8.0 Summary of Identified Concerns, Mitigating Measures and Future Commitments

The next phases of the study process are Detail Design and construction.

During Detail Design and prior to construction, a number of commitments for future consultation and environmental mitigation, as described in this Route Planning and Environmental Assessment Report, will be fulfilled. This section of the report describes those commitments.

A Design and Construction Report will be prepared near the end of Detail Design, to document how the commitments identified at the end of the Route Planning Study were given consideration.

8.1 Summary of Identified Concerns and Future Commitments

A summary of identified concerns and future commitments are provided in Exhibit 8-1.

Exhibit 8-1: Summary of Environmental Concerns and Commitments

Issue/Concerns Potential Effects	Concerned Stakeholder(s)	Future Work or Mitigation (to be confirmed during Detail Design)
CEAA Review Process	CEA Agency and Federal Agencies MTO	• Input to CEAA documentation for Federal Triggers as required • Obtain all federal approvals
Navigability • Potential impacts to navigability during or after construction • Obtain approval under the *Navigable Waters Protection Act*	Transport Canada MTO General Public	• Maintain or improve existing clearances for navigability • Obtain approval under the *Navigable Waters Protection Act*
Rail Crossings • Potential impacts to rail crossings during or after construction	CPR CNR MTO General Public	• Agreements from CPR and CNR for at-grade, grade separated crossings and track relocation. If an agreement cannot be reached approval will be required from the Canadian Transportation Agency.
Groundwater • Increased soil erosion • Groundwater contaminants from disturbance of contaminated soils, leaks and accident spills • Changes in groundwater levels in aquifers and yields of wells due to dewatering, changed flow patterns that may disrupt the community or private groundwater supplies for drinking water, irrigation or commercial uses • Damage to groundwater wells from blasting and vibration	MOE MTO Property Owners	• Prepare a Spill Prevention, Control and Countermeasures Plan for all construction contracts • If adverse effects are anticipated, develop and initiate a Groundwater Monitoring Program (well quality and quantity monitoring prior to contract initiation) • Obtain a permit to take water (PTTW)
Fisheries and Aquatic Habitat • Impacts to specialized aquatic habitats • Indirect or secondary impacts to watercourses and waterbodies • Fish passage	MNR DFO MTO General Public	• Undertake more detailed fish and fish habitat impact assessments in relation to more specific project design (including more detailed field assessment and sensitivity analysis as required) and refine mitigation measures, in order to fulfill requirements of DFO/MTO/MNR Fisheries Protocol and required approvals • Refine siting and/or design of bridge structures to avoid specialized aquatic habitat • Design culverts and structures to minimize the length (e.g. culverts design using wing walls or head walls) • Median openings should be considered where feasible and use techniques to reduce fill footprint • Incorporate design measures to minimize the degree of encroachment of fills for abutments at new crossings • Minimize the length of stream disrupted for new culverts • Minimize the length of stream disruption and duration of disruption • Avoid or minimize realignment requirements by aligning new culverts along the existing channel wherever possible • Design culverts to avoid and minimize impacts to stream flow or velocity • Minimize the length of channel sections requiring realignment by incorporation of all reasonable measures to reduce the fill footprint • Design to avoid encroachment into a channel where a section of watercourse channel meanders within the right-of-way • Reconstruct realigned channel sections using an naturalized channel design to ensure existing habitat conditions are maintained and enhanced • Avoid 'hard engineering' approaches for watercourse realignment • Design realigned channels to be of similar length to the existing channel • Maintain channel dimensions and channel type along the new sections • Integrate design input by a hydrologist and/or fluvial specialist as required • Minimize encroachment into aquatic and wetland habitat, particularly those habitats identified as relatively more sensitive • Timing restrictions for instream work will be included in the contract packages • Include special provision for blasting near watercourses in the contract package, as well as other typical constraints used at watercourses with fisheries resources (i.e. prevention of debris from entering the waterway, no refuelling near water, etc.) • Where watercourses support potential direct fish use up and downstream of the highway and fish passage is a potential concern: • Culverts should be embedded and substrate placed throughout the culvert – embedment should be sufficient such that

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Issue/Concerns Potential Effects	**Concerned Stakeholder(s)**	**Future Work or Mitigation (to be confirmed during Detail Design)**
		substrate can be sized to stay in place under storm flows and not affect the required conveyance capacity • A low flow channel should be formed within the substrate to avoid creation of a barrier to fish movement under low flow conditions • In no case should a barrier to fish movement be created • Design transitions from culvert inlets and particularly the culvert outfall to avoid creation of erosive conditions • Where relevant, created outlet and inlet pools to provide potential refuge habitat as well as for energy dissipation
Vegetation and Wetlands • Direct impacts (e.g. loss of vegetation) • Indirect impacts (e.g. spills)	MNR MTO General Public	• Develop vegetation protection measures in the contract package, including protection for the main portions of natural areas • Maintain the existing drainage regime over the short and long term; drainage should not be diverted or impounded • All trees should be felled and removed from the adjacent natural habitat • Appropriate clearing techniques should be used for all vegetation that must be removed. All vegetation cleared should be felled and removed away from the adjacent natural habitat. • Any temporary dewatering that may be required during construction through the wetland areas should be properly managed, and discharge filtered prior to release to the natural area to prevent erosion, siltation and/or temporary drawdown or flooding • All construction-related debris should be appropriately disposed of following construction • An environmental inspector should be retained to ensure all relevant mitigation measures are properly applied throughout construction • Site-specific mitigation measures: • Where appropriate, along the edges of the more sensitive natural features (e.g. deciduous swamps, coniferous swamps and shrub fens), temporary protection fencing will be installed prior to grading. This fencing will be maintained throughout construction. In many cases, it may be appropriate to integrate additional sediment and erosion control fencing with construction barrier fencing. • Specific edge management techniques will be applied in order to protect newly created edges of the more sensitive forested swamp communities. Techniques to be considered include native soil and seedbank retention (i.e. no root grubbing in a narrow transition zone to encourage rapid re-growth), and edge plantings. • Salvage of seedbanks for the small areas of sensitive wetland communities and communities supporting rare species (e.g. shrub fens, forested swamps, and Unit L14). Seedbank material can be re-instated in adjacent areas or temporarily disturbed areas that will be re-instated.
Wildlife • Potential for increased mortality • Migratory birds • Eco-passages • Species at Risk	MNR MTO General Public First Nation Communities	• Create replacement habitat for species at risk reptiles • Explore various types of warning signage (e.g. mobile/seasonal signage, indicate target wildlife group) to increase driver awareness and minimize driver habituation. • Provide wildlife crossing opportunities (Eco-passages) under new structures. New crossing structures to allow large wildlife to cross under the preferred route are proposed at six locations: Magnetawan River, Still River, Straight Lake, Key River, the CPR line at Straight Lake and the CN Rail line at Highway 522. Evaluate fence options to direct wildlife at appropriate locations • Eco-passages to be naturalized to promote wildlife use • Install smaller, more numerous crossing structures/culverts across the length of the highway. Dedicated crossing structures specifically designed to facilitate the movement of species at risk may also be appropriate along the segment of the preferred route between the Little Still River and Straight Lake. • Provide low profile wildlife fencing along the segment of the preferred route north of the proposed Highway 522 interchange where the four lane highway will diverge from the existing Highway 69 corridor and extend through areas where Eastern Massasauga Rattlesnake (EMR) and Eastern Massasauga Rattlesnake habitat have been confirmed. • Employ a dedicated barrier along the western edge of the preferred route that abuts vegetation units BB3, BB5, BB6 and BB9. Specifically design the barrier to prevent Eastern Massasauga Rattlesnake and other species at risk herpetofauna from accessing the new roadway. • Employ a training program to address the identification and management (e.g. relocation from the construction zone) of

Exhibit 8-1: Summary of Environmental Concerns and Commitments

Issue/Concerns Potential Effects	Concerned Stakeholder(s)	Future Work or Mitigation (to be confirmed during Detail Design)
		species of conservation concern for the contract administrator, environmental inspector, and contractor staff • Include timing restrictions for clearing activities to minimize impacts to breeding birds (no clearing May 1 to July 28 yearly, *Migratory Birds Convention Act*)
Surface Water • Increased upstream/downstream flood levels and erosion • Increase of pollutants to receiving watercourses • Increase in surface erosion to receiving watercourses	MNR MTO General Public	• Design watercourse crossings to minimize flood risk and erosion • Complete a Stormwater Management Study to identify water quantity and facilities to control peak flow and runoff and best management practices • Use erosion and sediment control measures at all sensitive areas where the disturbance of construction must be contained between Magnetawan River and Highway 522.
Erosion and Sediment Control • Impact to water quality and habitat quality	MNR MTO General Public	• Develop erosion protection and sediment control plan • Employ appropriate sedimentation and erosion control measures throughout the construction phase, including erection of silt fencing and maintenance of these until all disturbed surfaces that drain to natural areas are re-stabilized and vegetated • Schedule construction activities to occur primarily during low runoff periods where feasible • Minimize equipment operation when ground conditions are such that extensive compaction and pooling occurs, and ruts from vehicles are evident • Prior to construction, install control measures such as straw bale flow checks, rock flow checks, silt fence barrier and erosion control blankets on slopes and in the vicinity of watercourses to reduce the potential for erosion • Install control measures prior to stripping of soils, and adjust as grading proceeds • Inspect control measures daily during construction and repair as necessary • Stabilize and re-vegetate exposed soils after grading • Seeding of temporarily disturbed areas will incorporate appropriate mixes of locally adapted native plant species to accelerate re-vegetation • Any temporary roads will be removed and restored to pre-existing conditions • Minimize erosion by modifying the slope to flatten it or bench it, using retaining walls, using the least erodible fill materials in highly sensitive locations, implementing a landscape plan and controlling run-off
Aggregates • Potential for sterilization of aggregate resources	MNR MTO MNDM	• Consult with MNR and MNDM regarding aggregate resources
Management of Excess Materials • Potential impacts (e.g. site contamination) to sensitive areas and habitats a result of excess material storage or disposal	MTO MNR MOE	• Excess materials will be managed in accordance with OPSS 180 • Stockpiles of excavated materials, equipment storage and parking will be managed in designated areas to avoid further degradation of adjacent habitat • In consultation with MNR, identify appropriate locations for disposal of excess materials on Crown Lands

Potential Contamination
• Potential contaminated sites
	MTO
	MOE
		• Complete a Preliminary Site Screening for all properties prior to acquisition
		• Complete an Environmental Site Assessment for all properties identified as having potential contamination issues.
		• An active waste disposal site is located on the west side of Highway 69, 75 m south of the communications tower (near Cranberry). If waste deposition is identified to have occurred on the portion of the site to be impacted by the preferred route (access road) and CNR re-alignment, appropriate mitigation may include:
		  • Removal of waste and contaminated soil.
		  • Containment or relocation of waste and associated revisions to regulatory approvals, as necessary.

Community Structure – Residential • Impacts and disruptions to the social fabric of the affected communities	MTO Property Owners Residents Seasonal Residents	• Provide owners compensation for the lands and buildings to be acquired. • Provide advance notice of land acquisitions • Conduct property negotiations with property owners in accordance with standard MTO property purchasing processes
Businesses • Impacts and disruptions to business	MTO Affected Owners	• Conduct property negotiations with business/property owners in accordance with standard MTO property purchasing processes

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Issue/Concerns Potential Effects	Concerned Stakeholder(s)	Future Work or Mitigation (to be confirmed during Detail Design)
Forest Management • Access to lands • Impacts to Sustainable Forest Licence (SFL)	MTO MNR Westwind Forest Stewardship	• Provide suitable access to lands currently enjoying access. (Extension of access through each area will be the responsibility of others.) • Design and construct forest access roads to sufficient structural standards as to accommodate heavy logging trucks (MNR Forest Access Road standards)
Recreational • Impacts to marina operations • Impacts to snowmobile trails and access	MTO Affected Owners French River Snow Voyageurs	• Provide access to the marina at Key River via West Service Road (former Highway 69) • Provide a grade separated snowmobile trail crossing to connect the TOPS C Trail across Highway 69 just west of Highway 529 • During Detail Design, undertake additional consultation with the French River Snow Voyageurs towards determining appropriate snowmobile trail crossings along proposed Highway 69. • Maintain access to recreational lodges, cottages and areas utilized for hunting and fishing via interchanges and the Service Road system to the extent possible
Noise • Changes in noise levels	MTO MOE MNR General Public First Nation Communities	• Should there be excess material available from construction of the highway, consideration will be given to providing berms made from excess material within the future Highway 69 right-of-way adjacent to those receiver locations that are calculated to experience noise level increases of 5 dBA or greater. However, it is not technically feasible to provide berms at the Key River structures. • During construction, the contractor will abide by the Operational Constraints and municipal noise control by-laws • Employ SP199F33
Air Quality • Impacts to health, plan and crop damage or the deterioration of property cleanliness	MTO MOE General Public	• Employ standard dust control measures during construction
Vistas and Aesthetics • Impact on the general visual environment of the roadway due to changes in the form of the roadway	MTO General Public Grundy Lake Provincial Park	• Minimize vegetation removal, signage and entry features • Retain vegetation at the edge of the right-of-way (beyond clear zone) • Retain rock outcrops for visual interest (within the median and adjacent to the outside edge of the travelled highway) • Minimize the removal of vegetation as a result of the construction of access ramps and structures • Design proposed bridge structures to be aesthetically compatible with the landscape • During Detail Design a landscape architect will develop additional landscape elements to minimize impacts to the visual and aesthetic elements of the new highway • Examine options to create a berm at Clear Lake (Grundy Lake Provincial Park) on the old highway alignment.
Landscape • General Appearance • Scenic vistas	MTO General Public	• Use native species to enhance the final design with the intent of reducing impacts to fisheries, vegetation, wetlands and wildlife resources • Promote scenic vistas and blending of the Highway into the landscape
Traffic Interruptions and Delay During Construction	MTO General Pubic Emergency Services	• Finalize a Traffic Management and Staging Plan • Monitor traffic conditions during construction to ensure that unreasonable delays and backups are not occurring • Maintain traffic flow during construction using standard MTO construction signage, flag persons to regulate traffic and reduced speed limits through construction zones • Notify emergency response agencies of the construction schedule
Construction Dust and Noise	MTO General Public	• Employ Contract Operational Constraints and municipal noise control by-laws • Complaints regarding construction noise will be investigated according to the provisions of the existing MTO/MOE Noise Protocol • The contractor will be required to conform to SP199F33 • Blasting and pile driving will normally be restricted to the period of 0700 to 1900 hours daily • The contractor will be required to conform to OPSS 120 (General Specification for the Use of Explosives) • Standard MTO special provisions will be included in the contract to mitigate dust

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Issue/Concerns Potential Effects	**Concerned Stakeholder(s)**	**Future Work or Mitigation (to be confirmed during Detail Design)**
Archaeology	MTO MCL	• Include provisions in contract package, in the event that either human remains or archaeological resources are discovered during construction • A special provision will be included to protect the burial (identified with a wooden marker) near the Key River. • If other archaeological materials are encountered during construction, work shall cease in the area and the Ministry of Culture Regional Archaeologist will be notified • In the event that human remains are encountered during construction, the Contractor will immediately cease operations, notify the Contract Administrator and contact the Ontario Provincial Police, the Ministry of Culture Regional Archaeologist and the Registrar of the Ministry of Government Services Cemeteries Regulations Unit. • Local First Nation communities will also be notified in the event that either human remains or archaeological resources are discovered during construction.
Built and Cultural Heritage • Displacement, disruption or indirect impacts to cultural landscape units and build heritage features	MTO MCL General Public	• Complete documentation and site mapping of affected built and cultural heritage features
Median Crossovers	EMS MTO	• Median crossovers will be evaluated for emergency and maintenance purposes
Consultation	MNR / First Nations / Municipality of Killarney/French River Snow Voyageurs/ Forest Industry / CEA Agency	• Maintain communications to promote active participation and provide innovative solutions to comment interest elements (Crown land access, wildlife mitigation, snowmobile trails) • Advertise commencement of Detail Design assignments, PIC's and Design and Construction Report (DCR) completion
EA Act	MTO	• Complete DCR's for all Contracts
Cycling • Cycling is not permitted on Four-lane Highway 69		• Cyclists are encouraged to use alternate parallel routes where available • Proposed four-laning maintains an alternate parallel route • Those sections where parallel routes are not available, options will be evaluated

8.2 Future Consultation

The route planning process has involved on-going consultation with a number of external agencies, interest groups, members of the general public and property owners. It has also included initiating the process of obtaining a number of Federal and Provincial approvals required for the proposed works, before construction can begin.

The CEAA review process was initiated for Federal triggers (principally for watercourses with fisheries habitat or watercourses deemed to be 'navigable'). Federal agencies will continue to be involved as the design progresses, until fisheries design work, or compensation, is agreed upon and general arrangement drawings are approved by the Coast Guard/Transport Canada as required.

In addition, a number of discussions and meetings have been held with MNR to reach agreement on the best means of planning, designing and constructing the future four-lane highway, while minimizing impacts to fisheries, vegetation, wildlife, wetland, aggregate and Crown land resources. MNR's involvement during future study phases will continue to play a significant role in producing the final design and contract package for the future Highway 69. Westwind Forest Management has also been involved on the subject of harvesting and access to their operations on Crown lands. They will continue to be involved on the details of forest access roads, harvesting, first right of refusal on timber resources, etc.

First Nation communities, including Magnetawan First Nation and Henvey Inlet First Nation will continue to be involved and notified of future study phases.

The Municipality of Killarney and local roads boards will continue to be involved in the design and construction of the proposed works they affect future maintenance activities and the naming of side roads.

Utility companies will be involved to address relocations required in areas where utilities conflict with the proposed design.

Discussions will continue with the French River Snow Voyageurs regarding snowmobile trail connections and the proposed crossing structure for part of the TOPS trail system just east of Highway 526 (Still River).

It is anticipated that property owners and cottagers will also continue to have an interest in the construction phase and final design.

Public consultation will continue to play an important role during the Detail Design phase of the undertaking. The commencement of Detail Design will be announced in local newspapers. At least one PIC will be held during Detail Design to provide the public with opportunities to comment on "Future Commitment" resolutions.

After the Detail Design phase is completed, a Design and Construction Report will be made available during a formal public review period, in accordance with the Class EA for Provincial Transportation Facilities.

Prior to construction, MTO will begin the property acquisition process. During this time, MTO Property staff will be in direct communication with all property owners directly or indirectly affected by the proposed works. After property is purchased and prior to construction, municipalities and other affected agencies (i.e. emergency service, OPP, school bus companies, etc.) will be contacted again to advise them of the timing of construction and construction staging, as it might affect their travel routes or requirements through the contract limits. Signage will be placed along the highway to alert the general and travelling public of construction activities. During construction, the Contract Administrator will be available for dealing with individual property owner questions or requirements (i.e. dust suppression, access to entrance at side road, etc.).

Many concerns have been dealt with successfully through the consultation program during the Route Planning Study. The Project Team has come to agreement with several agencies, the public and property owners about the design of the highway, the location of interchanges and side road connections and means to mitigate environmental impacts, at a Preliminary Design level of detail.

Some comments received during the Route Planning process required details that were not available during Preliminary Design. These concerns have been documented and will be addressed during Detail Design. The previous section provides a summary of identified concerns, mitigating measures and future commitments as identified at the end of the Route Planning Study.