilities to be properly located, allows watermains, hydrants and leads to hydrants to have proper coverage, allows light standards and boulevards to comply with City standards for utility locations and street plantings. Also, urban cross-sections are typically implemented on all roadways within the urban area.

5.1.2.3.2 Winterberry Drive
An urban cross-section is the preferred design alternative for Winterberry Drive. A rural cross-section would reduce the rate of conveyance to the storm water receiver, but would have significant property and grading impacts. An urban cross-section would minimize property and grading impacts and would maintain consistency with the cross-section of Winterberry Drive, south of Paramount Drive. An urban cross-section allows utilities to be properly located, allows watermains, hydrants and leads to hydrants to have proper coverage, allows light standards and boulevards to comply with City standards for utility locations and street plantings. Also, urban cross-sections are typically implemented on all roadways within the urban area.

5.1.3 Preliminary Preferred Design

The preliminary preferred design for transportation improvements for Special Policy Area ‘C’ include:
- Widening about the centreline to accommodate 4 travel lanes (2 per direction) and a centre left turn lane.
- Provision of traffic signal and exclusive turn lanes at the intersection of Upper Mount Albion Road and Stone Church Road.
- Provision of traffic signal and exclusive turn lanes at the intersection of Winterberry Drive and the proposed Heritage Green Development Access Road.
- Provision of an urban cross section for Winterberry Drive and Stone Church Road.

5.2 Phase 3 and 4 Public Consultation

Complete summaries of the public meetings, along with project team responses to questions / issues are provided in Appendix A.3.

During the Phase 3 and 4 process of the SPA ‘C’ EA, the public consultation process involved the following activities:
Meeting with Six Nations Council

Representatives of the City and the consultant team met with the Six Nations Council during the Special Policy Area ‘C’ design alternatives phase of the project. This meeting provided the Six Nations Council with an opportunity to discuss the status of the Master Plan project, the Master Plan recommendations and issues of concern for the Six Nations. Two representatives of the Six Nation Council (not including the project team members) were present at the meeting. Many items were discussed, including:

- Project update;
- ROPA 9 Master Plan recommended solutions; and
- Concerns / Issues.

A copy of correspondence with the Six Nations Council, including meeting minutes is included in Appendix A.5.

Stakeholder Committee Meeting #3 (SC #3)

Representatives of the City and the consultant team met with the Stakeholder Committee during the SPA ‘C’ design 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’ design alternatives. Six members of the SC (not including the project team members) were present at the meeting. Many items were discussed, including:

- Project update;
- SPA ‘C’ design alternatives and recommendations; and
- SPA ‘C’ public notification.

A copy of the meeting minutes with the Stakeholder Committee is included in Appendix A.4.

Second Public Information Centre (PIC#2)

The Second Public Information Centre (PIC#2) for the Special Policy Area ‘C’ Environmental Assessment Study, was held on Thursday, October 12th, 2006 from 6:00 to 8:00 PM, at the Salvation Army Church Gym, 300 Winterberry Drive (at Paramount Drive), in the City of Hamilton. The purpose of PIC#2 was to provide information about the Study to the public and at the same time obtain public input. Twenty-two panels were displayed. The information panels included the following information for Special Policy Area ‘C’:

1. Welcome
2. Study Area
3. Study Background
4. Study Purpose
5. Class Environmental Assessment Process
6. Study Public Consultation Plan
7. Problem and Opportunity Statement
8. Description of SPA ‘C’ Preferred Planning Alternatives
9. Description of SPA ‘C’ Design Alternatives
10. Description of Design Alternatives Assessment Criteria
11. Special Policy Area ‘C’ Design Alternatives Evaluation
12. Description of the Design Criteria for Stone Church Road and Winterberry Drive
13. Identification and Description of Preferred SPA ‘C’ Design Alternatives
14. Functional Design Plans and Cross Sections
15. Summary of Impacts and Mitigative Measures
16. Future Actions and Contact Information

The public was advised about the meeting through advertisements in the local paper. Advertisements were placed in the Hamilton Spectator on Friday, September 29, 2006 and Friday, October 6, 2006, and in the Brabant papers (Mountain News, Glanbrook Gazette and Stoney Creek News) on Friday, September, 29, 2006. 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 A.2.

The format was an informal drop-in centre from 6:00 to 8:00 PM to meet the project team and to view the display panels and drawings. Attendees were asked to sign-in and were invited to fill-in comment forms at their convenience within a 2-week time frame. Attendees were also provided with a summary handout of the display materials.

Approximately 60 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 A.3.

The PIC displays were posted to the Project Website immediately following PIC.

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’ design phase included the following:
- Stone Church Road widening should be extended to Pritchard Road.
- Concerns regarding the timing of implementation.
6. SELECTED DESIGN, ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Inherent in the consideration of potential changes to existing conditions associated with transportation projects, is the significance of any impacts and the extent to which these impacts may be mitigated. Significance is related to importance in a local, regional, provincial or national context, and importance, relative to other identified sensitive areas and issues. This section describes the engineering features, and examines the anticipated environmental effects and mitigation measures for the relevant components of the natural, socio-economic and cultural environments for the preferred design alternative.

6.1 Recommended Alternative

This section describes the engineering features of the recommended transportation alternatives for Stone Church Road and Winterberry Drive. The preliminary design plan and typical cross-sections are included in Appendix B.

The technically preferred Design Alternative for the widening of Stone Church Road includes:

- Widening from Red Hill Valley Parkway ramps to Upper Mount Albion Road to 5 lanes (two through lanes per direction with a centre two-way left-turn lane/back to back left turn lanes), transitioning to the existing configuration at the intersection with Winterberry Drive. The widening would occur equally on both sides based on the centreline of Stone Church Road.
- Maintaining the existing 2 through lanes west of the intersection with the Red Hill Valley Parkway ramps.
- Provision of traffic signals at the intersections with Red Hill Valley Parkway ramps and with Upper Mount Albion Road.
- Provision of an urban cross-section from Red Hill Valley Parkway ramps to Winterberry Drive.

The technically preferred Design Alternative for Winterberry Drive includes:

- Extension of the existing northbound left turn lane at the intersection with Mud Street.
- 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.
- Provision of traffic signals with exclusive turning lanes at the proposed Heritage Green Development Access Road.
- Provision of an urban cross-section from Mud Street to Stone Church Road-Paramount Drive.

The proposed design of Winterberry Drive allows for a three lane cross-section (one through lane in each direction plus auxiliary left turn lanes). During Phase 3 and 4 of the
environmental assessment study, concerns were expressed regarding the need for additional through lanes on Winterberry Drive. In response to these concerns, the needs were investigated further. The intersection level of service analysis was reviewed, link traffic volumes were compared to typical link capacity, and property availability and impacts were considered.

The intersection analysis indicated that the proposed lane configuration of one left turn lane and one through/right turn lane at the Mud Street intersection and at the Paramount Drive intersection will allow for sufficient capacity. Storage for left turning vehicles will be maximized northbound at Mud Street and back-to-back left turns will be balanced between the southbound left turns at Paramount Drive and the northbound left turn into the proposed SPA ‘C’ development. The left turn space provided is anticipated to accommodate projected vehicle queues. The design does provide two southbound lanes between Mud Street and the development access; it is anticipated that this configuration will encourage traffic to utilize Mud Street to access the new development rather than accessing through the community (via Paramount Drive).

The estimated forecast link volumes do not warrant the need for an additional through lane. Projected volumes of 600-800 peak hour vehicles can be supported by one through lane per direction and allow for some reserve capacity as documented in the Phase 1 and 2 Master Plan Report. The protection for future bus bays has been identified to allow for the removal of the bus traffic from the traffic stream and contribute to uninterrupted traffic flows.

If a four-lane cross-section were to be implemented on Winterberry Drive, property would be required on the east side of Winterberry Drive if the road centreline is to be maintained on a continuous alignment through the Paramount Drive intersection. A west side only widening would result in a poorly aligned intersection.

Given that the traffic demands are anticipated to be accommodated with the proposed lane configuration and that additional property will be required from the east side of Winterberry Drive in order to accommodate a four lane cross-section, the current proposed three-lane configuration remains recommended.

The proposed design of Stone Church Road provides for a channelized westbound right turn lane with island at the intersection of the Red Hill Valley Parkway ramps (northeast corner of intersection). During Phase 3 and 4 of the environmental assessment study, concerns were expressed regarding the need for the channel and island. The need for the channelization and island will be reviewed during detailed design and will be revised if necessary.

Details regarding the design of the recommended alternative are contained in the following sections.
6.1.1 Geometric Design

Horizontal Alignment

The horizontal alignment of Stone Church Road from Trinity Church Corridor to Upper Mount Albion Road will be consistent with its existing horizontal alignment. The alignment shall meet with the as built ramps of Red Hill Valley Parkway. The alignment is shown on the design plates provided in Appendix B.1.

The horizontal alignment of Winterberry Drive from Stone Church Road-Paramount Drive to Mud Street will be consistent with its existing horizontal alignment. The alignment is shown on the design plates provided in Appendix B.1.

Vertical Alignment

The vertical alignment of Stone Church Road will match that of the existing throughout the corridor. The alignment shall meet with the as built ramps of Red Hill Valley Parkway. The vertical alignment of Stone Church Road will be adjusted to remove vertical alignment that reduces motorists’ visibility and will also be adjusted as required to ensure that the storm sewer installations, sewer outfalls and grades operate properly.

The vertical alignment of Winterberry Drive will be adjusted to remove the vertical crest that currently exists north of Stone Church Road-Paramount Drive. The vertical alignment of Winterberry Drive will be adjusted to remove vertical alignment that reduces motorists’ visibility and will also be adjusted as required to ensure that the storm sewer installations, sewer outfalls and grades operate properly.

Typical Cross-Sections

Typical cross-sections were developed to anticipate right-of-way needs for the Stone Church Road corridor, and include the following:
- 5-lanes
- Curb and Gutter
- Exclusive turning lanes
- Sidewalks
- Bike lanes
- Streetscaping, where feasible

Typical cross-sections were developed to meet the existing configuration of Winterberry Drive, and include the following:
- 2-lane cross-section
- Curb and Gutter
- Exclusive turning lanes
- Sidewalks
- Streetscaping, where feasible

**Accommodation for Transit**

The Hamilton Street Railway currently operates two bus routes in the vicinity of Special Policy Area ‘C’:

- 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.

Bus stops are currently located at all major intersections within the corridor.

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.

In discussions with the City of Hamilton, it was noted that consideration should be given to bus bays at all transfer points along Winterberry Drive with a redesign of the roadway. The Transportation Association of Canada Geometric Design Guidelines for bus stops indicate a 25m taper, and 40m parallel length prior to the bus stop, with an additional 25m parallel length to the intersection from the bus stop. The possibility of providing bus bays on the near side of the intersections was reviewed for the northwest corner of the intersection of Winterberry Drive and Paramount Drive for southbound buses on Winterberry Drive. The possibility of providing a far side bus bay was reviewed for the northwest corner of the intersection of Winterberry Drive and Paramount Drive for westbound buses on Paramount Drive. The provision of both bus bays appear feasible but will be reviewed during detail design.

**Accommodations for Pedestrians and Cyclists**

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, the preferred design for Winterberry Drive and Stone Church Road allow for a 1.5 m sidewalk on both sides of the roadways. The sidewalk design must comply with the City of Hamilton Barrier...
Free Guidelines. A 1.8 m on-road bike lane is provided along Stone Church Road from the Red Hill Valley Parkway ramps to Winterberry Drive.

It has been recently identified that the provision of bike lanes on Winterberry Drive between Paramount Drive and Mud Street is a desirable addition to the cycling network. The construction of bike lanes through this street segment should be reviewed through the development stages of SPA ‘C’ in consideration of required roadway upgrades and available road allowance.

**Pavement Design**

The recommended pavement design should be consistent with City of Hamilton standards.

**Streetscaping**

Locations where streetscaping can be feasibly accommodated will be determined during detail design and will be consistent with the cross-sections included in Appendix B.2.

### 6.1.2 Design Criteria

The preliminary design criteria for the recommended design concepts are summarized below.

#### 6.1.2.1 Stone Church Road

An urban cross-section (curb and gutter) with sidewalks was deemed appropriate for Stone Church Road given the planned development for the area, and also since urban cross-sections are typically implemented on all roadways within the urban area.

Bike facilities along Stone Church Road will be made continuous. Stone Church Road will provide a primary east-west route for cycling through the area.

| Stone Church Road: New Classification – Urban Arterial |
|---------------------------------|--------------------------------------------------|
| Right of Way                    | 36.58 m (120')                                 |
| Basic Number of Lanes           | 5 (including a two-way centre left turn lane/back to back left turn lanes) |
| Posted Speed Limit              | 50 km/hr (to a maximum of 70 km/hr)             |
| Design Speed Limit              | 70 km/hr                                        |
| Minimum Radius                  | 300 m min (at 2% superelevation)                |
| Maximum Grade                   | 4.5%                                             |
| Minimum Grade                   | 0.75%                                            |
| Vertical Curves \(^{1,2}\)      | k = 16-23 crest                                 |
|                                 | k = 20-25 sag; (headlight control)              |
### Lane Widths
- through: 3.5 m
- left turn: 3.3 m (adjacent to median), 3.5 m (not adjacent to median)
- right turn: 3.5 m
- TWCLTL: 4.0 m without median, 5.0 m with median
- bike lane: 1.8 m

<table>
<thead>
<tr>
<th>Tangent Length for Intersection Approaches</th>
<th>Storage length required + 15 m, or 30 m min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection Angle (min 90 +/− 10 degrees)</td>
<td></td>
</tr>
<tr>
<td>Median at Intersections (min 1.5 m)</td>
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</tr>
<tr>
<td>Minimum Stopping Sight Distance (min 170 m)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intersection radius</th>
<th>15 m at arterials; 12 m at collectors, 9 m at locals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sight Triangles</td>
<td></td>
</tr>
<tr>
<td>arterial to collector</td>
<td>15 m x 15 m</td>
</tr>
<tr>
<td>arterial to arterial</td>
<td>15 m x 15 m</td>
</tr>
<tr>
<td>arterial to local</td>
<td>15 m x 15 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. grade thru intersections</th>
<th>2% max.</th>
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</thead>
<tbody>
<tr>
<td>Sidewalk width</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5 m independent walk</td>
</tr>
<tr>
<td></td>
<td>2.0 m adjacent to curb</td>
</tr>
</tbody>
</table>

**Note:**
1. The combination of all design elements, including required motorists turning and stopping sightlines at intersections and access points, must be met.
2. Length of vertical curve in m, not to be less than the design speed in km/h

### 6.1.2.2 Winterberry Drive

An urban cross-section (curb and gutter) with sidewalks was deemed appropriate for Winterberry Drive given the existing and planned development for the area, and also since urban cross-sections are typically implemented on all roadways within the urban area.

The preliminary design criteria for the recommended design concepts are summarized below. The design should match the existing roadway at Mud Street and Winterberry Drive.

#### Winterberry Drive: New Classification – Urban Collector

<table>
<thead>
<tr>
<th>Right of Way</th>
<th>30.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Number of Lanes</td>
<td>2</td>
</tr>
<tr>
<td>Posted Speed Limit</td>
<td>50 km/hr (to a maximum of 70 km/hr)</td>
</tr>
<tr>
<td>Design Speed Limit</td>
<td>70 km/hr</td>
</tr>
<tr>
<td>Minimum Radius</td>
<td>300 m min (at 2% superelevation)</td>
</tr>
<tr>
<td>Maximum Grade</td>
<td>4.5%</td>
</tr>
<tr>
<td>Minimum Grade</td>
<td>0.75% (match existing at Mud Street &amp; Paramount Drive)</td>
</tr>
<tr>
<td>Vertical Curves (^{1,2})</td>
<td>k = 16-23 crest (match existing at Mud Street &amp; Paramount Drive)</td>
</tr>
<tr>
<td></td>
<td>k = 20-25 sag; (headlight control) (match existing at Mud Street &amp; Paramount Drive)</td>
</tr>
<tr>
<td>Lane Widths</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>through</td>
<td>3.5 m</td>
</tr>
<tr>
<td>left turn</td>
<td>3.3 m (adjacent to median)</td>
</tr>
<tr>
<td>right turn</td>
<td>3.5 m</td>
</tr>
<tr>
<td>Tangent Length for Intersection</td>
<td></td>
</tr>
<tr>
<td>Approaches</td>
<td>Storage length required + 15 m, or 30 m min</td>
</tr>
<tr>
<td>Intersection Angle</td>
<td>90 +/- 10 degrees</td>
</tr>
<tr>
<td>Median at Intersections</td>
<td>1.5 m</td>
</tr>
<tr>
<td>Minimum Stopping Sight Distance</td>
<td>170 m</td>
</tr>
<tr>
<td>Intersection radius</td>
<td>15 m at arterials; 12 m at collectors, 9 m at locals</td>
</tr>
<tr>
<td>Sight Triangles</td>
<td></td>
</tr>
<tr>
<td>arterial to collector</td>
<td>15 m x 15 m</td>
</tr>
<tr>
<td>collector to collector</td>
<td>12 m x 12 m</td>
</tr>
<tr>
<td>collector to local</td>
<td>7.5 m x 7.5 m</td>
</tr>
<tr>
<td>Max. grade thru intersections</td>
<td>2% max.</td>
</tr>
<tr>
<td>Sidewalk width</td>
<td></td>
</tr>
<tr>
<td>independent walk</td>
<td>1.5 m</td>
</tr>
<tr>
<td>adjacent to curb</td>
<td>2.0 m</td>
</tr>
</tbody>
</table>

Note:  
1. The combination of all design elements, including required motorists turning and stopping sightlines at intersections and access points, must be met.  
2. Length of vertical curve in m, not to be less than the design speed in km/h

6.1.3 Drainage and Stormwater Management

This section provides a summarized discussion of the preliminary drainage and stormwater management associated with the transportation improvements for Special Policy Area ‘C’.

6.1.3.1 Stone Church Road

Stone Church Road is proposed to be widened between Winterberry Road and the Red Hill Valley Parkway ramps. Storm drainage from this area is tributary to Montgomery Creek. The Heritage Green Mixed Use Development Stormwater Management Report (Delcan, 2006) is being updated to consider the ultimate storm water drainage catchment area.

Based on the Delcan, 2006 Report, the following comments are provided by XCG Consultants Limited:

Proposed stormwater management facilities for the Heritage Green Commercial Centre were sized for to control post-development flows to pre-development levels and for Level 2 water quality control. Erosion control was not considered in the sizing of the facilities. Additional stormwater management facilities are required to accommodate the increase in impervious area associated with the widening of Stone Church Road to address storm water management requirements for the widening of the Southern half of Stone Church Road from Upper Mount Albion Road to Winterberry Drive. A review of the background information contained with the Heritage Greene Functional Engineering Report identified that ditch drainage from the southern ditch on Stone Church Road is tributary to an existing 525mm diameter storm sewer.
on Paramount Drive. A storage volume of 533 m$^3$ will be required to meet quantity control requirements. An additional 273 m$^3$ will be required for water quality assuming Level 2 protection is required. A further 526 m$^3$ required for erosion control.

A wet pond with extended detention with a total volume of 1,059 m$^3$ will be required for the improvements on Stone Church Road. To accommodate this volume a minimum area of 1,059 m$^2$ or 1.05 ha is required based on an extended detention storage depth of 1.0m and a 3:1 length to width ratio.

Widening of Winterberry Drive between Mud Street and Paramount Drive will result in approximately an additional 1,000 m$^2$ of pavement area over existing conditions. Existing road drainage from the current road right of way is conveyed via the Winterberry Drive ditch to the Mud Street roadside ditches. Approximately 110m west of Winterberry Drive/Paramount Drive, a 900mm diameter cross culvert flows under Mud Street. The Heritage Green Mixed Use Centre Preliminary Servicing Report (February 2006), identified that a storm sewer would be constructed along Winterberry Drive to pick up storm drainage from the urbanized Winterberry Drive and conveyed to the existing storm sewer located within an easement on Hopewell Crescent.

As noted, the Heritage Green Mixed Use Development Stormwater Management Report (Delcan, 2006) is currently being updated to consider the ultimate storm water drainage catchment area. Any changes made could affect the stormwater recommendations of this study. The provision and location of stormwater management facilities will be reviewed further upon approval of the Heritage Green Mixed Use Development Reports prior to detail design.

**6.1.4 Utilities**

Several utilities are located within the study area. These include Union Gas, Hamilton Hydro, Bell Canada, FibreWired and Mountainview Cable. A summary of the potential impact on each utility is provided below.

**Hamilton Hydro**

Approximately eight metal streetlighting poles in the existing median of Winterberry Drive will need to be relocated.

Approximately twenty-one metal streetlighting poles along Stone Church Road will require relocation. Eight of the poles are on the south side of Stone Church Road, east of Upper Mount Albion Road. The other thirteen poles are located on the north side of Stone Church Road, west of Upper Mount Albion Road.

Approximately two wooden poles on the east side of Upper Mount Albion Road will need to be relocated at the southeast corner of the intersection with Stone Church Road. The impacted poles are proposed to be relocated within the new right of way.
Formal definition of impacts on utilities will be determined during detailed design. All utility information should be updated prior to construction to ensure that the data is accurate and to finalize relocation requirements as necessary.

The location of all the utilities will be reviewed during detailed design from a vertical and horizontal aspect.

**Union Gas**

An existing buried gas line is located on the south side of Stone Church Road throughout the study area. No impacts are anticipated to the existing buried gas line within the study area, since no changes are proposed to the Stone Church Road vertical alignment. Sufficient cover should be maintained.

Formal definition of impacts on utilities will be determined during detailed design. All utility information should be updated prior to construction to ensure that the data is accurate and to finalize relocation requirements as necessary.

The location of all the utilities will be reviewed during detailed design from a vertical and horizontal aspect.

**Bell Canada**

Impacts are anticipated for the overhead Bell facility on the east side of Upper Mount Albion Road at the intersection with Stone Church Road. The Bell facility is located on the Hydro poles, two of which will need to be relocated. Impacts on overhead facilities are subject to relocation of Hamilton hydro poles. Potential impacts are anticipated to the existing buried bell line within the study area, since a full reconstruction and widening of Stone Church Road could impact the Bell facility, depending on its current depth.

Formal definition of impacts on utilities will be determined during detailed design. All utility information should be updated prior to construction to ensure that the data is accurate and to finalize relocation requirements as necessary.

The location of all the utilities will be reviewed during detailed design from a vertical and horizontal aspect.

**FibreWired and Mountainview Cable**

An existing buried cable line is located on the south side of Stone Church Road, east of Upper Mount Albion. No impacts are anticipated to the existing buried cable line within the study area, since no changes are proposed to the Stone Church Road vertical alignment. Sufficient cover should be maintained.
Formal definition of impacts on utilities will be determined during detailed design. All utility information should be updated prior to construction to ensure that the data is accurate and to finalize relocation requirements as necessary.

The location of all the utilities will be reviewed during detailed design from a vertical and horizontal aspect.

### 6.1.5 Illumination and Traffic Signals

The need for and type of illumination within the sections of Stone Church Road and Winterberry Drive is to be confirmed at the detailed design stage. All illumination must be upgraded to cover the widened roadway pavement, in accordance with accepted standards. Given that the section of Stone Church Road from Trinity Church Corridor to Upper Mount Albion Road will be widened to a 5-lane cross-section, illumination will be required on both sides of the roadway throughout this section of the corridor. The relocation of existing illumination is to be addressed during detailed design. A few preliminary comments as follows are provided.

- Existing illumination in the existing median of Winterberry Drive, on the south side of Stone Church Road, east of Upper Mount Albion, and on the north side of Stone Church Road, west of Upper Mount Albion will need to be relocated to accommodate the widening.
- Full conventional illumination to City of Hamilton standards is recommended within the study limits.
- Should any of the existing light standards not be salvageable for reinstallation, new light standards should be installed to City of Hamilton standards.
- Illumination should be directed towards the roadway and sidewalks, and away from adjacent residences.

The traffic signal hardware at the Stone Church Road-Paramount Drive / Winterberry Drive intersection will need to be relocated with the reconstruction of Winterberry Drive.

Traffic signals are recommended at the intersections of Stone Church Road / Trinity Church Corridor, Stone Church Road / Upper Mount Albion Road and Winterberry Drive / the proposed Heritage Green Access Road.

### 6.1.6 Property Requirements

The preliminary design was prepared with the goal of minimizing the need for property within the corridor. Stone Church Road has a designated right-of-way width of 36.58 m (120 ft). However, the existing right-of-way varies throughout the corridor and is less than designated in some areas. Property requirements have been identified for this project at the following four locations:
South side of Stone Church Road, east of Upper Mount Albion Road (~ 950 m$^2$):
  - The existing right-of-way in this area is approximately 30.5 m. The additional property will allow for a right-of-way width in this area of 36.58 m.

South side of Stone Church Road, west of Upper Mount Albion Road (~ 1,800 m$^2$):
  - The existing right-of-way in this area is approximately 30.5 m. The additional property will allow for a right-of-way width in this area of 36.58 m.

North side of Stone Church Road, east of Red Hill Valley Parkway ramps – Heritage Green Developments (~ 3,500 m$^2$):
  - The existing right-of-way in this area is approximately 30.5 m. The additional property will allow for a right-of-way width in this area of 36.58 m.

North side of Stone Church Road, west of Red Hill Valley Parkway ramps (~ 560 m$^2$):
  - The existing right-of-way in this area is approximately 30.5 m. The additional property will allow for a right-of-way width in this area of 36.58 m.

The approximate property requirements are illustrated in Appendix B.1. The exact property requirements will be determined at detailed design. Overall, more detailed review of property requirements is required in all areas throughout the corridor as part of the detailed design.

6.1.7 Cost Estimate

The preliminary estimated construction cost for the recommended improvements is $6,589,000, including design fees and administrative costs. The fees do not include property acquisition costs which will be confirmed during detail design.

Stone Church Road - $4,226,000
Winterberry Drive - $1,678,000
Upper Mount Albion Drive - $493,000
Winterberry southbound right turn lane - $58,000
Mud Street eastbound right turn lane - $86,000
Red Hill Valley Parkway ramp - $48,000

The detailed cost breakdown table is included in Appendix C.

6.2 Environmental Effects and Mitigation Measures

This section examines the anticipated environmental effects and mitigating measures for the relevant components of natural, social, economic and cultural environments.
6.2.1 Natural Environment

6.2.1.1 Fisheries and Aquatic Habitat

There are no anticipated direct impacts to fish habitat within the study area, since the watercourse crossings along the Stone Church Road corridor are intermittent and do not support fish habitat, the proposed widening impacts are considered relatively minor.

There are no watercourse crossings in the Winterberry Drive corridor within the study limits.

Increases in quantity of runoff associated with the increased surface imperviousness from the proposed road improvements will not impact existing conditions.

Further details can be found in the Natural Environment report, provided in Appendix D.3 of the Master Plan.

6.2.1.2 Vegetation and Wildlife

There are no trees or other vegetation growth of biological significance within the study area. The transportation improvements will result in the removal or impact of approximately 29 trees that are ornamental types only.

Within the project limits, the Stone Church Road and Winterberry Drive corridors support wildlife species that are tolerant of urban conditions and human disturbance. Impacts to wildlife associated with this undertaking are therefore considered relatively minor.

Further details can be found in the Natural Environment report, provided in Appendix D.3 of the Master Plan.

6.2.1.3 Contaminated Property Screening

No evidence of actual contamination was identified within the study area. However, there is the potential for environmental contamination to be associated with some of the land uses (agricultural) identified. As a result, consideration should be given to conducting a further investigation during the detailed design stage and in advance of property acquisition.

6.2.1.4 Recommended Mitigation

The following are recommended mitigation measures for the protection of terrestrial and aquatic within the study corridor, during construction.
Natural Sciences

1. Tree removal, planting and protection during construction will be as per City of Hamilton Public Tree Removal Policy, and the City’s Tree Preservation and Protective Measures for Trees Affected by Construction Policy.

2. Trees on private property that may be affected as a result of the road widening or during construction will be identified prior to or during detailed design and may require the development of further strategies for mitigating these impacts.

3. In addition, in an effort to compensate for trees and other vegetation removed, and to enhance the aesthetics of the works and reduce any potential visually intrusive effects, streetscaping will be provided throughout the corridors, as appropriate, in accordance with the City of Hamilton Street Tree Planting Policy – Planning and Design and in accordance with cross sections in Appendix B.2.

4. Provide erosion and sediment control during construction.

5. Any soils that are removed during construction should be tested for contaminants that may have been used or dumped along the corridor limits. If the soils are contaminated, the City of Hamilton Contaminated Sites Management Program for Municipal Works measures will be implemented and will follow appropriate soil management practices including testing and disposing of contaminated soils using licensed haulers and disposal facilities.

6. To minimize reduced air quality due to dust, apply water and calcium chloride during construction.

6.2.2 Social, Economic and Cultural Environment

6.2.2.1 Land Use and Socio-Economic Impacts

The design does not significantly affect any existing accesses to Stone Church Road and Winterberry Drive, after construction. The design improves access to existing land uses with a centre left-turn lane that will provide safe refuge for turning vehicles. During detailed design, a traffic management plan will be developed to determine how traffic will be accommodated during construction and how access to properties adjacent to Stone Church Road and Winterberry Drive will be maintained.

Widening may temporarily impact access points to existing institutions and residences while construction is taking place. Timing of construction activities can be coordinated to mitigate many of these impacts. Construction activities should not have significant impacts on regular institution and residents operations throughout the corridor.
6.2.2.2 Road Construction and Noise

Current noise levels for dwellings either siding or backing onto Stone Church Road with no existing sound barriers are approximately 58.5 dBA, based on Stamson 5.0 Legacy Noise Analysis Software with the following assumptions:
- Speed limit – 50 km/h
- Source receiver distance – 15 m
- Receiver height – 1.5 m
- 10,800 automobiles in 24 hours
- 50 medium trucks in 24 hours
- 50 heavy trucks in 24 hours.

The Ministry of the Environment (MOE) does not have noise guidelines specifically relating to construction or roadway widening. However, the MOE does have a protocol with the Ministry of Transportation (MTO) relating to Provincial Highway Expansions. The protocol states that the primary objective is to achieve 55 dBA or the preconstruction ambient sound exposure, whichever is higher, at outdoor amenity areas. The MOE/MTO protocol indicates that for sound exposure increases greater than 5 dBA, an investigation into the administrative, economic, and technical feasibility of noise mitigation is required.

Projected noise levels are anticipated to be approximately 60.5 dBA, based on Stamson 5.0 Legacy Noise Analysis Software with the following assumptions:
- Speed limit – 50 km/h
- Source receiver distance – 15 m
- Receiver height – 1.5 m
- 14,000 automobiles in 24 hours
- 200 medium trucks in 24 hours
- 100 heavy trucks in 24 hours.

The sound exposure change will be less than 5 dBA (2 dBA). Sound levels are above the 55 dBA threshold and should be verified by field measurements to determine if noise attenuation is required.

6.2.2.3 Archaeology, Heritage and Cultural Resources

Archaeology

There is a potential for the identification of precontact and historic archaeological sites in areas depending on the degree of previous land disturbance. Based on a field review, it has been confirmed that grading associated with landscaping, utility installation, and roadside ditch construction has disturbed most of the study corridor on either side of Stone Church Road and Winterberry Drive. However, undisturbed soils may still be present, particularly on adjacent agricultural lands.
Prior to any land-disturbing activities within the Stone Church Road and Winterberry Drive corridors, a Stage 2 archaeological field survey should be conducted in accordance with Ministry of Culture Stage 1-3 Archaeological Assessment Technical Guidelines to identify any archaeological remains that may be present within undisturbed lands beyond the limits of the existing disturbed ROW (consisting of the traveled lanes and shoulders, and extending to the toe of the fill slope, the top of the cut slope, or the outside edge of the drainage ditch, whichever is furthest from the centerline), that will be impacted, whether temporarily or permanently, by the project. Overall, no significant archaeological site subject to possible impact from the proposed road widening is expected to be encountered. However, in the event that deeply buried archaeological remains are encountered during construction, the Heritage Operations Unit of the Ministry of Culture should be contacted, and standard procedures should be adhered to during construction. In the event that human remains are encountered during construction, the Ministry of Culture and the Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services should be contacted. Further details can be found in the Stage 1 Archaeological Assessment report, provided in Appendix D.1 of the Master Plan.

**Cultural Heritage**

No heritage or cultural features are expected to be impacted as a result of the proposed improvements to Stone Church Road and Winterberry Drive. 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 of the Master Plan.

**6.2.3 Comments from Provincial Agencies**

**Ministry of Natural Resources:**

The Ministry of Natural Resources provided comments through the public process on October 27, 2006. Their comments related to the Eramosa Karst ANSI. The following comments were provided:

Thank you for providing notice regarding initiation of Phases 3 and 4 of the Municipal Class Environmental Assessment process for the schedule ‘C’ projects identified through the Rymal Road Planning Area Master Plan. The Ministry has reviewed information available from the City’s website and mapping provided by iTRANS Consulting Inc. and offers the following comments.

Sections of the provincially significant Eramosa Karst ANSI are located within the Rymal Road Planning Area. Some of the projects proposed have the potential to impact the ANSI. The preferred alternative for a new collector road for the Trinity neighbourhood is proposed to pass through the ANSI Feeder Area and Developed Area. The widening of Rymal Road will occur within the ANSI Feeder Area. The Ministry notes that the mapping provided to show the Trinity neighbourhood collector alternatives does not show the full extent of creeks.
within the ANSI Feeder Area that would potentially be affected. The mapping should be carefully reviewed.

The *Earth Science Inventory and Evaluation of the Eramosa Karst ANSI* (April 2003) provides detailed information about the significance of the ANSI and includes recommendations for protecting its values. As the report notes, the Feeder Area contains all of the watersheds for streams that sink along the south edge of the Core Area. These streams are believed to contribute flow to the karst system in the Core and Developed Areas, and thus play a critical role in maintaining the provincially significant karst features. The report recommends, *that the Feeder Area be afforded a level of protection to ensure that:*

1. *the flows of the creeks into the Core Area are substantially maintained (i.e. stream discharge including low flow and high flow characteristics, and discharge response to runoff events),*
2. *water quality is improved (i.e. primarily a reduction in sediment load, since the sediment load is currently quite high as a result of agriculture), and*
3. *protective measures are employed to reduce the risk of contamination of surface streams by substances that would significantly impact the karst.*

*It is also recommended that prior to any development in the Feeder Area, development plans be reviewed to ensure that these objectives will be met. As well as expertise in civil engineering, reviewers should have expertise in environmental hydrology and geomorphology. A sound knowledge of karst hydrology and geomorphology would be an asset. There are significant features within the Developed Area, and the report provides recommendations for this area that should also be reviewed.*

It is the Ministry’s expectation that the recommendations of this report will be respected, and that the City will consult with reviewers with suitable expertise in the evaluation and selection of design alternatives. This information and assessment should be included in the Environmental Study Report.

Please continue to circulate new information as it becomes available. You may contact the undersigned if you have questions or clarification is required.

In response to the MNR comments, the proposed design for Special Policy Area ‘C’ will not be impacting the Eramosa Karst ANSI.

### 6.2.4 Summary of Identified Concerns and Mitigation Measures

A summary of the potential impacts to the natural, social/economic and cultural environments together with recommended mitigation measures is provided in *Table 6-1.*
Table 6-1: Anticipated Impacts and Proposed Mitigation Measures

<table>
<thead>
<tr>
<th>Factor</th>
<th>Anticipated Impact</th>
<th>Proposed Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Environment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation / Trees</td>
<td>- Removal of existing trees, and other vegetation</td>
<td>- There are no trees or other vegetation growth of biological significance within the study area. The approximate 29 trees that will be removed or impacted are ornamental types only.</td>
</tr>
<tr>
<td></td>
<td>- Approximately 4 trees will be removed or potentially impacted along Stone Church Road and approximately 25 trees (streetscaped trees in the existing median) will be removed or potentially impacted on Winterberry Drive. Approximately 3 of the 4 referenced trees on Stone Church Road will be on private property.</td>
<td>- Tree removal, planting and protection during construction will be as per City of Hamilton Public Tree Removal Policy, and the City’s Tree Preservation and Protective Measures for Trees Affected by Construction Policy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Trees on private property that may be affected as a result of the road widening or during construction will be identified prior to or during detailed design and may require the development of further strategies for mitigating these impacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- In addition, in an effort to compensate for trees and other vegetation removed, and to enhance the aesthetics of the works and reduce any potential visually intrusive effects, streetscaping will be provided throughout the corridors, as appropriate, in accordance with the City of Hamilton Street Tree Planting Policy – Planning and Design.</td>
</tr>
<tr>
<td>Wildlife</td>
<td>- Impact on wildlife habitat</td>
<td>- Within the project limits, the Stone Church Road and Winterberry Drive corridors support wildlife species that are tolerant of urban conditions and human disturbance. Impacts to wildlife associated with this undertaking are therefore considered relatively minor.</td>
</tr>
<tr>
<td>Fisheries and Aquatic</td>
<td>- Impact on fisheries or aquatic habitat</td>
<td>- Since the watercourse crossings along the Stone Church Road corridor are intermittent and do not support fish habitat, the proposed widening impacts are considered relatively minor.</td>
</tr>
<tr>
<td>Habitat</td>
<td></td>
<td>- There are no watercourse crossings in the Winterberry Drive corridor within the study limits.</td>
</tr>
<tr>
<td>Surface Water</td>
<td>- Increase in the existing pavement area will result in increase in quantity of runoff</td>
<td>- Increases in quantity of runoff will not impact existing conditions.</td>
</tr>
<tr>
<td></td>
<td>- Potential negative impact to receiving watercourses</td>
<td>- Water quality treatment will meet minimum Ministry of the Environment requirements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Provide erosion and sediment control during construction.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>- Potential for impacts from dust during construction.</td>
<td>- To minimize reduced air quality due to dust, apply water and calcium chloride during construction.</td>
</tr>
</tbody>
</table>
### Soil Removal, and Contaminants

<table>
<thead>
<tr>
<th>Factor</th>
<th>Anticipated Impact</th>
<th>Proposed Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Potential for removal of contaminated soils</td>
<td>Any soils that are removed during construction should be tested for contaminants that may have been used or dumped along the corridor limits. If the soils are contaminated, the City of Hamilton Contaminated Sites Management Program for Municipal Works measures will be implemented and will follow appropriate soil management practices including testing and disposing of contaminated soils using licensed haulers and disposal facilities.</td>
</tr>
</tbody>
</table>

### Social Environment:

#### Economic Impact to Businesses

- Economic impact to businesses
- Maintain access to individual driveways during construction.
- Full movement to existing properties will not be restricted after construction.
- Restriction on work hours in the corridor area.

#### Noise Levels

- Increase in existing noise levels.
- Future conditions expected with this project result in a predicted noise level of 68 dBA at most; this results in an increase of <3 dBA over the existing noise levels. This noise increase cannot be perceived by human hearing. According to the MOE/MTO protocol, mitigation is required for increases of 5 dBA or more. As such, noise mitigation is not required for the road widening.
- Construction activities are to comply with the requirements of the municipal noise by-law 03-020. Any initial complaint from the public will require verification that the general noise control measures agreed to are in effect, any noise concerns will be investigated, and the contractor warned of any problems.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Anticipated Impact</th>
<th>Proposed Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety concerns</td>
<td>Safety for pedestrian, cyclists, motorists</td>
<td>To maintain pedestrian movements, sidewalks will be constructed on both sides of Stone Church Road and on Winterberry Drive throughout the study limits. The sidewalk on the south side of Stone Church Road could be constructed as development proceeds. If necessary, a temporary sidewalk will be provided in the interim.</td>
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<tr>
<td></td>
<td></td>
<td>With the additional roadway width on Stone Church Road, pedestrians will have wider intersections to cross. Traffic signals will be timed to provide adequate crossing time for pedestrians.</td>
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<td></td>
<td>Bike facilities (eastbound and westbound) along Stone Church Road – Paramount Drive will be made continuous. Stone Church Road – Paramount Drive will provide a primary east-west route for cyclists through the area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The traffic signals will provide for gaps in traffic throughout the corridor for mid-block left turns on Stone Church Road – Paramount Drive.</td>
</tr>
<tr>
<td>Property Requirements</td>
<td>Requirement for additional property</td>
<td>Property will be required from approximately 1 school and 7 residential properties. Formal definition of property requirements will be determined during detailed design.</td>
</tr>
<tr>
<td>Cultural</td>
<td>Discovery of archaeological / human remains not anticipated</td>
<td>Immediately contact appropriate Ministries, if any deeply buried deposits are found.</td>
</tr>
<tr>
<td>Streetscaping</td>
<td>Reduced aesthetics</td>
<td>To address concerns over the aesthetics of the roadway, streetscaping is to be provided along both sides of Stone Church Road and along Winterberry Drive, where feasible. Streetscaping details will be confirmed during detailed design. Preliminary streetscaping plans include planting trees along the corridors.</td>
</tr>
<tr>
<td>Utility</td>
<td>Relocation of existing utilities</td>
<td>Existing utilities will need to be relocated. Formal definition of impacts on utilities, specifically Enbridge Gas, Union Gas, Hamilton Hydro, Bell Canada, Mountain Cable, Cogeco Cable, Fibrewired and Source Cable will be determined during detailed design.</td>
</tr>
<tr>
<td>Construction Detours</td>
<td>Inconvenience during construction</td>
<td>Impacts will be temporary in nature. The City will attempt to mitigate impacts as much as possible during detailed design and construction, through construction staging plans and traffic management plans.</td>
</tr>
<tr>
<td>Illumination</td>
<td>Need for additional illumination with a wider road</td>
<td>Illumination to be provided on Stone Church Road, as appropriate. Existing illumination along Winterberry Drive to be reviewed for appropriateness.</td>
</tr>
</tbody>
</table>
7. SUMMARY

Special Policy Area ‘C’ is a planning area defined in the Stoney Creek Official Plan. It is an area bounded by Winterberry Drive to the east, Paramount Drive to the south, the new Red Hill Valley Parkway / Mud Street interchange to the west, and the Lincoln Alexander Parkway-Mud Street West to the north. Special Policy Area ‘C’ includes 4.7 ha of lands proposed for commercial and residential development (known as the Heritage Green Development).

This report documents the Phases 3 and 4 of the Class EA process for transportation improvements for Special Policy Area ‘C’, including the identification and evaluation of design alternatives and the selection of preferred design. This report should be read in conjunction with the Rymal Road Planning Area (ROPA 9) Master Plan (June 2006), which documents Phases 1 and 2 of the Class EA process.

The following transportation improvements were part of the preferred alternatives for the SPA ‘C’ lands, 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 5 lanes from the RHVP ramps to east of 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.

The ROPA 9 Master Plan (Phase 1 and 2) Study also recommended that:

- Transit service be considered along the Winterberry Drive and Stone Church Road corridors with potential new transit stops or a potential transit hub within the SPA ‘C’ lands;
- Sidewalks be considered for Winterberry Drive and Stone Church Road; and
- Bicycle routes be considered for Stone Church Road.

The technically preferred Design Alternative for the widening of Stone Church Road includes:

- Widening from Red Hill Valley Parkway ramps to Upper Mount Albion Road to 5 lanes (two through lanes per direction with a centre two-way left-turn lane/back to back left turn lanes), transitioning to the existing configuration at the intersection with Winterberry Drive. The widening would occur equally on both sides based on the centreline of Stone Church Road.
- Maintaining the existing 2 through lanes west of the intersection with the Red Hill Valley Parkway ramps.
- Provision of traffic signals at the intersections with Red Hill Valley Parkway ramps and with Upper Mount Albion Road.
- Provision of an urban cross-section from Red Hill Valley Parkway ramps to Winterberry Drive.

The technically preferred Design Alternative for Winterberry Drive includes:
- Extension of the existing northbound left turn lane at the intersection with Mud Street.
- 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.
- Provision of traffic signals with exclusive turning lanes at the proposed Heritage Green Development Access Road.
- Provision of an urban cross-section from Mud Street to Stone Church Road-Paramount Drive.

The preliminary design of the technically preferred Design Alternative is outlined in Section 6.1 and Appendix B. The environmental impacts of the preferred Design Alternative is discussed in Section 6.2. To minimize the environmental impacts of the preferred Design Alternative, many mitigation measures will be implemented. These mitigation measures are summarized in Section 6.2.4 and include:
- Tree removal, planting and protection during construction will be as per City of Hamilton Public Tree Removal Policy, and the City’s Tree Preservation and Protective Measures for Trees Affected by Construction Policy.
- Trees on private property that may be affected as a result of the road widening or during construction will be identified prior to or during detailed design and may require the development of further strategies for mitigating these impacts.
- In addition, in an effort to compensate for trees and other vegetation removed, and to enhance the aesthetics of the works and reduce any potential visually intrusive effects, streetscaping will be provided throughout the corridors, as appropriate, in accordance with the City of Hamilton Street Tree Planting Policy – Planning and Design and Appendix B.
- Water quality treatment will meet minimum Ministry of the Environment requirements.
- Erosion and sediment control will be provided during construction.
- To minimize reduced air quality due to dust, apply water and calcium chloride during construction.
- Any soils that are removed during construction should be tested for contaminants that may have been used or dumped along the corridor limits. If the soils are contaminated, the City of Hamilton Contaminated Sites Management Program for Municipal Works measures will be implemented and will follow appropriate soil management practices including testing and disposing of contaminated soils using licensed haulers and disposal facilities.
- Maintain access to individual driveways during construction.
- Full movement to existing properties will not be restricted after construction.
- Restriction on work hours in the corridor area.
- Construction activities are to comply with the requirements of the municipal noise by-law 03-020. Any initial complaint from the public will require verification that the general noise control measures agreed to are in effect, any noise concerns will be investigated, and the contractor warned of any problems.
- Immediately contact appropriate Ministries, if any deeply buried deposits are found.
- Existing utilities will need to be relocated. Formal definition of impacts on utilities, specifically Enbridge Gas, Union Gas, Hamilton Hydro, Bell Canada, Mountain Cable, Cogeco Cable, Fibrewired and Source Cable will be determined during detailed design.