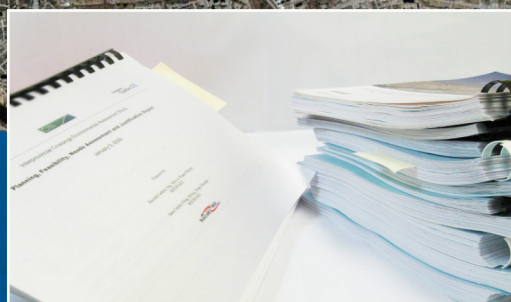




Future Interprovincial Crossings in the National Capital Region Environmental Assessment Study, Phase 2A



Summary Report of Existing Documentation

January 2010

NCC File No: SC2050

Future Interprovincial Crossings in the National Capital Region Environmental Assessment Study Phase 2A

Summary Report of Existing Documentation

Final Report

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AECOM Delcan

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NCC Project Management Committee

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Table of Contents

1	INTRODUCTION.....	2
2	METHODOLOGY OF ANALYSIS	3
3	ANALYSIS OF PHASE 1 DOCUMENTATION	5
3.1	Main Documents	5
3.1.1	Phase 1 Final Report: Planning, Feasibility, Needs Assessment and Justification (Including summary report)	5
3.1.2	Appendix A: Terms of Reference	5
3.1.3	Appendix A: Supporting Documentation	7
3.1.4	Appendix C: Assessment of Alternative Planning Solutions	7
3.1.5	Appendix D: Summary of Existing Conditions	8
3.2	Transportation	9
3.2.1	Appendix B: Current and Projected Traffic Demand	9
3.2.2	Appendix B: Future 2031 Traffic Demand Projections	9
3.2.3	Appendix B: Traffic Modelling and forecast Trip Assignment	10
3.2.4	Appendix B: Ottawa Road 174 Widening	10
3.2.5	Appendix M: Alternative Alignments	11
3.2.6	Appendix M: Prince of Wales Bridge	11
3.2.7	Appendix M: Transportation Systems Management	11
3.2.8	Appendix M: Ferry Coarse Screening	11
3.2.9	Appendix M: MacDonald-Cartier Bridge Tunnel Coarse Screening	12
3.3	Natural Environment	12
3.3.1	Appendix E: Natural Environment	12
3.3.2	Appendix F: Air Quality: Final Report	13
3.3.3	Appendix G: Fisheries and Aquatic Habitat	13
3.3.4	Appendix H: Hydrotechnical	13
3.3.5	Appendix H: Drainage	14
3.3.6	Appendix M: Geotechnical – Bridge	14
3.3.7	Appendix M: Geotechnical - tunnel	14
3.3.8	Appendix M: Existing Noise	15
3.3.9	Appendix M: Noise Effect on Horses	15
3.3.10	Appendix M: Water Wells	16
3.3.11	Appendix M: Britannia Filtration Plant	16
3.4	Urban, cultural and socioeconomic considerations	16
3.4.1	Appendix I: Archaeology ON	16
3.4.2	Appendix I: Archaeology QC	17
3.4.3	Appendix I: Heritage	17
3.4.4	Appendix J: Economic Impacts	17
3.4.5	Appendix K: Land Use Ontario	18
3.4.6	Appendix K: Land Use Québec	19
3.4.7	Appendix M: Navigable Waters	20
3.5	Public Consultation	20
3.5.1	General comments on the public consultation process	20
3.5.2	Appendix 1: Public Consultation Session No 1 Summary Report	24
3.5.3	Appendix 2: Public Consultation Session No 2 Summary Report	24
3.5.4	Appendix 3: Public Consultation Session No 3 Summary Report	25
3.5.5	Appendix 4: Public Consultation Session No 4 Summary Report	26
3.6	Phase 1 Evaluation Procedures	27
3.6.1	Appendix N: Analysis and Evaluation	27
3.6.2	Appendix O: Cost Estimate	27
3.6.3	Appendix L: Phase 1 Environmental Site Assessment	28

3.7	Other Topics	28
3.7.1	Appendix P: Proponency	28
3.7.2	Appendix Q: 1999 OMB Decision	29
3.7.3	Appendix R: Council Resolution, Ottawa, January 14, 2009	29
3.7.4	Appendix R: Council Resolution, Ottawa, January 28, 2009	30
3.7.5	Council Resolution, Ottawa, February 11, 2009	30
3.7.6	Appendix R: Council Resolution, Gatineau	30

4 CONSIDERATIONS FOR PHASE 2..... 31

LIST OF TABLES

Table 2.1	List of documents under study	3
Table 3.1	Evaluation of Alternative Planning Solutions	8
Table 3.2	Summary of Phase 1 Consultation Activities	Erreur ! Signet non défini.
Table 4.1	Considerations for the Phase 2B Study Design	32

1 Introduction

This report presents a summary and analysis of existing documentation stemming from Phase 1 work. It highlights findings and conclusions from Phase 1 that are pertinent to Phase 2A of the ongoing Environmental Assessment (EA) Study of the Future Interprovincial Crossings in the National Capital Region (NCR). This information will be used in support of the activities of Phase 2A, notably in the development of:

- the public consultation approach to be held during Phase 2A;
- the environmental assessment methodology for Phase 2B work; and,
- the consultation and communications program for Phase 2B.

Phase 1 EA study work documented the need and justification for improved interprovincial capacity, and developed and evaluated 12 different solutions comprised of combinations of different technological (bridge and tunnel) options in 10 possible corridors. From these 12 solutions, the top three ranked bridge corridors, Corridor 5 (Kettle Island), Corridor 6 (Lower Duck Island) and Corridor 7 (Baie McLaurin/Gatineau Airport) were retained for further detailed analysis by study partners for Phase 2 of the EA study.

The Phase 1 final report and its associated appendices, as well as reports of the four Phase 1 rounds of public consultations are the subject of analysis of the present report. A review of these documents reveals the kinds of information that has been produced and the depth of that information. This analysis also evaluates the study methodology of the various elements involved in Phase 1 work, including those used during public consultations. This analysis aims to highlight suitable and appropriate procedures for work in Phase 2A, and to avoid unnecessary duplication of resources on future research, fact finding and study design development.

This report begins with a presentation of the methodology employed in the analysis of Phase 1 documents. Next, an analysis of each aspect of the Phase 1 final report and each of its appendices is presented. This analysis provides, for each study aspect of Phase 1, a summary of the contents, conclusions and considerations pertinent to Phase 2A work as well as a summary of the methodology, background research, and consultation techniques employed.

2 Methodology of Analysis

The documents under review are part of the Roche NCE final report of Phase 1 activities published on January 5, 2009. The documents were obtained from the NCR Project website as well as the City of Ottawa website. Each document was reviewed by a professional of the Phase 2A consultant team with expertise in the document subject matter. The following aspects of each document, where available, are presented in chapter 3:

- A summary of the document's contents;
- A summary of the document's conclusions that are pertinent to Phase 2A and/or Phase 2B work;
- Notes and comments regarding the document's sources of information and reference material;
- A summary of the methodology related to the production of each document;
- Comments on whether any consultations were held with stakeholders or experts that were not otherwise involved in the public consultation process; and,
- Comments by reviewers regarding potential studies to be undertaken and work to be done as part of Phase 2B to assist the proponent in the assessment of the three corridors carried forward.

Table 2.1 presents a list of all the documents analysed within this report. They are classified into seven subject areas.

Table 2.1 List of documents under study

Subject Area	Documents
Main documents	Phase 1 Final Report: Planning, Feasibility, Needs Assessment and Justification Report (includes Summary Report) Appendix A: Terms of Reference Appendix A: Supporting Documentation Appendix C: Assessment of Alternative Planning Solutions Appendix D: Summary of Existing Conditions
Transportation	Appendix B: Current and Projected Traffic Demand Appendix B: Future 2031 Traffic Demand Projections Appendix B: Traffic Modelling and forecast Trip Assignment Appendix B: Ottawa Road 174 Widening Appendix M: Alternative Alignments Appendix M: Prince of Wales Bridge Appendix M: Transportation Systems Management Appendix M: Ferry Coarse Screening Appendix M: MacDonald-Cartier Bridge Tunnel Coarse Screening

Subject Area	Documents
Natural Environment	Appendix E: Natural Environment Appendix F: Air Quality – final report Appendix G: Fisheries and Aquatic Habitat Appendix H: Hydrotechnical Appendix H: Drainage Appendix M: Geotechnical – Bridge Appendix M: Geotechnical - tunnel Appendix M: Existing Noise Appendix M: Noise Effect on Horses Appendix M: Water Wells
Urban, Cultural and socioeconomic considerations	Appendix I: Archaeology Ontario Appendix I: Archaeology Quebec Appendix I: Heritage Appendix J: Economic Impacts Appendix K: Land Use ON Appendix K: Land Use QC Appendix M: Navigable Waters Appendix M: Britannia Filtration Plant
Public consultations	Appendix 1: Public Consultation Session No 1 Summary Report Appendix 2: Public Consultation Session No 2 Summary Report Appendix 3: Public Consultation Session No 3 Summary Report Appendix 4: Public Consultation Session No 4 Summary Report
Phase 1 Evaluation Procedures	Appendix N: Analysis and Evaluation Appendix O: Cost Estimate Appendix L: Phase 1 Environmental Site Assessment
Other	Appendix P: Proponency Appendix Q: 1999 OMB Decision Appendix R: Council Resolution, Ottawa, January 14, 2009 Appendix R: Council Resolution, Ottawa, January 28, 2009 Council Resolution, Ottawa, February 11 2009* Appendix R: Council Resolution, Gatineau

Note that in the following analysis, some document summaries or conclusions are citations extracted directly from the document under analysis. They are denoted by “ ” around the passage cited. Unless otherwise indicated, the source of the citation is the document under study.

*This document was obtained directly from the City of Ottawa website:
<http://www.ottawa.ca/cgi-bin/docs.pl?lang=en>

3 Analysis of Phase 1 Documentation

The following chapter presents a summary of the analysis of each document of the Phase 1 final report. Documents were categorized into seven main subject areas:

- 3.1 Main document;
- 3.2 Transportation;
- 3.3 Natural Environment;
- 3.4 Urban, Cultural and socioeconomic considerations;
- 3.5 Public Consultations;
- 3.6 Phase 1 Evaluation Procedures; and,
- 3.7 Other.

Note that appendices listed below are part of the documents analysed from the Phase 1 final report, rather than a reference to any appendix of the present report.

3.1 Main Documents

3.1.1 Phase 1 Final Report: Planning, Feasibility, Needs Assessment and Justification (Including summary report)

Date of Publication
5 January 2009

Document Summary

The final report contains a summary of all major aspects of Phase 1 work. They include early analyses into the need for further interprovincial capacity in light of population and employment growth predictions; the evaluation of different solutions to meet capacity shortfalls; the selection of potential corridors for a new interprovincial link; a description of the transportation, physical, socio-economic, and cultural considerations within each corridor; and finally the evaluation methodology and recommendations as to the corridor of choice to be carried forward into subsequent phases.

The final report is supported by its appendices, within which the considerations and procedures of Phase 1 work are described in detail. For this reason, the analysis of the various aspects is not treated here, but rather in their respective sections below.

Document Conclusions pertinent to Phase 2

Phase 1 Study recommended a new crossing be built at Kettle Island (Corridor 5) within the next 20 years. The Phase 1 Evaluation Committee found that corridor 5 was best able to meet transportation objectives while minimizing environmental effects.

3.1.2 Appendix A: Terms of Reference

Date of Publication
7 October 2007

Document Summary

The Terms of Reference (ToR) establishes the general procedures and processes that will guide Phase 1 EA activities. The ToR begins by setting out the physical, social and economic contexts for phase 1 work including descriptions of prior studies in 1994 and 1999. It describes the opportunities and benefits of the Interprovincial Crossings EA Study, and finally sets out a list of the specific economic, social, transportation and

environmental issues to be considered by the Phase 1 study. The document defines the Study Area for the EA study, which is divided into three levels of analysis: the Regional Study Area, the East and West Sector Study Areas, and the Individual Corridor Study Area.

The ToR sets out the study process that will be used “to avoid, minimize or prevent adverse environmental effects to the greatest extent possible”, which involves the identification of potential environmental effects for each considered alternative and the identification of mitigation measures. The document also defines the EA study objectives, a work program (with four major steps for Phase 1, and several objectives for Phase 2), and a Consultation Plan (including an Aboriginal Consultation Plan). A summary of public consultations held during the preparation of the ToR to obtain input on the contents of the ToR is included in the document. Finally, the ToR lays out the required approvals for the EA Study, the monitoring process that is envisaged, the method of documentation of study results and a study schedule.

Document Conclusions pertinent to Phase 2

- Currently, bridges operate at Level of Service F, while population, employment and tourism activities continue to grow.
 - A list of criteria that should be satisfied by the new crossings is listed below:
 - “Ensure interprovincial/municipal access between the primary provincial highway systems(freeway/expressway) in the Cities of Gatineau and Ottawa”;
 - Provide a truck route that can link to existing truck routes on both sides of the river;
 - Minimize community effects by linking to only existing freeways, expressways or arterial roadways (i.e. not linking to local or collector roads which were not designed for high volume traffic or truck traffic);
 - Provide a high mobility arterial roadway;
 - Accommodate all modes of travel including pedestrians, bicycles, transit, automobiles and commercial vehicles;
 - Complement transit objectives and plans;
 - Take into consideration the natural, socio-economic and environmental impacts;
 - Be affordable i.e. there must be a reasonable opportunity to implement the infrastructure; and,
 - “The level of service (LOS) objective for the Ottawa River screenline will be LOS D which will be defined as 85% of the capacity of the entire screenline”.
- (Source: Technical memo on Description of the 10 Short Listed Alignment Alternatives, 30 November 2007)
- Broad evaluation criteria were proposed to assess the Alternative Planning Solutions, along with a preliminary coarse screening of candidate corridors within the NCR, and evaluation methodologies.

Background Research

See 3.1.3 Appendix A: Supporting Documentation.

Methodology Employed

Public and Phase 1 study partners comments were incorporated in the ToR “as anticipated in the Ontario process”. The final ToR was made available to the public, and was conceived “in accordance with the harmonized processes that would satisfy the requirements of Canada, Ontario and Quebec.”

Consultations

The public and Phase 1 study partners were consulted prior to finalizing the ToR.

3.1.3 Appendix A: Supporting Documentation

Date of Publication

2 October 2007

Document Summary

Consists of all the appendices that were used to write the ToR:

- Regional Planning Policies: the NCC policies, the Ministry of Transportation of Ontario policies, the City of Ottawa policies (OP, TMP), the City of Gatineau policies (Strategic Plan, Urban Plan), and the MTQ policies (MTQ Strategic Plan).
- Federal and Provincial Environmental Assessment Legislation: presents the requirements for the federal, Ontario and Quebec Environmental Assessment Processes, as well as the Coordinated Environmental Assessment Process.
- Assessment of Alternative Planning Solutions: 9 alternative solutions are presented and assessed using several evaluation factors.
- Preliminary Coarse Screening Analysis: the first step consists in the screening of geographic areas (Rural areas, urban areas and urban core), and the second step consists in the identification and screening of corridors, based on evaluation criteria. Finally, 10 corridors are carried forward for further review (4 in the West and 6 in the East).
- Public Consultation Plan: presents the Goals and Objectives of the public consultation process. It also identifies the Key participants, as well as the public consultation tools to be used, as well as the documentation that will be provided as a result of the consultation process.

Document Conclusions pertinent to Phase 2

- The Assessment of Alternative Planning Solutions presents some Preliminary Conclusions: some alternatives are advised to be carried forward (Do nothing, TDM, Transit Improvements, TSM, Land Use Controls, Restrictive Road Pricing, Parking Management or Tolling Strategies, Diversion of Goods Movement from the Core Area, Improvements to Interprovincial Networks - New facilities), whereas the alternative Widening of existing interprovincial bridges is not recommended as a viable alternative.
- The Preliminary Coarse Screening Analysis identifies 10 corridors for further review.

3.1.4 Appendix C: Assessment of Alternative Planning Solutions

Date of Publication

17 December 2008

Document Summary

An analysis during Phase 1 of the existing capacity of interprovincial links, regional growth scenarios in population and employment, and transportation goals set by various regional governing bodies revealed that a shortfall in capacity equivalent to three to five lanes across the interprovincial screenline is anticipated by 2031. The Phase 1 consultant evaluated nine different alternative planning solutions to alleviate this shortfall problem (the problem). The potential of the nine alternatives in realistically addressing the transportation, socioeconomic, and environmental aspects of the problem were assessed. Table 3.1 presents the nine different alternatives as well as those carried forward for further study. The planning alternatives were carried forward under the premise that each one, in combination with others, could contribute to alleviating the problem. This

evaluation included the construction of new interprovincial infrastructure, alternative nine, as a solution to be carried forward.

Document Conclusions pertinent to Phase 2

Table 3.1 Evaluation of Alternative Planning Solutions

Alternative Planning Solutions		Phase 1 Recommendations
1	Do nothing (Existing transportation system is maintained)	Not carried forward (Baseline comparison)
2	Travel Demand Management (work time or travel mode shift, etc)	Carried forward
3	Transit Measures (TDM subgroup – improve existing services or create new services)	Carried forward
4	Transportation Systems/Supply Management (ITS, HOV lanes, etc.)	Carried forward
5	Land-use Control	Carried forward
6	Restrictive Road Pricing, Parking Management or Tolling Strategies	Not carried forward
7A	Diversion of Goods to Rail	Not carried forward
7B	Diversion of Goods Movement from the Core Area	Carried forward
8	Improvement to Interprovincial Networks – Existing Facilities	Not carried forward
9	Improvement to Interprovincial Networks – New Facilities	Carried forward

3.1.5 Appendix D: Summary of Existing Conditions

Date of Publication

11 February 2008

Document Summary

This document summarizes the environmental investigations relating to the potential corridors that were submitted for public consultation in the Terms of Reference in October 2007. It describes the baseline environmental conditions in each of the ten potential crossings short listed for further study, and identifies the environmental constraints associated with each corridor. The data and information presented in this document was collected from a wide range of sources, including existing reports and municipal, provincial and federal databases, along with field observations. The inventories include those features located within 300 m (both sides) of the roadway or freeway network links and in some instances significant feature in the vicinity of the corridor.

The baseline environmental conditions summarized in this report are detailed within the various appendices on technical elements. For this reason, the analysis of baseline environmental conditions is not treated here, but rather in their respective sections below.

3.2 Transportation

3.2.1 Appendix B: Current and Projected Traffic Demand

Date of Publication

December 17, 2008

Document Summary

This document analyses the current traffic conditions and projected traffic demand in the National Capital Region. It found that bridges are currently functioning at capacity during the commuter rush hours. Thus, with projected population and employment growth in Ottawa and Gatineau, there will be greater demand for interprovincial travel. Even with a new crossing, an aggressive transit target is required to satisfy the forecasted travel demand.

Document Conclusions pertinent to Phase 2

Additional interprovincial crossings are currently required to address capacity issues, truck routing concerns and the multitude of other issues. The status quo is not considered a reasonable alternative. A new interprovincial crossing will help divert, heavy truck transport from the Ottawa and Gatineau core areas.

Background Research

The results in this document were based upon:

- EMME3 TRANS model, based on the 2005 OD Survey;
- City of Ottawa Transportation Master Plan, 2003;
- Traffic counts on the 5 bridges in May 2007.

Methodology Employed

AM and PM peak traffic forecasts are extracted from the EMME3 TRANS model.

Considerations for Phase 2

- Assess the impact of the latest TRANS model on Phase 1 traffic projections for each of the three corridors.

3.2.2 Appendix B: Future 2031 Traffic Demand Projections

Date of Publication

May 31 2008

Document Summary

The document presents the projected 2031 morning peak hour traffic demands at the 10 crossing locations in both directions. The 2031 demands are based on the premise that significant increases in non-automobile modes will occur.

Background Research

The results in this document were based upon the EMME3 TRANS model.

Methodology Employed

AM peak traffic forecasts are extracted from the EMME3 TRANS model. A select link was done for each crossing scenario.

Considerations for Phase 2

- Assess the impact on Phase 1 results of the optimal scenario of the Interprovincial Transit Strategy.

3.2.3 Appendix B: Traffic Modelling and forecast Trip Assignment*Date of Publication*

5 August 2008

Document Summary

The document provides 2031 forecasted volume on the 10 crossings alternatives. These volumes are for the AM peak, in the peak direction (towards Ottawa). The volumes are split by existing trips and new trips (generated by the new crossing). The total volume is compared to the capacity.

Document Conclusions pertinent to Phase 2

Based on this analysis, all links can accommodate the forecast demand. Therefore the current alternatives are reasonable and technically feasible.

Background Research

The results in this document were based upon the EMME3 TRANS model.

Methodology Employed

AM peak traffic forecasts are extracted from the EMME3 TRANS model (Auto volume difference)

Considerations for Phase 2

- Analyse traffic movements at intersections to complement regional scale analysis of Phase 1.

3.2.4 Appendix B: Ottawa Road 174 Widening*Date of Publication*

14 April 2008

Document Summary

Based on traffic model runs for 2031, the five eastern crossing alternatives will generate traffic on Road 174 in Ottawa. The MTO has carried out preliminary design study for the widening of Highway 417, including the interchange with the Road 174. The suggested design could be incorporated in the widening of Road 174.

Document Conclusions pertinent to Phase 2

Depending on the crossing scenarios, two additional lanes could be required on road 174. MTO projects to widen Highway 417 could be integrated with the widening of Road 174 for eastern crossing alternatives.

Background Research

The results in this document were based upon:

- EMME3 TRANS model; and,
- Highway 417 from Highway 416 to Anderson Road, Preliminary Design Study and Environmental Assessment, GWP663-93-00, THS, Plates 25-29.

Methodology Employed

AM peak traffic forecasts are extracted from the EMME3 TRANS model for the 5 eastern crossing alternatives (Auto volume difference)

3.2.5 Appendix M: Alternative Alignments

Date of Publication

30 November 2007

Document Summary

Technical memo presenting illustrations of the 10 corridor alignments. It presents a summary of each corridor's location, type and distance to existing infrastructure on the Ottawa and Gatineau sides of the Ottawa River.

Document Conclusions pertinent to Phase 2

- Each corridor must connect to the arterial road networks of the City of Ottawa and Gatineau as well as to provincial road networks.
- Interchanges must also be spaced two kilometres apart, a constraint for Corridor 7.

3.2.6 Appendix M: Prince of Wales Bridge

Date of Publication

November 2007

Document Summary

Technical memo in support of screening of alternatives. Memo on utilisation of Prince of Wales Bridge as a rail alternative for goods and mass transit across the Ottawa River.

Document Conclusions pertinent to Phase 2

Potential exists for shipping freight carried by "51 trucks (possibly 90 in 2031) to rail mode, this alternative cannot by itself solve the trucking problem in the core area of the National Capital Region".

3.2.7 Appendix M: Transportation Systems Management

Date of Publication

May 2008

Document Summary

Technical memo in support of screening of alternatives. Memo on use of TSM to manage interprovincial capacity

Document Conclusions pertinent to Phase 2

While some modest capacity gains may be realised through acting on existing interprovincial infrastructure, it was determined this capacity is insufficient to offset the need for new crossing infrastructure.

3.2.8 Appendix M: Ferry Coarse Screening

Date of Publication

15 January 2008

Document Summary

Technical memo in support of screening of alternatives. Memo on suitability of ferry to meet interprovincial capacity shortfall.

Document Conclusions pertinent to Phase 2

Ferry unsuitable to accommodate additional 2000 vehicles/hour.

3.2.9 Appendix M: MacDonald-Cartier Bridge Tunnel Coarse Screening

Date of Publication

August 27 2008

Document Summary

Technical memo in support of screening of alternatives. Memo on feasibility of option of extending the southern link of the Macdonald-Cartier Bridge southward in a tunnel to either connect with the Vanier Parkway, which then connects to Highway 417 at the Vanier Parkway interchange, or to a tunnel under Lower Town and the Market to connect with Nicholas Street, which then connects to Highway 417 at the Nicholas Street interchange.

Document Conclusions pertinent to Phase 2

Transportation supply provided by this link is insufficient to address the future demand across the Ottawa River screenline. In addition, although a central trucking link may be attractive to reduce effects in the downtown core, it continues to rely on all trucking to be funnelled downtown rather than distributing this traffic to different crossings locations.

3.3 Natural Environment

3.3.1 Appendix E: Natural Environment

Date of Publication

April 2008

Document Summary

The natural environment assessment of the crossing alternatives represents an examination of existing non-fisheries ecological features and functions within eight broad corridors. Field and archival investigations focused on vegetation, flora and vertebrate fauna (especially breeding birds), with particular attention being placed upon Species at Risk (SAR).

Document Conclusions pertinent to Phase 2

No corridor can support an interprovincial crossing without some measure of negative impact. The severity of the ecological constraint to the development of an interprovincial crossing, however, varies within and between corridors. Accordingly, this study provides a relative determination of the natural environment sensitivity of each corridor.

Methodology Employed

The assessment involved compilation of existing data from documentation undertaken in a wide variety of ecological assessments in the NCR. The assessment involved compilation of existing data from documentation undertaken in a wide variety of ecological assessments in the NCR. These were supplemented by 2007 field investigations in which all major habitats and natural areas were examined in each of the corridors.

Considerations for Phase 2

- Assess the impact on Phase 1 results from changes in regulatory requirements at the provincial and federal level with respect to SAR.
- Follow Environment Canada requirements for nesting bird inventories and potentially occurring taxa of vascular flora of SAR.

3.3.2 Appendix F: Air Quality: Final Report

Date of Publication

September 2008

Document Summary

The task of assessing the air quality impacts that would result from each of the crossing alternatives was accomplished with three criteria chosen to be representative of vehicle related air quality impacts: Greenhouse Gas (GHG) emission burden, Criteria Air Contaminant (CAC) emission burden, and a sensitivity index relating to population exposed to varying levels of contaminants of carbon monoxide (CO), nitrogen oxides (NOx), sulphur oxides (SOx) and respirable particulate matter (PM2.5).

Document Conclusions pertinent to Phase 2

Quantitative results were generated for each criterion (GHG, CAC and sensitivity index) and each corridor.

Methodology Employed

Composite Emission Factor based on screenline counts on the five bridges of the area. Emission factor assumed to remain the same until 2031.

Considerations for Phase 2

Follow Health Canada guidelines for the assessment of air quality.

3.3.3 Appendix G: Fisheries and Aquatic Habitat

Date of Publication

18 November 2008

Document Summary

This study's specific objectives are as follows: to describe the baseline environmental conditions relating to fish and fish habitats; to assess each corridor for key environmental constraints associated with the potential impacts of a roadway construction project; and to determine the relative significance of these environmental constraints.

Document Conclusions pertinent to Phase 2

Constraints for each corridor were identified.

Methodology Employed

The description of present natural environment conditions is based on the review of existing literature and field observations.

Considerations for Phase 2

Conduct detailed surveys or specialised analysis (e.g. sediment analysis, fish sampling) as required to fulfill requirements of federal and provincial agencies.

3.3.4 Appendix H: Hydrotechnical

Date of Publication

25 February 2008

Document Summary

This memorandum provides a preliminary overview of hydrotechnical considerations regarding alternative Interprovincial (Ottawa River) bridge crossing locations in Ottawa/Hull and the surrounding areas.

Document Conclusions pertinent to Phase 2

Preliminary discussions with Rideau Valley Conservation Authority staff suggest that there are no significant existing problems relating to ice, morphodynamics or flooding for the 3 corridors.

Methodology Employed

The preliminary review of hydrotechnical considerations is based on an interpretation of existing information regarding flows, water levels and local bathymetric conditions.

Considerations for Phase 2

Consider site specific ice management issues, flooding potential and geomorphological sensitivities.

3.3.5 Appendix H: Drainage*Date of Publication*

January 28 2008

Document Summary

This technical memorandum identifies drainage and surface water features that can be considered as constraints within each of the 10 broad corridors.

Document Conclusions pertinent to Phase 2

None provided in the technical memorandum

Methodology Employed

Existing aerial photography and topographic mapping at a scale of 1:25,000 was reviewed for each of the 10 corridors to identify drainage features of possible interest. Each of the corridors was then visited, and particular features were noted in a series of tables.

Considerations for Phase 2

Define in detail drainage parameters for each corridor.

3.3.6 Appendix M: Geotechnical – Bridge*Date of Publication*

14 November 2007

Document Summary

This memo provides planning level geotechnical constraints on the ten interprovincial bridge crossing sites being considered.

Methodology Employed

Constraints are based on a review of existing available published surficial geology, bedrock geology, geomorphology, and trends in depth to bedrock maps.

Considerations for Phase 2

Include cost estimates for geological constraints.

3.3.7 Appendix M: Geotechnical - tunnel*Date of Publication*

31 March 2008

Document Summary

This memo provides planning level geotechnical constraints relating to tunnel options. This memo is complimentary to previous technical memo on bridge crossings. This memo assumes that a tunnel would be 13 metres in diameter.

Document Conclusions pertinent to Phase 2

No relevant conclusions since no tunnel options are carried forward in phase 2.

3.3.8 Appendix M: Existing Noise

Date of Publication

29 November 2007

Document Summary

A summary of the noise sensitive land uses is documented for each of the ten corridors under review.

Methodology Employed

All noise sensitive areas (NSA) within a 300 metre corridor band width were graphically depicted. In addition, to account for downstream acoustical effects from increased traffic, an additional area of influence was included. Future noise levels were computed using the STAMSON noise software program. The future sound levels “with improvements” were compared to the “future no project conditions”.

Considerations for Phase 2

- Conduct further noise analyses within selected corridors to ensure conformity with Health Canada guidelines for noise impact assessments.
- Consider impacts of noise simulations due to any change in predicted traffic volumes stemming from the use of the updated TRANS model.
- Take into account MTQ’s “Politique sur le bruit routier” for Quebec side.

3.3.9 Appendix M: Noise Effect on Horses

Date of Publication

27 May 2008

Document Summary

This memorandum summarizes the findings from journal articles that pertain to noise effects on horses and evaluates whether noise effects on horses should be included in the short list of evaluation criteria.

Document Conclusions pertinent to Phase 2

Based on the findings of the two presented studies, generally, no significant effects are noted when horses are subjected to noise stress tests. For this reason, it is recommended that this criterion not be carried forward to the short list of evaluation criteria. However, in the event that the Kettle Island corridor is recommended, Phase 1 consultants recommended that further analysis be considered for impacts on horses at the RCMP stables.

Background Research

Scientific literature review - 2 studies

3.3.10 Appendix M: Water Wells

Date of Publication

June 9, 2008

Document Summary

The aim of the document is to identify potential water well locations on the lands in the vicinity of the alternative crossing locations. The document identifies potentially impacted water well locations for each crossing alternative that includes a tunnel. A potentially impacted water well location is defined as one that is located “within 50 metres of an alternative crossing alignment, and deeper than 2 metres below the existing ground surface”. Only one alternative is found to have impacts on water well locations. Corridor 2, the Ridell/March/417 tunnel alignment, may impact 12 potential well locations.

Document Conclusions pertinent to Phase 2

The corridors considered in Phase 2 have no potential impacts on water well locations.

Consultations

City of Ottawa and Ville de Gatineau

3.3.11 Appendix M: Britannia Filtration Plant

Date of Publication

December 22, 2008

Document Summary

The document responds to a raised concern “regarding the proximity of the two west end crossings in Lac Deschenes to the Intake Protection Zone (IPZ) for the Britannia Water Purification Plant”.

Document Conclusions pertinent to Phase 2

The analysis only examines western alternatives, which are not carried forward in Phase 2.

Consultations

Rideau Valley Conservation Authority

3.4 Urban, cultural and socioeconomic considerations

3.4.1 Appendix I: Archaeology ON

Date of Publication

April 2008

Document Summary

This document is a summary of a Stage 1 archaeological assessment of corridors on the Ottawa side.

Document Conclusions pertinent to Phase 2

The assessment determined that 45 archaeological sites have been registered with the OASD, but only one site, Site BiFu-6, is located in the vicinity of a proposed corridor crossing—Petrie Island crossing. According to the NCC three archaeological sites and two archaeological finds or unregistered sites are known to be located within close proximity to

the proposed Interprovincial Crossings. Additionally, the presence of historic roads, several small stream courses, and the Ottawa River indicate the potential for archaeological sites.

Methodology Employed

The Stage 1 archaeological assessment was conducted in accordance with the Ontario Heritage Act (2005) following the Ontario Ministry of Culture's draft *Standards and Guidelines for Consultant Archaeologists* (2006).

Considerations for Phase 2

Conduct stage 2 archaeological assessments as necessary.

3.4.2 Appendix I: Archaeology QC

Date of Publication

July 2008

Document Summary

This study covers prehistoric as well as historic archaeological potential.

Document Conclusions pertinent to Phase 2

The archaeological potential assessment identified 26 zones of prehistoric archaeological potential and 25 zones of historic archaeological potential. The study also identified seven features of heritage interest located within the boundaries of certain corridors.

Methodology Employed

The methodology follows standard practices for similar studies in the province of Québec.

Considerations for Phase 2

Conduct stage 2 archaeological assessments as necessary.

3.4.3 Appendix I: Heritage

Date of Publication

March 2008

Document Summary

Document specific to the Ontario side. For the purposes of this assessment, the term cultural heritage resources was used to describe both cultural landscapes and built heritage features.

Methodology Employed

The methodology follows standard practices for similar studies in the province of Ontario.

3.4.4 Appendix J: Economic Impacts

Date of Publication

24 November 2008

Document Summary

This document is a regional economic development impact study. Projected flows of commercial and auto volumes are used to estimate the industrial, intermodal, service and office economic development potential of each of ten possible corridors.

Document Conclusions pertinent to Phase 2

Corridor 5 (Kettle Island) and Corridor 6 (Lower Duck Island) perform best according to the study's economic development criteria: they "show the highest reduction in truck traffic in the metropolitan downtown and the highest increases in truck and auto traffic in the corridor." Corridors 1, 2 and 10 perform the worst.

Background Research

Documents and data consulted include: TRANS regional demand forecasting transportation model (based on population and employment), planning documents (Ottawa's Official Plan, Gatineau's Master Plan and Schéma d'Aménagement), and governmental economic development policies.

Methodology Employed

Using a literature review, three criteria are measured for each corridor in order to assess their economic development potential:

- improvement of metropolitan downtown economy (measure: reduction of truck traffic away from downtown bridges),
- industrial and intermodal economic development (measure: commercial traffic attracted to corridor);
- service and office economic development (measure: number of personal cars attracted to selected office and services zones)

Considerations for Phase 2

- Conduct a thorough cost-benefit analysis to account for physical, transportation and socio-economic costs, impacts and benefits.
- Employ an input-output model as a useful additional decision tool for economic impact assessment if construction costs are estimated to vary widely in each corridor.

3.4.5 Appendix K: Land Use Ontario*Date of Publication*

19 February 2008

Document Summary

This document examined the existing land use and future land use designation of a 600 m wide corridor among the 10 possible alignments. On the Ontario side, the inventory was based upon a review of the City of Ottawa's Official Plan (adopted in 2003 and amended in 2006), the Greenspace Master Plan, the NCC's Greenbelt Master Plan designation and field visits in fall 2007. It provides background information used in the evaluation of corridor alternatives and identifies significant features and constraints within each corridor, including:

- existing land use;
- official plan designations;
- urban natural areas;
- urban recreational areas;
- visual impacts;
- public utilities;
- agricultural zones; and,
- natural constraints such as mass movement and flood risk areas.

Document Conclusions pertinent to Phase 2

- Corridor 5 may interfere with Rockcliffe Airport runway, Canadian Aviation Museum, Montfort Hospital, RCMP musical rides, and CMHC offices, crosses Kettle Island conservation zone;
- Corridor 6 and 7 cross the Greenbelt.

Background Research

- City of Ottawa's Official Plan
- Greenspace Master Plan
- NCC's Greenbelt Master Plan

Methodology Employed

Includes review of existing plans combined with verification by field visits.

Considerations for Phase 2

- Examine the feasibility of displacing Rockcliffe airport runway for corridor 5.
- Examine plans for specific upcoming development projects for compatibility with corridors (Montfort Hospital Expansion, shopping centres, Rockcliffe Airport, etc.)

3.4.6 Appendix K: Land Use Québec

Date of Publication

April 2008

Document Summary

This document examined existing uses and future land use designations within corridors of study. It provides an inventory of current land use and land use designations, agricultural zones, and natural constraints such as mass movement and flood risk areas;

Document Conclusions pertinent to Phase 2

- Corridors cross flood risk zones and some areas of mass movement; intersections with Highway 50 to be developed as nodes of activity,
- Corridor 5 is protected for transport infrastructure, identified as gateway to be developed;
- Corridor 6 requires some property expropriation to widen Lorrain Rd.
- Corridor 7 crosses McLaurin Bay Park, transshipment hub and rail sorting yard planned within corridor, close proximity to Gatineau airport and industrial parks; potential of intermodal freight hub, airport and new interprovincial infrastructure could encourage sector's development.

Background Research

- Schéma d'aménagement of the CUO (2000)
- Ville de Gatineau Strategic Plan (2003-2007)
- Ville de Gatineau Plan d'urbanisme (2005)
- Land use (2007) and designation (2002) of Municipality of Pontiac
- Agricultural Lands plan of the Commission de protection du territoire agricole of Québec (1990)

Methodology Employed

Includes review of existing plans combined with verification by field visits

Considerations for Phase 2

Examine plans for specific upcoming development projects for compatibility with corridors (gateway and new development nodes along highway 50, industrial park developments, intermodal freight hub, Gatineau airport, etc.).

3.4.7 Appendix M: Navigable Waters*Date of Publication*

May 2008

Document Summary

The document “examines the existing conditions and the potential impacts of a new interprovincial crossing on navigable waters in the National Capital Region (NCR)”. This includes boating activities for recreation, tourism, commercial activities, ferry service and regulatory agencies activities, in the eastern and western parts of the Ottawa River. “The main potential constraint to navigation is the clearance of a potential bridge. The bridge span should also be sufficient to maintain the navigable channel”.

Document Conclusions pertinent to Phase 2

“The bridge clearance should be at least equal to the air draught required by the tallest boat”.

Background Research

- Fisheries and Oceans Canada, Nautical Charts 1512, 2005.
- Michael McGoldrick, The Ottawa River Sailing Page, <http://sailquest.com/ottawa/>
- Nepean Sailing Club, Statistics on boat traffic, prepared by Jeffrey Nelson.
- Rockcliffe Yacht Club, A note on boating on the lower Ottawa River, 21 December 2007, prepared by John Murray.
- Transport Canada, Navigable Waters Protection Act.

3.5 Public Consultation

3.5.1 General comments on the public consultation process

Four rounds of public consultations were held on both sides of the River at different points of Phase 1 of the Interprovincial Crossings EA Study. The aim was to provide people with information on how the study was being conducted, as well as on the results as they became available. This provided the public with an opportunity to ask questions and express opinions and concerns. General comments regarding different aspects of the four rounds of consultation are listed below.

Opportunities for people to get informed and comment on the issue at stake

- Good quality of information was provided to people: maps of the study areas, very complete information on the context, methodology used, etc. People could get information at public events or through the website (bilingual technical documents were posted in June 2008) which was regularly updated.
- Attractive materials were used to communicate with the public, such as presentation boards and project bulletins.
- Many different sources were provided for people to make comments: website submissions, by telephone, e-mail, comment sheets, mail and fax.

Consultation panel

- The panel of people consulted was quite broad (Technical Advisory Committee, Public Consultation Group, external agencies, the whole public).
- An Aboriginal Consultation Plan was included in the process. In particular, the Algonquins of Pikwakanagan and the Kitigan Zibi Anishinabeg Band Council were contacted.

Consultation relevance

- Consultation sessions were held regularly at different stages of the Phase 1 study. One more session was added (prior to the evaluation of the crossing locations) for the public to comment on “how criteria and data were developed and considered”. The supplementary session was held between the second and the third round of consultations (according to the primary agenda).
- The goals assigned to the Public Consultation Sessions were very clearly stated, and the debates were structured.

Consultation visibility and convenience

- Some of the locations where sessions were held may not have been very easy to find (e.g. Ecole Secondaire du Versant for PCS 2).
- The time when consultation sessions were held may not have been convenient for some people (i.e. weeknights).
- For PCS 3 and 4, one session was held on each side of the river.
- There were few notices to make people aware of consultation events. For example, three notices were published in three local newspapers for the first round, and all on the same day. For the other rounds, two notices were published in two different local newspapers, both on the same day. The events were advertised on the website.

Method of analysis of comments

- Comments were classified according to their origin of submission (Open house in Ottawa or Gatineau, web site submission, telephone etc).
- Comments were classified into different categories that included issues related to specific corridors, study process, documentation, methodology (weighting, etc), and public consultation. PCS 4 also included comments regarding the technically preferred plan and alternative planning solutions.
- In all four Public Consultation Sessions, people were asked to check off the geographic “area of interest” that raised the most concerns to them. In the PCS 3 report, for each area of interest, the main concerns raised by the public are listed.
- Beside the types of comments, people’s input was classified into interests and concerns, such as community, natural environment, traffic and transportation, business and commerce, water use and resources, socio-economic environment, cultural environment, land use and property, costs.

PCS summary

- The summary of items raised by the public is similar to those raised in the Summary Report of Correspondence (especially regarding weighting, impacts on communities, trucking issues, preferred solutions).
- Table 3.3 presents general information and statistics of the four rounds of consultation.

	PCS 1	PCS 2	PCS 3	PCS 4
Dates, locations and format	<ul style="list-style-type: none"> Wed. June 6, 2007: École Secondaire du Versant (Gatineau), drop-in (5-9 p.m). Thurs. June 7, 2007 : Centre de Service d'Aylmer (Gatineau), drop-in (5-9 p.m). Tues. June 12, 2007: Maison du Citoyen (Gatineau), drop-in (5-9 p.m), presentation (7 p.m). Wed. June 13, 2007 : Kanata Recreation Complex (Ottawa), drop-in (5-9 p.m). Thurs. June 14, 2007: Sir Wilfred Laurier Secondary School (Ottawa), drop-in (5-9 p.m). Mon. June 18, 2007: Ottawa City Hall, drop-in (5-9 p.m), presentation (7 p.m). 	<ul style="list-style-type: none"> Tues. Feb. 12, 2008: 104 Rue du Barry (Gatineau), Open House (5-9 p.m). Wed. Feb 13, 2008 : 115 Rue Principale, Aylmer (Gatineau), Open House (5-9 p.m). Tues. Feb 19, 2008: Maison du Citoyen (Gatineau), Open House (5-9 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m). Wed. Feb. 20, 2008 : Kanata Recreation Complex (Ottawa), Open House (5-9 p.m). Thurs. Feb. 21, 2008: Pineview Golf Course, Blair Road (Ottawa), Open House (5-9 p.m). Mon. Feb. 25, 2008: Ottawa City Hall, Open House (5-9 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m). 	<ul style="list-style-type: none"> Wed. June 11, 2008: Maison du Citoyen (Gatineau), Open House (12:00-1:00 p.m and 5-7 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m). Tues. June 17, 2008: Ottawa City Hall, Open House (5-7 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m). 	<ul style="list-style-type: none"> Tues. Sept. 23, 2008: Maison du Citoyen (Gatineau), Open House (12:00-1:00 p.m and 5-7 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m). Wed. Sept. 24, 2008: Lansdowne Park (Ottawa), Open House (5-7 p.m), presentation (7 p.m), questions and comments (7:30-9:30 p.m).
Notices	<ul style="list-style-type: none"> The Ottawa Citizen, May 23, 2007. Le Droit, May 23, 2007. La Revue de Gatineau, May 23, 2007. 	<ul style="list-style-type: none"> The Ottawa Citizen, January 30, 2008. Le Droit, January 30, 2008. 	<ul style="list-style-type: none"> The Ottawa Citizen, June 3, 2008. Le Droit, June 3, 2008. 	<ul style="list-style-type: none"> The Ottawa Citizen, September 16, 2008. Le Droit, September 16, 2008.
Attendance	<ul style="list-style-type: none"> Quebec: 74 Ontario: 317 	<ul style="list-style-type: none"> Quebec: 57 Ontario: 663 	<ul style="list-style-type: none"> Quebec: 31 Ontario: 285 	<ul style="list-style-type: none"> Quebec: 57 Ontario: 874
Areas of interest	<ul style="list-style-type: none"> Ottawa East (King Edward Ave easterly) Ottawa Central (Island Park Dr to King Edward Ave) Ottawa West (Island Park Dr. westerly) "Quebec East (Gatineau River easterly) Quebec Central (Gatineau Park to Gatineau River) Quebec West (Gatineau Park westerly) 	<ul style="list-style-type: none"> 148/Pink/Blvd des Allumettieres-Riddell/March Blvd des Allumettieres-Moodie/417 "Blvd des Allumettieres-Holly Acres/416/417 Kettle Island Lower Duck Island Gatineau Airport Montee Mineault-10th Line Petrie Island Masson-Angers-Cumberland Other" 	<ul style="list-style-type: none"> 148/Pink/Blvd des Allumettieres-Riddell/March: 4% Blvd des Allumettieres-Moodie/417: 78% Blvd des Allumettieres-Holly Acres/416/417: 79% Kettle Island: 5% Lower Duck Island: 0.8% Gatineau Airport: 0.8% Montee Mineault-10th Line: 0.7% Petrie Island: 1.1% Masson-Angers-Cumberland: 0.4% Other: 2% No input: 0.4% 	<ul style="list-style-type: none"> Corridor 1: Pink/148 /Blvd des Allumettieres-Riddell/ March/417 Corridor 2: 148 /Blvd des Allumettieres-Riddell/March/417 Corridor 3: Blvd des Allumettieres-Moodie/417 Corridor 4: Blvd des Allumettieres-Holly Acres/416/417 Corridor 5: Kettle Island Corridor 6: Lower Duck Island Corridor 7: Gatineau Airport Corridor 8: Montee Mineault-10th Line Corridor 9: Petrie Island Corridor 10: Masson-Angers-Cumberland

	PCS 1	PCS 2	PCS 3	PCS 4
Types of comments	<ul style="list-style-type: none"> Issues with specific corridors: 53% Comments related to the process, the documents and the methodology: 16% Other issues: 31% 	<ul style="list-style-type: none"> Issues with crossing corridors: 72% Planning / EA Process: 23% Documentation: 11% Public consultation: 5% Evaluation Methodology: 4% 	<ul style="list-style-type: none"> Issues with crossing corridors Planning / EA Process Documentation Public consultation Evaluation Methodology 	<ul style="list-style-type: none"> Issues: 64.1% Technically Preferred Plan: 23.4% Evaluation Methodology: 5.6% Planning / EA Process: 4.7% Alternative Planning Solutions: 1.2% Documentation: 0.4% Other: 0.4%
Main interests / concerns	<ul style="list-style-type: none"> Community: 18.5% Environment: 3.3% Transportation: 63.3% General: 14.8% 	<ul style="list-style-type: none"> Community: 67% Environment: 59% Traffic and Transportation: 59% Business and commerce: 12% General/Other: 12% 	<ul style="list-style-type: none"> Traffic and transportation Natural environment Cultural environment Water use and resources Socio-economic environment Land use and property Cost 	<ul style="list-style-type: none"> Traffic and transportation Natural environment Cultural environment Water use and resources Socio-economic environment Land use and property Cost
Main items/ concerns raised by the public	<ul style="list-style-type: none"> Regional ring road suggested Include Deschênes Rapids corridors Suggest improving King Edward corridor Suggest another corridor along Rifle Road in the west end Selection and weighting criteria Input data and transportation models Speed up the process Previous study conclusions Consultation process Include examining the use of the Prince of Wales Bridge for public transit Environmental impacts Impacts on communities Recreational activities Existing and potential congestion 	<ul style="list-style-type: none"> Selection and weighting criteria Input data Transportation information provided Speed up the process Previous study conclusions Consultation process Include public transit concerns in the study. Environmental impacts Impacts on communities Various existing land use constraints Existing and potential congestion Recreational activities 	<ul style="list-style-type: none"> Traffic sailing Natural environment Pollution Cost Property values Quality of life RCMP facilities Montfort Hospital Transit 	<ul style="list-style-type: none"> Weighting of criteria Impacts on communities Alternative solutions Trucking issues Alternatives to the technically preferred plan Do not support the Kettle Island Corridor Support the Kettle Island corridor

Recommendations for public consultation in Phase 2

- Hold public consultation sessions regularly throughout the study and at milestones prior to carrying the study forward. Advertise sessions in multiple sources and on multiple dates, and hold sessions at convenient times to encourage public participation.
- Make special efforts to encourage Gatineau residents to take part into the process.
- Include First Nations in the consultation process.
- Include all data received through the consultation process in analysis.

3.5.2 Appendix 1: Public Consultation Session No 1 Summary Report*Date of Publication*

July 24, 2007

Document Summary

The aim of the document is to present and analyse the input and comments obtained during PCS 1 regarding:

- Draft Study Terms of Reference
- Study process
- Alternative planning solutions
- Crossing alternatives

Document Conclusions pertinent to Phase 2

See Table 3.2 for consultation results.

Background Research

1200 comments from the public

Methodology Employed

- 4 meetings were held as open houses (drop-in style), 2 others were followed by formal presentations and question period.
- In the comment sheets, people were asked to check one of 6 areas of concern.

Consultations

- Technical Advisory Committee
- Public Consultation Group
- External Agency Consultation
- Aboriginal consultation plan

Considerations for Phase 2

- Advertise public consultation sessions well
- Hold sessions in easy to find locations
- Include all gathered data in analysis

3.5.3 Appendix 2: Public Consultation Session No 2 Summary Report*Date of Publication*

17 April 2008

Document Summary

The aim of the document is to present and analyse the input and comments obtained during PCS 2 regarding:

- Environmental inventories and constraints
- Current traffic analysis
- Alternative solutions
- Preliminary alignments
- Preliminary evaluation criteria

Document Conclusions pertinent to Phase 2

- PCS 2 comments were used as a basis to develop some evaluation criteria.
- See Table 3.2 for consultation results.

Background Research

710 comments from the public

Methodology Employed

- 4 meetings were held as open houses (drop-in style), 2 others were followed by formal presentations and question period.
- As a result of this session, one more session was added (prior to the evaluation of the crossing locations) for the public to comment on "how criteria and data were developed and considered".
- In the comment sheets, people were asked to check one of 10 areas of concern which corresponded to the ten proposed corridors.

Consultations

- Technical Advisory Committee
- Public Consultation Group
- External Agency Consultation
- Aboriginal consultation plan
- Municipal consultation

Considerations for Phase 2

- Advertise public consultation sessions well
- Hold sessions in easy to find locations
- Include all gathered data in analysis

3.5.4 Appendix 3: Public Consultation Session No 3 Summary Report

Date of Publication

10 September 2008

Document Summary

The aim of the document is to present and analyse the input and comments obtained during PCS 3 regarding:

- Analyses and projected traffic
- Truck origins and destinations
- Short list of evaluation criteria
- Evaluation process
- Evaluation methodology

Document Conclusions pertinent to Phase 2

See Table 3.2 for consultation results.

Background Research

2000 comments from the public

Methodology Employed

- 2 meetings with an open-house format (drop-in style) involving a presentation;
- Seven topics of interest were identified on the comment sheets and people were asked to prioritize them: traffic and transportation, natural environment, cultural environment, water use and resources, socio-economic environment, land use and property, cost;

Consultations

- Technical Advisory Committee
- Public Consultation Group
- External Agency Consultation
- Aboriginal consultation plan
- Municipal consultation

Considerations for Phase 2

- Advertise public consultation sessions well
- Hold sessions in easy to find locations
- Include all gathered data in analysis
- Ensure explanations of study aspects are accessible to all public participants

3.5.5 Appendix 4: Public Consultation Session No 4 Summary Report*Date of Publication*

17 November 2008

Document Summary

The aim of the document is to present and analyse the input and comments obtained during PCS 4 regarding:

- Update on the projected traffic analysis
- Update on the Truck Trip Analysis
- Review of the evaluation process and methodology
- Evaluation results and conclusions
- Review of the recommended Technically Preferred Alternative

Document Conclusions pertinent to Phase 2

See Table 3.2 for consultation results

Background Research

9056 comments from the public

Methodology Employed

- 2 meetings were held in an open-house format (drop-in style) involving a presentation and question period.
- Aim: present the result of the detailed technical evaluation, the ranking of alternatives
- In the comment sheets, people were asked to check one of 10 areas of concern which corresponded to the ten proposed corridors.

Consultations

- Technical Advisory Committee
- Public Consultation Group
- External Agency Consultation
- Aboriginal consultation plan
- Municipal consultation

Considerations for Phase 2

- Advertise public consultation sessions well
- Hold sessions in easy to find locations
- Include all gathered data in analysis
- Clearly define comment categories with respect to subject matter

3.6 Phase 1 Evaluation Procedures

3.6.1 Appendix N: Analysis and Evaluation

Date of Publication

18 September 2008

Document Summary

Describes the evaluation methodology, which is based on the Multiple Attribute Trade-off System (MATS), used to develop recommendations of a preferred corridor and technology. The evaluation methodology involves the following steps:

- Development of criteria
- Collection of data
- Definition of social utility function (requiring raw data and utility function)
- Weighting of criteria
- Rating of alternatives
- Selection of technically preferred solution
- Sensitivity testing
- Public review
- Selection of corridor

A MATS system has many advantages, including being traceable and more transparent, and suited to the comparison of trade-offs between competing criteria

Document Conclusions pertinent to Phase 2

Phase 1 analysis recommends Corridor 5 (Kettle Island) as the top ranked corridor. However, the top three ranked corridors, which include Corridor 6 (Lower Duck Island) and Corridor 7 (Baie McLaurin/Gatineau Airport), will be carried forward in Phase 2

Consultations

Consultation with experts of evaluation committee on weighting and utility curve;

Considerations for Phase 2

- Evaluate suitability of different comparative evaluation methodologies, including MATS, in development of an appropriate Phase 2B Study Design.

3.6.2 Appendix O: Cost Estimate

Date of Publication

January 6, 2009

Document Summary

The document presents a table of probable total project costs for each corridor and for each technical option (e.g. tunnel or bridge).

Background Research

MTO Parametric Guide

Methodology Employed

The corridors are divided into several segments and priced according to their characteristics. The sum of the costs of these segments represents the total cost for each corridor.

Considerations for Phase 2

- Cost considerations are taken into account in 3.4.4 Economic Impacts.

3.6.3 Appendix L: Phase 1 Environmental Site Assessment

Date of Publication
December 2008

Document Summary

The Screening Level Phase 1 ESA was required as a component of the Environmental Assessment (EA) for the site. The objectives of the Screening Level Phase 1 ESA were to: 1. Identify issues of potential environmental concern (IPECs) along each alternative with the potential to have impacted the soil and/or groundwater on the site; 2. Score each alternative based on the number and severity of the IPECs.

Document Conclusions pertinent to Phase 2

IPECs associated with past and current land use were identified along and near the site. Some of these land uses can be classified as having a low likelihood to impact the site based on factors such as location and actual use. Conversely, a number of past land uses and current facilities/activities can be classified as having a higher potential for subsurface impacts on soil and/or groundwater on the site.

Golder and Associates recommended conducting a formal Phase 1 ESA for the alternatives selected for Phase 2B to assess the issues of potential environmental concerns in greater detail. They noted that the study should include all the components listed in the November 2001 CSA document entitled *Phase 1 Environmental Site Assessment, Z768-01*.

3.7 Other Topics

3.7.1 Appendix P: Proponency

Date of Publication
29 September 2008

Document Summary

The continuation of the study into Phase 2 should be completed as a federal Screening EA, which respects the requirements of any provincial legislative processes for those portions of the project such as road interconnections which are under provincial jurisdiction. Federal guidance for defining a project considers interdependency (linkage and proximity) to avoid 'project splitting'. If a project cannot proceed without the completion of another project, then the projects should be assessed together. In this case, because of the interconnection requirements, it is logical to include those projects with the actual crossing project as a single federal project.

Document Conclusions pertinent to Phase 2

It is recommended by the Consultant that the Federal Government be the sole proponent for the project with the NCC acting as the lead Responsible Authority for the purposes of the environmental assessment, subject to written confirmation from both provincial ministries of the environment.

3.7.2 Appendix Q: 1999 OMB Decision*Date of Publication*

22 December 1999

Document Summary

The OMB hearing concerned the problems raised by citizens regarding the truck route through downtown Ottawa, and specifically on King Edward Avenue. It considered the history of truck traffic in the downtown and interprovincial crossings. Finally it mentioned the previous studies that were done on the issue of interprovincial crossings with an emphasis on the study that was completed in 1994.

Document Conclusions pertinent to Phase 2

"The Regional Municipality must modify its 1997 Plan to reflect the findings in this decision". The main findings included:

- The RMOC Official Plan should "require removal of the [King Edward, Rideau, Waller, Nicholas] (KERWN) Corridor from the regional truck route system as soon as one of the [prior] noted infrastructure projects is completed and relocation of the truck route to that infrastructure". This means that once the new interprovincial bridge (designated as a truck route) is built, the truck route described as KERWN should be removed from the City truck route network;
- "The weight of the reports, studies and testimonies clearly indicate that the Kettle Island Corridor is a supportable inter-provincial corridor";

Phase 1 assumptions were consistent with the OMB decision. The City of Ottawa has advised that transportation demand modelling completed during Phase 1 involved runs with and without trucks using the Macdonald Cartier Bridge.

Considerations for Phase 2

- Undertake a sensitivity analysis of truck traffic with various diversion scenarios or restrictions, to distinguish how the resulting impacts would differ between the alternatives

3.7.3 Appendix R: Council Resolution, Ottawa, January 14, 2009*Date of Publication*

14 January 2009

Document Summary

Expresses the City of Ottawa Council's position as of January 14, 2009.

Document Conclusions pertinent to Phase 2

- No west end river crossing;
- Approves that "no corridors in the west end be designated in the City of Ottawa 's Official Plan for possible future river crossings until 2028";

- Corridors 6 (Lower Duck) and 7 (Gatineau Airport) should be “protected and included in Phase 2 for evaluation”.

Note: See council resolution on January 28 below for the follow up to this motion.

3.7.4 Appendix R: Council Resolution, Ottawa, January 28, 2009

Date of Publication

January 28, 2009

Document Summary

Expresses the City of Ottawa Council's position as of January 28, 2009.

Document Conclusions pertinent to Phase 2

- Council affirms its position on the inclusion of corridor 6 and 7 in Phase 2;
- Corridor 10 (Cumberland-Masson-Angers) should be protected;
- “Council support the positions of the Province of Ontario and the Province of Quebec”.

Note: See council resolution on February 11 for a follow up to this motion

3.7.5 Council Resolution, Ottawa, February 11, 2009

Date of Publication

February 11, 2009

Document Summary

Expresses the City of Ottawa Council's position as of February 11, 2009.

Document Conclusions pertinent to Phase 2

- Council does not support the inclusion of corridor 6 and 7 (Lower Duck Island) in Phase 2;
- A motion to have corridor 10 (Cumberland-Masson-Angers) be protected and included in Phase 2 for evaluation was rejected;

Note: Since the February 11th Council meeting, City of Ottawa staff have advised that the current position of the City is to have corridors 5, 6 and 7 carried forward in Phase 2;

3.7.6 Appendix R: Council Resolution, Gatineau

Date of Publication

Not indicated

Document Summary

Expresses the City of Gatineau Council position.

Document Conclusions pertinent to Phase 2

- Council approves the recommendation put forth by the Roche-NCE Consortium Kettle Island as the sole corridor to be retained.
- “It is unacceptable to transfer all heavy truck traffic from King Edward Avenue to Montée Paiement”.

4 Considerations for Phase 2

This report provides a summary and analysis of documentation produced during Phase 1 of the EA Study of the Future Interprovincial Crossings in the NCR. The scope of information produced in Phase 1 covers a wide range of physical, socioeconomic and cultural aspects of the 10 corridor alternatives. However, since 10 corridors and 12 possible interprovincial solutions were examined during Phase 1, many aspects of the three corridors carried forward will clearly require further and more comprehensive study. This will serve to better define corridor alignments, impacts and possible mitigation measures, and ultimately, to aid in the selection of the new interprovincial link location.

This report, like the Summary Report of Correspondence, serves as a basis for ongoing activities by providing an overview of existing information. It also represents a first pass at defining considerations that are to be included in the continuation of Phase 2 activities, notably in the development of the Phase 2A consultation program as well as the Phase 2B EA Study Design and consultation program. Table 4.1 presents a list of these considerations.

Table 4.1 Considerations for the Phase 2B Study Design

Transportation
<ul style="list-style-type: none"> • Assess the impact of the latest TRANS model on Phase 1 traffic projections for each of the three corridors. • Assess the impact on Phase 1 results of the optimal scenario of the Interprovincial Transit Strategy. • Analyse traffic movements at intersections to complement regional scale analysis of Phase 1. • Undertake a sensitivity analysis of truck traffic with various diversion scenarios or restrictions, to distinguish how the resulting impacts would differ between the alternatives
Natural Environment
<ul style="list-style-type: none"> • Assess the impact on Phase 1 results from changes in regulatory requirements at the provincial and federal level with respect to Species at Risk (SAR). • Follow Environment Canada requirements for nesting bird inventories and potentially occurring taxa of vascular flora of SAR. • Follow Health Canada guidelines for the assessment of air quality. • Conduct detailed surveys or specialised analysis (e.g. sediment analysis, fish sampling) as required to fulfill requirements of federal and provincial agencies. • Consider site specific ice management issues, flooding potential and geomorphological sensitivities. • Define in detail, drainage parameters for each corridor. • Include in cost estimates measures to address geological constraints. • Conduct further noise analyses within selected corridors to ensure conformity with Health Canada guidelines for noise impact assessments. • Consider impacts of noise simulations due to any change in predicted traffic volumes stemming from the use of the updated TRANS model. • Take into account MTO's "Politique sur le bruit routier" for Quebec side.
Urban, Cultural and Socioeconomic considerations
<ul style="list-style-type: none"> • Conduct Stage 2 Archaeological Assessments as necessary. • Conduct a thorough cost-benefit analysis to account for physical, transportation and socio-economic costs, impacts and benefits. • Employ an input-output model as an additional decision tool for economic impact assessment if construction costs are estimated to vary widely in each corridor. • Examine feasibility of relocating a portion of the Rockcliffe airport runway for Corridor 5. • Examine plans for specific upcoming development projects for compatibility with corridors in Ottawa (Montfort Hospital Expansion, shopping centres, Rockcliffe Airport, etc.) and Gatineau (gateway and new development nodes along highway 50, industrial park developments, intermodal freight hub, Gatineau airport).
Public Consultation
<ul style="list-style-type: none"> • Hold public consultation sessions regularly throughout the study and at milestones prior to carrying the study forward. Advertise sessions in multiple sources and on multiple dates, and hold sessions at convenient times to encourage public participation. • Make special efforts to encourage Gatineau residents to take part into the process. • Include First Nations in the consultation process. • Include all data received through the consultation process in analysis. • Ensure explanations of study aspects are accessible to all public participants. • Clearly define comment categories with respect to subject matter.
Phase 1 Evaluation Procedures
<ul style="list-style-type: none"> • Evaluate suitability of different comparative evaluation methodologies, including MATS, in development of an appropriate Phase 2B Study Design.

