Stoney Creek Urban Boundary Expansion (SCUBE) Area – Transportation Master Plan (Phases 1 & 2) Study Report

November 2008

07-07995-2000

Submitted by

Dillon Consulting Limited

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1.0 INTRODUCTION

1.1 Background

Vision 2020 is Hamilton's long term vision for a strong, healthy, sustainable future shared by local government, citizens, business, groups and organizations. It provides detailed information on the City of Hamilton's Sustainable Community Initiative. Guiding principles for transportation planning within Hamilton have been outlined by the City's 2007 Transportation Master Plan which identifies that in 2020, the City of Hamilton's transportation system will:

- ✓ Offer safe and convenient access for individuals to meet their daily needs.
- ✓ Offer a choice of integrated travel modes, emphasizing active transportation, public transit and carpooling.
- ✓ Enhance the livability of neighbourhoods and rural areas.
- ✓ Encourage a more compact urban form, land use intensification and transit-supportive node and corridor development.
- ✓ Protect the environment by minimizing impacts on air, water, land and natural resources.
- ✓ Support local businesses and the community's economic development.
- ✓ Operate efficiently and be affordable to the City and its citizens.

By 2021 planned growth in the Stoney Creek Urban Boundary Expansion (SCUBE) area, resulting from Official Plan Amendments, a subsequent Ontario Municipal Board ruling and the Province of Ontario's Places to Grow Plan for the Greater Golden Horseshoe is expected to range up to 13,100 in population and 7,700 in employment. The SCUBE Transportation Master Plan was undertaken to prepare a transportation strategy that would suitably accommodate these development projections and the City of Hamilton's long-term vision.

This report presents the analyses and evaluations undertaken to determine the transportation system required to support the Stoney Creek Urban Boundary Expansion (SCUBE).

1.2 Municipal Class EA Process

The Municipal Class Environmental Assessment process, identified in ***Figure 1***, has generally been followed for the SCUBE Transportation Master Plan Study. The study has been carried out according to the guidelines set out in A.2.7 Master Plans of the Municipal Engineers Association (MEA) Class Environmental Assessment.

Approach #1 of the Master Planning process from the Municipal Engineers Association (MEA) document was used as a guide for the SCUBE Transportation Master Plan Study. This approach involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the Municipal Class EA process. However, since no problems were identified in Phase 1, alternatives were not required to be identified for Phase 2.

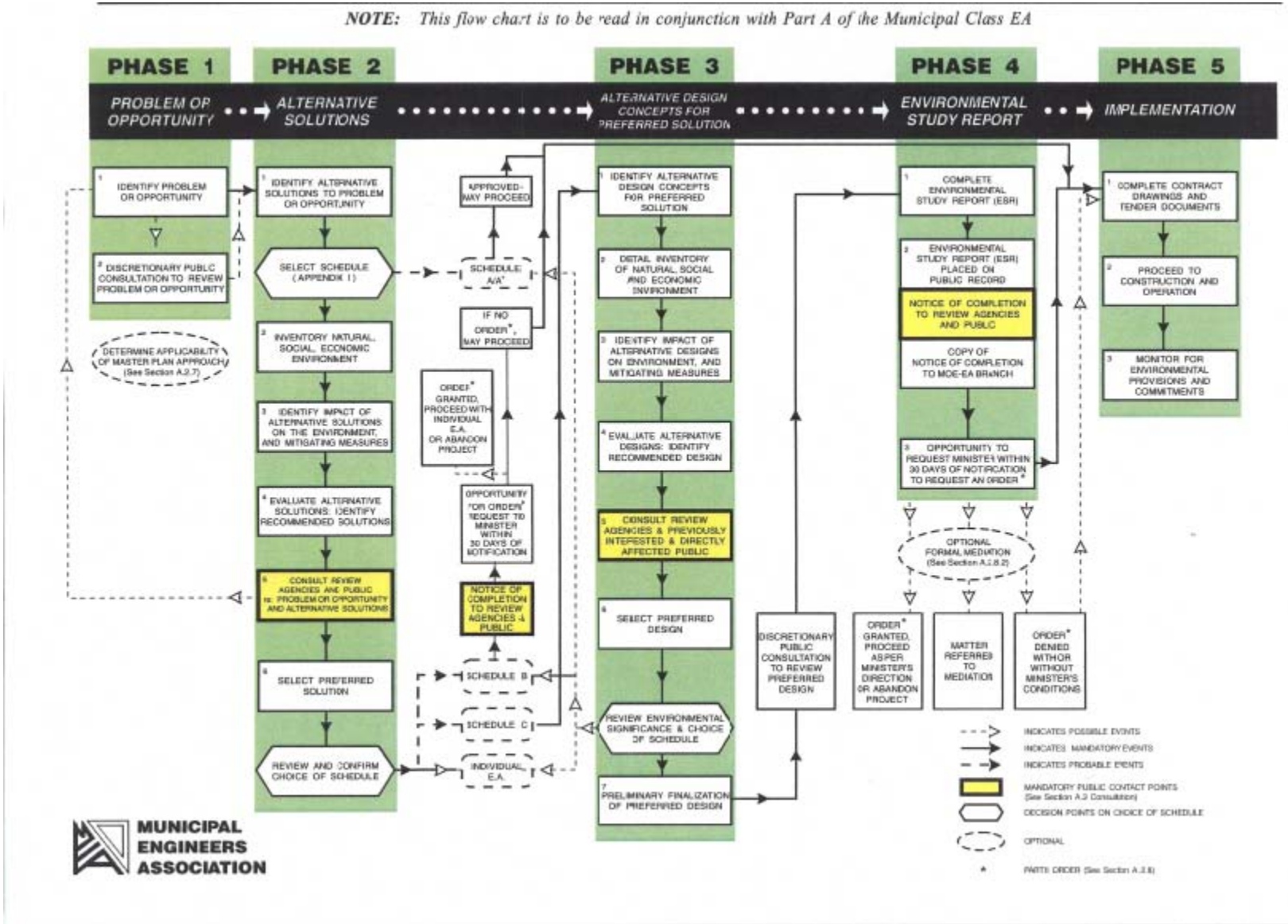
Approach #1 of the Master Planning process is done at the broad level of assessment thereby requiring more detailed investigations at the project-specific level in order to fulfill the Municipal

Class EA documentation requirements for the specific Schedule B and C projects identified within the Master Plan.

The Master Plan would therefore become the basis for, and be used in support of, future investigations for the specific Schedule B and C projects identified within it. Schedule B projects would require the filing of the Project File for public review while Schedule C projects would have to fulfill Phases 3 and 4 of the Municipal Class EA process prior to filing an Environmental Study Report (ESR) for public review.

A Transportation Master Plan Report has been prepared documenting the process followed and the recommendations made for the future road network.

Figure 1 – Municipal Class EA Planning and Design Process



1.3 Study Objectives

The study identified no "problems" in the study area by 2021, as defined in the Class EA process. Therefore, it was concluded that there were no major road works to be evaluated.

This study presents a transportation system to guide the transportation infrastructure and strategic policies of the SCUBE area up to the 2021 planning horizon year. The specific objectives of the study include:

- Prepare a transportation strategy that supports the addition of 223 hectares of land to the urban area in lower Stoney Creek (Stoney Creek Urban Boundary Expansion Area - "SCUBE");
- Identify any problems or opportunities and related alternative solutions to transportation issues to 2021;
- Identify and protect future transportation corridors;
- Integrate policies, programs, funding and infrastructure needs;
- Identify preliminary cost estimates for transportation infrastructure improvement projects;
- Develop a Transportation Master Plan for SCUBE; and
- Satisfy Phases 1 & 2 of the Municipal Class EA process.

1.4 Scope of Work

This study consisted of the following major tasks:

- Develop a sub-area transportation model for SCUBE incorporating relevant studies/ documentation and OMB decisions pertaining to growth in SCUBE;
- Assess transportation infrastructure requirements for the existing and expansion areas (both minimum and maximum scenarios);
- Undertake operational modelling to determine more detailed impacts to the study area roadway network.
- Develop a Transportation Master Plan for the SCUBE area;
- Identify key road links, required transit routes, cycling routes and other infrastructure requirements;
- Identify transportation demand management objectives and required policies;
- Identify appropriate right-of-way (ROW) for key corridors;
- Develop financial strategy/monitoring program;
- Review proposal to widen Highway 8 (from DeWitt Road to Fruitland Road); and
- Identify opportunities for operational improvements.

1.5 Study Area

The study area is bounded by the South Service Road to the north, the Hamilton/Niagara Region boundary to the east, Highway 8 to the south, and Fruitland Road to the west. The limits of the study area are illustrated in ***Figure 2***. The study area is located within the existing Community of Stoney Creek in the City of Hamilton.

The majority of the study area is currently undeveloped, with the exception of an existing residential area in the Winona Urban Community. The lands between Barton Street and the South Service Road contain a number of low density industries. Planned development within the study area is set to occur in SCUBE Central, SCUBE East, the Employment Corridor, Parcel A, and Parcel B.

1.6 Land Use

1.6.1 Planning Framework

The Stoney Creek Community Urban Boundary Expansion Area is governed by Official Plan Amendment (OPA) No. 14 of the former Regional Municipality of Hamilton-Wentworth Official Plan, and OPA No. 99 to the former City of Stoney Creek Official Plan. Both OPAs add 550 gross acres (as amended by the Ontario Municipal Board) to the City of Hamilton Urban Area. One of the requirements that arose out of the OMB decision was a requirement for the preparation of a General Land Use concept for the study area prior to any development taking place.

In November 2006, the City of Hamilton Planning and Economic Development Department developed a general land use concept, shown in ***Figure 3***, for 223 hectares of land in the Stoney Creek Special Policy Area (SPA) (which forms part of the Stoney Creek Community Urban Boundary Expansion Area). The area is to be the first in the City of Hamilton to be planned under the Places to Grow Growth Plan for the Greater Golden Horseshoe, with the goal of creating a vibrant and complete community that:

- Meets or exceeds the Growth Plan's density target of 50 residents and jobs per hectare;
- Provides convenient access to an approximate mix of jobs, local services, recreation, and a full range of housing; and
- Makes efficient use of land and infrastructure, at transit supportive densities and street configurations.

1.6.2 Existing Land Use

The majority of the study area is currently underdeveloped, with the exception of an existing residential area in the Winona Urban Community, north of the QEW. There is sparse existing residential development in the Greenbelt areas. There is also an existing industrial area between Barton Road and the QEW.

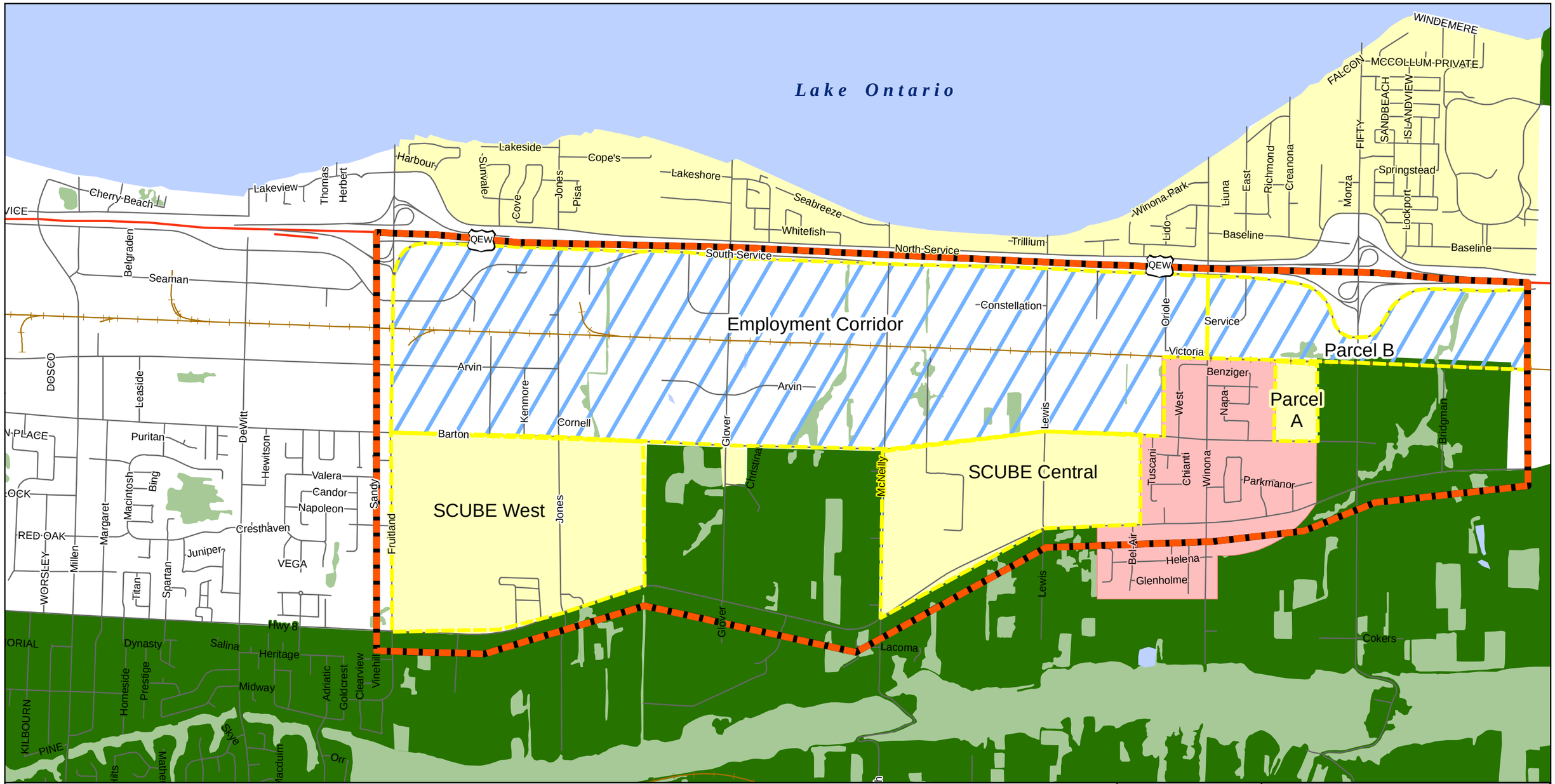
The Winona Urban Community is located west of Fifty Road and south of the CN Railway tracks with 709 dwelling units that contain an estimated population of 2,145. Parcel A, located on the north-east corner of the community, sets to expand the population of this urban area.

The existing residential community north of the QEW has a population of approximately 5,300. This area is not projected to grow significantly.

Approximately 155 hectares in SPA F is designated as Greenbelt area. This includes two areas within the Stoney Creek Community Urban Boundary Area located just north of Highway 8. The total Greenbelt area has an existing population of 1,115 persons. This area is also not projected to grow significantly due to the restrictions for development within the designated Greenbelt areas.

1.6.3 Population and Employment Projections

Population and employment projections were completed for a number of sub-areas in the Stoney Creek Community Urban Boundary Expansion Area. Minimum and maximum population and employment scenarios for the area of SCUBE East, SCUBE Central, Parcel A, and Parcel B were evaluated in this study.



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LEGEND

- Secondary Roads
- Highway
- Railway
- Winona Urban Community
- Employment
- Residential Infill/Expansion
- Study Area
- Greenbelt
- Woodlots
- Lake

1 : 20,000

0 500 1,000 1,500m

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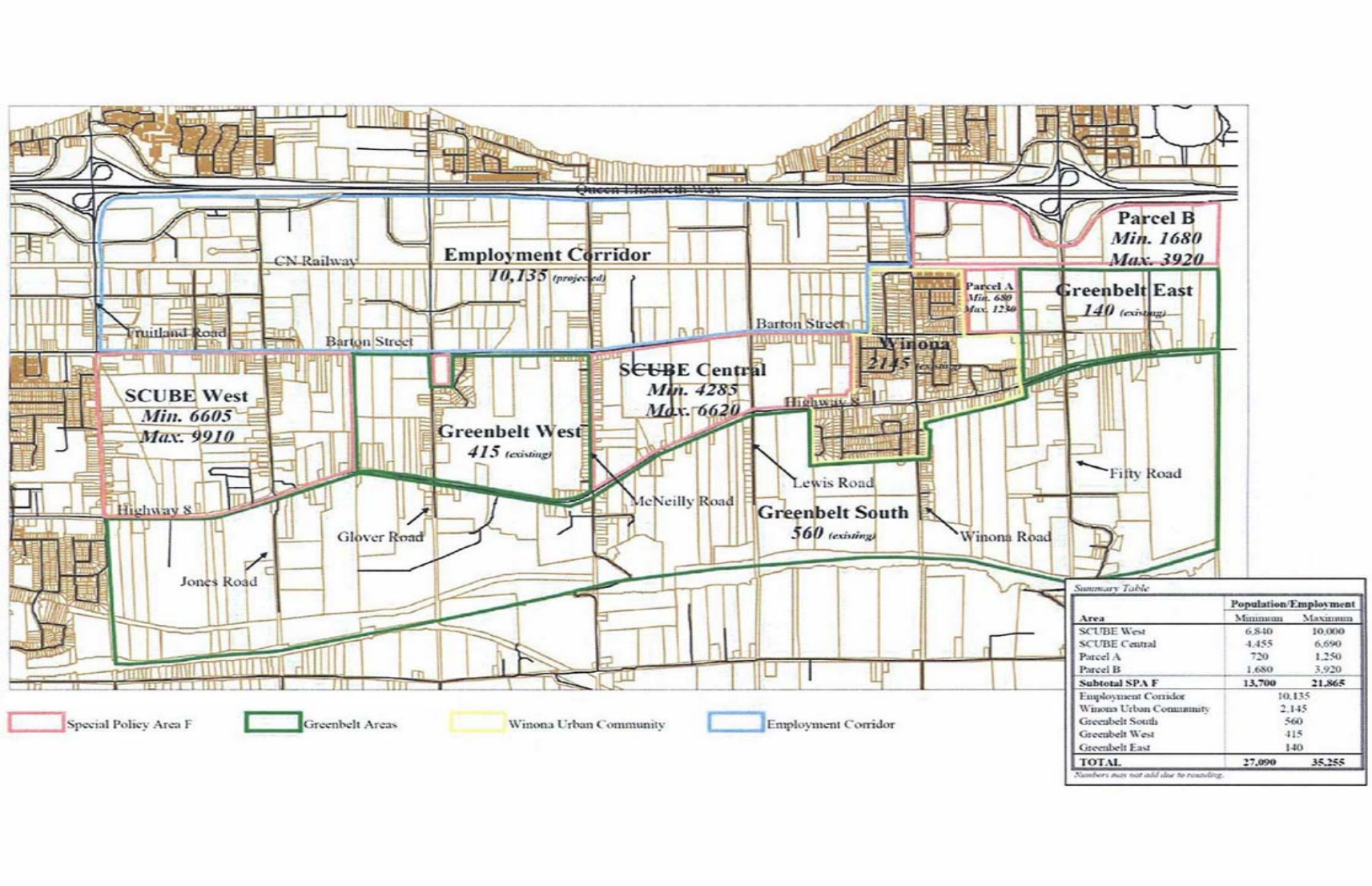
PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

STUDY AREA AND 2021 LAND USE

Figure 2

Figure 3 –Stoney Creek Special Policy Area F, General Land Use Concept



Summary Table

Area	Population/Employment Minimum	Maximum
SCUBE West	6,840	10,000
SCUBE Central	4,455	6,690
Parcel A	720	1,250
Parcel B	1,680	3,920
Subtotal SPA F	**13,700**	**21,865**
Employment Corridor	10,135	
Winona Urban Community	2,145	
Greenbelt South	560	
Greenbelt West	415	
Greenbelt East	140	
TOTAL	**27,090**	**35,255**

Numbers may not add due to rounding.

2.0 EXISTING CONDITIONS

The following section describes the existing transportation infrastructure, services and programs in place in the SCUBE Area.

2.1 Roads

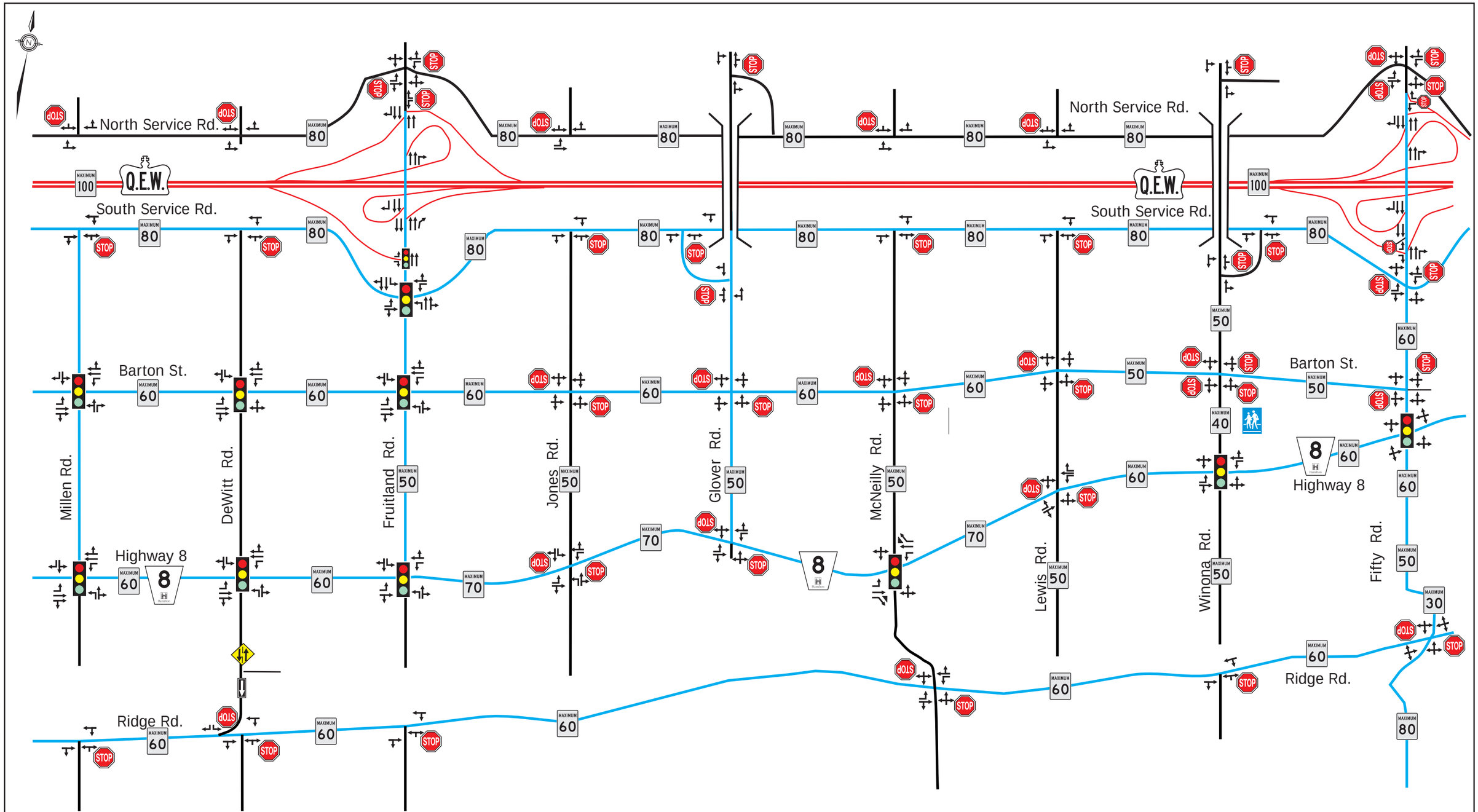
Currently, automobile use in the SCUBE area represents a significant part of trip making. Auto modal split in the area is at 72 percent during the AM peak period (2001 TTS). This is primarily due to the rural nature of the land use, which includes low density scattered residential use, open space, and low density light industrial. As a result, transit services in the area are minimal as are cycling and pedestrian infrastructure.

The primary local east-west corridors within the SCUBE area are Highway 8 and Barton Street, which extend from Hamilton easterly through Stoney Creek into the study area; Highway 8 also extends easterly providing connections to Niagara Region. Although both roads have five-lane cross-sections (with centre two-way left turn lanes) in the existing suburban areas to the west, they narrow to basic two-lane cross-sections within the SCUBE area. Traffic signals are provided on Barton Street at DeWitt Road and at Fruitland Road; and on Highway 8 at DeWitt Road, Fruitland Road, McNeilly Road, and Fifty Road.

Longer distance trips are accommodated on the Queen Elizabeth Way (QEW), a six-lane provincial freeway facility connecting Hamilton (and the GTA) in the west, and Niagara Region in the east.

North-south streets are provided at roughly 800 metre intervals: from west to east, the primary north-south arterial and collector roads are DeWitt Road; Fruitland Road; Jones Road; Glover Road; McNeilly Road; Lewis Road; Winona Road; and Fifty Road. Most north-south streets are discontinuous owing to geographic and transportation barriers: namely, the Niagara Escarpment to the south, and the QEW and Lake Ontario to the north. Exceptions are DeWitt Road, which provides upbound (southbound) escarpment access; Fruitland Road, which provides interchange access to the QEW; McNeilly Road, which provides two-way escarpment access; and Fifty Road, which is the only north-south corridor to both cross the escarpment and provide access to the QEW.

The existing road network is illustrated in ***Figure 4***.



LEGEND:

- Existing Lane Configuration (at intersection)
- Existing Traffic Signal
- Existing Stop Sign
- Existing School Crossing

Existing Road Designation
(Hamilton-Wentworth Official Plan, June 2005)

- Inter-Regional Highway/Corridor
- Arterial Road

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PROJ. MANAGER:	AA
CHECKED BY:	AA
DRAWN BY:	SLC
SCALE:	N.T.S.
DATE:	June 20, 2008
PROJECT NO.:	07-7995-1000

STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

EXISTING ROAD NETWORK

Figure 4

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2.2 Cycling

Currently, cycling in the SCUBE area represents a minor proportion of the modal split - less than 1 percent during the AM peak period, and less than 2 percent during the PM peak period (2001 TTS). The primary reason for this low modal split is a lack of development in the area, which results in a relatively longer distance between trip origins and trip destinations, and a lack of cycling infrastructure to provide safe and convenient routes for both utilitarian and recreational cyclists.

The *Bikeways, Trails, and Parks* map distributed by the City of Hamilton identifies only a small number of designated cycling routes and trails in the SCUBE area. These are illustrated in ***Figure 5*** and include:

- A cautionary on-street bike route on the North Service Road. This route forms part of a larger waterfront bicycle route/multi-purpose trail that extends west into Halton Region and east to Niagara Region;
- A bike lane on the North Service Road between Fruitland Road and Waterford Crescent;
- An on-street bike route on Arvin Avenue between Fruitland Road and Jones Road (extending west into the City of Hamilton);
- An on-street bike route on Jones Road between Arvin Avenue and Highway 8, providing a connection to the Stoney Creek Municipal Centre;
- A cautionary on-street bike route on Highway 8 between Jones Road and DeWitt Road; and
- An on-street bike route on Fruitland Road between Sherwood Park Road and Regalview Drive (just north of Highway 8).

The existing network provides little connectivity for utilitarian cyclists or recreational trail users to reach destinations within SCUBE or in the rest of Hamilton. To achieve the City's targeted 15 percent cycling/walking modal split by 2021, a much broader network of cycling lanes/trails and comprehensive policies and strategies are required.

In the summer 2008 the area cycling network was expanded to include a 12 km cycling route along the North Service Road between Confederation Park and Fifty Point Conservation Area. This route consists of a combination of on-street bike routes, on-street painted bike lanes and off-road multi use pathways. This portion of the cycling network is also a portion of the 680 km Waterfront Trail that stretches from Niagara to the Quebec border.

Lake Ontario

WINDEMERE
FALCON
MCCOLLUM-PRIVATE
SANDBEACH
ISLANDVIEW
FIFTY
Springstead
Lockport
Baseline
Monza
Winona Park
Lido
Liuna
East
Richmond
Creanona
Trillium
Cherry Beach
Lakeview
Thomas
Herbert
Harbour
Lakeside
Sunvale
Cove
Jones
Pisa
Cope's
Lakeshore
Seabreeze
Whitefish
QEW
North Service
South Service
Belgraden
Seaman
Constellation
Oriole
Service
Victoria
Benziger
Napa
West
Bridgman
Arvin
Leaside
Puritan
DeWitt
Hewitson
Barton
Kenmore
Cornell
Glover
Christina
McNeilly
Lewis
Tuscani
Chianti
Winona
Parkmanor
Bel-Air
Helena
Glenholme
Cokers
Lacoma
Valera
Candor
Napoleon
Sandy
Fruitland
Jones
Cresthaven
Juniper
VEGA
Margaret
Macintosh
Bing
Titan
Spartan
Hwy 8
Dynasty
Salina
Heritage
Midway
Homeside
Prestige
Adriatic
Goldcrest
Clearview
Vinehill
Skyle
Macduim
Orr
Mathe
Hilts

LEGEND

- Exsiting On - Street Bike Route*
- Cautionary on Street Bike Route*
- Exsiting Multi - Use Path*
- Secondary Roads
- Highway
- Railway
- Study Area
- Lakes
- Woodlots

N E S W

* As Indicated on the Hamilton Transportation Master Plan

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0 500 1,000 1,500m

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SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

EXISTING CYCLING\TRAIL NETWORK IN THE SCUBE AREA

Figure 5

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2.3 Transit

Existing transit services in the study area are limited. The only fixed route service provided within the study area is Route 55, which provides half hour service, Monday to Saturday along Highway 8 to the Stoney Creek Municipal Services Centre (at Jones Road). A 'tripper' bus provides additional service within the western portion of the employment corridor. Limited fixed route service is also provided on Sunday's and Holiday's to the western portions of SCUBE West.

For the remainder of the study area, the Hamilton Street Railway (HSR) provides a Trans-Cab service. Trans-Cab is a shared-ride taxi service between the Hamilton Street Railway and a local taxi provider that provides service in portions of Stoney Creek and Glanbrook. The Trans-Cab provides service east of Jones Road, connecting to the conventional transit system via Route 55 at the Stoney Creek Municipal Service Centre at Jones Road and Highway 8.

The minimal service is provided in response to the low density land use in the area, which is difficult to service by transit without incurring a large deficit (poor cost/recovery from the fare box). As a result of this minimal service, the existing mode split for transit in the study area is less than 2 percent during the AM and PM peak period. Based on the existing land use and ridership, the Trans-Cab appears to provide a service level that is appropriate for demand, in a cost effective manner. However, as the area develops, alternative service delivery methods should be explored to improve overall service levels and increase ridership.

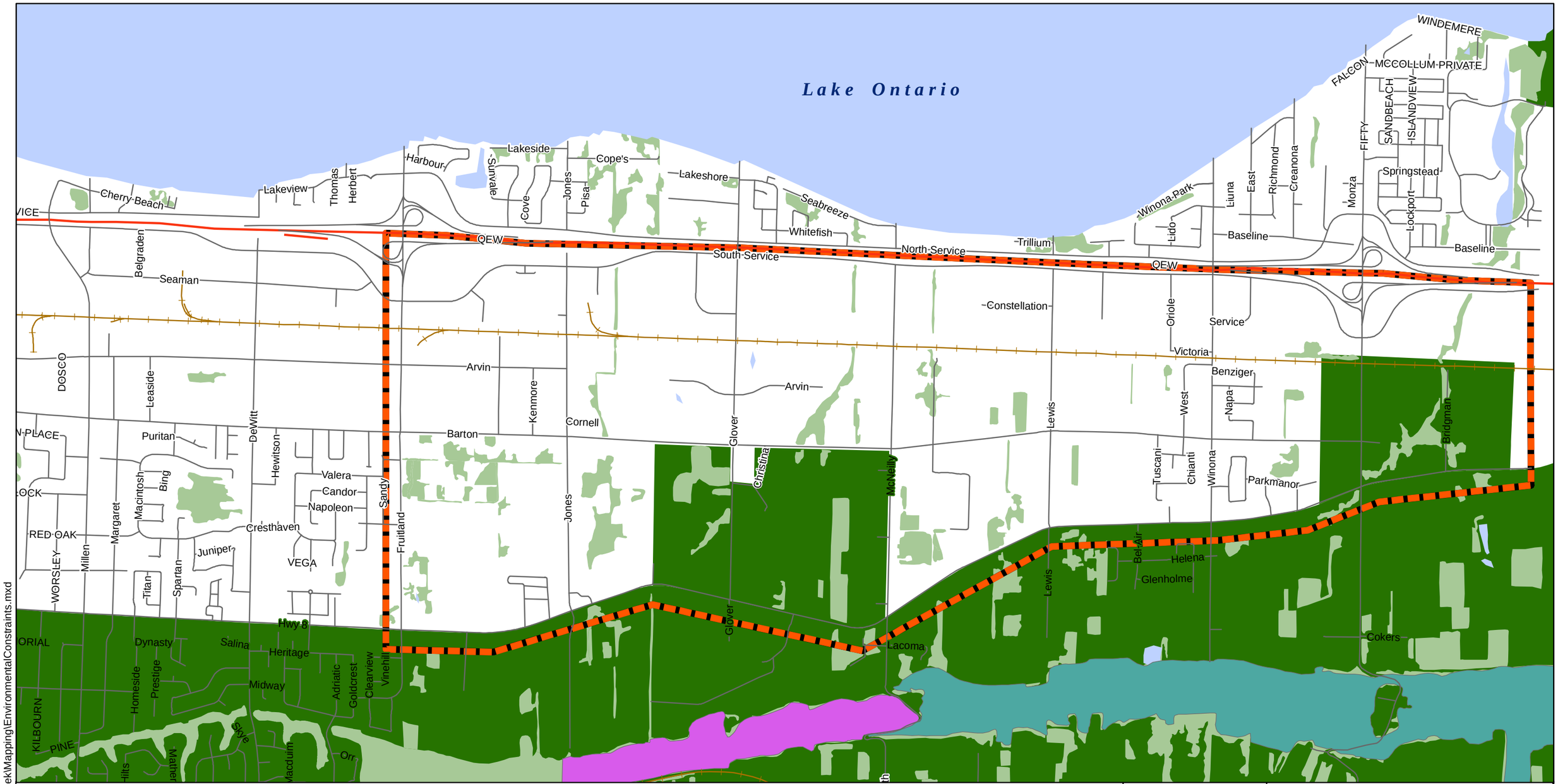
An interregional bus service, operated by Coach Canada, currently runs through the study area every two hours; however, there is no existing stop in the SCUBE area.

2.4 Significant Environmental Opportunities/Constraints

The southern end of the study area is bounded by the Niagara Escarpment. This area has been designated as part of the provincial Greenbelt. This is illustrated in ***Figure 6***. The *Greenbelt Act* (2005) identifies where urbanization should not occur in order to provide permanent protection of the agricultural land base and the ecological features and functions occurring in the Greenbelt Plan Area. That area includes all of the Niagara Escarpment Plan Area as well as the Oak Ridges Moraine Conservation Plan Area and the Protected Countryside. Within the SCUBE study area, the portion of Greenbelt north of Highway 8 (with the exception of a small portion of the Winona community) is designated as part of the Niagara Escarpment Protection Plan.

The policies of the Niagara Escarpment Plan are the policies of the Greenbelt Plan for the Niagara Escarpment Plan Area.

The importance of this designation pertains to the level of infrastructure. The plan recognizes the importance of maintaining existing infrastructure and adding new infrastructure to continue to serve existing and permitted land uses within the Greenbelt or to serve national, provincial and inter-regional needs traversing the Greenbelt. However, new and expanded infrastructure in the Greenbelt must adhere to the following policies:



LEGEND

- Secondary Roads
- Highway
- Railway
- Study Area
- Greenbelt
- Fruitland Escarpment
- Niagara Section Escarpment
- Woodlots
- Lake

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PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

ENVIRONMENTAL CONSTRAINTS

Figure 6

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

1. *All existing, expanded or new infrastructure subject to and approved under the* ***Canadian Environmental Assessment Act****, the* ***Environmental Assessment Act****, the* ***Planning Act****, the* ***Aggregate Resources Act****, the* ***Telecommunications Act*** *or by the National or Ontario Energy Boards, or which receives a similar environmental approval, is permitted within the Protected Countryside, subject to the policies of this section and provided it meets one of the following two objectives:*

    a) *It supports agriculture, recreation and tourism, rural settlement areas, resource use or the rural economic activity that exists and is permitted within the Greenbelt; or*

    b) *It serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate* ***infrastructure*** *connections among urban growth centres and between these centres and Ontario's borders.*

2. *The location and construction of* ***infrastructure*** *and expansions, extensions, operations and maintenance of* ***infrastructure*** *in the Protected Countryside, are subject to the following:*

    a) *Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such* ***infrastructure****;*

    b) *Planning, design and construction practices shall minimize, wherever possible, the* ***negative impacts*** *and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;*

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

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

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

For the SCUBE area, the analysis undertaken did not identify any immediate roadway widening requirements through the Niagara Escarpment to 2021.

3.0 EXISTING NETWORK ASSESSMENT

3.1 Road Network

The primary east-west roads in the study area include the Queen Elizabeth Way (QEW), followed by Highway 8 and Barton Street. The primary north-south routes in the study area are Fruitland Road and Fifty Road; both providing access to the QEW.

Roadway characteristics were identified on the primary road network through a site survey of the area. The survey examined intersection control and configuration, number of travel lanes, and the posted speed limit. These are illustrated on ***Figure 4***.

3.2 Existing Traffic Volumes

Existing AM and PM peak hour turning movement volumes were provided by the City of Hamilton for the following intersections:

1. Highway #8 at Winona Road (May 6, 2005);
2. Barton Street at Glover Road (February 23, 2004);
3. Barton Street at Lewis Road (February 27, 2004);
4. Barton Street at McNeilly Road (February 26, 2004);
5. Highway #8 at Glover Road (October 27, 2004);
6. Highway #8 at Winona Road (September 22, 2004);
7. Barton Street at Fifty Road (December 5, 2005);
8. Barton Street at Winona Road (November 28, 2005);
9. Fifty Road at South Service Road (September 30, 2005);
10. Glover Road at Constellation Drive (February 25, 2004);
11. Glover Road at Arvin Avenue (February 24, 2004);
12. Barton Street at Glover Road (February 23, 2004);
13. South Service Road at McNeilly Road (February 20, 2004);
14. Barton Street at McNeilly Road (February 26, 2004); and
15. South Service Road at Lewis Road (February 19, 2004).

Average Annual Daily Traffic (AADT) volumes were also provided for the following roadway segments:

1. South Service Road, just east of Fifty (04-10-2006);
2. South Service Road just west of Fruitland (04-10-2006);
3. North Service Road just west of Fifty (04-10-2006);
4. North Service Road just east of Fruitland (04-10-2006);
5. Fifty Road between Barton and Highway #8 (04-10-2006);
6. Fifty Road between QEW and Barton (04-10-2006);
7. Fruitland Road south of Barton (12-09-2006);
8. Fruitland Road north of Barton (12-06-2006);
9. Highway #8 between Winona and Fifty (04-10-2006);
10. Highway #8 between Fruitland and Jones (04-10-2006);

11. Barton Road between Winona and Fifty (04-10-2006); and
12. Barton Road between Fruitland and Jones (04-10-2006).

Detailed traffic data including turning movement counts and AADT are presented in ***Appendix A*** and were used to validate the transportation demand model.

3.3 Roadway Safety

Collision reports were provided for vehicle collisions occurring over the past 5-year period at the intersection of:

1. Barton Street and Lewis Road (10/24/00 – 10/23/05);
2. Lewis Road and South Service Road (10/24/00 – 10/23/05);
3. McNeilly Road and South Service Road (12/08/98 – 12/07/03); and
4. Barton Street and McNeilly Road (12/08/98 – 12/07/03).

At these intersections, the most frequent occurrence of vehicle collisions occurred at the intersection of Barton Street and Lewis Road (8 collisions over 5 years), and Barton Street and McNeilly Road (5 collisions over 5 years).

At Barton Street and Lewis Road, the most frequent type of collision was a through movement collision between northbound and westbound vehicles (3) and between southbound and eastbound vehicles (3). The cause may be due to drivers waiting at a stop sign on Lewis Road misjudging the appropriate gap available to cross Barton Street, which results in a collision with east and westbound traffic.

At Barton Street and McNeilly Road, three of the five collisions were of the same type experienced at Barton Street and Lewis Road. The intersection is also controlled by a two-way stop sign at the McNeilly Road approach.

Intersection collisions between 2001 and 2005 were also analyzed for the following locations but no patterns were observed:

1. DeWitt Road and South Service Road;
2. DeWitt Road and Barton Street;
3. DeWitt Road and Arwin Avenue;
4. Fruitland Road and Highway 8;
5. Fruitland Road and Barton Street;
6. Barton Street and Jones Road;
7. Highway 8 and Jones Road;
8. Glover Road and Highway 8;
9. Glover Road and Barton Street;
10. Barton Street and McNeilly Road;
11. McNeilly Road and Highway 8;
12. Barton Street and Lewis Road;
13. Lewis Road and Highway 8;

14. South Service Road and Winona Road;
15. Highway 8 and Winona Road;
16. Barton Street and Winona Road;
17. Fifty Road and South Service Road;
18. Fifty Road and Barton Street;
19. Fifty Road and Highway 8;
20. South Service Road and Oriole Avenue; and
21. Sonoma Lane and Winona Road.

No significant trends have been identified.

3.4 Planned Roadway Improvements

Within the context of the Hamilton City-wide TMP, no major roadway improvements were identified for this area of Hamilton.

3.5 Transit Services

Transit services are operated by the Hamilton Street Railway (HSR) using the Trans-Cab service between Monday and Saturday. Trans-Cab is a shared-ride taxi service between the Hamilton Street Railway and a local taxi provider that provides service in portions of Stoney Creek and Glanbrook. The Trans-Cab provides service east of Jones Road, connecting to the conventional transit system via Route 55 at the Stoney Creek Municipal Service Centre at Jones Road and Highway 8.

4.0 DEMAND FORECASTING MODEL DEVELOPMENT FOR SCUBE

The network analysis was undertaken using the City of Hamilton's AM Peak Hour Model (Hamilton model) to determine travel demand needs and phasing between 2006-2021. A sub-area model was developed to estimate transportation demand within the SCUBE study area.

4.1 Synopsis of Existing Model

To help calibrate and validate this sub-area model for the Stoney Creek Community Urban Boundary Expansion Area, Dillon obtained the following information from the Hamilton model:

- Networks for 2004, 2011, 2021 and 2031;
- AM peak hour auto trip matrices for 2004, 2011, 2021 and 2031;
- AM peak hour total person trip matrices for 2004, 2011, 2021 and 2031;
- City of Hamilton population data for 2001, 2006, 2011, 2016, 2021, 2026 and 2031;
- City of Hamilton employment data for 2001, 2011, 2021 and 2031; and
- Model Development draft report (dated April 2005).

4.2 Revisions to Base Year (2001) Network Representation

The base year (2004) road network used in the Hamilton Emme/2 model was reviewed for accuracy within the study area and additional detail added for consistency with the zone system. Changes made included the addition of required centroid connectors and revisions to the existing ones. Based on current information received, a number of link attributes were modified to reflect the existing situation. The link attributes used in the model for the base year is presented in ***Appendix A.***

4.3 Zone Summary

The data used as input to the Hamilton model is mostly based on the modified GTA zone system developed by the Data Management Group (DMG). Overall, there are 195 zones in Hamilton, as presented in ***Table 1***.

Table 1 – Zone Summary

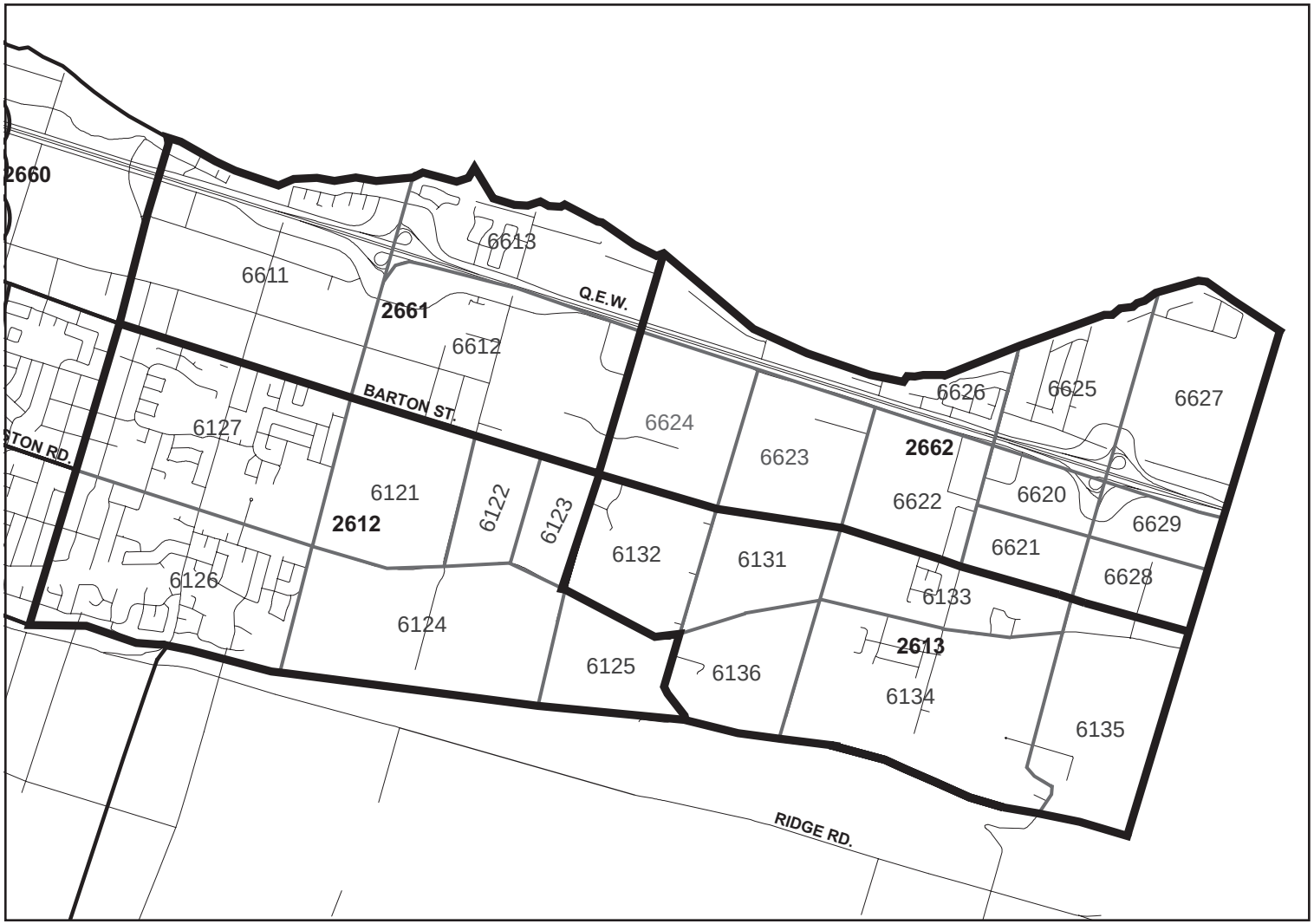
Area	Number of Zones
Former Town of Stoney Creek	20
Rest of Hamilton	175
Region of Niagara	85
GTA & adjacent areas	111

4.4 Sub-area Model for SCUBE

The four GTA traffic zones that make up the Stoney Creek Community Urban Boundary Expansion Area as well as adjacent zones were sub-divided into 26 sub-zones to reflect a more detailed evaluation. This is illustrated in ***Figure 7***.

The sub-area model uses the Hamilton model networks and trip tables as a starting point. To obtain the more detailed trip tables, the origins and destinations from the initial trip table were split in accordance with the estimated distribution of population and employment in the sub-zones.

The existing 2021 trip table produced by the model is based on that finer zone system. Approximations of the existing and anticipated split in population between the sub zones are shown in ***Table 2***.



LEGEND

GTA ZONE

Subdivided Zone

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CHECKED BY: AA
DRAWN BY: SLC
SCALE: NTS
DATE: November 10, 2006
PROJECT NO.: 07-07995-100

STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

STONEY CREEK COMMUNITY URBAN BOUNDARY EXPANSION SUB-ZONES

Figure 7

Table 2 – Split in Population and Employment

GTA Zone	Hamilton Zone	Population			Employment			Area of Planned Development
		2004 Split	2021 Split (Min)	2021 Split (Max)	2004 Split	2021 Split (Min)	2021 Split (Max)	
2612	6121	.02	0.20	0.27	.15	0.45	0.45	SCUBE West
	6122	.01	0.10	0.14	.30	0.22	0.22	SCUBE West
	6123	.02	0.01	0.01	.05	0.03	0.03	
	6124	.00	0.00	0.00	.05	0.03	0.03	
	6125	.01	0.01	0.01	.10	0.06	0.06	
	6126	.44	0.32	0.27	.10	0.06	0.06	
	6127	.50	0.36	0.30	.25	0.15	0.15	
2613	6131	.04	0.47	0.53	.20	0.56	0.56	SCUBE Central
	6132	.07	0.04	0.03	.10	0.03	0.03	
	6133	.40	0.23	0.26	.25	0.28	0.28	SCUBE Central
	6134	.42	0.23	0.16	.30	0.09	0.09	
	6135	.03	0.02	0.01	.15	0.05	0.05	
	6136	.04	0.02	0.01	.00	0.00	0.00	
2661	6611	.35	0.35	0.35	.60	0.55	0.55	
	6612	.15	0.15	0.15	.40	0.45	0.45	Employment Corridor
	6613	.50	0.50	0.50	.00	0.00	0.00	
2662	6621	.06	0.14	0.22	.00	0.00	0.00	Parcel A
	6622	.06	0.06	0.05	.30	0.23	0.19	Employment Corridor
	6623	.01	0.01	0.01	.25	0.23	0.19	Employment Corridor
	6624	.00	0.00	0.00	.30	0.23	0.19	Employment Corridor
	6625	.29	0.26	0.24	.00	0.00	0.00	
	6626	.28	0.26	0.23	.00	0.00	0.00	
	6627	.27	0.25	0.22	.15	0.10	0.08	
	6628	.03	0.03	0.02	.00	0.00	0.00	
	6629	.00	0.00	0.00	.00	0.10	0.18	Parcel B
	6620	.00	0.00	0.00	.00	0.10	0.18	Parcel B

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

4.5 Trip Generation

Table 3 outlines trip rates obtained from multiple regression analysis of the trip end and land use data used in the Hamilton model for the 20 zones in the former town of Stoney Creek. These trip rates will be used to calculate new trip end totals for the zones within the study area.

Table 3 – Trip Rates in Stoney Creek Traffic Zones

	2021
Population coefficient for auto driver origins	0.1125
Employment coefficient for auto driver origins	0.0201
Population coefficient for auto driver destinations	0.0277
Employment coefficient for auto driver destinations	0.1510

4.6 Trip Distribution

The existing trip matrices were "re-balanced" using the revised trip end totals within the study area.

4.7 Auto Assignment

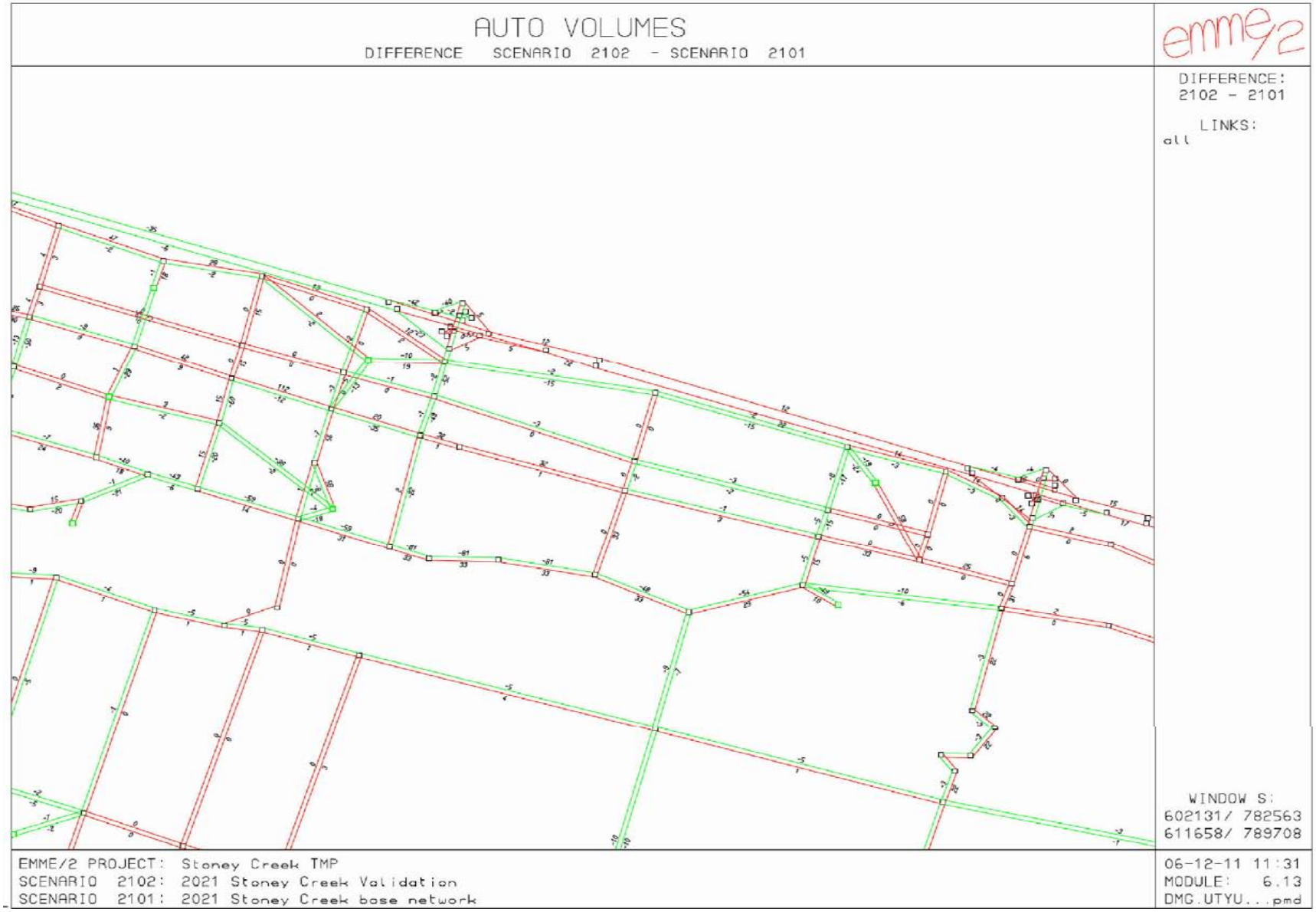
Two changes have been made to the volume delay functions used in the Hamilton model.

1. The volume delay functions have been modified to produce a free flow assignment on the sections of the network outside the City of Hamilton. The skeleton network representation in those areas results in some extremely high volume to capacity ratios that could affect where trips enter and leave the Hamilton section of the network in an unpredictable and unstable manner. The free flow assignment reduces the average trip time for the entire network from more than 10 hours down to 27 minutes.
2. The standard BPR functions have been replaced by Tangent functions. For volume to capacity ratios the tangent functions use the same formulae as the BPR functions they replace. For greater v/c ratios travel time increases linearly with the tangent functions but exponentially with the BPR functions. The main advantage in using the tangent functions is that the equilibrium assignment converges at a much faster rate. Without adequate convergence the assignment results can be distorted by random variations that bare no relationship to the difference in assumptions being tested. In a test assignment using the 2021 network and trip table the normally accepted level of convergence had not been reached after 100 iterations of the equilibrium assignment with the BPR functions. Using Tangent functions convergence was achieved in 30 iterations using considerably more stringent criteria than the default settings.

4.8 Validation

Figure 8 illustrates the difference between two 2021 assignments to the same network, one being the auto table obtained from the City-wide model and the other being the revised trip table obtained by applying the sub-area model trip rates within the study area. As illustrated, the differences are of no consequence in the context of the 2021 forecast.

Figure 8 – 2021 Validation (Auto Volumes)



4.9 Model Runs

Three model "runs" were completed to establish the existing and anticipated demand on the study area network. These include:

1. 2006 Existing Conditions;
2. 2021 with Minimum Population Growth Scenario; and
3. 2021 with Maximum Population Growth Scenario.

Population and Employment growth forecasts that fed into the 2021 model runs were developed based on the General Land Use Concept for Stoney Creek Special Policy Area F. ***Table 4*** presents the population and employment projections for each sub-zone that fed into the model runs. These are illustrated by zone for both the 2021 minimum and maximum population growth scenarios in ***Appendix A***.

Table 4 – Forecasted Population and Employment

Zone	Sub-Zone	Area	Population			Employment		
			2,006	2021 Min	2021 Max	2,006	2021 Min	2021 Max
2612	6121	SCUBE West	234	3,195	5,284	271	1,334	1,334
	6122	SCUBE West	117	1,646	2,722	542	666	666
	6123	Greenbelt West	234	234	234	90	90	90
	6124	Greenbelt South	117	117	117	90	90	90
	6125	Greenbelt South	229	229	229	181	181	181
	6126	Existing Res	5,045	5,045	5,045	181	181	181
	6127	Existing Res	5,742	5,742	5,742	452	452	452
	Sub-Total		**11,719**	**16,208**	**19,373**	**1,806**	**2,993**	**2,993**
2613	6131	SCUBE Central	105	2,279	3,769	75	691	691
	6132	Greenbelt West /SP Area F	184	184	184	38	38	38
	6133	SCUBE C/Winona/Grnblt E	1,053	1,139	1,884	94	345	345
	6134	Greenbelt S / Winona	1,079	1,079	1,079	113	113	113
	6135	Greenbelt South	105	105	105	57	57	57
	6136	Greenbelt South	105	105	105	0	0	0
	Sub-Total		**2,632**	**4,892**	**7,127**	**377**	**1,243**	**1,243**
2661	6611	Existing Mixed (employ)	998	998	998	4,895	4,895	4,895
	6612	Employment	428	437	437	3,264	4,044	4,044
	6613	Existing Mixed (employ)	1,426	1,426	1,426	0	0	0
	Sub-Total		**2,852**	**2,862**	**2,862**	**8,159**	**8,939**	**8,939**
2662	6621	Parcel A/ Winona/Greenbelt E	281	721	1,247	0	0	0
	6622	Employment / Winona	281	286	286	1,803	2,022	2,022
	6623	Employment	47	52	52	1,503	2,022	2,022
	6624	Employment	0	5	5	1,803	2,022	2,022
	6625	Existing Mixed (res)	1,358	1,358	1,358	0	0	0
	6626	Existing Mixed (res)	1,311	1,311	1,311	0	0	0
	6627	Existing Mixed (res)	1,264	1,264	1,264	902	902	902
	6628	Greenbelt E	140	140	140	0	0	0
	6629	Parcel B	0	0	0	0	841	1,961
	6620	Parcel B	0	0	0	0	841	1,961
	Sub-Total		**4,682**	**5,136**	**5,662**	**6,011**	**8,649**	**10,890**
	TOTAL		**21,885**	**29,098**	**35,024**	**16,353**	**21,825**	**24,066**

4.9.1 Screenline Analysis

A comparison of simulated volumes and capacity across a number of screenlines was completed for the 2006 existing scenario and the 2021 minimum and maximum scenarios to help understand network deficiencies across screenlines. ***Figure 9*** illustrates the screenlines that were used in this analysis. As indicated earlier, the simulated volumes are for the AM peak hour. It can be expected that PM peak hour volumes in the reverse direction will be higher by 0% to 30%. Volume to capacity (v/c) ratios in excess of 0.85 is therefore an indicator of potential problems.

Under existing (2006) conditions, ***Figure 10*** indicates that there are no capacity deficiencies on any of the screenlines. The one exception is the screenline south of Highway 8 (Screenline #8), which is approaching critical capacity.

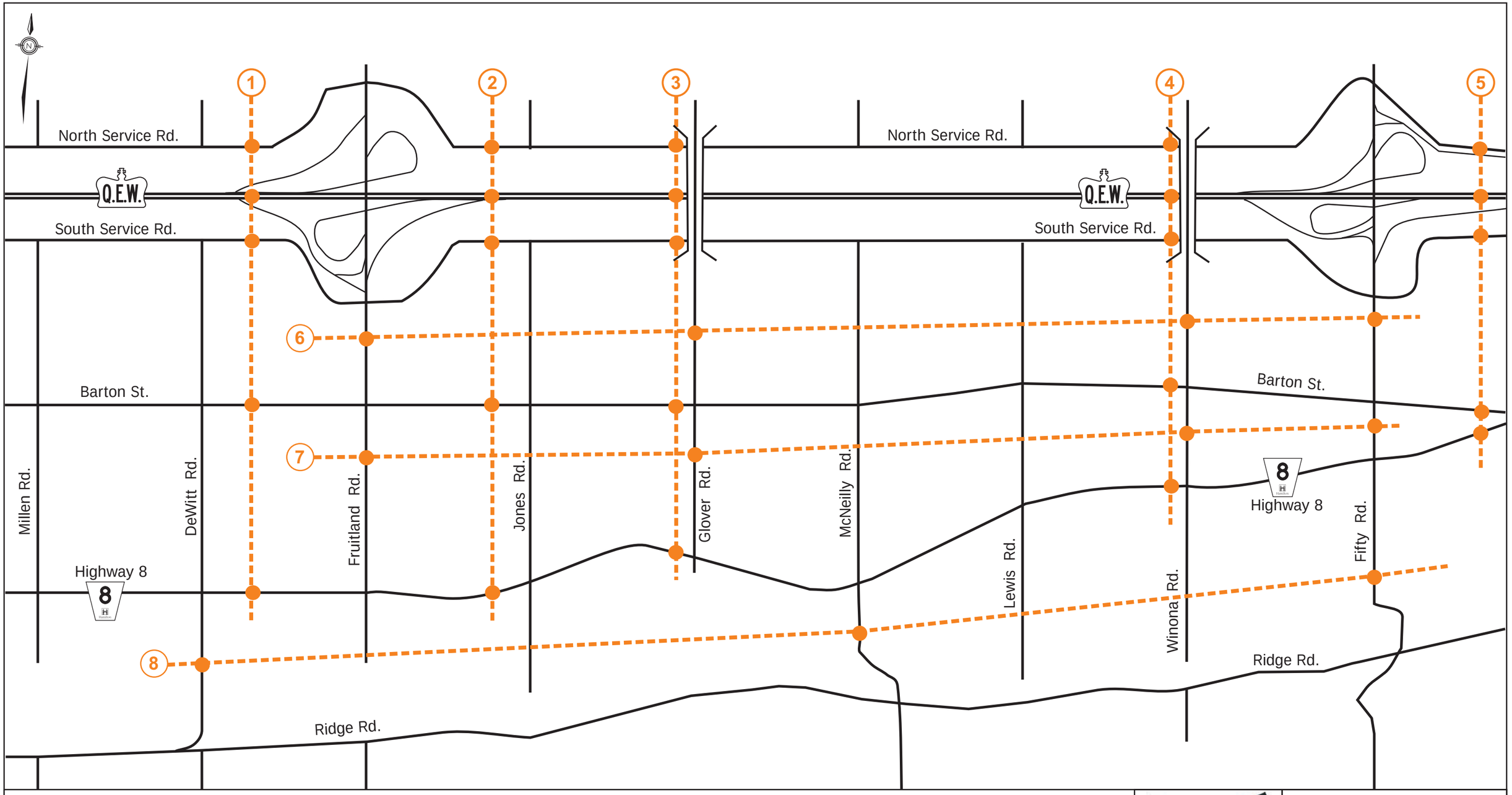
By 2021, under both the minimum and maximum population employment scenarios, no additional capacity deficiencies on any of the screenlines were identified, with the exception of the screenline south of Highway 8 (Screenline #8), where additional capacity requirements were identified for travel between the study area and south of the Escarpment. This is illustrated in ***Figure 11*** and ***Figure 12.***

Detailed screenline analysis tables for the 2006 and 2021 scenarios can be found in ***Appendix A***. The screenline tables reference detailed volumes, capacity, and v/c ratios for links in each screenline.

4.10 Description of Problem

Both 2021 population and employment scenarios identify a capacity deficiency in Screenline #8 (approximately 400 and 470 vehicles for the minimum and maximum scenario respectively), which captures north-south travel demand in the study area through the escarpment using DeWitt Road, McNeilly Road, and Fifty Road. However, the "true" capacity of the north/south crossings of the escarpment are, more appropriately, reflected in a longer screenline, which would capture more higher order roadways such as the Red Hill Creek Expressway and Centennial Parkway. The inclusion of this capacity to the screenline will accommodate the excess traffic volume demand observed in the study area, which in absolute numbers, represented less than half of the planning capacity of an arterial roadway. This demand can be accommodated by additional road capacity outside the study area, transit service improvements, and TDM. This conclusion is consistent with findings in the City-wide Transportation Master Plan.

Under existing conditions, the overall road network in the study area is operating well. By 2021, screenline capacity is below the critical v/c with the exception of Screenline #8. However, as detailed above, the demand above the critical v/c of 0.85 can be accommodated without the need for additional roadway capacity in the study area, under both the minimum and maximum population and employment scenarios.



LEGEND

6 — Screen Lines

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SCALE: NTS	
DATE: February 21, 2007	
PROJECT NO. 07-7995 - 1000	

STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

SCREENLINES

Figure 9

North Service Rd.

Q.E.W.

South Service Rd.

North Service Rd.

Q.E.W.

South Service Rd.

1 2 3 4 5

6 7 8

0.58 0.61 0.62 0.35 0.60 0.52

0.35

0.80

Barton St.

Barton St.

Highway 8

8

Highway 8

8

Ridge Rd.

Ridge Rd.

Millen Rd.

DeWitt Rd.

Fruitland Rd.

Jones Rd.

Glover Rd.

McNeilly Rd.

Lewis Rd.

Winona Rd.

Fifty Rd.

LEGEND

6 Screen Lines

0.49 Screenline Volume/Capacity

0.49 Screenline Exceeds Critical Volume/Capacity (>0.85)

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STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

2006 SCREENLINE ANALYSIS

Figure 10

North Service Rd.

Q.E.W.

South Service Rd.

North Service Rd.

Q.E.W.

South Service Rd.

1

2

3

4

5

6

7

8

0.67

0.70

0.71

0.39

0.69

0.59

Barton St.

Barton St.

0.52

Millen Rd.

DeWitt Rd.

Fruitland Rd.

Jones Rd.

Glover Rd.

McNeilly Rd.

Lewis Rd.

Winona Rd.

Fifty Rd.

Highway 8

8

Highway 8

8

1.02

Ridge Rd.

Ridge Rd.

LEGEND

6 — Screen Lines

0.49 — Screenline Volume/Capacity

0.49 — Screenline Exceeds Critical Volume/Capacity (>0.85)

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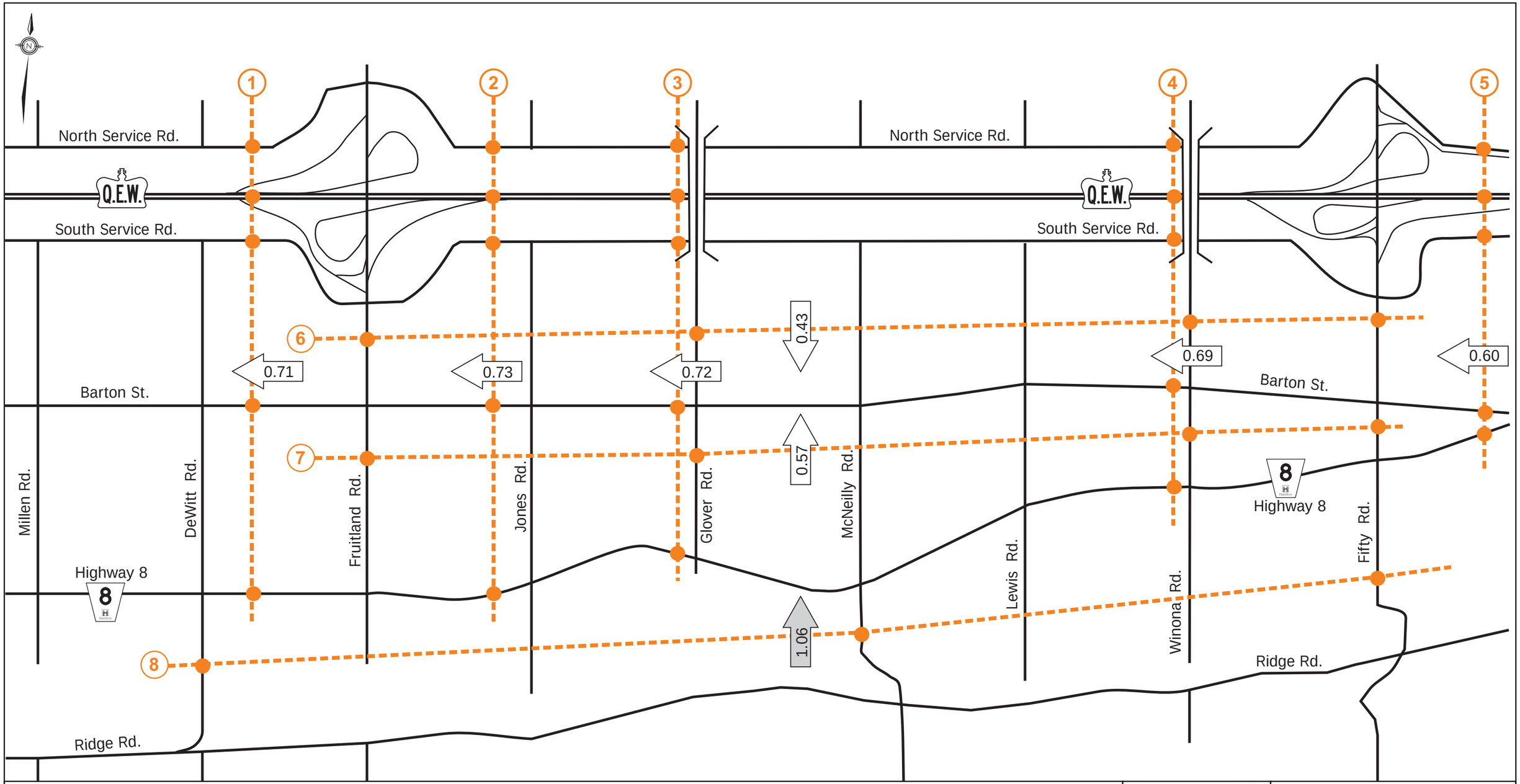
STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

2021 MINIMUM POPULATION AND EMPLOYMENT SCENARIO SCREENLINE ANALYSIS

Figure 11



LEGEND

6 — Screen Lines

0.49 — Screenline Volume/Capacity

0.49 — Screenline Exceeds Critical Volume/Capacity (>0.85)

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STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

2021 MAXIMUM POPULATION AND EMPLOYMENT SCENARIO SCREENLINE ANALYSIS

Figure 12

5.0 OPERATIONAL MODELING ANALYSIS

This section outlines the findings of an assessment of future corridor traffic operations in the Stoney Creek Urban Boundary Expansion (SCUBE) area, in conjunction with the long-range road network modelling analysis conducted as presented in Section 4.

Analyses were conducted for the AM peak hour for the time horizon 2021, which corresponds with the regional model data prepared for the screenline analyses. Full analyses were conducted on the 2021 maximum development scenario, the worst-case scenario.

The study was based on corridor analysis of the two main east-west corridors, Highway 8 and Barton Street, from DeWitt Road in the east to Fifty Road in the west. The analysis included the following intersections:

- Barton Street and DeWitt Road
- Barton Street and Fruitland Road
- Barton Street and Jones Road
- Barton Street and Glover Road
- Barton Street and McNeilly Road
- Barton Street and Lewis Road
- Barton Street and Winona Road
- Barton Street and Fifty Road
- Highway 8 and DeWitt Road
- Highway 8 and Fruitland Road
- Highway 8 and Jones Road
- Highway 8 and Glover Road
- Highway 8 and McNeilly Road
- Highway 8 and Lewis Road
- Highway 8 and Winona Road
- Highway 8 and Fifty Road

Both Fruitland Road and Fifty Road provide full-interchange access to the Queen Elizabeth Way (QEW). Both Fifty Road and McNeilly Road provide full mountain access across the Niagara Escarpment; in addition, DeWitt Road provides one-way (southbound/upbound only) mountain access.

Speed Limits

The posted speed limit along Barton Street is 60 km/h from DeWitt Road to Winona Road, and 50 km/h from Winona Road to Fifty Road. Along Highway 8, the posted speed limit varies from 60 km/h between DeWitt Road and Fruitland Road, to 70 km/h between Fruitland Road and Lewis Road, and then back to 60 km/h from Lewis Road easterly. No changes to the speed limits were assumed to 2021.

Traffic Volumes

As part of the travel demand forecasting component of the study, a sub-area model was developed for the SCUBE area based on the City of Hamilton's AM peak hour model. This sub-area model forecast road network volumes at a regional level based on existing and future population and employment levels. Several different scenarios were exported from the model, including a simulation of existing conditions, the 2021 "minimum" population and employment forecasts, and the 2021 "maximum" population and employment forecasts. The future horizon forecasts were projected onto the existing network, and onto an expanded network including a number of new links (e.g. Arvin Avenue extensions).

While regional model results are generally accurate enough to project volumes at a larger (regional screenline) scale, they tend to require adjustments when assessing conditions at a more local level.

In the case of the SCUBE model, adjustments were made at a corridor / intersection level to compensate for two factors:

- The sub-area model significantly over-assigns traffic to the northbound (downbound) escarpment crossings (McNeilly Road; Fifty Road). The "existing conditions" model assigns approximately 720 AM peak hour trips northbound to McNeilly Road and 530 AM peak hour trips northbound to Fifty Road, compared to surveyed volumes of roughly 100-125 vehicles per hour in both locations. This could reflect a number of potential factors (e.g., overly generous trip generation rates for local employment zones; modelled escarpment crossing capacity limitations further to the west).
- Local trip patterns are heavily influenced by centroid connector locations. In the model, trips generated by each subzone access the network via up to three links connecting to the subzone centroid. In reality, traffic access is generally dispersed amongst several driveways and smaller intersections rather than concentrated onto one to three general access points. This characteristic of the model tends to result in a greater degree of traffic fluctuation and variability along a corridor, particularly Barton Street.

The bullets above simply identify key differences between a macro-level model (demand forecasting) and a micro-level simulation (the objective of this exercise).

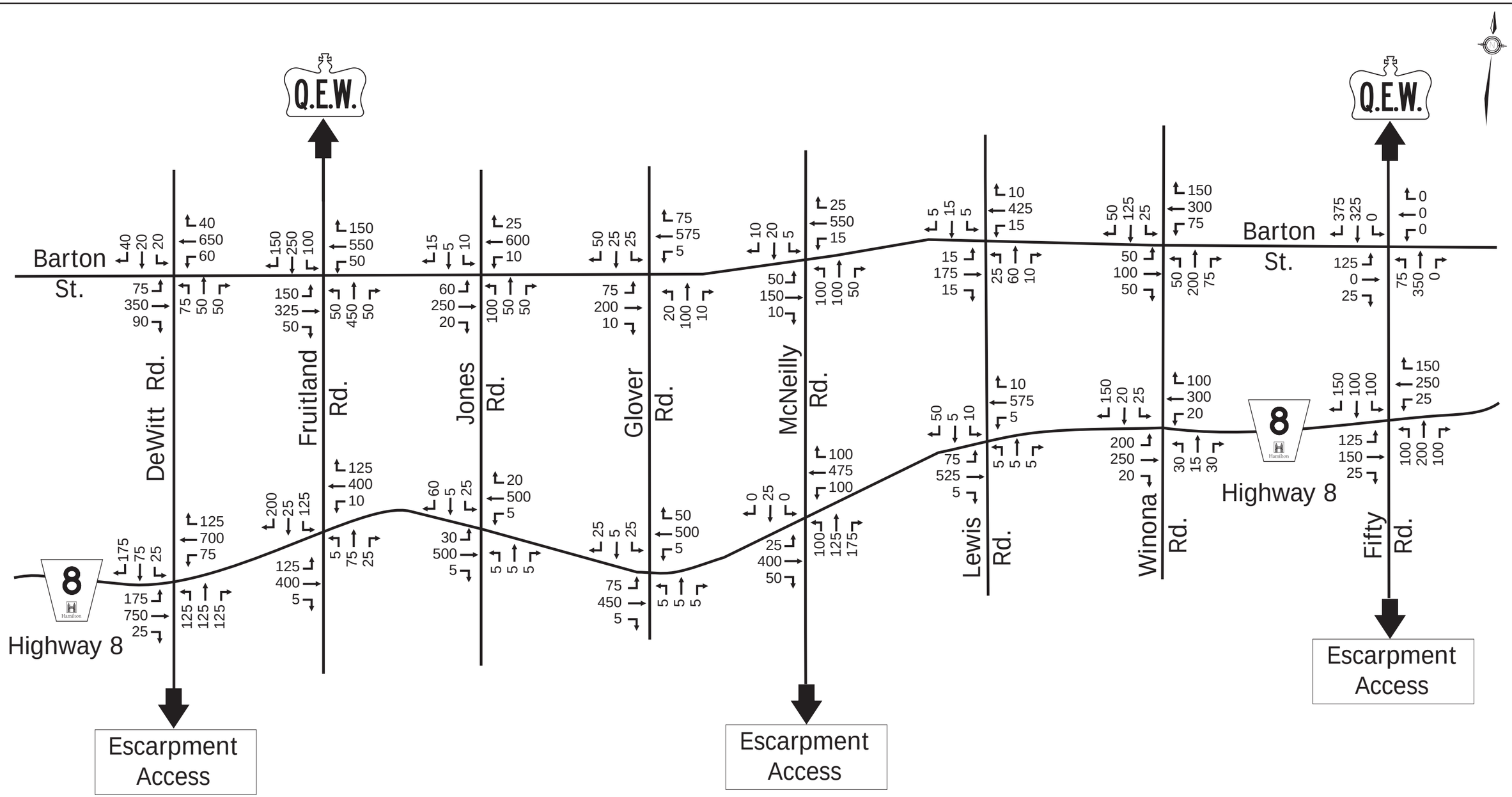
To account for these differences, the "existing conditions" model link volumes were adjusted to more closely reflect surveyed traffic patterns, and traffic growth related to SCUBE development was then added to the adjusted "existing" volumes. Intersection volumes were then extrapolated based on existing intersection and link traffic patterns; the location and magnitude of development areas; and the available road network. It should be noted that this approach results in volumes that are appropriate for a long-range, regional-level forecast, and that a higher level of variability will be inherent on an intersection basis. However, given that a number of other factors are also variable (e.g., the nature of the proposed population and employment uses; the location of collector roads, driveways and site accesses), this level of detail is considered to be appropriate for the purposes of this analysis.

Traffic Operations

Corridor traffic operations were evaluated using the Synchro (version 6) analysis software package. This allowed operations and capacity to be assessed at an intersection level, and also allowed for an assessment of the feasibility of corridor traffic control signal co-ordination. Typical City of Hamilton parameters were applied to the analyses, including the application of a standard 90-second cycle length for signal co-ordination, and conservative base saturation flow rates of 1,650 vehicles per hour per lane for through movements and 1,500 vehicles per hour per lane for turning lanes.

For the purposes of operational analyses, the existing lane configurations and intersection control were assumed, although traffic signal timings and phases were optimized. This represents a conservative assessment, since it reflects the existing road network, rather than future modifications (e.g., the completion of Arvin Avenue will increase network connectivity and potentially divert some trips from Barton Street). The Future 2021 traffic volumes that were applied to the network, reflecting the maximum development scenario, are shown in ***Figure 13.***

The future 2021 signalized and unsignalized intersection analysis results are summarized in ***Table 5*** and ***Table 6***, respectively.



LEGEND

123 →
123 →
123 ↰
} AM peak hour traffic volume

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STONEY CREEK
URBAN BOUNDARY EXPANSION AREA

FUTURE 2021 AM PEAK HOUR TURNING MOVEMENT VOLUMES

Figure 13

Table 5 – Future 2021 (Maximum Development) Signalized Intersection Operations

Intersection	Weekday AM Peak Hour	
	v/c	LOS
DeWitt Road / Barton Street	0.36	B
Fruitland Road / Barton Street	0.79	C
DeWitt Road / Highway 8	0.72	B
Fruitland Road / Highway 8	0.39	C
McNeilly Road / Highway 8	0.77	C
Fifty Road / Highway 8	0.75	C

All signalized intersections are expected to operate at a reasonable level of service (LOS C or better) and are expected to operate under capacity (v/c < 0.80) under 2021 "maximum development" conditions during the AM peak hour analyzed. No critical movements (i.e., individual turning movements at or approaching capacity) have been identified. These are likely to be conservative estimates given that the analyses reflect the existing road network and do not include planned expansion (e.g., completion of Arvin Avenue). There may also be opportunities to improve operations through localized intersection improvements (e.g., strategic implementation of advance left turn phases; construction of exclusive turning lanes for movements currently made from shared lanes).

Table 6 – Future 2021 (Maximum Development) Unsignalized Intersection Operations

Intersection	Movement	v/c	LOS
Jones Road / Barton Street	Northbound Approach	0.99	F
	Southbound Approach	0.11	C
Glover Road / Barton Street	Northbound Approach	0.73	F
	Southbound Approach	0.44	D
McNeilly Road / Barton Street	Northbound Approach	1.00	F
	Southbound Approach	0.12	C
Lewis Road / Barton Street	Northbound Approach	0.29	C
	Southbound Approach	0.07	C
Winona Road / Barton Street	Northbound Approach	1.39	F
	Southbound Approach	1.15	F
Fifty Road / Barton Street	Eastbound Approach	0.68	E
Jones Road / Highway 8	Northbound Left Turn	0.04	D
	Southbound Left Turn	0.17	D
Glover Road / Highway 8	Northbound Approach	0.09	D
	Southbound Approach	0.29	D
Lewis Road / Highway 8	Northbound Approach	0.11	D
	Southbound Approach	0.14	C
Winona Road / Highway 8	Northbound Approach	0.50	E
	Southbound Approach	0.44	C

Based on the estimated total future volumes, a number of unsignalized intersections in the Barton Street corridor may experience operational problems during the AM peak hour under the maximum development scenario, and may be candidates for widening for exclusive left turn lands and/or installation of traffic control signals (alternately, the volumes suggest that roundabouts could be considered at most locations). Although PM peak hour volumes were not modelled, outbound traffic generated by the employment areas north of Barton Street will likely increase pressure on these intersections in the PM peak hour as well.

Conversely, the unsignalized intersections along Highway 8 are anticipated to experience reasonable operations under the existing conditions and are less likely to require signalization. Notwithstanding, the City should continue to monitor the Highway 8 corridor for potential operational improvements (signalization; geometric modifications such as new turning lanes or roundabouts) as the SCUBE area develops.

Both the Barton Street and Highway 8 corridors are currently fronted generally by low-density strip residential, commercial and industrial development, characterized by frequent low-volume driveways. As the SCUBE area develops and through volumes increase on Barton Street and Highway 8, these corridors may be candidates for widening to a three-lane cross-section to provide continuous centre two-way left turn lanes (TWLTLs). These centre lanes would serve local driveways and intermediate intersections with local streets, removing left turn traffic from through lanes and improving corridor operations and capacity. At major intersections, the centre two-way left turn lane would become a standard left turn lane.

Feasibility of Signal Progression

As noted above, it is likely that a number of intersections in the Barton Street corridor will require signalization, or alternate treatment, to provide sufficient intersection capacity under the ultimate build-out of the SCUBE area. While the pressure on the Highway 8 corridor will likely be less, it will still be prudent to plan for future signalization of major intersections. Therefore, as an alternate scenario, the two corridors were analyzed with all major intersections operating under traffic signal control, to assess the feasibility of implementing signal progression. Signal timings assumed an area-wide 90-second cycle length, and were optimized to minimize overall intersection delays. Pre-timed operations were assumed as a worst case; actuation of the side street approaches would generally increase green time on the main street and potentially expand the main street green band.

The Transportation Association of Canada (TAC) recommends that, given a 90-second cycle length, signalized intersections be spaced approximately 875 metres apart for an average speed of 70 km/h or 750 metres apart for an average speed of 60 km/h. The spacing between major intersections on Barton Street ranges from approximately 800 to 850 metres; the spacing between intersections on Highway 8 is slightly longer due to its slightly more indirect alignment.

Highway 8 has a speed limit of 70 km/h for much of its alignment through the study area, and therefore should experience good signal progression since the desirable 875-metre intersection spacing at 70 km/h generally corresponds to the typical intersection spacing in the corridor. This is confirmed by the Synchro analyses, which found that Highway 8 will be able to operate between DeWitt Road and Fifty Road with a 38-second westbound green band and with a 20-second eastbound green band. The limiting point for the shorter eastbound green band is the Fifty Road intersection, which acts as the eastern limit of the corridor; for the rest of the corridor, the eastbound green band is in fact closer to 42 seconds. This limitation is not significant since volumes

at the east end of the corridor are lower; through traffic comprises a lower proportion of eastbound approach volumes at Fifty Road; and a green band equivalent to roughly half the cycle length can be provided on the remainder of the six-kilometre corridor. It should be noted that these results are based on the existing speed limits; if the posted speed limit is reduced from 70 km/h as the area becomes more urban in nature, there may be disruptions to signal progression in one or both directions.

On Barton Street, the speed limit is lower (60 km/h for most of the corridor), which corresponds to a shorter ideal spacing (750 metres given a 90-second cycle length). As a result, achieving two-way signal progression on this corridor will be more difficult. Again, this is confirmed by the Synchro analyses, which found that while a 40-second green band can be provided for the peak westbound direction, the eastbound green band between intersections becomes progressively shorter. However, eastbound through traffic would only need to stop at one intermediate intersection within the corridor as a result, which is not unreasonable for the off-peak direction of travel. Alternately, a 100-second cycle length would provide improved two-way progression at a 60 km/h travel speed, although longer cycle lengths are less typical in the City of Hamilton and would tend to increase side street delay.

The Barton Street and Highway 8 intersections with Fifty Road are located within approximately 240 metres of each other. Signal progression on Fifty Road was analyzed given that it provides a through route between the QEW and the Mountain. For this corridor, signal progression is less critical for the northbound direction because less than half of the traffic at the upstream intersection (Highway 8) is actually northbound through traffic; the remainder turns from Highway 8 and would enter the northbound flow outside of the north/south green band. As a result, progression can be optimized for southbound traffic without significant impact on northbound traffic.

Summary of Findings

We conclude the following, based on the analyses outlined above:

- No major capacity issues are predicted for the horizon year 2021 at any of the signalized intersections.
- No significant through lane capacity increases (i.e., additional through lanes) are anticipated to be required.
- Some of the uncontrolled intersections are estimated to be over capacity in the horizon year 2021, predominantly intersections along Barton Street. Some improvements may be required to solve these capacity problems. These could include a combination of localized intersection widening (for exclusive turning lanes) and/or installation of traffic control signals; or, conversion to roundabout.
- Both Highway 8 and Barton Street are likely to be good candidates for widening to a three-lane cross-section, with the centre lane serving as a two-way left turn lane at driveways and local road intersections, and changing to a standard left turn lane at major intersections. However, further study is required as development progresses. In the interim, intersections along Highway 8 and Barton Street (i.e., Jones Road; Glover Road; McNeilly Road; Lewis Road; Winona Road; Fifty Road) should be protected for future intersection improvements, potentially consisting of either signalization and/or construction of exclusive turning lanes; or conversion to a roundabout.

- There is generally good potential for signal co-ordination in the event that traffic signals are installed on Barton Street and Highway 8 at each major north-south roadway (approximately 800- to 850-metre spacing). Good signal progression can be provided in both directions on Highway 8, given a 90-second cycle length and the existing speed limits. Signal progression would need to be optimized for the peak direction of travel on Barton Street (and on Highway 8, if speed limits are reduced as the corridor becomes more urbanized); however, a reasonable level of co-ordination can still be maintained for the off-peak direction.

Due to the high-level nature of the analyses outlined above, it is also recommended that the above findings be confirmed through more detailed traffic impact studies as future development proceeds.

6.0 2021 NETWORK ASSESSMENT

As presented in Sections 4 and 5, the traffic demands associated with the planned development in SCUBE were initially forecasted using a sub-area model developed based on the City of Hamilton's AM peak hour City-wide model. These model forecasts allowed for an assessment of any potential broader capacity issues at a screenline level. Through this analysis, it was determined that the overall road network is anticipated to have sufficient capacity to accommodate the development outlined under the 2021 maximum population and employment scenario.

The analyses found the following:

- There are no screenline level capacity issues in the study area road network, both in existing conditions and by 2021.
- Operational issues on the roadway network may need to be addressed as development occurs.
- Existing transit services in the study area are limited.
- Existing cycling network provides little connectivity for utilitarian cyclists or recreational trail users.
- No major capacity issues are predicted for the 2021 horizon year at any of the existing signalized intersections in the Barton Street or Highway 8 corridors.
- Some of the unsignalized intersections are estimated to be over capacity in the horizon year 2021, predominantly intersections along Barton Street. Some improvements may be required to solve these capacity problems. These could include a combination of localized intersection widening (for exclusive turning lanes) and/or installation of traffic control signals or conversion to roundabouts.
- Both Highway 8 and Barton Street are likely to be good candidates for widening to a three-lane cross-section, with the centre lane serving as a two-way left turn lane at driveways and local road intersections, and changing to a standard left turn lane at major intersections.
- There is generally good potential for signal co-ordination in the event that traffic signals are installed on Barton Street and Highway 8 at each major north-south roadway (approximately 800 to 850 metre spacing). Good signal progression can be provided in both directions on Highway 8, given a 90 second cycle length and maintaining the existing speed limits. Signal progression would need to be optimized for the peak direction of travel on Barton Street (and on Highway 8, if and when speed limits are reduced as the corridor becomes more urbanized). However, a reasonable level of co-ordination can still be maintained for the off-peak direction.
- The operational improvements noted above will be best defined once detailed traffic studies are undertaken in support of development proposals.

7.0 TRANSPORTATION SYSTEM POLICIES FOR SCUBE

Since there are no infrastructure improvements identified as part of the analyses undertaken, this document presents a series of considerations and recommendations to guide the development of the SCUBE transportation system to 2021.

7.1 Guiding Principles

The 2007 Hamilton Transportation Master Plan (TMP) outlines the City's transportation objectives and guiding principles for the development of its transportation networks, policies, and programs. The Statement of Transportation Objectives and Guiding Principles, as illustrated in the Master Plan, is illustrated in ***Table 7***.

Table 7 – Statement of Transportation Objectives and Guiding Principles

In 2020, the City of Hamilton's transportation system will:	
Objective 1	**Offer safe and convenient access for individuals to meet their daily needs**
Principle 1(a)	Transportation facilities and services should be safe, secure and barrier-free
Principle 1(b)	Each transportation mode should have an acceptable level of service
Principle 1(c)	Non-travel alternatives and shorter trips should be encouraged
Objective 2	**Offer a choice of integrated travel modes, emphasizing active transportation, public transit and carpooling**
Principle 2(a)	Alternatives to single-occupant vehicle travel should be practical and attractive
Principle 2(b)	Transportation facilities and services should be continuous and seamlessly integrated
Principle 2(c)	The health benefits of active lifestyles should be recognized and promoted
Objective 3	**Enhance the liveability of neighbourhoods and rural areas**
Principle 3(a)	Transportation facilities should reflect and complement their community context
Principle 3(b)	Noise and other undesirable impacts of traffic on residential areas should be minimized
Objective 4	**Encourage a more compact urban form, land use intensification and transit-supportive node and corridor development**
Principle 4(a)	Investment in transit-supportive land uses should be encouraged by quality public transit services and facilities
Principle 4(b)	Transportation facilities should meet current needs while remaining adaptable to those of the future
Principle 4(c)	Zoning, urban design and parking management strategies should minimize land consumed by automobile travel
Objective 5	**Protect the environment by minimizing impacts on air, water, land and natural resources**
Principle 5(a)	The use of greenspace for new infrastructure should be minimized
Principle 5(b)	Transportation technologies and behaviours should reduce energy consumption and air emissions
Principle 5(c)	The impacts of surface water runoff from transportation facilities should be minimized
Objective 6	**Support local businesses and the community's economic development**
Principle 6(a)	The efficiency of goods movement to, from and within the city should be maximized
Principle 6(b)	Businesses and institutions should remain accessible to employees and visitors
Objective 7	**Operate efficiently and be affordable to the City and its citizens**
Principle 7(a)	Maximum value should be extracted from existing facilities and services
Principle 7(b)	Decisions should take into account the life-cycle costs of transportation facilities and services
Principle 7(c)	Transportation funding opportunities involving other governments, the private sector and individual users should be considered

Source: 2007 City of Hamilton Transportation Master Plan

7.2 2021 Travel Targets

The 2007 Hamilton TMP sets up a number of transportation targets for the short- and long-term (2021) period. These are described under four main transportation policy themes, which should be reflected in the SCUBE TMP study. These are:

- Promote a Strong and Vibrant Economy;
- Build Liveable Communities;
- Provide a Balanced Transportation Network; and
- Improve Public Transit.

The targets are based on proposed policy directions set out in the TMP as well as the Official Plan review. In the long-term, the target is to reduce overall vehicle use by 20 percent from existing (2001) levels. The transportation targets are illustrated in ***Table 8.***

Table 8 – Transportation Targets (2007 Hamilton TMP)

	Current Situation (based on 2001 data)	Potential Near Term Scenario (based on a goal of reducing auto vehicle-kilometres by 10% compared to 2001)	Potential Long Term Scenario (based on a goal of reducing auto vehicle-kilometres by 20% compared to 2001)
Estimated daily vehicle kilometres of travel by Hamilton residents	4.8 million km	4.3 million km	3.8 million km
Share of daily trips made by single-occupant drivers	68%	58%	52%
Share of daily trips made by using municipal transit	5%	9%	12%
Share of daily trips made by using walking or cycling	6%	10%	15%
Annual transit rides per capita (City-wide) (1)	40	60	80-100

Source: 2007 City of Hamilton Transportation Master Plan

One of the challenges for the SCUBE area is that targets reflect the entire City, which averages out downtown and more developed areas with the more rural areas characterized by low density, single use development with minimal cycling, pedestrian, and transit infrastructure/services in place.

Table 9 further demonstrates this.

Table 9 – 2001 Mode Split

	City	SCUBE
MODE SHARE	**100%**	**100%**
Auto Driver	65%	73%
Auto Passenger	12%	7%
Transit (including GO Rail)	7%	2%
Walking	10%	7%
Cycling	1%	0%
School Bus	5%	10%
Other	0%	0%

Source: 2001 TTS data

The table illustrates 2001 AM peak period travel patterns in the City of Hamilton and in the SCUBE area. The City-wide 2001 single occupant driver mode split was 65 percent; in contrast, the 2001 single-occupant driver modal split for the SCUBE area was 73 percent; which was 8 percent higher than the City-wide average. Likewise, transit use in the SCUBE area was only 2 percent, while the City-wide average was 7 percent.

This means that achieving the city-wide mode split targets in the SCUBE area will be more difficult than in more urbanized areas of Hamilton.

In the SCUBE area, getting to the transportation targets illustrated in ***Table 8*** will require a comprehensive and multi-faceted approach that will involve:

- Developing a compatible mix of uses in neighbourhoods;
- Improving the roadway system and facilities including parking, walking and cycling infrastructure;
- Maximizing the use of existing capacity and helping to induce a non-auto mode split increase;
- Reducing the community's dependence on single occupant automobile travel;
- Promoting public transit, increasing transit service levels and service coverage;
- Establishing the key nodes and links as high density, transit supportive and pedestrian friendly areas and corridors; and
- Considering the role and the needs of goods movement.

While this study has not looked at land use considerations, the type, density, and design of the community (residential and employment) will play a significant role in achieving these targets.

7.3 Roads

The SCUBE road network should adhere to the key objectives and supporting strategies identified by the 2007 Hamilton TMP. These objectives and supporting strategies include:

- Maximize the efficiency of the existing road network in order to minimize the need for new escarpment crossings and other potentially high impact projects;
- Focus road improvements on good movement corridors and enhance access to employment lands; and
- Expand use of intelligent transportation system to optimize road capacity.

The 2007 Hamilton TMP identifies key areas of infrastructure improvement within the city based on:

- Committed/planned road widenings to accommodate planned growth;
- Upgrading and expansion of road links serving employment areas and growth areas; and
- Recognition of need to provide efficient access to business parks and employment areas.

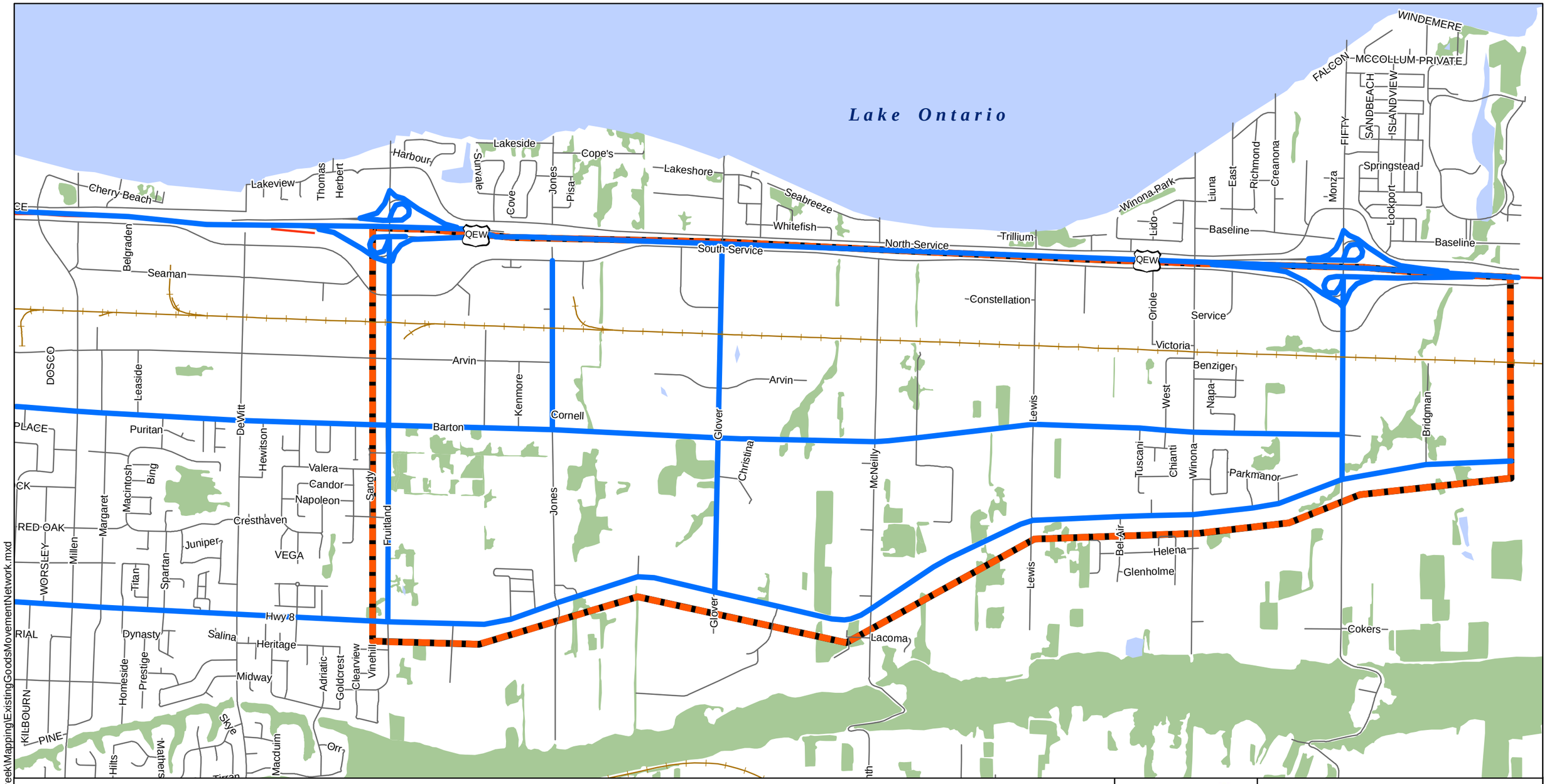
7.4 Goods Movement

The Summary of Proposed Recommended Policies (Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton) addresses goods movement policies. These recommended policies include:

- Improve dialogue with the goods movement industry and other stakeholders to elevate the issue of goods movement in Hamilton (SCUBE);
- Maintain, protect and enhance the existing goods movement network to support the economic development strategy;
- Clearly define land uses adjacent to transportation corridors to facilitate location of transportation dependent industry and commerce enterprises close to network access points with minimum intrusion on other uses; and
- Maximize the efficiency of the existing goods movement network by regulating on-street and off-street loading.

The Stoney Creek industrial area represents a major goods movement generator within the study area and the City of Hamilton. As such, the SCUBE area has a number of identified 'full time truck routes'. These include the QEW and Highway 8, as well as Barton Street, Fruitland Road and Fifty Road between Highway 8 and the QEW, Lewis Road, Glover Road, Jones Road and Winona Road between the QEW and Barton Street. The existing goods movement network is illustrated in ***Figure 14***.

The City is currently conducting a Truck Route Master Plan Study to address goods movement issues. This should form the basis for setting appropriate policy and designated goods movement routes in the SCUBE area.



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LEGEND

- Goods Movement Network
- Secondary Roads
- Highway
- Railway
- Study Area
- Woodlots
- Lakes

N
W E
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* As Indicated on the Hamilton Transportation Master Plan

1 : 20,000

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DILLON CONSULTING

PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

EXISTING GOODS MOVEMENT NETWORK

Figure 14

7.5 Parking Policy

The city-wide TMP Parking Policy Paper (Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton) provides parking policy recommendations. The following policies should be implemented in SCUBE:

- Adopt off-street parking policies, including required parking ratios established through zoning, that attempt to balance the need to supply sufficient parking to support residential and business while avoiding excess parking supply that can discourage transit use;
- Improve parking options and related incentives for transit and active transportation modes; and
- Minimize any negative impacts of parking on urban design and pedestrian activity.

The focus on parking for SCUBE will be the identification of on-street parking areas on the arterial and major collector corridors.

7.6 Transit/Travel Demand Management (TDM)

7.6.1 Transit

Improving public transit is a primary approach that is emphasized in the 2007 Hamilton TMP to reduce the single-occupant vehicle travel. The TMP addresses the following primary objectives of the transit strategy:

- Establish a layered transit system including proposed bus rapid transit, commuter rail, intercity rail and regular bus;
- Enhance transit supportive development around major nodes and corridors; and
- Improve parking facilities for transit riders near major transit terminals.

There are more challenges and opportunities to improve the transit service in SCUBE area. The following policies should be carried through in SCUBE:

- Improve and extend the Hamilton Street Railway Company (HSR) service;
- Increase transit service levels and service coverage;
- Increase coordination between the transit network and pedestrian/cycling networks, promoting multi-modal trips;
- Establish transit priority corridors and investigate Rapid Transit (RT) options along Highway 8 between Stoney Creek and downtown Hamilton; and
- Explore opportunities to partner with community-based organizations to improve the delivery of accessible transit service.

7.6.2 Travel Demand Management (TDM)

The Travel Demand Management Policy Paper (Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton) identifies two types of objectives for TDM.

1. **System objectives** are higher level transportation goals:
   - Reduce single-occupant vehicle trips, increase walking, cycling, transit and/or carpooling trips;
   - Control growth in traffic volumes, congestion and parking demands;
   - Shift transportation demand to off-peak hours; and
   - Improve air quality and preserve efficient goods movement.
2. **Program objectives** for TDM could include the following general outcomes:
   - Establish public awareness and support for sustainable travel options;
   - Promote practical, user-oriented information about sustainable travel options to residents, employers and institutions;
   - Provide tools and assistance to partners who are undertaking their own TDM measures; and
   - Encourage employers and educational institutions to support commuter options for their employees and/or students.

7.7 Cycling/Trails/Sidewalks

The 2007 Hamilton TMP identifies the need to promote and encourage walking and cycling 'through the provision of facilities and programs' in order to help build active communities and reduce the dependence on single occupant vehicle travel, including the "associated infrastructure costs, air quality, safety and congestion programs" that arise with an overdependence on automobile travel.

The goal is to provide the incentives (i.e. via the proper infrastructure) to increase the mode share for cycling and walking to 15 percent (city-wide) as recommended in the 2007 Hamilton TMP.

The plan identifies two specific objectives that should be carried through in the SCUBE Area. These are to:

- Facilitate efficient and safe travel for commuters and other cyclist and pedestrians through expansion and improvement of the network of on-street cycling and pedestrian facilities and Escarpment connections; and
- Promote recreational cycling, walking, and active transportation through the development of off-street facilities.

To achieve these objectives, the development of SCUBE will need to be conducted in a manner that identifies opportunities to increase the ease of both pedestrian and cycling trips through a series of infrastructure provisions, policies and programs, and land development strategies. These include:

- Encouraging stronger live-work relationships in land use planning decisions;
- Road network connectivity;
- Improve the extent, connectivity and quality of pedestrian and cyclist infrastructure;
- Encourage cycling and walking through education, promotion and enforcement support programs;
- Ensure new development is bicycle and pedestrian friendly through appropriate urban design policies and practices; and
- Increase coordination between the transit network and bicycle and pedestrian trips (including the provision of bicycle parking along the proposed transit priority corridor/ future RT route).

7.7.1 Cycling/Trails Design Guidelines

The design of cycling bikeways in the City is guided by the "Design Guidelines for Bikeways" report produced by former Region of Hamilton-Wentworth in 1999. The document presents a recommended guideline for the uniform design of bikeways throughout the City based on adopted basic bikeway guidelines, recommended by the Transportation Association of Canada, Ontario Ministry of Transportation and other agencies, and modified to suit local circumstances.

Three basic types of bicycle facilities are presented:

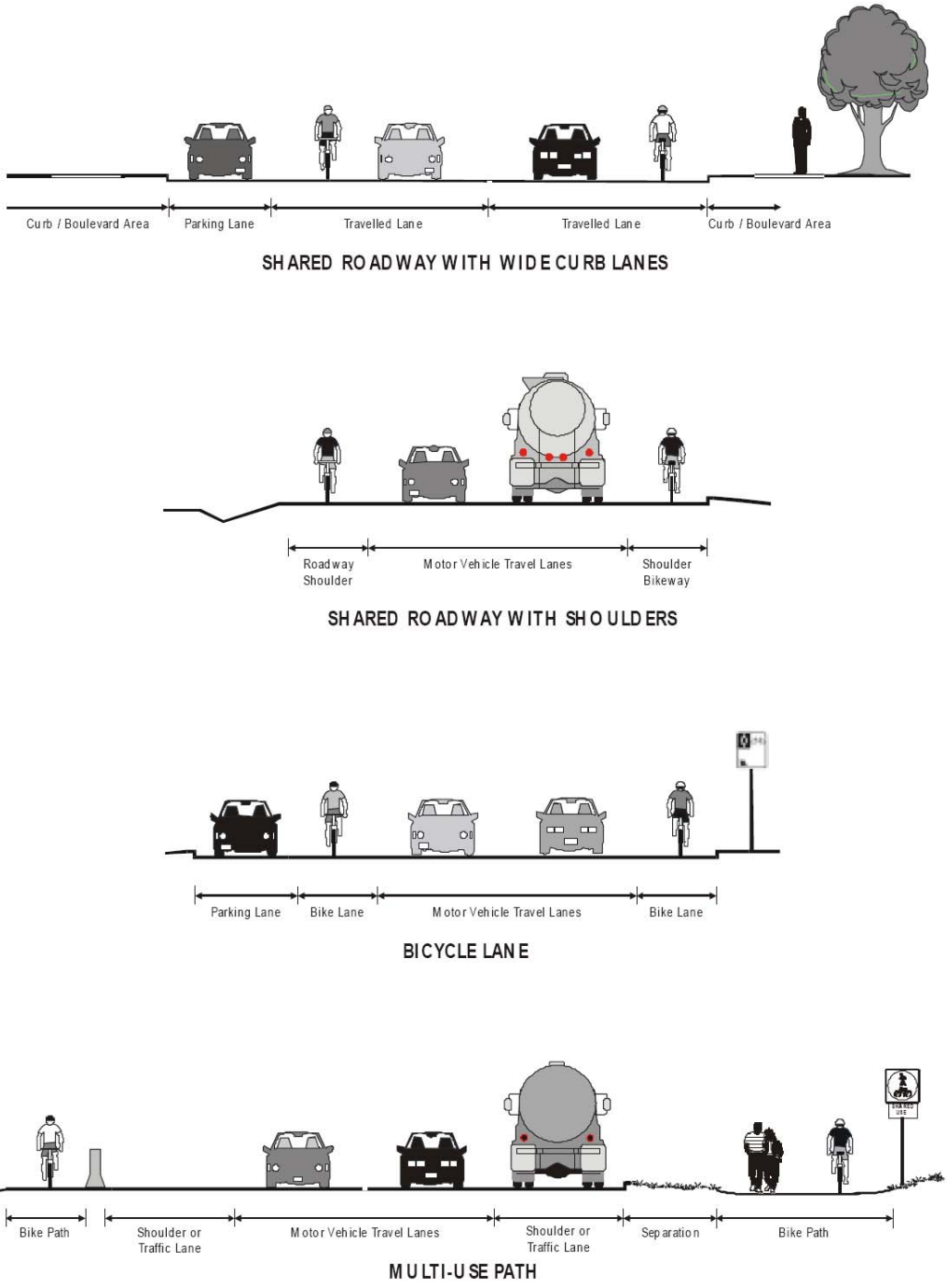
- **Shared Roadways** – On shared roadways, cyclists and motorists share the same travel lanes. These types of facilities can be signed as bicycle, and different roadway treatments can be done to increase the level of comfort for cyclists. This includes wider outside lanes and paved shoulders.

- **Bicycle Lanes** – Bicycle lanes have a portion of the roadway or shoulder designated by signing, pavement markings and/or physical barriers as a bicycle only lane. While these lanes are designated for bicycles only, vehicles are allowed to cross into the lane to perform turning movements.

- **Multi-use Paths** – Multi-use paths are physically separated from the roadway by an open space, barrier or separate right-of-way. Paths can be designated for cyclists only, or can be shared with pedestrians, inline skaters, etc.

Typical cross-sections of these facilities are illustrated in ***Figure 15***.

Figure 15 – Types of Bikeways



Source: Region of Hamilton-Wentworth, Design Guidelines for Bikeways, December 1999

According to the Design Guidelines for Bikeways, the selection of the type of bicycle facility is dependent on four major factors:

- Motor vehicle traffic volumes (AADT per lane);
- Average motor vehicle operating speed (km/hour);
- Traffic mix (number of heavy vehicles per hour); and
- Presence of on-street parking.

The type of bikeway recommended based on traffic volume and speed is presented in ***Table 10***. The selection criteria should also consider the number of heavy vehicles on the street and on-street parking. The Region of Hamilton-Wentworth Bikeway Guidelines will be reviewed as part of the Cycling Master Plan 2008 update.

Table 10 – Bikeway Type Criteria

Average Motor Vehicle Operating Speed (km/h)	AADT (per lane)		
	<3,000	3,000 - 5,000	>5,000
<30	SL	WCL	N/A
30 - 50	WCL	WCL or BL	WCL or BL
50 - 70	WCL or BL	BL	BL
>70	N/A	BL	BL or MP

SL = Shared Use Lane **WCL** = Wide Curb Lane **BL** = Bike Lane
MP = Multi-Use Path **N/A** = Not Applicable **AADT** = Annual Average Daily Traffic

Notes
* for all rural sections, use paved shoulders
* where WCL or BL, select BL if high truck % and/or parking

Source: Region of Hamilton-Wentworth, Design Guidelines for Bikeways, December 1999

7.7.2 Lane Widths Required

The implementation of bikeways in SCUBE will need to take into account the lane width required for each type of bikeway, and the available ROW on the proposed street. The Design Guideline suggests wider widths for busier streets, measured from the edge of the gutter pan to the edge of the lane marking. Suggested widths for each type of facility are indicated in ***Table 11***.

Table 11 – Lane Widths

	Lane Width (m)					
	Wide Curb Lane	Bicycle Lane	Lane & Parking Stalls	Contra-Flow Lane	HOV / Bus	Multi - Use Path
Absolute Minimum	4.0	1.2	4.0	1.5	4.3	2.5
Minimum	4.3	1.5	4.0	1.8	4.5	3.0
Desirable	4.5	1.8	4.5	2.0	4.8	4.0

Source: Region of Hamilton-Wentworth, Design Guidelines for Bikeways, December 1999

7.7.3 Sidewalk Guidelines

The placement of sidewalks in SCUBE should be based on the road type and the surrounding land use. Overall, the following are recommended:

- **Arterial Roads** – Sidewalks on both sides for residential and commercial areas.
- **Collector Roads** – Sidewalks on both sides for residential and commercial areas.
- **Local Roads** – Commercial local roads within SCUBE should require sidewalks on both sides of the street and wider curb lanes for cyclists. Residential local roads within SCUBE should require sidewalks present on both sides of the street, with the exception of cul-de-sacs.

8.0 DEVELOPING A TRANSPORTATION STRATEGY FOR SCUBE

In the preparation of a 2021 transportation strategy emphasis was placed on the principles identified in the 2007 Hamilton TMP. Since no screenline level roadway improvements were identified in this study, this section of the report focuses on operating requirements and strategies for the road network, a preliminary transit service design, a TDM strategy, and the placement of a cycling and pedestrian network to reach the modal split targets identified in the 2007 Hamilton TMP.

8.1 Road Network Improvements

8.1.1 2007 Hamilton TMP Recommended Road Network

The proposed infrastructure improvements in SCUBE to 2021 identified in the 2007 Hamilton TMP are illustrated in ***Table 12***. These improvements were incorporated as part of the modelling work undertaken for the SCUBE TMP. Most of the road improvements involve the addition of left turn lanes and the urbanization of rural roadways. The most extensive improvement will be the extension of Arvin Avenue between Jones Road and just east of Lewis Road. This extension will provide increased access to the Stoney Creek Industrial Area, which will help service the existing and any new industrial land uses in this area.

Two road widenings are also indicated in the study area. This includes the widenings of Highway 8 to four lanes and Fruitland Road between Barton Street and Arvin Avenue. These were both identified as long-term requirements (beyond 2021) in the city-wide TMP, and confirmed in this study.

The last column, of Table 12, has been added to update the EA Schedule based on the 2007 amendment to the Class EA process.

Table 12 – Planned Road Infrastructure Improvements in SCUBE

Road Name	From	To	Description of Works	Anticipated Timing	Total Project Costs ($M)	EA Schedule	Remarks/ Status
Arvin Avenue	McNeilly Road	just east of Lewis Road	New Road	2007-2011	$3.89	C	Separate EA Study underway
	Jones Road	existing end	New Road	2007-2011			
	Existing end	extend to McNeilly Road	New Road	2007-2011			
Barton Street	Fruitland	Glover Road	Two-way Left-turn Lane	Beyond 2021	$12.57	C	Phases 3 & 4 to be carried out
	Glover Road	Fifty Road	Two-way Left-turn Lane	Beyond 2021			
Fifty Road	QEW	Hwy 8	Road Widening	Beyond 2021	$2.32	C	Phases 3 & 4 to be carried out
Fruitland Road	Arvin Avenue	Barton Street	Road Widening	Beyond 2021	$0.79	C	To be reviewed under the 5 year review of HTMP
Glover Access Road	Glover Road	North Service Road	Conversion to urban cross-section	2007-2011	$0.75	A	A+
Hwy 8	Fruitland Road	Hamilton Boundary	Road Widening	Beyond 2021	$10.54	C	Phases 3 & 4 to be carried out
	DeWitt Road	Fruitland Road	Road Widening & Two-way Left-turn Lane	Beyond 2021			
Jones Road	Barton Street	South Service Road	Conversion to urban cross-section	2012-2021	$1.94	A	A+
Lewis Road	Barton Street	South Service Road	Conversion to urban cross-section	2007-2011	$1.75	A	Schedule C, Study underway
McNeilly Road	Barton Street	South Service Road	Conversion to urban cross-section	2007-2011	$1.87	A	Study completed
Sunnyhurst Avenue	Barton Street	North end	Conversion to urban cross-section	2012-2021	$1.12	A	A+

*The Arvin Avenue Class EA to McNeilly Road is underway.

8.1.2 Opportunities and Constraints

As illustrated above, very little roadway capacity improvements are required in the SCUBE area to accommodate increase in population and employment to 2021. The only significant roadway expansion is the extension of Arvin Avenue to service the Stoney Creek Employment Corridor.

The road network in the SCUBE area is primarily constrained by a number of natural and man-made features. This includes the Escarpment and Greenbelt area to the south, the QEW and the CN Railway corridor to the north. Both create significant constraints to adding additional capacity or roadway connectivity to the north-south roadway network. As such, vehicles entering the QEW or traveling south of the Escarpment must rely on a limited number of connections. While no new north-south arterial roadway improvements were identified by 2021, this can constrain the development of the collector road network.

One of the other difficulties in developing a collector road network in the development parcels will be finding appropriate access points to the arterial road network. While each of the development parcels are largely undeveloped (i.e. SCUBE West), a number of the arterial roads bounding these

parcels have existing land uses. Impacts to these land uses will need to be minimized when developing a collector road network.

8.1.3 Intersection and Roadway Improvements

The operational analyses recommended a number of operational improvements along Barton Street and Highway 8. It was noted major intersections along Highway 8 and Barton Street should be protected for future intersection improvements, potentially consisting of either signalization and/or construction of exclusive turning lanes; or conversion to a roundabout. These intersections include:

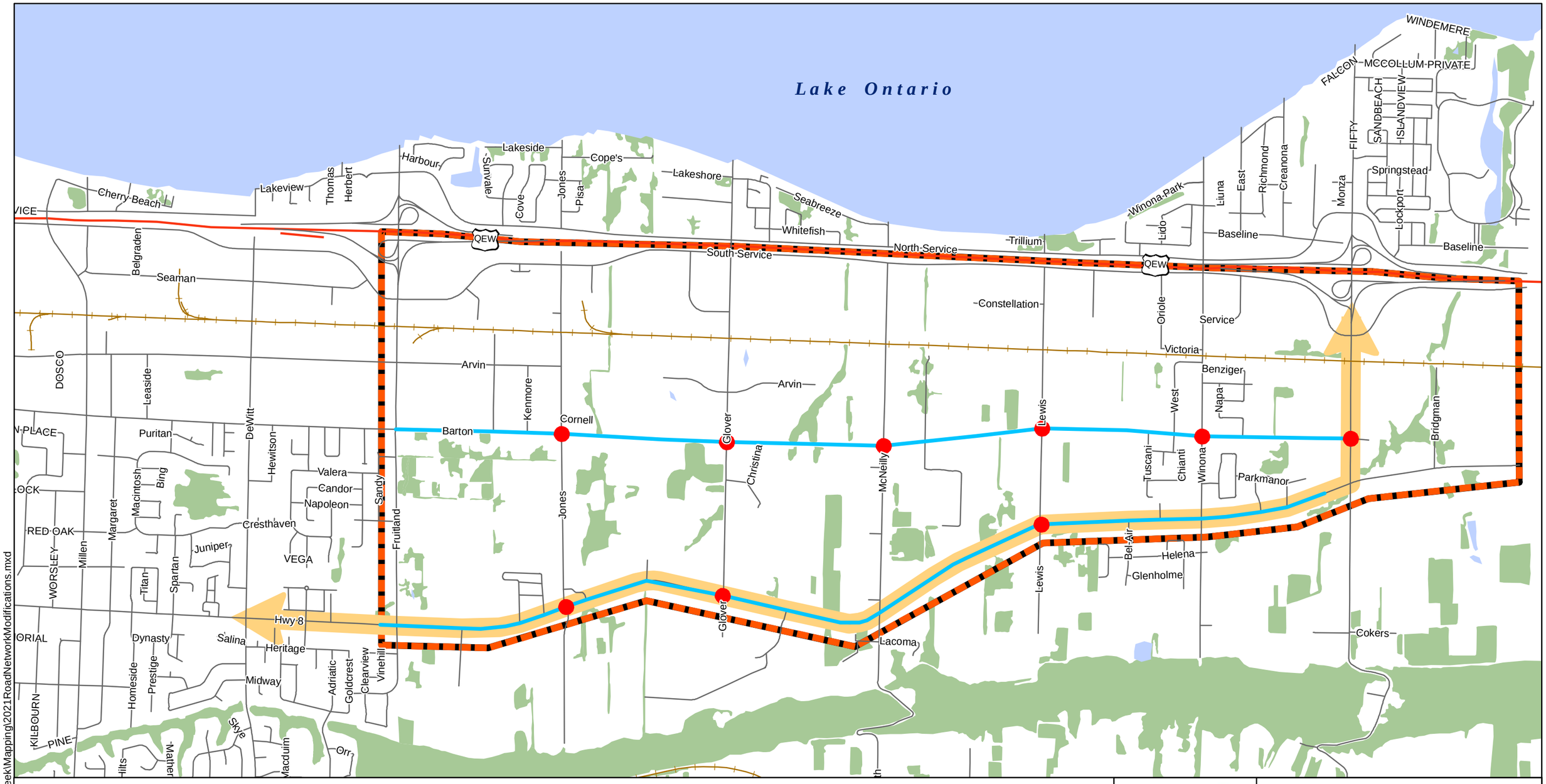
- Highway 8 and Barton Street at Jones Road;
- Highway 8 and Barton Street at Glover Road;
- Barton Street at McNeilly Road;
- Highway 8 and Barton Street at Lewis Road;
- Highway 8 and Barton Street at Winona Road[1]; and
- Barton Street at Fifty Road.

Due to the high level nature of the analyses conducted, it was also recommended that the above findings be confirmed through more detailed traffic impact studies as development proceeds. This should include a roundabout feasibility study in the Secondary Plan for any intersection that warrants a traffic signal.

It was also noted that Highway 8 and Barton Street be widened to a basic three-lane cross-section to provide centre two-way left-turn lanes at mid-block driveways and local intersections, and left-turn lanes at major intersections once development proceeds, subject to the undertaking of traffic impact studies.

A study of these potential improvements is presented in ***Figure 16.***

[1] Since the completion of the traffic analysis, a traffic signal has been constructed at Highway 8 and Winona Road. Left turn lanes have also been constructed on the Highway 8 approach.



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LEGEND

- Potential Capacity Increase (signalization or roundabout; new turning lanes)
- Potential Accommodation of Transit Priority Measures
- Widen for Continuous two-way left turn lane
- Secondary Roads
- Highway
- Railway
- Study Area
- Woodlots
- Lakes

N E S W

1 : 20,000

0 500 1,000 1,500m

DILLON CONSULTING

PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

INTERSECTIONS AND ROADWAYS WITHPOTENTIAL FOR IMPROVEMENTS BY 2021

Figure 16

8.1.4 Fruitland Road

The area of Fruitland Road between Barton Street and Highway 8 is characterized by low density strip residential with driveway access on Fruitland Road. A number of residents in this section of the corridor have raised significant concern over the growth in through traffic on the road and increasing truck traffic.

Fruitland Road is a two-lane arterial road. The road contains a full access interchange with the QEW, providing good access to the Employment Corridor north of Barton Street and to Highway 8. The road is also designated by the City of Hamilton as a designated truck route between the QEW and Highway 8, providing access to the growing employment area in Stoney Creek.

Due to the location of the interchange and the connection to Highway 8 (it is one of only two north-south arterials that provide access to both the QEW and Highway 8), traffic volumes on this road are expected to grow.

An Environmental Study Report for a Fruitland Road Realignment from Highway 8 to Barton Street was completed in September 1992. The study was conducted in order to address the need to re-establish Fruitland Road as a Regional Arterial Roadway to better serve through traffic, including trucks. The study was also driven by a need to provide a safe and functional environment for the community along Fruitland Road.

The ESR recommended a realignment of Fruitland Road, however, it noted that that a review of the study would be required if construction of the project did not commence within a three year period. In 1990, City Council recommended that the realignment of the Fruitland Road project be delayed pending the completion of the urban boundary study. This project has not been completed to date, and the ESR completed in 1992 is now considered to be outdated based on the Municipal Class EA process.

The 2021 transportation model undertaken for the SCUBE TMP did not indicate a capacity issue on Fruitland Road that would necessitate the need for additional traffic lanes as indicated in the 1992 ESR. This may be due to the recent opening of the Red Hill Valley Parkway (RHVP). Data collection since the opening of RHVP is underway to determine the impact on the surrounding area.

The SCUBE Secondary Plan Study and the Truck Route Master Plan Study, which are in their early stages, are important studies which will influence any recommendations regarding Fruitland Road especially the section between Barton Street and Highway No.8. As such, the City plans to undertake this detailed evaluation for Fruitland Road at a later stage, separate from the SCUBE TMP. This should be completed in coordination with the Secondary Plan Study and Truck Route Master Plan Study. The Fruitland Road study should include a review of potential alternatives to Fruitland Road, including "do nothing", in terms of the natural, social, cultural and economic environment, as well as transportation perspectives.

8.1.5 Barton Street Improvements

While no significant through lane capacity increases are required by 2021, the widening of Barton Street to a basic three-lane cross-section should be considered in due course for operational reasons. This is due to the low density, strip residential, commercial, and industrial developments along this roadway, including a number of access points. The recommendation is to build a centre two-way left-turn lane at mid-block driveways and local intersections, and left-turn lanes at major intersections. This would increase the capacity of the corridor and increase road safety.

8.1.6 Highway 8 Improvements

No significant through lane capacity increases (i.e., additional through lanes) are required by 2021. However, a widening of Highway 8 to a basic three-lane cross-section should be considered to increase the capacity of the corridor and increase road safety in due course as development proceeds. ***Figure 17*** illustrates a typical cross-section for a three-lane arterial road with an on-street bicycle lane.

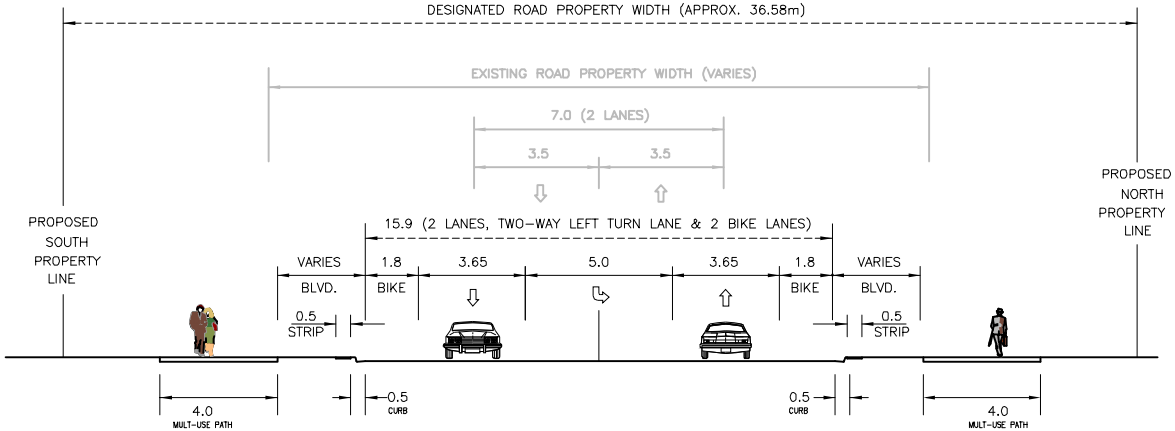
In the long-term (beyond 2021), it is anticipated that Highway 8 will need to be widened to five lanes, with a bicycle lane/paved shoulder (as indicated in the City-wide Transportation Master Plan). The 2007 Hamilton TMP also designates Highway 8 through the SCUBE area as a transit priority/ future RT corridor.

The designation of a transit priority corridor on Highway 8 means that buses will travel in mixed traffic, but have priority at intersections through traffic signal control or minor roadway modifications such as queue jump lanes. The conversion to RT means that transit vehicles will operate in their own ROW. The conversion to RT would be dependent on ridership growth and financial performance targets on the corridor being reached.

The RT corridor will likely require two of the five lanes to be converted to bus only lanes instead of adding an additional two lanes to the widened five-lane cross-section. Some minor increases in ROW may also be required under this scenario depending on the type of RT system implemented to accommodate for bus platform/passenger waiting areas. Careful consideration will also need to be made as to the placement of the bicycle lane. While the ROW for this type of scenario should be protected today along Highway 8, the exact nature of the corridor will need to be reviewed as the RT concept in the City is developed and implemented.

Figure 18 presents a typical cross-section of the ROW for Highway 8 as a five-lane urban arterial, with two lanes for the RT network, and two cycling lanes in place. The cross-section illustrates the RT operating on the curb-lane, with passenger waiting areas located on the sidewalk. The design will need to be confirmed by the City of Hamilton/Hamilton Street Railway as the RT concept is finalized.

Therefore, based on the above, the City will need to conduct a study to protect the right-of-way to allow for the future widening to a 5-lane cross-section with RT and cycling lanes.



URBAN SECTION

Highway 8
3-Lane Cross-Section

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For illustrative purposes only

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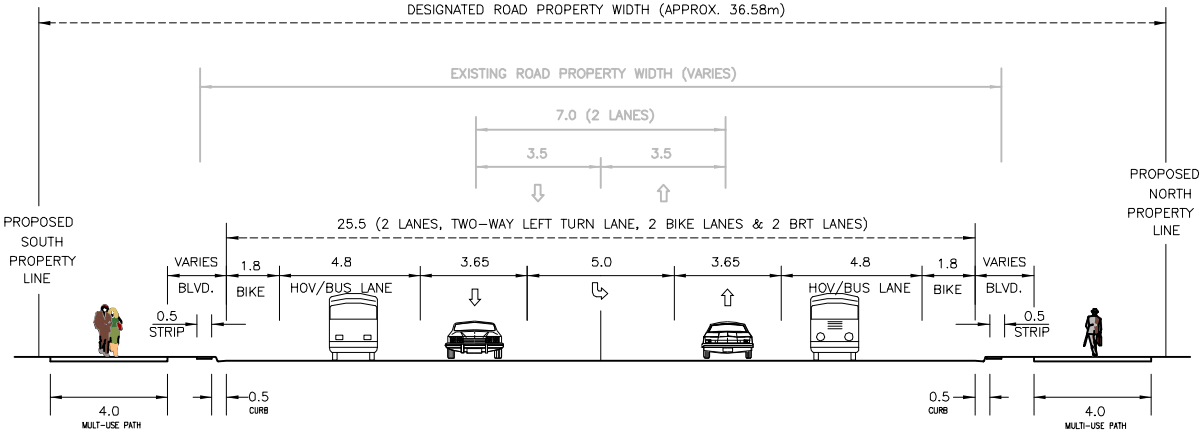
DESIGN BY:	DK/TAD
DRAWN BY:	GCC
SCALE:	N.T.S.
DATE:	MARCH 10, 2008
PROJECT No.	07-7995

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

THREE-LANE ARTERIAL ROAD CROSS-SECTION (HIGHWAY 8)

Figure 17



URBAN SECTION

Highway 8
BRT/HOV 5-Lane Cross-Section

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For illustrative purposes only

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DESIGN BY:	DK/TAD
DRAWN BY:	GCC
SCALE:	N.T.S.
DATE:	MARCH 10, 2008
PROJECT No.	07-7995

STONEY CREEK URBAN BOUNDARY EXPANSION AREA (SCUBE)
PHASE 2 TRANSPORTATION MASTER PLAN

FIVE-LANE BRT/HOV ARTERIAL ROAD CROSS-SECTION (HIGHWAY 8)

Figure 18

8.1.7 Fifty Road Improvements

No improvements have been identified on Fifty Road by 2021 as part of this analysis. However, as RT is extended east into Stoney Creek and eventually connects to the proposed transit terminal at Fifty Road and South Service Road, there may be a need to improve Fifty Road between Highway 8 and the QEW consistent with the Hamilton Transportation Master Plan which proposed widening that section of Fifty Road beyond 2021. This analysis should form part of more detailed work on the layout and the access/egress of the proposed transit terminal.

8.1.8 Collector/Local Road Network

The growth of the SCUBE area will require a number of additional collector roads to provide adequate access to the large development parcels. As stated in the City-wide Transportation Master Plan, both commercial and residential collectors shall have wider lanes or separate facilities in order to accommodate cyclists. As well, sidewalks should be provided on both sides of the street and where required in industrial areas.

Where collector roads are designated as cycling routes and have on-street parking on both sides of the street, a minimum 26.0 metre ROW should be protected. Where on-street parking is permitted on only one side of the street, a minimum 20.0 metre ROW should be protected.

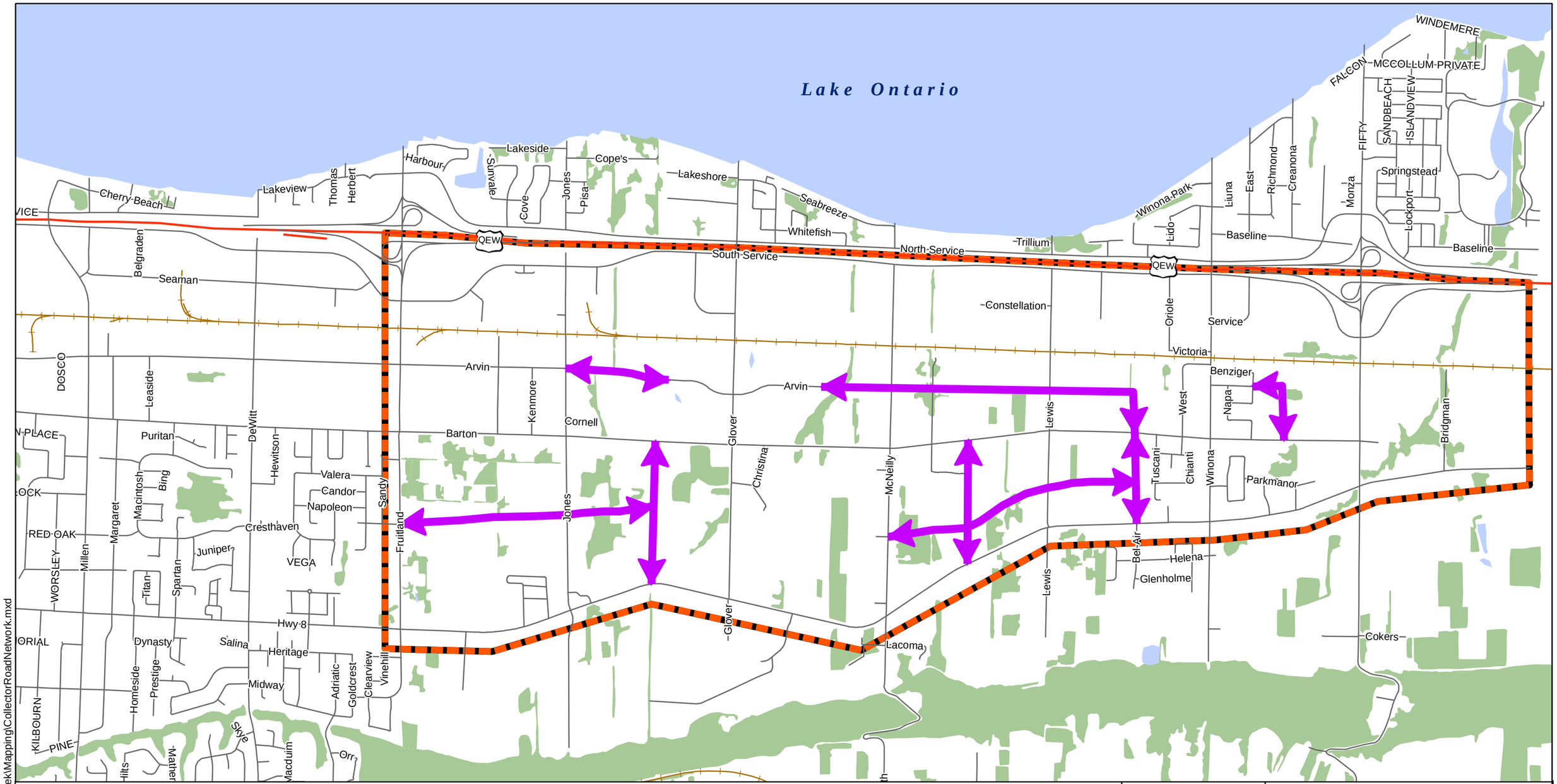
Each development parcel in the SCUBE area was reviewed to address the appropriate collector network required to service development. Several natural and man-made barriers exist that prevent the formation of continuous north-south and east-west collector roads in the study area. These issues, along with the proposed collector road network, are identified below and illustrated in ***Figure 19***.

8.1.9 Employment Corridor

The Employment Corridor is bound by Fruitland Road to the west, the QEW to the north, Winona Road to the east, and Barton Street to the south. An east-west CN Railway track divides the area into two distinct parcels. This creates some difficultly in providing additional north-south connections through the development area. However, the area is well serviced with north-south arterial connections.

The north side of the development area is adequately serviced by the South Service Road. The road runs parallel to the QEW providing access to existing industrial land uses on the south side. Access to existing industrial land uses is also provided along the north-south arterials that run through the Employment corridor. Since much of the area is already developed with large scale industrial land uses, there remains limited opportunities for an additional east-west roadway that is continuous throughout the corridor. Therefore, any intensification in the area will need to be serviced by local access roads or through the existing road network.

The south side of the Employment Corridor is serviced by Barton Street. The north side of the street provides access to existing employment land uses, while the south side is designated for residential development. This area of the employment corridor is largely undeveloped. To help promote development in this area, the City is currently conducting an EA for the extension of Arvin Avenue and improvement of Lewis Road between South Service Road and Barton Street.



LEGEND

- Proposed Collector/ Local Road Network
- Railway
- Secondary Roads
- Highway
- Study Area
- Woodlots
- Lakes

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PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

PROPOSED COLLECTOR/LOCAL ROAD NETWORK

Figure 19

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Arvin Avenue presently exists in segments of Employment Corridor, running parallel to the CN Rail corridor. The extension of this road would allow the Employment Corridor to develop further. This would involve the extension of Arvin Avenue as follows:

- Jones Road easterly connecting to the portion of Arvin Avenue that connects with Glover Road;
- East of Glover Road continuing from the existing leg of Arvin Avenue to McNeilly Road;
- East of McNeilly Road to Lewis Road; and
- East of Lewis Road terminating in a cul-de-sac west of West Avenue.

SCUBE West

SCUBE West is a parcel bounded by Fruitland Road to the west, Barton Street to the north, east of Jones Road to the east, and Highway 8 to the south. The area is largely undeveloped, with the exception of some existing residential and employment land uses along the major arterial roads that bound the development area. The area to the east of the development parcel is bounded by Greenbelt lands, which constrains the development of a continuous east-west collector road between SCUBE West and SCUBE Central.

To appropriately subdivide the land for development, the following collectors are proposed:

- A north-south collector at the boundary of SCUBE West and the Greenbelt West. The collector would provide access to the Greenbelt for recreational purposes and access to residential development along SCUBE West.

- An east-west mid-block collector between Fruitland Road and the proposed north-south collector (above). To maintain appropriate connectivity west of Fruitland Road, opportunities to connect to Sherwood Park Drive should be assessed as part of the ongoing Class EA of Fruitland Road.

SCUBE Central

SCUBE Central is a residential parcel bounded by McNeilly Road to the west, Barton Street to the north, Lewis Road to the east, and Highway 8 to the south. The area is largely undeveloped, with the exception of some existing residential and employment land uses along the major arterial roads that bound the development area. The area to the east of the development parcel is bounded by the Winona community, while the area to the west is bounded by Greenbelt lands. The area to the south is bounded by Greenbelt lands, while the area to the north is bounded by Employment lands. The constraints on each side of this development parcel make it difficult to provide connectivity in a collector road network.

To appropriately subdivide the land for development, the following collectors are proposed:

- A north-south collector at the eastern boundary of SCUBE Central between the proposed extension of Arvin Avenue and Highway 8;

- A mid-block north-south collector between McNeilly Road and Lewis Road connecting Barton Street with Highway 8; and

- An east-west mid-block collector between McNeilly Road and the proposed eastern boundary north-south collector (above).

Parcel A

Parcel A is a small parcel bounded by east of Winona Road to the west, the CN Railway to the north, west of Fifty Road to the east, and Barton Street to the south. The area is constrained by existing development on the south and west, the CN Railway tracks to the north, and the Greenbelt to the east. The only access to this parcel is through Barton Street.

To appropriately subdivide the land for development, the following collector is proposed:

- A north-south mid-block local road between Barton Street and Sonoma Lane.

Parcel B

Parcel B is a small parcel bounded by Winona Road to the west, the South Service Road to the north, the Hamilton/Niagara Region boundary to the east, and Barton Street to the south. This area is adequately serviced and accessed by the South Service Road. Therefore, no additional collector roads are required to provide access.

8.1.10 On-Street Parking

The placement of on-street parking in SCUBE should be based on the road type and the surrounding land use. Overall, the following are recommended:

Arterial Roads

- No on-street parking permitted.
- Only permit short-term on-street parking where main-street retail abuts the street.

Collector Roads

- Permit parking on both sides of street.

Local Roads

- Allow on-street parking on one side of the street.
- Locate parking on same side of street as sidewalk location.
- On single access roadways, locate parking on side of street with fewer access points.

8.2 Transit

8.2.1 2007 Hamilton TMP Recommended Transit Network

The City-wide Transportation Master Plan recommends a strategic higher order transit network using Rapid Transit (RT). The purpose of the network is to provide high quality transit service throughout the city in an effort to reach the 12 percent transit mode split target by 2021.

Within the SCUBE area, the 2007 Hamilton TMP recommends a future inter-regional transit corridor on or adjacent to the QEW, connecting this area of Hamilton to the GTA and Niagara Region. An inter-regional transit route was also identified in the Provincial Growth Plan (Places to Grow). An ideal location for a station would be in the proximity of a QEW interchange with excellent connectivity for pedestrian, cycling and transit users.

Metrolinx (the Greater Toronto Transportation Authority) has not indicated an anticipated timing for this type of service, however, they have indicated that service will initially be implemented using GO Buses, followed by GO Rail in the long-term. In the short-term, Metrolinx has identified funding for a new platform to accommodate GO Train/VIA service at the Hamilton James Street North GO/VIA Station. This was identified as part of the second stage of the 5-year Quick-Win funding announcement in November 2007. The station improvements will improve transit service in downtown Hamilton and set the stage for future transit in the SCUBE area and as a Gateway to Niagara Region. The 2007 Hamilton TMP indicates that one of the logical connections (stops) for this corridor should be within the SCUBE area.

The plan also recommends a proposed transit priority corridor/future RT route along Highway 8, north on Fifty Road, terminating at a potential future transit terminal at Fifty Road and Baseline Road. Transit priority corridors use modifications to signals and minor lane alterations at intersections (queue jump lanes) to give transit priority over private automobiles. The purpose of this approach is to increase the reliability of transit by increasing on-time performance, and increasing the speed of transit. In the long-term, if ridership warrants, the corridor could be converted to an RT route, which may require an additional traffic lane for transit vehicles only. While the recommendations in the TMP are strategic at this point, ROW should be protected on Highway 8 and Fifty Road in the SCUBE area for any future conversion to a full RT route.

8.2.2 Opportunities/Constraints

Transit service in the SCUBE area is limited, which has resulted in a transit modal split less than 2 percent during the AM and PM peak hours (2001 TTS). Transportation choices by existing residents have already been determined, and this will be difficult to break even when transit services are introduced. The largest increase in ridership will occur from new residents and employees in the area whose travel choices have not been predetermined. This will require a base level of transit service to be introduced as the area begins to grow.

The Transit Priority Route identified in the TMP will provide an attractive and reliable connection to the rest of Hamilton, and if properly planned, will be able to attract significant ridership. The concern with this corridor is that the majority of it is surrounded by undevelopable Greenbelt lands. This reduces the number of potential transit riders located within a 5 minute walking distance of a transit stop, making it difficult to attract the ridership required to achieve a 12 percent transit modal split. The benefit of this corridor is that it will connect to a proposed RT corridor in the western portion of Hamilton, which will provide residents using the service a fast and reliable service to the City. Looking at the SCUBE area in isolation, the more appropriate corridor to invest in a rapid transit service is on Barton Street. Barton Street is central to the SCUBE area, surrounded by employment lands to the north, and residential lands to the south. There is a higher potential to build higher densities along this corridor that will support the implementation of Rapid Transit service. To achieve this, the transit priority/future RT corridor in Stoney Creek would need to be rerouted from Highway 8 to Barton Street via Jones Road. Current investigations into RT may recommend LRT as an alternative or adjunct to RT on a corridor specific basis.

The opportunity for an interregional service through Stoney Creek provides a significant opportunity to increase transit modal split for interregional trip making to either the GTA or Niagara Region. Anchoring a local HSR service to this corridor as well as a 'park and ride' facility would increase the use of transit.

8.2.3 Proposed Inter-regional Transit Terminal

In previous studies, the City of Hamilton had identified a need for an interregional transit terminal in Stoney Creek generally located off the QEW. The close proximity to a QEW interchange would minimize travel time for interregional routes accessing the stop and would provide an opportunity to integrate a park and ride facility off the QEW.

The terminal would need to be located within the urban development area surrounded by supportive land uses such that there is the potential for walk in/out traffic. There is potential for GO Rail to provide service to Stoney Creek in the long-term, as GO can use the CN Railway line located along the Employment Corridor, just south of the QEW. A proposed interregional transit terminal in Stoney Creek needs to take all these matters into consideration.

To accommodate passenger boardings and alightings in Stoney Creek, the location of an inter-regional and multi-modal terminal was assessed generally adjacent to the CN Railway line.

Terminal sites considered included a site near Fruitland Road and the QEW, the southeast quadrant of Fifty Road and South Service Road, and the southwest quadrant of Fifty Road and South Service Road. They all provide easy access to the QEW and park and ride opportunities, while located adjacent to the rail line.

Fruitland Road and QEW

The Fruitland Road location, while more central to Stoney Creek, has considerably less land available and is surrounded by light industrial uses making the site less conducive to transit supportive development opportunities. Its distance from Niagara Region would also compromise its role as a "gateway" from the east. Further, this location does not have a direct access to the south through the Escarpment.

Southeast Quadrant of Fifty Road and South Service Road

The difficulty with this location is that it is at the edge of the urban development area and would not be supported by the appropriate lands uses and densities; thus having limited potential for walk in/out traffic. This means that the terminal will serve primarily as a transfer station (between auto and transit, or local transit and interregional transit) rather than a destination. This will likely limit the ability to attract sufficient ridership to reach the desired 12 percent transit modal split.

Southwest Quadrant of Fifty Road and South Service Road

A site within the southwest quadrant of Fifty Road and South Service Road (within Parcel B) was found to be the most suitable location, given the expected growth within the study area and proximity to Niagara Region. It also provides good access from/to the south as Fifty Road connects to the Escarpment; it is located within close proximity to the existing Winona community and the Employment Corridor, which could foster some walking or cycling trips without having to

cross the QEW. The terminal would also minimize length of transit route by requiring only one route to cross the QEW. Finally, this site can act as a "gateway" from the east.

A development application for a large format retail complex on the Parcel B site (southwest of Fifty Road and South Service Road) has been submitted to the City of Hamilton's Development and Economic Development Department for review. It is recommended that the appropriate land use for this site be reviewed in the planning process to ensure that this future opportunity for a transit terminal is not precluded.

Once in place, it is recommended that local HSR transit services be routed to this terminal, along with consideration for interregional buses and a park and ride lot.

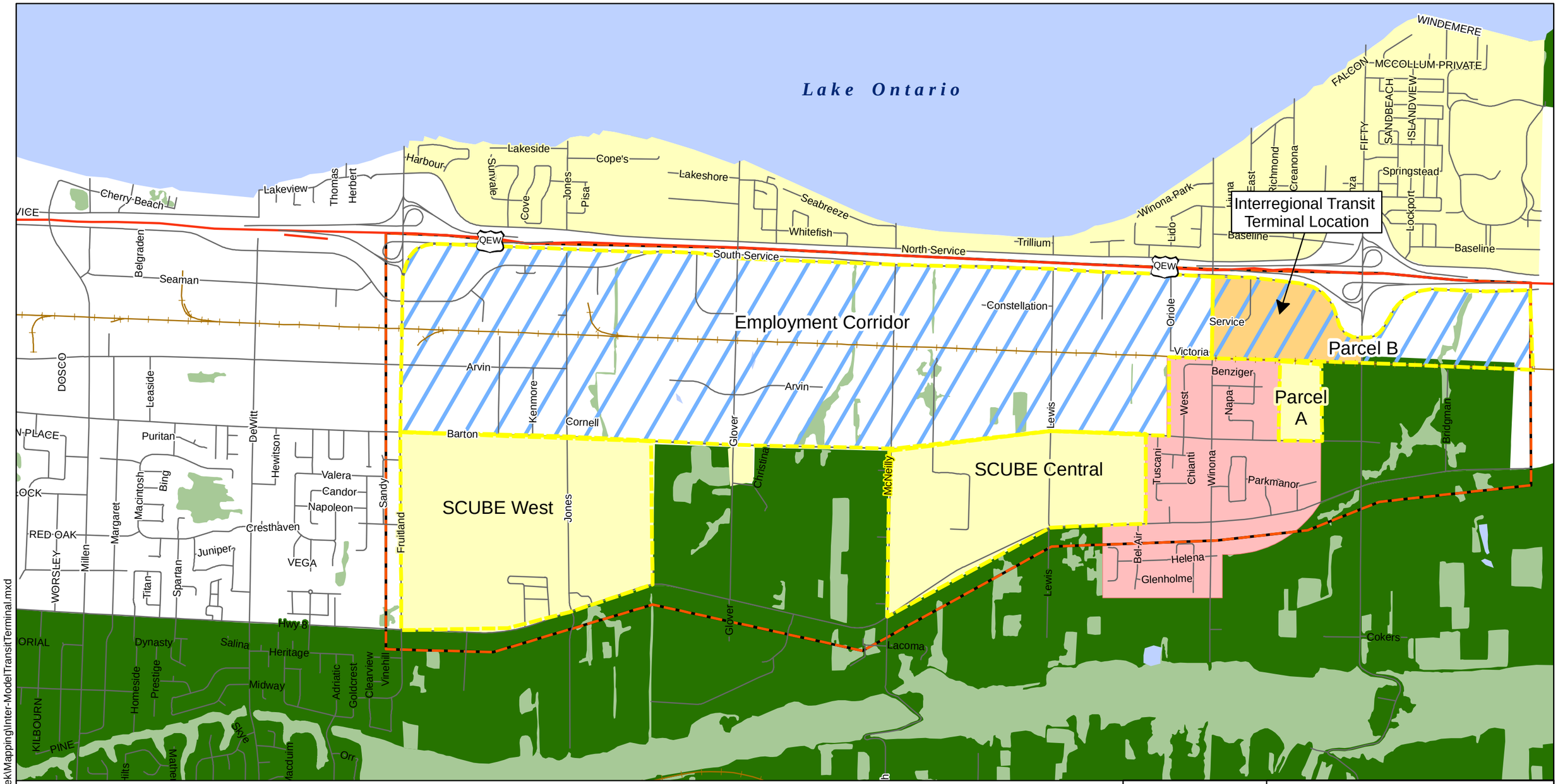
With the long-term potential for rail service, consideration should be made to protecting the lands on Parcel B for a future inter-regional transit terminal. Short-term implementation of this terminal location should also be considered as a pre-emptive action to GO Rail service. ***Figure 20*** shows the recommended location.

This recommendation is consistent with the City wide Master Plan recommendations where it is stated that "*The Primary Objective of the Transit Strategy are:*

- *To develop a layer of bus routes connecting major Transit nodes that are isolated from the effects of congestion*
- *To encourage transit-supportive development around nodes and corridors*
- *To provide seamless transit system; and*
- *To facilitate travel to/from surrounding regions*".

The HTMP (2007) also notes "The Provincial Growth Plan (Places to Grow) identifies a future intercity transit service to Niagara Region. Based on the discussion with GO transit, it is anticipated that this service will initially be implemented using buses, moving to commuter rail in the longer term."

This site may require improvements to Fifty Road as the Highway 8 RT corridor would terminate at this location. Therefore, in order to connect the transit terminal to the RT corridor, improvements to Fifty Road will be required. However, this is beyond the current planning horizon and is subject to more detailed evaluation as to property and design.



LEGEND

- Secondary Roads
- Highway
- Railway
- Winona Urban Community
- Employment
- Residential Infill/Expansion
- Study Area
- Greenbelt
- Lake
- Woodlots

* As Indicated on the Hamilton Transportation Master Plan

1 : 20,000

0 500 1,000 1,500 m

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CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

RECOMMENDED INTER-REGIONAL TRANSIT TERMINAL LOCATION

Figure 20

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8.2.4 Transit Service Design

The transit strategy was designed to accommodate a 12 percent municipal transit modal split. It should be noted that this route concept and the proceeding ridership forecasts does not mean that this modal split target will be achieved. Much of this will depend on transit supportive land use patterns and parking policies being achieved, the implementation of transit priority infrastructure, and system improvements elsewhere in the City being completed to ensure an attractive level of transit service for the entire trip.

Service Concept

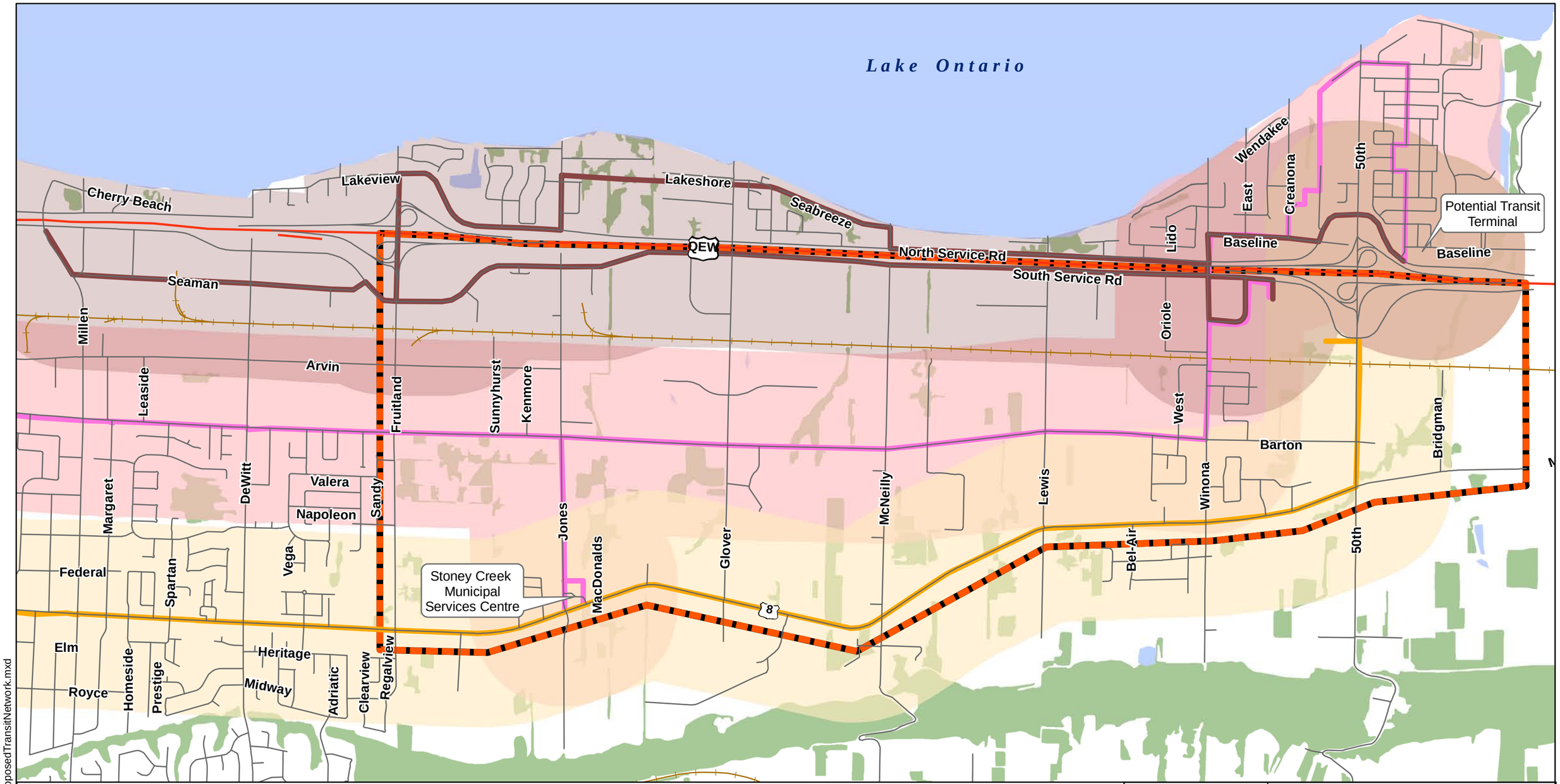
Figure 21 illustrates the proposed municipal transit service for the SCUBE Area. As illustrated, local transit routes would operate in an east-west direction terminating at a proposed new inter-regional terminal located at Fifty Road and Baseline Road. If the recommended transit terminal option on the southeast corner of Fifty Road and South Service Road is approved, the transit service design would be adjusted to terminate at this location. In both situations, routes would continue west connecting to major destinations within the City of Hamilton.

It is recommended that this terminal be a terminus for not only local HSR transit services, but a key stop for a proposed GO Bus route connecting the SCUBE area with the rest of Hamilton, the GTA, and Niagara Region. Given the proximity of this terminal to the QEW, considerations should be made to develop a park and ride lot at this location.

Three routes were designed to service the SCUBE area:

- Highway 8;
- Barton Street; and
- North/South Service Road.

The **Highway 8 Route** will form part of the transit priority corridor and potentially an RT route as identified in the 2007 Hamilton TMP. The route provides two-way transit service along Highway 8 and Fifty Road between the future transit terminal and other parts of Hamilton (west of SCUBE). This express, limited stop service is bounded by the Greenbelt to the south and the Winona Community and two new growth areas to the north. The route also provides a direct connection to the Stoney Creek Municipal Services Centre. It is anticipated that this route will have a moderate potential to attract ridership due to the express nature of the service. However, for an RT route to become a reality in this corridor by 2031, significant progress must be made to achieving higher development densities and mix of land uses within a 5-minute walking distance of Highway 8. This will be a challenge given the proximity of the Greenbelt on both sides of this road. If higher densities do not develop along Highway 8, future Rapid Transit studies should consider designating Barton Street as an RT route within the SCUBE Area given its closer proximity to developable lands.



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LEGEND

- Proposed Transit Priority Corridor and Future BRT Route*
- Proposed Local Transit Route
- Future Proposed Transit Route*
- Future Inter-Regional Transit
- Future Inter-Regional Connection to Grimsby and St. Catharines
- Railway
- Secondary Roads
- Highway
- Lakes
- Woodlots
- 500m Transit Route Buffer
- 500m Transit Route Buffer
- 500m Transit Route Buffer
- Study Area

N E S W

1 : 20,000

0 510 1,020 1,530m

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PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

PROPOSED STONEY CREEK TRANSIT SERVICE

Figure 21

The **Barton Street Route** provides two-way service along Barton Street between the future transit terminal and other parts of Hamilton (west of SCUBE). The route provides transit service through the existing and proposed residential neighbourhood at Fifty Road, north of Baseline Road, through the existing Winona community, and along Barton Street servicing the north end of two new residential areas, and the south side of the employment corridor. The route also makes a slight deviation to the south along Jones Road to provide direct assess to Stoney Creek Municipal Service Centre.

The **North/South Service Road Route** provides service on the residential area along the North Service Road and the employment area on the South Service Road between the future transit terminal and areas west in Hamilton. During the AM peak period, the service heads westbound along the North Service Road to accommodate employment based trips to downtown Hamilton. On the return trip, the route traverses the South Service Road to accommodate trips from the rest of Hamilton to the Employment Corridor in SCUBE. In the PM peak period, the route is reversed (eastbound on the North Service Road and westbound on the South Service Road). This provides direct access to the majority of transit users using this service.

Service Level

The level of service was determined based on the number of passengers required to achieve a 12 percent transit modal split. This was conservatively estimated using the demand forecasting model developed in the study, by calculating 12 percent of all inbound and outbound trips to each traffic zone under the 2021 maximum population and employment scenario to account for municipal transit trips. These trips were then assigned to the three municipal transit routes based on the proximity of the route to each traffic zone. This provided the total number of boardings and alightings for each route in the SCUBE area.

To determine the level of service required, the peak load for each route was determined by taking the ridership in the peak direction and reducing it by 10 percent to account for internal trip making. An average number of passengers per run was then assumed based on 90 percent of the peak load capacity of an accessible 40 foot bus. This was used to determine number of runs required, and the subsequent level of service needed to accommodate the peak hour passengers. During the off-peak, the service level was designed around a ridership that was 30 percent of the AM peak hour ridership. The anticipated ridership and service levels for the 2021 horizon year on the three proposed municipal transit routes are illustrated in ***Table 13.***

Overall, a higher level of service is anticipated on the Barton Route due to its close proximity to the future employment area, future residential area, and the existing Winona community. While the Highway 8 route is designated as transit priority corridor, ridership on this route was anticipated to be lower due to the Greenbelt areas surrounding much of the corridor in SCUBE.

The lower level of service on the North/South Service Road route is due to the existing land use in the area. The area is characterized by higher income and low density housing on the north side, and strip industrial development on the north side.

Table 13 – Estimated Local Transit Service Levels

Transit Trips	***Hwy 8***	***Barton***	***NSR***
Total Boarding	229	192	41
Total Alightings	164	248	101
Peak Load*	206	223	91

**minus 10 percent for internal trips*

Peak Demand	***Hwy 8***	***Barton***	***NSR***
Peak Hour Ridership	206	223	91
Pass per Bus	50	50	50
Runs/Hour	4	5	2
Frequency (min)	15.0	12.0	30.0

Offpeak Demand	***Hwy 8***	***Barton***	***NSR***
Passengers/Hour	62	67	27
Pass per Bus	50	50	50
Runs/Hour	1	1	1
Frequency (min)	60.0	60.0	60.0

8.3 Transportation Demand Management (TDM)

8.3.1 2007 Hamilton TMP Recommendations

As previously mentioned, the 2007 Hamilton TMP identifies two types of objectives for TDM; System objectives and Program objectives.

Based on these two broad objectives, the TMP identifies a number of policies that should be implemented to meet its mode split targets. The targets that apply to the SCUBE area are identified below:

- Apply travel demand management strategies as an essential part of land use controls and the provision of transportation infrastructure and services;
- Build public awareness of sustainable travel options and their personal and community benefits;
- Maximize the effectiveness and value of municipal TDM investments by fostering partnerships with local businesses, educational institutions and community groups;
- Work with other governments and agencies to strengthen TDM initiatives in Hamilton through intergovernmental partnerships; and
- Monitor TDM initiatives and their effects, with the goal of continually improving related tools and services.

8.3.2 Recommended Strategies for SCUBE

A Transportation Demand Management Strategy should be developed for the SCUBE area that attempts to delay, defer or even eliminate the need for significant capital investment in new transportation infrastructure by:

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

To achieve this, TDM policies should be identified that could:

- ***Eliminate trips*** – through appropriate land use planning and tele-working initiatives;
- ***Reassign trips*** – by encouraging the use of less congested corridors;
- ***Reduce peak period trips*** – investigating opportunities to shift schedule start and end time of major employers;
- ***Link trips*** – by mixed used land-use planning, thereby promoting walking between activities;
- ***Increase transit use*** – through service and fare enhancements;
- ***Increase vehicle occupancy*** – through ridesharing organizations; and
- ***Engage employers*** in being part of the solution.

A key component of this strategy will be the development of a SCUBE Transportation Management Association (TMA). TMA's are member-controlled organizations that enable employers, developers, property managers, and institutions in a defined geographic area to work together to solve local transportation problems. TMA's provide an institutional framework for Transportation Demand Management (TDM) programs and services as a more cost effective method than those managed by individual businesses. Initiatives currently being undertaken by existing TMAs in the GTA include:

- Ridershare matching programs (the GTA-wide Carpool zone);
- Guaranteed ride home programs;
- Shuttle bus services;
- Advocacy for improved transit, pedestrian and cycling facilities;
- Shared parking co-ordination; and
- Marketing and promotion of sustainable transportation.

TMA's also allow small employers to provide such programs at the same level as those operated by large businesses.

Currently, a new TMA is being formed for the City of Hamilton as part of the Smart Commute Initiative (SMART COMMUTE HAMILTON). This will involve a number of employers in the City of Hamilton.

8.4 Cycling

8.4.1 2007 Hamilton TMP Recommended Cycling Network

The 2007 Hamilton TMP builds on the existing bicycle network in the City of Hamilton by recommending a number of facility expansions and improvements. The criteria used for the evaluation of proposed infrastructure improvements include:

- Connectivity and Continuity;
- Directness of Route; and
- Safety and Comfort.

In the SCUBE area, the recommendations include an upgrade of existing cautionary on-street bike routes along the North Service Road and Highway 8 to on-street bike lanes and paved shoulders/ shared lanes, and the expansion of the network east to Fifty Road and south to the Escarpment. This initial network was developed based on a review of the Shifting Gears report, planned cycling infrastructure projects in the immediate term, as well as consultation with the Hamilton Cycling Committee to provide feedback on cycling needs and opportunities. The improvements are illustrated in ***Figure 22***. It represents a basic network strategy that should be considered at the first stage of implementation, but not as a final network in each community. For each community, a more detailed examination of cycling needs should be undertaken to evolve the cycling network over time. The Hamilton Cycling Master Plan is currently being updated and will provide further recommendations to improve the SCUBE cycling network.

Lake Ontario

WINDEMERE
FALCON
MCCOLLUM-PRIVATE
SANDBEACH
ISLANDVIEW
FIFTY
Springstead
Lockport
Baseline
Monza
Liuna
East
Richmond
Creanona
Winona Park
Lido
Cherry Beach
Lakeview
Thomas
Herbert
Harbour
Lakeside
Sunvale
Cove
Jones
Pisa
Cope's
Lakeshore
Seabreeze
Whitefish
Trillium
North Service
South Service
QEW
Belgraden
Seaman
Constellation
Oriole
Service
Victoria
Benziger
Napa
West
Bridgman
Arvin
Leaside
Puritan
DeWitt
Barton
Kenmore
Cornell
Glover
Christina
McNeilly
Lewis
Tuscani
Chianti
Winona
Parkmanor
Hewitson
Bing
Macintosh
Margaret
Valera
Candor
Napoleon
Sandy
Fruitland
Cresthaven
Juniper
VEGA
Spartan
Titan
Hwy 8
Dynasty
Salina
Heritage
Midway
Homeside
Prestige
Adriatic
Goldcrest
Clearview
Vinehill
Style
Orr
Bel-Air
Helena
Glenholme
Lacoma
Cokers

LEGEND

- Proposed Bike Lane/ Paved Shoulder/Shared Lane*
- Bike Lane*
- Cautionary on Street Bike Route*
- Exsiting Multi - Use Path*
- Exsiting On - Street Bike Route*
- Secondary Roads
- Highway
- Railway
- Lakes
- Woodlots
- Study Area

* As Indicated on the Hamilton Transportation Master Plan

1 : 20,000

0 500 1,000 1,500m

DILLON CONSULTING

PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

PROPOSED 2021 CYCLING NETWORK (2007 CITY OF HAMILTON TMP)

Figure 22

File Location: I:\GIS\07995\Mapping\ProposedCyclingNetworkTMP.mxd

8.4.2 Opportunities and Constraints

The 2021 cycling network developed in the 2007 Hamilton TMP was reviewed in more detail to identify any areas of concern and expansion opportunities that would increase the attractiveness of cycling in the SCUBE area. The objective of this review was to examine the study area in more detail to determine whether the proposed network maximized cycling opportunities based on the principles of Connectivity and Continuity, Directness of Route, and Safety and Comfort. Several areas of concern and opportunities for expansion were identified. These include:

1. The proposed interregional transit terminal located on the northeast corner of the North Service Road and Fifty Road provides an excellent opportunity for an intermodal connection with the bicycle network, particularly with its location along the lakeshore bicycle route. The proposed bicycle route along the North Service Road ends at Fifty Road, therefore missing out on an opportunity to provide the intermodal connection to the interregional transit terminal. Extending the network east towards Niagara Region is recommended.

2. If the proposed interregional transit terminal is located on Parcel B (southwest side of Fifty Road and South Service Road), good cycling access will also be important to promote intermodal connections. The TMP designates a cycling route on Fifty Road, however there are no other cycling connections to this proposed terminal. Extending the network to Winona Road with connections to the proposed terminal is recommended.

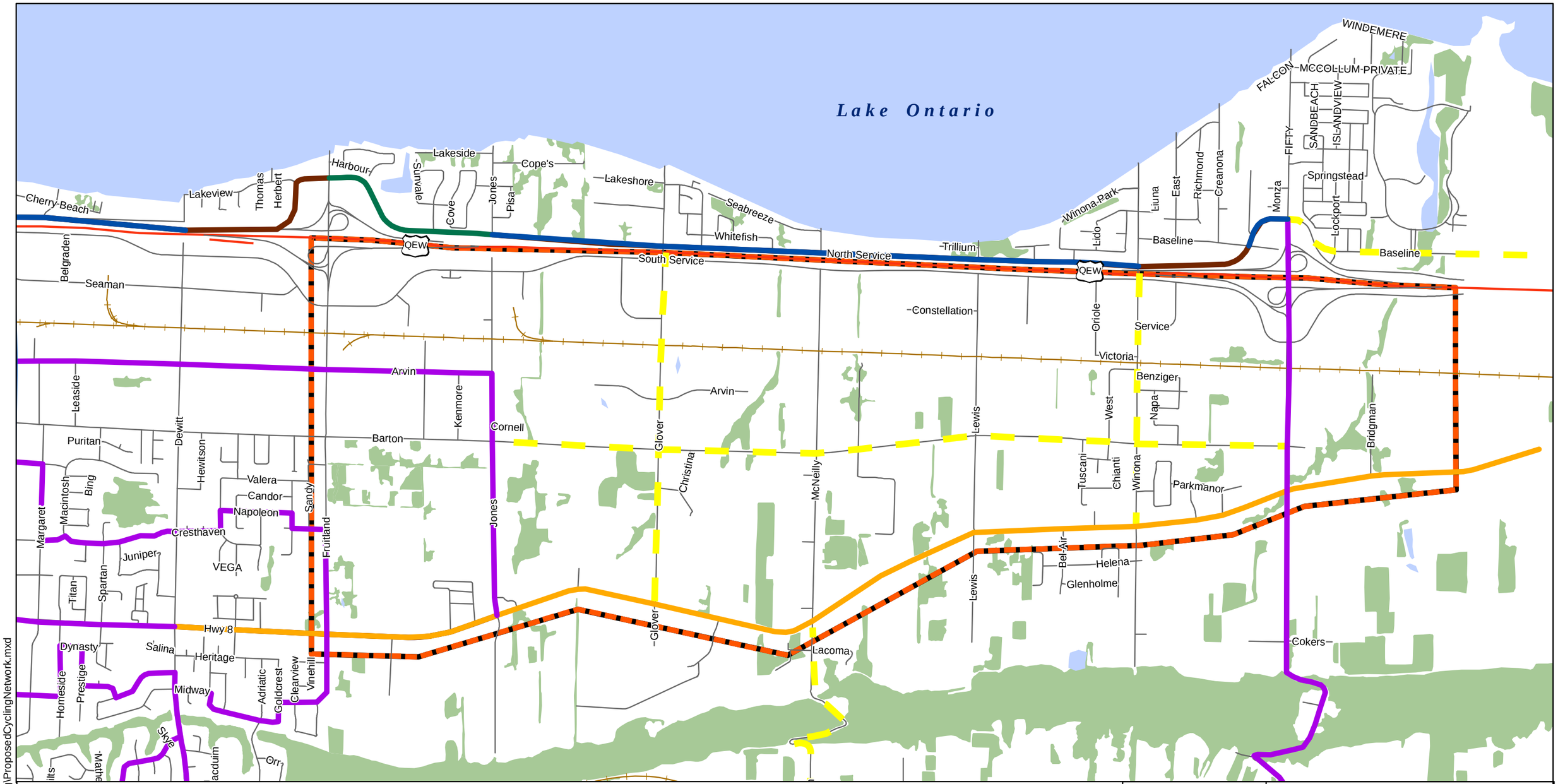
3. No north-south link exists in the western portion of the study area connecting the North Service Road to the southern portion of the study area. This reduces the directness and connectivity of the network, particularly with the high population and employment growth projected to occur in SCUBE West, SCUBE Central, the Employment Corridor, and along the North Service Road between Jones Road and McNeilly Road. Providing a link on either Fruitland Road or Glover Road is recommended.

4. The bicycle route along Fifty Road crosses over a highway interchange at the QEW. The crossing of highway interchange ramps is a well documented concern of cyclists due to the number of conflict areas that occur with automobiles and should be avoided where possible. An alternative link to the North Service Road, or specific design considerations around the interchange are recommended.

5. Barton Street is currently a low volume corridor that provides direct access to a significant portion of the projected population and employment growth in the SCUBE area. The designation of this road as a bicycle route will further increase the continuity and directness of the network. Providing an alternate east-west route on this low volume corridor is recommended.

8.4.3 Recommended 2021 Cycling Network

The proposed future cycling network for the SCUBE area is presented in ***Figure 23***. The proposed improvements build on the network recommended in the 2007 Hamilton TMP using the three evaluation criteria identified in the plan: Connectivity and Continuity, Directness of Route, and Safety and Comfort.



LEGEND

- Proposed Bike Lane/ Paved Shoulder/Shared Lane*
- Proposed Corridors
- Bike Lane*
- Cautionary on Street Bike Route*
- Exsiting Multi - Use Path*
- Exsiting On - Street Bike Route*
- Secondary Roads
- Highway
- Railway
- Study Area
- Lakes
- Woodlots

* As Indicated on the Hamilton Transportation Master Plan

1 : 20,000

0 500 1,000 1,500m

DILLON CONSULTING

PROJ. MANAGER: AA	
CHECKED BY: AA	
DRAWN BY: SFG	
SCALE: 1 : 20,000	
DATE: June 26, 2008	
PROJECT NO.:07-7995-100	

STONEY CREEK URBAN BOUNDARY EXPANSION AREA

RECOMMENDED 2021 CYCLING NETWORK

Figure 23

File Location: I:\GIS\077995\Mapping\ProposedCyclingNetwork.mxd

The network also addresses the issues and opportunities identified above to create a comprehensive and interconnected network of cycling routes that will provide an increased opportunity to increase cycling as a mode of transportation. Specific recommendations are presented below:

1. **Barton Street between Jones Road and Fifty Road** – provides an east-west connection between the Winona community and Jones Street, with access to the Stoney Creek Municipal Services Centre and west into Hamilton via Arvin Road. The route also responds to the population growth south of Barton Street and employment growth north of Barton Street by providing a direct link immediate adjacent to these areas. Barton Street should be considered for on-street bike lanes.

2. **Glover Road between Highway 8 and North Service Road** – provides a north-south connection in the western portion of the study area, thereby adding to the north-south network, and responding to the growing residential growth along the North Service Road. Fruitland Road was considered as an alternative, but was not carried forward due to the higher traffic volumes and the need for cyclists to cross the QEW on/off ramps.

3. **Winona Road between Highway 8 and North Service Road** – provides an alternative easterly north-south link between the growing North Service Road community and the Winona community. While a north-south link is proposed along Fifty Road in the 2007 Hamilton TMP, the Winona Road link provides a direct connection between the growing Winona community and the North Service Road without having to cross the QEW interchange at Fifty Road. It also provides a connection to the recommended interregional transit terminal in Parcel B. While there is some duplication with a proposed Winona Road cycling route and Fifty Road cycling route, the Fifty Road cycling route provides a direct connection to the Escarpment, which cannot be accommodated by a Winona Road route. For this reason, it is recommended that both facilities be carried forward.

4. **McNeilly Road/8th Road East between Highway 8 and Ridge Road** – provides an alternative direct connection up the Escarpment for recreational cyclists, responding to the projected population growth located north of Highway 8. The alternative would be to access the Escarpment along Fifty Road (at the east edge of the study area), or on DeWitt Road, located just outside (to the west) of the study area.

5. **North Service Road/Baseline Road between Fifty Road and Niagara Region** – provides a continuation of the lakeshore cycling route east to Niagara Region. The route also provides a good intermodal connection between cycling and transit at the proposed interregional transit terminal at Baseline Road (just east of Fifty Road).

9.0 PUBLIC CONSULTATION

The public consultation process followed in the study included notification of agencies and the public, a public open house and stakeholder meetings.

A study website has been maintained throughout the study process at: www.hamilton.ca/SCUBE-Transportation.

9.1 Agency Notification

A letter advising of the study purpose and process and inviting public agencies to comment on the study and attend the Public Information Centre (PIC) on April 2, 2008, was forwarded to:

- Region of Niagara;
- Town of Grimsby;
- GO Transit;
- Niagara Escarpment Commission (NEC);
- Ministry of Transportation – Ontario (MTO);
- Assembly of First Nations;
- Mississaugas of the New Credit River; and
- Six Nations of the Grand River.

Copies of the notifications of this study are included in ***Appendix B-1***. Formal responses acknowledging the invitation letter were received from all via a response letter or through follow-up by Dillon. Notices were published in the Hamilton Spectator and the Stoney Creek News on March 20 and 28, 2008 and approximately 3,300 notices were distributed to residences and businesses in the study area.

In response to the PIC notice, a meeting was held on April 17, 2008, with the Region of Niagara, to discuss matters of mutual interest relative to the SCUBE TMP. A copy of the minutes of the meeting is presented in ***Appendix B-2***.

9.2 Public Information Centre

A Public Information Centre was held on April 2, 2008 at the Chandelier Place Reception and Conference Centre, to present the purpose, process, findings and recommendations of the SCUBE TMP. The meeting took place from 7:00 p.m. to 9:00 p.m. and followed a walk around format. Twenty-seven (27) display boards summarized the study work to that time. A copy of the display boards is included in ***Appendix B-3***.

Approximately 120 people attended the meeting. A number of comments were received from meeting participants. These comments and the action taken by the study team are presented in ***Appendix B-4***. For the most part, comments received were operational in nature or specific to Fruitland Road. These matters were forwarded to the appropriate jurisdiction for their information and action at the appropriate time.

9.3 Stakeholder Meeting

Mady Developments expressed concern about the proposal from this study to consider a transit terminal/hub at the northeast quadrant of Fifty Road and the CNR tracks. A meeting was held on May 12, 2008, with representatives of Mady Developments to discuss their concerns. A copy of the minutes of this meeting are provided in ***Appendix B-5***.

9.4 First Nations

Letters were forwarded to the Mississaugas of the New Credit River and the Six Nations of the Grand River to solicit their advice and input into the Master Plan process. A copy of these letters is included in ***Appendix B-6***.

10.0 SUMMARY OF RECOMMENDED TRANSPORTATION SYSTEM

The following section summarizes the recommendations from the Transportation Master Plan for the SCUBE area.

10.1 Road Network Improvements

10.1.1 Intersection and Roadway Improvements

- Conduct detailed studies in future to confirm operational improvements at major intersections along Highway 8 and Barton Street.

- Widen Highway 8 and Barton Street to a 3-lane cross-section, with a two-way left-turn lane at local intersections and separate left-turn lanes at major intersections.

- Where intersection improvements are proposed, assess the feasibility of a roundabout.

10.1.2 Fruitland Road

- Conduct a new Class EA for Fruitland Road generally between Barton Street and Highway 8, taking into consideration:

    - **Previous Studies** – The City wide TMP study and Growth Related Integrated Development Strategy (GRIDS); and

    - **The Outcome of Ongoing Studies** – SCUBE, Truck Route Master Plan study and effects of opening Red Hill Valley Parkway.

10.1.3 Highway 8 Improvements

- Conduct a study to protect the ROW along Highway 8 during the SCUBE Secondary Planning process in order to allow widening of up to five lanes, with a bicycle lane/paved shoulder and allow a future transit priority/future RT corridor. The exact nature of the corridor will need to be reviewed as the RT plan in the City is developed and implemented.

10.1.4 Collector/Local Road Network

- Extend the Collector/Local Road network in new development areas in coordination with the ongoing SCUBE Secondary Plan to facilitate continuous access to new development and connectivity to the existing road network. This should include:

    - Employment Corridor

        - Arvin Avenue roughly between Jones Road west of Avenue Road (as indicated by the existing Arvin Avenue extension EA).

- SCUBE West
    - A north-south collector at the boundary of SCUBE West and the Greenbelt West; and
    - An east-west mid-block collector between Fruitland Road and the proposed north-south collector (in SCUBE West).
- SCUBE Central
    - A north-south collector at the eastern boundary of SCUBE Central between the proposed extension of Arvin Road and Highway 8;
    - A mid-block north-south collector between McNeilly Road and Lewis Road connecting Barton Street with Highway 8; and
    - An east-west mid-block collector between McNeilly Road and the proposed eastern boundary north-south collector (in SCUBE Central).
- Parcel A
    - A north-south mid-block local road between Barton Street and Sonoma Lane.

10.2 Transit

10.2.1 Proposed Inter-regional Transit Terminal

- Assess the potential and protect lands for an inter-regional and multi-modal terminal during the SCUBE Secondary Plan process for Parcel B, on the southwest corner of Fifty Road and the South Service Road, adjacent to the CN Rail lines. This location would be used as a future GO Rail stop, an intercity bus terminal, a GO Bus terminal, an HSR terminal, and a potential park and ride lot. This location would replace the proposed interregional terminal at Fifty Road and Baseline Road. In addition, future studies should address ROW requirements on Fifty Road and Highway 8.

10.2.2 Transit Service Design

- The proposed transit service is designed around a proposed inter-regional transit terminal at Fifty Road and Baseline Road on city-owned land. In the event that the location of the terminal is developed on Parcel B (identified above), all services should be reoriented to this terminal.

- Develop the following three routes in an east-west direction to service the SCUBE area:
    - **Highway 8** – The route provides two-way transit service along Highway 8 and Fifty Road between the future transit terminal and other parts of Hamilton (west of SCUBE);

- **Barton Street** – The route provides transit service through the existing and proposed residential neighbourhood at Fifty Road, north of Baseline Road, through the existing Winona community, and along Barton Street servicing the north end of two new residential areas, and the south side of the employment corridor;

- **North/South Service Road** – During the AM peak period, the service heads westbound along the North Service Road. On the return trip, the route traverses the South Service Road to accommodate trips from the rest of Hamilton to the Employment Corridor in SCUBE. In the PM peak period, the route is reversed.

- Given the proximity of this terminal to the QEW, considerations should be made to develop a park and ride lot at this location.

- Assess the potential of rerouting the proposed transit priority corridor/future RT route from Highway 8 to Barton Street in the SCUBE area. This should be based on operating performance, connection to the rest of the RT network, and opportunity for transit supportive transit ridership in the SCUBE area.

10.3 Transportation Demand Management

- A Transportation Demand Management Strategy should be developed for the SCUBE area. This should form part of the HAMILTON SMART COMMUTE TMA that is currently being developed. Key areas that should be targeted include:

    - Stoney Creek Municipal Service Centre; and
    - Stoney Creek Employment Corridor.

10.4 Cycling and Trails

- Create a comprehensive and interconnected network of cycling routes. This should include the proposed cycling network in the TMP along with the following links:

    - Barton Street between Jones Road and Fifty Road;
    - Glover Road between Highway 8 and North Service Road;
    - Winona Road between Highway 8 and North Service Road;
    - McNeilly Road/8th Road East between Highway 8 and Ridge Road;
    - North Service Road/Baseline Road between Fifty Road and Niagara Region; and
    - Connectivity to appropriate trails in Niagara Region.

11.0 IMPLEMENTATION PLAN

11.1 Financial Strategy

Having established a transportation strategy to the year 2021, the next critical step is to define its cost. A Capital Expenditure Plan for the SCUBE network to 2021 has been developed as part of this study. The plan is divided into:

- Road Widening/New Alignments;
- New Intersections/Traffic Management; and
- Transit Costs (Capital and Operations).

11.1.1 Capital Costs – New Widening/New Alignments

The 2021 network contains a potential widening, new alignments and conversions to urban cross-sections. These were identified in the City-wide Transportation Master Plan. The total costs and anticipated timing of these projects are illustrated in ***Table 14***.

Costs for the potential widening of roadway improvements identified in this report are identified below. These will need to be confirmed through the Municipal Class EA process.

- Widening of Highway 8 between Fruitland Road and Fifty Road to a three-lane cross-section
- Widening of Barton Street between Fruitland Road and Fifty Road to a three-lane cross-section

Costing is based on benchmark costs and typical cross-sections. The benchmark costs contain normal engineering and construction contingency allowance. It is assumed that most new construction will be funded by "Growth" via development charges, including 100 percent of the collector road network. **It must be noted this is order-of-magnitude costing.**

11.1.2 New Intersections/Traffic Management

Within the context of this study, Dillon undertook some intersection analyses by making best efforts to forecast turning movements for the 20-year horizon along Barton Street and Highway 8. Recognizing that using a long range regional model to do this is not a precise exercise, preliminary intersection operations analyses were conducted at key intersections along Barton Street and Highway 8 based on model output and other adjustments.

These intersections were identified in ***Section 8.1.3***, and should be monitored to identify the type of improvement required. In general, the general cost to improve these intersections is illustrated in ***Table 14***. It is anticipated that these will largely be borne by Development Charges.

Table 14 – Typical Intersection Improvement Costs

Improvement	Estimated Cost
New Full Intersections (incl. turn lanes)	$450,000
New "T" Intersections (incl. turn lanes)	$250,000
Upgrade/Modify Intersections (incl. turn lanes)	$300,000
Addition of Single Left/Right Turn Lanes	$40,000
Entrance Modifications/Regrading	$25,000
Signalization of Stop Controlled Intersection	$200,000
Minor Intersection Upgraded to Roundabout	$250,000
Major Intersection Upgraded to Roundabout	$600,000

Six intersections were identified for improvement along Barton Street and Highway 8. The widening of both streets to include a centre-left turn lane will improve forecasted capacity issues at these intersections. However, some intersections may still require signalization to improve overall level of service as the area develops and traffic volumes increase. Recognizing the preliminary nature of this type of analysis, for costing purposes, four of six intersections were assumed to require signalization by 2021.

This would be at a cost of approximately $800,000 (4 x $200,000 per intersection).

11.1.3 Transit Capital and Operating Costs

Based on the service plan presented in this study, the annual operating costs and capital costs were estimated to provide local transit service into SCUBE. Several assumptions were used in this cost estimate based on data provided by staff at the HSR:

- Bus purchase cost is $600,000;
- HSR would need to purchase required buses for peak period service;
- Hourly operating cost of $85.00 for weekday peak service and $70.00 for off-peak service;
- Seven hours of peak service per weekday (6:00am to 9:00am and 2:00pm to 6:00pm);
- Weekday service between 6:00am and 12:00am; and
- No weekend service accounted for service summary.

Based on these assumptions, ***Table 15*** illustrates the projected annual operating cost and capital cost for the 2021 HSR provided weekday transit services within SCUBE.

Table 15 – 2021 Local SCUBE Transit Operating and Capital Cost

Routes	Capital Costs			Annual Operating Cost			
	Buses Required	Bus Purchase	Total	Daily Bus Hours	Peak Hourly Cost	Off-Peak Hourly Cost	Annual Cost
Hwy 8 Service	4	$600,000	$2,400,000	31.2	$85.00	$70.00	$467,270
Barton Service	6	$600,000	$3,600,000	50.0	$85.00	$70.00	$1,030,771
North Service Road Service	2	$600,000	$1,200,000	18.0	$85.00	$70.00	$358,600
Total	**10**		**$6,000,000**	**81.2**			**$1,498,041**

Note: Cost assumes two-way service within SCUBE only.

It is important to note that these routes would need to continue into the City of Hamilton and terminate at logical nodes within the City. The transit strategy for SCUBE should therefore be reviewed by the HSR and integrated into its existing and planned system. This will require a recalculation of both the service and capital costs for the overall transit network.

11.2 Staging Plan

The implementation of the measures recommended in this report should coincide with subdivision development.

12.0 SUMMARY OF RECOMMENDATIONS

A number of recommendations were made as part of this study. These recommendations are summarized below. Where appropriate, the Schedule of study as defined in the Municipal Class Environmental Assessment October 2000 (as amended in 2007) is provided in brackets:

Road Network Improvements

- As development progresses, conduct detailed studies to confirm operational improvements at major intersections along Highway 8 and Barton Street (Schedule A+).

- Study the need to protect right-of-way along Highway 8 and Fifty Road for future RT service (Schedule C).

- Undertake further studies to confirm road widening to a 3-lane cross section on Highway No. 8 and Barton Street (Schedule C).

- Fruitland Road Class EA -Subject to other ongoing studies (Separate EA to determine whether this will be a Schedule B or C project).

Transit Improvements

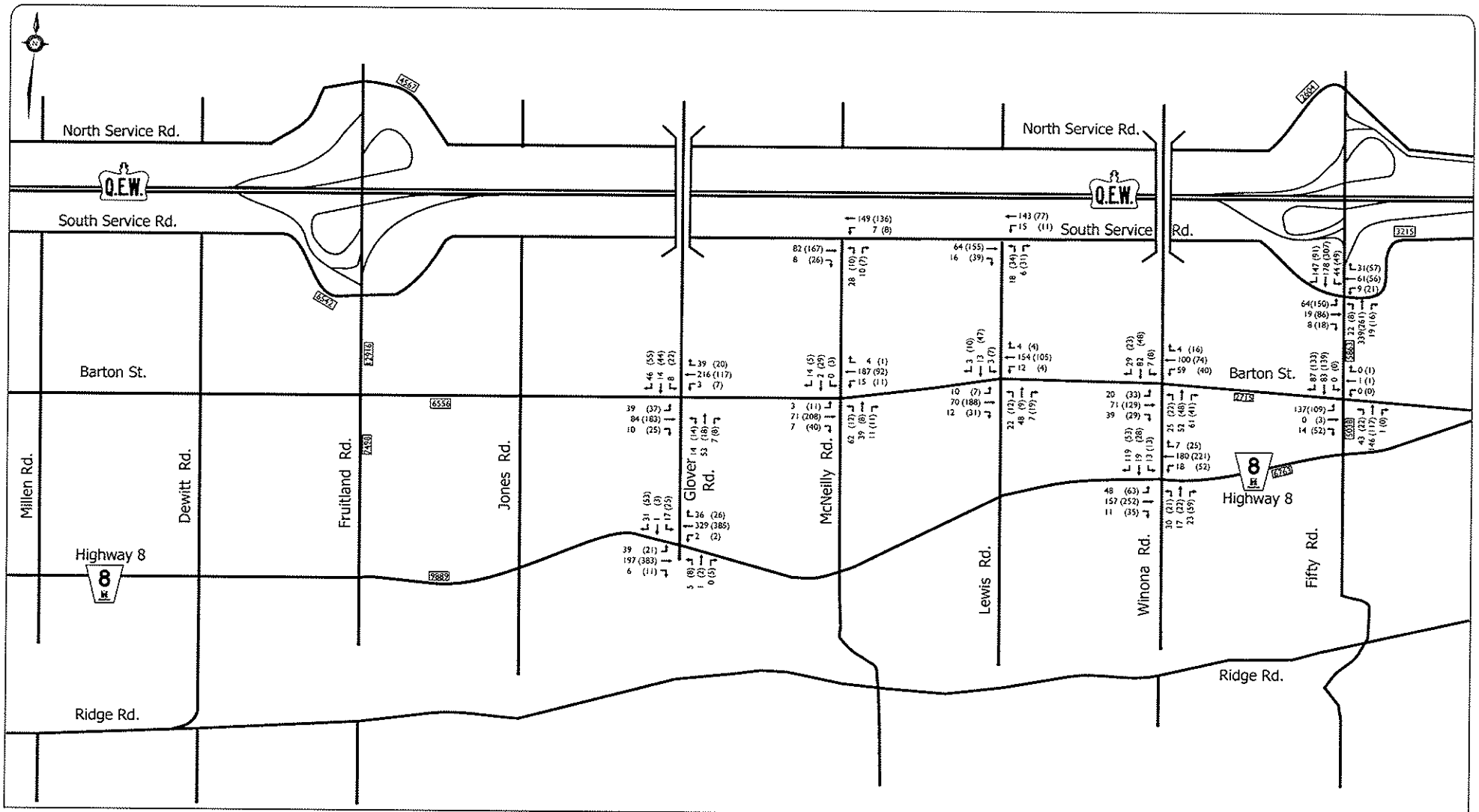
- Feasibility study for inter-regional transit terminal (Class EA Schedule is likely A+ or B; to be confirmed following feasibility study), including access and system connectivity requirements.

- Develop local TDM Strategy.

Cycling Network Improvements

- Ensure integrated and connected network.

APPENDIX A
DETAILED TRAFFIC DATA



DILLON CONSULTING

Legend:

XXXX AADT

123 (123) ↓
123 (123) →
123 (123) ↰
AM (PM) peak hour traffic volume

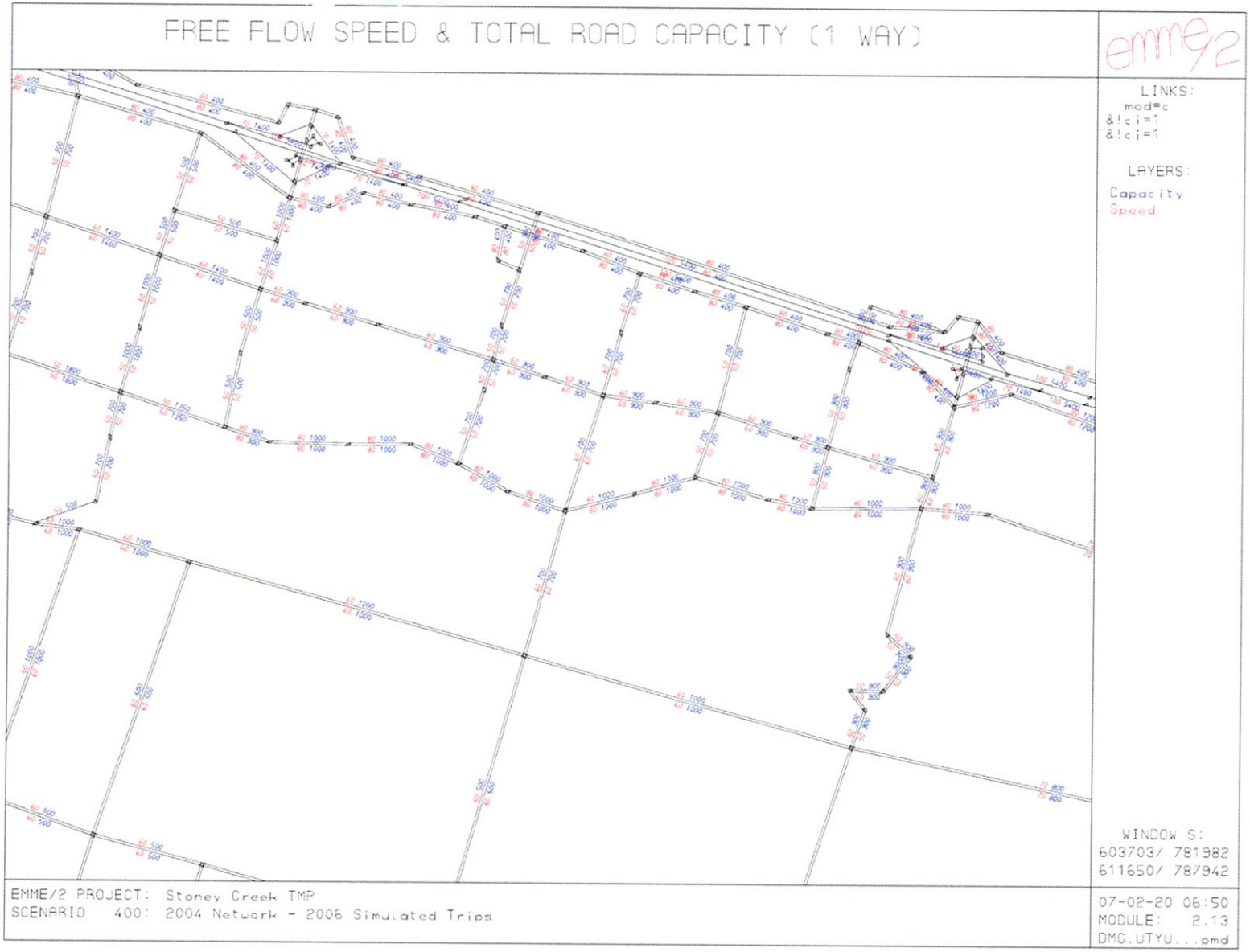
Urban Boundary Expansion
Community of Stoney Creek, City of Hamilton

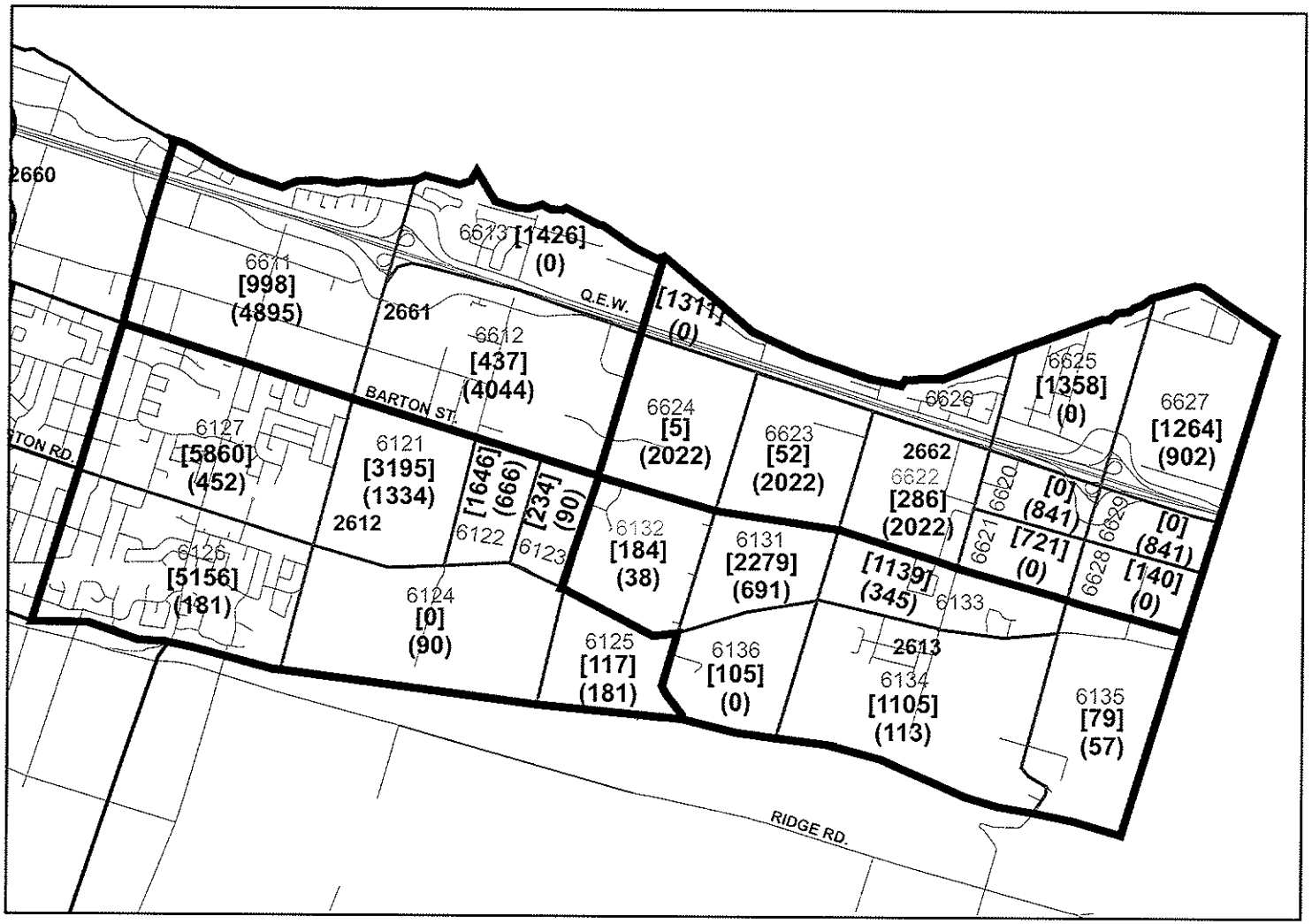
EXISTING TURNING VOLUMES & AADT COUNTS

Proj. Manager: AA		Drawn By: SLC	Figure:
Scale: N.T.S.		Checked By: AA	
Date Issued: November 10, 2006		Project No.: 06-6847-1000	
Location: M:\...\066847\stoney crk comm\\graphics		File Name: Turning Volumes-Revcdr	

Figure A-1

Figure A-2 2004 Base Year Link Attributes





NOT TO SCALE

DILLON CONSULTING

Legend:

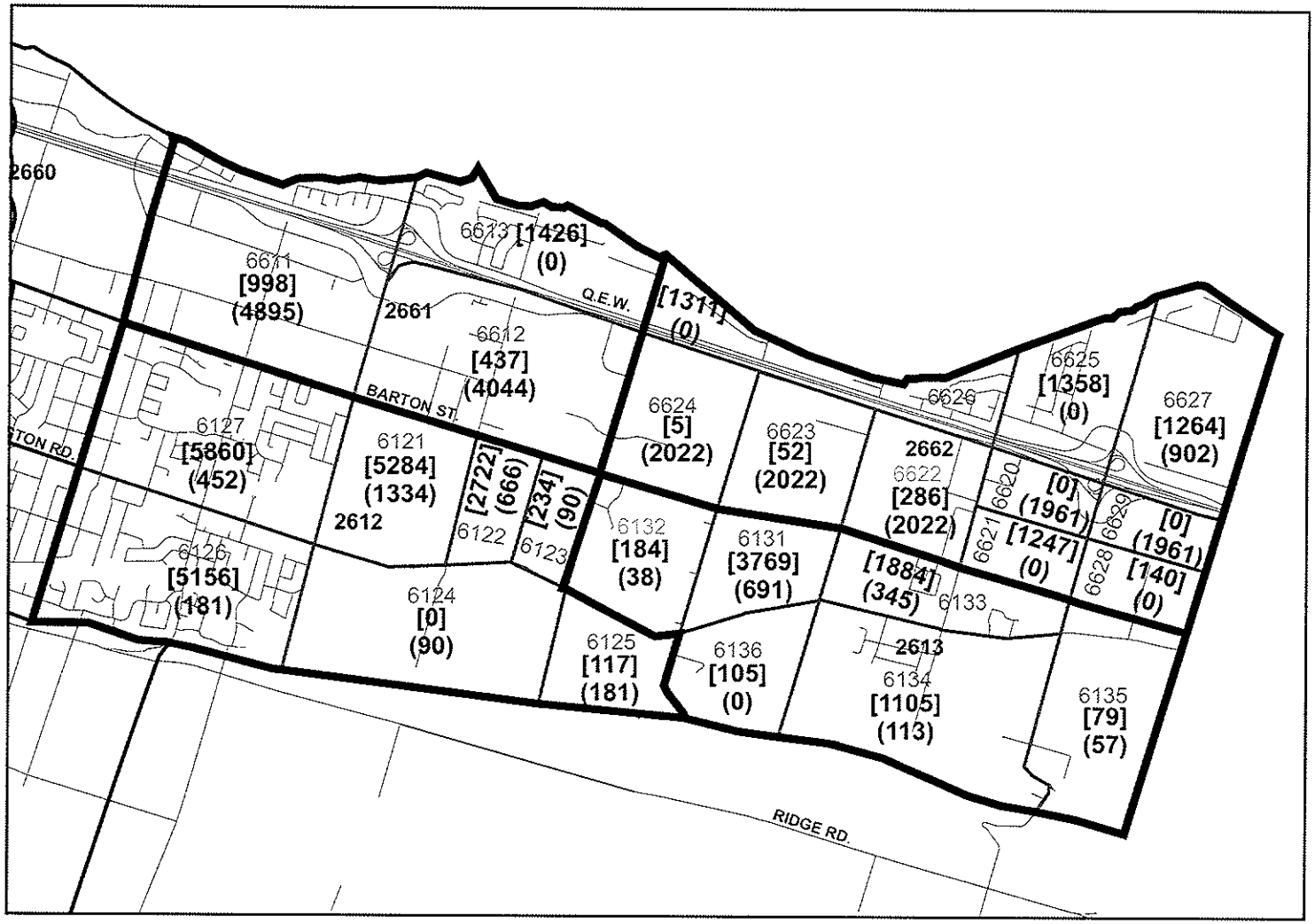
- GTA Zone
- Subdivided Zone
- 6125 Zone Number
- [105] Population
- (0) Employment

Urban Boundary Expansion
Stoney Creek Community, City of Hamilton

2021 Minimum Population and Employment Scenario Forecast by Sub-Zones

Proj. Manager:	AA	Drawn By:	SLC/DEH
Scale:	N.T.S.	Checked By:	DAK
Date Issued:	February 20, 2007	Project No.:	06-6847-1000
Location:	M:\...\066847\stoney crk commun\graphics	File Name:	population-employment.cdr

Figure: Figure A-3



NOT TO SCALE

DILLON CONSULTING

Legend:

- GTA Zone
- Subdivided Zone
- 6125 Zone Number
- [105] Population
- (0) Employment

Urban Boundary Expansion
Stoney Creek Community, City of Hamilton

2021 Maximum Population and Employment Scenario Forecast by Sub-Zones

Proj. Manager:	AA	Drawn By:	SLC/DEH
Scale:	N.T.S.	Checked By:	DAK
Date Issued:	February 20, 2007	Project No.:	06-6847-1000
Location: M:\...\066847\stoney crk commun\graphics		File Name:	population-employment.cdr

Figure A-4

Table A-6 Existing (2006) Scenario Screenline Analysis

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
North-South Screenlines			**Per Direction**						
1 West of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*48*	*0.12*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3159*	*0.59*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*124*	*0.31*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*757*	*0.54*	
Highway 8			*2*	*675*	*80*	*1,350*	*533*	*0.39*	
						8,950	***4,621***	***0.52***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*174*	*0.44*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4189*	*0.78*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*288*	*0.72*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*215*	*0.15*	
Highway 8			*2*	*675*	*80*	*1,350*	*319*	*0.24*	
						8,950	***5,185***	***0.58***	
2 East of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*149*	*0.37*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2416*	*0.45*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*438*	*1.10*	*EB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*481*	*0.53*	
Highway 8			*1*	*900*	*80*	*900*	*522*	*0.58*	
						8,000	***4006***	***0.50***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*298*	*0.75*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3749*	*0.69*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*261*	*0.65*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*106*	*0.12*	
Highway 8			*1*	*900*	*80*	*900*	*464*	*0.52*	
						8,000	***4878***	***0.61***	
3 West of Glover Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*180*	*0.45*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2416*	*0.45*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*273*	*0.68*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*89*	*0.10*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*427*	*0.43*	
						8,100	***3385***	***0.42***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*206*	*0.52*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3749*	*0.69*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*339*	*0.85*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*220*	*0.24*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*474*	*0.47*	
						8,100	***4988***	***0.62***	
4 West of Winona Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*60*	*0.15*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2416*	*0.45*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*36*	*0.09*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*11*	*0.01*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*206*	*0.21*	
						8,100	***2729***	***0.34***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*202*	*0.51*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3749*	*0.69*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*402*	*1.01*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*69*	*0.08*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*439*	*0.44*	
						8,100	***4861***	***0.60***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
5 East of Fifty Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*56*	*0.14*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2214*	*0.41*	
South Service Road	*Arterial*	*Hamilton*	*2*	*600*	*80*	*1,200*	*5*	*0.00*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*19*	*0.02*	
						8,000	***2294***	***0.29***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*298*	*0.75*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3038*	*0.56*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*205*	*0.51*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*168*	*0.17*	
						7,200	***3709***	***0.52***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
East-West Screenlines			**Per Direction**						
6 South of South Service Road									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*496*	*0.50*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*115*	*0.16*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*57*	*0.06*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*561*	*0.62*	
						3,500	***1229***	***0.35***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*480*	*0.48*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*230*	*0.33*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*34*	*0.04*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*139*	*0.15*	
						3,500	***883***	***0.25***	
7 South of Barton Street									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*168*	*0.34*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*250*	*0.36*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*33*	*0.04*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*613*	*0.68*	
						3,000	***1064***	***0.35***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*54*	*0.11*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*20*	*0.03*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*33*	*0.04*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*133*	*0.15*	
						3,000	***240***	***0.08***	
8 South of Highway 8									
Northbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*585*	*0.84*	
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*721*	*1.03*	*NB*
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*531*	*0.59*	
						2,300	***1,837***	***0.80***	
Southbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*359*	*0.51*	
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*162*	*0.23*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*35*	*0.04*	
						2,300	***556***	***0.24***	

**Critical V/C is defined as the ratio greater than or equal to 0.85*

Table A-7 2021 Minimum Population/Employment Scenario Screenline Analysis

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
North-South Screenlines			**Per Direction**						
1 West of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*79*	*0.20*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3787*	*0.70*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*172*	*0.43*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*824*	*0.59*	
Highway 8			*2*	*675*	*80*	*1,350*	*761*	*0.56*	
						8,950	***5,623***	***0.63***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*240*	*0.60*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4494*	*0.83*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*299*	*0.75*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*470*	*0.34*	
Highway 8			*2*	*675*	*80*	*1,350*	*536*	*0.40*	
						8,950	***6,039***	***0.67***	
2 East of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*208*	*0.52*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2982*	*0.55*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*459*	*1.15*	*EB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*588*	*0.65*	
Highway 8			*1*	*900*	*80*	*900*	*643*	*0.71*	
						8,000	***4880***	***0.61***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*341*	*0.85*	*WB*
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4033*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*270*	*0.68*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*424*	*0.47*	
Highway 8			*1*	*900*	*80*	*900*	*547*	*0.61*	
						8,000	***5615***	***0.70***	
3 West of Glover Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*243*	*0.61*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2982*	*0.55*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*268*	*0.67*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*173*	*0.19*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*535*	*0.54*	
						8,100	***4201***	***0.52***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*254*	*0.64*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4033*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*379*	*0.95*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*543*	*0.60*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*530*	*0.53*	
						8,100	***5739***	***0.71***	
4 West of Winona Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*73*	*0.18*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2982*	*0.55*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*48*	*0.12*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*27*	*0.03*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*334*	*0.33*	
						8,100	***3464***	***0.43***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*207*	*0.52*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4033*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*431*	*1.08*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*307*	*0.34*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*622*	*0.62*	
						8,100	***5600***	***0.69***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
5 East of Fifty Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*78*	*0.20*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2549*	*0.47*	
South Service Road	*Arterial*	*Hamilton*	*2*	*600*	*80*	*1,200*	*29*	*0.02*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*224*	*0.22*	
						8,000	***2880***	***0.36***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*324*	*0.81*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3230*	*0.60*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*325*	*0.81*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*343*	*0.34*	
						7,200	***4222***	***0.59***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
East-West Screenlines			**Per Direction**						
6 South of South Service Road									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*527*	*0.53*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*188*	*0.27*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*112*	*0.12*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*540*	*0.60*	
						3,500	***1367***	***0.39***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*257*	*0.26*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*311*	*0.44*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*69*	*0.08*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*392*	*0.44*	
						3,500	***1029***	***0.29***	
7 South of Barton Street									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*301*	*0.60*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*307*	*0.44*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*186*	*0.21*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*779*	*0.87*	*NB*
						3,000	***1573***	***0.52***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*203*	*0.41*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*19*	*0.03*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*49*	*0.05*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*316*	*0.35*	
						3,000	***587***	***0.20***	
8 South of Highway 8									
Northbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*595*	*0.85*	*NB*
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*964*	*1.38*	*NB*
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*798*	*0.89*	*NB*
						2,300	***2,357***	***1.02***	*NB*
Southbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*391*	*0.56*	
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*252*	*0.36*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*98*	*0.11*	
						2,300	***741***	***0.32***	

**Critical V/C is defined as the ratio greater than or equal to 0.85*

Table A-8 - 2021 Maximum Population/Employment Scenario Screenline Analysis

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
North-South Screenlines			**Per Direction**						
1 West of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*89*	*0.22*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3907*	*0.72*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*184*	*0.46*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*864*	*0.62*	
Highway 8			*2*	*675*	*80*	*1,350*	*824*	*0.61*	
						8,950	***5,868***	***0.66***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*249*	*0.62*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4561*	*0.84*	*WB*
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*309*	*0.77*	
Barton Street	*Arterial*	*Hamilton*	*2*	*700*	*60*	*1,400*	*551*	*0.39*	
Highway 8			*2*	*675*	*80*	*1,350*	*674*	*0.50*	
						8,950	***6,344***	***0.71***	
2 East of Fruitland Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*216*	*0.54*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3170*	*0.59*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*465*	*1.16*	*EB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*665*	*0.74*	
Highway 8			*1*	*900*	*80*	*900*	*719*	*0.80*	
						8,000	***5235***	***0.65***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*359*	*0.90*	*WB*
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4052*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*289*	*0.72*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*535*	*0.59*	
Highway 8			*1*	*900*	*80*	*900*	*596*	*0.66*	
						8,000	***5831***	***0.73***	
3 West of Glover Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*251*	*0.63*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3170*	*0.59*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*272*	*0.68*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*236*	*0.26*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*598*	*0.60*	
						8,100	***4527***	***0.56***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*272*	*0.68*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4052*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*402*	*1.01*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*561*	*0.62*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*548*	*0.55*	
						8,100	***5835***	***0.72***	
4 West of Winona Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*99*	*0.25*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3170*	*0.59*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*79*	*0.20*	
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*73*	*0.08*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*478*	*0.48*	
						8,100	***3899***	***0.48***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*207*	*0.52*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*4052*	*0.75*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*422*	*1.06*	*WB*
Barton Street	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*309*	*0.34*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*625*	*0.63*	
						8,100	***5615***	***0.69***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
5 East of Fifty Road									
Eastbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*86*	*0.22*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*2559*	*0.47*	
South Service Road	*Arterial*	*Hamilton*	*2*	*600*	*80*	*1,200*	*26*	*0.02*	
Highway 8			*1*	*1,000*	*80*	*1,000*	*485*	*0.49*	
						8,000	***3156***	***0.39***	
Westbound									
North Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*319*	*0.80*	
QEW	*Highway*	*Province*	*3*	*1,800*	*100*	*5,400*	*3230*	*0.60*	
South Service Road	*Arterial*	*Hamilton*	*1*	*400*	*80*	*400*	*353*	*0.88*	*WB*
Highway 8			*1*	*1,000*	*80*	*1,000*	*383*	*0.38*	
						7,200	***4285***	***0.60***	

Screenline	Road Classification	Jurisdiction	Lanes	Capacity	Free Flow Speed	Total Capacity	Modelled Demand	2021 V/C	Critical V/C
East-West Screenlines			**Per Direction**						
6 South of South Service Road									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*617*	*0.62*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*237*	*0.34*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*118*	*0.13*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*512*	*0.57*	
						3,500	***1484***	***0.42***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*1,000*	*60*	*1,000*	*524*	*0.52*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*324*	*0.46*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*110*	*0.12*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*545*	*0.61*	
						3,500	***1503***	***0.43***	
7 South of Barton Street									
Northbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*398*	*0.80*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*299*	*0.43*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*274*	*0.30*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*752*	*0.84*	
						3,000	***1723***	***0.57***	
Southbound									
Fruitland Road	*Arterial*	*Hamilton*	*1*	*500*	*50*	*500*	*223*	*0.45*	
Glover Road	*Arterial*	*Hamilton*	*1*	*700*	*50*	*700*	*23*	*0.03*	
Winona Road	*Arterial*	*Hamilton*	*1*	*900*	*50*	*900*	*84*	*0.09*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*389*	*0.43*	
						3,000	***719***	***0.24***	
8 South of Highway 8									
Northbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*596*	*0.85*	*NB*
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*1004*	*1.43*	*NB*
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*830*	*0.92*	*NB*
						2,300	***2,430***	***1.06***	*NB*
Southbound									
Dewitt Road	*Collector*	*Hamilton*	*1*	*700*	*50*	*700*	*414*	*0.59*	
McNeilly Road	*Arterial*	*Hamilton*	*1*	*700*	*60*	*700*	*296*	*0.42*	
Fifty Road	*Arterial*	*Hamilton*	*1*	*900*	*60*	*900*	*97*	*0.11*	
						2,300	***807***	***0.35***	

**Critical V/C is defined as the ratio greater than or equal to 0.85*

APPENDIX B
PUBLIC CONSULTATION

APPENDIX B-1
Study Notification

Hamilton

City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Strategic & Environmental Planning, Public Works Department,
77 James St. N, Suite 320
Hamilton, ON L8R 2K3
Phone: 905.546.2424 Ext. 3438 Fax: 905.546.4435
Email: mphilip@hamilton.ca

March 14, 2008

Regional Niagara Planning & Development Department
Region of Niagara
2201 St David's Road, P.O. Box 1042
Thorold, Ontario
L2V 4T7

DearJoe Cousins,

The City of Hamilton has initiated the Transportation Master Plan (TMP) study of the Stoney Creek area. The objective of this study is to assess the transportation needs for the Stoney Creek Urban Boundary Expansion area to support the projected growth of the area by the year 2021. This study area borders the Town of Grimsby and Region of Niagara and has a rail line that travels through it. A transportation hub is under consideration; on the South West quadrant of Fifty Road and South Service Road.

Attached is the public information centre notice that will be held on April 2nd 2008 from 7:00pm – 9:00pm at the Chandelier Place Reception and Conference Centre. Your presence at this event and further collaboration in this study would be appreciated as this study may have some interest to the Region of Niagara. If you have any further questions or concerns feel free to contact me.

The project website: www.hamilton.ca/SCUBE-Transportation

Sincerely,

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
mphilip@hamilton.ca

Encl: PIC Notice

CC: Alvaro Almuina, P.Eng., Dillon Consulting Limited
Project Files.

Hamilton

City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Strategic & Environmental Planning, Public Works Department,
77 James St. N, Suite 320
Hamilton, ON L8R 2K3
Phone: 905.546.2424 Ext. 3438 Fax: 905.546.4435
Email: mphilip@hamilton.ca

March 14, 2008

Planning Department
Town of Grimsby
P.O. Box 159-160 Livingston Ave.
Grimsby, Ontario
L3M 4G3

To Whom This May Concern,

The City of Hamilton has initiated the Transportation Master Plan (TMP) study of the Stoney Creek area. The objective of this study is to assess the transportation needs for the Stoney Creek Urban Boundary Expansion area to support the projected growth of the area by the year 2021. This study area borders the Town of Grimsby and Region of Niagara and has a rail line that travels through it. A transportation hub is under consideration; on the South West quadrant of Fifty Road and South Service Road.

Attached is the public information centre notice that will be held on April 2nd 2008 from 7:00pm – 9:00pm at the Chandelier Place Reception and Conference Centre. Your presence at this event and further collaboration in this study would be appreciated as this study may have some interest to the Town of Grimsby. If you have any further questions or concerns feel free to contact me.

The project website: www.hamilton.ca/SCUBE-Transportation

Sincerely,

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
mphilip@hamilton.ca

Encl: PIC Notice

CC: Alvaro Almuina, P.Eng., Dillon Consulting Limited
Project Files

Hamilton

City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Strategic & Environmental Planning, Public Works Department,
77 James St. N, Suite 320
Hamilton, ON L8R 2K3
Phone: 905.546.2424 Ext. 3438 Fax: 905.546.4435
Email: mphilip@hamilton.ca

March 14, 2008

GO Transit
20 Bay St., Suite 600
Toronto, Ontario
M5J 2W3

Dear Don Francey,

The City of Hamilton has initiated the Transportation Master Plan (TMP) study of the Stoney Creek area. The objective of this study is to assess the transportation needs for the Stoney Creek Urban Boundary Expansion area to support the projected growth of the area by the year 2021. This study area borders the Town of Grimsby and Region of Niagara and has a rail line that travels through it. A transportation hub is under consideration; on the South West quadrant of Fifty Road and South Service Road.

Attached is the public information centre notice that will be held on April 2nd 2008 from 7:00pm – 9:00pm at the Chandelier Place Reception and Conference Centre. Your presence at this event and further collaboration in this study would be appreciated as this study may have some interest to the GO Transit. If you have any further questions or concerns feel free to contact me.

The project website: www.hamilton.ca/SCUBE-Transportation

Sincerely,

M. Philip

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
mphilip@hamilton.ca

Encl: PIC Notice

CC: Alvaro Almuina, P.Eng., Dillon Consulting Limited
Project Files

Hamilton

City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Strategic & Environmental Planning, Public Works Department,
77 James St. N, Suite 320
Hamilton, ON L8R 2K3
Phone: 905.546.2424 Ext. 3438 Fax: 905.546.4435
Email: mphilip@hamilton.ca

March 14, 2008

GO Transit
20 Bay St., Suite 600
Toronto, Ontario
M5J 2W3

Dear Bill Jenkins,

The City of Hamilton has initiated the Transportation Master Plan (TMP) study of the Stoney Creek area. The objective of this study is to assess the transportation needs for the Stoney Creek Urban Boundary Expansion area to support the projected growth of the area by the year 2021. This study area borders the Town of Grimsby and Region of Niagara and has a rail line that travels through it. A transportation hub is under consideration; on the South West quadrant of Fifty Road and South Service Road.

Attached is the public information centre notice that will be held on April 2nd 2008 from 7:00pm – 9:00pm at the Chandelier Place Reception and Conference Centre. Your presence at this event and further collaboration in this study would be appreciated as this study may have some interest to the GO Transit. If you have any further questions or concerns feel free to contact me.

The project website: www.hamilton.ca/SCUBE-Transportation

Sincerely,

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
mphilip@hamilton.ca

Encl: PIC Notice

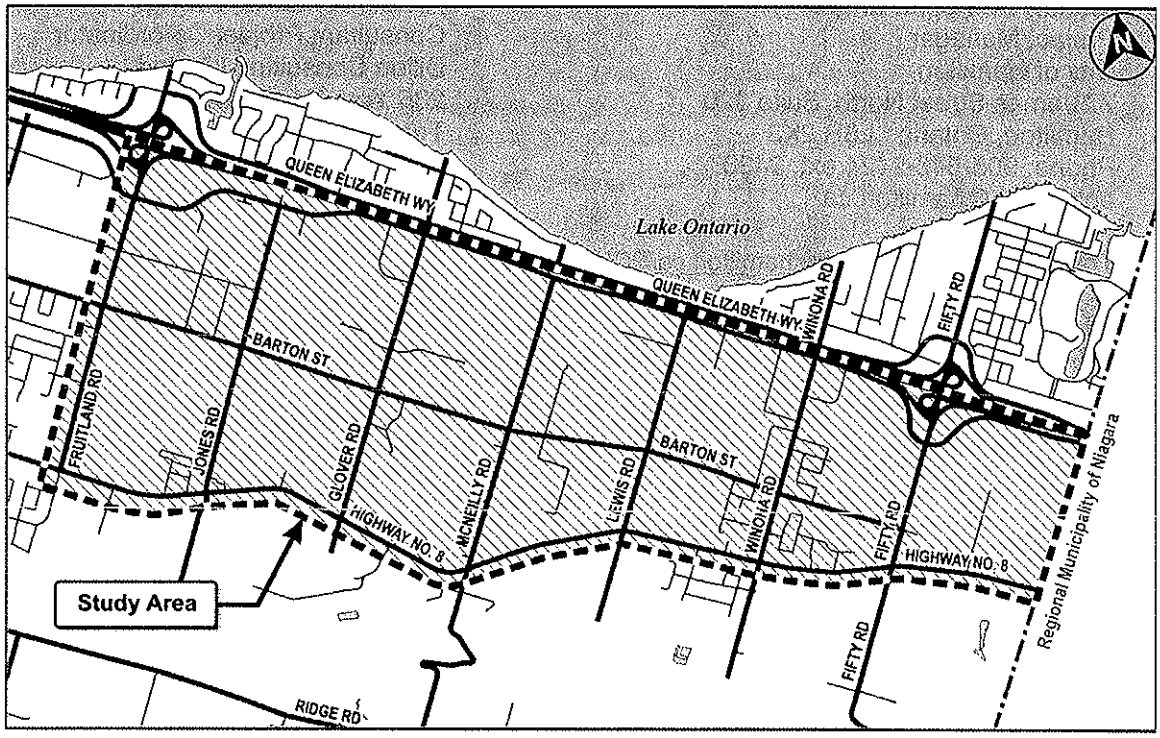
CC: Alvaro Almuina, P.Eng., Dillon Consulting Limited
Project Files

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
NOTICE OF PUBLIC INFORMATION CENTRE NO. 1

THE STUDY

The Regional Official Plan No.14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek. The SCUBE area will require growth related infrastructure.

Accordingly, the City of Hamilton has initiated the Transportation Master Plan (TMP) study. The objective of this study is to assess the transportation needs for the SCUBE area to support the projected growth of the area by the year 2021. The study area is located between Highway 8 on the south, South Service Rd on the north, Fruitland Road on the west and the City boundary on the east as shown in the map below.



THE PROCESS

This project is being carried out as a Master Plan project under the guidelines of the Municipal Engineers Association *Municipal Class Environmental Assessment* (October 2000, as amended in 2007). The study approach is to complete all Class EA requirements for all Schedule A, A+, and B projects and fulfil Phases 1 and 2 of the Class EA process for Schedule C projects.
One Public Information Centre (PIC) will be held during the study to present the project, planning solutions and receive public input.

Upon completion of the study, an Environmental Study Report will be available for public review and comment. Another advertisement will be published at that time, indicating where and how the public can have access to the report.

PUBLIC INFORMATION CENTRE (PIC) No.1
The first Public Information Centre for this Transportation Master Plan study is scheduled for:

DATE: **Wednesday, April 2, 2008**
TIME: **7.00 pm to 9.00 pm**
LOCATION: **Chandelier Place Reception and Conference Centre**
660 Barton Street, Stoney Creek

PUBLIC COMMENTS INVITED
There is an opportunity at any time during this process for interested persons to review outstanding issues and bring concerns to the attention of the Project Manager.

If you have any questions or comments or wish to be added to the study mailing list, please contact:

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
eplanning@hamilton.ca

Alvaro Almuina, P.Eng.
Consultant Project Co-ordinator
Dillon Consulting Limited
235 York Boulevard, Suite 800
Toronto, ON M2J 4Y8
Phone: 905-229-4647, ext. 2455
aalmuina@dillon.ca

The project website: www.hamilton.ca/SCUBE-Transportation

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act.* With the exception of personal information, all comments will become part of the public record.

This Notice issued March 20 and March 28, 2008.

THE CITY OF
HAMILTON
OFFICE OF THE MAYOR

March 14, 2008

Dear Resident,

From the start of this Council term, we have worked together to address concerns raised by residents of the Fruitland Road community. We are writing today to provide an update on transportation issues affecting your neighbourhood.

Within days of taking office, we requested a speed and volume count on Fruitland Road which took place on December 9, 2006. The results showed a volume of 7,498 vehicles with an average speed of 54 km/h – 4 percent of vehicles traveled at speeds of 70 km/h or greater.

Four months later, we conducted another speed and volume count. This count took place April 24 - 26, 2007 and showed an average volume of 8,070 vehicles per day with an average speed of 57 km/h – 12 percent of vehicles traveled at speeds of 70 km/h or greater.

On October 15, 2007 the City of Hamilton received a petition requesting a 7pm to 7am truck traffic ban on Fruitland Road. This petition was referred to the Truck Route Sub-Committee.

After the Red Hill Valley Parkway opened, we conducted another speed and volume count beginning November 29, 2007. This count was terminated when the rubber tubes used to conduct the measurements were damaged during snow removal. Additional speed and volume counts will take place sometime in April or May depending on weather conditions.

In addition to the abovementioned speed and volume counts, the City is also undertaking several studies related to transportation and growth in your area.

Transportation Master Plan
The Transportation Master Plan study will assess the transportation infrastructure needs to support projected growth by 2021, in the Stoney Creek Urban Boundary Expansion (SCUBE) area. The process is being carried out under guidelines of the Municipal Class Environmental Assessment document and will satisfy both Phase 1 and 2 requirements.

Hamilton City Centre
77 James Street North, Suite 230, Hamilton, Ontario L8R 2K3
T: 905.546.4200 • F: 905.546.2340 • E: mayorfred@hamilton.ca • www.mayorfred.ca

Public consultation is a mandatory requirement of the Municipal Class Environmental Assessment process. As such, a Public Information Centre (PIC) will be held on **Wednesday, April 2nd, 2008** from **7 to 9pm** at Chandelier Place, 660 Barton Street in Stoney Creek. During this meeting, planning staff will present the project, the existing conditions, problems, opportunities, possible solutions, and improvements in general terms proposed for major roads and intersections.

This PIC will provide you the opportunity to bring forward any concerns and will be valuable in developing recommendations moving forward. At the end of the Phase 1 & 2 study process an Environmental Study Report will be prepared and made available for public review and comment. For more details please consult the Transportation Master Plan newsletter enclosed.

Truck Transportation Master Plan

The Truck Transportation Master Plan will study existing designated truck routes throughout the Greater Hamilton Area, plus 24 identified problem locations, including Fruitland Road. A request for proposal (RFP) to hire a consultant to assist the City in developing the plan closed on February 13, 2008. Submissions are currently being reviewed with a decision expected this month.

Once the consultant is hired, public consultations will be scheduled and notices will be sent to area residents by mail. The Planning study will be completed and presented to the Truck Route Sub-Committee by the end of the year.

The above studies, together with ongoing vehicle and speed counts, will help ensure transportation infrastructure meets the needs of the Fruitland Road and broader Stoney Creek community.

In the months ahead, you will receive further updates by mail from the City on this matter. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

Fred Eisenberger
Mayor

905.546.4200
mayorfred@hamilton.ca

Maria Pearson
Councillor - Ward 10,
Stoney Creek

905.546.2701
mpearson@hamilton.ca

David Mitchell
Councillor - Ward 11,
Glanbrook, Stoney Creek, Winona

905.546.4513
dmitchel@hamilton.ca

Issue 1, March 2008

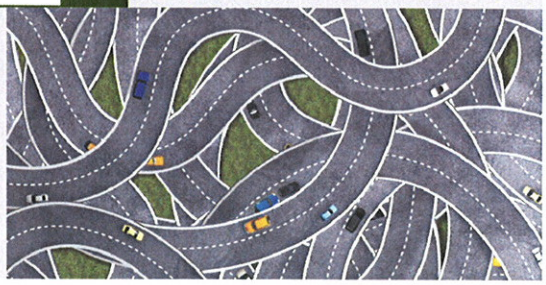
Stoney Creek Urban Boundary Expansion

SCUBE

Hamilton

Transportation Master Plan

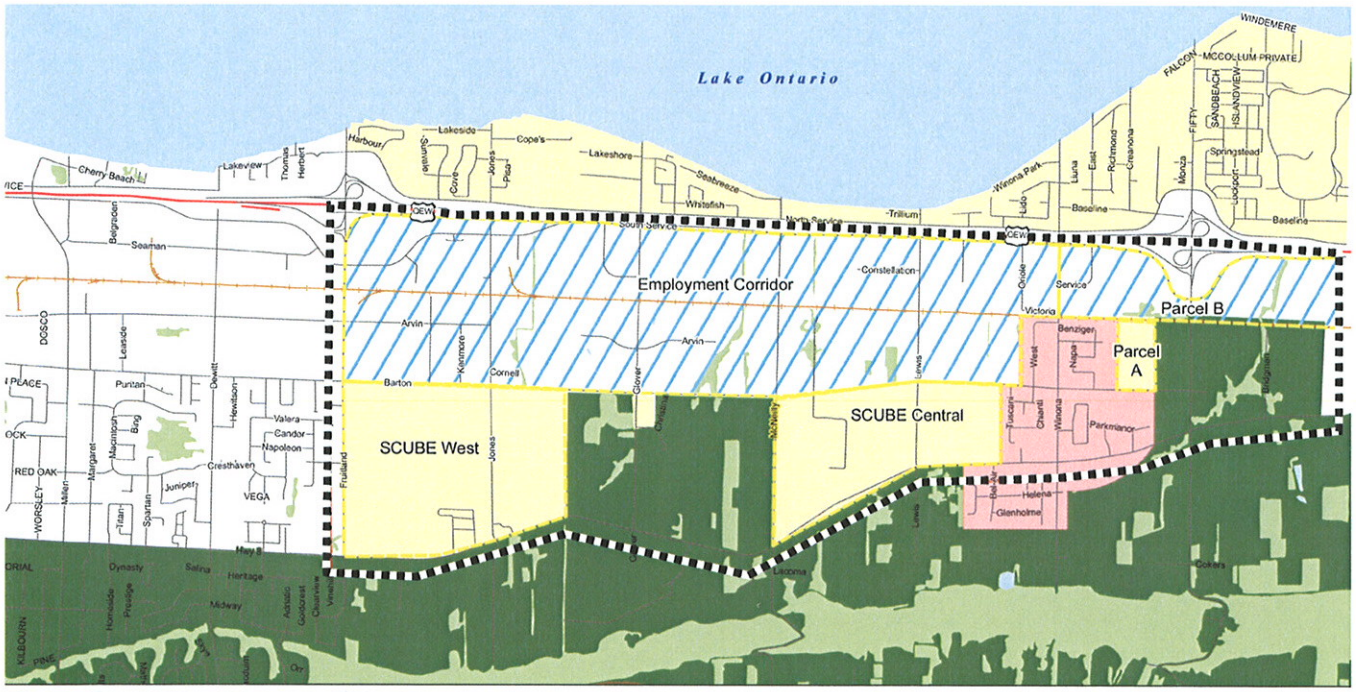
Newsletter



In order to plan proactively for anticipated development and population growth over the next 12 years, the City of Hamilton is developing a master plan to assess transportation requirements in an urban area of Stoney Creek bounded by Fruitland Road to the west, urban boundary to the east, Highway No.8 to the south and South Service Road to the north (Figure 1). It is commonly referred to as the Stoney Creek Urban Boundary Expansion (SCUBE) area Transportation Master Plan Study.

In order to complete this Master Plan, the City is coordinating this study with other studies simultaneously under the Municipal Class Environmental Assessment process. These studies include:

- Secondary Planning Study - which will determine the types of land uses that will be permitted and their location. Study initiated June 2007; and
- Truck Route Master Plan Study – which will include the evaluation of truck routes within this area. Study to be initiated Spring 2008.



Stoney Creek Urban Boundary Expansion
Figure 1: Transportation Master Plan Study Area
2021 Land Use

Legend

- Secondary Roads
- Highway
- Railway
- Winona Urban Community
- Employment
- Residential Infill/Expansion
- Study Area
- Greenbelt
- Woodlots
- Lake

N

Continued on reverse...

Issue 1, March 2008

Stoney Creek Urban Boundary Expansion

SCUBE

Hamilton

The City has also begun collecting data related to the opening of the Red Hill Valley Parkway to determine if this new roadway has resulted in a change in traffic patterns.

An Environmental Assessment is a process used in Ontario to determine the potential impacts a project or development may have on the environment so that the best possible decisions can be made. The "environment" being studied in this process includes not only natural conditions of air, land, water, plant and animal life and human beings, but also social, economic and cultural conditions affecting each of us and our community.

Previous planning studies, including an Official Plan amendment, have been undertaken in this area as they relate to the expansion of the Stoney Creek Urban Boundary Expansion, and new Provincial Legislation, the Greenbelt Plan (2005) and the Places to Grow Plan (2006), have been introduced to address how and where growth is to take place. The recommendations of these studies are all being incorporated in the overall planning for this area.

In regards to previous transportation studies that have been undertaken, an Environmental Assessment Study for Fruitland Road began in 1989 and was completed in 1992, which recommended a realignment of this roadway. This report also stated that a review of the study would be required if the construction did not commence within a 3-year period. In addition, in 1990 Council recommended that any construction of a realigned Fruitland Road be delayed until the urban area boundary study was completed.

The previously completed Fruitland Road study is now considered to be outdated and a new Environmental Assessment is being undertaken for Fruitland Road as part of the ongoing Transportation Master Plan, in conjunction with the planning for the Stoney Creek Urban Boundary Expansion study. These studies will also incorporate the recommendations of the recently completed City-wide Growth Related Integrated Development Strategy (GRIDS, completed spring 2006) and City of Hamilton Transportation Master Plan (completed spring 2007) which outline principles and strategies that were developed to guide future development within the City.

Public input is extremely important in the Environmental Assessment process. The City of Hamilton encourages members of the public and other interested stakeholders to actively participate in this process to provide valuable feedback.

The first Public Information Centre for this Stoney Creek Urban Boundary Expansion Transportation Master Plan is scheduled for Wednesday April 2, 2008
7:00 p.m. to 9:00 p.m.
Chandelier Place
Reception and Conference Centre
660 Barton Street, Stoney Creek

Notices for the Public Information Centre will be mailed, and placed in the local newspaper inviting residents and property owners to attend and provide input into this study process.

If you wish to be added to our mailing list, or have any questions about this ongoing study, please contact:

Mohan Philip
Strategic Planning Section
Public Works Department
320 - 77 James Street North
Hamilton, ON L8R 2K3

Phone: 905-546-2424 ext. 3438
Fax: 905-546-4435
Email: mphilip@hamilton.ca

Transportation Master Plan

Stoney Creek Urban Boundary Expansion (SCUBE)

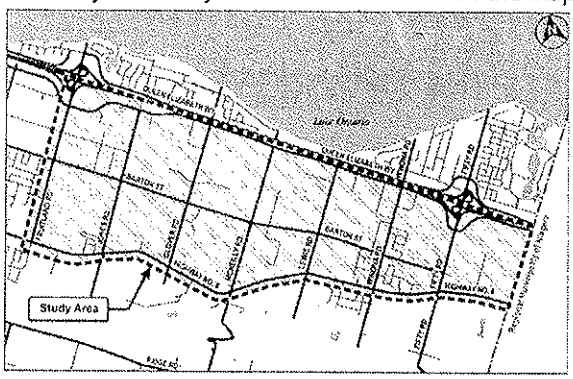
Transportation Master Plan Class Environmental Assessment

NOTICE OF PUBLIC INFORMATION CENTRE NO. 1

THE STUDY

The Regional Official Plan No.14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek.

Accordingly, the City of Hamilton has initiated the Transportation Master Plan (TMP) study for the SCUBE area. The objective of this study is to assess the transportation needs to support the projected growth by the year 2021. The study area is located between Highway 8 on the south, South Service Rd on the north, Fruitland Road on the west and the City boundary on the east as shown in the map below.



THE PROCESS

The Class Environmental Assessment (EA) Master Plan approach is being undertaken in accordance with the requirements of the *Municipal Engineers Association's Municipal Class Environmental Assessment* (October 2000, as amended in 2007). The Master Plan will, at a minimum, address Phase 1 (Problem or Opportunity) and Phase 2 (Alternative Solutions) of the Municipal Class EA process.

Upon completion of the study, an Environmental Study Report will be prepared and made available for public review and comment. Another advertisement will be published at that time.

PUBLIC INFORMATION CENTRE (PIC) No.1

The following Public Information Centre will be held to provide study background, existing conditions, proposed improvements and receive public input:

DATE:	**Wednesday, April 2, 2008**
TIME:	**7:00 pm to 9:00 pm**
LOCATION:	**Chandelier Place Reception and Conference Centre 660 Barton Street, Stoney Creek**

PUBLIC COMMENTS INVITED

There is opportunity at any time during this process for interested persons to review outstanding issues and bring concerns to the attention of the Project Manager. If you have any questions or comments, or wish to be added to the study mailing list, please contact either:

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
eplanning@hamilton.ca

Alvaro Almuina, P.Eng.
Consultant Project Co-ordinator
Dillon Consulting Limited
235 York Boulevard, Suite 800
Toronto, ON M2J 4Y8
Phone: 905-229-4647, ext. 2455
aalmuina@dillon.ca

The project website: www.hamilton.ca/SCUBE-Transportation

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act.* With the exception of personal information, all comments will become part of the public record.

This Notice issued March 20 and March 28, 2008.

STONEY CREEK URBAN BOUNDARY EXPANSION (SCUBE)

Transportation Master Plan Class Environment Assessment

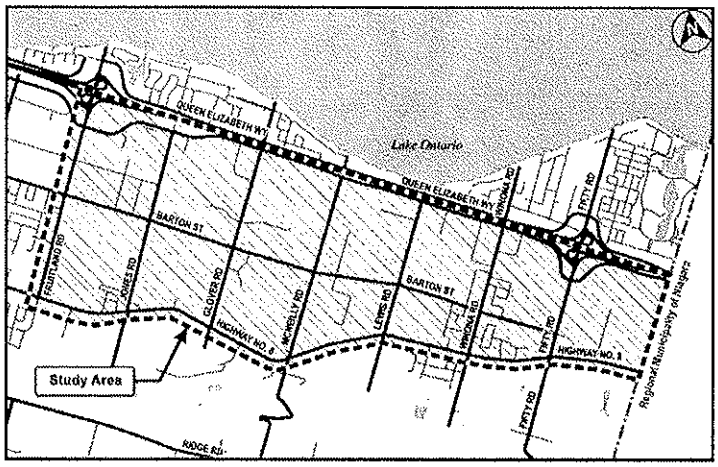
NOTICE OF PUBLIC INFORMATION CENTRE NO. 1

Hamilton

THE STUDY

The Regional Official Plan No.14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek.

Accordingly, the City of Hamilton has initiated the Transportation Master Plan (TMP) study for the SCUBE area. The objective of this study is to assess the transportation needs to support the projected growth by the year 2021. The study area is located between Highway 8 on the south, South Service Rd on the north, Fruitland Road on the west and the City boundary on the east as shown in the map below.



THE PROCESS

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Upon completion of the study, an Environmental Study Report will be prepared and made available for public review and comment. Another advertisement will be published at that time.

PUBLIC INFORMATION CENTRE (PIC) No.1

The following Public Information Centre will be held to provide study background, existing conditions, proposed improvements and receive public input:

DATE: **Wednesday, April 2, 2008**
TIME: **7:00 pm to 9:00 pm**
LOCATION: **Chandelier Place Reception and Conference Centre**
660 Barton Street, Stoney Creek

PUBLIC COMMENTS INVITED

There is opportunity at any time during this process for interested persons to review outstanding issues and bring concerns to the attention of the Project Manager. If you have any questions or comments, or wish to be added to the study mailing list, please contact either:

Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
eplanning@hamilton.ca

Alvaro Almuina, P.Eng.
Consultant Project Co-ordinator
Dillon Consulting Limited
235 York Boulevard, Suite 800
Toronto, ON M2J 4Y8
Phone: 905-229-4647, ext. 2455
aalmuina@dillon.ca

The project website: www.hamilton.ca/SCUBE-Transportation

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

This Notice issued March 20 and March 28, 2008.

Stoney Creek News March 21, 2008

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
NOTICE OF PUBLIC INFORMATION CENTRE NO. 1

THE STUDY

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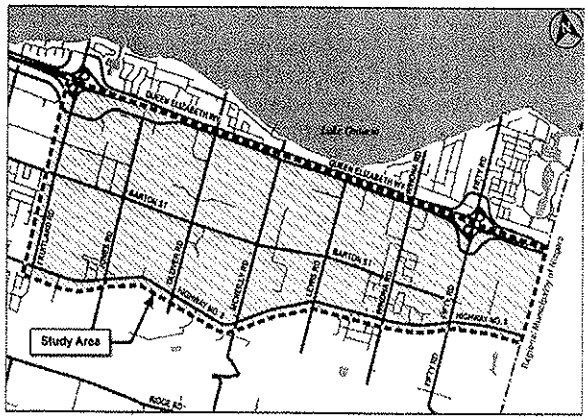

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STONEY CREEK NEWS
MARCH 28TH

HAMILTON SPECTATOR
MARCH 28TH

Hamilton

STONEY CREEK URBAN BOUNDARY EXPANSION (SCUBE)

Transportation Master Plan Class Environment Assessment

NOTICE OF PUBLIC INFORMATION CENTRE NO. 1

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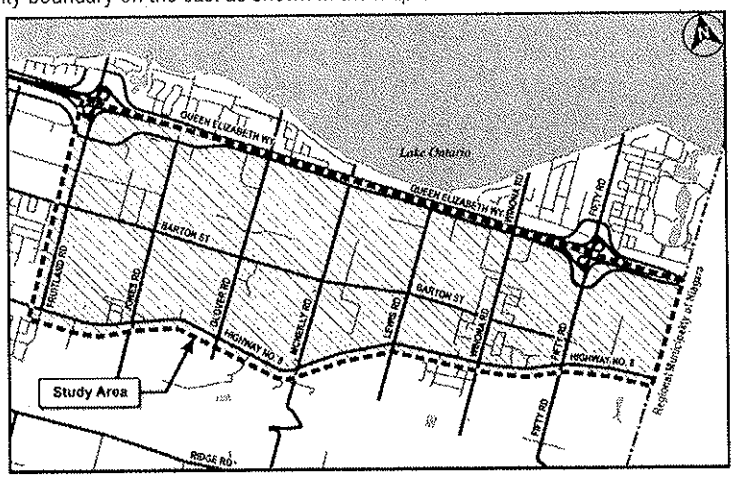

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This Notice issued March 20 and March 28, 2008.

APPENDIX B-2

Consultation with MTO, Niagara Region, Town of Grimsby, ORC, HydroOne, GO, CN Rail and Transport Canada

-----Original Message-----
From: Smith, Shawn (MTO) [mailto:Shawn.Smith@ontario.ca]
Sent: Friday, May 09, 2008 12:08 PM
To: Salsberg, Lisa (MTO); Hewitt, Tom (MTO); Yeung, Richard (MTO); Roszler, Greg (MTO); De Gannes, Roger (MTO); Stala, Dan (MTO); Jones, Bill (MTO)
Cc: Klowak, John (MTO); Flora, Eric; Keith Vogl; Bob LeRoux; Wayne Carter; Mike Sone; Cousins, Joe; Philip, Mohan
Subject: Stoney Creek Urban Boundary Expansion (SCUBE) project by City of Hamilton

Good day.

The City of Hamilton is undergoing a study to assess the transportation needs in Stoney Creek to support the projected growth by
the year 2021. The study area is located between Highway 8 on the south, South Service Rd on the north, Fruitland Road on the west and the City boundary on the east. Attached is the information presented at the first Public Information Centre, held in April 2008.

One of the objectives of their study is to identify key road links, required transit routes, cycling routes and other infrastructure requirements for the study area. They are proposing a transit hub at Fifty Rd and SSR. This obviously needs to be coordinated with the planned MTO carpool lot and GO park and ride at QEW & Casablanca, which is the next interchange east of Fifty Rd. We are also concerned with the impacts of their study on the QEW.

If you have any comments and would like to be included on future notices, please let me know and I will inform the City.

Shawn

Shawn Smith, P.Eng.
Project Engineer, MTO Planning & Design
416-235-3598

-----Original Message-----
From: Smith, Shawn (MTO) [mailto:Shawn.Smith@ontario.ca]
Sent: Thursday, May 22, 2008 3:22 PM
To: Philip, Mohan
Cc: Barber, Chris (MTO); Salsberg, Lisa (MTO); Yeung, Richard (MTO); Klowak, John (MTO)
Subject: RE: SCUBE comments

Mohan:

Regarding your Stoney Creek Urban Boundary Expansion project, at this point we expect that any works proposed that may have impacts on our ROW are or will be assessed in accordance with the Environmental Assessment Act by the City as per the Municipal Class EA process.

There is a need to coordinate the City of Hamilton's plans with any proposed MTO projects, including the carpool lot and GO park and ride at QEW & Casablanca, although this interchange is approximately 2.5 km to the east in Niagara Region. Further, the proposed transit hub at Fifty Rd. & South Service Rd. (and all other components of their proposal) will need to be reviewed with MTO to determine any impacts to this section of the QEW Corridor in general.

Also, any work proposed that might impact our ROW will need to be reviewed to determine if there will be any environmental impacts, and acted upon accordingly.

The following people in addition to myself should be informed of SCUBE project updates:

Lisa Salsberg, MTO Urban Planning Office, (416) 235-3809
Chris Barber, MTO Environmental Office, (416) 235-3450
Richard Yeung, MTO Corridor Management Section, (416) 235-4351

Also, Keith Vogl, Town of Grimsby (attended the open house in April), and Eric Flora, Region of Niagara, should be included.

If you have any questions, feel free to contact me at 416-235-3598.
Shawn

Shawn Smith, P.Eng. - Project Engineer
Highway Engineering | Planning & Design, Hamilton-Niagara
Provincial Highways Management Division | Ministry of Transportation
4th Floor, Building D, 1201 Wilson Ave. | Downsview ON, M3M 1J8
Tel: 416.235.3598 | Fax 416.235.3576

From: Philip, Mohan [mailto:Mohan.Philip@hamilton.ca]
Sent: Wednesday, July 16, 2008 3:58 PM
To: Smith, Shawn (MTO)
Cc: Barber, Chris (MTO); Salsberg, Lisa (MTO); Yeung, Richard (MTO); Klowak, John (MTO); Keith Vogl; Flora, Eric; Almuina, Alvaro; Jajko, Melanie; Stephen, Jillian; Panicker, Elizabeth
Subject: RE: SCUBE comments

Dear Shawn,

Thank you again for your continuing input into the Stoney Creek Urban Expansion Boundary Transportation Master Plan (TMP). We are completing Phases 1 and 2 of the Municipal Class EA study process. The TMP study has not identified any major roadway improvements in the study area which impacts the MTO Right of Way (QEW).

The major TMP recommendation is the consideration of a transit hub at the south-west quadrant of the QEW and Fifty Road, north of the rail line. The City of Hamilton has immediate plans to undertake a separate study for this. We will advise you of the study and schedule a stakeholders (MTO, GO, CN/CP Rail, Hamilton, Niagara Region, Grimsby) meeting to discuss the transit hub and to seek input into the study.

We will keep you posted on the progress of the TMP and relevant follow up work. Please contact me if you have questions.

Regards,

Mohan Philip, M.Eng.
Project Manager
Capital Planning & Implementation
Public Works Dept., City of Hamilton
320 - 77 James Street North
Hamilton, ON L8R 2K3
Tel: 905-546-2424 Ext. 3438
Fax:905-546-4435
mohan.philip@hamilton.ca

DILLON
CONSULTING

MINUTES OF MEETING
MEETING NO. 3

FILE:	07-8995-1000	
DATE:	April 17, 2008	
LOCATION:	City of Hamilton – City Centre – Room 320 A	
PURPOSE:	To discuss the TMP Process and Findings with the Region of Niagara	
PRESENT:	***City of Hamilton:***	Lisa Zinkewich Mohan Philip Brenda Khes Alissa Mahood Andrea McDonald Heather Mitchell
	Region of Niagara:	Eric Flora
	Dillon Consulting:	Alvaro Almuina
DISTRIBUTION:	All Present, D. Kar	

ITEM **ACTION BY**

1. Overview by Mohan Philip
   - Mohan provided an overview of the study and schedule noting the final study report is scheduled to be distributed by June 2008.
   - Mohan also noted there is a secondary plan study underway looking at the various development areas in SCUBE in more detail.
   - It was also noted that the City of Hamilton has initiated a City-wide truck route study evaluating all truck route designations including Fruitland Road.
   - Eric noted the Region of Niagara has deferred the need for additional capacity across the escarpment to the Nigara-GTA corridor study currently underway by MTO. He further noted that with the opening of the Red Hill Expressway, additional capacity across the escarpment may not be an issue.
   - It was noted that this conclusion is supported by the findings of the Hamilton City-wide TMP and the SCUBE TMP.

2. Secondary Plans

- It was noted the City will be undertaking a visioning exercise with key stakeholders on the secondary plans for SCUBE on May 2, 2008. The public may attend the visioning exercise only as spectators. It is expected that the draft land use options will be developed by the end of the year. Public-wide input will be sought at that time.
- Mapping is being updated to clarify greenbelt/urban boundary definitions as there have been recent changes issued as a result of OMB hearings.
- Current applications before the City include Mady Lands (southwest quadrant of Fifty Road and QEW) and Flying J in the southeast quadrant of the same intersection.
- Eric referenced a recently released study from MTO on Car Pool Lots along the QEW. It was noted that the following roadways were identified as potential Car Pool Lot sites: Fruitland, Casablanca, Lincoln and Ontario.
- It was also noted that a GO Station was also being contemplated at Casablanca gateway centre including a Car Pool Lot and Kiss'n Ride
- Eric will contact MTO to release the MTO Car Pool study to the City of Hamilton. — Eric Flora
- There was general agreement that the proposed transit terminal in the TMP (at the southwest quadrant of Fifty and QEW) was an appropriate recommendation. It was noted there is an active proposal from Mady Development to develop this site. The integration of the terminal would need to be incorporated in development plans for this area.

3. Discussion on Boundary Matters of Common Interest

- There was general discussion about items/issues of common interest including:
    - Ensuring cycling routes connect across the boundary between the Region and City
    - Identifying Right-of-way on boundary roads such as Highway 8 and sharing requirements as there is likely to be differences in roadway classification between the two agencies. It was noted the City of Hamilton is currently undertaking a right-of-way study for major roadways
    - Eric noted the Region does not designate truck routes on its roadways
    - It was noted there is a Cycling Committee comprised of representatives from Hamilton, Region of Niagara and Halton Region meets annually to discuss common cycling matters.
    - Region if undertaking a sustainability services study (a roads rationalization study)
    - A copy of the Region's Capital Programme was provided to the City of Hamilton

4. Fruitland Road
   - There was a general discussion on the status of Fruitland Road; noting that further investigations on this road are subject to the City's Truck Route Study. It was also noted that MTO's Car Pool Lot recommendation of Fruitland Road as a possible Lot location is not consistent with current planning on SCUBE.

ERRORS AND/OR OMISSIONS

Minutes of this meeting were prepared by Alvaro Almuina. Please advise Alvaro Almuina of any errors or omission to these minutes at aalmuina@dillon.ca.

-----Original Message-----
From: Bob LeRoux [mailto:BLeRoux@town.grimsby.on.ca]
Sent: Thursday, April 10, 2008 2:00 PM
To: Philip, Mohan
Cc: Keith Vogl; Ken Brothers (E-mail); Joe Cousins (E-mail)
Subject: SCUBE _ Transportation Master Plan

Further to the 1 March 08 Newsletter regarding the SCUBE (Stoney Creek Urban Boundary Expansion) Transportation Master Plan being developed by the City of Hamilton we have the following comments:

- Will the study be identifying and mitigate if required , new development transportation impacts on the Town of Grimsby and Region of Niagara roads to the east ,

- Historically the lack of safe and adequate truck escarpment access has been a major concern to residents & Councils along current escarpment routes , to the extent that a joint Niagara /Hamilton Regional study took place to address these issues (Niagara Escarpment Crossing Study - 1997). Will the next stage of this Escarpment Study (EA process) be carried out prior to allowing the new SCUBE area to open to development ?

- Although the boundaries for your study area do not extend above the escarpment the possible future escarpment truck route improvements may significantly influence transportation corridors through the study area for the access to the QEW. As a adjacent municipality that has had to deal with Hamilton generated truck flow through the escarpment , we require these issues be dealt with.

-----Original Message-----
From: Philip, Mohan [mailto:mphilip@hamilton.ca]
Sent: Friday, April 11, 2008 10:53 AM
To: Bob LeRoux
Subject: RE: SCUBE _ Transportation Master Plan

Hi Bob,

Thanks for providing us with your concerns on this study.

The City of Hamilton has just commenced a City Wide Truck Route Study. The concerns raised by you regarding the truck routes could be addressed effectively through that study. I will pass your concerns to that study group as well.

Regarding SCUBE Transportation study, we have scheduled a meeting with the Niagara Region Staff for Thursday, April 17th, 9.00 - 11.00 to discuss the transportation issues. We would appreciate if you could also attend or send in your representative for the meeting. Please let me know at the earliest,

Could you please also let me know your full mailing addresss for including in our study circulaion list.

Thanks
Mohan Philip, M.Eng.
Project Manager
Capital Planning & Implementation
Public Works Dept., City of Hamilton
320 - 77 James Street North
Hamilton, ON L8R 2K3
Tel: 905-546-2424 Ext. 3438
Fax:905-546-4435
mphilip@hamilton.ca

From: Philip, Mohan [mailto:Mohan.Philip@hamilton.ca]
Sent: Tuesday, August 12, 2008 3:56 PM
To: Wijesooriya, Anil (ORC)
Cc: Panicker, Elizabeth
Subject: FW: QEW/50

Hi Anil,

The Stoney Creek Urban Boundary Expansion (SCUBE) transportation master plan study is underway. We are about to complete the phases 1 & 2 of the Municipal class EA process. The study recommends a inter-regional, multi-modal transportation hub on the lands bounded by South Service Road on the North, Fifty Road on the east, Rail line on the south, and Winona on the west. The exact area and shape of land required and the impact on MTO parcel is not known at this stage. The minimum land requirement is roughly estimated as 15 acres. The City has plans to undertake a separate detailed study for this with input from MTO, GO Transit, Town of Grimsby, CN rail etc.. We will inform you of the study upon commencement.
Please contact me if you have questions.

Thanks
Mohan Philip

-----Original Message-----

From: Gordon.LUNG@HydroOne.com [mailto:Gordon.LUNG@HydroOne.com]
Sent: Friday, June 06, 2008 12:02 PM
To: Almuina, Alvaro
Cc: charles.esendal@HydroOne.com
Subject: EA_10091 City of Hamilton - Stoney Creek Urban Boundary Expansion EA Study

June 6, 2008

Dear Alvaro Almuina,

Please find our response for the subject project.
Should you have any questions, please do not hesitate to contact:

Charles S. Esendal, P.Eng., MBA
Sustainment Manager
Lines Information Systems & Programs

☎: (416) 345-5931
: charles.esendal@HydroOne.com

Regards,
Gordon Lung
Transmission Lines Sustainment
System Investment

Hydro One Networks, Inc.
483 Bay Street,
TCT15-A11, North Tower
Toronto, Ontario
M5G 2P5

☎: (416) 345-6492
: gordon.lung@HydroOne.com

hydro one

ENVIRONMENTAL ASSESSMENT

Project Name	Stoney Creek Urban Boundary Expansion Class EA		
Date	03/20/2008	HO No.	10091
Name	Alvaro Almuina aalmuina@dillon.ca	Municipality	Hamilton
Tel. No.	(905) 229-4647 ext. 2455	Intersection	East of Fruitland Rd, North of Highway 8
Company	Dillon Consulting Limited	Land Use	Urban boundary expansion

In our initial review, we have confirmed that Hydro One Transmission Facilities are located within your study area.

Please allow appropriate lead-time in your project schedule in the event that relocation or modifications of our facilities are required, or an outage is needed that may not be readily available.

Potential impacts on Distribution facilities are usually of a lesser degree and these will be managed through our field offices. See attached.

In planning, please note that developments should not reduce line clearances and limit access to our facilities at any time. Any construction activities must maintain the electrical clearance from the transmission line conductors as specified in the Ontario Health and Safety Act for the respective voltages.

The integrity of the structure foundations must be maintained at all times, with no disturbance of the earth around the poles, guy wires and tower footings. There must not be any grading, excavating, filling or other civil work close to the structures.

Note that existing rights of ways may have provisions for future lines or already contain secondary land uses (i.e. pipelines, water mains, parking, etc). Please take this into consideration in your planning.

Once details are known and it is established that your development will affect Hydro One facilities including the rights of way, please submit plans that detail your development and the affected Hydro Facilities to:

Kent Taylor, Hydro One Real Estate Management
185 Clegg Road, Markham L6G 1B7
Phone: (905) 946-6230, Fax: (905) 946-6287
kent.taylor@hydroone.com

Please note that the proponent will be responsible for costs associated with modification or relocation of Hydro One facilities, as well as any added costs that may be incurred due to increase efforts to maintain our facilities.

Please be advised that this is only a preliminary assessment based on current information. Upon receipt of more detailed plans Hydro One Networks Inc. will provide additional comments.

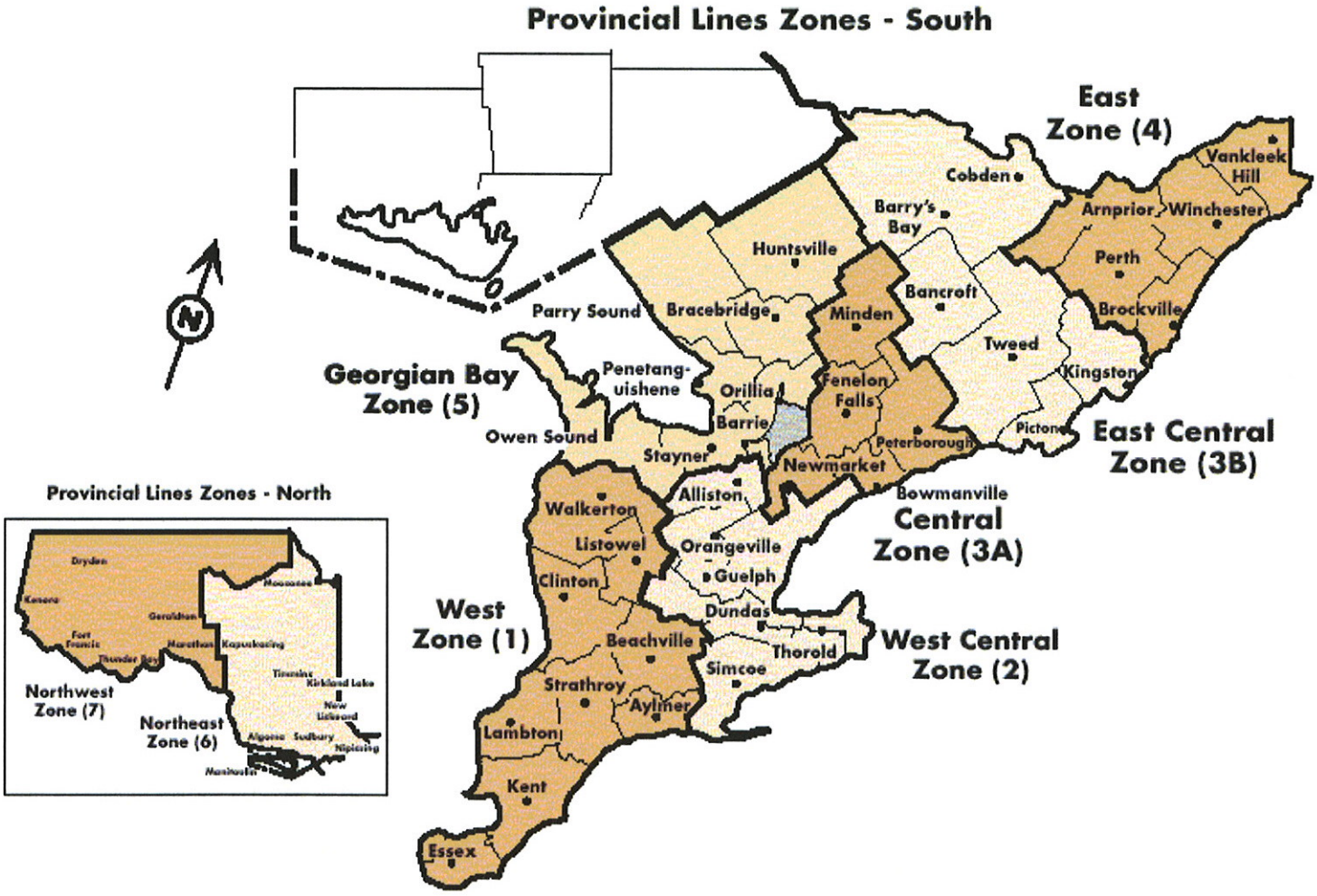
If you have questions or concerns regarding specific clearances or Hydro One right of way situations, please feel free to contact:

Charles S. Esendal, P.Eng., MBA
Transmission Lines Sustainment
Hydro One Networks, Inc.
483 Bay Street, TCT15, North Tower
Toronto, Ontario,M5G 2P5
Phone: (416) 345-5931
charles.esendal@HydroOne.com

ATTACHMENT

Hydro One Initial Contact List

Zone #	Zone Name	Telephone #	Fax #	E-mail
1	West	800-957-7756 X 3252	519-423-6971	zone1scheduling@HydroOne.com
2	West Central	905-627-6050	905-627-6059	WestCentralZoneScheduling@HydroOne.com
3A	Central	888-871-3514 x 3341	705-743-9890	zone3ascheduling@HydroOne.com
3B	East Central	866-646-4619	613-967-3582	eastcentralzonescheduling@hydroone.com
4	East	866-288-8874 or 613-267-2154	613-267-7248	EastZoneScheduling@HydroOne.com
5	Georgian Bay	888-238-2398 and press 2	705-727-4803	zone5scheduling@HydroOne.com
6	Northeast	888-835-9444 x 309	705-566-8093	zone6scheduling@HydroOne.com
7	Northeast	807-346-3823	800-932-6171	northwestzonescheduling@hydroone.com



Transit

20 Bay Street • Suite 600
Toronto, Ontario, Canada M5J 2W3
20 rue Bay, bureau 600
Toronto (Ontario) Canada M5J 2W3

Phone: (416) 869-3600 ext. 5305
Fax: (416) 869-1563
Email: jeff.bateman@gotransit.com

July 22, 2008

Mr. Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario
L8R 2K3

Dear: Mr. Philip

Subject: Transportation Master Plan - Stoney Creek Urban Boundary Expansion

GO Transit has reviewed materials presented with respect to the City of Hamilton Transportation Master Plan study for the Stoney Creek Urban Area Expansion. We are generally supportive of the directions undertaken to-date and commend the City of Hamilton for its proactive approach in assessing the transportation needs of the Stoney Creek Area to 2021.

With respect to the proposed transportation hub at the south west quadrant of 50 Road and South Service Road, we offer the following comments:

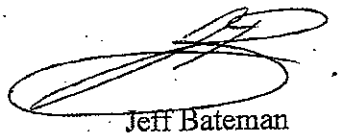
- GO Transit and the Ministry of Transportation are jointly constructing a new Park and Ride facility at Casablanca Road/QEW in anticipation of future Niagara GO bus service. Construction of this lot is expected to commence in spring 2009. This location also has the potential to accommodate a future GO Rail station.

- The close proximity of Park and Ride facilities at Casablanca Road to the proposed transportation hub at 50 Road/South Service Road will likely reduce GO Transit's interest in serving this location. However, GO Transit will not preclude the opportunity to serve this location in the future if there is a business case to do so. (e.g. dependent on the surrounding development and market demand at this location).

It should be noted that GO Transit is in the process of identifying a permanent Park and Ride location for the Stoney Creek area. GO Transit's preference would be a location in the QEW /Centennial Parkway area and we would appreciate any assistance from the City of Hamilton in identifying possible sites with direct access to the QEW.

We continue to be available to assist this important initiative as required. Please contact me or Mike Sone at (416) 869-3600 ext. 5402 if you have any questions or require any clarification.

Sincerely,



Jeff Bateman
Senior Planning Officer

Cc. Mr. Alvaro Almuina - Project Co-ordinator, Dillon Consulting Limited
Mr. Mike Sone, GO Transit

Regional Engineering
Engineering Services

Canadian National Railway
1 Administration Road
P.O. Box 1000
Concord, Ontario
L4K 1B9
Tel.: 905-669-3155
Fax: 905-760-3406

March 20, 2008

Email: eplanning@hamilton.ca

Mr. Mohan Philip, M. Eng.
Project Manager
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3

Re: Stoney Creek Urban Boundary Expansion
Transportation Master Plan – Class Environmental Assessment

Thank you for your notice dated October 19, 2007 informing us of the study commencement and scheduled Public Information Center for the above noted project.

CN has no concerns at this time, and does have interest in this project due to the existing at-grade railway crossings within the project area on the Grimsby Subdivision. Please be informed that if a crossing is to be widened or upgraded, it may take up-to 18 months or longer, from the date the Purchase Order is received, to complete the Automatic Warning Device modifications.

CN will not be able to attend the Public Information Center No.1 scheduled for April 2, 2008 but requests to be kept informed throughout the project.

Sincerely,
Darylann Perry for
John F. MacTaggart, P.Eng.
Senior Engineering Services Officer

-----Original Message-----
From: Craigs, Jeremy [mailto:CRAIGSJ@tc.gc.ca]
Sent: Tuesday, April 08, 2008 10:56 AM
To: eplanning@hamilton.ca; Almuina, Alvaro
Subject: Class EA - Stoney Creek Urban Boundary Expansion Transportation Master Plan NEATS 12256

Thank you for your letter regarding the above referenced environmental assessment.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to Suzanne Shea, NWP Officer at (519) 383-1866.

Please note that certain approvals under the Navigable Waters Protection Act or Railway Safety Act trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

<<Annex A Navigable Waters Protection Act Application Addresses.doc>> <<TC Application Form.pdf>> <<TC Application Guide.pdf>> Please contact me should you wish to discuss this further.

Regards,
Jeremy Craigs
Environmental Officer
Environment and Engineering
Transport Canada - Ontario Region (PHE)
4900 Yonge Street, North York, ON M2N 6A5
p: 416-952-0502
f: 416-952-0514
P Please consider the environment before printing this email.

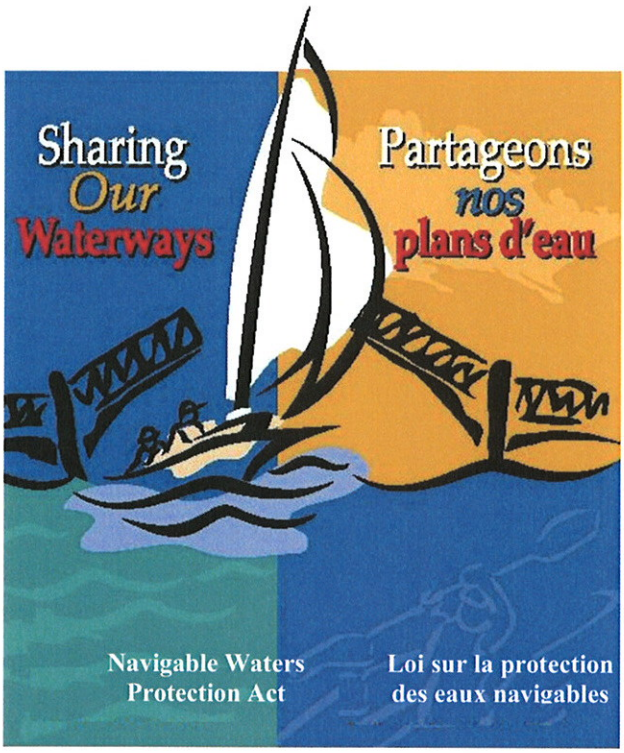
Transport Canada
Marine

Transports Canada
Maritime

Ontario Region
&
Prairie & Northern Region

NAVIGABLE WATERS PROTECTION ACT

APPLICATION GUIDE



Navigable Waters Protection
201 Front Street North
Suite 703
Sarnia, Ontario, N7T 8B1

Phone (519) 383-1865 Fax (519) 383-1989

Canada

APPLICATION GUIDE CHECKLIST

Before returning your application form, the following **must** be included otherwise your application will not be processed:

- ☐ Name of property owner & description of the project site
- ☐ Complete mailing address of the property owner
- ☐ Plot or survey plan with project shown & adjacent landowners
- ☐ Map or chart with arrow to show location of project
- ☐ Plan view of the project (with dimensions)
- ☐ Side view of project (with dimensions)
- ☐ Location for disposal of dredge spoils (if applicable)
- ☐ Name of the contractor/firm doing the work (if applicable).

APPLICATION GUIDE

INTRODUCTION

The Navigable Waters Protection Act (NWPA) revised Statutes of Canada, 1985, is one of the oldest pieces of federal legislation. It first became law on May 17, 1882. The principle objective is to protect the public right of navigation by prohibiting the building or placement of any "work" in, upon, over, under, through, or across a navigable water without the authorization of the Minister of Transport. The jurisdiction of the legislature begins at the high water mark. Therefore structures that are between low and high water marks will require approval under the NWPA. The administration of the NWPA was recently transferred to Transport Canada.

Important Notice

An approval granted by the Minister is neither a general approval of construction nor an authorization in respect of any law, excepting the Navigable Waters Protection Act. An authorization may also be required from the Minister under the Fisheries Act; you should contact the Department of Fisheries & Oceans for such a determination. In addition, contact should also be made with local municipal, provincial and other government offices to determine if other approvals will be required for the proposal.

What is a Navigable Waterway?

A navigable water is any body of water capable of being navigated by floating vessels of any description for the purpose of transportation, commerce or recreation. This includes both inland and coastal waters. The authority to determine the navigability of a waterway and consequently the requirement for an application under the NWPA, rests with the Minister of Transport or his/her designated representative.

Examples of Some Types of "Works" Requiring Authorization

- any bridge, boom, dam, causeway, wharf, dock, boathouse, intake, outfall, etc.;
- dredging; dumping of fill, retaining wall, groyne, breakwater;
- submarine or overhead cables, tunnel, pipeline;
- aquaculture facilities;
- any other device, structure, or thing whether similar in character to the above or not.

Permit Process

There are basically two types of processes followed in reviewing an application under the Act:

- **Formal Approval**
  The formal approval process is followed when NWPA officials determine that your work or project poses a substantial interference with navigation. Under the requirements of the Act all bridges, booms, dams, and causeways must be processed by formal approval.

- **Letter of Exemption**
  The exemption process is followed when NWPA officials determine that your work or project does not pose a substantial interference with navigation.

How to Make an Application

1. Application Form - Complete, sign and date the enclosed application form.

2. Site Location - Obtain 6 copies of a map or topographic chart of your area. Please include enough details to simplify the location of the proposed project. If not already shown, add the following:

- Name of the waterbody in which the project is located;
- Location of the proposed project (draw an arrow showing the exact location of the site on the map);
- Approximate latitude and longitude of the project

3. Plot Plan - One (1) copy of your plot or survey plan, showing adjacent property owners (include names), with the location of the proposed work clearly indicated.

4. Plan View (6 copies) - The plan view shows the proposed project as if you were looking straight down on it from above. Provide these drawings, to scale or dimensioned, containing sufficient detail to clearly show your proposed project, including:

- Any existing works presently on your property or adjacent properties such as docks, slipways, breakwaters etc.;
- Existing shorelines;
- Dimensions (length, width, etc.) of the project All dimensions should be from the ordinary high water mark.. See sample sketches for further details;
- Average water depth around the project;
- Scale of drawing.
- North arrow.

5. Profile View or Section View (6 copies) - The profile view is a scale drawing that shows the side, front, or rear of the proposed structure as it would look if you were standing to the side of it; the section view is a scale drawing that shows the proposed structure as it would look if sliced internally for display. Clearly show the following:

- Dimensions of the project, including width, height etc. See the sample sketches for further details;
- The ordinary high water mark (O.H.W.M.) and high water mark (H.W.M.);
- Existing and proposed ground contours;
- Height above the bed of the waterway;
- The type of construction material to be used;
- Scale;

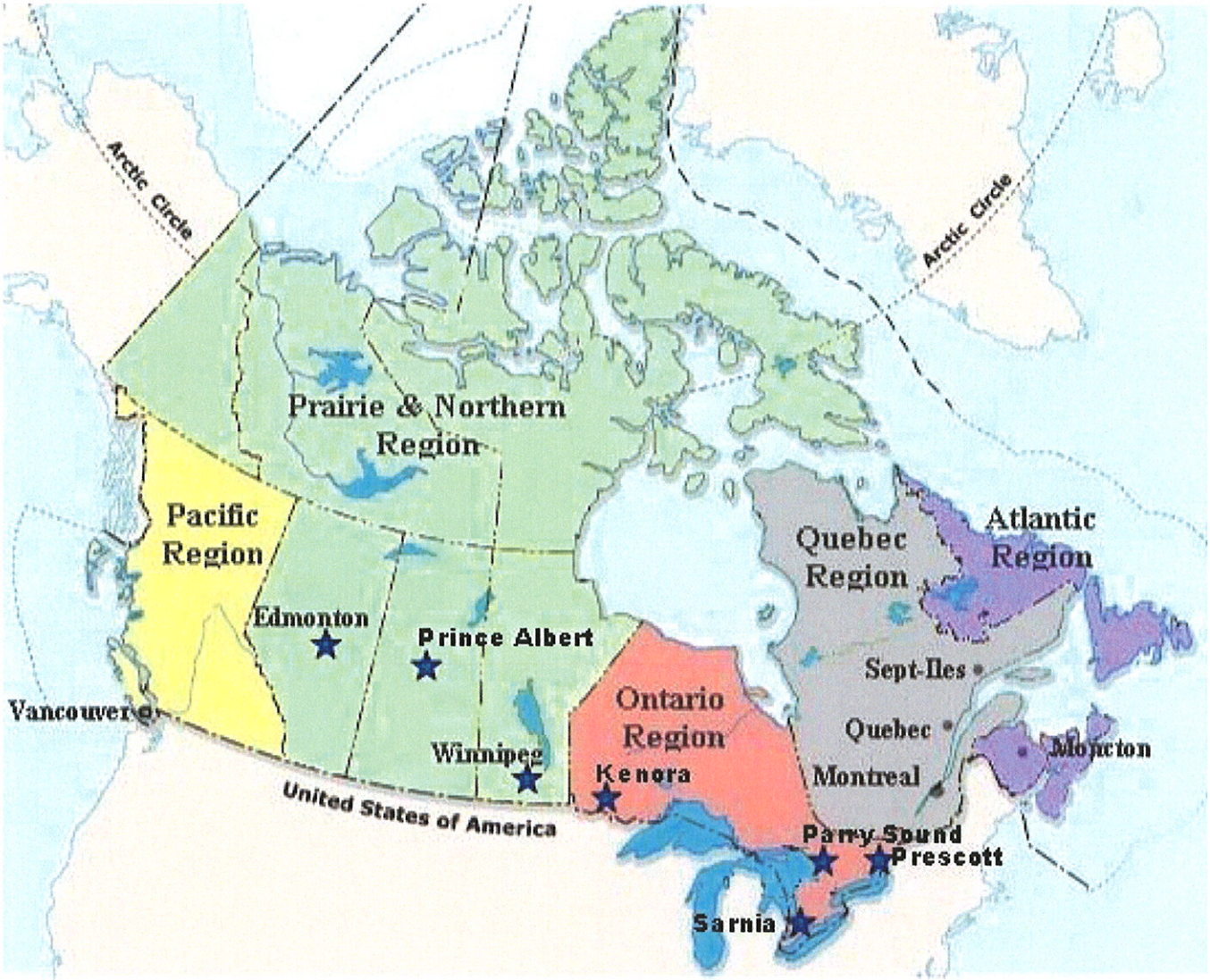
Other information

a) If any information is missing, your application may be delayed; therefore please ensure that your application, plans, etc. are complete.
b) Please be advised that it is recommended that applications for approval under the NWPA be made well in advance of the anticipated start-up date, to allow Coast Guard officials to do a complete investigation and possible environmental assessment of your project, which may take several months.
c) Advise whether you have received or applied for a waterlot lease or permit, and if so, with whom you have applied and when.
d) Provide a proposed construction schedule, advising when you plan on starting the project.
e) If you are not the upland owner, provide the owners consent in writing.
f) Provide an environmental assessment or study if one has been prepared.

Where to Make an Application

In accordance with the map below, please submit applications for approval to the addresses listed on Annex A "Navigable Waters Protection Act Application Addresses".

Ontario Region & Prairie & Northern Region
NWP PROGRAM – AREA OFFICES



Annex A Navigable Waters Protection Act Application Addresses

To apply for approval of works or for additional inquiries about the Navigable Waters Protection Act or Program, please contact the appropriate office below.

NWP Regional Office - South Western Ontario

Navigable Waters Protection Program

100 Front Street South,

Sarnia, ON N7T 2M4

NWPA Prescott Office - Eastern Ontario

Navigable Waters Protection Program P.O. Box 1000
401 King St. W
Prescott, ON K0E 1T0

NWPA Parry Sound Office - North Eastern Ontario

Navigable Waters Protection Program
28 Waubeek St.
Parry Sound, ON P2A 1B9

NWPA Kenora Office - North Western Ontario

Navigable Waters Protection Program P.O. Box 649
1100 3rd Ave. S
Kenora, Ontario P9N 3X6

NWP Winnipeg Office - Manitoba

Navigable Waters Protection Program Freshwater Institute
501 University Crescent
Winnipeg, MB R3T 2N6

NWP Prince Albert Office - Saskatchewan

Navigable Waters Protection Program
125 - 32nd Street West
Prince Albert, SK S6V 7H7

NWP Edmonton Office - Alberta

Navigable Waters Protection Program

4253 - 97th Street

Edmonton, AB T6E 5Y7

Navigable Waters Protection Act
Request for Project Review

Is this the first time you are requesting a review for this project?			
Yes ☐	No ☐		

Section A — Proponent / Owner /Other Information

Name of Proponent/Owner:		
Mailing Address:		
Street Address (if different than above):		
City/Town:	Province/Territory:	Postal Code:
Tel. No. (Residence):	Tel. No. (Work):	Tel. No.: (Other)
Fax No:	E-mail Address:	
Name of Contractor/Agency/Consultant (if applicable):		
Mailing Address:		
Street Address (if different than above):		
City/Town:	Province/Territory:	Postal Code:
Tel. No. (Residence)	Tel. No. (Work):	Tel No. (Other)
Fax No:	E-mail Address:	

Section B — Location of the project and physical description of the site

Name of Nearest Community (*City, Town, Village*):	Municipality / District / County:
Legal Description (Lot, Concession, Township, Section, Range):	Name of Primary Watercourse (River, Lake, Bay)
Access Road to Proposed Work Site (e.g., *route number, highway series number or street name/number if urban area, etc.)*	
Topographic/Chart No. (if applicable)	Water lot Lease or Permit (if applicable)
Description of shoreline, if applicable *(i.e., ground type, vegetation, slope, other)* *Note: Enclose photographs:*	Description of watercourse *Note: Enclose photographs:*
Average width and depth of waterway at the project site:	Type of navigation (recreational/commercial):

Section C — Description of Project (Please attach additional information – see Section D)

What is the proposed project? *(dock, dam, bridge, aquaculture site, etc.)* *Note: Detailed description of work must be attached.*	
Proposed Start Date:	Proposed Completion Date:
Status of the Project (circle): New Existing Addition Repair	Is the work permanent or temporary?

Section D — What to send to Navigable Waters Program with Request for Project Review

Attach the following documents/information:

- Detailed project description with construction schedule
- Detail of any temporary works and method of construction activities
- Property ownership status (if you are not the owner, attach a letter of permission from the owner)
- Map or chart to show location of project (6 copies)
- Sketch or drawing of project, including side and top view and showing dimensions of the project (6 copies)
- Survey plan or sketch with dimensions indicating the location of existing buildings, shoreline structures, property lines, high and low water marks, and adjacent properties
- Current photographs of the proposed work site (photos of open water period where possible)
- A list of any equipment that may be used during the project

Date:	**Signature:**
For NWPA Use only:	
NWPA #:	

APPENDIX B-3
Public Information Centre Display Boards and Handouts

Welcome to
Public Information Centre No. 1

Stoney Creek Urban Boundary Expansion (SCUBE) Area Transportation Master Plan

Wednesday April 2, 2008
7.00 pm to 9.00 pm
Chandelier Place Reception and Conference Centre

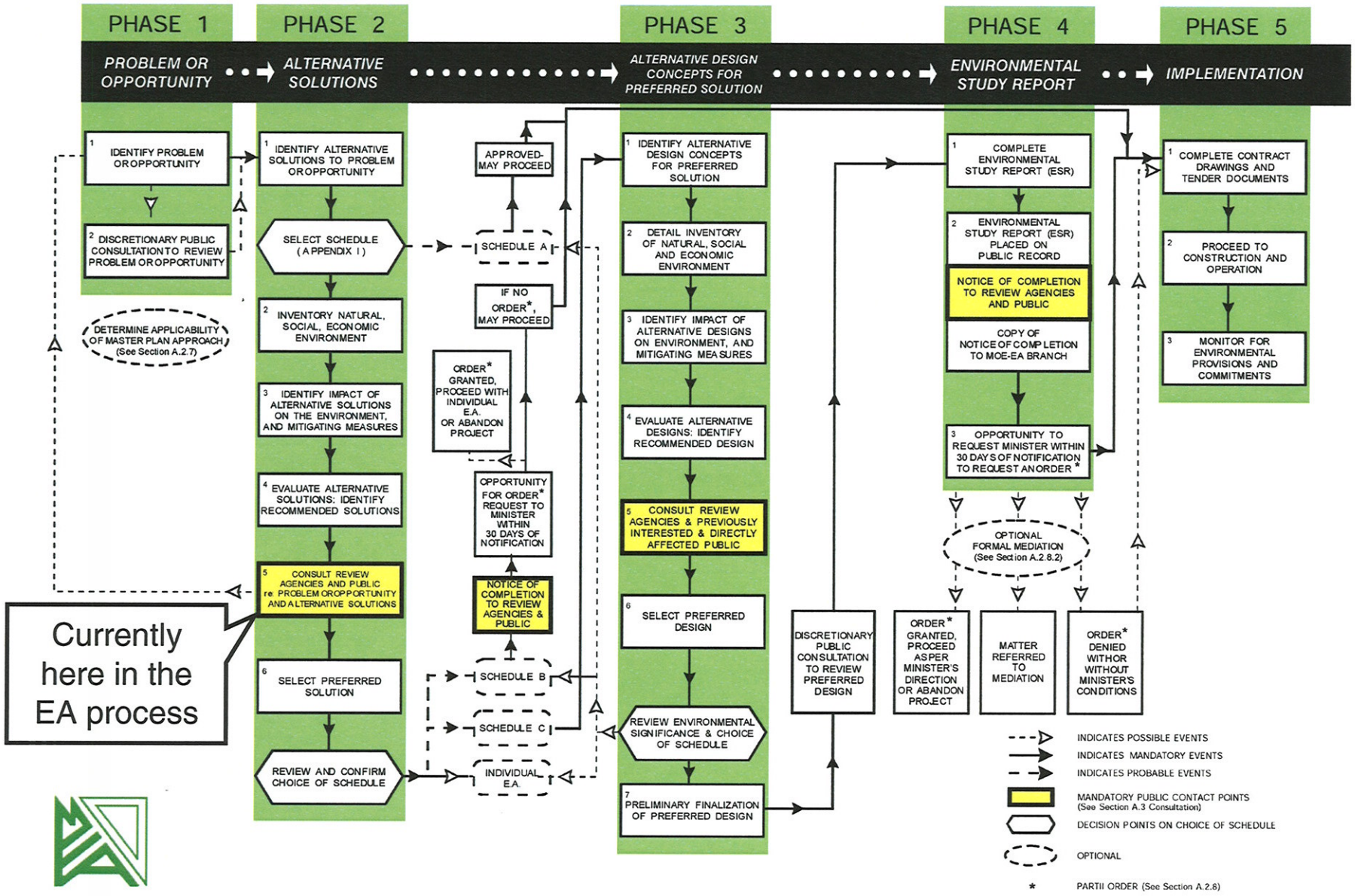
Hamilton

DILLON CONSULTING

Study Purpose

- Serves as Phase 1 & 2 of the Municipal Class Environmental Assessment (EA)
- **Phase 1**:
  - Identification of Problem or Opportunity
- **Phase 2**:
  - Identification of alternative solutions to any identified problems
  - Development of Transportation Master Plan for SCUBE

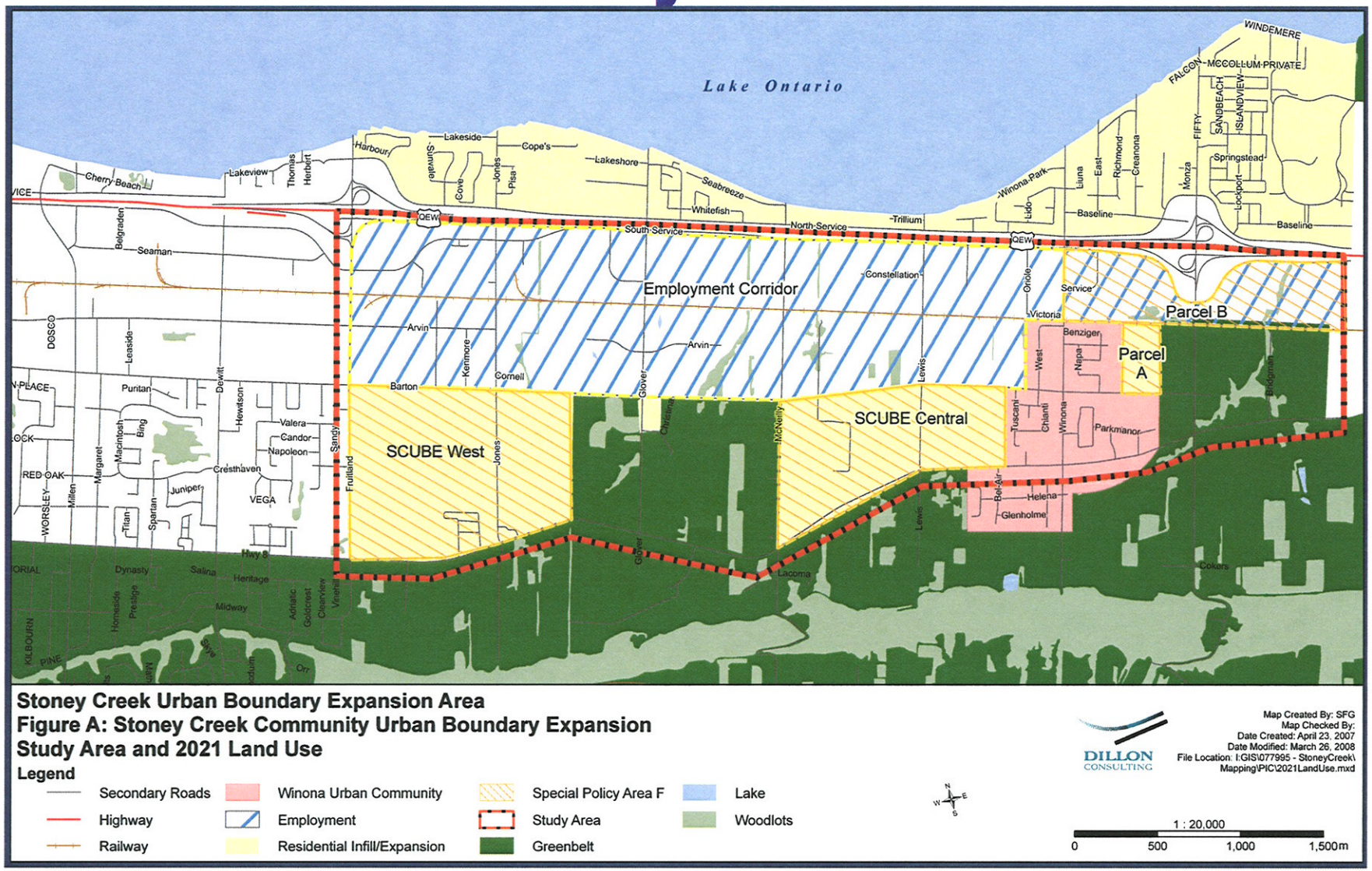
Municipal Class EA Process



Study Objectives

- Prepare a transportation strategy that supports the addition of 650 gross acres to Stoney Creek Special Policy Area F in the lower Stoney Creek/Winona sub-area, (Stoney Creek Urban Boundary Expansion Area - "SCUBE").
- Identify any problems or opportunities and related alternative solutions to transportation issues to 2021
- Identify and protect future transportation corridors
- Integrate policies, programs, funding and infrastructure needs
- Identify preliminary cost estimates for transportation infrastructure improvement projects
- Develop a Transportation Master Plan for SCUBE
- Satisfy Phases 1 & 2 of the Municipal Class EA process

Study Area



Stoney Creek Urban Boundary Expansion Area
Figure A: Stoney Creek Community Urban Boundary Expansion Study Area and 2021 Land Use

Legend

- Secondary Roads
- Highway
- Railway
- Winona Urban Community
- Employment
- Residential Infill/Expansion
- Special Policy Area F
- Study Area
- Greenbelt
- Lake
- Woodlots

DILLON CONSULTING

Map Created By: SFG
Map Checked By:
Date Created: April 23, 2007
Date Modified: March 26, 2008
File Location: I:GIS\077995 - StoneyCreek\Mapping\PIC\2021LandUse.mxd

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Projected Growth in SCUBE

- The Regional Official Plan No.14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by the Ontario Municipal Board designated lands for the SCUBE area to allow urban development in Lower Stoney Creek
- Planned growth to occur in the SCUBE area to 2021 is estimated as:
  - Population: 7,200 to 13,100
  - Employment: 5,500 to 7,700
- SCUBE will be planned under the Places to Grow Plan for the Greater Golden Horseshoe

Scope of Study: Stage 1

- Develop a sub-area transportation model for SCUBE incorporating relevant studies / documentation and OMB decisions pertaining to growth in SCUBE
- Assess transportation infrastructure requirements for the existing and expansion areas (both minimum and maximum scenarios)
- Undertake operational modelling to determine more detailed impacts to the study area roadway network
- No screenline capacity "problems" identified to 2021 (as defined by the Municipal Class EA process)

Scope of Study: Stage 2

- Develop a Transportation Master Plan for the SCUBE area
- Identify key road links, required transit routes, cycling routes and other infrastructure requirements
- Identify transportation demand management objectives and required policies
- Identify appropriate right-of-way (ROW) for key corridors
- Develop financial strategy / monitoring program
- Review proposal to widen Highway 8 (from Dewitt Road to Fruitland Road)
- Identify opportunities for operational improvements

Guiding Principles – City TMP

In 2020, the City of Hamilton's transportation system will:

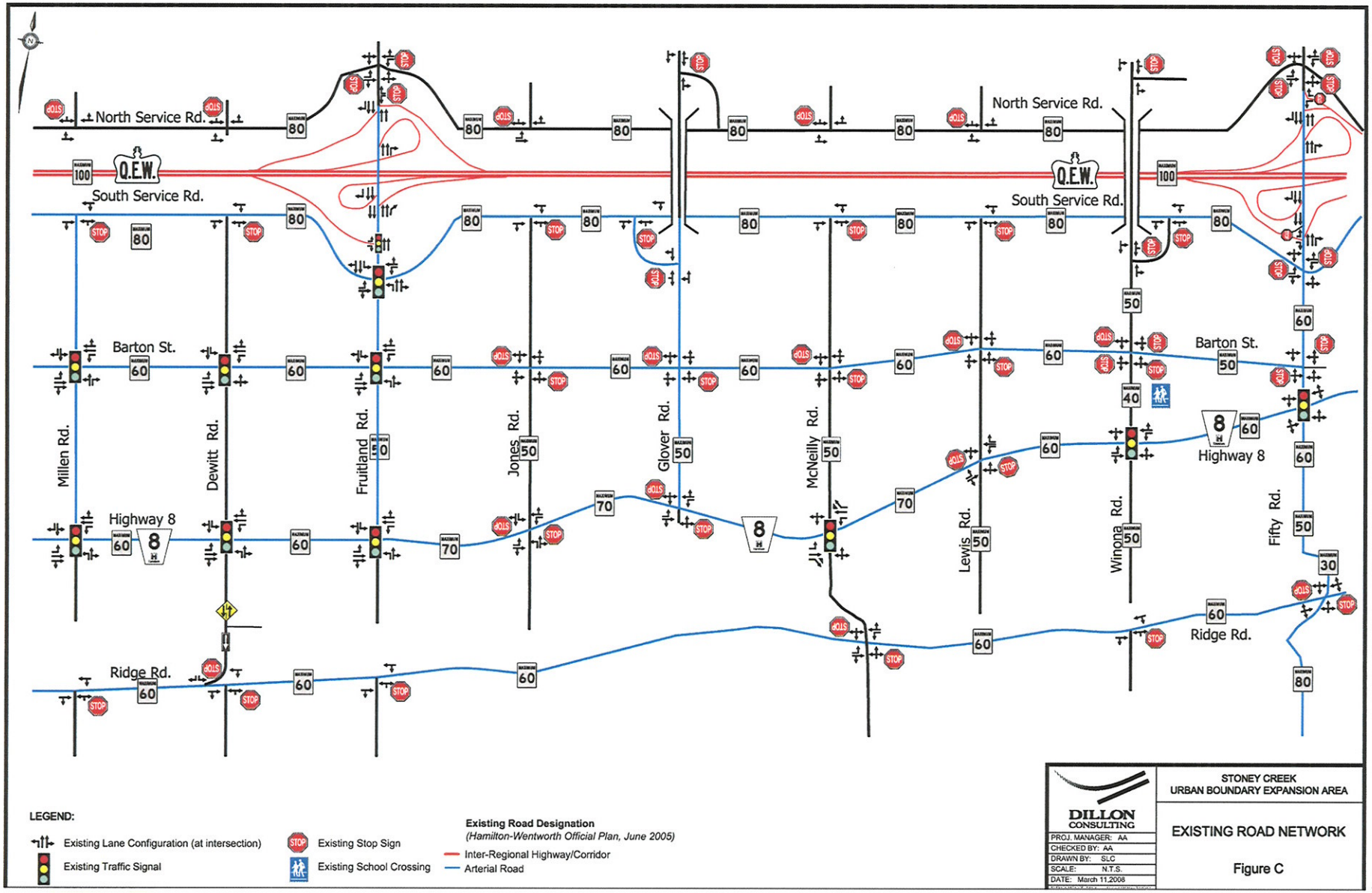
1. Offer safe and convenient access for individuals to meet their daily needs
2. Offer a choice of integrated travel modes, emphasizing active transportation, public transit and carpooling
3. Enhance the liveability of neighbourhoods and rural areas
4. Encourage a more compact urban form, land use intensification and transit-supportive node and corridor development
5. Protect the environment by minimizing impacts on air, water, land and natural resources
6. Support local businesses and the community's economic development
7. Operate efficiently and be affordable to the City and its citizens

NOTE: VISION 2020 is Hamilton's long term vision for a strong, healthy, sustainable future shared by local government, citizens, business, groups and organizations. It provides detailed information on the City of Hamilton's Sustainable Community Initiative.

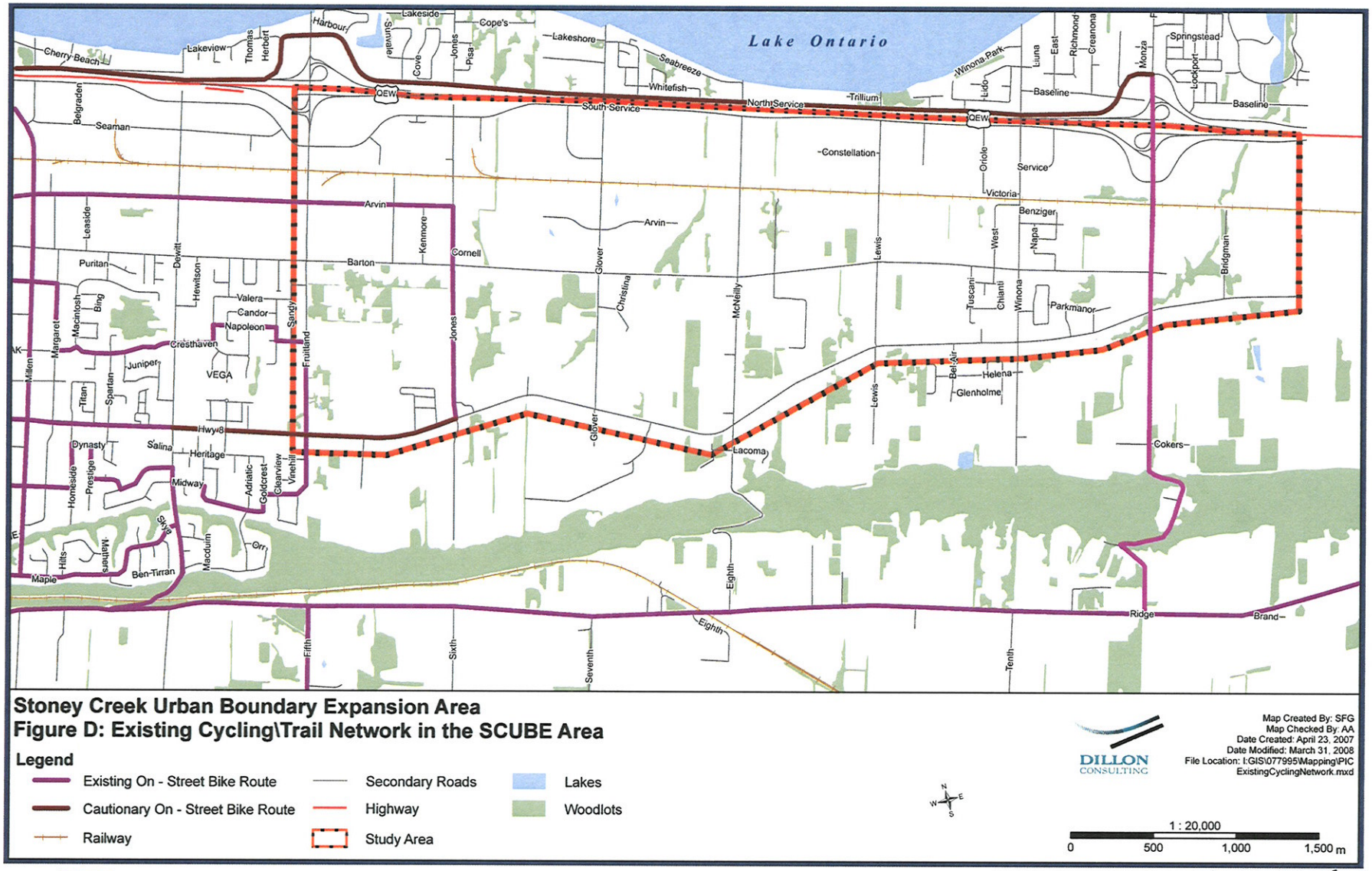
Observations

- There are no screenline level capacity issues in the study area road network, both in existing conditions and by 2021
- Operational issues on the roadway network may need to be addressed as development occurs
- Existing transit services in the study area are limited
- Existing cycling network provides little connectivity for utilitarian cyclists or recreational trail users

Existing Traffic Control Conditions



Existing Cycling / Trail Network



Stoney Creek Urban Boundary Expansion Area
Figure D: Existing Cycling\Trail Network in the SCUBE Area

Legend

- Existing On - Street Bike Route
- Cautionary On - Street Bike Route
- Railway
- Secondary Roads
- Highway
- Study Area
- Lakes
- Woodlots

DILLON CONSULTING

Map Created By: SFG
Map Checked By: AA
Date Created: April 23, 2007
Date Modified: March 31, 2008
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SCUBE Transportation System Strategy 2021

Road Network Improvements:

- Intersection and Roadway Improvements
  - Conduct detailed studies in future to confirm operational improvements at major intersections along Highway 8 and Barton Street
  - Widen Highway 8 and Barton Street to a 3-lane cross-section, with a Two-way left-turn lane at local intersections and separate left-turn lanes at major intersections
  - Where intersection improvements are proposed, assess the feasibility of a roundabout

SCUBE Transportation System Strategy 2021

Road Network Improvements:

- Highway 8 Improvements
  - Conduct a study to protect Right-of-Way to allow for future widening to a 5-lane cross-section with potential for a transit priority corridor/Bus Rapid Transit
  - Improvement should include cycling lanes
- Collector Road Network.
  - Extend collector road network in new development areas to improve access and connectivity

Stoney Creek Urban Boundary Expansion Area

Figure E: Proposed 2021 Intersection and Roadway Improvements

Legend

- Potential Capacity Increase (signalization or roundabout; new turning lanes)
- Potential Accommodation of Transit Priority Measures
- Widen for Continuous two-way left turn lane
- Secondary Roads
- Highway
- Railway
- Study Area
- Lakes
- Woodlots

DILLON CONSULTING

Map Created By: SFG
Map Checked By:
Date Created: April 23, 2007
Date Modified: March 11, 2008
File Location: I:GIS\077995 - StoneyCreek\PIC Mapping\2021RoadNetworkModifications.mxd

*As Indicated on the Draft Hamilton Transportation Master Plan

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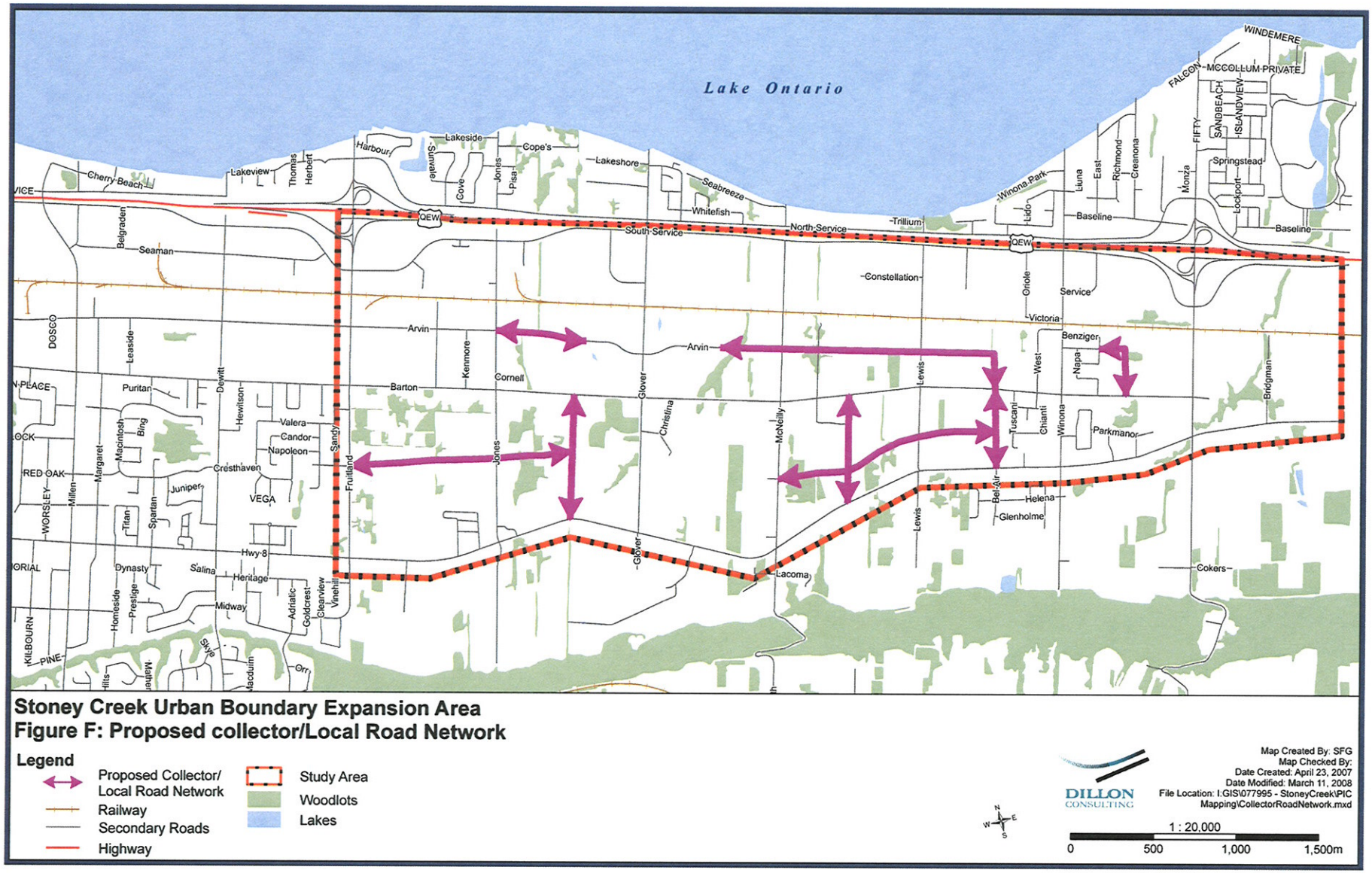

Stoney Creek Urban Boundary Expansion Area
Figure F: Proposed collector/Local Road Network

Legend

- Proposed Collector/ Local Road Network
- Railway
- Secondary Roads
- Highway
- Study Area
- Woodlots
- Lakes

DILLON CONSULTING

Map Created By: SFG
Map Checked By:
Date Created: April 23, 2007
Date Modified: March 11, 2008
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SCUBE Transportation System Strategy 2021

Fruitland Road

- A Class Environmental Study Report for a Fruitland Road Realignment from Highway 8 to Barton Street was completed in September 1992
- The 1992 report stated a review of the report would be required if construction of the proposed realigned road did not commence within a 3-year period
- In 1990 Council recommended that any construction of a realigned Fruitland Road be delayed until the urban boundary study was completed. The study is currently underway
- The 1992 Fruitland Road report is now considered to be outdated based on the Municipal Class EA Process

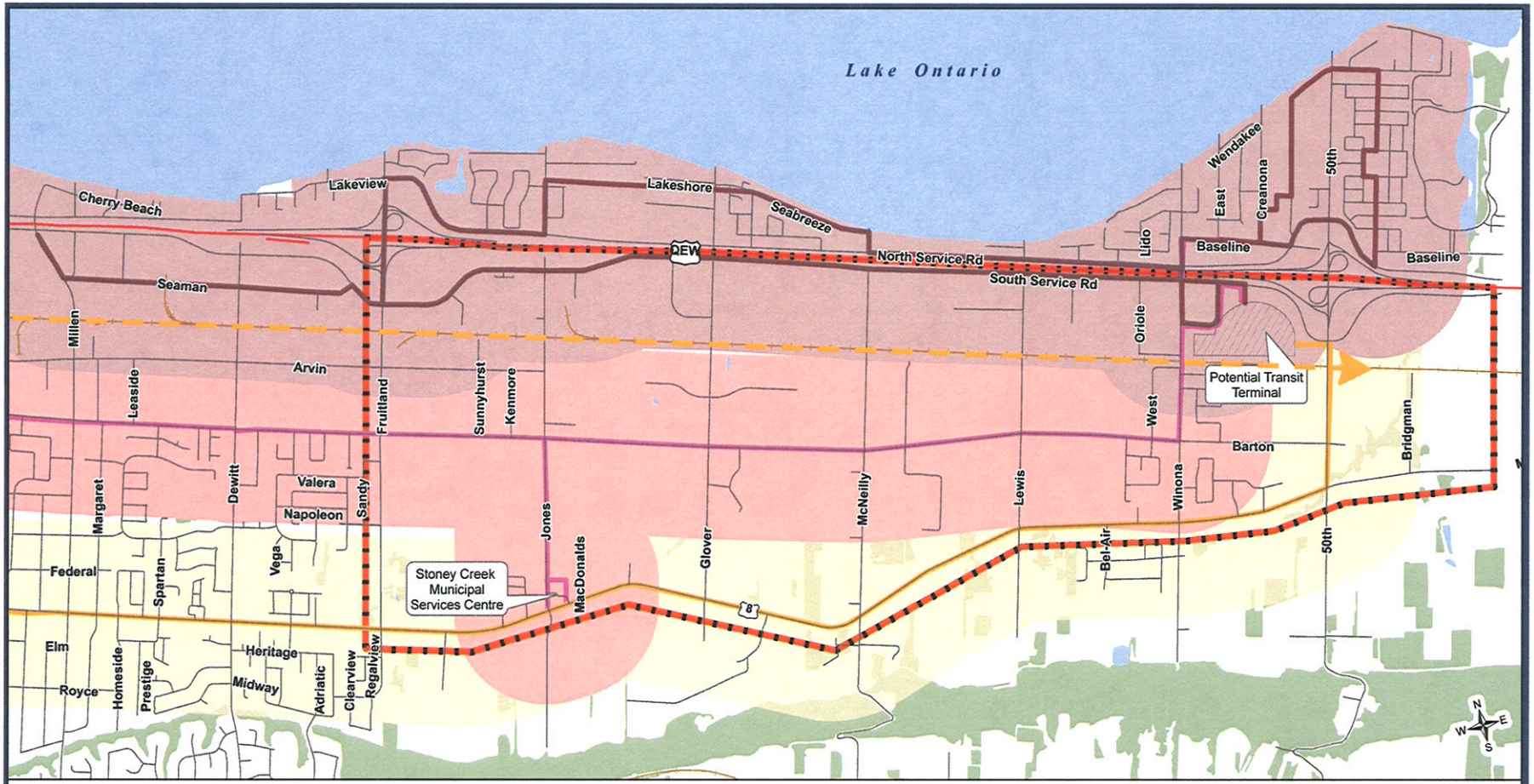
SCUBE Transportation System Strategy 2021

- SCUBE TMP Recommends a new Class EA be conducted on Fruitland Road generally between Barton Street and Highway 8, taking into consideration:
  - Previous studies: The City wide TMP study and Growth Related Integrated Development Strategy (GRIDS)
  - The outcome of ongoing studies: Stoney Creek Secondary Plan study, Truck Route Master Plan study (to be initiated soon) and the effect of opening Red Hill Valley Parkway.

SCUBE Transportation System Strategy 2021

Transit:

- Proposed Inter-regional Transit Terminal
  - Assess the feasibility of an inter-regional multi-modal transit terminal at the southwest corner of Fifty Road and South Service Road
  - In the short-term, secure lands (Parcel B) for this future terminal
  - Potential precursor to long-term passenger rail
- Transit Service Design
  - Develop east-west routes to service Highway 8, Barton Street and North Service Road / South Service Road



Stoney Creek Urban Boundary Expansion Area
Figure G: Proposed Stoney Creek Transit Service

Legend

- Proposed Transit Priority Corridor and Future BRT Route
- Proposed Local Transit Route A
- Proposed Local Transit Route B
- Potential Inter-Regional Transit Link
- Railway
- Secondary Roads
- Highway
- Study Area
- 500m Transit Route Buffer
- 500m Transit Route Buffer
- 500m Transit Route Buffer
- Woodlots
- Lakes

DILLON CONSULTING

Map Created By: SFG
Map Checked By:
Date Created: April 23, 2007
Date Modified: March 31, 2008
File Location: I:GIS\077995\Mapping\ProposedTransitNetwork.mxd

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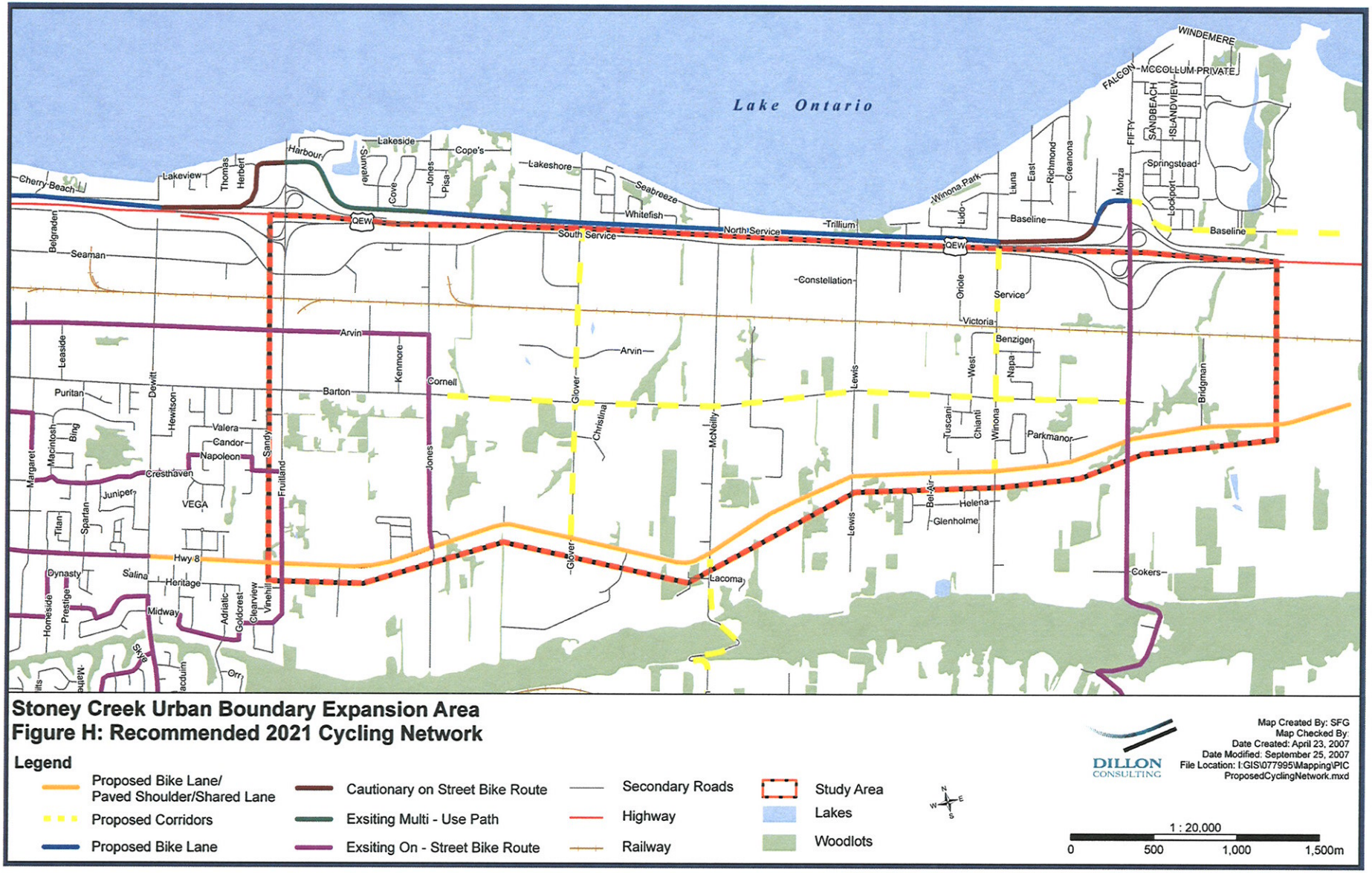
SCUBE Transportation System Strategy 2021

Transportation Demand Management (TDM):

- Develop a TDM Strategy as part of Hamilton Smart Commute Transportation Management Association (TMA)

Cycling and Trails:

- Create a comprehensive interconnected network of cycling routes throughout SCUBE



Stoney Creek Urban Boundary Expansion Area
Figure H: Recommended 2021 Cycling Network

Legend

- Proposed Bike Lane/ Paved Shoulder/Shared Lane
- Proposed Corridors
- Proposed Bike Lane
- Cautionary on Street Bike Route
- Exsiting Multi - Use Path
- Exsiting On - Street Bike Route
- Secondary Roads
- Highway
- Railway
- Study Area
- Lakes
- Woodlots

DILLON CONSULTING

Map Created By: SFG
Map Checked By:
Date Created: April 23, 2007
Date Modified: September 25, 2007
File Location: I:GIS\077995\Mapping\PIC ProposedCyclingNetwork.mxd

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Financial Considerations

Road Widening / New Alignment	2021 Transit Costs (Capital & Operations)	New Intersections / Traffic Management
➡ **City-wide TMP Identified Road Improvements Projects** *($40.6 M)* ➡ **Widen Hwy 8** to 3 lanes, from Fruitland Road to Fifty Road *(Subject to further study)* ➡ **Widen Barton Street** to 3 lanes, from Fruitland Road to Fifty Road *(Subject to further study)*	**Transit Capital Costs:** • Hwy 8 *($2.4 M)* • Barton Street *($3.6 M)* • North Service Road / South Service Road *($1.2 M)* **Transit Operating Costs (annually):** • Hwy 8 *($0.47 M)* • Barton Street *($1.03 M)* • North Service Road / South Service Road *($0.36 M)*	**Based on intersection analysis, 2021 horizon:** • 6 intersections identified for improvement along Barton Street & Highway 8 *(approx. $1.8 M)* • 4 intersections estimated for signalization in 2021 *(approx. = $0.8 M)*

Summary of Recommendations

Road Network Improvements:

- As development progresses, conduct detailed studies to confirm operational improvements at major intersections along Highway 8 and Barton Street (Schedule A+)
- Study the need to protect Right-of-way along Highway 8 (Schedule C)
- Undertake further studies to confirm road widening to a 3-lane cross section on Highway No. 8 and Barton Street (Schedule C)
- Fruitland Road Class EA -Subject to other ongoing studies (Separate EA to determine whether this will be a Schedule B or C project)

Summary of Recommendations

Transit Improvements:

- Feasibility study for inter-regional transit terminal
- Develop local TDM Strategy

Cycling Network Improvements:

- Ensure integrated and connected network

Next Steps

• Incorporate feedback from this Consultation Session into final report	May 2008
• Finalize report on the SCUBE TMP Study	May 2008
• Tentative Study Completion	June 2008
• Conduct Class EA Study on Fruitland Road	Tentative 2009
• Ensure Secondary Plans incorporate recommendations of the SCUBE TMP Study	On-going

THANK YOU FOR ATTENDING!

Please fill out a comment form and leave it in the comment box or respond by mail / email before April 18, 2008

Mohan Philip, M.Eng.
Project Manager
Capital Planning and Implementation
Public Works, City of Hamilton
77 James Street North, Suite 320
Hamilton, ON L8R 2K3
tel: (905) 546-2424 ext. 3438
fax: (905) 546-4435
email: ***eplanning@hamilton.ca***

Alvaro L. Almuina, M. Eng., P.Eng.
Project Manager
Dillon Consulting Limited
235 Yorkland Blvd., Suite 800
Toronto, ON M2J 4Y8
tel: (416) 229-4647 ext. 2455
fax: (416)229-4692
email: ***aalmuina@dillon.ca***

Please visit our project website for updates:

www.hamilton.ca/SCUBE-Transportation

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
PUBLIC INFORMATION CENTRE NO. 1
Wednesday, April 2, 2008

COMMENT SHEET

Please take a few minutes and provide us with your thoughts and comments on the information presented at this Public Open House. With the exception of all personal information, all comments will become part of the public record.

THANK YOU.

****

Name:_____

Address:_____

Email: _____

☐ I would like to be kept informed on the study progress.

Comments can be placed in the "comments box" or forwarded to one of the contacts below by April 18, 2008:

Mohan Philip, M. Eng.
Project Manager
Capital Planning and Implementation
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
eplanning@hamilton.ca

Alvaro Almuina, P.Eng.
Consultant Project Co-ordinator
Dillon Consulting Limited
235 York Boulevard, Suite 800
Toronto, ON M2J 4Y8
Phone: 905-229-4647, ext. 2455
aalmuina@dillon.ca

The project website: www.hamilton.ca/SCUBE-Transportation

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
PUBLIC INFORMATION CENTRE NO. 1
Wednesday, April 2, 2008

SIGN-IN SHEET

Name	Postal Mailing Address	Contact Information (phone, e-mail, etc.)

APPENDIX B-4
Summary of Comments and Responses

Stoney Creek Urban Boundary Expansion (SCUBE)
Summary of Comments

I.D.	Organization	Comment	Response/Action Taken
1	Ministry of Transportation	Please add me to your mailing list for the SCUBE project. Also, note that MTO's concerns relate to the impact of your study on the QEW. Regarding your Stoney Creek Urban Boundary Expansion project, at this point we expect that any works proposed that may have impacts on our ROW are or will be assessed in accordance with the Environmental Assessment Act by the City as per the Municipal Class EA process. There is a need to coordinate the City of Hamilton plans with any proposed MTO projects, including the carpool lot and Go park and ride at QEW & Casablanca, although this interchange is approximately 2.5 km to the east in Niagara Region. Further, the proposed transit hub at Fifty Rd. & South Service Rd. (and all other components of their proposal) will need to be reviewed with MTO to determine any impacts to this section of the QEW Corridor in general. Also, any work proposed that might impact our ROW will need to be reviewed to determine if there will be any environmental impacts, and acted upon accordingly.	Comment noted. Replied to MTO on July 16, 2008. Thank you again for your continuing input into the Stoney Creek Urban Expansion Boundary Transportation Master Plan (TMP). We are completing Phases 1 and 2 of the Municipal Class EA study process. The TMP study has not identified any major roadway improvements in the study area which impacts the MTO Right of Way (QEW). The major TMP recommendation is the consideration of a transit hub at the south-west quadrant of the QEW and Fifty Road, north of the rail line. The City of Hamilton has immediate plans to undertake a separate study for this. We will advise you of the study and schedule a stakeholders (MTO, GO, CN/CP Rail, Hamilton, Niagara Region, Grimsby) meeting to discuss the transit hub and to seek input into the study. We will keep you posted on the progress of the TMP and relevant follow up work. Please contact me if you have questions.
2	Niagara Region	I would like to arrange a meeting to discuss Niagara's input into this study. I look after the transportation planning end of things for Niagara [road allowance requirements. GO transit expansion into Niagara, boundary-road EA's, bicycling needs (on and off road facilities)], as well as traffic operations; while George Nicholson (copied on this email) is a Senior Policy Planner for the Region. I'm also interested in finding out more about the 'transportation hub' at Fifty Rd/QEW interchange. Regional transportation staff is currently providing input to the MTO (and GO transit) on their carpool lot project at Casablanca Blvd/South Service Road in Grimsby.	Meeting was held as requested on April 17, 2008. Meeting minutes in **Appendix B-2**.

I.D.	Organization	Comment	Response/Action Taken
3	Indian and Northern Affairs	We can confirm that there are no comprehensive claims in the City of Hamilton, Ontario. We cannot make any comments regarding potential or future claims, or claims files under other departmental policies. This includes claims under Canada's Specific Claims Policy or legal action by the First Nation against the Crown. For more information, I suggest you contact the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582. INAC- Comprehensive Claims Branch does not have any specific interest in the project and would request to be taken out of the mailing list.	Comment noted
4	Resident	Barton St. from Fruitland Rd. to Fifty Rd. should be, most definitely, made 5 lanes wide. Fifty Road from the South Service Rd. to No. 8 Hwy. should be 5 lanes wide as well. A traffic light needs to be installed at Fifty Road at the South Service Road. Now!!! No. 8 Hwy. & Fifty Rd. needs immediate widening on both highways.	Comment noted
5	Resident	I am highly convinced that the overall projection is coming together. However, due to numbers quoted for the projected growth, the number of cars is likely to coincide at a minimum to that of the smallest population growth. As such, our major highways will not be able to handle the additional flow. Making the collector roads wider and faster will only be helpful on the "off" hours. The rail station is a must!! Also, snow removal will be an issue once the existing ditches are covered to make way for the additional lane and must be considered in the process at all levels/departments.	Comment noted
6	Resident	I am wondering about the transportation study and why No. 8 and Barton would be considered for increased lanes and also about the collector roads. Are the roads not really accessible now? Many people who attended the meeting were disappointed that there was not a formal presentation with a question and answer period.	Comment noted

I.D.	Organization	Comment	Response/Action Taken
7	Resident	1- In the event that the widening of Barton St. and Hwy. # 8 result, in more land being obtained, how do you decide from which side of the road it will be taken from? What is the compensation given to the landowner who loses his land? 2- On a much broader issue and likely outside of this Committee's mandate, what are the City's plans to provide for adequate schooling and recreational requirements in support of this urban expansion?	The following response was sent by email May 29, 2008. Response 1: The determination of property requirements is undertaken as part of Phase 3 and Phase 4 of the Class Environmental Assessment process, where alternative designs and more detailed analysis of impacts are undertaken (at corridor level). The current TMP study completes Phases 1 and 2 only of the Class Environmental Assessment process, which identifies need and justification at a "roadway system network" level. Property requirements are not considered at this stage of the process. As for compensation, the City will have the property requirement appraised, based on fair market value, the owner will have the opportunity to have his/her own appraisal carried out, at the City's cost. The second appraisal can only be carried out at the City's approval to do so. The City will pursue negotiations on the basis of the results of the two appraisals until a reasonable settlement can be reached. Response 2: A Secondary Plan process is also underway to define the land use and community structure for the SCUBE area. Your concerns about community services will be addressed as part of the process. We have forwarded this question to the Planning Department for their information.
8	Resident	I live in the new development north of the QEW between Fruitland and 50 Rd., and I was wondering why the transportation plan's study area does not include any of the neighbourhoods north of the QEW, stopping at the South, rather than the North Service Rd. I would have liked to attend the information session but have to chair my own committee meeting that night.	The following response was sent by email July 14, 2008: Thank you for your interest in the SCUBE Transportation Master Plan Study (TMP). The following is the study team's response to your concerns. The Regional Official Plan No. 14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as

I.D.	Organization	Comment	Response/Action Taken
			amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek. This is a recent change to the planning designation for these lands. These designated lands are mainly located south of South Service Road, north of HWY 8 and east of Fruitland Road. Accordingly, the City of Hamilton initiated the Transportation Master Plan (TMP) study of the SCUBE area. The terms of reference issued for this study South Service Road as the northern boundary. The objective of this study is to assess the transportation needs at a strategic level to support the projected growth by the year 2021. We anticipate that nay major transportation infrastructure facilities, if at all needed, will be mainly within this study area. Notwithstanding this limit, the study looked at the broader picture, when necessary. The study identified the need to improve transit and there is recommendation of a local transit service along North Service Road. If you have any questions, please contact me.

I.D.	Organization	Comment	Response/Action Taken
9	Landmart Homes	1- The reason I was asking for your contact info is because we (Landmart Homes) have some land in the SCUBE West study are, particularly between Fruitland Road and Jones Road, and would like to remain aware of what's happening with respect to the Transportation Master Plan, and how it will affect our lands. It appears that there will be an east/west collector road running through our property, and any proposed realignment of Fruitland Road would likely run through our property as well (although we are hopeful that Fruitland Road will simply be widened instead of realigned). Are there any other studies being completed at the moment for this area? I heard something about Philips Engineering doing a wastewater study, but don't know how far along they are. Am I able to obtain copies of these studies if/once they are completed? Any update you are able to provide would be greatly appreciated.	The following response was sent by email on April 9 2008: Thank you for attending the PIC. Hope you have received our previous PIC notice by mail. You can send me your complete mailing address to ensure that you get the future notices. Regarding the SCUBE TMP study process you can contact me or get information from the project website www.hamilton.ca/SCUBE-Transportation. As far as I understand, Philips Engineering is conducting certain study for a developer. Another study undertaken by the City in that area is the SCUBE East Subwatershed Study. For information on this you may want to contact Manager Jill Stephen at jstephen@hamilton.ca, phone 905-546-2424 Ext: 6392
10	Resident	This study is nothing new since 1991-92. I had attended a few meetings during this time frame. This is just a repeat of it and added bus route for 2021. Why is this meeting being held at the Chandelier Place instead of City Hall? Why pay for it? As far as I am concern this is a waste of our time and money. It was not a meeting, just go and look through the study paper.	The following response was sent by letter July 15, 2008: As advertised in the Public Information Centre No. 1 notice, the Regional Official Plan No. 14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek. This is a recent change to the planning designation for these lands. Accordingly, the City of Hamilton initiated the Transportation Master Plan (TMP) study for the SCUBE area. The objective of this study is to assess the transportation needs to support the projected growth by the year 2021. The Class Environmental Assessment (EA) Master Plan approach is being undertaken in accordance with the requirements of the Municipal Engineers Association's Municipal Class Environmental

I.D.	Organization	Comment	Response/Action Taken
			Assessment (October 2000, as amended in 2007). The PIC was held as an Open House (i.e. a walk through format) to present the draft SCUBE Transportation Master Plan. Study team members were available to discuss concerns on a one-on-one basis; a format that was found very beneficial by participants. The venue for the PIC was the best available at the time. Please contact me if you have any questions.
11	Town of Grimsby	I did not see anything addressing the issue of 50 Road and the need to accommodate Truck traffic accessing the Upper Hamilton Area. I actually saw nothing that discussed 50 Road at all. Considerable work was undertaken with Niagara Region & Hamilton Region a few years ago to address the inter-regional escarpment access issue. Will the study be identifying and mitigate if required, new development transportation impacts on the Town of Grimsby and Region of Niagara roads to the east. Historically the lack of safe and adequate truck escarpment access had been a major concern to residents & Councils along current escarpment routes, to the extent that a joint Niagara/Hamilton Regional study took place to address these issues (Niagara Escarpment Crossing Study- 1997). Will the next stage of this Escarpment Study (EA process) be carried out prior to allowing the new SCUBE area to open to development? Although the boundaries for your study area do not extend above the escarpment the possible future escarpment truck route improvements may significantly influence transportation corridors through the study area for the access to the QEW. As an adjacent municipality that has had to deal with Hamilton generated truck flow through the escarpment, we require these issues be dealt with.	The City of Hamilton is undertaking a new study to evaluate truck routes throughout the City of Hamilton. This study will address the identified concerned/comments you express above. We have forwarded your comments and contact information to the study team undertaking the truck route study. Regarding SCUBE Transportation study, we have scheduled a meeting with the Niagara Region Staff for Thursday, April 17th, 9.00 – 11.00 to discuss the transportation issues. We would appreciate if you could also attend or send in your representative for the meeting. Please let me know at the earliest. Could you please also let me know your full mailing address for including in our study circulation list.

I.D.	Organization	Comment	Response/Action Taken
12	Resident	This meeting was a disappointment. We were hoping to get answers to our problem with the trucks travelling down Fruitland Road. We would want the truck route signs removed. The traffic flow with cars has increased never mind the trucks. Now with the information given on future development the traffic will be even worst. Does anyone care about us?	The following response was sent by letter July 16, 2008: The PIC was held as an open house to present the draft SCUBE Transportation Master Plan. This study was undertaken as a result in recent changes to the planning designation for the lands in lower Stoney Creek. The modified urban boundary expansion area includes approximately 223 hectares of land available for development. The objective of this study is to assess the transportation needs to support the projected growth by the year 2021. The study did not indicate a capacity issue on Fruitland Road for the projected growth. However, as presented at the PIC, a separate detailed study will be undertaken for Fruitland Road. A separate study is currently underway to evaluate truck routes throughout the City of Hamilton. This study will consider the concerns/comments you expressed above. We have forwarded your comments and contact information to the study team leading the truck route study. If you have any questions or comments or wish to be added to the study mailing list you may contact the Public Works Department at trafaa@hamilton.ca. Please contact me if you have any questions related to the SCUBE transportation master plan study.
13	Resident	You are proposing to develop for future growth but where in your design will accommodate the youth of tomorrow. There is nothing noted for the addition of schools, parks, playgrounds, soccer fields or arena's, to name a few. It makes no sense to me that the north farm lands of E.D. Smith Fruit Farms sits idle when it could offer terrific opportunity for the youth. I would recommend you contact the owner to see if these lands can be purchased to accommodate the youth, family and healthy living. Why is the Smith Farm the only greenbelt in the area, with the exception of minor parts?	The following response was sent by email July 16, 2008: Response 1: The TMP study only looks at the transportation system required to support the anticipated growth. Social/Community needs are identified separately. A Secondary Plan study process is underway to define the land use and community structure for the SCUBE area. Your concerns about community services will be considered as part of this process. We have forwarded this question to the Planning Department for their consideration.

I.D.	Organization	Comment	Response/Action Taken
			Response from Planning Department: You are correct in pointing out that the E.D. Smith farm lands are within the Greenbelt and as such only permit a number of specific uses that would not include schools or residential housing. The subject lands that you indicate are also designated Tender Fruit and Grape within the Greenbelt Plan and the focus of this designation is primarily for agricultural uses. The Fruitland-Winona Secondary Plan process is underway and is working with a Community Advisory Group (CAC) to determine the needs of the community and develop some alternative community designs for review in the fall. However, the City of Hamilton must respect the provincial Greenbelt Plan and cannot designate any uses that are not permitted in the Greenbelt Plan. Please feel free to visit our website for information regarding the CAC and Fruitland-Winona Secondary Plan www.hamilton.ca/fruitlandwinona. I have also noted that your name is on our circulation list and you will be notified by mail regarding the next Public Information Centre.
14	Resident	I live on McNally Rd. and my yard connects to the area to be developed. I would ask the city to save the orchard area that runs from Barton to Hwy 8. This area is important to wild life. This area is a haven for migrating birds, in both spring and fall. Rabbits, deer, hawks, falcons, possum also share this home. We understand there must be development but there must be some consideration for the environment.	Comment noted

I.D.	Organization	Comment	Response/Action Taken
15	Resident	The expansion of people must be careful. Our children must be able to see trees outside of a museum. We want to share peace of the area with our new neighbours. The traffic increase we must be prepared and have the roads in place before the people come.	Comment noted
16	Resident	I feel that there is an opportunity to develop interconnected bicycle/pedestrian paths through any new area developments. Developers should be required to put these paths into their plans before starting to build. Bicycles will be a major part of the future as fossil fuels swindle and get more expensive. The train/transportation hub purposed for Fifty Road and the Service Roads a good idea as we must plan for the future. Please include me in any future mailings about this subject.	Comment noted
17	Resident	I would appreciate the city protecting the tree area from Barton to Hwy 8 behind McNally Rd. This area is home to deer, rabbits, and migrating birds, in all seasons. We have many hawks, finches, hummingbirds, cardinals, oriels, that use this as a safe place to breed. As a city we need to 'minimize our carbon imprint' and be proud of this area.	Comment noted
18	Transport Canada	Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any 'works' in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to Suzanne Shea, NWP Officer at (519) 383-1866. Please note that certain approvals under the Navigable Waters Protection Act or Railway Safety Act trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.	Comment noted

I.D.	Organization	Comment	Response/Action Taken
19	CN Engineering Services	CN had no concerns at this time, and does have interest in this project due to the existing at-grade railway crossings within the project area on the Grimsby Subdivision. Please be informed that if a crossing is to be widened or upgraded, it may take up-to 18 months or longer, from the date the Purchase Order is received, to complete the Automatic Warning Device modifications. CN will not be able to attend the Public Information Center No. 1 scheduled for April 2, 2008 but requests to be kept informed throughout the project.	No response required
20	Resident	The Installation and Location of (any) Bus Shelters: A while back I notified the transportation department about a bus stop in front of my driveway and directly across on the opposite side of # 8 HWY, the concern being the constant passing on the shoulder of this highway in both directions. I am worried that someone waiting for the bus might be hit by an unsuspecting driver making one of those soft shoulder passers. The stop was moved on my side to further down the road. This stop has never bothered me; it was the one on the other side of the highway that concerned me with all the cars and trucks passing me while I am waiting to turn into my driveway. I would hope that someone in your department will take into consideration that almost all along your proposed route there are soft shoulders **allowing?** Motorists to pass (although they shouldn't). All proposed bus stops with or without shelters should be somehow protected from this happening.	The following response was provided by email July 17, 2008: Thanks for your input into this study. The Stoney Creek Urban Boundary Expansion (SCUBE) Transportation Master Plan Study was undertaken to assess the future transportation needs of the study area at a strategic level to support the projected growth. We have considered your comments in our analysis. They study recommends widening of Hwy 8 to basic 3 lanes (with centre left turn lanes) by the year 2021. The concerns you pointed out will get resolved when the recommendations are implemented. Since these are operational and safety issues which cannot wait till such time, I am forwarding this to HSR and the Traffic Operations section for their review and necessary action.
21	Mady Development Corporation	Please refer to **Appendix B-5** for comments	Please refer to **Appendix B-5** for response.

I.D.	Organization	Comment	Response/Action Taken
22	Resident	I live off of 50 Road, and given the high density housing developments off 50 Road and around it, would you please help me understand why the Transportation Master Plan doesn't extend to 50 Road?	The following response was sent by email May 28, 2008: The Regional Official Plan No.14 (ROPA 14) and Official Plan Amendment No. 99 (OPA 99) as amended by Ontario Municipal Board designated lands for the Stoney Creek Urban Boundary Expansion (SCUBE) to allow urban development in Lower Stoney Creek. This is a recent change to the planning designation for these lands. These designated lands are mainly located south of South Service Road, north of HWY 8 and east of Fruitland Road. Accordingly, the City of Hamilton initiated the Transportation Master Plan (TMP) study for the SCUBE area which will satisfy the Phases 1 & 2 of the Municipal Class Environmental Assessment document. The objective of this study is to assess the transportation needs at a strategic level to support the projected growth by the year 2021. We anticipate that any major transportation infrastructure facilities, if at all needed, will be mainly within this study area.
23	Hydro One Networks, Inc.	In our initial review, we have confirmed that Hydro One Transmission Facilities are located within your study area. Please allow appropriate lead-time in your project schedule in the event that relocation or modifications of our facilities are required, or an outage is needed that may not be readily available. Potential impacts on Distribution facilities are usually of a lesser degree and these will be managed through our field offices. See attached. In planning, please note that developments should not reduce line clearances and limit access to our facilities at any time. Any construction activities must maintain the electrical clearance from the transmission line conductors as specified in the Ontario Health and Safety Act for the respective voltages.	Comment noted.

I.D.	Organization	Comment	Response/Action Taken
		The integrity of the structure foundations must be maintained at all times, with no disturbance of the earth around the poles, guy wires and tower footings. There must not be any grading, excavating, filling or other civil work close to the structures. Note that existing rights of ways may have provisions for future lines or already contain secondary land uses (i.e. pipelines, water mains, parking, etc). Please take this into consideration in your planning. Once details are known and it is established that your development will affect Hydro One facilities including the rights of way, please submit plans that detail your development and the affected Hydro Facilities to: Kent Taylor, Hydro One Real Estate Management	
24	Assembly First Nations	I would recommend that you provide the information you have given the AFN to the First Nation communities in the vicinity of Stoney Creek. You should also personally contact the First Nation communities in the area and provide them with more detailed information. It is these First nation communities who may be impacted by the land development in Stoney Creek may have outstanding land claims in the area and/or may use this area for traditional harvesting activities. I have provided a list of the First nation communities in your area for your reference as an attachment to this letter.	Appropriate First Nations were contacted directly.
25	Go Transit	GO Transit is supportive of higher order transit service in this area and confirmed they are opening a new transit stop for GO bus services at the QEW/ Casablanca Road interchange. This is a short-term improvement. GO wishes to participate in the long-term transit planning opportunities in this Area.	Please refer to **Appendix B-2**. GO has been added to the list of stakeholders for the transit terminal follow-up studies.
26	Association of Iroquois and Allied Indians (AIAI)	The AIAI provided advice on procedures in the First Nations but did not have any specific comments on the SCUBE TMP.	Comments noted.

APPENDIX B-5
Consultation with Mady Development Corp.

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
PUBLIC INFORMATION CENTRE NO. 1
Wednesday, April 2, 2008

Hamilton

COMMENT SHEET

DILLON CONSULTING

Please take a few minutes and provide us with your thoughts and comments on the information presented at this Public Open House. With the exception of all personal information, all comments will become part of the public record.

THANK YOU.

****

SEE COMMENTS ATTACHED.

Name: HAROLD R. KERSEY

Address: 1875 LESLIE ST., UNIT 11, TORONTO M3B 2M5

Email: hkersey@madycorp.com

I would like to be kept informed on the study progress.

Comments can be placed in the "comments box" or forwarded to one of the contacts below by April 18, 2008:

Mohan Philip, M. Eng.
Project Manager
Capital Planning and Implementation
City of Hamilton
77 James Street North, Suite 320
Hamilton, Ontario L8R 2K3
Phone: 905-546-2424 ext. 3438
eplanning@hamilton.ca

Alvaro Almuina, P.Eng.
Consultant Project Co-ordinator
Dillon Consulting Limited
235 York Boulevard, Suite 800
Toronto, ON M2J 4Y8
Phone: 905-229-4647, ext. 2455
aalmuina@dillon.ca

The project website: www.hamilton.ca/SCUBE-Transportation

We, Penady (Stoney Creek) Ltd., own an approximately 15.5 hectare parcel of land at the south west quadrant of the interchange of QEW and Fifty Road. A representative of our company attended the April 2, 2008 Public Information Centre No. 1 for the Stoney Creek Urban Boundary Expansion (SCUBE) Area Transportation Master Plan, and provided us with a copy of the handout that was distributed at that meeting. In accordance with information provided at the aforementioned public meeting we are to provide our comments by April 18, 2008. We hereby provide our comments and questions as follows:

- We note that Figure G Proposed Stoney Creek Transit Service illustration identifies a "Potential Transit Terminal" on what appear to be our entire holdings, please confirm this information.
- Please be aware that we submitted an Official Plan and Rezoning application for development of our lands on October 31, 2005 and the applications are currently being processed by the City of Hamilton.
- Please be aware that we currently have additional adjacent lands (approx. 2.4 hectares) under contract to purchase at a significantly high price to augment the size of our holdings for development purposes. Our contract to purchase the adjacent lands has a very short time frame. Therefore, it is imperative that the issue of a Potential Transit Terminal on our lands be resolved as soon as possible.
- Has a study been undertaken to identify alternative locations for a Potential Transit Terminal? if so, please provide us with a copy of that study. If not, will a study be undertaken in this regard?
- We note that the text box on page 10 of the handout includes "-assess the feasibility of an inter-regional multi-modal transit terminal at the south west corner of Fifty Road and South Service Road". Do you have the criteria upon which such a facility will be assessed? If so please provide us with this information.
- We note that the text box on page 10 of the handout also includes "-In the short-term, secure lands (Parcel B) for this future terminal", please provide us with some idea of the definition of "short term".
- We feel that as the land owners we should have been directly contacted regarding a Potential Transit Terminal on our lands prior to same being considered for public comment at a public meeting, especially given the fact that the City is currently processing our development applications that do not include a Potential Transit Terminal.
- We are available to meet with the City to discuss a Potential Transit Terminal on our lands and hereby stress that there is a tremendous sense of urgency to do so given our current contractual obligations.

We look forward to hearing from someone at the City of Hamilton regarding the above comments in the very near future.

PENADY (STONEY CREEK) LTD.

Harold B Kersey April 14/08

Harold (Hal) Kersey, MCIP, RPP
Vice-President, Planning & Development
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Hamilton

May 6, 2008

Harold R. Kersey
Vice-President, Planning & Development
Mady Development Corporation
1875 Leslie Street, Unit 11
Toronto, M3B 2M5

Dear Mr. Kersey,

Re: Stoney Creek Urban Boundary Expansion (SCUBE) Transportation Master Plan Study

Thank you for participating in the public open house for the SCUBE Transportation Master Plan Study (TMP).

Following is the study team's response to the questions you posed per your e-mail of April 14, 2008. Your comments/questions have been paraphrased in italics, followed by our response:

- *We note that Figure G Proposed Stoney Creek Transit Service illustration identifies a "Potential Transit Terminal" on what appear to be our entire holdings, please confirm this information.*
  Response: The northwest quadrant of Fifty Road and the Railway tracks has been identified as an area for a potential transit terminal for SCUBE based on approved Hamilton Transportation Master Plan and the current allocation of population and employment estimates within the SCUBE area.

- *Please be aware that we submitted an Official Plan and Rezoning application for development of our lands on October 31, 2005 and the applications are currently being processed by the City of Hamilton.*
  Response: Comment noted.

- *Please be aware that we currently have additional adjacent lands (approx. 2.4 hectares) under contract to purchase at a significantly high price to augment the size of our holdings for development purposes. Our contract to purchase the adjacent lands has a very short time frame. Therefore, it is imperative that the issue of a Potential Transit Terminal on our lands be resolved as soon as possible.*
  Response: Comment noted. However, the confirmation of the transit terminal is subject to further study as the master plan level of analysis undertaken as part of the SCUBE TMP does not identify the terminal configuration and design.

- *Has a study been undertaken to identify alternative locations for a Potential Transit Terminal? if so, please provide us with a copy of that study. If not, will a study be undertaken in this regard?*
  Response: As part of the SCUBE TMP, alternative locations were considered based on the current assignment of population and employment estimates throughout SCUBE.

- *We note that the text box on page 10 of the handout includes "-assess the feasibility of an inter-regional multi-modal transit terminal at the south west corner of Fifty Road and South Service Road". Do you have the criteria upon which such a facility will be assessed? If so please provide us with this information.*
  Response: No. The more detailed level of analysis would form part of the recommended follow up studies.

- *We note that the text box on page 10 of the handout also includes "-In the short-term, secure lands (Parcel B) for this future terminal", please provide us with some idea of the definition of "short term"*
  Response: The spirit of the comment is to ensure that lands are not developed in such a manner that the opportunity for a future transit terminal is lost. In this instance, "short-tem" would mean at the earliest appropriate time.

- *We feel that as the land owners we should have been directly contacted regarding a Potential Transit Terminal on our lands prior to same being considered for public comment at a public meeting, especially given the fact that the City is currently processing our development applications that do not include a Potential Transit Terminal.*
  Response: The Master Plan process is a very strategic level of analysis and the study follows the Municipal Class EA process. We are now in the early stages of the study process. The first PIC notice was sent to all landowners in the study area. We believe the appropriate time to meet directly with land owners is in future steps of study; once more detail information is available.

- *We are available to meet with the City to discuss a Potential Transit Terminal on our lands and hereby stress that there is a tremendous sense of urgency to do so given our current contractual obligations.*
  Response: A meeting will be scheduled shortly to discuss this matter in the context of your application.

Please let us know if you have questions.

Yours Truly,

Mohan Philip, M. Eng.
Project Manager

Cc Alvaro Almuina, Dillon Consulting Ltd.
Peter De Iulio, City of Hamilton
Brenda Khes, City of Hamilton
Andrea McDonald, City of Hamilton
Project file

DILLON
CONSULTING

MINUTES OF MEETING
MEETING NO. 4

FILE:	07-8995-1000	
DATE:	May 12, 2008	
LOCATION:	City of Hamilton – City Centre – Room 250D	
PURPOSE:	To discuss the TMP Process and Findings with representatives of Mady Development Corporation	
PRESENT:	***City of Hamilton:***	Lisa Zinkewich Mohan Philip Peter De Iulio Elizabeth Panicker Danielle Tobey
	Mady Development Corp:	Harold Kersey Mario Joannette Calvin McCourt, PenEquity Management
	Dillon Consulting:	Alvaro Almuina
DISTRIBUTION:	All Present, Brenda Khes, Andrea McDonald, Melanie Jajko	

ITEM **ACTION BY**

1. Overview of TMP by Mohan Philip

- Mohan provided an overview of the study and schedule noting the draft study report is scheduled to be distributed by June 2008.
- Mohan also noted there is a secondary plan study underway looking at the various development areas in SCUBE in more detail.
- It was noted that the TMP has suggested a transit terminal be provided for Stoney Creek in the east end. This conclusion is supported by the findings of the Hamilton City-wide TMP and the SCUBE TMP as well as GO Transit and Metrolinx plans and visions.
- Once the TMP is approved by Council, follow up studies needs to be conducted including a more detailed look at the transit terminal needs proposed in the southwest quadrant of Fifty Road and the South Service Road; however, timing for these studies cannot be confirmed at this time

2. Mady Development Application

- It was noted that there is a current application before the City by Mady Development Corp at the southwest quadrant of Fifty Road and South Service Road
- The lands comprise of approximately 42 acres and the proposal is to develop commercial and retail uses
- Mady Developments Corp noted they are also in the process of purchasing lands adjacent to their current holdings
- The City noted it had a number of concerns about the proposed site development; independent of the transit terminal issue.
- With regards to a question about whether other locations for the transit terminal were investigated, it was noted that three other feasible sites were considered but the one proposed in the south-west quadrant of Fifty Road and South Service Road had the greatest potential for transit services.
- Mady Development Corporation indicated their willingness to work with the City in the development of the lands and proposed transit terminal.

3. Follow up Actions

- There was general discussion about the potential for the subject lands and the integration of a transit terminal. The following key points were stated:
    - The City needs to consult with all stakeholders (MTO/Metrolinx/GO Transit/Niagara Region/Town of Grimsby etc.) to move the concept of the transit terminal into the next planning phase — City
    - Dillon will look at other similar transit sites and provide a preliminary estimate of the land area needed for the SCUBE terminal. This to be provided by mid-June — Dillon

ERRORS AND/OR OMISSIONS

Draft Minutes of this meeting were circulated to the meeting attendees. These minutes are considered final.

APPENDIX B-6
Correspondence with First Nations

Affaires indiennes et du Nord Canada | Indian and Northern Affairs Canada

March 31, 2008

Mr. Mohan Philip
Project Manager
City of Hamilton
77 James Street North, Ste 320
HAMILTON, ON L8R 2K3

RE: Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
Notice of Public Information Centre No. 1

Dear Mr. Philip,

I am responding to your request for information sent to the Comprehensive Claims Branch, by mail, on March 20, 20087.

We can confirm that there are no comprehensive claims in the City of Hamilton, Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Specific Claims Policy or legal action by the First Nation against the Crown. For more information, I suggest you contact the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582.

INAC- Comprehensive Claims Branch does not have any specific interest in the project and would request to be taken out of the mailing list.

Yours truly,

Kevin Clement, A/ Director
for
Lynn Bernard, Director General
Comprehensive Claims Branch

Cc. Alvaro Almuina, Dillon Consulting Limited.

statement contained in this correspondence. Data and information is based on information in departmental records and is disclosed for convenience of reference only. In accordance with the provisions of the *Access to Information Act* and the *Privacy Act*, confidential information has not been disclosed. Canada does not act as a representative for any Aboriginal group for the purpose of any claim. Information from other government sources and private sources (including Aboriginal groups) should be sought, to ensure that the information you have is accurate and complete.

Canada

Assembly of First Nations

473 Albert Street, 8th Floor
Ottawa, Ontario K1R 5B4
Telephone: 613.241.6789 Fax: 613.241.5808
Website: www.afn.ca

Assemblée des Premières Nations

473, rue Albert, 8e Étage
Ottawa (Ontario) K1R 5B4
Téléphone : 613.241.6789 Télécopieur : 613.241.5808
Siteweb : www.afn.ca

April 11, 2008

Mr. Mohan Philip, M.Eng
City of Hamilton
77 James Street North, Suite 320
Hamilton, ON, L8R 2K3

Dear Mr. Philip:

The Assembly of First Nations (AFN) is in receipt of your notice issued March 20th and 28th, 2008 regarding the Stoney Creek Urban Boundary Expansion Transportation Master Plan study. The AFN is a national representative organization of over 630 First Nation's communities in Canada. The AFN is designed to present the views of the various First Nations through their leaders in areas such as: Aboriginal and Treaty Rights, Economic Development, Education, Languages and Literacy, Health, Housing, Social Development, Justice, Taxation, Land Claims, Environment, and a whole array of issues that are of common concern which arise from time to time. The First Nation leaders meet quarterly to set national policy and direction through resolution.

Please be advised that the AFN functions solely as a representative organization. As such the organization cannot be construed as a government, agent, principle, administrator and/or contractor for any of the First Nation communities who are members of the AFN. As AFN does not have any entitlement to the lands in question and cannot speak on behalf of the First Nation communities in your area, we are not in a position to provide any comments on the study.

I would recommend that you provide the information you have given the AFN to the First Nation communities in the vicinity of Stoney Creek. You should also personally contact the First Nation communities in the area to provide them with more detailed information. It is these First Nation communities who may be impacted by the land development in Stoney Creek, may have outstanding land claims in the area and/or may use this area for traditional harvesting activities. I have provided a list of the First Nation communities in your area for your reference as an attachment to this letter.

../2

Please be advised that the Supreme Court of Canada has recently issued a number of judgments that provides clarity on the duty to consult and accommodate. In *Haida Nation v. British Columbia (Minister of Forests) and Weyerhaeuser* the Supreme Court held that there is a duty to consult and accommodate where there is knowledge of the potential existence of an Aboriginal right or title and conduct that may adversely affect it. Furthermore, the Supreme Court held in *Taku River Tlingit First Nation v. British Columbia* that where the potential for negative derivative impact on aboriginal claims is high, First Nations are entitled to something significantly deeper than minimal consultation and to a level of responsiveness that can be characterized as accommodation.

It is in the nature of respect for the first peoples that consultation and accommodation should be pursued. I commend your association for being proactive in attempting to inform us of your plans. I would strongly recommend that you please offer this courtesy to the First Nation Communities in your area.

Sincerely,

Richard Jock
Chief Executive Officer

First Nation Communities in the Vicinity of the City of Hamilton

Mississaugas of the New Credit
RR#6
Hagersville, Ontario, N0A 1H0
Phone: (905) 768-1133

Six Nations of Grand River
PO Box 5000
Ohsweken, Ontario, N0A 1M0
Phone: (519) 445-2201

Public Works Department
Capital Planning and Implementation
77 James Street North, Suite 320
Hamilton, ON L8R 2K3
905-546-2424 ext. (3438) ~ 905-546-4435(Facsimile)

Hamilton

May 23, 2008

Ms. Margaret Sault
Director of Lands, Claims & Member Research
Mississaugas of the New Credit
RR # 6, Hagersville, ON, N0A 1H0

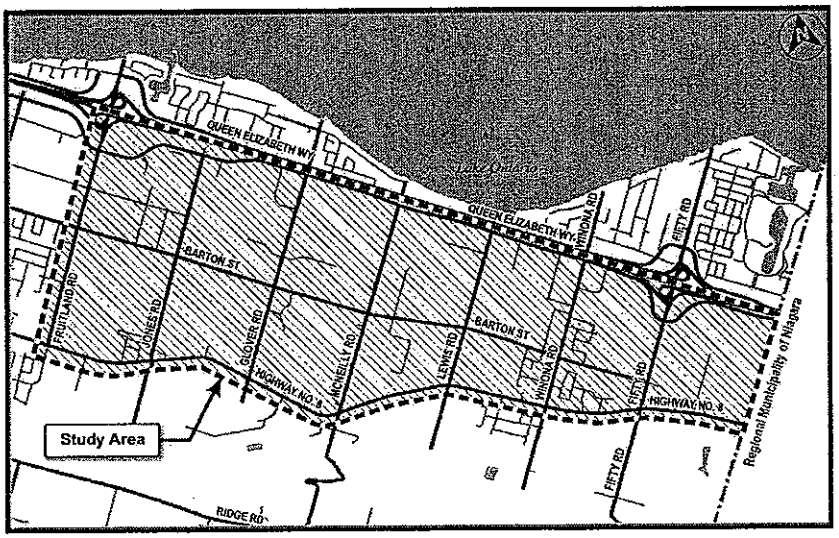
Dear Ms. Sault:

Re: Stoney Creek Urban Boundary Expansion Area, Transportation Master Plan

This is further to our notice of Public Information Centre (PIC) held on April 2, 2008, regarding the Transportation Master Plan study for the Stoney Creek Urban Boundary Expansion (SCUBE) area in Hamilton. The City of Hamilton would like to initiate a dialogue process with your office throughout this study.

Mr. Richard Jock, Chief Executive Director, Assembly of First Nations also recommended that we contact your office for consultation and provide more information as you are one of the First Nations Communities in the Hamilton Area.

The Municipal Class Environmental Assessment process was initiated to assess the transportation needs for the SCUBE area to support projected growth by the year 2021. The study area is bounded by Highway 8 to the south, South Service Road to the north, Fruitland Road to the west, and the City boundary to the east as shown in the map below.



To date, results from the study indicate:

- No new transportation infrastructure is required;
- Improvements to existing road networks may be necessary; and
- Transit services and cycling networks should be enhanced.

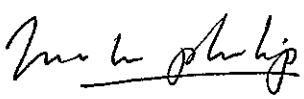
The Transportation Master Plan will be based on a series of Smart Growth Principles that include:

- Protecting the environment by minimizing impacts on air, water, land and natural resources;
- Encouraging more compact urban areas and land use intensification;
- Offering more travel choices including public transit and carpooling;
- Providing better linkages through cycling and walking trails; and
- Enhancing the liveability of neighbourhoods and rural areas.

The City would like to better understand your interest, if any, in this area. At your request, we would like to meet with you and/or representatives from your First Nation to discuss the plan in more detail. This would be a great opportunity to share information, comments, or suggestions Mississaugas of the New Credit has about the plan and to answer any questions.

For your information, we have attached the Notice of PIC No.1 and the displays used at the PIC. Please do not hesitate to contact me at 905-546-2424 extension 3438. I look forward to hearing from you.

Yours Truly,



Mohan Philip, M. Eng.
Project Manager, Strategic Planning

Encl: PIC Notice and Displays

cc Alvaro Almuina, Dillon Consulting Ltd.
Peter De Iulio, City of Hamilton
Andrea McDonald, City of Hamilton
Project file

Public Works Department
Capital Planning and Implementation
77 James Street North, Suite 320
Hamilton, ON L8R 2K3
905-546-2424 ext. (3438) ~ 905-546-4435(Facsimile)

Hamilton

May 23, 2008

Ms. Barb Harris
Six Nations of the Grand River
P.O. Box 5000, Ohsweken
Ontario, N0A 1M0

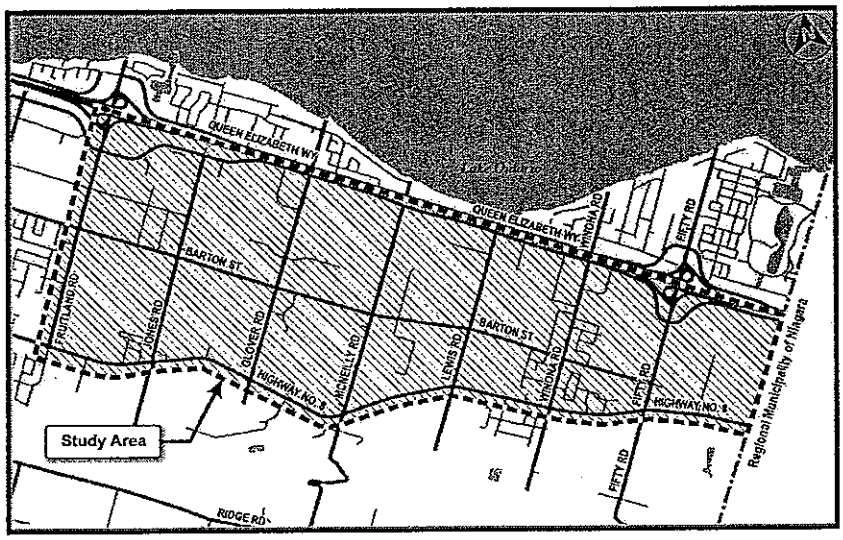
Dear Ms. Harris:

Re: Stoney Creek Urban Boundary Expansion Area, Transportation Master Plan

This is further to our notice of Public Information Centre (PIC) held on April 2, 2008, regarding the Transportation Master Plan study for the Stoney Creek Urban Boundary Expansion (SCUBE) area in Hamilton. The City of Hamilton would like to initiate a dialogue process with your office throughout this study.

Mr. Richard Jock, Chief Executive Director, Assembly of First Nations also recommended that we contact your office for consultation and provide more information as you are one of the First Nations Communities in the Hamilton Area.

The Municipal Class Environmental Assessment process was initiated to assess the transportation needs for the SCUBE area to support projected growth by the year 2021. The study area is bounded by Highway 8 to the south, South Service Road to the north, Fruitland Road to the west, and the City boundary to the east as shown in the map below.



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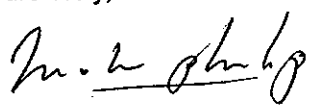
The Transportation Master Plan will be based on a series of Smart Growth Principles that include:

- Protecting the environment by minimizing impacts on air, water, land and natural resources;
- Encouraging more compact urban areas and land use intensification;
- Offering more travel choices including public transit and carpooling;
- Providing better linkages through cycling and walking trails; and
- Enhancing the liveability of neighbourhoods and rural areas.

The City would like to better understand your interest, if any, in this area. At your request, we would like to meet with you and/or representatives from your First Nation to discuss the plan in more detail. This would be a great opportunity to share information, comments, or suggestions Six Nations of the Grand River has about the plan and to answer any questions.

For your information, we have attached the Notice of PIC No.1 and the displays used at the PIC. Please do not hesitate to contact me at 905-546-2424 extension 3438. I look forward to hearing from you.

Yours Truly,



Mohan Philip, M. Eng.
Project Manager, Strategic Planning

Encl: PIC Notice and Displays

cc Alvaro Almuina, Dillon Consulting Ltd.
Peter De Iulio, City of Hamilton
Andrea McDonald, City of Hamilton
Project file

Association of Iroquois and Allied Indians
Ontario Environmental Assessment Act
Fax Back Form

Date: June 25th 2008

905 546 4435

Re:

Stoney Creek Urban Boundary Expansion (SCUBE)
Transportation Master Plan Class Environmental Assessment
Notice of Public Information Centre No.1

We are in receipt of documentation produced under the Ontario Environmental Assessment Act for our review and comment. Please accept this letter as a response to your invitation and not an act of consultation. We cannot and do not consider this response letter to be consultation as we are not mandated to consult on behalf of our member nations. Our involvement as a representative for the First Nations occurs when invited by one of our member First Nations to do so. Consultation should always occur with the First Nation(s) specifically impacted.

As an association, we understand that your role in the environmental assessment process is primarily technical and that our concerns, which are Aboriginal rights, socio-economic and indigenous knowledge-based, are to fit within established scientific, technological and policy frameworks established by the Province of Ontario. We are of the view that this framework is invalid as it has been developed without input or consultation with First Nations.

Our organization receives no federal or provincial funding in helping to facilitate a mutual understanding of environmental concerns between proponents and our member First Nations. Based on this lack of understanding, funding and resources, we are only able to state that we do have member First Nations whose traditional hunting and gathering areas may be affected by this project.

Our organization and Member Nations are usually open to participating in sustainable planning processes. However, the current federal and provincial practices in this policy area are left to the goodwill of proponents, in terms of collaborating with First Nations, and in identifying potential First Nation issues and incorporating these into the overall planning processes.

Aboriginal people are listed as "stakeholders" in environmental assessment processes, however this is only partially correct. First Nations people have collective constitutional rights, including land rights, hunting, gathering and fishing rights. The practice and recognition of these rights in southern and central Ontario is an outstanding issue between the provincial and federal governments and our member Nations. Therefore, in proposed land use situations, First Nations can seek legal remedies before the courts, including legal injunctions and other judicial intervention.

Our comments on documents produced under the current Environmental Assessment Act are as follows:

- It is our experience that when First Nations are approached respectfully and referenced in an appropriate way, that this overall approach tends to lead to more positive dialogue.

- We currently do not have the capacity to address the methodology developed for the site selection criteria and technological alternatives, at this particular time. The Proponent should use discretion in considering the selection of a site and technology that may interfere with the exercise of First Nations rights, including treaty and rights to access to wild game, water, plants, fish and ceremonial areas etc. Consideration should be put towards treaty boundary lines, real and potential land claims, and First Nations communities in the surrounding area.

- While the provincial EA legislation and EA practice may put the onus on the Proponent to consult First Nations, federal and provincial Crowns do have a constitutional obligation to uphold the rights of First Nations, and a duty to consult. The provincial and federal governments may not be forthcoming regarding this duty, as this duty currently exists in common law and is not reflected in Ontario EA legislation; which needs to be updated.

- As a safeguard, we suggest that First Nations be directly involved in the development and application of the Terms of Reference to accommodate for any potential First Nation intervention or interests. This approach would be ideal for addressing any First Nation issues that may arise. For example, where there may be archaeological discoveries at a site, First Nations customs vary and the Proponent should be ready to address that situation with the appropriate First Nations, in an innovative or other culturally appropriate manner.

- Based on archeological finds, it may be necessary to consult with other First Nations that have not been presently identified by the Ministry of the Environment or the Ontario Aboriginal Affairs Secretariat. First Nations that currently reside in the Province of Quebec may also have an interest in projects located in Ontario.

We thank you for taking the time to contact our organization and regret that we are not able to provide you with more assistance. If you have further questions or concerns please contact our office at (519) 434-2761.

Sincerely,

Adriana Poulette B.A., M.A.
Senior Policy Analyst and Government Relations Advisor
The Association of Iroquois and Allied Indians

First Nation Consultation Log
SCUBE Project, City of Hamilton

Last Updated: September 15, 2008

Date	Contact Name	Contact Information	Organization/ Department	Title	Note	Action
Mar. 20 2008	Richard Jock	476 Albert St, 8th Floor, Ottawa, ON. K1R 5B4	Assembly of First Nations	Chief Executive Officer	• Notice was sent to the Assembly of First Nations regarding the SCUBE Project.	
Apr. 11, 2008	Richard Jock	Letter	Assembly of First Nations	Chief Executive Officer	• Notified the City of Hamilton that they should be in contact with; Mississaugas of the New Credit and Six Nations of the Grand River.	• Send information to the mentioned First Nation and request a meeting if they would like.
May 13. 2008		905-768-1133	Mississaugas of the New Credit	Reception	• Contacted to see who the correspondence/letter should be addressed to.	• Address letter to Chief Bryan LaForme.
May 13, 2008		519-445-2201	Six Nations of the Grand River.	Reception	• Contacted to see who the correspondence/letter should be addressed to.	• Address letter to Lonny Bomerry, Director of Lands and Resources.
May 23, 2008	Barb Harris	Letter	Six Nations of the Grand River.	Councillor	• A letter and copies of the PIC boards were sent to Councillor Harris including an invitation to meet one-on-one to discuss the project, solicit information, and to record any comments.	

Date	Contact Name	Contact Information	Organization/ Department	Title	Note	Action
May 23, 2008	Bryan LaForme	Letter	Mississaugas of the New Credit	Chief	• A letter and copies of the PIC boards was sent to Councillor Harris including an invitation to meet one-on-one to discuss the project, solicit information, and to record any comments.	
June 17, 2008	Bryan LaForme	905-768-1133	Mississaugas of the New Credit	Chief	• Followed up with a phone call to Chief LaForme. • Chief LaForme asked Dillon to contact Margaret Sault instead.	• Contact Margaret Sault (905-768-0109) instead of Chief LaForme
June 17, 2008	Margaret Sault	905-768-0109	Mississaugas of the New Credit		• Left a message with Ms. Sault	
June 17, 2008	Barb Harris	905-768-1133	Six Nations of the Grand River.	Councillor	• Left a message for Councillor Harris. • Reception asked us to follow-up with Lonny Bomberry as well.	
June 17, 2008	Lonny Bomberry	519-753-0665	Six Nations of the Grand River	Director of Lands and Resources	• Left a message for Mr. Bomberry	
July 3, 2008	Margaret Sault	905-768-0109	Mississaugas of the New Credit		• Left a message with Ms. Sault	
July 3, 2008	Lonny Bomberry	519-753-0665	Six Nations of the Grand River	Director of Lands and Resources	• Left a message for Mr. Bomberry	
July 3, 2008	Lonny Bomberry	519-753-0665	Six Nations of the Grand River	Director of Lands and Resources	• Mr. Bomberry called and asked Dillon to get in touch with Kate Cave.	• New contact is Kate Cave.

Date	Contact Name	Contact Information	Organization/ Department	Title	Note	Action
July 3, 2008	Kate Cave	519-445-2563	Six Nations of the Grand River	Lands Supervisor	• Left a message for Ms. Cave.	
July 7, 2008	Kate Cave	519-445-2563	Six Nations of the Grand River	Lands Supervisor	• Ms. Cave left a message with Dillon saying that she is drafting a letter on behalf of Six Nation to say that they do not have issues or comments regarding the SCUBE. The letter is to be signed by the Chief and sent out.	
July 7, 2008	Margaret Sault	905-768-0109	Mississaugas of the New Credit		• Left a message with Ms. Sault	

APPENDIX C

Glossary of Transportation Planning Terminology

GLOSSARY OF TRANSPORTATION PLANNING TERMINOLOGY

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

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

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

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

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

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

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

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

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

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

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

Bicycle Path (“Bike Path”) - See Shared Use Path Bicycle System. A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational

signage. Bicycle systems should establish a continuous routing, but may be a combination of any and all types of bikeways.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mode Split - Mode split is the percentage of trips taken by each of the possible modes of travel (auto, transit, bicycle, walking). Mode split does not refer to the number of trips, but rather to the proportion of people that use each of the various modes of transportation. It also describes

the process of allocating the proportion of people using modes. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using public transportation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Transportation Master Plan - A long-range document that identifies facilities and programs that should function as an integrated transportation system and includes a financial plan that demonstrates how the long-range plan can be implemented. The plan must show that the

current system can be operated and maintained over the long-term, as well as recommend capital expansion projects to be constructed.

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

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

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

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

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

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

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