

2. ENVIRONMENTAL ASSESSMENT PROCESS

This chapter provides a brief review of the EA Report 1997 and a detailed description of the current MTO Review. Included in this chapter is a description of consultation during the MTO Review, the MTO Review Phases, preliminary design, potential environmental effects and proposed mitigation measures, preparation and submission of the Amendment to the EA Report 1997, commitments to further work, and the Canadian Environmental Assessment Act main “triggers”.

2.1 EA Report 1997

In December 1997, an Environmental Assessment Report was completed for Highway 7 from Kitchener to Guelph and was submitted to the Minister of the Environment. The report followed the MTO Guideline for the Preparation of an Environmental Assessment Report One-Stage Submission (November 1983).

The Environmental Assessment – One Stage Submission represents a one-time only submission for a Ministry of Transportation Group ‘A’ project. Projects in this group involve the construction of major new highway facilities. These projects are relatively large and complex and have the potential for significant environmental effects. The EA Report 1997 included the following:

- a discussion of the purpose of the project;
- the environmental assessment process followed;
- the current environmental condition in the study area;
- the alternatives considered;
- a description of the environmental effects associated with the project and all reasonable alternatives; and
- an outline of the commitment for further work to be undertaken relative to identified “environmentally significant areas/issues”.

The report recommended a new route for Highway 7 to the north of the existing highway. The Ministry of the Environment’s formal review process was completed in late 1998. At that time concerns regarding impacts on wetlands were raised by a number of interest groups and local municipal councils.

2.2 MTO Review

The MTO Review was initiated by a commitment from the Minister of Transportation in January 1999 to review some of the aspects of the study. The intent of the review was not to start over, but was to take a ‘second look’ at some of the issues. The areas initially identified for review included:

- comparison of actual traffic volumes existing in 1999 / 2000 with demand forecasts prepared in 1989 / 1990.
- further consideration of the role of transit.
- consideration of the option of widening existing Highway 7 in the central rural section.
- modifications to the Recommended Plan (1997) to reduce impacts on wetlands.

The Review was conducted in three phases each of which included a Public Information Centre, which gave the public an opportunity to review and provide comments on what was being presented. The Review was divided into the following phases and key events.

Phase 1- February 1999 to March 2000: Minor Alignment Shifts to the Recommended Plan (1997). Modifications to the alignment presented in the EA Report (1997) were proposed. Following public consultation, the decision was made to move into a second review phase.

Phase 2 – April 2000 to February 2001: New Alignment Alternatives. In response to comments received additional alternatives were developed which included new route alternatives, existing Highway 7 alternatives and combined alternatives. A new Technically Preferred Alternative was developed during this phase. Following public consultation activities in January – February 2001, the Project Team decided to move into a third phase of review.

Phase 3 – February 2001 to March 2002: Central Section Alternatives. Two new alternatives for the central rural section of the study area were developed in response to the comments received regarding the Technically Preferred Alternative presented in Phase 2. Following the analysis and evaluation of the central section alternatives a new Recommended Route was presented to the public, in November 2001.

The three phases of the MTO Review are documented in detail in Chapters 3, 4, 5, and 6 of this EA Amendment. Chapter 3 describes the existing and future conditions in the study area including an identification of the environmentally significant areas/issues. The identification, analysis and evaluation of alternative alignments for Highway 7 are discussed in Chapter 4. Chapter 5 provides a detailed description of the Recommended Route (2002) and Chapter 6 reviews the environmental protection strategies.

After finalization of the Amendment to the EA Report 1997 it will be submitted to the Ministry of the Environment for formal review and approval and will be available for public review and comment.

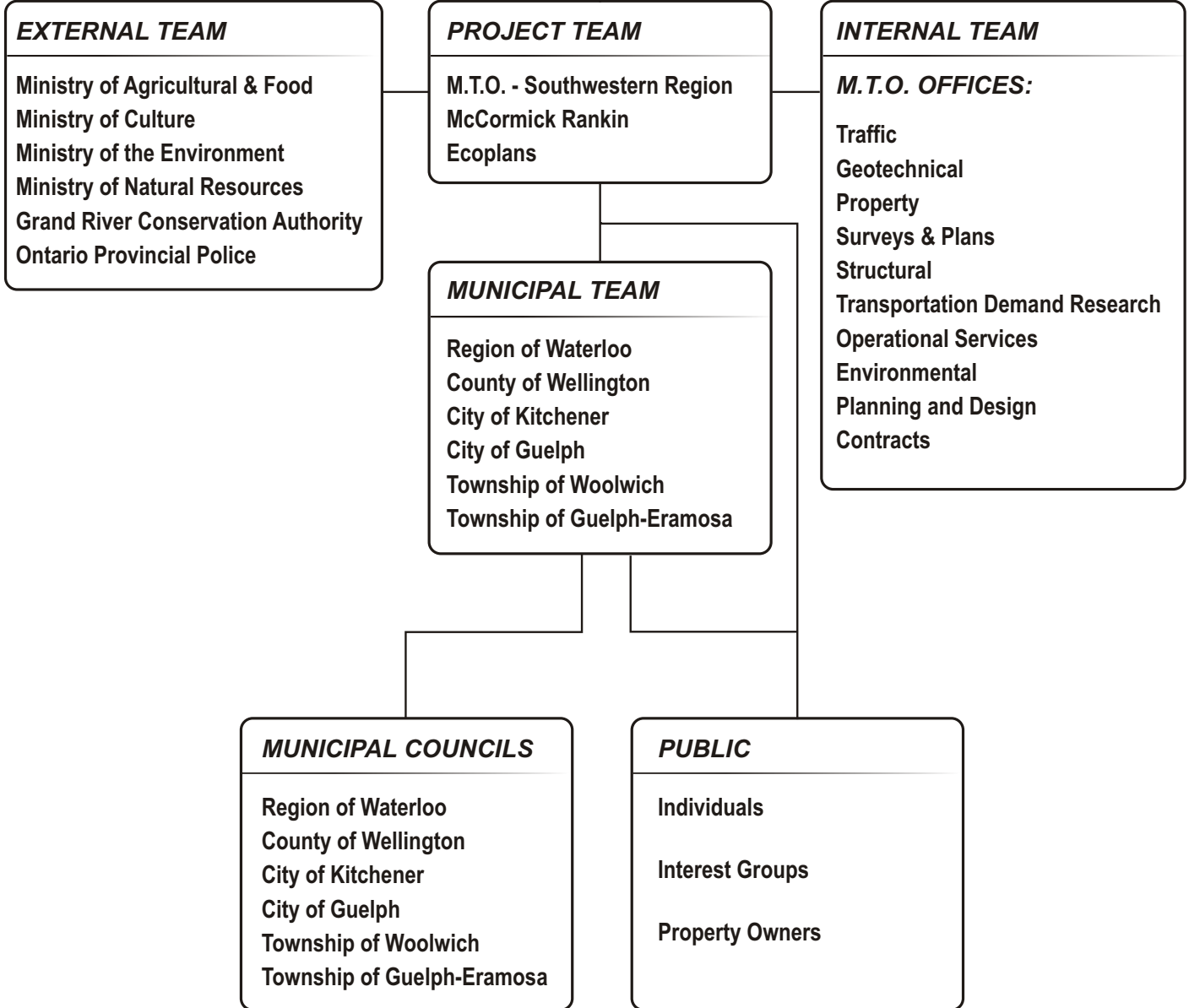
2.3 Study Organization

The study organization is shown on Exhibit 2-1. The **Project Team** is comprised of representatives from the Ministry of Transportation and its consultants. **McCormick Rankin Corporation**, a firm of consulting engineers specializing in transportation projects, was the Prime Engineering Consultant. **Ecoplans Ltd** was the environmental consultant.

The Project Team was the key working group responsible for carrying out the MTO Review and the preparation of the Amendment to the EA Report 1997.

The **Internal Team** comprised representatives of various specialist offices within the Ministry of Transportation. Contact with these groups was made as required throughout the study.

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2.4 Consultation During the MTO Review

This section provides an overview of the consultation efforts undertaken during the MTO review, between 1999 and 2002. The role of the municipalities, external agencies, property owners, the public and interest groups is described in the following sections. More detail of the consultation activities during the individual phases of the review is presented in Section 2.5.

Consultation was also undertaken during the original environmental assessment and planning study, between 1989 and 1994. This consultation was described in the EA Report 1997. Details of the earlier consultation are not repeated in this EA Amendment, because the results of the earlier study have been superseded by the work carried out during the MTO review.

2.4.1 Municipalities

The Municipalities within the study area include; Regional Municipality of Waterloo, County of Wellington, City of Kitchener, City of Guelph, Township of Woolwich and Township of Guelph-Eramosa. A Municipal Team of representatives from the Engineering and Planning Departments of the six municipalities was developed for the study. A joint meeting of the Municipal Team and External Agencies was held prior to each of the Public Information Centres and prior to Municipal Council presentations. Issues of concern to the municipalities were typically discussed at these meetings. Minutes of these meetings are included in Appendix A. Members of the Municipal Team were also encouraged to contact Project Team members to discuss any concerns related to the MTO Review. A process of ongoing dialogue was maintained throughout the study.

2.4.2 External Agencies

During the Original EA process External Agencies were contacted and asked to participate in the study. The agencies that participated in the Original EA study were contacted at the commencement of the MTO Review. Key External Agencies for the MTO Review included the following:

- Ministry of the Environment
- Ministry of Agriculture, Food and Rural Affairs
- Ministry of Natural Resources
- Ministry of Culture
- Grand River Conservation Authority
- Ontario Provincial Police

Contact with the External Agencies was made at key points in the study. Meetings were scheduled throughout the study prior to each set of Public Information Centres, to provide the External Agencies with the opportunity to review the study progress and provide input. Minutes of these meetings are included in Appendix A.

2.4.3 Property Owners

Property owners meetings were held prior to the February and November 2001 Public Information Centres, in order to provide the property owners within the study area an opportunity to comment on the alternatives and recommendations of the Project Team. The property owners meetings were conducted as informal drop-in centres. Property owners were informed through letters sent prior to the meeting and were also contacted by telephone prior to the drop-in centre. A property owner group was established by the business operators within the study area during Phase 2 of the MTO Review known as the Highway 7 Home and Property Owners Group.

2.4.4 Public

The public was provided with several opportunities to review the study status and provide comments on the material presented. Public consultation for the MTO Review began in January 2000 with a workshop for stakeholders. The workshop presented the study findings to the representatives of interest groups invited to attend. All of the participants were provided with a workbook containing a summary of the information to be discussed in advance of the workshop.

Public Information Centres were also held at three key points during the MTO Review to provide members of the public an opportunity to comment on the recommendations of the Project Team. The Public Information Centres were held as informal drop-in centres where members of the Project Team were available to discuss the study on a one to one basis. The public was notified of the Public Information Centres by brochure and newspaper advertisements in the local papers. The brochures were distributed to all addresses within the study area and to those who expressed an interest in the study.

2.4.5 Interest Groups

The following interest groups were involved in the study:

- HALT 7
- Kitchener-Waterloo Field Naturalists
- Waterloo Public Interest Research Group
- Waterloo Citizens Environmental Advisory Committee
- Guelph Field Naturalists
- Federation of Ontario Field Naturalists
- Federations of Agriculture
- Transport 2000 Ontario Waterloo Region Chapter
- CARP (Canadian Association of Retired Persons)

2.5 MTO Review Phases

The MTO Review was initiated in response to public concerns that were raised at the time the Highway 7 Environmental Assessment was in the final stage of public review. A public meeting was conducted by the Region of Waterloo in January 1999 to allow members of the public to express their concerns. Subsequent to this meeting the MTO committed to a review of the Recommended Plan (1997) that would consider minor

alignment shifts (and review of other areas). As the review progressed to a Workshop and set of Public Information Centres, there was a realization by the Project Team that the review would require development of additional alternatives. The MTO Review generally followed three phases as shown on Exhibit 2-2 and as defined as follows:

Phase 1 – Minor Realignment Shifts to the Recommended Plan (1997) (February 1999 to March 2000) - The modifications to the Recommended Plan involved specific shifts in the horizontal alignment to reduce impacts at wetland locations. A review of widening alternatives on the existing Highway 7 right-of-way in the central rural section of the corridor was also included.

Phase 2 – New Alignment Alternatives (April 2000 to February 2001) – In response to the comments received at the Public Information Centres held in Phase 1 (March 2000) new alternatives were developed. In addition to the modified alternative presented to the public in March 2000, the following new alternatives were developed for analysis.

- New Route Alternatives
- Existing Highway Alternatives
- Combined Alternatives

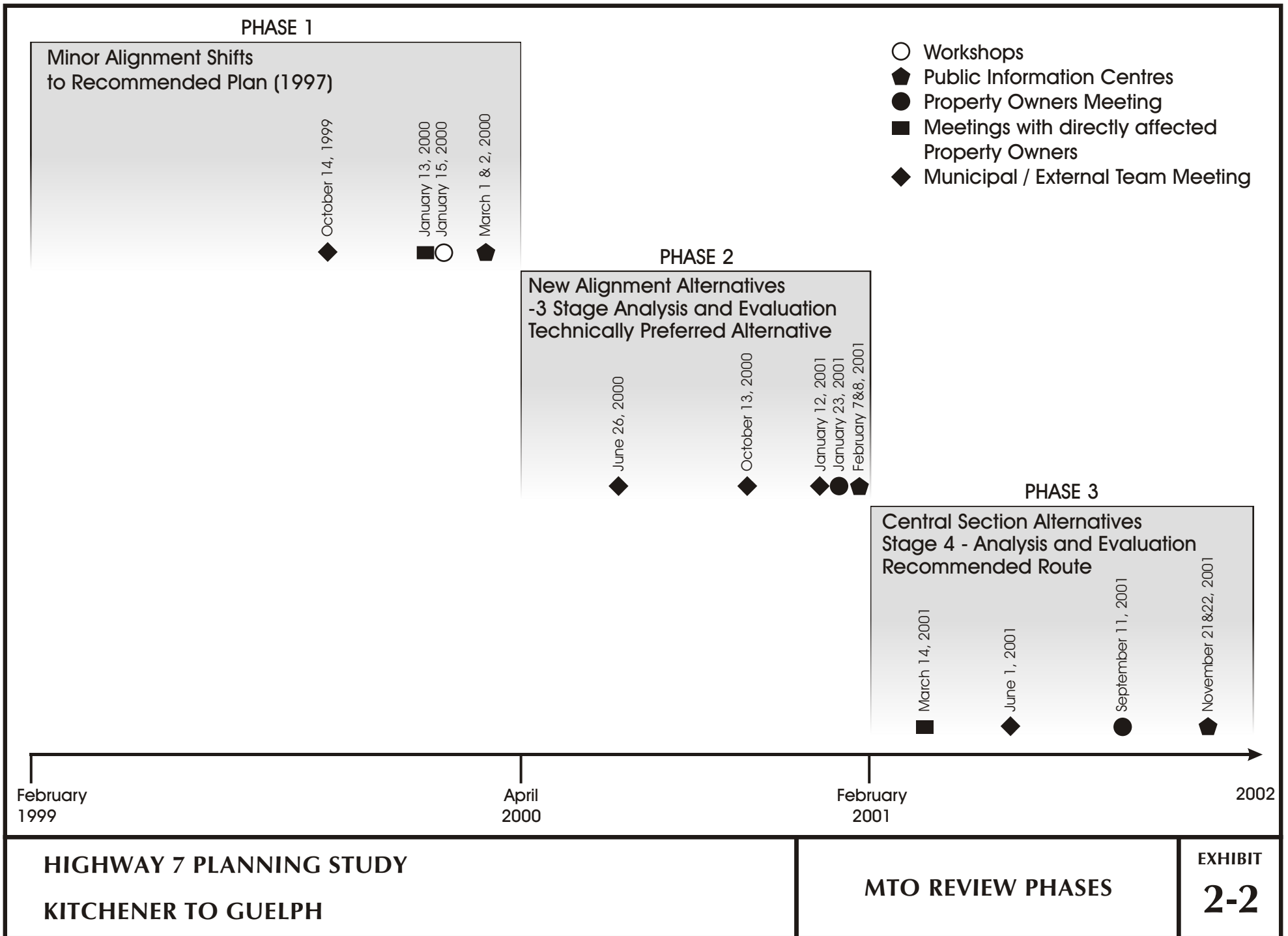
The alternatives were analyzed, evaluated and presented to the public in February 2001. The analysis and evaluation of the alternatives included the identification of the Technically Preferred Alternative presented at the February 2001 Public Information Centres.

Phase 3 - Central Section Alternatives (February 2001 to March 2002) – In response to the significant negative comments about the Technically Preferred Alternative, particularly in the central section of the study area, from Regional Road 17 to Townline Road, two additional alternatives were developed. For the sections of the study area west of Regional Road 17 and east of Townline Road, there were no significant changes to the Technically Preferred Alternative presented in February 2001. Only minor refinements to service roads and interchange ramp configurations were proposed in these sections. The analysis and evaluation of the Central Section Alternatives, minor refinements (east and west) and the Recommended Route were presented to the public in November 2001.

The following sections describe each of the phases in more detail including a description of the consultation which took place during each of the three phases.

2.5.1 Phase 1: Minor Alignment Shifts to the Recommended Plan (1997) (February 1999 – March 2000)

The modifications to the Recommended Plan (1997) involved specific shifts in the horizontal alignment to reduce impacts at wetland locations. The alignment was shifted in an effort to address concerns raised by a number of interest groups and local municipal councils.



These alignment alternatives are described in detail in Section 4.2.1. Phase 1 also included a review of widening alternatives on the existing Highway 7 right-of-way in the central rural section of the corridor. A number of questions were also asked regarding the viability of transit, both on its own and in combination with road improvements. Work undertaken during this phase of the review showed that the concept of a nominal widening in the Central Section to four or five lanes and a supplement of transit and travel demand management (i.e. ride share, car-pooling, and corporate van) would not address the forecast growth in the Highway 7 corridor in the planning time frame. These alternatives are reviewed in more detail in Section 4.1.

Section 2.5.1.1 describes the consultation activities undertaken for the public, property owners, agencies and municipalities to review and provide comments on the alternatives and the recommendations by the Project Team. The results of the consultation including the main responses are also included.

2.5.1.1 Phase 1 Consultation

The following is a chronological summary of consultation events during Phase 1 of the MTO Review.

Date	Event
February 9, 1999	Meeting with MTO, GRCA and MNR.
October 14, 1999	Meeting with the Municipal and External Agency Team to review the findings from Phase 1 of the review.
January 13, 2000	A Property owner meeting was held to seek input from directly affected owners regarding the findings from Phase 1 of the review.
January 15, 2000	A workshop involving the stakeholders was held. Attendees were given the opportunity to review and discuss the need and justification; transit as an option to highway improvements; summary of alternatives to improve Highway 7; relative real cost of the alternatives; effects of a new alignment on the natural features, agriculture and businesses; and the Wellington Street interchange.
February 15, 2000	Presentation to the Region of Waterloo Planning Committee and the Township of Woolwich Planning Committee
February 16, 2000	Presentation to Regional Municipality of Waterloo Engineering Committee
February 21, 2000	Presentation to Township of Guelph-Eramosa Council

Date	Event
February 28, 2000	Presentation to City of Guelph Council and City of Kitchener Council
March 1 & 2, 2000	Public Information Centres were held in both the City of Guelph and the City of Kitchener to provide the public with an opportunity to review the work carried out in Phase 1 of the review.

During Phase 1 of the MTO Review the majority of the concerns / issues raised were related to the need for additional roadway capacity in the Highway 7 corridor. Responses were split essentially 50/50 between widening existing Highway 7 and a new alignment. Additional alternatives were identified by the agencies and the public, which further avoided impacts to the wetlands. The following table provides a summary of the issues raised during Phase 1 consultation with agencies, municipalities, property owners and the public.

Agency / Public	Issues / Concern	Response
Region of Waterloo / County of Wellington	Further consideration should be given to transit in response to public comments	Transit alternatives were presented at the Workshop and PICs
Region of Waterloo	Further consider alternatives which expand existing Highway 7	Existing Highway 7 alternatives were developed and presented to the public
GRCA	The GRCA's Board position was to recommend that the selected route be shifted to the north of the Ellis Creek Wetland and the Marden South Wetland. This position was based on GRCA Staff's summary of the January 2000 Workshop.	New Route Alternatives were identified that would fully or partly avoid impacts to these wetlands.
Stakeholders	Develop alternatives that further avoid impacts to the wetland areas	Additional New Route Alternatives were developed
Public	Develop alternatives which use the existing Highway 7 alignment in the rural central section. Many residents did not feel that a new alignment was necessary.	Existing Highway 7 Alternatives were developed.

Agency / Public	Issues / Concern	Response
	A noise analysis should be completed to determine the impacts on residences adjacent to the alignment.	A noise analysis was completed for the additional alternatives developed
	Farm operators were almost exclusively in support of a new alignment.	The modified EA alignment was carried forward with the additional alternatives developed.

2.5.2 Phase 2: New Alignment Alternatives (April 2000 to February 2001)

In January and March 2000, at the Workshop and Public Information Centres, external agencies and the public identified alternatives that would further avoid impacts to the wetland areas. The Project Team reviewed the comments and determined that the development of a further set of alternatives was warranted. The modified alternative as developed in Phase 1 was identified as one of the New Route Alternatives. The following provides a brief description of the alternatives developed. A more detailed description of the alternatives including the analysis and evaluation is provided in Chapter 4.

New Route Alternatives

The New Route alternatives were divided into east and west sections with a common 'match point', meaning that any east alternative could be matched with any west alternative at the match point. These were described as Revised Easterly Alternatives and were numbered RE1, RE2, RE3.

In the west section, the Revised Westerly (RW1, RW2, RW3 and RW4) Alternatives were developed.

Alternative RE1-RW1 is the modified alternative that was presented to the public during Phase 1. The remaining Revised Easterly alternatives were developed to address concerns expressed by the Grand River Conservation Authority (GRCA), regarding potential impacts at the Ellis Creek and Marden wetlands. RW2 and RW3 alternatives would avoid the Hindu Temple and the core area of the Bloomingdale – Rosendale wetland by being south of Bridge Street. RW4 was developed in response to a suggestion from one of the interest groups.

Existing Highway Alternatives

During the consultation activities in Phase 1, members of the public continued to speak in favour of expanding the existing Highway 7, rather than building on a new alignment. During Phase 2 of the MTO Review, alternatives utilizing the existing highway were developed for the 'central rural portion' of the study area, between Ebycrest Road in the west and Guelph Township Road 3 in the east.

Combined Alternatives

The combined alternatives were developed in order to allow consideration of new alignment alternatives in the east and west, combined with existing highway options in

the 'central rural portion' of the study area, between Ebycrest Road in the west and Guelph Township Road 3 in the east.

Analysis and Evaluation

The above alternatives were analyzed and evaluated in a three stage process which is described in detail in Chapter 4.

All of the Alternatives were analyzed to determine the effects on the environment using a number of factors. An evaluation compared each of the alternatives using both engineering and environmental factors.

Based on the analysis and evaluation a Technically Preferred Route was selected. When the Technically Preferred Route was presented to the municipalities, agencies, property owners and the public there was an overwhelming opposition to the central portion of the alternative that made use of the existing highway. The consultation during this phase of the study is discussed in more detail in the following section.

2.5.2.1 Phase 2: Consultation

The following is a chronological summary of consultation events during Phase 2 of the review.

Date	Event
April 6, 2000	Presentation to City of Kitchener Environment and Economic Development Committees
April 28, 2000	Presentation to the Grand River Conservation Authority Board
June 26, 2000	Presentation of the alternatives being considered for Phase 2 of the review, and the proposed evaluation process to the Municipal and External Agency Team.
October 13, 2000	Presentation of the analysis of alternatives to the Municipal and External Agency Team.
January 12, 2001	Presentation of the results of the evaluation of alternatives including the Technically Preferred Alternative to the Municipal and External Agency Team.
January 23, 2001	Property owner meeting to present the new alternatives developed following the March 2000 PIC including the Technically Preferred Alternative for review and comment.
January 25, 2001	Presentation to the County of Wellington Council.
February 5, 2001	Presentation to the City of Kitchener Council, Township of Guelph-Eramosa Council, and City of Guelph Council.
February 6, 2001	Presentation to the Township of Woolwich Council, and Region of Waterloo Transportation Committee.
February 7 & 8, 2001	Public Information Centres were held in both the City of Guelph and the City of Kitchener to provide the public with an opportunity to review the work that had been carried out following the March 2000 Public Information Centres.

The following table provides a summary of the issues raised during Phase 2 consultation with agencies, municipalities, property owners and public.

Agency / Public	Issues / Concern	Response
Region of Waterloo	Requested (June 2000) that discontinuous service roads be considered as well as continuous service roads for the CAH system.	The alternative was developed and carried through the evaluation process.
	Requested (June 2000) that the project address potential transit improvements for consideration by the municipalities in order to demonstrate that transit is part of the solution.	Reviewed by the Project Team. Conceptual transit options were developed for comparison with other alternatives.
	The Region noted (October 2000) that some of the Bridgeport residents had expressed concerns about potential noise impacts because of the Grand River crossing by three of the Revised Westerly (RW) alternatives.	A noise analysis was completed as part of the study process.
City of Kitchener	The City noted (October 2000) that the removal of the Hindu Temple with the alternative RW1 is a significant concern to the City of Kitchener Council.	Comment noted.

Agency / Public	Issues / Concern	Response
City of Guelph	The City noted in June 2000, that there is an industrial subdivision proposed on the east side of Silvercreek Parkway, and that it appears that the Highway 7 ramps and the proposed new access road to the subdivision are located too closely together. It was also indicated that the City of Guelph Council has made a commitment to the local residents that no access to additional development will be permitted in this area and asked: (i) if local residents are aware of the Silvercreek Parkway ramp location; and (ii) if the option of placing an interchange at Woodlawn Road had been considered.	The residents had been informed as part of the consultation process. A full interchange at Woodlawn Road was considered, however the close spacing of the intersections (two ramp terminals and Silvercreek Parkway) were considered to be a significant operational constraint.
Township of Woolwich	The Township noted (January 2001) they did not support the February (2001) Technically Preferred Alternative and had significant concerns with the alignment of service roads.	These concerns were addressed in Phase 3 with the development of additional alternatives.
County of Wellington	The County noted (October 2000) that some residents have expressed concern about potential traffic infiltration in the Silvercreek Community due to increased traffic volumes bound for Highway 7.	This concern is addressed in the configuration of the intersection of the ramp terminal intersection with Silvercreek Parkway.
Municipal Councils	None of the municipal councils passed resolutions in support of the Technically Preferred Alternative (2001).	
Ministry of Natural Resources	In January 2001, the MNR expressed concerns about the potential impact of service roads on the wetland features.	These concerns were resolved with the development of alternatives in Phase 3.

Agency / Public	Issues / Concern	Response
Ministry of Agriculture and Food	OMAF had concerns regarding how information about the agricultural community was obtained for the analysis and evaluation. It was suggested that agricultural impacts should distinguish between owner operated and tenant operated.	The Project Team met with OMAF to review the methodology for gathering data. OMAF representatives were satisfied with the process.
Property / Business Owners	Expressed concerns at the property owner meeting about the central section of the Technically Preferred Alternative, in particular the loss of direct access to existing Highway 7 and the discontinuous service road network	Revised central alternatives were developed, analyzed and evaluated, and presented to the public in November 2001. (Phase 3).
	A Property Owners Group circulated a brochure at both Information Centres outlining concerns with the central rural section of the Technically Preferred Alternative, specifically loss of direct access to existing Highway 7 and the discontinuous service road network. The brochure identified the group's preference for a new alignment north of existing Highway 7.	Revised central alternatives were developed, analyzed and evaluated, and presented to the public in November 2001.

Agency / Public	Issues / Concern	Response
Public	75% of the comments received at the Information Centres indicated that MTO should not seek approval for the Technically Preferred Alternative. The most commonly cited reasons were: a preference for a new route through the central section or a preference for one of the previously identified alternatives	Revised central alternatives were developed, analyzed and evaluated, and presented to the public in November 2001.

2.5.3 Phase 3: Central Section Alternatives (February 2001 – March 2002)

When the Technically Preferred Alternative from Phase 2 was presented to the Public in February 2001, there was a strong negative reaction to the service road concept. As a result of the opposition, the Project Team considered additional alternatives in the rural central section of the study area. Based on work carried out earlier in the review, the Project Team determined that the most reasonable alignments for new alternatives would be located between the best New Route alternative identified in Phase 2, and existing Highway 7.

The two new alternatives for the central rural portion are briefly described below:

Alternative RC1 was a further refinement of the New Route alternative (RE2-RW3) developed in Phase 2. Alternative RC1 would allow the community at Shantz Station to remain, would avoid the interior of the Townline West and Hopewell Creek Riparian wetlands, and would allow existing Highway 7 to remain open for local traffic.

Alternative RC2 was a new alignment located immediately to the north of existing Highway 7. This alternative makes provision for connector roads, to allow continued access between existing Highway 7 and Woolwich Road 72 and Regional Road 30. Alternative RC2 would completely avoid the Townline West and Hopewell Creek Riparian wetlands, but would require the removal of the community of Shantz Station on the north side of Highway 7. Existing Highway 7 would remain open for local traffic.

Four alternatives were analyzed and evaluated during this phase. These were the Revised Central alternatives along with the Technically Preferred Alternative from Phase 2, and the best new route alternative from Phase 2. Alternative RC1 was identified as the preferred alternative. RC1 was presented as the Recommended Route to municipalities, agencies, property owners and the public. The following section reviews the consultation carried out for Phase 3.

2.5.3.1 Phase 3 Consultation

The following is a chronological summary of consultation events during Phase 3 of the review.

Date	Event
March 14, 2001	Meeting with the owners / operators of the nurseries that would be affected by the service road option.
April 6, 2001	Presentation to City of Guelph Chamber of Commerce
June 1, 2001	Municipal and External Agency Team meeting was held to discuss the comments received at the Public Information Centres in February 2001 and to present the new alternatives under consideration in the central section of the study area
September 4 & 5, 2001	Field walk of the wetland areas with the Ecological and Environmental Advisory Committee (EEAC) of the Regional Municipality of Waterloo and representatives of the Project Team
September 11, 2001	Property owner meeting to present two new alternatives in the central section of the study area for review and comment.
November 21 & 22, 2001	Public Information Centres were held in both the City of Guelph and the City of Kitchener to provide the public with an opportunity to review the two additional alternatives developed for the central section, the analysis and evaluation of the alternatives and the Recommended Route.
December 21, 2001	Presentation to GRCA Board
January 22, 2002	Presentation to the Township of Woolwich Council.
February 4, 2002	Presentation to the City of Kitchener Council
February 13, 2002	Presentation to the Region of Waterloo Council
February 18, 2002	Presentation to the Township of Guelph - Eramosa Council
February 25, 2002	Presentation to the City of Guelph Planning, Works and Environment Committee
March 12, 2002	Presentation to the County of Wellington Roads Committee

The following is a summary of the issues / concerns raised regarding the Recommended Route presented to the public in November 2001.

Agency / Public	Issues / Concern	Response
Region of Waterloo	Passed resolution supporting the Recommended Route (2002) in February 2002.	

Agency / Public	Issues / Concern	Response
City of Kitchener	Passed resolution supporting the Recommended Route (2002) in February 2002.	
Township of Woolwich	Passed resolution supporting the Recommended Route (2002) in February 2002.	
County of Wellington	Passed resolution supporting the Recommended Route (2002) after presentation in March 2002.	
City of Guelph	In 2002, some councillors expressed concerns regarding the proposed interchange at Silver Creek Parkway/Woodlawn Road, and asked about Ministry plans for upgrading of the Hanlon Expressway, or a northerly extension of the Hanlon Expressway. On April 5, 2004 a resolution in support of the Recommended Route (2002) was passed by City Council.	MTO provided information to City administration regarding questions raised by councillors.
Township of Guelph-Eramosa	Passed resolution supporting the Recommended Route (2002) in February 2002.	
GRCA	Passed resolution supporting the Recommended Route (2002) in December 2001.	
Public	The recommended route was generally accepted by the public	
Property Owners	The recommended route was generally accepted by the property owners	

2.6 Preliminary Design

Following the public review of the analysis and evaluation, including the identification of the Recommended Route in November 2001, the Project Team considered all feedback received and prepared the preliminary design of the Recommended Route (2002). The concerns raised by the Highway 7 business and property group have been addressed through the selection of the Recommended Route (2002) because existing Highway 7 will remain for local traffic and the frontages along Highway 7 will not be impacted.

Chapter 5 provides a detailed description of the Recommended Route (2002). Section 5.2 provides a comparison between the Recommended Route (2002) and the Recommended Plan (1997) and Section 5.3 describes the features of the Preliminary Design.

2.7 Potential Environmental Effects and Proposed Mitigation Measures

The identification of Potential Environmental Effects was based on :

- Field and background data collection, including updates from the current MTO Review.
- Review of the horizontal and vertical profiles (preliminary) of the Recommended Route (2002), in the context of environmental features, to assess potential impacts from horizontal intrusion, as well as grade changes and possible groundwater implications (vertical component).
- Evaluation of potential effects, consisting of direct and indirect effects, short and long term effects, and understanding of construction/operation requirements of highways - through a combination of agency consultation, MTO liaison, input from public/interest groups, and professional judgment.

The identification of Mitigation Measures was based on:

- Review of and reference to Ontario Provincial Standards and Specifications (OPSS) that are accepted in the industry and implemented by MTO.
- Preparation of Environmental Protection Plan (EPP) guidelines that may be employed during subsequent stages of the MTO project. Each EPP guideline provides a description of the project activity, identifies associated environmental concerns, and details protection measures and other responsibilities (including contingency plans).
- Agency consultation, MTO liaison, review of Environmental mitigation practices and standards (being developed in the Environmental Standards project for MTO) and professional judgment (numerous highway projects).

The Environmental Effects and Mitigation Measures are described in detail in Chapter 6.

2.8 Preparation and Submission of the Amendment to the EA Report 1997

The final stage of this study is the preparation and formal submission of the Amendment to the EA Report 1997 to the Ministry of the Environment. The report documents the process followed in accordance with the *Environmental Assessment Act*. This report is considered to be an amendment because the original EA Report 1997 was the foundation and the MTO Review re-considered specific issues from the EA Report 1997 as directed by the Minister of Transportation in January 1999. The issues reviewed include the following:

- comparison of actual traffic volumes existing in 1999 / 2000 with demand forecasts prepared in 1989 / 1990.
- further consideration of the role of transit.
- consideration of the option of widening existing Highway 7.
- modifications to the Recommended Plan (1997) to reduce impacts on wetlands.

Exhibit 2-3 illustrates the process that was followed for the MTO Review, which is a parallel process to the Original EA work.

For the MTO Review existing traffic was updated and an assessment of the capacity of three roadway types was completed. The roadway types included Controlled Access Highway (CAH), Right In / Right Out (RIRO), and 5-lane. Both transit and using existing Highway 7 were reassessed as Alternatives to the Undertaking. The Recommended Plan (1997) was carried forward into the review with modifications and included in the analysis and evaluation of the alternatives. The analysis framework (Groupings and Factors) was based on the original EA Study and updated to reflect current environmental policies.

The EA Amendment documents all of the work that was carried out during the MTO Review starting from January 1999. However, as the Original EA work included extensive field work, background data collection and public consultation, it was important that the MTO Review build upon this earlier work.

Chapter 3 describes the existing conditions in the study area. At the beginning of each section there are ‘text boxes’ that are excerpts from the EA Report 1997. The balance of each section provides an update of the existing conditions as identified during the field work conducted as part of the MTO Review.

Chapter 4 describes the identification, analysis and evaluation of the alternatives. The analysis framework and the evaluation process followed are consistent with the Original EA work so that ‘traceability’ of the process can be maintained. The factors for analysis were reviewed and updated based on current environmental policies.

Chapter 5 describes the proposed undertaking and Chapter 6 describes the environmental effects and the proposed mitigation strategies.

Distribution of the EA Amendment

Copies of the report will be provided to the Ministry of the Environment for distribution to all review agencies. Copies of the report will also be available at all Municipal Clerk’s offices of municipalities within the study area as well as libraries at key locations in the study area. During the review period, the report will also be available electronically at www.highway7ea.ca.

The review process by the Ministry of the Environment will provide the public with the opportunity to review and comment on the EA Amendment. The public will be notified of the submission by notices in the local newspaper. Notices will also be mailed directly to property owners and individuals who expressed an interest in the study.

Environmentally Significant Issues / Concerns

In the EA Report 1997, Environmentally Significant Concerns / Issues were identified by following the One-Stage Submission Guidelines, which had a defined procedure for identifying environmentally significant concerns / issues. The definition of an environmentally significant issue is as follows:

“Areas/Issues of the natural, cultural, economic and social environment for

which the reviewing ministries/agencies/public require detail relative to specific environmental impacts and commitments to mitigation. This information is necessary to facilitate decision-making relative to the acceptance of the environmental assessment and approval of the undertaking.”

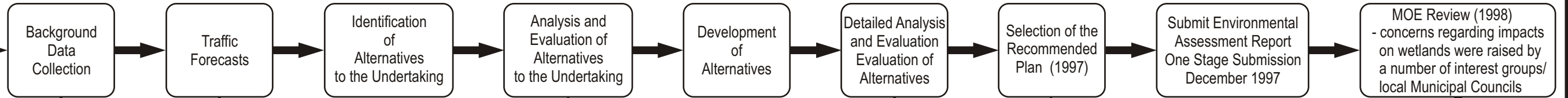
Environmentally significant concern / issue was identified if one or more of the following situations apply:

- i) The issue or concern was identified as environmentally significant in Provincial, Regional or local plans, policies or studies.
- ii) The issue or concern was identified as environmentally significant during the consultation process by any of the following:
 - external ministries or agencies
 - municipalities
 - interest groups
 - the general public
- iii) The issue or concern was identified as environmentally significant during field surveys and investigations and analysis undertaken by the Project Team.

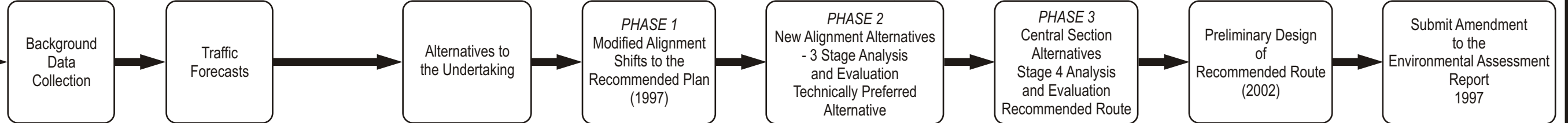
The identification of environmentally significant issues / concerns has been carried through to the EA Amendment. The following table provides a comparison of the environmentally significant issues / concerns identified in the EA Report 1997 with those identified in the EA Amendment.

EA Report 1997		EA Amendment	
Identified Environmentally Significant Issue	Identified by	Identified Environmentally Significant areas / issues	Identified by
Municipalities <ul style="list-style-type: none"> • The need to provide reasonable transportation infrastructure to meet expected population growth. 	Local Municipalities	Municipalities <ul style="list-style-type: none"> • The need to provide reasonable transportation infrastructure (capacity) to meet the expected growth in population (demand). 	Local Municipalities
Communities <ul style="list-style-type: none"> • The disruption or displacement of homes, both in urban and rural areas. • Access and disruption of businesses in the Shirley Avenue industrial area. • Disruption of existing rural communities. 	Local Residents Local Businesses Local Residents and Businesses	Communities / Land Use <ul style="list-style-type: none"> • Loss or disruption of access to the upper tier road network, particularly in the industrial areas of Kitchener and Guelph. • Disruption to access during construction. • Disruption or displacement of households, both in the urban and rural areas. 	Local Businesses Local Businesses Local Residents
Noise <ul style="list-style-type: none"> • Increase in noise levels greater than 5dBA in noise sensitive areas. 	MOEE Local Residents	Noise <ul style="list-style-type: none"> • Increase in noise level for noise sensitive land uses adjacent to the alignment. 	Local Residents

**HIGHWAY 7
PLANNING STUDY
KITCHENER
TO GUELPH
(April 1989)**



**MTO Review
Initiated by
Minister of Transportation
January 1999**



- Areas of Review
- wetland impacts
 - traffic forecasts
 - transit options
 - opportunities to expand existing Highway 7

- updated existing and future conditions and identified changes from the EA Report 1997

- comparison of actual traffic volumes existing in 1999/2000 with demand forecasts prepared in 1989/1990

- reassessed the viability of transit both on its own and in combination with road improvements

- reassessed existing Highway 7 alternatives

- the Recommended Plan was modified to further reduce wetland impacts

- Public Consultation identified additional alternatives

- modified Recommended Plan was carried forward to Phase 2 as RE1/RW1

- analysis and evaluation framework based on original EA framework

- updated/modified groupings and factors to reflect current environmental policies

- in response to public comments additional alternatives were developed in the central section only

- format of Amendment Report is similar to the Original EA

- where appropriate comparisons are made between the EA Report 1997 and the MTO Review

<p>Heritage Resource</p> <ul style="list-style-type: none"> • The loss of heritage features. 	<p>Area LACACs Ministry of Citizenship, Culture and Recreation</p>	<p>Heritage Resources</p> <ul style="list-style-type: none"> • Loss of heritage features, including archaeological sites. • The heritage and conservation of the Grand River Corridor. 	<p>Area LACACs Ministry of Culture</p>
<p>Vegetation</p> <ul style="list-style-type: none"> • The loss of high quality woodlands. 	<p>MNR GRCA</p>	<p>Vegetation and Wetlands</p> <ul style="list-style-type: none"> • The Grand River valley, Bloomingdale-Rosendale Wetland (LSW), Hopewell Creek, Hopewell Riparian Woodland/Wetland (LSW), Townline Wetland (now PSW), Ellis Creek Wetland (PSW), and Marden South Wetland (PSW). 	<p>MNR GRCA</p>
<p>Wetlands</p> <ul style="list-style-type: none"> • The removal or disturbance of Provincially significant Wetlands (Classes 1-3). • The removal or disturbance of other wetlands (Classes 4-5). 	<p>MNR GRCA GRCA</p>	<p>Wildlife Resources</p> <ul style="list-style-type: none"> • Maximizing integrity and minimizing intrusion within the wetland areas, to the extent possible, while balancing other competing resource interests. • Maintaining wildlife movement opportunities in the design, and maximizing habitat retention in the design of the Grand River crossing. 	<p>MNR GRCA Interest Groups</p>
<p>Fisheries and Aquatic Habitats</p> <ul style="list-style-type: none"> • Protection of fish/aquatic habitats (Grand River, Hopewell Creek and Ellis Creek). 	<p>MNR GRCA</p>	<p>Aquatic Resources and Fisheries</p> <ul style="list-style-type: none"> • Protection of fish/aquatic habitats in the Grand River, Hopewell Creek, and Ellis Creek • Significant degradation of surface water features 	<p>MNR GRCA</p>
<p>Water Resources</p> <ul style="list-style-type: none"> • Loss or contamination of private wells and water sources. • Significant degradation of surface water features. 	<p>Local Residents MOEE MNR GRCA</p>	<p>Water Quality and Quantity</p> <ul style="list-style-type: none"> • Loss or contamination of private wells and water sources. • Significant degradation of surface water features. 	<p>Local Residents MOE GRCA</p>
<p>Geology and Physiology</p> <ul style="list-style-type: none"> • Loss of potential aggregate resources. 	<p>MNR Ministry of Northern Development and Mines Local Municipalities</p>	<p>Geology and Physiology</p> <ul style="list-style-type: none"> • Loss of potential aggregate resources. 	<p>MNR RMW</p>
<p>Environmentally Sensitive Areas</p> <ul style="list-style-type: none"> • Loss of any portion of an ESPA. 	<p>Local Municipalities MNR</p>	<p>Environmentally Sensitive Areas</p> <ul style="list-style-type: none"> • Loss of any portion of an Environmentally Sensitive Area (ESA). 	<p>Local Municipalities MNR</p>
<p>Agricultural Soil Capability</p> <ul style="list-style-type: none"> • Loss of Class 1 to 4 soils capability. 	<p>OMAFRA</p>	<p>Soil Capability</p> <ul style="list-style-type: none"> • Loss of Class 1 to 4 agricultural land. 	<p>OMAFRA</p>
<p>Farm Community</p> <ul style="list-style-type: none"> • Disruption to the existing farm community. 	<p>Local Farmers OMAFRA</p>	<p>Agricultural Land Use</p> <ul style="list-style-type: none"> • Agricultural Land Use. 	<p>Local Farmers OMAFRA</p>

		Farm Community <ul style="list-style-type: none"> • Disruption to the existing farm community. 	Local Farmers OMAFRA Federation of Agriculture
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2.9 Commitments to Further Work

Throughout the study process of external team meetings, internal meetings, and the organized public consultation, concerns raised by any of these groups that would require further work subsequent to this study were documented. Commitments to further work have been identified in Chapter 5 and 6. As part of the EA process there is a commitment to follow-up or address identified issues in the later stages of this project (eg. during detail design).

2.10 Canadian Environmental Assessment Act

This project must comply with the requirements of the *Canadian Environmental Assessment Act* (CEAA). The following table identifies the main “triggers” under CEAA and their application to the Recommended Route (2002). Where permits are required application will be made during detail design.

“Trigger”	Applied to this Project
Canadian Coast Guard Under Navigable Waters Protection Act (NWP)	<ul style="list-style-type: none"> • Both the Grand River and Hopewell Creek are considered to be navigable. • Application for approval under NWP will be made during detail design.
Canadian Transport Agency (CTA) If agreement cannot be reached with owners of affected rail lines, the project may be referred to the CTA for authorization under the Railways Act	<ul style="list-style-type: none"> • A new freeway ramp and connection road will be constructed under the CN Rail immediately west of the Kitchener – Waterloo Expressway (KWE) in Kitchener (refer to Section 5.3.1). • A new freeway ramp and connection road will also be constructed under the CN Rail immediately east of the KWE (refer to Section 5.3.1). • Application for approval of the construction of the crossings will be made to CTA during detail design stage if agreement cannot be reached with owners of the affected rail lines.

“Trigger”	Applied to this Project
<p>Department of Fisheries and Oceans Following review by the Ontario Ministry of Natural Resources, the affected components of the project may be referred to the DFO for authorization under the Fisheries Act if there is harmful alteration or destruction of fish habitat.</p>	<ul style="list-style-type: none"> • Mitigating measures to be reviewed with appropriate agencies during detail design who will determine the need for referral to DFO.
<p>Indian and Northern Affairs Canada If project affects any First Nations Lands</p>	<ul style="list-style-type: none"> • No First Nation Lands were identified as being affected during the study.
<p>Federal funding or federal land involvement</p>	<ul style="list-style-type: none"> • No federal lands were identified as being affected during the study. • If federal funding becomes available for this project.