July 15, 2011

Mr. Peter Fay
City Clerk
City of Brampton
2 Wellington Street West
Brampton, ON L6Y 4R2

Subject: Arterial Road Rationalization Review Phase II Project Update, Capital Project 08-4325 - All Wards

I am writing to advise that Regional Council approved the following resolution at its meeting held on Thursday, July 7, 2011:

That Delcan Corporation’s Final Report on Phase II of the Arterial Road Rationalization Review Project attached as Appendix II to the report of the Commissioner of Public Works, dated June 7, 2011, titled “Arterial Road Rationalization Review Phase II Project Update, Capital Project 08-4325 – All Wards”, be received;

And further, that the recommendation of Option 4A as identified in the Arterial Road Rationalization Review Phase II Project as the major arterial roads jurisdictional option to be implemented be endorsed;

And further, that staff be directed to report back to Regional Council on the implementation details of Option 4A and on a process to review opportunities to streamline specific road and related infrastructure operations;

And further, upon adoption of the recommendations from the Commissioner of Public Works contained in the subject report, that the mandate of the Arterial Roads Review Ad hoc Steering Committee be considered complete as it relates to the Phase II Project;

And further, that the Arterial Roads Review Ad hoc Steering Committee continue to meet to provide advice and direction to staff on the optimization of the road network in the Peel;

And further, that a copy of the subject report be forwarded to the City of Mississauga, the City of Brampton and the Town of Caledon for information and endorsement of Option 4A in principle, subject to agreement on detailed implementation matters.

The above resolution and attached report are provided for your information and consideration.

Stephanie Jurrius
Legislative Specialist
SJ:rc

Corporate Services Office of the Regional Clerk
10 Peel Centre Dr., Brampton, ON L6T 4B9
Tel: 905-791-7800 www.peelregion.ca
c:   Dan Labrecque, Commissioner, Public Works, Region of Peel
     Damian Albanese, Transportation, Region of Peel
REPORT
Meeting Date: June 16, 2011
Arterial Roads Review Ad hoc Steering Committee

DATE: June 7, 2011

REPORT TITLE: ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT
UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

FROM: Dan Labrecque, Commissioner of Public Works

RECOMMENDATION

That Delcan Corporation's Final Report on Phase II of the Arterial Road Rationalization Review Project attached as Appendix II to the report of the Commissioner of Public Works, dated May 10, 2011, titled "Arterial Road Rationalization Review Phase II Project Update Capital Project 08-4325 - All Wards", be received;

And further, that the recommendation of Option 4A as identified in the Arterial Road Rationalization Review Phase II Project as the major arterial roads jurisdictional option to be implemented be endorsed;

And further that staff be directed to report back to Regional Council on the implementation details of Option 4A and on a process to review opportunities to streamline specific road and related infrastructure operations;

And further, upon adoption of the recommendations from the Commissioner of Public Works contained in the subject report, that the mandate of the Arterial Roads Review Ad hoc Steering Committee be considered complete;

And further, that a copy of the subject report be forwarded to the City of Mississauga, the City of Brampton and the Town of Caledon for information and endorsement of Option 4A in principle, subject to agreement on detailed implementation matters.
REPORT HIGHLIGHTS

- Delcan Corporation, working in collaboration with members of the Staff Working Group, developed a methodology to evaluate the nine jurisdictional options under consideration as part of the Arterial Road Rationalization Review Phase II Project.
- The data required for evaluation of the options has been collected and summarized.
- The Staff Steering Committee recommends that Option 4A be implemented.
- The Staff Steering Committee further recommends that a process be developed to review opportunities to streamline specific road and related infrastructure operations.
- In accordance with the Terms of Reference for the ARRASC, upon receipt of the final report regarding Phase II of the Arterial Road Rationalization Review Project the Committee will have fulfilled its mandate.

DISCUSSION

1. Background

   In November 2005, Regional Council directed staff, working in conjunction with area municipal staff, to review the criteria for designating a road as upper tier and to undertake a review to rationalize the arterial road network.

   The Arterial Road Rationalization Review Project has been carried out in two phases. Phase I involved a technical review of criteria which defines a major arterial road and application of the criteria to the roads in Peel. Phase I was completed in June 2007. The results of Phase I were lists and a map of the roads within Peel that met the major arterial road criteria. (The lists and map also identified those existing major arterial roads, as identified in Official Plans, that did not meet the criteria.)

   Phase II has involved the identification of jurisdictional options for the major arterial roads identified in Phase I, the development of a methodology to evaluate the options, and the identification and collection of the data to be used in the evaluation. (See Appendix I for a description of the nine jurisdictional options.)

2. Phase II Process

   As a part of Phase II of the Arterial Road Rationalization Review Project, Delcan Corporation was hired as a consultant to develop a methodology (data analysis tool) to assess and evaluate the nine jurisdictional options, develop an approach for collecting the data required for the evaluation and facilitate the collection of the data. (Appendix II – Delcan Corporation’s Final Report – describes the process followed in developing the data analysis tool and presents the data that was collected.)

   During Phase II, Delcan Corporation proposed and discussed criteria and methodologies with the Staff Working Group, who in turn took issues and recommendations to the Staff Steering Committee. Project updates were presented to, and direction was obtained from, the Arterial Road Review Ad hoc Steering Committee (ARRASC) at two Committee meetings and a half-day workshop.
June 7, 2011
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

Data was collected for the nine performance measures included in the data analysis tool:

1. Financial (Cost of delivering and supporting major services)
2. Service delivery
3. Customer Service
4. Network effectiveness
5. Planning
6. Capital project delivery
7. Facilities and equipment
8. Human resources
9. Existing contract and timing considerations

Members of the Staff Working Group worked with Delcan Corporation to identify the data needed to support the performance measures and to collect the data.

The Staff Working Group determined that it would be extremely difficult for the area municipalities to break out cost information for their arterial roads (due to their accounting systems not segregating costs out by road class). Costs for snow removal, for example, are not allocated on the basis of the type or functionality of road segments. The Staff Working Group came to the conclusion that allocation by the area municipalities of costs to arterial and non-arterial roads would require extensive work and that, even with external consulting support, it would be difficult to rationalize the outcomes. Accordingly, a decision was approved by the ARRASC at its meeting held on February 18, 2010 to use the Region's unit costs (operating and capital) as a proxy to estimate the expenses incurred by the area municipalities to maintain their arterial road networks.

A review of the data on operating standards and service levels by Delcan Corporation indicated that there were no significant differences in how roads are maintained by the Region and the area municipalities. (All four municipalities meet or exceed the Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways.) They also found that cost differentials for inputs such as labour, material and equipment were generally negligible. These findings supported the decision to use the Region's unit costs as a proxy for area municipal costs.

All of the remaining data - to support the other performance measures - was collected by, and is specific to, each of the four municipalities.

A half-day workshop for ARRASC members, other elected officials, and members of the Staff Steering Committee and Staff Working Group was held on June 18, 2010. Workshop participants rated the performance measures with respect to each measure's importance in determining roadway jurisdiction. The rating showed consensus amongst participants that the most important performance measures were: Financial, Service Delivery, Customer Service, Network Effectiveness and Planning. These five performance measures represent End User Impacts. The remaining four measures (Capital Project Delivery, Facilities and Equipment, Human Resources, Existing Contract and Timing Considerations) are Implementation and Transitional Issues. In addition, given the close scoring of the top five performance measures, it was decided that all measures would be given equal weighting in the analysis of the nine jurisdictional options.
June 7, 2011

ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

3. Recommended Jurisdictional Option

The Staff Working Group determined, after testing several sets of scores using the methodology developed in Phase II, that any scores are subjective and that the test results did not indicate a clear mandate for any particular jurisdictional option. The Staff Working Group then examined the jurisdictional options qualitatively, taking into consideration both the data collected as part of Phase II and potential financial implications. Option 4A (see the table below) was seen as the preferred option, as it addresses a number of major arterial road jurisdictional concerns and is expected to have minimal implementation and transition issues and cost implications. The jurisdictional concerns would be addressed through the downloading of two existing Regional roads that did not meet the major arterial road criteria identified in Phase I of the project (Embleton Road and Kennedy Road between Steeles Avenue and Bovaird Drive), the downloading of an isolated section of Mavis Road, and the uploading of three roads that would enhance the connectivity and continuity of the Regional road network (Coleraine Drive, Castlemore Road, and Winston Churchill Boulevard between Dundas Street West and Highway 401).

The Staff Steering Committee (comprising Dan Labrecque, Commissioner of Public Works, Region of Peel; Martin Powell, Commissioner of Transportation and Works, City of Mississauga; Thomas Mulligan, Commissioner of Works and Transportation, City of Brampton; and Craig Campbell, Director of Public Works, Town of Caledon) supports the implementation of Option 4A. The Staff Steering Committee believes that the consensus selection (and implementation) of Option 4A represents, per Regional Council's original direction to staff, a rationalization of the arterial road network.

The implementation of Option 4A would result in the following changes, subject to appropriate due diligence and concurrence by all three area municipalities and Regional Council:

<table>
<thead>
<tr>
<th>Arterial Road</th>
<th>Limits</th>
<th>Proposed Jurisdiction</th>
<th>Current Jurisdiction</th>
<th>Length (km)</th>
<th>Length (lane km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolton Arterial Rd</td>
<td>King St to Hwy 50</td>
<td>Region of Peel</td>
<td>N/A</td>
<td>4.3</td>
<td>9.8</td>
</tr>
<tr>
<td>Coleraine Dr</td>
<td>Hwy 50 to King St</td>
<td>Region of Peel</td>
<td>City of Brampton / Town of Caledon</td>
<td>8.5</td>
<td>27.8</td>
</tr>
<tr>
<td>Castlemore Rd</td>
<td>Airport Rd to Hwy 50</td>
<td>Region of Peel</td>
<td>City of Brampton</td>
<td>6.2</td>
<td>20.8</td>
</tr>
<tr>
<td>Winston Churchill Blvd</td>
<td>Dundas St W to Hwy 401</td>
<td>Region of Peel</td>
<td>City of Mississauga</td>
<td>12.5</td>
<td>57.2</td>
</tr>
<tr>
<td>Kennedy Rd</td>
<td>Steeles Ave W to Bovaird Dr</td>
<td>City of Brampton</td>
<td>Region of Peel</td>
<td>6.2</td>
<td>25.7</td>
</tr>
<tr>
<td>Embleton Rd</td>
<td>Winston Churchill Blvd to Mississauga Rd</td>
<td>City of Brampton</td>
<td>Region of Peel</td>
<td>2.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Mavis Rd</td>
<td>Steeles Ave E to Brampton/Mississauga boundary</td>
<td>City of Brampton</td>
<td>Region of Peel</td>
<td>2.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

(See Appendix III for a map showing Option 4A.)
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

4. Review of Operational Areas

While the impetus for the Arterial Road Rationalization Review project was a jurisdictional review, discussions late in the process turned to identifying opportunities where the Region and the area municipalities could enhance our collaborative efforts on particular operational issues, to the overall benefit of the common taxpayer.

The Staff Steering Committee will identify the road and related infrastructure operations that the four municipalities could review for potential streamlining. The goal would be to develop a much more abbreviated process for review than that followed in the first two phases of the Arterial Road Rationalization Review project.

5. Financial Implications

Assessment of the financial implications of the Staff Steering Committee's recommendations requires consideration of two components: (1) financial implications related to the recommended jurisdictional changes and (2) financial implications related to the operational reviews outlined in Section 2.

With respect to the financial implications of the jurisdictional changes identified in Option 4A, the cost of each change will be the responsibility of the municipality taking over jurisdiction of the road in question. The timing of the implementation of the jurisdictional changes and the identification of funding mechanisms and sources for this will be resolved through future discussions between the municipalities.

With respect to the operational reviews, it is premature to speculate on any financial implications. Future reports to Regional Council and area municipal councils would provide this information, as well as analysis results and potential options.

6. Proposed Direction

With the ARRASC's approval, the Staff Steering Committee will develop an action plan to implement the jurisdictional changes identified in Section 3 and will develop a process to review the operational areas identified in Section 4. Staff will update Regional Council on the status of the Arterial Road Rationalization Review Phase II project in Fall 2011.

In order to maintain the relevance and sustainability of Peel's arterial road network over the longer term, the Staff Steering Committee proposes that the four municipalities undertake reviews of all of the arterial roads in Peel every five years in conjunction with the Region's Long Range Transportation Plan Update.
7. Completion of the Mandate for the Arterial Roads Review Ad hoc Steering Committee

In accordance with the Terms of Reference for the ARRASC, upon receipt of the final report regarding Phase II of the Arterial Road Rationalization Review Project the Committee will have fulfilled its mandate. Future implementation requirements will be served through the regular council processes of the Region and the three area municipalities.

Dan Labrecque
Commissioner of Public Works

Approved for Submission:

D. Szwarc, Chief Administrative Officer

For further information regarding this report, please contact Damian Albanese at extension 7801 or via email at damian.albanese@peelregion.ca

Authored By: Brian Lakeman / Sabbir Saiyed

Legislative Services
**Jurisdictional Options**

**Option 1**  "Status Quo"
Existing jurisdiction remains the same.

**Option 2**  "All major arterial roads uploaded to the Region"
Major arterial roads identified in Phase I under the jurisdiction of the Region of Peel.

**Option 3**  "All major arterial roads downloaded to area municipalities"
All roads under the jurisdiction of the area municipalities.

**Option 4A**  "Any other effective combination of Options 1, 2 and 3 except the Mississauga Proposal"
Option 1 enhanced; elements of Option 2 & 3 – Status Quo submitted by Region of Peel.

These roads don't conform to the Major Arterial Road criteria from Phase I. Download Kennedy Rd. (Steeles Ave. to Bovaird Dr.), Mavis Rd. (Southerly boundary of Brampton City limits to Steeles Ave.) and Embleton Rd. (Mississauga Rd. to Winston Churchill Blvd.) to area municipalities.

Subsequent to Phase I, Coleraine Dr. within the City of Brampton, may connect to Hwy 50 and Hwy 427. It may, therefore, meet the Major Arterial Road criteria and should be uploaded. Upload Winston Churchill Blvd. (Dundas St. to Hwy 401), Castlemore Rd. (Hwy 50 to Airport Rd.), Coleraine Dr. (Hwy 50 to King St.) and the Bolton Arterial Rd (King St. to Hwy 50).

**Option 4B**  "Any other effective combination of Options 1, 2, 3 except the Mississauga Proposal"
Option 2 enhanced; elements of 1 & 3 submitted by Region of Peel.

All major arterial roads identified in Phase I under the jurisdiction of the Region of Peel.

Downloading roads that don't conform to the Major Arterial Road criteria from Phase I. Download Kennedy Rd. (Steeles Ave. to Bovaird Dr.), The Gore Rd. (Hwy 50 to Queen St.) and Embleton Rd. (Mississauga Rd. to Winston Churchill Blvd.) to area municipalities.

Subsequent to Phase I, Coleraine Dr. within the City of Brampton limits, may connect to Hwy 427. It may, therefore, meet the Major Arterial Road criteria. Upload Coleraine Dr. (Hwy 50 to Mayfield Rd. and King St. to Hwy 50).
Option 4C  “Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal”

Option 1 enhanced; Status Quo – with minor changes, submitted by the City of Brampton. Kennedy Rd. (from Bovaird Dr. to Steeles Ave.), Mavis Rd. (from Steeles Ave. to the South City limits) and Embleton Rd. (from Mississauga Rd. to the West city limit) transferred from the Region of Peel to Brampton.

Option 4D  “Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal”

Option 2 enhanced; submitted by the City of Brampton and the City of Mississauga.

All major arterial roads identified in Phase I under the jurisdiction of the Region of Peel, except the roadways which are of Local Municipal Interest. Roads which are of local municipal interest include roads which area municipalities have declared to be of local interest. This category would normally include major transit corridors where transit service is under the jurisdiction of the local municipalities or roads within urban villages or downtown areas where there is a desire to integrate roadway design with land-use controls, urban design, active transportation, transit and local traffic.

Roads that would be under the City of Brampton jurisdiction under this option are: Hurontario Street (entire length including Main Street), Chinguacousy Road (entire length including Mavis Road), Dixie Road (entire length), Airport Road (entire length), Queen Street (entire length), Steeles Avenue (entire length, Bovaird Drive (from Mississauga Road to Airport Road), Sandalwood Parkway (from Creditview Road to Airport Road). Roadways identified under option 4A will also be transferred to Brampton under this option as they do not meet the criteria of a major arterial road.

Roads under the City of Mississauga jurisdiction under this option are: Lakeshore Blvd. (entire length), Dundas St. (entire length), Burnhamthorpe (entire length), Hurontario St. (entire length) and Eglinton Ave. (Erin Mills Pkwy to Ninth Line).

Option 4E  “Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal”

Option 3 enhanced; submitted by the City of Brampton and the City of Mississauga.

All roads under the jurisdiction of the area municipalities, except those arterial roadways which are outside of the urbanized area. Arterial roadways outside of the urbanized areas are roads which accommodate high volumes of through traffic destined to urban area and therefore serve more of a regional function.

Roads that would be under the jurisdiction of the Region of Peel (within Brampton) area Winston Churchill Blvd, Mississauga Road, Gore Road, Hwy 50, Steeles Avenue (from Winston Churchill Blvd to Mississauga Road), Bovaird Drive (from Winston Churchill Blvd to Mississauga Road), Mayfield Road to
June 7, 2011
APPENDIX I
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

Castlemore Road (from Gove Road to Hwy 50). The entire City of Mississauga should be considered as an urbanized area.

Option 4F
Queen Street from Mayfield Road to north of Columbia Way is downloaded to the Town of Caledon, Coleraine Drive from Highway 50 to Mayfield Road is uploaded from Brampton and Coleraine Drive from Mayfield Road to Highway 50 is uploaded from Town of Caledon.
Region of Peel Arterial Roads Rationalization Review

June 7, 2011
APPENDIX II
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

Final Report

May 2011

Delcan
List of Appendices

Appendix A - ARRASC Meeting Minutes and Reports
Appendix B - ARRASC Presentations
Appendix C - Network Option Maps
Appendix D - Sample Criteria Matrix
Appendix E - Data Checklist
Appendix F - Letter to Emergency Services
Appendix G - Data Summary Tables
Appendix H - Workshop Report
1.0 INTRODUCTION

The Regional Municipality of Peel, in collaboration with the City of Brampton, the city of Mississauga and the Town of Caledon, has evaluated alternative ways to assign jurisdiction of the major arterial roads throughout Peel. Known as Phase II of the Arterial Road Rationalization Review, this activity built upon the accomplishments of Phase I of the project – the identification of the roads in Peel that met the definition of a major arterial road. Under the stewardship of Regional Council's Arterial Road Review Ad hoc Steering Committee (ARRASC), and the guidance of a multi-jurisdictional Staff Steering Committee and Working Group, Delcan Corporation (Delcan) was hired to develop a methodology to assess and evaluate nine jurisdictional options.

During the Phase II activity, Delcan has suggested criteria and methodologies to the Working Group, which in turn has taken issues and recommendations to the Staff Steering Committee. Because of the complexity of the issues raised, and the variety of operational and planning practices undertaken by the four municipalities, thirteen staff-level meetings were required over the course of the project. Project update reports and presentations have been provided to the ARRASC at three Sub-Committee meetings, including a half-day workshop on June 18, 2010. Minutes of the ARRASC meetings and presentations made by the study team are provided in Appendix A and B, respectively.

1.1 Background

On November 17, 2005, Regional Council directed the Commissioner of Public Works "to review the criteria for designating a road as upper tier and to undertake a review to rationalize the arterial road network, working in conjunction with area municipal staff to report back to Council at a future time." Regional and area municipal staff formed a Working Group to review the direction in two phases. Phase I undertook a technical review of criteria which define a major arterial road and applied these criteria to roads in Peel Region to identify those that meet the criteria, without regard to jurisdiction. The "Identification of Arterial Road and Road Rationalization within the Region of Peel – Phase One" report was approved by Regional Council on June 21, 2007, Resolution 2007-784.

As noted above, one of the primary outcomes from Phase I was the establishment of a consolidated criteria for the definition of arterial roads, from the perspective of service function, traffic flow characteristics, connections, transit, vehicle types, traffic speed and traffic volume. In addition, these criteria were applied to all roads within Peel to determine which should be classified as major arterial roads. A few existing arterial road sections were identified as not meeting the criteria. The intention of Phase II of the project was to review and rationalize the
arterial road system in Peel, building on the classification work done in Phase I. Nine jurisdictional options – combinations of arterial road uploads and downloads – were generated, including a "status quo" option. The options were presented to the ARRASC on June 26, 2008 and were approved by Regional Council on July 3, 2008, Resolution 2008-842. A summary of the options is provided in Table 1. Maps of the options can be found in Appendix C.

Table 1
Network Option Definitions

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>“Status Quo”&lt;br&gt;Existing jurisdiction remains the same.</td>
</tr>
<tr>
<td>Option 2</td>
<td>“All major arterial roads uploaded to the Region”&lt;br&gt;Major arterial roads identified in Phase I under the jurisdiction of the Region of Peel.</td>
</tr>
<tr>
<td>Option 3</td>
<td>“All major arterial roads downloaded to area municipalities”&lt;br&gt;All roads under the jurisdiction of the area municipalities.</td>
</tr>
<tr>
<td></td>
<td>“Any other effective combination of Options 1, 2 and 3 except the Mississauga Proposal*”&lt;br&gt;Option 1 enhanced; elements of Option 2 &amp; 3 – Status Quo submitted by Region of Peel.</td>
</tr>
<tr>
<td></td>
<td>These roads don’t conform to the Major Arterial Road criteria from Phase I. Download Kennedy Rd. (Steeles Ave. to Bovaird Dr.), Mavis Rd. (Southerly boundary of Brampton City limits to Steeles Ave.) and Embleton Rd. (Mississauga Rd. to Winston Churchill Blvd.) to area municipalities.</td>
</tr>
<tr>
<td>Option 4A</td>
<td>Subsequent to Phase I, Coleraine Dr. within the City of Brampton, may connect to Hwy 50 and Hwy 427. Therefore may meet the Major Arterial Road criteria therefore should be uploaded. Upload Winston Churchill Blvd. (Dundas St. to Hwy 401), Castlemore Rd. (Hwy 50 to Airport Rd.), Coleraine Dr. (Hwy 50 to King St. and King St. to Hwy 50).</td>
</tr>
</tbody>
</table>
## APPENDIX II

### ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE

**CAPITAL PROJECT 08-4325**

**ALL WARDS**

Region of Peel, Arterial Road Rationalization Review, Phase II

May 2011

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| **Option 4B** | "Any other effective combination of Options 1, 2, 3 except the Mississauga Proposal”
Option 2 enhanced; elements of 1 & 3 submitted by Region of Peel.  
All major arterial roads identified in Phase I under the jurisdiction of the Region of Peel.

Downloading roads that don’t conform to the Major Arterial Road criteria from Phase I. Download Kennedy Rd. (Steeles Ave to Bovaird Dr.), The Gore Rd. (Hwy 50 to Queens St.) and Embleton Rd. (Mississauga Rd. to Winston Churchill Blvd.) to area municipalities.

Subsequent to Phase I, Coleraine Dr. within the City of Brampton limits, may connect to Hwy 427. Therefore may meet the Major Arterial Road criteria. Upload Coleraine Dr. (Hwy 50 to Mayfield Rd. and King St. to Hwy 50). |

| **Option 4C** | "Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal”
Option 1 enhanced; Status Quo – with minor changes, submitted by the City of Brampton.  
Kennedy Rd. (from Bovaird Dr. to Steeles Ave.), Mavis Rd. (from Steeles Ave. to the South City limits) and Embleton Rd. (from Mississauga Rd. to the West city limit) transferred from the Region of Peel to City of Brampton. |

| **Option 4D** | "Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal”
Option 2 enhanced; submitted by the City of Brampton and the City of Mississauga.  
All major arterial roads identified in Phase I under the jurisdiction of the Region of Peel, except the roadways which are of Local Municipal Interest. Roads which are of local municipal interest include roads which area municipalities have declared to be of local interest. This category would normally include major transit corridors where transit service is under the jurisdiction of the local municipalities, or roads within urban villages or downtown areas where there is a desire to integrate roadway design with land-use controls, urban design, active transportation, transit and local traffic.

Roads that would be under the City of Brampton jurisdiction under this option are: Hurontario Street (entire length including Main Street), Chinguacousy Road (entire length including Mavis Road), Dixie Road (entire length), Airport Road (entire length), Queen Street (entire length), Steeles Avenue (entire length). |
June 7, 2011
APPENDIX II
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS
Region of Peel, Arterial Road Rationalization Review, Phase II
May 2011

<table>
<thead>
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<th>OPTIONS</th>
<th>DESCRIPTION</th>
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<tr>
<td></td>
<td>length, Bovaird Drive (from Mississauga Road to Airport Road), Sandalwood Parkway (from Creditview Road to Airport Road). Roadways identified under option 4A will also be transferred to Brampton under this option as they do not meet the criteria of a major arterial road. Roads under the City of Mississauga jurisdiction under this option are: Lakeshore Blvd. (entire length), Dundas St. (entire length), Burnhamthorpe (entire length), Hurontario St. (entire length) and Eglinton Ave. (Erin Mills Pkwy to Ninth Line).</td>
</tr>
<tr>
<td><strong>Option 4E</strong></td>
<td>&quot;Any other effective combination of Options 1, 2, 3, except the Mississauga Proposal&quot; Option 3 enhanced; submitted by the City of Brampton and the City of Mississauga. All roads under the jurisdiction of the area municipalities, except those arterial roadways which are outside of the urbanized area. Arterial roadways outside of the urbanized areas are roads which accommodate high volumes of through traffic destined to urban areas and therefore serve more of a regional function. Roads that would be under the jurisdiction of the Region of Peel (within Brampton) are Winston Churchill Blvd, Mississauga Road, Gore Road, Hwy 50, Steeles Avenue (from Winston Churchill Blvd to Mississauga Road), Bovaird Drive (from Winston Churchill Blvd to Mississauga Road), Mayfield Road to Castlemore Road (from Gove Road to Hwy 50). The entire City of Mississauga should be considered as an urbanized area.</td>
</tr>
<tr>
<td><strong>Option 4F</strong></td>
<td>Queen Street from Mayfield Road to north of Columbia Way is downloaded to the Town of Caledon, Coleraine Drive from Highway 50 to Mayfield Road is uploaded from City of Brampton and Coleraine Drive from Mayfield Road to Highway 50 is uploaded from the Town of Caledon.</td>
</tr>
</tbody>
</table>

To allow for evaluation of the nine jurisdictional options, a proposed list of evaluation criteria was developed which would be used to measure the impacts of the adoption of each of the options: financial, service delivery, customer service, network effectiveness, planning, capital project delivery, existing contracts, equipment, facilities, human resources and timing.

In response to a public call for proposals, Delcan was retained to:

- Review current practices related to jurisdictional responsibilities for major arterial roads;
June 7, 2011
APPENDIX II
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

Region of Peel, Arterial Road Rationalization Review, Phase II
May 2011

- Develop an evaluation methodology and matrix;
- Develop an approach for collecting the data required for the evaluation; and
- Facilitate the collection of data.

The evaluation methodology has been documented, allowing for its use in future assessments of the arterial road network in Peel. The current practices review was eliminated from the scope of work by the Steering Committee.

1.2 Study Team Organization

The project organization consists of a Working Group, a Staff Steering Committee and the ARRASC. The Working Group consisted of staff from the Region of Peel, City of Brampton, City of Mississauga, Town of Caledon and Delcan. The Staff Steering Committee was comprised of senior staff members from the Region and the area municipalities. The Working Group consulted the Staff Steering Committee and the ARRASC at strategic points during the study to provide feedback and/or seek endorsement of work/decisions to date. The members of the various groups and the ARRASC are presented in Table 2.
<table>
<thead>
<tr>
<th>Working Group</th>
<th>Staff Steering Committee</th>
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<td>Works</td>
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<td>Mayor - Marilyon Morrison</td>
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<tr>
<td>Kant Chawla, Senior Transportation Planner</td>
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</table>
2.0 KEY SERVICE ELEMENTS

As a starting point, the broad list of evaluation criteria generated by Delcan was used as the basis for refinement of the service elements. The Working Group and Staff Steering Committee identified the cost and impacts to service delivery elements that would be most impacted by changes to the jurisdiction of major arterial roads. During this process, staff considered both those aspects of service delivery that are consistent amongst the municipalities and those for which there are significant differences. In addition, sensitivities related to public perception and historical concerns were of prime consideration.

During these deliberations, it was noted that several of the broad criteria could better be considered as implementation challenges likely to arise during a change in roadway jurisdiction, rather than as service delivery criteria. As a result, facilities and equipment, human resources, and existing contracts and timing were identified under a new subheading of “Implementation and Transitional Issues”. The remaining criteria – service delivery, customer service, network effectiveness, and planning and capital project delivery – were identified under the subheading of “End User Impacts”.

To facilitate the understanding of the broad criteria, and the focused collection of data, sub-categories of criteria were developed. In all, 37 sub-categories were identified and presented to the ARRASC at their December 10, 2009 Sub-Committee meeting. The ARRASC reviewed the overall service element matrix which was presented at that time and endorsed the use of the matrix and the detailed service activities which would be used in the data collection and future assessment. The matrix is based on presenting the existing information for the status quo (Network Option 1) for each data category and the net change that would occur in each category for each of the other eight network options. Figure 1 presents a snapshot of the approved matrix format. A full version of the matrix is provided in Appendix D.
The ARRASC agreed to consider the County of Dufferin’s request that Phase II review the download of Regional Road 23 (Caledon East-Garafraxa Townline Road, an existing arterial road) from the Region to the Town of Caledon. The future Bolton Arterial By-pass Road (between King and Queen Streets) had been referred to Phase II of the study by Regional Council Resolution 2008-574 on May 8, 2008. Two future roadways recommended within the Peel Highway 427 Extension Area Transportation Master Plan Study area and the Halton-Peel Boundary Area Transportation Study area were deferred from consideration in Phase II, limiting the study to existing roads.

### 2.1 Methodology

Once the data and information collection requirements had been approved, a checklist was prepared as a management tool to assist staff in the task of data collection and tracking. The checklist is provided in Appendix E. Working Group discussions about the checklist led to further understanding of the service elements and how they should be assessed and applied to the nine options. Two key decisions about methodology were made at this time:

The original plan which was to compare the historical costs incurred by each municipality for their respective arterial roads and then determine the financial impacts of the nine jurisdictional options proved unworkable. (The way in which cost information for roads is collected would make it extremely difficult for the local municipalities to break out the information for arterial

---

**Figure 1**

**Criteria Matrix**

<table>
<thead>
<tr>
<th>Option No.</th>
<th>Winter Maintenance</th>
<th>Roadway Maintenance</th>
<th>Traffic Operations and Design</th>
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<td></td>
<td>Ops DC Relub Improve</td>
<td>Ops DC Relub Improve</td>
<td>Ops DC Relub Improve</td>
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<td>3.</td>
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<tr>
<td>Expert</td>
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<tr>
<td>Educators</td>
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<td>Rend</td>
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</tbody>
</table>

**Existing Values - Status Quo**

**Net Change from Existing - Status Quo**

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The original plan which was to compare the historical costs incurred by each municipality for their respective arterial roads and then determine the financial impacts of the nine jurisdictional options proved unworkable. (The way in which cost information for roads is collected would make it extremely difficult for the local municipalities to break out the information for arterial
roads.) Accordingly, it was decided to use the Region of Peel's unit costs, operating and capital, as a proxy to estimate the expenses incurred by the area municipalities to maintain their arterial road networks; and

Issues related to impacts to taxation levels would be deferred until the stage where detailed assessments of the options is done (if it is determined that there is a need for such a stage and it is approved by the ARRASC).

The Staff Steering Committee discussed the possibility of applying different weightings to the various evaluation criteria. The evaluation methodology that was developed incorporated the ability to do this. The issues of evaluation criteria and weighting were also addressed at the ARRASC workshop held on June 18, 2010 (see Section 4.2).

2.2 Data Collection

Members of the Working Group, working cooperatively with staff from Delcan, gathered the required data. A data checklist summarizing each of the service elements within nine performance measure categories (Figure 2) was developed for ease of auditing and a progress/data delivery matrix was distributed to the Working Group on a regular basis. The process of data collection required a considerable amount of time (10 months), as the four agencies collect, track and summarize their data differently.

3.0 PERFORMANCE MEASURES

3.1 Definitions

Each of the key service elements was further defined in order to clearly outline to the Region and Area Municipal staff the type of data required and its format/content. This was done to ensure that the data that was submitted would be comparable and that similar assumptions/parameters were used. Figure 2 provides a detailed definition of each of the service elements contained within the nine performance measures. The term "lane kilometres" utilized in this study is defined as the 2008 through lane kilometres of major arterial roads for each respective agency.
Figure 2
Data Checklist

1. Cost of delivering and supporting major services (operations and capital)

   a. Winter Maintenance
      
      i. The 2008 operational costs/through lane kilometre (in-house and contracted services) including administrative, facilities and equipment costs. Itemized listing of all non-capital roadway winter maintenance costs for calendar year 2008, including boulevard snow removal but no sidewalk ploughing.

      ii. Development Charge (DC) program (3yr average: 2008 – 2010). This included itemized expenditures related to development charge improvements to winter maintenance facilities (actual and projected).

      iii. Annualized and planned capital improvement costs (rehabilitation and improvement - 3yr average: 2008 – 2010). Itemized expenditures related to capital improvements to winter maintenance facilities (actual and projected). Definition as follows:
         
         i. rehabilitation = repair of existing infrastructure.
         ii. improvement = expansion, alteration, upgrade.

   b. Roadway Maintenance
      
      i. The 2008 operational costs/lane kilometre (in-house and contracted services) including administrative, facilities and equipment costs. Itemized list of all non-capital maintenance costs related to roadway, curb and shoulder maintenance for the calendar year 2008.

      ii. Development Charge (DC) program (3yr average: 2008 – 2010). Included itemized expenditures related to Development Charge improvements to roadways, curbs or shoulders, or facilities associated with roadway maintenance (actual and projected).

      iii. Annualized and planned capital improvement costs (rehabilitation and improvement - 3yr average: 2008 – 2010). Including itemized expenditures related to capital improvements of roadways, curbs or shoulders, or facilities associated with roadway improvements (actual and projected). Data was separate by capital rehabilitation (repair) and capital improvement (expansion/alteration).
c. Traffic Operations and Signals
   i. Operational costs, including administration, studies, facilities, equipment, signals, signs and pavement markings. Itemized list of all non-capital traffic operations and systems costs for the calendar year 2008. Development review was not included.

   ii. Development Charge (DC) program (3yr average: 2008 - 2010). Itemized expenditures related to development charge improvements to traffic signals or systems (actual and projected).

   iii. Annualized and planned capital improvement costs (rehabilitation and improvement - 3yr average: 2008 - 2010). Itemized expenditures related to capital improvements of traffic signals, systems or control centres (actual and projected). Capital rehabilitation (repair) and capital improvement (expansion or alteration) was separated.

2. Service Delivery (Public Clarity)
   a. Maintenance standards for major arterial roads, current levels of service (operational policies) and technical standards related to: winter maintenance on roads, roadway maintenance, traffic signal maintenance, sign maintenance and pavement marking maintenance.

   b. Reciprocal agreements for any current formal or semi-formal arrangements between any or all municipalities in Peel Region respecting these activities on major arterial roads: winter maintenance on roads, roadway maintenance and traffic operations/systems.

   c. Complaint referrals (multi jurisdiction) - Documentation respecting receipt of requests and complaints concerning major arterial roads which were lodged with the wrong jurisdiction in 2008.

   d. Liaison with emergency service providers. Involved the notification of the purpose and scope of the Phase II review and the request for comments from Police, Fire and Emergency Medical Service.

   e. Number of agencies involved (multi jurisdiction) - Description of services and issues on major arterial roads which routinely require multi jurisdictional review in order to resolve or report on the issue. Estimated or documented frequency of such multi jurisdictional involvement in 2008.
3. Customer Service

a. Approval procedures for business and residential - A listing of the applications which are made on major arterial roads which require dual level approval. Documented frequency of this multi jurisdictional approval process for 2008.

b. Complaint tracking and response relating to major arterial roads, current standards for response times to complaints and inquiries related to: winter maintenance, road maintenance, traffic maintenance and requests for traffic studies.

c. Customer service surveys - Customer service surveys which have been undertaken over the past 5 years which may relate fully or in part to any services which are provided on major arterial roads.

4. Network Effectiveness

a. Connectivity to neighbouring jurisdictions and provincial facilities - Identification and consideration of major arterial roads which are contiguous with major arterial roads in neighbouring jurisdictions; and which provide direct access to and from provincial highways; in a broader regional network context. Estimation of the level of traffic passing through the Region or municipality on certain corridors.

b. Connectivity to collector and local roads - Identification and consideration of the frequency of intersecting lower order roads to the major arterial roads in question, from a district, community or neighbourhood network context.

c. Access policies - Includes current policies with respect to the provision of driveways on major arterial roads.

d. Traffic device policies - Current policies with respect to the provision of traffic control signals, pedestrian crossovers, and other traffic control devices and facilities on major arterial roads. Current traffic signal control zones, or system control corridors or zones; communication systems and zones; traffic signal network software and hardware.

e. Truck routing policies - Current policies or typical by-laws restricting or regulating large vehicles on major arterial roads.
June 7, 2011
APPENDIX II
ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE
CAPITAL PROJECT 08-4325
ALL WARDS

Region of Peel, Arterial Road Rationalization Review, Phase II
May 2011

f. Maintenance routes - Current routes assigned to contracted services or in-house maintenance personnel respecting winter maintenance on roads, roadway maintenance, and traffic maintenance, including inspection staff and supervisors, if they are assigned routes. Works yards, control centres or other base locations related to the service should also be identified. For local jurisdictions, these routes may also include collector and local streets.

g. Multi modal networks (transit, pedestrians, bikes, goods movement) - Excerpts of reports or policy documents which discuss and/or identify discontinuity in any transportation-related network throughout the Region. Anecdotal evidence of network shortcomings in any of the modalities.

5. Planning (Corridor Land Use, Special Road Character)

a. Role of corridor and associated land use - Consideration of existing and planned major traffic generators and high density land use corridors in relation to the network of major arterial roads. Policies respecting Business Improvement Areas or Neighbourhood Improvement Areas, and examples of joint venture initiatives.

b. Road design and corridor policies and standards - Current policies and standards respecting a variety of major arterial road design features such as width of road allowance, number of lanes, lane widths, medians.

c. Streetscape, sign and landscape policies and standards - Current policies and standards respecting a variety of “pedestrian realm” design issues such as: sidewalk width, boulevard width and treatment, sign types, sizes and locations, plantings, pedestrian amenities on major arterial roads and retrofit initiation or approval policies.

d. Special road character - Current policies and standards for designating major arterial roads for special attention or treatment, and the various types of designations, treatments or operational policies which could be applied. Including retrofit initiation or approval policies.

e. Plans and policies for transit networks, higher order service - Excerpts from plans or reports describing the existing and approved future network of additional conventional transit service, as well as BRT and/or LRT on major arterial roads.
Active transportation (bikes and pedestrians) policies and networks - Excerpts from plans or reports describing the existing and approved future network of bicycle and pedestrian networks on major arterial roads.

g. Development review - The number of development reviews undertaken by traffic and transportation staff in 2008 for properties on major arterial roads. Any documented performance standards relative to this effort for the same year, staff resources available to conduct the reviews, policies to address localized response standards, quantification respecting multi jurisdictional issues.

6. Capital Project Delivery

a. Project management costs (in-house and contracted) - Itemized listing of all costs to support capital projects in 2008 broken down by: in-house and contracted services. An estimate of the percent of the total cost which applies to all aspects of work on major arterial roads as defined in Option 2.

b. Financing costs - Identify whether all or a portion of the total cost of capital projects is paid through debentures or other borrowed funds. If yes: what portion of the total annual cost was financed in 2008 and what is the annualized cost on the dollar.

c. Resources to administer the Capital Improvement Program (CIP) - Identify the staff resources required to administer the CIP. Estimate the portion of the CIP dedicated to all work on major arterial roads in 2008 (and note the how this estimate was determined).

7. Facilities and Equipment

Anticipate the potential impact upon works yards, control centres and other buildings and offices, which may have to be expanded or transferred to another jurisdiction, in whole or in part as a result of the various network options.

The potential impact on fleet management (operations and maintenance), including the transfer of vehicles and equipment from one jurisdiction to another which are involved in these services.
8. Human Resources (Impacts and Implications)

Direct service providers - Anticipate the potential impact upon municipal staff actually engaged in the delivery of the winter and road maintenance, and traffic operations and systems services. This identified the numbers of staff performing specific activities in terms of full time equivalent (FTE).

9. Existing Contract and Timing considerations

a. Contracts (scope/duration of internal and contracted services)- Pertinent extracts of any contracts relating to the aforementioned services, ranging from contracted services for installation and maintenance, or for consulting assignments, to internal unionized staff. Identify specific contracts which are shared or harmonized between two or more jurisdictions within the region.

b. Capital programs - Specific commitments in the capital improvement program (CIP) relating to major arterial roads which may have to be transferred from one jurisdiction to another. This included partially or fully completed Environmental Assessments.

c. Upper tier agreements - Specific commitments made between the municipality and any other authority (such as the province or federal government, or a major utility) which relate directly or indirectly to major arterial roads.

d. Property acquisition - Anticipated need for property acquisition to expand a facility, in the event that existing facilities would be inadequate to accommodate a significant increase in scope of service, and facility transfer would not be an obvious solution.

e. Other commitments - Anticipated other major impacts which may not be captured in any of the categories above.
3.2 Rationale for Data Preparation

The intent of the data preparation work was to develop a methodology and tool to summarize and present the data and analyze the impacts of the nine network options. Both the data and tool needed to be flexible to allow for more detailed analysis of the data as needed.

Policies, procedures and plans affect the functionality, look and feel of the road network. In order to determine how each municipality integrated the road network within their community fabric, an extensive review was undertaken of the qualitative information provided by each of the four municipalities. In addition, Delcan undertook a review of the information provided to the public on each of the municipalities’ web sites.

3.3 Data Management and Analysis Tool

Given the large amount of data reviewed and assessed for applicability, it was imperative that the data be summarized in a format that was clear, traceable and concise. The data management and analysis tool was developed utilizing a Microsoft Excel workbook containing eighteen spreadsheets. Separate spreadsheets were developed for each of the nine performance measures along with supporting data reference and analysis sheets that clearly organize, track and allow for comparison of the large quantity of information. Within the respective summary or calculation sheets, all assumptions used are documented for ease of reference. These assumptions were discussed and endorsed by the Working Group, Staff Steering Committee or the ARRASC as applicable. The data collected comprised hundreds of documents and electronic files including, but not limited to:

- Official plans, transportation studies, maintenance standards & policies, capital improvement program & budgets, various agreements and contracts (reciprocal, neighbours, Ontario Ministry of Transportation, maintenance, etc.)
- Historical and forecast financial data (2008-2019)
- Expenditures for capital, maintenance and operations
- Call logs, staffing levels, approval procedures, complaint tracking, complaint referrals
- Others

As such, the respective spreadsheets contain a variety of quantitative and qualitative data which can be used to assess the net impact on individual performance measures for each of the jurisdictional options. Three key comparison summary sheets were developed to assist in future network evaluations. These sheets are:

- Performance Measure - Financial Summary
- Performance Measure - Financial Comparison
Figures 3 and 4 illustrate a sample of a quantitative summary spreadsheet and a qualitative performance measure summary sheet, respectively. The full set of spreadsheet reports is provided in Appendix G.

### Figure 3
**Sample Quantitative Data Summary Spreadsheet**

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<th>Projected</th>
<th>Difference/Projected Less Historical</th>
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<td>Increase in Coverage</td>
<td>123%</td>
<td>156%</td>
<td>33%</td>
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<td>Increase in Capacity</td>
<td>28%</td>
<td>36%</td>
<td>8%</td>
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<tr>
<td>Increase in Efficiency</td>
<td>15%</td>
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<td>5%</td>
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### Figure 4
**Sample Qualitative Data Summary Spreadsheet**

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<th>Network</th>
<th>Current</th>
<th>Projected</th>
<th>Difference/Current Less Historical</th>
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<td>72%</td>
<td>16%</td>
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<td>Network B</td>
<td>34%</td>
<td>42%</td>
<td>8%</td>
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<tr>
<td>Network C</td>
<td>48%</td>
<td>55%</td>
<td>7%</td>
</tr>
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The full set of spreadsheet reports is provided in Appendix G. Each spreadsheet contains detailed data on various metrics and performance indicators, providing a comprehensive overview of the project's progress and achievements. The quantitative data summary spreadsheet (Figure 3) offers a detailed breakdown of key performance indicators, while the qualitative data summary spreadsheet (Figure 4) focuses on qualitative measures and insights that help in understanding the project's impact and effectiveness.
3.4 Data Summary Discussion

The following presents a discussion of each of the 9 performance measures reviewed.

Performance Measure 1 - Cost of Delivering Services

The cost of delivering services is summarized in Table 1 in Appendix G - "Comparison of Expenditures for Various Network Alternatives Historical Spending versus CIP Spending Model". The information contained within the spreadsheet was based on the following information:

The per lane kilometre costs for road, winter and traffic maintenance was developed using four years of financial information provided by the Region of Peel. The activity costs included staffing, equipment, materials, contracted services and overhead. The information provided was broken down for urban and rural arterial roads using cost data from the Region's North and South Roads Maintenance Districts.

The capital costs were based on three years of data from 2008 to 2010 provided by the Region. The information provided was broken down as road construction, intersections, attenuation walls, pavement management, structures and landscaping. Pavement management was listed under rehabilitation and was entirely funded by property taxes. The remaining works were broken down as improvement (taxpayer funded) and DC (development charges/external funding). The information provided did not allow for an allocation between rural and urban type arterial roads. Similar to the operating, a cost per lane kilometre was calculated.

As previously noted, the cost comparison was to be based on historical expenditures. After reviewing the information provided for Performance Measure 9 - Capital Programs, however, Delcan staff determined that a more accurate financial impact analysis could be developed for the various network options by using the proposed 10 year capital program costs provided by each of the municipalities. Both methods of comparison were added to the Data Tool and a review of them yielded some significant differences, especially within the growth areas of the Region. These summaries are provided in Table 2 - Summary of Comparison of Expenditures for Various Network Alternatives in Appendix G. Network Option 1 is the "base case" (status quo) and represents the existing major arterial road network.

Performance Measure 2 - Service Delivery

All of the municipalities have adopted Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways (MMSMH). The Regulation sets out the minimum standards of repair for highways under municipal jurisdiction. Although the municipalities have all adopted MMSMH there is a disparity in municipal road condition ratings. These ratings represent overall condition (structural, ride, comfort, etc.) of the roadway and are used as an indicator for the
planning of required capital and maintenance road works. With the exception of the Town of Caledon each of the other road authorities currently exceed their condition targets. Caledon is currently at 47.9% which is below their targeted value of 66%, highlighting their stated concern over having enough resources to maintain their existing road network.

All the branches of emergency services were contacted requesting any concerns that they may have with respect to jurisdictional changes to the roads. Peel Region Police and the Caledon Fire Department were the only branches which provided input.

The data compiled by the Region’s, City of Brampton’s and City of Mississauga’s call centres indicates that there is not any significant confusion with the public as to who has jurisdiction over the arterial roads within the Region. This statement is based on the fact that after reviewing the various call centre data provided, only a small percentage of calls related to other agency’s roadways.

There are a number of agreements between the municipalities with respect to providing road services. Agency staff currently interacts on a regular basis to deal with various issues that impact roadways (e.g. winter maintenance, traffic signal maintenance, etc.)

**Performance Measure 3 – Customer Service**

All the municipalities follow, at least, the minimum requirements of the MMSMH, which sets out response times in dealing with road maintenance issues once they have been identified. The data showed no significant differences in response times between agencies.

The Region of Peel and City of Mississauga have undertaken customer satisfaction surveys, which have yielded similar satisfaction results in regards to roads and neither survey highlight any significant issues.

**Performance Measure 4 – Network Effectiveness**

A comprehensive review of the information provided by the municipalities was undertaken to determine network effectiveness. Information reviewed included Official Plans (both approved and proposed), Transportation Master Plans, policies, etc. Information on the road networks in adjacent municipalities was also reviewed. All of the municipalities have implemented very similar policies regarding network effectiveness. Each agency has a similar view and definition for the role and function of different classes of roadways, specifically arterials. A key difference identified was that although all the municipalities agree on the need to control access to/from arterial roads, only the Region has passed a controlled access by-law.
Performance Measure 5 – Planning

Documentation reviewed included Official Plans, streetscaping studies, guidelines, design standards, Transportation Master Plans, Bike Plans etc. The four agencies all have implemented very similar policies. The municipalities have identified that the arterial road network is needed to move people and goods. The corridors are to be developed so that they will accommodate pedestrians, bicycles, transit and vehicles, both commercial and personal. In addition they have developed streetscaping plans and policies so as to enhance the visual experience and take into account the local character of the area.

Performance Measure 6 – Capital Project Delivery

The data has been provided for information purposes and is unique to the various agencies. This information would be used to assess the impacts of the implementation of the jurisdictional options. The municipalities use a combination of in-house resources and consultants, that is in proportion to the size of their respective Capital Programs, to carry out the various aspect of the work required in completing a road project. They have adopted a pay as you go approach for the road works as no financing cost were identified.

Performance Measures 7 and 8 – Facilities & Equipment and Human Resource Implications

Impacts on staffing, equipment and contractors were based on the estimates provided by Peel Region for each of the jurisdictional options. The net changes in these resources identified by the Region were reallocated to the municipalities based on a prorated basis using the change in lane kilometres (for each municipality) under the various jurisdictional options. Impacts to facilities were based on specific information provided by each of the municipalities for the various jurisdictional options.

Performance Measure 9 – Existing Contract Timing and Consideration

The review of existing contracts and agreements (involving the municipalities) did not identify anything that would be an impediment to a change in the road jurisdiction for the roads identified in the network options. The same was found for the various upper tier and neighbouring municipality agreements that have been entered into for the maintenance of roads, signals and bridges. Modifications of these agreements could be easily implemented if a change in roadway jurisdiction occurred.
4.0 WORKSHOP

4.1 Purpose and Structure

As part of the Arterial Region Road Rationalization Review Phase II, a workshop with the ARRASC was held. The purpose of the workshop was to provide an update of the project status, to generate discussion with respect to the main elements of the evaluation process and to discuss what the overall significance/importance of each of these elements should be when making decisions related to arterial roadway jurisdiction.

The workshop was held on the morning June 18, 2010 at Peel Regional Headquarters. The meeting was facilitated by members of the consultant project team (Delcan) and was attended by members of the ARRASC, other members of Regional Council and members of the Staff Steering Committee and Working Group. The workshop Summary Report is included in Appendix H.

The workshop format consisted of three primary components:

- Presentation of the project status and update;
- Breakout sessions with two working groups; and
- Overall group summary and discussion.

4.2 Summary and Recommendations

Two breakout groups were formed that included both elected officials and municipal/regional staff. Delcan staff moderated each group's discussion and took the participants through each of nine performance measures: Financial, Service Delivery, Customer Service, Network Effectiveness, Planning, Capital Project Delivery, Facilities and Equipment, Human Resources, and Existing Contracts and Timing.

The discussions started with a definition of the performance measures followed by a detailed discussion by all participants as to what role or significance the measures should have when considering an arterial roadway jurisdiction change within the Region of Peel.

Once the discussions were completed the elected officials and staff were asked to complete an anonymous survey and rate each of the performance measures on a scale 1 to 10 with respect to each performance measure's importance in determining/establishing roadway jurisdiction. The ratings were considered to be an absolute score and not relative to the other performance measures. The anonymous ratings were tabulated and summarized by group: elected officials and staff. The results are presented in Table 3.
Table 3
Summary Performance Measure Rating

<table>
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<tr>
<th>Performance Measures</th>
<th>Elected Officials Average Rating</th>
<th>Staff Average Rating</th>
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</thead>
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<td>Customer Service</td>
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<td>Network Effectiveness</td>
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<td>Planning</td>
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<tr>
<td>Capital Project Delivery</td>
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<td>5.4</td>
</tr>
<tr>
<td>Facilities &amp; Equipment</td>
<td>5.3</td>
<td>6.7</td>
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<tr>
<td>Human Resources</td>
<td>6.0</td>
<td>6.3</td>
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<tr>
<td>Existing Contracts and Timing</td>
<td>5.7</td>
<td>7.4</td>
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</table>

Note: Score of 1 represents a high level of importance and 10 represents a low level of importance.

The ratings showed that there was consensus amongst the elected officials and staff that the most important performance measures were Financial, Service Delivery, Customer Service, Network Effectiveness, and Planning. There was a discrepancy in the scoring of Capital Project Delivery, but after follow-up discussion it was agreed that it was not as important as the top five measures. In addition, given the close scoring of the top five performance measures, it was decided that they would all be given equal weighting in the analysis and scoring of the nine jurisdictional options. Workshop participants determined that the top five performance measures should be used to develop a shortlist of options and that all of the performance measures would be used in any further analysis of the shortlisted options (if staff is directed to do so by the ARRASC).
5.0 DATA SUMMARY

The following information presents a summary of the collected data that is summarized in the various tables in Appendix G. These data include various performance measures which have been grouped into two main categories of data: financial and implementation and transitional issues. The end user impact assessment will be completed by Working Group in the future.

Financial

Using each road authority's 10 year capital improvement program, annualized costs were prepared for the various expenditure categories. These proposed expenditures provide a more accurate representation of where the funds are to be spent recognizing changes in expenditures based on network expansion and rehabilitation needs. Reviewing these expenditures indicates that the majority of the funds to be spent by the Region of Peel on the regional road network will be in Brampton at 54.6% with the remaining funds being divided equally between Caledon and Mississauga at 22.3% and 23.1% respectively. On a per km basis these expenditures represent $142,268 in Brampton, $71,876 in Caledon and $74,878 in Mississauga. This distribution of expenditures is representative of the planned distribution of growth over the next 10 years in the Region. It is anticipated that approximately 50% of the funding for this identified work will be provided through Development Charges.

As these expenditures are considered within the context of the various jurisdictional network options the proposed expenditures required by each of the four roadway agencies will change. Considering the jurisdictional network Options 2 through 4F, Figures 5 and 6 illustrate the anticipated changes in annual costs relative to the Status Quo for operations & maintenance and capital expenditures for each agency, respectively. The total overall shift in annual costs by agency (sum of Figure 5 and 6) for each jurisdictional option is presented in Figure 7.
In reviewing the graphs, jurisdictional Options 2 and 4B result in the greatest increase in annual costs to the Region with majority of roadways being uploaded while Options 3, 4D and 4E represent significant downloading of regional roads to the area municipalities. The status quo estimated annual total roadway expenditures (capital and operations) for each of the four agencies is approximately:

- Brampton $12,500,000\(^1\)
- Caledon $2,700,000\(^1\)
- Mississauga $22,000,000\(^1\)
- Peel $153,000,000

\(^1\)Status Quo expenditures consist of Regional operation/maintenance costs and Municipality 10 year planned capital improvements
Implementation and Transitional Issues

A review of the various performance measures that are contained in the implementation and transitional issues category was undertaken. This category contains Capital Project Delivery, Facilities & Equipment, Human Resources and Contracts & Timing. These categories related primarily to staffing, equipment, contracts and agreements. For the purpose of this initial assessment the working group agreed that the impact on operational staff and equipment would be based on estimates provided by the Region of Peel for each scenario. The shift in these resources was forecast based on a pro-rating the regional estimates by the change in lane kilometres under each of the jurisdictional options, with a net of zero.

Preliminary estimates of facility impacts were prepared by the road authorities. These estimates primarily highlighted if the road authority could service the additional lane kilometres received in the various network options from one of their existing service yards or whether an expansion to a facility or new facility was required. Options 2, 3 and 4B each identified the need for either an expansion or the construction of a new service facility.

A review of existing contracts and agreements revealed that with some of the proposed jurisdictional network options either maintenance agreements (e.g. winter maintenance, sweeping, etc.) or boundary agreements (e.g. upper tier, neighbouring municipality) with would need to be modified. The review determined that there were no impediments to the modification of these agreements if a jurisdictional change was made.

The study Working Group determined that higher level review would be completed as part of this study given the substantial level of effort and time required to assess and gather information for each of the unique network options. It was agreed that a more detailed assessment would be undertaken to quantify the true impacts to staffing, equipment and facilities once a preferred Options was selected.

Although not part of the study process there was some discussion in regards to taxation and the ability to pay for arterial roads that may be downloaded to the area municipalities. It was clearly articulated by the Town of Caledon that based on present taxation models, they were not able to take on and maintain any additional road infrastructure.
Project Summary

In completing Phase II of the Arterial Road Rationalization Review Project, Delcan undertook a number of tasks. The first task involved the identification of jurisdictional options for the major arterial roads identified in Phase I. Based on the review of the jurisdictional options and discussions with working group members, a draft framework for the evaluation methodology was prepared and discussed with the Steering Committee and AARSC. Following their approval of the methodology, Delcan, developed an approach to facilitate the data collection required to support the evaluation methodology and prepared a data analysis tool to assist in the assessment and evaluation the jurisdictional options.

Key to the data collection and analysis in Phase II was the decision to use the Region's unit costs (operating and capital) as a proxy to estimate the expenses incurred by the area municipalities to maintain their arterial road networks. This decision approved by AARASC was made in response to the Staff Working Group review of the data which determined that it would be extremely difficult for the area municipalities to break out cost information for their arterial roads due to their accounting systems not segregating costs out by road class.

Additionally, a half-day workshop for ARRASC members, other elected officials, and members of the Staff Steering Committee and Staff Working Group was held on February 18, 2010. The focus of the workshop was to provide an update on the study and to establish the importance of each performance measures with respect to determining roadway jurisdiction. Consensus amongst participants indicated that the most important performance measures were: Financial, Service Delivery, Customer Service, Network Effectiveness and Planning. These five performance measures represent End User Impacts. The remaining four measures (Capital Project Delivery, Facilities and Equipment, Human Resources, Existing Contract and Timing Considerations) were considered Implementation and Transitional Issues. In addition, given the close scoring of the top five performance measures, it was decided that all measures would be given equal weighting in the analysis of the nine jurisdictional options.

As the project moves forward beyond Phase II, the working group in cooperation with the steering committee will utilize the information collected and assembled in this study to evaluate and make a recommendation on a preferred jurisdictional option to ARRASC.
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<th>Frequency</th>
<th>Operations</th>
<th>Capital</th>
<th>Expenditure</th>
<th>Cost Operations</th>
<th>Percent Difference</th>
<th>Percent Cost Difference</th>
<th>CIP Spending Model</th>
<th>Historical Spending Model</th>
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<th>Percent Spending Difference</th>
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<td>Operators</td>
<td>Force</td>
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<td>Percent Difference</td>
<td>Percent Cost Difference</td>
<td>CIP Spending Model</td>
<td>Historical Spending Model</td>
<td>Spending Difference</td>
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</table>

**Notes:**
- Figures are rounded to the nearest whole number.
- Percentages are calculated based on the total expenditure.
- The spending model compares against the CIP spending model.
- The historical spending model compares against the urban road operations.

**Table 1:**
ARterial Road Rationalization Review Phase II Project Update
Comparision of Expenditures for Various Network Alternatives
Historical Spending Model versus CIP Spending Model
## Summary of Comparison of Expenditures for Various Network Alternatives

**Historical Spending Model Versus CIP Spending Model**

<table>
<thead>
<tr>
<th>Option No.</th>
<th>Brenton</th>
<th>Caledon</th>
<th>Mississauga</th>
<th>Peel</th>
<th>Brampton</th>
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<td>100.0</td>
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<td>2,753,177</td>
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<tr>
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### Financial Historical Expenditure Program

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<th>Mississauga</th>
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Note: The table represents the summary of comparison for various network alternative historical spending model versus CIP spending model for the region of Peel in the ARTERIAL ROAD RATIONALIZATION REVIEW PHASE II PROJECT UPDATE for all wards.