



Ministry of  
Transportation

Ontario

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FOUR-LANING OF HIGHWAY 11/17  
MACKENZIE TO EAST OF PEARL (WELCH CREEK)

Township of Shuniah

ENVIRONMENTAL ASSESSMENT CATEGORY B

G.W.P. 372-90-00

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**ENVIRONMENTAL STUDY REPORT**

PLANNING AND DESIGN SECTION



ENVIRONMENTAL STUDY REPORT  
G.W.P. 372-90-00

FOUR-LANING OF HIGHWAY 11/17  
MACKENZIE TO EAST OF PEARL (WELCH CREEK)

Provincial Highways  
Class Environmental Assessment

Group B Project

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January 1996

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## THE PUBLIC RECORD

Copies of this document have been sent to the following offices of the Ministry of Environment and Energy to be placed in the public record:

District Office  
435 James Street South  
Thunder Bay, Ontario P7E 6E3

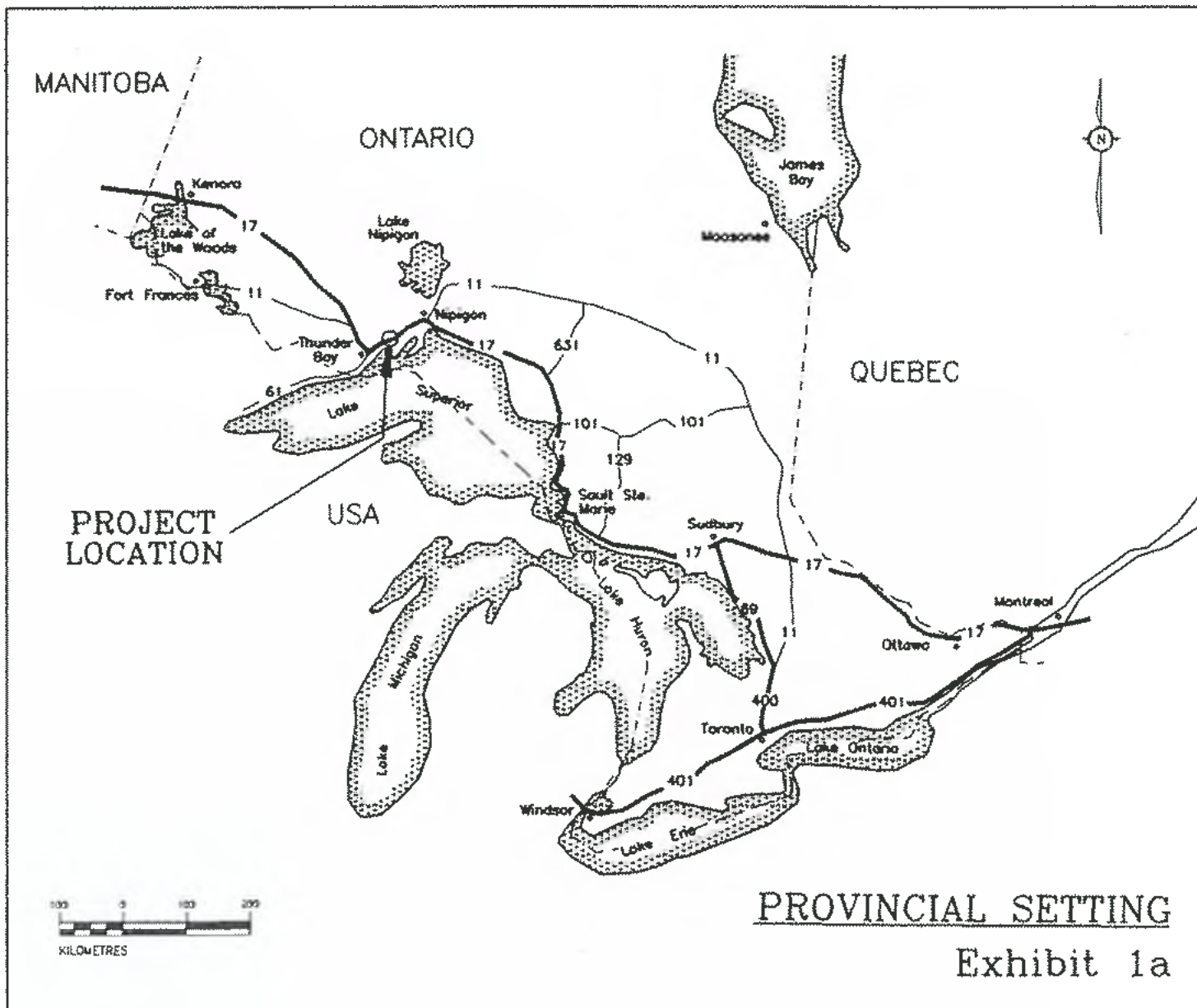
Regional Office  
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Thunder Bay, Ontario P7E 6E3

To facilitate public review of this report, copies have also been filed at:

Clerk  
Township of Shuniah  
420 Leslie Avenue  
Thunder Bay, Ontario P7A 1X8

Brodie Resource Library  
216 Brodie Street South  
Thunder Bay, Ontario P7E 1B9

Waverley Resource Library  
285 Red River Road  
Thunder Bay, Ontario P7B 1A9



**PROVINCIAL SETTING**

Exhibit 1a

ENVIRONMENTAL STUDY REPORT  
HIGHWAY 11/17  
From MacKenzie Easterly 33 km to 3 km East of Pearl

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## EXECUTIVE SUMMARY

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This project is one of four studies being carried out by the Ministry of Transportation (MTO) for the four-laning of the Trans-Canada Highway (Highway 11/17, Terry Fox Courage Highway) from Thunder Bay to Nipigon. The study area described in this report extends from MacKenzie easterly 33 km to 3 km east of Pearl (Welch Creek).

The selected alternative for the four-lane highway consists of a new location (located approximately 300 m north of the existing highway) from MacKenzie Station Road to just east of Birch Beach Road, and twinning to the south of the existing highway from Birch Beach Road to east of Pearl. Minor curve improvements are recommended in the vicinity of Silver Lake Road and Pearl Lake.

Major design features of the four-lane highway include:

- two driving lanes in each direction, resulting in a four-lane cross-section;
- a minimum 30 m centre median which separates the opposing lanes of traffic (except in the vicinity of Pearl River where a 15 m median is used to reduce impact on potential fisheries resources);
- a minimum 90 m right-of-way (except at Pearl River where a 75 m right-of-way is provided);
- public access to the highway at intersecting highways and sideroads;
- private access at existing entrances or entrances provided for in previous property agreements, where feasible (right-in and right-out movements only); and
- new entrances on the four-lane highway only as approved by the Ontario Ministry of Transportation.

Environmental features considered include the natural environment (i.e., factors such as physiography and soils, surface drainage and fisheries, wildlife and vegetation), social environment (i.e., factors such as impacts on residences, land use, culture, tourism and recreation), economic environment, utilities, engineering considerations (i.e. factors such as safety, access) and cost. The public consultation program included four sets of Public Information Centres held during the planning and preliminary design phases of the project. Consultation was also ongoing with the Township of Shuniah, as well as external ministries, agencies, and utilities.

This Environmental Study Report is being prepared during preliminary design in order to proceed with the designation of a corridor for the four-laning of Highway 11/17 in the study area. Environmental issues and concerns are being addressed by normal mitigating measures. A tabular summary of identified concerns and mitigation measures is contained in Section 3.3 of this report. Other specific compensation/mitigation measures will be identified for issues that emerge during the detail design phase of the study. The Ministry of Transportation is committed to the

appropriate mitigation and compensation required to deal with these issues in the future. Mitigation measures identified during detail design will be included in the construction contract and verified by monitoring and altered as required.

## CHAPTER 1 - THE ENVIRONMENTAL STUDY REPORT

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This Environmental Study Report (ESR) is prepared in compliance with the requirements of the *Provincial Highways Class Environmental Assessment* which has been accepted and approved under the Environmental Assessment Act. The ESR documents the environmentally significant aspects of the planning, design, construction and operation of specific Group "B" projects which fall within the definition of the Class. It includes a description of the project and its purpose, specific environmental effects and mitigation measures, and committed monitoring procedures associated with the implementation of the project.

Other aspects of this class of undertaking, such as environmental assessment process, are contained in the *Provincial Highways Class Environmental Assessment*. Readers interested in these matters are encouraged to refer to that document.

In addition, detailed background information is contained in the *Planning and Preliminary Design Report, Four-Laning Highway 11/17, MacKenzie to East of Pearl (Welch Creek)* and in the Ministry's project files. The Ministry of Transportation Project Manager or Environmental Planner are available to discuss this background information.

After clearance of the Environmental Study Report the selected corridor will be designated as a controlled access highway (CAH).

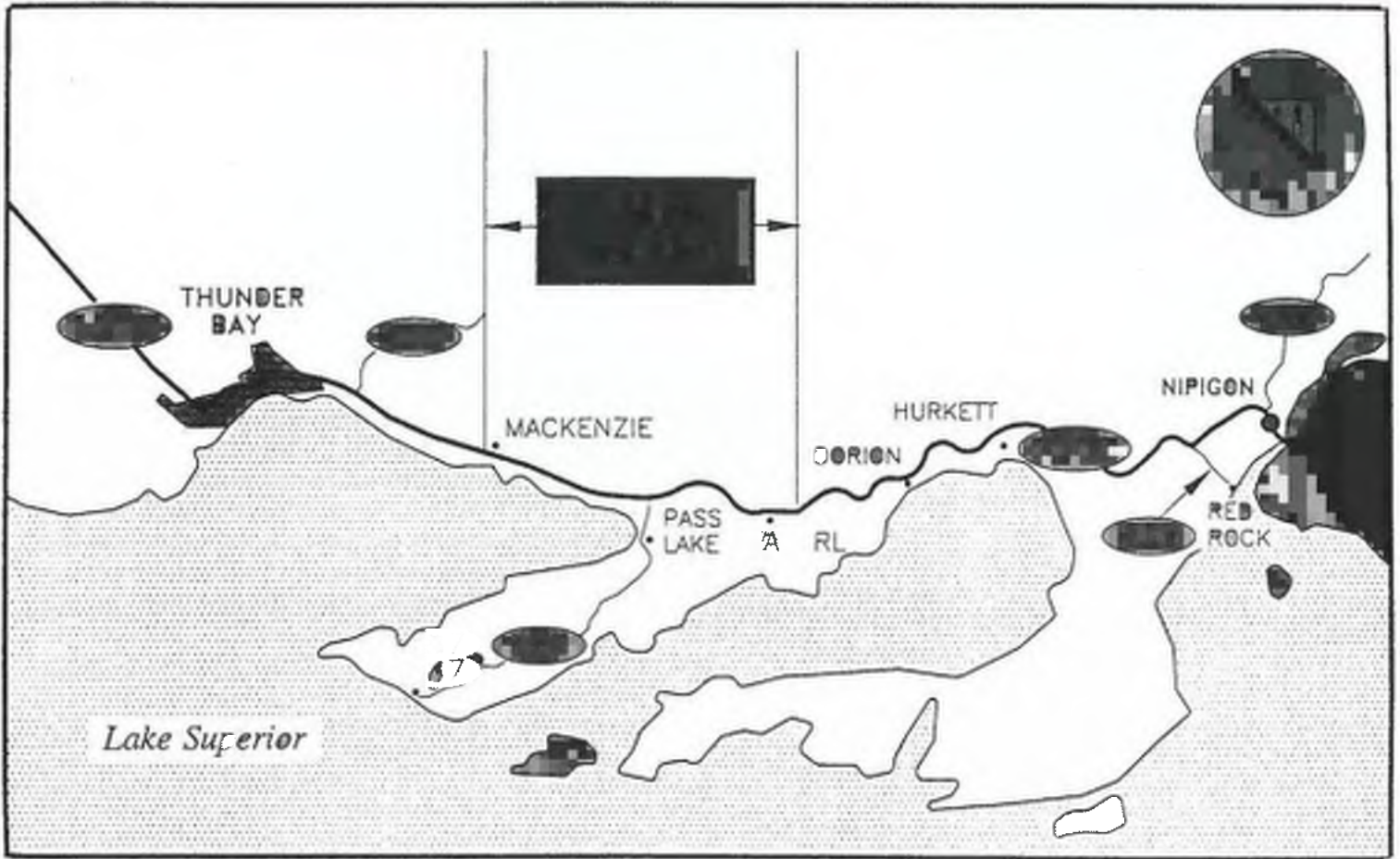
This document focuses on the need to protect a highway corridor for a future four-lane highway in the study area. The need for protection of a corridor now is based on the province's long-term plan to four-lane the Trans-Canada Highway from Thunder Bay to Nipigon, as described in Section 2.3. This ESR is being prepared during preliminary design because there is a need now to protect a corridor for the four-lane highway.

Protecting the corridor now will allow development to continue in areas not affected by the future four-lane highway. For example, in sections of the study area where the four-lane highway bypasses the existing highway, the Ministry of Transportation's restrictions on new entrances and development along the existing highway can be relaxed. In other words, the designation of the corridor will confirm its location and allow the Ministry of Transportation to permit development and entrances to sections of the study area that will not be affected by the future four-lane highway.

A glossary of technical terms is provided in Appendix A.



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Details of these relocations will be confirmed during detail design, in cooperation with Ontario Hydro.

The selected alternative also crosses the TransCanada Pipeline and the FOTS line. Details of these crossings will be dealt with during detail design, in accordance with the regulations of governing authorities.

There are no municipal utilities in the study area.

### **2.2.13 Right-of-Way Requirements and Corridor Control**

A typical 90 m wide right-of-way is required for the initial and freeway stage of development (as described in Section 2.2.14). For sections of the existing Highway 11/17 that will be twinned, the existing right-of-way is 45 m wide and an additional 45 m is required. In the vicinity of Pearl River, where the median width is 15 m, the total future right-of-way width is approximately 75m. At some locations, the median width is wider than 30 m and additional property is required. This occurs in twinning sections where the eastbound lanes are not parallel to westbound lanes or where clearances must be maintained from existing hydro towers.

Some property will also be required at intersecting sideroads where realignments are planned, or sight distance improvements are required. Property protection for possible future interchanges has also been identified during preliminary design.

After clearance of the Environmental Study Report, a controlled access highway (CAH) designation will be placed on the selected corridor for Highway 11/17. Entrances will be considered by way of permit to be approved by the MTO Regional Director. However, no entrances will be allowed on new four-lane alignment sections. After the construction of the four-lane highway, entrances onto the existing Highway 11/17 will remain in twinning sections, unless unsafe, but will have access in one direction only (right-turn-in, right-turn-out).

With the completion of the new alignment for Highway 11/17 it is anticipated that bypassed sections of the existing Highway 11/17 will be transferred to the jurisdiction of the Township of Shuniah.

## 2.2.14 Phased Implementation of Improvements

The following provides a summary of the phased implementation of the improvements:

### Phase 1: Four-Lane Divided Highway

This phase involves the construction of a four-lane highway with at-grade intersections at highways and municipal roads. This does not preclude staging options which could include initial construction of two lanes where a new alignment has been selected.

Private access to the four-lane highway will be controlled on the following basis:

- safety and design requirements permitting, existing entrances will remain with access restricted to one direction (i.e., right-turn-in and right-turn-out) in twinning sections; and
- new entrances on the four-lane highway only as approved by the Ministry of Transportation's Regional Director, Northwestern Region, Thunder Bay.

### Phase 2: Interchanges at Strategic Locations

This phase involves the provision of interchanges at some of the intersecting highways and municipal roads.

Interchanges may be provided based on the following warrants:

- if traffic signals are warranted; or
- if safety or operational considerations warrant an interchange.

### Phase 3: Interchanges at Other Locations

Phase 3 includes the construction of interchanges at the remainder of the intersecting highways and municipal sideroads. Roads will be closed at the highway if interchanges are not justified and alternate access is available or can be provided by service roads.

### Phase 4: Freeway Designation

In Phase 4, all entrances to the four-lane highway will be closed when the highway is designated as a freeway. If alternate access is not feasible by service roads or sideroads, individual properties will be purchased.

## **2.3 Project Justification and Purpose**

### **2.3.1 Protection of Corridor**

Justification for the protection of a corridor is based on a need to provide land for a future four-lane highway, while permitting suitably located development to occur in the study area. As noted in Chapter 1, the protection of a corridor is required now, although construction is not imminent.

Protecting the corridor now will allow development to continue in the areas not affected by the future four-lane highway. For example, in sections of the study area where the four-lane highway bypasses the existing highway, the freeze on new entrances and development along the existing highway can be relaxed. In other words, the designation of the corridor at this time, will confirm its location and allow the Ministry of Transportation to permit development and entrances to sections of the study area that will not be affected by the future four-lane highway.

### **2.3.2 Construction of Four-Lane Highway**

The justification and purpose for constructing a four-lane highway is described below.

The section of Highway 11/17 between Thunder Bay and Nipigon forms a strategic link in the Trans-Canada Highway system. Trans-continental, regional and local traffic rely heavily on this highway. There is no alternative highway route within the province. The four-laning will provide a parallel road system which will serve as an alternative route in the event of a roadway accident, natural disaster or structural loss.

Closure of the Trans-Canada system would have an impact on the economy of the region as well as the trans-continental movement of goods and people within Canada.

The potential risk of such a closure was first brought to light in the early 1970's when a load limit was placed on the Nipigon River bridge. Since then, the Ministry of Transportation has identified the potential risk of a highway closure at a number of bridge sites along this section of Highway 11/17. In the late 1970's functional contingency plans were developed for critical sites. In 1987, a preliminary design study was undertaken to determine requirements for the implementation of these contingency plans. Until Highway 11/17 is four-laned, the Ministry of Transportation must rely on these contingency plans in case of structural loss.

The four-laning of Highway 11/17 will improve traffic service especially during the peak summer

period. Traffic volumes increase by approximately 60 percent during the summer. Passing lanes have been implemented along more than 10 percent of the length of Highway 11/17 between Thunder Bay and Nipigon. Despite these passing lanes, the Ministry of Transportation still receives complaints regarding delays caused by slow moving vehicles.

The collision rate for the MacKenzie Station Road to Pearl section of Highway 11/17 is higher than the provincial average in many sections. The four-laning will lower the accident rate and provide a safer facility.

The area between Thunder Bay and Nipigon is rich in natural resources. There are many mining and logging operations that rely on Highway 11/17 for access. A four-lane facility will improve the movement of these resources and encourage economic development.

The four-laning of Highway 11/17 will benefit the region in terms of temporary new jobs and the creation of spin-off industries to serve the construction industry.

In summary, the four-laning of Highway 11/17 between Thunder Bay and Nipigon will:

- provide a second roadway to the existing single link of Highway 11/17, ensuring the operating integrity of the Trans-Canada Highway;
- improve traffic operations, especially during the summer;
- provide a safer highway facility;
- facilitate the movement of natural resources; and
- encourage economic development.

## **2.4 Significant Environmental Features**

Prior to the development of route alternatives, a preliminary survey of existing environmental features within the study area was conducted through secondary source materials and limited field reviews.

Significant existing environmental features within the study area that influenced the development of initial alternatives were identified to be:

- areas where entrances (i.e., driveways) to the highway are frequent;
- the operation of commercial businesses adjacent to the highway;

- residences immediately adjacent to the highway;
- conflicts with public utilities (hydro, pipeline, etc.) and railway lines;
- physical features such as large rock formations, swamps and lakes; and
- environmental features including cold water fish streams, archaeological resources and wildlife habitat.

This section of the report describes the existing environment in the study area.

## 2.4.1 Natural Environment

### 2.4.1.1 Physiography and Soils

Glacial action during the Precambrian and Pleistocene Eras has influenced the physiography of the region. The region is classified as moderately broken uplands, with strongly broken uplands characteristic around Pearl.

The study area is located in the Port Arthur Hills region of the Precambrian Shield, dominated by glacial tills and metasediments. Just north of the study area, the MacKenzie Moraine extends from Gorham Ward (where the Dog Lake Moraine and the Marks Moraine merge) across MacGregor and portions of McTavish Wards in the Township of Shuniah. Comprised of sand and gravel deposits, the moraine intersects Highway 11/17 from Loon Lake to Pearl in McTavish Township. South of the moraine along the shore of Thunder Bay, the area is classified as beach lands, composed of sand and cobble materials deposited over glacial tills and bedrock. Ancient wave action from glacial Lake Algonquin has produced a variety of beaches and terraces.

The soils in the project area from MacKenzie Station Road to Highway 587 are classified in the Lakehead Region Conservation Authority Watershed Plan, as undulating to smooth gravelly and sandy plains. From Blend Lake to the eastern study limits, shallow soils are present over Precambrian bedrock. These shallow, scattered soil deposits limit the productivity of the land.

The Precambrian Shield has a vast mineral potential and is host to a variety of deposits including iron ore, lead, zinc, silver and amethyst. The Ministry of Northern Development and Mines has supplied the location of abandoned mines within the study area. They are located north of the existing highway east of Sunnyside Beach Road and south of the existing highway at the east project limit.

During the planning phase of the project and evaluation of route alternatives, Peto MacCallum



Ltd. Consulting Engineers were retained to obtain geotechnical information at Pearl Lake. Their study related to the subsurface lake bottom conditions and provided geotechnical comments regarding the feasibility of constructing an embankment within the lake. Their findings indicated that the lake bottom is of soft organic matter that would not support fill into the lake or an embankment. Based on their findings, the Geotechnical Section of the Ministry concluded that construction of an eastbound lane through Pearl Lake was not practical from an engineering and financial point of view. The geotechnical study, dated March 1993, is on file in the Planning and Design Section of the Ministry of Transportation, Northwestern Region, Thunder Bay.

#### **2.4.1.2 Surface Drainage and Fisheries**

Glaciation of the region formed its intricate surface drainage patterns. Numerous wetland sites are characteristic throughout the Thunder Bay Region, with several small wetland units located in the study corridor. Several lakes and streams are found within the study area and intersect Highway 11/17 flowing into Lake Superior. They include:

- the MacKenzie River system which drains an area of 44,526 ha north of the study corridor, and empties into Lake Superior, intersecting Highway 11/17 at MacKenzie Beach Road;
- Blend Lake, Deception Lake, and Silver Lake feeding the Blend River system;
- Loon Lake, Bass Lake, Big Pearl Lake, Devlin Lake and Pearl Lake as part of the Pearl River system; and
- several small unnamed streams that intersect the Trans-Canada Highway at various points.

Hazard lands are often associated with these wetland areas. Development of these lands is limited by environmental hazards such as flood susceptibility, erosion susceptibility, instability or other physical conditions which are severe enough to pose risk to occupants or loss of life, property damage or social disruption. It is a general policy with the Lakehead Region Conservation Authority that there should be no encroachment of structural development or major landscape alterations on hazard lands in order to prevent loss of life and minimize property damage. Lakehead Region Conservation Authority expressed concerns with the detailed designs of the watercourse crossings which may be subject to the Authority's Fill, Construction and Alteration to Waterways Regulations. The placement of culverts will be confirmed during detail design and carried out in accordance with MTO standards.

Surface drainage along the existing highway is carried by roadside ditches. There are no storm sewers in the study area. The proposed four-lane highway will include ditch drainage alongside the roadway and in the median. No significant changes to surface drainage are anticipated

throughout the study area, except in the vicinity of Pearl River, which is discussed in Section 3.1.2.

#### 2.4.1.3 Sub-surface Drainage

Groundwater characteristics are dependent on the physiography, geology and topography of the area. There is limited aquifer potential in the Thunder Bay region as a result of the underlying bedrock and its proximity to the surface, as noted in the Lakehead Region Conservation Authority's watershed plan.

Residents and businesses throughout the study area use well water. The depth to groundwater varies throughout the study area from less than 10 m to 40 m.

No formal response was received from the Ministry of Environment and Energy and no concerns regarding groundwater were noted in conversation with this agency.

#### 2.4.1.4 Wildlife

The area surrounding Thunder Bay, including the study area is classified in the Ontario Land Inventory with slight to moderately severe limitations to produce wildlife. These limitations are a result of poor nutrient and moisture conditions in the soil. These factors limit the growth of vegetation suitable for food and cover and limit the capability of the land to produce and sustain wildlife. The class system ranks Class 1 as excellent (i.e., no limitations to produce wildlife) and Class 7 as poor (i.e., no capability to produce wildlife).

The area surrounding Thunder Bay is rated as Class 3 for moose production and Class 4 and 5 for deer production. The study corridor from MacKenzie Station Road to east of Blend Lake has a low moose density and from Blend Lake to the end of the study area has a moderate moose density. The deer population is found in small isolated groups within the study area as a result of winter weather conditions. A small wintering area is located just east of Loon Lake.

The Ministry of Natural Resources indicated that there is a high concentration of deer east of Pass Lake.

Within the larger Thunder Bay region, the following species are also present:

- small game species such as ruffed grouse, spruce grouse, snowshoe hare, sharptail grouse and

woodcock;

- waterfowl, including ducks, geese and shorebirds;
- fur bearers such as beaver, muskrat, martin and mink;
- predators such as timber wolves, black bears, coyotes and brush wolves; and
- non-game species including bald eagles, ospreys, herons, cormorants and gulls.

#### **2.4.1.5 Vegetation**

The dominant trees in the forest along the existing highway corridor include poplar, white birch, balsam fir and black spruce. Other species include white cedar and white spruce. Many of these forests are growing in swampy areas or on land that was once used for agricultural purposes. Most forests have an understorey of ferns, grasses and herbaceous plants and provide limited habitat for wildlife.

Two plantations have been identified north of Highway 11/17, one just east of Bass Lake, and the other just west of Big Pearl Lake. An area of natural regeneration has also been identified east of Pearl Lake, south of Highway 11/17.

#### **2.4.1.6 Waste Management**

Three waste disposal sites are present within the study area, one is located just south of Loon Lake north of the Ontario Hydro transmission corridor, the second is west of Pearl Lake south of the Canadian National Railway, and the third (McTavish Landfill) is located south of Highway 11/17 at Silver Lake Road. This information was obtained from the Ministry of Environment and Energy and the Township of Shuniah Official Plan (January 1991).

#### **2.4.1.7 Environmentally Sensitive Areas (ESAs) and Area of Natural and Scientific Interest (ANSI)**

There are no Environmentally Sensitive Areas (ESAs) in the study area.

There is an Area of Natural and Scientific Interest (ANSI) north of and adjacent to the existing highway east of West Loon Road (opposite Mirror Lake Road). The ANSI is a rock outcrop with two elements of the Gunflint Formation. The Ministry of Natural Resources has expressed concern regarding construction through this ANSI.



## 2.4.2 Social Environment

### 2.4.2.1 Land Use

Land uses within the study area are comprised of residential, recreational, vacant land and commercial uses in concentrated areas.

Residential land use within the study area primarily consists of seasonal and non-farm residences which tend to be located along major township roads, highways and the shore of Lake Superior. Cottage developments are also located on inland lakes such as Loon, Deception and Bass Lakes. The western portion of the study area, from MacKenzie Station Road to Highway 587, has several sideroads connecting the existing Highway 11/17 to the shoreline of Lake Superior to the south. The small community of Pearl is located at Pearl River and Highway 11/17.

Most commercial land use is focused in three locations within the study area. These three primary locations are found firstly, approximately 5.5 km east of MacKenzie Station Road, secondly at Crystal Beach Road and thirdly at Highway 587. These commercial establishments are further discussed in Section 2.4.2.3.

Recreational land use, although limited in nature is present within the study area. Recreation and tourism are discussed in Section 2.4.2.2.

Transportation and utility land uses include the Trans-Canada Highway, Canadian National Railway, Canadian Pacific Railway, TransCanada pipeline, Ontario Hydro transmission lines, Thunder Bay Telephone and Bell Canada's National Fibre Optic Transmission Line (FOTS).

In 1982, over 90 percent of the land area in Shuniah Township was considered vacant land (both undeveloped and cleared).

Future land uses within the study area consist of shoreline residential, community residential, rural, highway commercial and hazard lands. Most of the study area is designated for future rural land use.

It is an objective of the Official Plan of the Township of Shuniah (January 1991) to allow for the free flow of traffic along the provincial highways and to maintain this area as one servicing the tourist trade and resource industries. The Transportation Systems Policies of the Official Plan indicates that transportation plays a key role in economic development of the Township and that

Highway 11/17 is to remain a main transportation artery.

#### **2.4.2.2 Culture, Tourism and Recreation**

##### Archaeology and Heritage Features

A pre-field study of Highway 11/17 from Thunder Bay to Nipigon was carried out by Archaeological Services Inc., for the Ministry of Transportation in March 1992. This report is on file with the Ministry of Transportation and contains an inventory of all registered archaeological sites within the study corridor, as well as a summary of estimated archaeological site potential. Due to the sensitivity of archaeological site location data, this information is not widely distributed and detailed site descriptions are not included in this report.

Within the study corridor, several Paleo-Indian sites have been identified in the Lakehead Region Conservation Authority's watershed plan. These sites are noted just south of Highway 11/17 at Highway 587.

The Ministry of Citizenship, Culture and Recreation (former Ministry of Culture, Tourism and Recreation) indicated the presence of three potential archaeological sites in the vicinity of MacKenzie Station Road. It was also confirmed that no known significant historical sites are within the study area.

##### Tourism and Recreation

At present, public recreational lands and access to Lake Superior is limited due to physical constraints and extensive private land ownership. Three private campgrounds are located just south of Highway 11/17, one at MacKenzie Station Road and two near Loon Lake. Two Conservation Authority holdings which offer a variety of recreational activities are also located near MacKenzie Station Road. These lands are not adjacent to the highway or directly affected by the project. Sleeping Giant Provincial Park is located south of the study area and receives access via Highway 587.

The Ministry of Natural Resources requested that access to Sleeping Giant Park be maintained at all times during construction.

A representative from the Municipal Economic Development Agency (MEDA) met with the Ministry of Transportation during the planning phase of the project to discuss a proposed golf





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**Table 1  
Description of Evaluation Factors**

<b>Evaluation Factor</b>	<b>What Factor Takes into Consideration</b>
<i>Social Environment</i>	
Community Disruptions	Changes to established travel patterns in residential communities as a result of a new four lane highway
Residential Displacements	Number of residences to be purchased
Residential Displacements	Maximum density (number/km) of residences to be purchased
Residential Disruptions	Number of residences from which some property is required
Property Disruptions	Area of land to be purchased for the new right-of-way
Institutional Displacements	Number of institutional properties to be purchased
Institutional Disruptions	Number of institutional properties from which some property is required
Noise	Number of residences that may experience a perceived change in noise level
Land Use	Amount of non-rural land that is required for the new right-of-way
Visual Aesthetics	Number of residences that will view the new highway because of its proximity
Out-of-Way Travel	Number of residences subjected to out-of-way travel caused by right-in/right-out turning movements
Archaeological Potential	Potential for archaeological sites along the right-of-way
Archaeological Sites	Location of registered archaeological sites in proximity to the right-of-way
<i>Economic Environment</i>	
Employment Decrease	Jobs lost as a result of business purchases and change in business activity as a percentage of the total number of jobs in the Township
Municipal Tax Base Decrease	Decrease in taxes paid by the local businesses as a percentage of the industrial and commercial tax revenue of the Township
Business Displacements	Number of businesses to be purchased
Business Disruptions	Number of businesses from which some property is required
<i>Natural Environment</i>	
ESAs and ANSIs	Compatibility with identified Environmentally Sensitive Areas and Areas of Natural and Scientific Interest
Watercourses	Number of watercourse crossings affecting potential fisheries resources
Wetlands	Area of wetlands to be removed by the right-of-way
Vegetation	Area of treed land to be removed by the right-of-way
Wildlife	Area of designated wildlife habitat areas to be removed by the right-of-way
Agriculture	Area of productive agricultural land required for the right-of-way
Groundwater	Potential for groundwater disruption based on the proximity of local wells to the right-of-way
<i>Highway Operations</i>	
Entrance Density	Safety and highway operation as a function of the maximum number of entrances per km, in one direction
Entrances	Safety and highway operation as a function of the total number of entrances
Level of Service	Highway operating conditions as a function of speed and travel time, traffic interruption, freedom to manoeuvre, driving comfort, convenience and safety
Grades (truck speed)	Safety and highway operation as a function of minimum truck operating speeds on a grade
Intersections	Efficiency, capacity and safety as a function of the number of intersections
<i>Cost</i>	
Construction	Construction cost, including the cost of roads, bridges, utility relocation, sideroad reconstruction, and improvements to existing highway
Maintenance (Annual)	Annual maintenance cost
Property	Cost of purchasing land, residences, businesses and institutions





## CHAPTER 3 - ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

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### 3.1 Natural Environment

#### 3.1.1 Physiography and Soils

Potential environmental effects related to physiography and soils include sheet and embankment erosion during construction. Proposed mitigation measures would involve the incorporation of erosion and sediment control measures during detail design.

The potential for localized soil contamination in isolated areas is also recognized. Although this matter has not been investigated during either the planning or preliminary design phases of the project, there are some land uses existing along the highway that have been historically related to potential contamination. Examples of these land uses include a gas station, and auto wrecking/scrap yard. Although the Ministry of Environment and Energy has not expressed any concerns in writing, they did indicate verbally that their primary concerns regard the crossing of contaminated sites or waste disposal sites. Proposed mitigation measures include an environmental audit of sites with "high potential for soil contamination" during detail design. Should contaminated soil be encountered, disposal will be conducted in accordance with applicable government statutes and guidelines. Waste disposal sites are discussed in Sections 2.4.1.6 and 3.1.6.

#### 3.1.2 Surface Drainage and Fisheries

As described in Section 2.2.5, the selected alternative includes an extension of the existing concrete box culvert at Pearl River, the construction of a wall adjacent to the stream and rechannelization of a 160 m section of Pearl River in this area. The channel configuration (i.e., shape, alignment and channel treatment to enhance fish habitat) is to be developed during detail design. The special study *Fisheries Habitat Assessment Pearl River Preliminary Design Study MacKenzie to Pearl*, carried out during preliminary design and subsequently accepted by the Ministry of Natural Resources, had the following findings (see Section 2.2.5):

- No brook trout were observed to spawn within either the braided channels or further downstream of the area identified as "potential brook trout spawning habitat", although suitable substrate for spawning was identified. The fisheries biologist concluded that the study

area is not a brook trout spawning area.

- Based on the Ministry of Natural Resources fish habitat classification system, the Pearl River within the study area is considered to be Type 2 habitat - that is, habitat which is important to fish but does not limit overall productive capacity.

The study also identified a number of potential impacts to fisheries at Pearl River. They include:

- direct effects due to channel relocation;
- direct effects due to erosion and sediment introduction to stream channels;
- indirect effects on downstream reaches due to changes in upstream channel form;
- effects on hydrogeology (see Section 3.1.3);
- effects on water temperature; and
- effects on water quality.

Mitigating measures proposed for these effects are:

- that natural channel design principles be employed to construct the new stream channel;
- that the new culvert be constructed with open footings, or oversize and backfill with natural substrate material sized for expected flows and velocities;
- that the culvert be designed to ensure that no barriers are created to fish movement, either by incorporating vertical breaks within or at the downstream end, by creating excessive water velocities, or by presenting a channel which is too shallow for fish to navigate freely; and
- that the Ministry of Natural Resources be consulted on the specific design of the Pearl River channel relocation and culvert crossing during detail design.

Effects on fish habitat in watercourses throughout the study area will be mitigated by implementing the Ministry of Natural Resources river crossing procedures and approved fisheries mitigation measures where necessary. Work on cold water creeks will be limited to a period between June 15 and August 31.

Another potential environmental effect is sediment flow into surface drainage during construction, impacting water quality. This will be mitigated through the incorporation of stormwater quality, river crossing and drainage management guidelines during detail design and construction. It also includes the incorporation of permeable roadbed materials in the areas where the alignment bisects organic deposits.



Involvement from both the Ministry of Natural Resources and Lakehead Region Conservation Authority will continue to be sought during the detail design and construction phases of the project, to confirm that all work is carried out in accordance with regulations regarding surface drainage and fisheries.

Application will be made to the Department of Fisheries and Oceans through the Ministry of Natural Resources when construction is ready to proceed for authorization to harmful alteration of fish habitat, as required by the Federal Fisheries Act. At that time, mitigation and compensation will be established. The construction of this project will be subject to the Canadian Environmental Assessment Act.

### 3.1.3 Sub-surface Drainage

As part of the special study carried out at Pearl River during preliminary design, Thurber Engineering Ltd. was retained to complete a hydrogeological assessment in the vicinity of the proposed stream channel relocation. This assessment focused on identifying the potential for and the occurrence of upwelling conditions within the Pearl River and the potential impact of the highway twinning on groundwater quality. Findings from the study were as follows:

- The anticipated groundwater flow rate toward the potential spawning habitat in the Pearl River is expected to be small. However, it is not known at this time if groundwater flow originating north of existing Highway 11/17 and discharging into the braided stream channel network of Pearl River (i.e., potential spawning habitat) is sufficient to support a brook trout spawning area.
- The proposed new highway embankment is not anticipated to interfere with groundwater flow provided that the embankment is constructed with free draining granular materials meeting the Ontario Provincial Standard Specification (OPSS) gradation requirements for Select Granular Material.
- Erosion protection and/or retaining wall construction adjacent to the Pearl River should be limited to permeable systems such as gabion baskets or armour stone rip-rap resting on a prepared shallow foundation.
- With reference to groundwater quality, all three groundwater samples meet Ontario Drinking Water Guidelines (ODWG) with the exception of Aluminum and Manganese.

Minimal impact is expected on groundwater throughout the remainder of the study area.

### **3.1.4 Wildlife**

The selected alternative has minimal impact on wildlife in the study area. The 30 m wide median will permit the continued movement of animals across the highway and throughout the area.

### **3.1.5 Vegetation**

The Ministry of Natural Resources requested that access be maintained to forest management areas. Access via existing driveways will be maintained to these areas with right-in, right-out movements permitted. Turn around opportunities will be provided at intersections and median cross-overs throughout the study area.

The selected alternative will result in the loss of some vegetation. Standard procedures will be implemented for vegetation clearing and residual vegetation protection. Locations where it will be feasible for vegetation to remain in the median will be determined during detail design.

Grading, topsoil and vegetation will be required for all exposed earth slopes. This will be confirmed during detail design and carried out during construction. Exposed earth will be revegetated using seeding and mulching or sodding.

### **3.1.6 Waste Management**

The Ministry of Transportation generates excess materials and waste as a result of the construction, operation and maintenance and/or clean-up of transportation facilities.

Excess materials are generated by construction activities required specifically for the project or activities linked to the operation and maintenance of provincial highway facilities as a whole. Excess materials typically associated with construction activities may include asphalt, concrete, swamp material, wood, earth and rock. Excess materials associated with maintenance activities may include road sweeping materials, wood, sediment, litter and other debris. Excess materials are primarily managed through reuse, recycling, management as fill, or disposal as waste in accordance with Ministry of Environment and Energy (MOEE) legislation, policy and MOEE/MTO protocols.



Wastes are primarily generated by operations not specifically linked to an individual highway project, but rather to the operation and maintenance of provincial highway facilities as a whole. Some examples of wastes include waste oil from MTO fleet maintenance, zone painting and asphalt testing liquids, and, spill or accident related materials which must be removed from MTO property. Wastes are managed in accordance with the *Environmental Protection Act*, Regulation 347 and other applicable legislation.

The McTavish Landfill site, in the vicinity of Silver Lake Road, will continue to receive access from a realigned entrance to the existing highway. The selected alternative is on a new alignment at this location and does not impact the operation of the site. The existing highway and Silver Lake Road are bypassed and remain in operation at this location. Access to the new four-lane highway, in all directions, will be provided via a new municipal road connection opposite Silver Lake Road.

Property required for the new four-lane highway (from the landfill site) is located adjacent to the existing highway, on the western portion of the site and approximately 90 m from the location of the actual landfill on this property. Historically, soil contamination has coincided with this type of land use, resulting in the potential for soil contamination in this immediate area. Proposed mitigation measures include an environmental audit of sites with "high potential for soil contamination" during detail design. Should contaminated soil be encountered, disposal will be conducted in accordance with applicable government statutes and guidelines.

### **3.1.7 Environmentally Sensitive Areas (ESAs) and Areas of Natural and Scientific Interest (ANSIs)**

The selected alternative crosses the ANSI (rock outcrop, Gunflint Formation) with the realigned West Loon Road, opposite Mirror Lake Road. The realignment of West Loon Road is required at this location for reasons of safety (i.e., improved intersection spacing and the provision of a full cross-intersection with Mirror Lake Road). Physical constraints such as lack of space and topography do not permit the realignment of Mirror Lake Road to the existing West Loon Road. Impact to the ANSI will be confirmed during detail design and minimized during construction.

### **3.1.8 Aggregates**

Sand, gravel and crushed rock are a vital construction material required for Ministry of Transportation projects. The *Aggregate Resources Act* ensures that environmental concerns

associated with aggregate activities (i.e., extraction, transportation, site rehabilitation and processing) are addressed. In accordance with this Act, environmental concerns are identified and appropriate mitigation is determined for site specific aggregate activities.

## **3.2 Social Environment**

### **3.2.1 Land Use**

The four-laning of Highway 11/17 has the potential to have a positive effect on land use in the study area, as it will improve the movement of goods and people throughout the area, as well as increasing safety and access to the area.

### **3.2.2 Culture, Tourism and Recreation**

The selected alternative has the potential to affect heritage/archaeological resources at MacKenzie River and in the vicinity of Highway 587. An archaeological assessment along the corridor will be conducted in accordance with *A Protocol for Dealing with Archaeological Concerns on MTO Undertakings* during detail design and mitigation implemented where required prior to construction.

The selected alternative has the potential to remove traffic from the existing tourist related development (including the amethyst rock shops) adjacent to the existing highway in bypassed sections. This can be mitigated with the use of special signage for tourist/retail areas along the new alignment. The existing picnic site will remain at Pearl for westbound traffic. If a picnic site is required for eastbound traffic a suitable location with access from a sideroad will be determined. The Ministry of Transportation is presently examining opportunities to provide bicycle paths either adjacent to the highway or as part of the highway.

### **3.2.3 Economic and Community Features**

The economic impact analysis identified that a number of benefits are likely to result from the proposed highway upgrading. However, reduced access and exposure will also create economic disruption.

Economic impacts will vary and a new alignment bypassing existing businesses will result in the

most significant impact due to the diversion of transient traffic away from the existing highway. This can be mitigated with the use of special signs for business areas where the existing highway is bypassed.

The Township of Shuniah identified the Esso Pass Lake Travel Plaza at the intersection of Highway 11/17 and Highway 587, as a significant business in the study area. The municipality identified a need to minimize impact to this business to protect the economic environment of the community because it generates a significant percentage of the total business and commercial tax revenue received from the study area.

The selected alternative requires the purchase of three commercial properties, in the vicinity of Highway 587. Owners will be compensated at fair market value. Any business losses claimed to be a result of highway works will be dealt with as provided in the *Expropriations Act*.

The overall impact of four-laning Highway 11/17 from Thunder Bay to Nipigon has a potentially positive effect on the economic development of the region as a result of more efficient movement of regional resources, as well as the potential for increased tourism.

#### 3.2.4 Utilities

The selected alternative crosses existing and proposed utilities including Ontario Hydro (wood pole lines and steel tower transmission corridors), FOTS, and the TransCanada Pipeline.

Utility companies have been involved throughout the planning and preliminary design stages of the study.

Details of all utility crossings will be confirmed during detail design and carried out in agreement with utility companies affected.

#### 3.2.5 Noise

Because the study area is relatively sparsely populated and largely covered in dense vegetation, and because the expanded highway incorporates the existing highway through much of the project, the total noise impact of the selected alternative when compared to existing noise levels is minimal.

During the planning phase of the study, it was estimated that ten residences will experience a minimum increase of about 3.0 dBA. This change in noise level is considered barely perceptible to the human ear, and is lower than the MTO standard of a 5.0 dBA increase in noise level, and does therefore not warrant mitigation.

During the preliminary design phase of the project, a property owner expressed concern over the potential for increased noise caused by the selected alternative at his property. In response to this concern, the Ministry of Transportation carried out a preliminary noise analysis adjacent to his property to determine present and future noise levels. The "Ontario Ministry of Environment Road Traffic Noise Prediction Model" (Stamson Version 3.00) was used for this study. The noise analysis determined that noise generated from the future four-lane highway will be essentially the same as existing ambient levels at this location.

A future noise assessment study could be carried out in specific areas if deemed necessary during detail design.

### 3.2.6 Aesthetics

The four-laning of the highway throughout the study area will require the removal of vegetation within the "foot print" of the constructed roads. However, a major factor in the rationale for the median width (i.e., 30 m) is to allow some vegetation to remain within the median, thus improving the appearance of the highway without jeopardizing safety. Also, the median width allows independent grades for the eastbound and westbound roadways. This situation is not only economically desirable but also allows an aesthetically pleasing highway design.

### 3.2.7 Safety

As described in Section 2.3.2, the long term project justification and purpose is based on a need to improve safety on the highway in the future.

The selected alternative will improve safety in the study area by:

- providing a parallel road system for the Trans-Canada Highway which will increase the potential for continuing road service in the corridor in the event of a major roadway collision, natural disaster or structural loss;
- improve traffic service especially during the peak summer period;
- potentially improve (i.e., lower) the collision rate which is higher than the provincial average

- for King's highways in many sections of the study area;
- provide improved sight distance at intersections with sideroads; and
  - provide safer storage space in the median to allow left turning or crossing vehicles to wait before proceeding.

The selected alternative also includes a new alignment from MacKenzie Station Road to the vicinity of Birch Beach Road, which eliminates frequent entrances and sideroad intersections with the highway in this area. It therefore improves safety in this area by reducing the number of access points and separating local traffic (including school buses) from through traffic.

The Ontario Provincial Police indicated that they support the four-laning of Highway 11/17 for reasons of improved safety.

### **3.2.8 Access**

The phased implementation of improvements is described in Section 2.2.14.

In the first phase of implementation, existing accesses (i.e., entrances) will be permitted to remain with right-in, right-out movements permitted. The selected alternative includes the identification of locations for interchanges to be developed at strategic locations in the long term (i.e., later phases of implementation). Ultimately, in the very long term, when the road is designated a freeway, all entrances to the four-lane highway will be closed, and if alternate access is not feasible by service roads or sideroads, individual properties will be purchased.

The selected alternative limits access to the four-lane highway, in comparison with existing conditions. This is mitigated through the provision of opportunities to change direction in travel, as provided by frequent median cross-overs or intersections with sideroads. The selected alternative also includes the realignment or adjustment of existing entrances to match the new four-lane highway.

### **3.2.9 Emergency Response to Spills**

Regarding emergency response, the Ministry of Transportation's policy is that direct responsibility for containment and clean-up of spills and abandoned materials on MTO highway facilities rests with the owner of the material and person in control of the material at the time of the spill or



abandonment. Where spills or abandoned materials occur on MTO highway facilities, MTO may assist where persons legally responsible cannot be located or are unable to respond. MTO assistance may include notification of authorities, provision of equipment and material, and traffic management. In the event of a spill of MTO material by MTO staff, MTO undertakes all notification, containment and clean-up responsibilities required by provincial and federal legislation.

### **3.3 Summary of Identified Concerns and Mitigating Measures**

Table 2 provides a summary of identified concerns and mitigating measures. The concerns identified in Table 2 include those issues that have not already been dealt with during either the planning or preliminary design phases of the project. For a complete account of all concerns expressed by either external agencies or the public, see Section 2.8 and Appendix B. Potential environmental effects and mitigating measures identified by the Project Team to be dealt with during either detail design or construction are also included in Table 2.

**Table 2  
Summary of Identified Concerns and Mitigating Measures**

Environmental Concern	Source of Concern	Mitigating Measures
<p><u>Physiography and Soils</u></p> <p>Potential for localized soil contamination where selected alternative crosses existing land uses typically associated with "high potential for soil contamination" (i.e., in vicinity of Highway 587 and at McTavish Landfill Site).</p>	<p>MTO, MOEE</p>	<p>Conduct an environmental audit of properties, with "high potential" during detail design. Should contaminated soil be encountered, management to be conducted in accordance with government statutes.</p>
<p>Soil erosion (sheet and embankment erosion)</p>	<p>MTO</p>	<p>Incorporate erosion and sediment control measures at detail design</p>
<p><u>Surface Drainage and Fisheries</u></p> <p>Encroachment or alteration of hazard lands</p>	<p>Lakehead Region Conservation Authority (LRCA)</p>	<p>Confirm details of all watercourse crossings during detail design as some may be subject to the Authority's Fill, Construction and Alteration to Waterways Regulations where construction is necessary in hazard lands</p> <p>Placement of all culverts to be carried in accordance with MTO standards</p>
<p>Impact to fisheries in Pearl River</p>	<p>MTO, MNR</p>	<p>Channel design to be confirmed during detail design and to include:</p> <ul style="list-style-type: none"> <li>• natural channel design principles for the new stream channel</li> <li>• new culvert with open footings or oversize and backfilled with natural substrate material sized for expected flows and velocities</li> <li>• culvert design to ensure that no barriers are created to fish movement</li> </ul> <p>Application will be made to the Department of Fisheries and Oceans when construction is ready to proceed through the Ministry of Natural Resources for authorization to harmful alteration of fish habitat, as required by the Federal Fisheries Act. At that time, mitigation and compensation will be discussed.</p>
<p>Impact to fisheries in all watercourses</p>	<p>MNR</p>	<p>Follow MNR's river crossing procedures and approved mitigation measures where necessary. Work on cold water creeks to be limited to a period between June 15 and August 31.</p>
<p>Sediment flow into surface drainage affecting water quality and drainage</p>	<p>LRCA and MNR</p>	<p>Detail design to include the incorporation of stormwater quality, river crossing and drainage management guidelines. Sediment control measures (silt fence barriers, etc.) to be put in place prior to beginning any new ditching. Culvert inlet/outlet locations will be rip-rapped to control erosion and sedimentation, where required.</p>





**Table 2  
Summary of Identified Concerns and Mitigating Measures**

Environmental Concern	Source of Concern	Mitigating Measures
<p><u>Sub-Surface Drainage</u></p> <p>Impact to groundwater at Pearl River</p>	<p>MTO</p>	<p>Embankment to be constructed with free draining granular materials meeting Ontario Provincial Standard Specification (OPSS) gradation requirements for select granular material.</p> <p>Erosion protection and/or retaining wall construction adjacent to Pearl River to be limited to permeable systems such as gabion baskets or armour stone rip-rap resting on a prepared shallow foundation.</p>
<p><u>Vegetation</u></p> <p>Loss of vegetation and access to merchantable timber</p> <p>New vegetation required</p>	<p>MNR, MTO</p> <p>MTO</p>	<p>Locations where it will be feasible for vegetation to remain in the median to be determined during detail design. Access to merchantable timber to be maintained via existing driveways (right-in, right-out movements). Standard procedures to be implemented for vegetation clearing and residual vegetation protection. Provision of snowfence (or equivalent) and silt fence protection along sensitive areas.</p> <p>Grading, topsoil and revegetation required for exposed earth slopes to be determined during detail design and carried out during construction. Exposed earth to be revegetated using seeding and mulching or sodding.</p>
<p><u>Area of Natural and Scientific Interest (ANSI)</u></p> <p>Impact on ANSI</p>	<p>MNR</p>	<p>Impact to be confirmed during detail design and minimized during construction.</p>
<p><u>Archaeology</u></p> <p>Impact (or loss of) potential archaeological resources at MacKenzie River crossing and in vicinity of Highway 587</p>	<p>MCTR</p>	<p>Conduct an archaeological assessment along the corridor in accordance with <u>A Protocol for Dealing with Archaeological Concerns on MTO Undertakings</u> and mitigation if required, prior to construction.</p>
<p><u>Tourism and Recreation</u></p> <p>Access to Sleeping Giant Park</p> <p>Tourist exposure to amethyst rock shops</p> <p>Retain existing picnic site</p>	<p>MNR</p> <p>MCTR</p> <p>MCTR</p>	<p>Access to be maintained to Highway 587 (and Sleeping Giant Park) during construction. Detours and staging to be confirmed during detail design.</p> <p>Special signage to existing tourist related businesses to be examined during detail design.</p> <p>Existing picnic site retained with access from westbound lanes, and location for new picnic site identified during preliminary design with access from eastbound lanes</p>



**Table 2  
Summary of Identified Concerns and Mitigating Measures**

Environmental Concern	Source of Concern	Mitigating Measures
<u>Utilities</u> Conflict with existing and proposed utilities	Ontario Hydro, FOTS, Trans Canada Pipeline	Details of all utility crossings to be confirmed during detail design and carried out in compliance with all utility crossing requirements.
<u>Noise</u> Increase in noise levels	Public/MTO/MOEE	Change in noise level is lower than the MTO standard (5.0 dBA increase) thus no mitigation is required. Noise assessment study could be carried out in a specific area if deemed necessary during detail design.
<u>Access</u> Access during construction  Access after construction	MTO  Public/MTO	Access to sideroads and private property during construction to be determined during detail design.  Future access to highway related to phased implementation of improvements. First phase to permit access to existing driveways (right-in, right-out movements) and at grade intersections with sideroads, Phases 2 and 3 involves the provision of interchanges at some locations and Phase 4 includes a freeway designation and access only at interchanges. If alternate access to private property is not feasible by service roads or sideroads, individual properties will be purchased.



## CHAPTER 4 - MONITORING

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After the corridor is designated for a controlled access highway, the Ministry of Transportation will monitor development along both the corridor and the existing highway to ensure compatibility with its long range plans. No development will be permitted within the proposed corridor, where it is on a new alignment. Where the corridor involves twinning with the existing highway, new entrances will only be considered by way of permit to be approved by the MTO Regional Director. In sections where the four-lane highway bypasses the existing highway, the freeze on new entrances and development along the existing highway may be relaxed.

The detail design phase will be carried out prior to construction. Some environmental issues that cannot be anticipated at this time (i.e., during preliminary design) may emerge during detail design. Specific compensation and mitigation measures will be identified for these issues during detail design and will require monitoring during construction. The Ministry of Transportation is committed to the appropriate mitigation and compensation required to deal with these issues in the future.

During construction, monitoring will be conducted by on-site construction supervisory staff to ensure that environmental protection measures outlined in the contract are implemented. This monitoring consists of ensuring the proper execution of environmental protection measures contained in the contract, and dealing with environmental problems that develop during construction. In the event that protective measures do not address concerns identified or major problems develop, the appropriate Ministry will be contacted to provide additional input.

In the event that the impacts of the construction are different than anticipated, or that the method of construction is such that there are greater than anticipated impacts, the Contractor's method of operation will be modified to reduce those impacts.

After the Contractor's work has been accepted by the Ministry, the effectiveness of the design and mitigating measures will be reviewed by the Ministry District Maintenance staff who patrol the highway. Should problems arise, District forces may either carry out remedial measures or notify Regional staff depending on the magnitude of the problem.



APPENDIX A

GLOSSARY





## GLOSSARY

The following are definitions of the technical terms used in this Environmental Study Report.

Aquifer	A layer of underground sand, gravel, or spongy rock in which water collects.
Controlled Access Highway (CAH)	A type of designation for a highway that imposes stricter controls on permits and the use of frontage lands abutting the highway.
Cross-intersection	A cross-intersection is the general area where two roads cross.
Decision Sight Distance	Decision sight distance is the distance required for a driver to detect an information source or hazard which is difficult to perceive in a roadway environment that might be visually cluttered, then recognize the hazard or its potential threat, select appropriate action, and complete the manoeuvre safely and efficiently.
Design Speed 120	Design speed is a speed selected for purposes of design and correlation of the geometric features of a road and is a measure of the quality of design offered by the road. It is the highest continuous speed at which individual vehicles can travel with safety on a road when weather conditions are favourable and traffic density is so low that the safe speed is determined by the geometric features of the road. Design speed 120 is when the selected design speed is 120 km/h.
Diamond Interchange	A diamond interchange is a type of interchange where the configuration of ramps resembles the shape of a diamond in plan. The ramps intersect with the crossing road at intersections controlled by either traffic signals, or where volumes are low, stop signs on the exit ramps. See Appendix D for a schematic diagram of a diamond interchange.
Independent Alignments	In this report, independent alignments refers to the vertical alignment or profile of the eastbound and westbound lanes of the proposed Highway 11/17. It means that the westbound and eastbound lanes have different profiles and are not always at the same elevation.

Loop Ramp	A loop ramp is a circular turning roadway used to permit the movement of traffic from one roadway to another roadway (i.e., the highway) at an interchange.
Median	A median is the area that separates roadway lanes carrying traffic in opposite directions. The median width is the distance between the edges of pavement, thus, the “left-side” shoulders are included within the median width.
New Alignment	In this report the new alignment refers to those areas where the future four-lane highway does not use the existing Highway 11/17. In most cases it means that the four-lane highway is bypassing the existing highway.
Parclo A Interchange	A Parclo A interchange is a partial cloverleaf interchange with two inner loop ramps both located on the highway approach in advance of the crossing road. See Appendix D for a schematic diagram of a Parclo A interchange.
Permeable	Permeable means having pores or openings that permit liquids or gases to pass through.
RAD 120	RAD 120 is a road classification that identifies the roadway as a Rural Arterial Divided roadway with a design speed of 120 km/h.
Select Granular Material	Select granular material is the granular material selected for the road bed in accordance with the Ontario Provincial Standard Specification (OPSS).
Stop Controlled Intersection	A stop controlled intersection is an intersection where all vehicles must stop on the side road, at a stop sign.
T-Intersection	A T-intersection is where two roads meet, but one does not cross the other. One road ends and the other continues.
Twinning	In this project, twinning means that a new two-lane roadway will be constructed alongside the existing two-lane highway, separated by a median, thus creating a four-lane twinned facility. The existing highway will carry traffic in one direction of travel and the two new lanes will carry traffic in the opposite direction of travel.
WB 17.5 Design Vehicle	A design vehicle is a motor vehicle of selected dimension and operating characteristics that is representative of a class

or group of vehicles. It is used to establish geometric design controls for specific turning requirements and conditions for the purpose of accommodating vehicular movements of a designated type. A WB 17.5 design vehicle is representative of a tractor - semi-trailer combination. This design vehicle represents the 13.7 m and 14.0 m length semi-trailers. The current legal trailer length is 14.65 m.



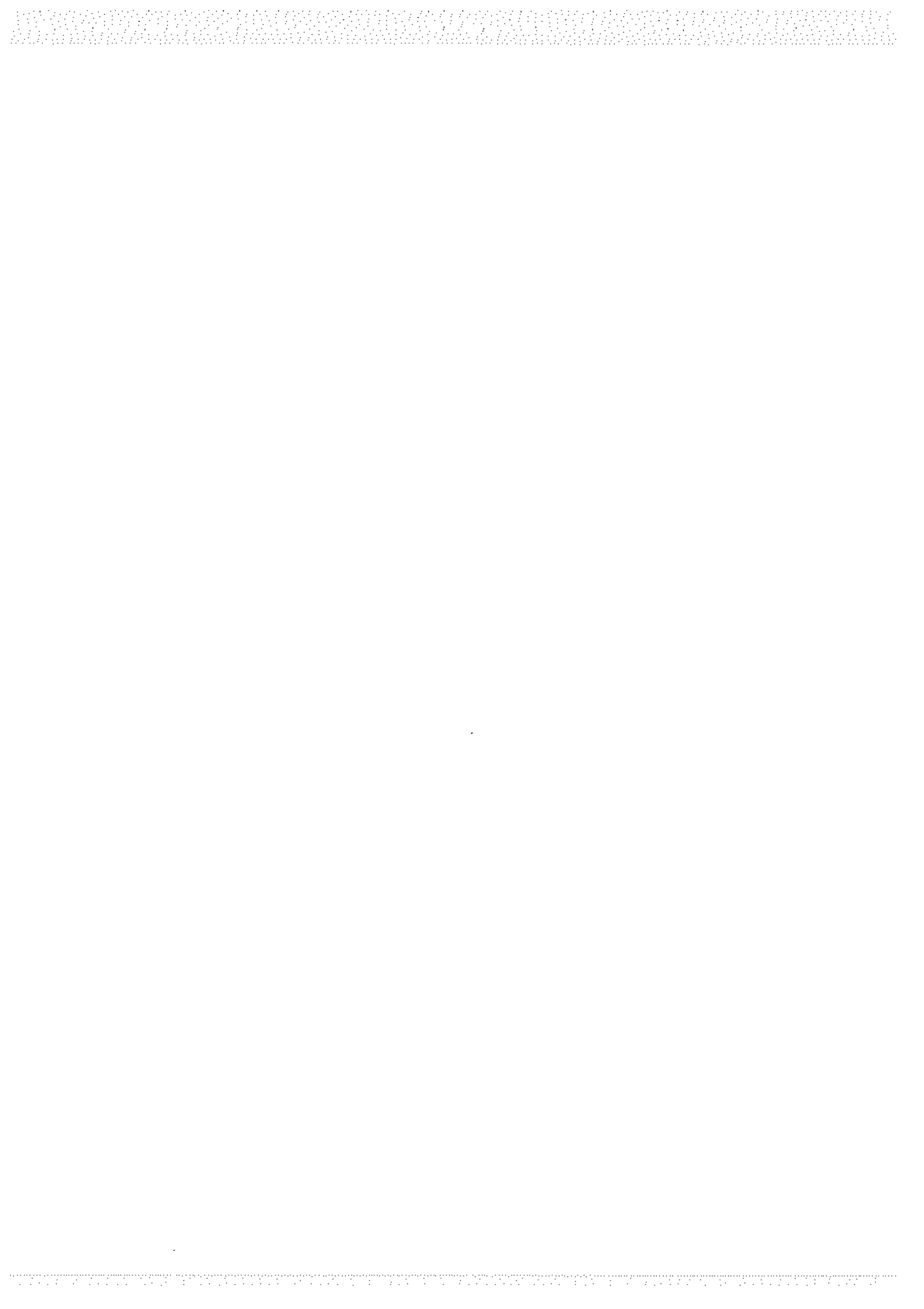
**APPENDIX B**

**SUMMARY OF PUBLIC CONSULTATION**



**Table B-1**  
**Summary of Input Received from**  
**Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
Ministry of Culture, Tourism and Recreation 1825 East Arthur Street Thunder Bay, Ontario P7E 5N7	William Ross Regional Archaeologist  Bob Bridges Tourism Consultant	<ul style="list-style-type: none"> <li>attended external team meetings throughout study process</li> <li>identified concerns regarding sites located in vicinity of MacKenzie River crossing and an unverified site at Highway 587 (May 31, 1993)</li> <li>met with MTO to discuss a proposed golf course, tourist rock shop, the possibility of special signage for retail areas, cycling lanes and the Pass Lake Truck Stop (June 30, 1993)</li> </ul>	<ul style="list-style-type: none"> <li>comments noted and taken into consideration during preliminary design</li> <li>kept Ministry of Culture, Tourism and Recreation informed of status of study</li> </ul>
Ministry of Natural Resources, 435 James Street South Thunder Bay, Ontario P7E 6E3	Bill Therriault District Manager  Walt Risi Jim Trotter Stephen Duda Barb Rees Charlie Lauer Ian Mettam Tom Marcolini A. Kalas	<ul style="list-style-type: none"> <li>provided information on watercourses, wildlife, vegetation, and Provincial Park access during data collection stage of study (August 2, 1991)</li> <li>provided input on potential impacts to Pearl Lake and aggregate maps for Shuniah Township (December 2, 1991)</li> <li>provided input on preliminary planning alternatives for four-laning Highway 11/17, as presented to agencies and public in July 1992</li> <li>attended external team meetings throughout study process</li> <li>concerns related to the protection of fish habitat in streams, placement of fill in Pearl Lake (created by the twinning to the south alternatives), protection of an ANSI in the Loon Lake area, Crown land with merchantable timber and an MNR tree plantation near Bass Lake (September 28, 1992)</li> </ul>	<ul style="list-style-type: none"> <li>information documented and taken into consideration during evaluation of alternatives</li> <li>requested additional information (October 25, 1991)</li> <li>comments noted and taken into consideration during evaluation of alternatives</li> </ul>





**Table B-1  
Summary of Input Received from  
Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
Ministry of Natural Resources (cont'd)	Jill Entwistle	<ul style="list-style-type: none"> <li>• provided input on the Selected Corridor and indicated that their greatest concern is with the potential for the harmful alteration of fish habitat caused by culvert and bridge installations, filling, channel relocation and sedimentation</li> <li>• provided more information on 12 watercourses affected by Selected Corridor and requested continued involvement in site inspections, etc. (December 8, 1993)</li> <li>• requested additional information on fisheries data and more consultation with MTO</li> <li>• reference made to Protocol (Section 3.0) and Section 35(2) of the Fisheries Act</li> <li>• provided fisheries information on Pearl River and possible ideas on rechannelizing Pearl River</li> <li>• indicated that Jim Trottier will be initiating discussions with DFO and requested an opportunity to review plans and methodology proposed for fisheries assessment work</li> <li>• indicated in letter that staff have reviewed the Pearl River Hydrogeological study and are satisfied that all areas of the required fishery study have been addressed</li> </ul>	<ul style="list-style-type: none"> <li>• carried comments forward into preliminary design and developed and reviewed route alternatives in the vicinity of Pearl River</li> <li>• details to be confirmed during preliminary design</li> <li>• provided MNR with background information on Selected Corridor and reasons for choosing twinning to the south at Pearl River (May 1994)</li> <li>• commissioned special fisheries study to confirm details of fish habitat at Pearl River (August 1994)</li> <li>• adjusted selected corridor to 15 m median through Pearl to reduce impact on fish habitat in Pearl River</li> <li>• fisheries consultant to meet with MNR representatives to reach agreement on Pearl River diversion and consensus on highway location in this area (November 1994)</li> <li>• fisheries study carried out and completed (March 14, 1995)</li> </ul>



**Table B-1**  
**Summary of Input Received from**  
**Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
Ministry of Northern Development and Mines 435 James Street South Thunder Bay, Ontario P7E 6E3	D.E. Moorhouse John Scott D. Feldbrueage E. Lane	<ul style="list-style-type: none"> <li>• indicated that primary concern is regarding safety with respect to abandoned mines and provided information on their locations within study area (June 18, 1991)</li> <li>• attended external team meetings throughout study process</li> <li>• provided map showing approximate locations of known old mines in study area (May 25, 1993)</li> </ul>	<ul style="list-style-type: none"> <li>• information documented and taken into consideration during evaluation of route alternatives</li> <li>• information noted</li> </ul>
Ministry of Environment and Energy Regional Office 435 James Street South Suite 331, Third Floor Thunder Bay, Ontario P7E 6E3	Mark Sutterfield Chief Approvals and Planning Eric Jarhunen Angelo Zorzes	<ul style="list-style-type: none"> <li>• attended external team meeting in March 1994</li> <li>• indicated (on telephone) that his primary concerns are regarding crossing of contaminated site or waste disposal site and adherence to MOEE noise standards (May 29, 1995)</li> </ul>	<ul style="list-style-type: none"> <li>• kept informed throughout study process</li> <li>• comments noted</li> </ul>
Ontario Ministry of Agriculture and Food 435 James Street South, Suite 333 Thunder Bay, Ontario P7E 6E3	Clarence D. Haverson Agricultural Representative P.Ag. Thunder Bay District Jean Riddell / B. McLean Rural Organization Representative	<ul style="list-style-type: none"> <li>• indicated that they have no concerns because there is no soil of present or future agricultural significance in this area (August 29, 1991)</li> <li>• attended external team meeting in May 1993</li> </ul>	<ul style="list-style-type: none"> <li>• comments noted</li> <li>• kept informed through study process</li> </ul>
Ontario Provincial Police P.O. Box 3080 Thunder Bay, Ontario P7B 1H3	Serg. C.L. Campbell Serg. A. Cordeiro Serg. W.F. Johnson B. Creed	<ul style="list-style-type: none"> <li>• support four-laning of Highway 11/17</li> <li>• attended external team meeting in May 1995</li> </ul>	<ul style="list-style-type: none"> <li>• comments noted</li> </ul>



**Table B-1**  
**Summary of Input Received from**  
**Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
Lakehead Board of Education 2135 Sills Street Thunder Bay, Ontario P7E 5T2	Bob Allison Superintendent of Business  Bo Watson Watson Bus Lines	<ul style="list-style-type: none"> <li>• Watson Bus Lines handles transportation for Lakehead Board of Education</li> <li>• indicated that they operate out of headquarters located just east of Highway 587 on Highway 11/17 and had questions regarding expansion of facilities on their property</li> <li>• attended external team meeting in March 1994 (March 3, 1993)</li> </ul>	<ul style="list-style-type: none"> <li>• response provided by MTO (March 1993)</li> </ul>
Lakehead Region Conservation Authority 1136 Oliver Road Thunder Bay, Ontario P7B 5T9	Rick Potter Chairman  Steve Suke Mervi Henttonen	<ul style="list-style-type: none"> <li>• indicated that primary concerns involve detailed designs of watercourse crossings (June 6, 1991)</li> <li>• provided copy of Watershed Inventory Study prepared by Authority in 1982 (September 19, 1991)</li> <li>• provided "hazard lines" on study area base plans and indicated that construction activities within or near these areas should be approved by the Lakehead Region Conservation Authority and may require a permit under Fill Construction and Alteration to Waterways Regulations (November 8, 1991)</li> <li>• provided 1:20,000 Ontario Base Maps (November 18, 1992)</li> <li>• attended external team meetings throughout study process</li> </ul>	<ul style="list-style-type: none"> <li>• comments noted for preliminary design</li> <li>• information used in data collection and evaluation of alternatives</li> <li>• provided plans to mark "hazard lands" on (October 9, 1991)</li> <li>• clarified legislative requirements for conservation authority re: approvals and results</li> </ul>
Township of Shuniah 420 Leslie Avenue Thunder Bay, Ontario P7A 1X8	Council Roads Committee  Murray Stewart, Planner	<ul style="list-style-type: none"> <li>• indicated that main concerns are regarding intersections to access the lands abutting the alignment and requested that consideration be given to locate future intersections at strategic locations along right-of-way to accommodate future growth on both sides of highway (July 10, 1992)</li> </ul>	<ul style="list-style-type: none"> <li>• made presentations to Council or Roads Committee prior to each Public Information Centre</li> </ul>



**Table B-1**  
**Summary of Input Received from**  
**Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
<p>Ontario Hydro Engineering and Construction Services 700 University Avenue Toronto, Ontario M5G 1Z5</p>	<p>Robert Malvern John Grieve</p>	<ul style="list-style-type: none"> <li>provided input on the potential impacts of four-laning highway on Ontario Hydro's existing 115 KV transmission line in study area and expressed concerns relating to maintaining hydro line in median of four lane highway (June 3, 1991)</li> </ul>	<ul style="list-style-type: none"> <li>comments noted and taken into consideration during evaluation of route alternatives and finalization of selected alternative</li> </ul>
<p>393 University Avenue Toronto, Ontario M5G 2L6</p>	<p>Robert Alstrom Jeff Forsythe Fred Podealuk</p>	<ul style="list-style-type: none"> <li>attended external team meetings throughout study process (June 3, 1991)</li> <li>requested plans of Selected Corridor for hydro's long term planning (March 7, 1994)</li> </ul>	
<p>34 North Cumberland Street Thunder Bay, Ontario P7A 4L5</p>	<p>Keith Loyer Joe Crozier Bryan Stout</p>	<ul style="list-style-type: none"> <li>identified need to relocate 1.8 km of wood pole line and three double circuit steel towers (March 7, 1994)</li> <li>also indicated that the double circuit steel tower line in the vicinity of Pearl Lake could be relocated if it proved to be cheaper than rock cut in this area (June 23, 1995)</li> </ul>	
<p>TransCanada Pipeline TransCanada Pipelines Tower 111-Fifth Avenue S.W. P.O. Box 1000, Station M Calgary, Alberta T2P 4K5</p>	<p>Ron Bridges Right-of-Way Department</p> <p>Ivan Hamelin Thunder Bay Regional Office</p>	<ul style="list-style-type: none"> <li>provided pipeline sheets from Loon Lake to Nipigon (September 4, 1991)</li> <li>attended external team meetings throughout study process</li> <li>provided pipeline crossing application and noted that drawings are to be compiled in accordance with the National Energy Board Pipeline Crossing Regulations (April 4, 1994)</li> </ul>	<ul style="list-style-type: none"> <li>information noted for preliminary design</li> </ul>
<p>City of Thunder Bay Telephone 1046 Lithium Drive Thunder Bay, Ontario P7B 6G3</p>	<p>D. Wilke P. Mascairn S. Laatu</p>	<ul style="list-style-type: none"> <li>attended external team meetings throughout study process</li> </ul>	<ul style="list-style-type: none"> <li>kept informed throughout study process</li> </ul>
<p>Canadian National Railway 460 - 123 Main Street Winnipeg, Manitoba R3C 2P8</p>	<p>R. Meleskie J. Gomes</p>	<ul style="list-style-type: none"> <li>attended external team meeting in March 1994</li> </ul>	<ul style="list-style-type: none"> <li>kept informed throughout study process</li> </ul>





**Table B-1**  
**Summary of Input Received from**  
**Ministries, Agencies, Municipalities and Utilities**

Organization	Contacts	Issue/Concern	Action Taken by Project Team
Emergency Measures Organization Thunder Bay Area 330 North Vickers Street Thunder Bay, Ontario P7C 4B2	J. Coupland	<ul style="list-style-type: none"> <li>• attended external team meeting in May 1995</li> </ul>	<ul style="list-style-type: none"> <li>• kept informed throughout study process</li> </ul>
Bell Canada 1001 William Street Thunder Bay, Ontario P7B 6J9	G.W. Pilot R. Enstrom	<ul style="list-style-type: none"> <li>• attended external team meeting in May 1995</li> </ul>	<ul style="list-style-type: none"> <li>• kept informed throughout study process</li> </ul>



**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<p><b>Public Information Centre #1 - July 7, 1992</b></p>	
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• owns business in study area</li> <li>• has concerns regarding impact on his business</li> <li>• prefers Concept C</li> <li>• have concerns regarding access, safety (needs improving), recreation (swimming hole), and tourism</li> <li>• prefers Concept C</li> <li>• want to minimize impact on residents of Shuniah, cottagers and residents along existing highway</li> <li>• prefers Concept A</li> <li>• has property concerns</li> <li>• has cost concerns regarding Concept C</li> <li>• concerns regarding construction and impacts on social environment</li> <li>• suggested developing passing lanes instead of twinning highway</li> <li>• PIC was very informative</li> <li>• concerns regarding access to busy trails, fishing spots and for snowmobiling</li> <li>• prefers Concept C from MacKenzie to Eldorado Beach Road and twinning option from Eldorado Beach Road to Pass Lake</li> <li>• prefers Concepts A and B (i.e. twinning options)</li> </ul>	<ul style="list-style-type: none"> <li>• preference noted and will be taken into consideration</li> <li>• comments noted and will be taken into consideration</li> <li>• impacts on businesses will be considered during evaluation</li> <li>• preference and comments have been noted and will be taken into consideration during the evaluation stage</li> <li>• preferences and comments noted and will be taken into consideration</li> <li>• preference comments noted</li> <li>• enclosed Highway Property Purchasing Brochure</li> <li>• comments noted and will be taken into consideration</li> <li>• justification for four-lane divided highway explained</li> <li>• Highway 11/17 strategic link in Trans-Canada Highway and needs to be twinned to provide alternative routes (and structures) in emergency situations, and to improve traffic flow and safety between Thunder Bay and Nipigon</li> <li>• comments noted</li> <li>• impact on recreational land uses will be taken into consideration</li> <li>• preference noted and will be taken into consideration</li> <li>• preference noted and will be taken into consideration</li> </ul>



Table B-2  
 Summary of Public Comments and Responses from  
 PIC #1, PIC #2, PIC #3 and PIC #4

Comments	Response
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• new alignment reduces impact on private home owners and improves safety along existing highway</li> <li>• concerns re: safety (needs improving) and cost</li> <li>• would prefer to have a second two-lane (two way) highway further north, instead of one, four-lane highway</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> <li>• comments noted and taken into consideration</li> <li>• justification for four-lane divided highway explained</li> <li>• Highway 11/17 strategic link to Trans-Canada Highway and needs to be twinned to provide alternative routes (and structures) in emergency situations, and to improve traffic flow and safety between Thunder Bay and Nipigon</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• has property concerns</li> <li>• property affected by all options</li> <li>• would link to see some compensation for loss of timber</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> <li>• enclosed Highway Property Purchasing Brochure</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept A</li> <li>• has environmental concerns (minimize impact on Lake Superior)</li> <li>• prefers Concept C</li> <li>• lives in Section 1, would be affected by either twinning concept</li> <li>• concerned about noise, traffic, and access</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> <li>• preference and comments noted and will be taken into consideration during evaluation stage</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• has concerns regarding safety and property</li> <li>• twinning options are too disruptive to community along present highway, and not safe because of all the driveways</li> <li>• does not want limited access (from one direction only) to his driveway</li> <li>• would be directly affected by one twinning option</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments have been noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• concerned about access to mine from both directions</li> <li>• new route should include some paving of side roads</li> <li>• sent in questionnaire with factor priorities circled</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration during evaluation stage</li> <li>• local side roads are responsibility of local municipality</li> <li>• response has been noted and will be taken into consideration</li> </ul>



**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>• prefers Concept B</li> <li>• concerns regarding environment</li> <li>• would like to see elimination of herbicides in controlling roadside vegetation</li> <li>• wants bicycle path</li> </ul>	<ul style="list-style-type: none"> <li>• preference noted and will be taken into consideration</li> <li>• response noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concepts A and B</li> <li>• wants bicycle path</li> <li>• concerned about costs</li> </ul>	<ul style="list-style-type: none"> <li>• preferences noted and will be taken into consideration</li> <li>• travel by bicycle through study area will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• leave present highway as community road</li> </ul>	<ul style="list-style-type: none"> <li>• preference noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• has property on Option 2-2</li> <li>• concerned about noise</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration during the evaluation stage</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• concerns regarding access</li> <li>• new alignment to north would make existing highway “quieter” road for those who live on it</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• owns business on highway</li> <li>• has concerns regarding safety (needs improving), and tourism (particularly with regard to Amethyst Mines)</li> <li>• would prefer to have a second two-lane (two way) highway to north, instead of one, four-lane two way highway</li> </ul>	<ul style="list-style-type: none"> <li>• comments re: importance of tourist trade noted</li> <li>• preference for northerly route noted</li> <li>• Highway 11/17 strategic link to Trans-Canada Highway and needs to be twinned to provide alternative routes (and structure) in emergency situations, and to improve traffic flow and safety between Thunder Bay and Nipigon</li> </ul>





**Table B-2  
Summary of Public Comments and Responses from  
PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• concerns regarding access and safety (needs improving)</li> <li>• twinning options will still have driveways and school buses on them - not safe</li> <li>• residents will be inconvenienced by limited access with twinning options</li> <li>• twinning options would also require purchasing several residential properties</li> <li>• Concept C keeps highway traffic away from residences, and would not have private accesses</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• concerns regarding access and safety</li> <li>• vacant land up north is better for highway, not land with residences on it (as with twinning options)</li> <li>• better to separate trucks from tourists and residences</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments have been noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• want to preserve "pristine" nature of cottage country shoreline</li> <li>• prefer Concept C</li> <li>• suggest holding PICs during July and August when campers can attend</li> </ul>	<ul style="list-style-type: none"> <li>• preference and concepts have been noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• wants to preserve aesthetics and safety along Lake Superior shoreline from Thunder Bay to Sibley Peninsula</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• has concerns regarding safety, property, costs, and businesses on highway</li> <li>• new alignment would allow for greater development of residential/tourist community along shoreline and existing highway, while maintaining access to properties already built on</li> <li>• new alignment should provide signs for businesses on existing highway</li> </ul>	<ul style="list-style-type: none"> <li>• preference for Concept C is noted</li> <li>• comments were thorough and helpful in identifying local concern, and are appreciated</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept B between Pass Lake and Pearl</li> </ul>	<ul style="list-style-type: none"> <li>• preference noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept A</li> </ul>	<ul style="list-style-type: none"> <li>• preference noted and will be taken into consideration</li> </ul>



**Table B-2  
Summary of Public Comments and Responses from  
PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• concerns regarding safety (needs improving)</li> <li>• Concepts A and B have too great an impact on social environment</li> <li>• not safe to mix school buses and driveways with truck traffic</li> <li>• suggested developing passing lanes instead of twinning highway</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> <li>• comments noted and taken into consideration</li> <li>• Highway 11/17 strategic link in Trans-Canada Highway and needs to be twinned to provide alternative routes (and structures) in emergency situations, and to improve traffic flow and safety between Thunder Bay and Nipigon</li> </ul>
<ul style="list-style-type: none"> <li>• prefers Concept C</li> <li>• Concept C affects least number of homes</li> <li>• new alignment to the north would allow existing development to grow in south</li> <li>• MacKenzie is too populated to put four-lane highway through</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> </ul>
<ul style="list-style-type: none"> <li>• prefer Concept C</li> <li>• have property concerns</li> <li>• second choice is Concept A</li> <li>• strongly supports project and upgrading of Trans-Canada in study area</li> <li>• questioned staging in Section 4</li> </ul>	<ul style="list-style-type: none"> <li>• preference and comments noted and will be taken into consideration</li> <li>• staging to be determined during preliminary design</li> </ul>
<ul style="list-style-type: none"> <li>• has concerns regarding access and businesses on highway</li> <li>• suggested developing passing lanes instead of twinning highway</li> </ul>	<ul style="list-style-type: none"> <li>• comments noted</li> <li>• Highway 11/17 strategic link in Trans-Canada Highway and needs to be twinned to provide alternative routes (and structures) in emergency situations, and to improve traffic flow and safety from Thunder Bay to Nipigon</li> <li>• controlled access is critical component of safety on highways</li> <li>• impact on businesses will be considered</li> </ul>



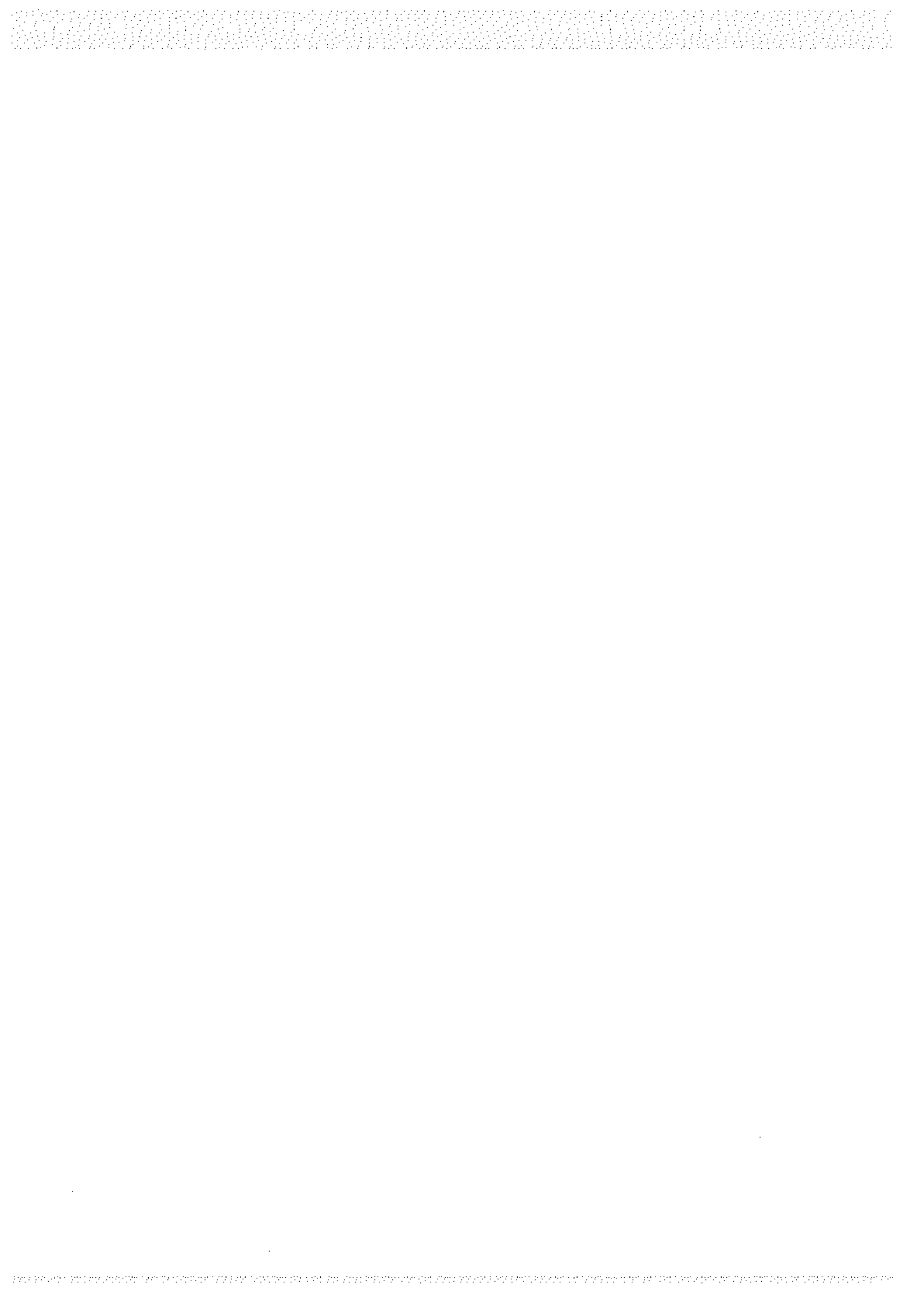
Table B-2  
 Summary of Public Comments and Responses from  
 PIC #1, PIC #2, PIC #3 and PIC #4

Comments	Response
<p><b>Public Information Centre #2 - June 16 and 17, 1993</b></p> <ul style="list-style-type: none"> <li>not in favour of eliminating direct access to Crystal Beach Road</li> <li>is a summer resident in cottage area</li> </ul> <hr/> <ul style="list-style-type: none"> <li>in favour of preferred corridor</li> </ul> <hr/> <ul style="list-style-type: none"> <li>in favour of preferred corridor in the vicinity of West Loon Road</li> <li>the separation between east and westbound lanes (at West Loon Road) should be wider</li> <li>roadway intersection should be well signed</li> </ul> <hr/> <ul style="list-style-type: none"> <li>not in favour of preferred corridor (prefers plan C2-2)</li> <li>suggested to separate the eastbound and westbound lanes using a wide median</li> <li>asked who pays for the maintenance of highway and bridge</li> </ul> <hr/> <ul style="list-style-type: none"> <li>requested that no bridges be within sight of MacKenzie River Falls</li> </ul>	<ul style="list-style-type: none"> <li>new alignment was chosen to minimize impact on residences and businesses and to improve highway safety (reduced number of entrances abutting highway)</li> <li>summer residences on Crystal Beach Road will continue to have access from the road connection from the new four-lane facility to the existing highway</li> </ul> <hr/> <ul style="list-style-type: none"> <li>comment noted</li> </ul> <hr/> <ul style="list-style-type: none"> <li>support for preferred corridor in the vicinity of West Loon Road is noted</li> <li>to ensure safety and efficiency the Ministry of Transportation is developing rural highways with a minimum standard 30 m wide median and 90 m right-of-way</li> <li>intersection of West Loon Road and Mirror Lake Road will be signed</li> </ul> <hr/> <ul style="list-style-type: none"> <li>currently examining the possibility of extending the new alignment easterly and connecting it to the existing highway further to the east</li> <li>refinements to the preferred route will be presented at the next PIC</li> <li>separating east and westbound lanes by a very wide median is not practical because drivers should be able to see the other lanes so that they may avoid wrong way turns</li> <li>the Ministry provides financial assistance through the provincial subsidy program to municipalities</li> </ul> <hr/> <ul style="list-style-type: none"> <li>additional plan and topographic information was requested to identify falls location</li> <li>alignment revisions will be examined to maintain the privacy of the falls area</li> </ul>



Table B-2  
 Summary of Public Comments and Responses from  
 PIC #1, PIC #2, PIC #3 and PIC #4

Comments	Response
<ul style="list-style-type: none"> <li>concerned with signage for his business</li> <li>concerned about sign costs</li> </ul>	<ul style="list-style-type: none"> <li>there will be a meeting with the Ministry of Tourism to discuss the MTO policy on signing and other opportunities to promote products from this unique area</li> </ul>
<ul style="list-style-type: none"> <li>not in favour of preferred corridor</li> <li>prefers highway to be north of existing roadway</li> <li>suggested noise barriers on both sides of highway</li> </ul>	<ul style="list-style-type: none"> <li>Ministry does not construct noise barriers where direct access is maintained to the highway</li> <li>considering a more northerly alignment in the Birch Beach Road area</li> </ul>
<ul style="list-style-type: none"> <li>in favour of preferred corridor</li> <li>wants his access maintained to the west of property</li> </ul>	<ul style="list-style-type: none"> <li>access to existing driveways will be maintained on the preferred plan and will be restricted to right-in and right-out turns</li> <li>median cross-overs and side road intersections will facilitate turns in the opposite direction</li> </ul>
<ul style="list-style-type: none"> <li>in favour of preferred corridor (particularly in the vicinity of West Loon Lake Road)</li> <li>wants to speed up the construction process</li> </ul>	<ul style="list-style-type: none"> <li>comment is noted</li> </ul>
<ul style="list-style-type: none"> <li>requested information on the Trans-Canada Study</li> <li>the project is a good idea, however, would like to know the amount of land required and type of compensation</li> <li>requested an entrance road on their property</li> </ul>	<ul style="list-style-type: none"> <li>property requirements will be determined during the preliminary design stand and compensation based on current market value</li> <li>sent out PIC Information Brochure and Highway Property Purchasing Brochure regarding acquisition of property</li> <li>existing entrances will have access limited to right-in and right-out turns</li> </ul>
<ul style="list-style-type: none"> <li>in favour of the preferred corridor</li> <li>pleased that potential accidents will be reduced</li> </ul>	<ul style="list-style-type: none"> <li>comments have been noted</li> </ul>
<ul style="list-style-type: none"> <li>strongly support the preferred corridor</li> <li>right turn into MacKenzie Beach Road is dangerous</li> <li>four lanes over MacKenzie Bridge would affect wildlife</li> </ul>	<ul style="list-style-type: none"> <li>comments have been noted</li> </ul>
<ul style="list-style-type: none"> <li>concerned about losing personal property</li> <li>does not agree with the highway alignment (Birch Beach Road to Eldorado Beach Road)</li> <li>concept C2-1 preferred with junction at Highway 587</li> </ul>	<ul style="list-style-type: none"> <li>other alignments are being examined in the Birch Beach area</li> <li>future development will not have access to the new four-lane highway (only allowed from Birch Beach Road)</li> </ul>





**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>concerned about effects to residential homes</li> <li>prefer C2-1 or C2-2 (behind residential homes)</li> </ul>	<ul style="list-style-type: none"> <li>examining the idea of extending the new alignment to connect to the existing highway further to the east</li> <li>modifications to be presented at next PIC</li> </ul>
<ul style="list-style-type: none"> <li>prefer plan C1-1 (reduces disruption to the MacKenzie Station Road)</li> </ul>	<ul style="list-style-type: none"> <li>preference for alternative C1-1 noted and any modifications and refinements to the preferred plan will be presented at the next PIC</li> </ul>
<ul style="list-style-type: none"> <li>support the location of the preferred corridor</li> <li>concerned with noise and environmental impact and past accidents</li> </ul>	<ul style="list-style-type: none"> <li>existing hills and valleys will be maintained</li> <li>Ministry does not construct noise walls in rural areas where direct access to the highway is being maintained</li> </ul>
<ul style="list-style-type: none"> <li>concerned with the safety of the Loon Lake entrance</li> </ul>	<ul style="list-style-type: none"> <li>sideroad intersections are being improved to provide proper geometric design</li> </ul>
<ul style="list-style-type: none"> <li>prefer to see a four-lane highway north of MacKenzie Inn</li> </ul>	<ul style="list-style-type: none"> <li>a new alignment from MacKenzie Station Road to Amethyst Harbour Road was chosen as it provides sufficient operational and community benefits. Further east additional cost for a new alignment is not justified</li> </ul>
<ul style="list-style-type: none"> <li>support the location of the preferred corridor</li> <li>bicycle paths would be an asset</li> </ul>	<ul style="list-style-type: none"> <li>comments have been noted</li> <li>Ministry is aware of growing need for bicycle travel and it is being examined</li> </ul>
<ul style="list-style-type: none"> <li>support the location of the preferred corridor</li> <li>opposed to Concept B (Section 4-5); prefer Concept A (Section 4-5)</li> </ul>	<ul style="list-style-type: none"> <li>in Sections 4 and 5 many physical constraints exist on the north side therefore Concept B - twinning to the south to tie into adjacent Section 3 was the best alternative</li> </ul>
<ul style="list-style-type: none"> <li>opposed to the twinning (south alternative)</li> <li>concerned with environmental/social/economic effects caused by the twinning</li> <li>concerned with the location of the Pass Lake Esso Travel Plaza (should be located in the centre median)</li> <li>are four lanes really needed at all</li> </ul>	<ul style="list-style-type: none"> <li>public input will be reviewed and a recommended plan will be presented at a future PIC</li> <li>the Ministry's policy does not permit development in the median of a highway and cannot make an exception</li> <li>Highway 11/17 is a strategic link in the Trans-Canada Highway (only east/west route)</li> </ul>



**Table B-2  
Summary of Public Comments and Responses from  
PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>prefers a more northerly route or new alignment from Amethyst Harbour Road to East Loon Lake Road</li> </ul>	<ul style="list-style-type: none"> <li>a key factor in designing the highway in this area was maintaining direct access to the Esso Pass Lake Travel Plaza (required highway exposure)</li> <li>northerly alignment does not provide sufficient operational and community benefits</li> </ul>
<ul style="list-style-type: none"> <li>do not support the location of the preferred corridor (prefer alternative C1-1) because of proximity to property</li> </ul>	<ul style="list-style-type: none"> <li>currently examining alternatives in this area</li> <li>refinements to the preferred plan will be presented at the next PIC</li> </ul>
<ul style="list-style-type: none"> <li>support the location of the preferred corridor</li> <li>approve of joining Road No. 5 North and South where Road No. 5 is now</li> </ul>	<ul style="list-style-type: none"> <li>examining the option of realigning Road 5 North to intersect opposite Road 5 South. Modifications and refinements to the preferred plan will be presented at the next PIC</li> </ul>
<ul style="list-style-type: none"> <li>request access to new four-lane highway (right-in/right-out)</li> </ul>	<ul style="list-style-type: none"> <li>direct access will be controlled and since this business already has access to the existing highway it will continue to remain this way</li> </ul>
<ul style="list-style-type: none"> <li>would like to extend the section of new alignment easterly to avoid property impacts to the properties at the proposed connection to the existing highway</li> </ul>	<ul style="list-style-type: none"> <li>examining the suggestion of extending the new alignment easterly</li> <li>modifications and refinements to the preferred plan will be presented at the next PIC</li> </ul>
<ul style="list-style-type: none"> <li>preferred corridor is fine, however, concerned with properties in the path of the connection to the highway</li> <li>existing logging road to the west would make a suitable access road location</li> </ul>	<ul style="list-style-type: none"> <li>every effort is made to minimize impacts of highway alignments on properties</li> <li>examining possibility of extending the section of new alignment easterly to avoid impacts to the properties at the present connection to the existing highway</li> <li>logging road will have a right-in and right-out access to the westbound lanes of the new highway</li> </ul>
<ul style="list-style-type: none"> <li>support the location of the preferred corridor</li> <li>concerned with possibility of noise impacts</li> </ul>	<ul style="list-style-type: none"> <li>comments about noise have been noted</li> </ul>
<ul style="list-style-type: none"> <li>how many feet will be required from our land</li> <li>would like compensation for lack of entrance to highway</li> </ul>	<ul style="list-style-type: none"> <li>45 metres will be required from the property frontage</li> <li>request for compensation for property damages should be sent directly to the Ministry of Transportation</li> </ul>
<ul style="list-style-type: none"> <li>suggest aligning Road No. 5 North opposite Road No. 5 South</li> </ul>	<ul style="list-style-type: none"> <li>currently examining suggestion for realignment Road No. 5</li> <li>recommended plan will be presented at the next PIC</li> </ul>



**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<p><b>Public Information Centre #3 - March 7 and 8, 1994</b></p>	
<ul style="list-style-type: none"> <li>has concerns regarding access to property north and south of new alignment</li> </ul>	<ul style="list-style-type: none"> <li>can retain land north and south of highway</li> <li>new accesses will not be permitted onto new alignment</li> <li>property access to connect properties will be examined further in next stage of the study</li> <li>if access cannot be arranged then MTO will consider purchase of property</li> </ul>
<ul style="list-style-type: none"> <li>questions why alignment is on his property</li> <li>concerns regarding realignment of MacKenzie Station Road</li> </ul>	<ul style="list-style-type: none"> <li>alignment shifted slightly southerly at MacKenzie Station Road to minimize impact on residential development north of existing highway and improve horizontal alignment</li> <li>sent Highway Property Purchasing Brochure</li> <li>next phase, preliminary design, will examine property impacts more closely and will be followed by a Public Information Centre</li> </ul>
<ul style="list-style-type: none"> <li>in favour of selected corridor</li> <li>do not support new alignment at Birch Beach Road</li> <li>selected corridor cuts off most of their property</li> </ul>	<ul style="list-style-type: none"> <li>comment noted</li> <li>opinion regarding selected corridor noted</li> <li>Project Team tried to minimize impact of new alignment on property owners in the area</li> </ul>
<ul style="list-style-type: none"> <li>in favour of selected corridor and realignment of Birch Beach Road</li> </ul>	<ul style="list-style-type: none"> <li>comment noted</li> </ul>
<ul style="list-style-type: none"> <li>in favour of selected corridor</li> <li>would prefer route even further north</li> </ul>	<ul style="list-style-type: none"> <li>comments are noted</li> </ul>
<ul style="list-style-type: none"> <li>wants alignment moved further north from Birch Beach Road to Pass Lake, to maximize land available for rural residential development (between existing Highway 11/17 and Lake Superior)</li> </ul>	<ul style="list-style-type: none"> <li>preference for more northerly alignment noted</li> <li>in Section 2, the additional cost of building a new alignment east of Birch Beach Road did not provide for sufficient operational and community benefits</li> </ul>
<ul style="list-style-type: none"> <li>in favour of selected corridor</li> <li>inquired more information on timing of project</li> </ul>	<ul style="list-style-type: none"> <li>support for selected corridor noted</li> <li>project is not on Ministry's current program</li> <li>next phases are preliminary design, then detail design, and ultimately construction when funds become available</li> </ul>



**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>• does not support new alignment in vicinity of Silver Lake Road</li> <li>• concerns re property and business impacts</li> </ul>	<ul style="list-style-type: none"> <li>• new alignment in this area based on a need to improve the horizontal alignment (by reducing the number of curves) and restrictions south of existing highway (i.e. railway and pipeline)</li> <li>• sent Highway Property Purchasing Brochure</li> <li>• next phase, preliminary design, will examine property impacts more closely and will be followed by a Public Information Centre</li> </ul>
<ul style="list-style-type: none"> <li>• prefers a more northerly alignment</li> <li>• need good access to East Loon Road</li> <li>• wishes to retain and improve his signage on highway</li> </ul>	<ul style="list-style-type: none"> <li>• East Loon Road will have direct access to four-lane highway in first stage and access via interchange and service road in ultimate stage</li> <li>• suggested contacting Ministry of Tourism, Culture and Recreation re signage</li> </ul>
<ul style="list-style-type: none"> <li>• opposed to twinning to south at Highway 587</li> <li>• concerns relate to increased noise and less privacy</li> <li>• prefer concept C3-2 with truck stop in median</li> </ul>	<ul style="list-style-type: none"> <li>• noise analysis conducted indicating virtually no noise increase on this property</li> <li>• removal of vegetation to be minimized to protect his privacy</li> <li>• MTO standards do not permit development in median of highway</li> </ul>
<ul style="list-style-type: none"> <li>• selected corridor in close proximity to his camp</li> <li>• new alignment divides his property</li> <li>• concerns regarding property purchase and possible development of this land adjacent to existing highway</li> </ul>	<ul style="list-style-type: none"> <li>• sent Highway Property Purchasing Brochure</li> <li>• development adjacent to existing highway in areas where selected corridor is on new alignment is a municipal matter</li> <li>• preliminary design will examine property impacts more closely</li> </ul>
<ul style="list-style-type: none"> <li>• would have preferred bypass of Pearl</li> <li>• consider themselves buyout situation</li> <li>• hope impact on Pearl River is minimized</li> <li>• would like to be bought out as soon as possible</li> </ul>	<ul style="list-style-type: none"> <li>• preference for bypass of Pearl noted</li> <li>• details of impact and mitigation at Pearl River to be examined in next phase of study (preliminary design)</li> <li>• will keep them informed on status of property purchase</li> </ul>





**Table B-2**  
**Summary of Public Comments and Responses from**  
**PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<p><b>Public Information Centre #4 - May 31 and June 1, 1995</b></p> <ul style="list-style-type: none"> <li>• support improvements at Pearl River</li> <li>• does not support location of Selected Alternative in vicinity of Birch Beach Road</li> <li>• feels twinning to south detracts from property value on Lake Superior, between Birch Beach Road and Nelson Road</li> <li>• wants highway to be located further north in this area</li> </ul>	<ul style="list-style-type: none"> <li>• comment noted for file - no response sent because no address on comment sheet</li> <li>• comments have been noted and will be kept on file</li> <li>• new alignment was extended further north after input was received from public at PIC #2 and revisions presented to public at PIC #3</li> <li>• new alignment does not continue east of Birch Beach Road because additional cost premium does not provide sufficient operational and community benefits</li> <li>• four-laning of Trans-Canada Highway will improve overall safety of highway access to Lake Superior - don't feel it will have negative impact on property value on Lake Superior</li> </ul>
<ul style="list-style-type: none"> <li>• supports Selected Alternative but does not agree with plans to purchase property</li> <li>• they anticipate difficulty in selling property if it is planned to be a buyout for twinning of highway</li> </ul>	<ul style="list-style-type: none"> <li>• comments have been noted</li> <li>• timing of property purchase is dependent on government priorities and funding</li> <li>• Highway Property Purchasing Brochure which explains how property is valued and what owners' rights are</li> </ul>
<ul style="list-style-type: none"> <li>• supports Selected Alternative</li> <li>• somewhat frustrated by uncertainty of timing because property is affected</li> </ul>	<ul style="list-style-type: none"> <li>• understand desire to confirm timing of construction, unfortunately, timing depends on a number of factors which we don't control or predict (i.e. safety, availability of funds, new provincial government's highway construction priority)</li> <li>• it is the intent of the Ministry to proceed with the designation of the right-of-way for future four lane highway, to protect against development which would be detrimental to the plan</li> </ul>



**Table B-2  
Summary of Public Comments and Responses from  
PIC #1, PIC #2, PIC #3 and PIC #4**

Comments	Response
<ul style="list-style-type: none"> <li>• support location of Selected Alternative</li> <li>• would prefer to have full intersection at Eldorado Beach Road rather than Nelson Road</li> </ul>	<ul style="list-style-type: none"> <li>• full intersection cannot be provided at Eldorado Beach Road because of difference in elevation between eastbound and westbound lanes and the proximity of the railway</li> <li>• however, median cross-over will be provided 1.6 km west of Eldorado Beach Road</li> <li>• full intersection is provided at Nelson Road because of flatter terrain and increased distance from railway</li> </ul>
<ul style="list-style-type: none"> <li>• supports location of Selected Alternative</li> <li>• noted difficulty in accessing West Loon Road for eastbound traffic under existing conditions</li> <li>• would like to see bicycle path included in plan</li> </ul>	<ul style="list-style-type: none"> <li>• support for Selected Alternative is noted and appreciated</li> <li>• as part of the project, intersections and access to sideroads will be improved by providing better skew angles, sight distance, horizontal alignment improvements and turning lanes</li> <li>• access to West Loon Road will be improved through these methods as part of the plan</li> </ul>
<ul style="list-style-type: none"> <li>• fully supports location of Selected Alternative and four-laning of Trans-Canada</li> <li>• agrees with need for improved safety</li> <li>• would like to be placed on mailing list</li> </ul>	<ul style="list-style-type: none"> <li>• support and enthusiasm for Selected Alternative is appreciated</li> <li>• name was added to mailing list</li> </ul>
<ul style="list-style-type: none"> <li>• does not support Selected Alternative</li> <li>• does not support Selected Alternative</li> <li>• feels that new alignment should continue to east of Pass Lake and become twinning somewhere between Pass Lake and West Loon Road</li> <li>• this would reduce summer camper traffic</li> </ul>	<ul style="list-style-type: none"> <li>• comment noted</li> <li>• reason why Selected Alternative ends new alignment east of Birch Beach Road is to keep Pass Lake Esso complex in full operation (as it provides significant business and commercial tax revenue to the municipality), and because the additional cost premium for a new alignment from Birch Beach Road to vicinity of Pass Lake does not provide sufficient operational and community benefits</li> </ul>



In addition to comments received from Public Information Centres, a number of people contacted the Ministry regarding individual property concerns during the study.

Due to the sensitivity of these concerns and the requirements of the Freedom of Information Act, these concerns remain on file with the Ministry of Transportation, Northwestern Region, Thunder Bay.

Table B-3 summarizes public contact made separate from Public Information Centres during the study, in a general way.



**Table B-3  
Summary of Public Contact Made Separate from PIC**

Year	Public Contact	Issue/Concern	Action Taken by Project Team
1991	Own property north and south of the existing highway within project limits	<ul style="list-style-type: none"> <li>• wanted new alignment one half mile north of existing highway from Lakeshore Drive to Highway 587 based on:               <ul style="list-style-type: none"> <li>- desire to provide Class 1 controlled access freeway from Thunder Bay to Highway 587;</li> <li>- minimize property damage;</li> <li>- avoid built up areas and sideroads to beaches on Lake Superior;</li> <li>- avoidance of impact to 'cottage country' travellers;</li> <li>- reduction of noise to cottages along Lake Superior;</li> <li>- separation of truck traffic from local traffic</li> </ul> </li> <li>• require that access be maintained to land north of highway</li> </ul>	<ul style="list-style-type: none"> <li>• responded to letter and met with property owners to review property issues and concept plans for four-lane highway</li> <li>• added to mailing list and kept informed of study throughout planning process</li> <li>• no known outstanding issues</li> </ul>
1992	Own large parcel of land north of existing highway	<ul style="list-style-type: none"> <li>• require that access be maintained to land north of highway</li> </ul>	<ul style="list-style-type: none"> <li>• met with owners to discuss four-lane highway and impacts land north of highway</li> <li>• informed owners that it would be reasonable to carry on with "business as usual"</li> <li>• no known outstanding issue</li> </ul>
	Own business in study area	<ul style="list-style-type: none"> <li>• offered design options which mitigate impact to business operation</li> <li>• indicated that a reduction in the size of front yard area would have significant impact on trucks ability to manoeuvre</li> <li>• provided additional information on location of underground storage tanks</li> <li>• biggest concern was with regard to useable property in front of main building</li> </ul>	<ul style="list-style-type: none"> <li>• met with business owner to review design options at property</li> <li>• considered economic impact to business as significant factor in evaluation process</li> <li>• selected corridor minimizes impact to business</li> <li>• no known outstanding issues</li> </ul>





**Table B-3  
Summary of Public Contact Made Separate from PIC**

Year	Public Contact	Issue/Concern	Action Taken by Project Team
1992 (cont'd)	Own property north of existing highway	<ul style="list-style-type: none"> <li>• had property concerns relating to impact of four-lane highway on existing house and garden</li> <li>• have major garden on property</li> <li>• cannot tolerate living with highway any closer</li> </ul>	<ul style="list-style-type: none"> <li>• met with property owner</li> <li>• took comments into consideration during evaluation process</li> <li>• shifted preferred corridor slightly to south to reduce impact on property (avoiding house and garden)</li> <li>• rear portion of property will be affected but highway will not be any closer to house</li> <li>• no known outstanding issues</li> </ul>
1993	Own land at eastern end of study area on north and south side of highway	<ul style="list-style-type: none"> <li>• needs access to property from eastbound and westbound lanes (including left turn into property) (1993)</li> <li>• reviewed plans of selected alternative at consultant's office and indicated verbally that he was happy with plans (1995)</li> </ul>	<ul style="list-style-type: none"> <li>• indicated that existing driveways (on north side and south side) will continue to have access</li> <li>• will review location of turn around to minimize out-of-way travel</li> <li>• ultimately, recommended plan includes median turn around east of Pearl Lake</li> <li>• no known outstanding issues</li> </ul>
	Own property on south side of existing highway within project limits	<ul style="list-style-type: none"> <li>• had property concerns relating to impact of four-lane highway on house, property value and lifestyle</li> </ul>	<ul style="list-style-type: none"> <li>• met with property owner to discuss alternatives</li> <li>• alignment shifted to minimize impact on properties in the area</li> <li>• no known outstanding issues</li> </ul>
1994	Own business (and property) on north side of existing highway within project limits	<ul style="list-style-type: none"> <li>• requested information with regard to property acquisition</li> <li>• is affected by selected corridor</li> <li>• requested plan of selected corridor in vicinity of his property</li> <li>• requested access off new four-lane highway</li> </ul>	<ul style="list-style-type: none"> <li>• information provided</li> <li>• no known outstanding issues</li> <li>• access denied</li> </ul>



**Table B-3  
Summary of Public Contact Made Separate from PIC**

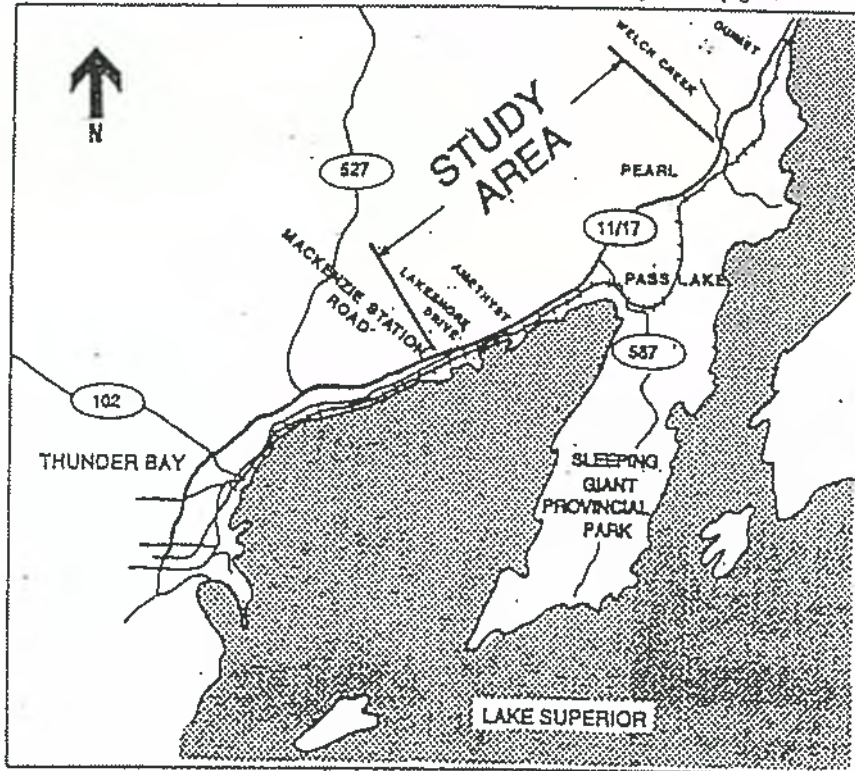
Year	Public Contact	Issue/Concern	Action Taken by Project Team
1994 (cont'd)	Owns property south of existing highway within limits of study area	<ul style="list-style-type: none"> <li>• has major concerns regarding impact of selected corridor on property</li> <li>• concerns pertain to increase in noise and loss of privacy (i.e., visual impact)</li> <li>• suggested putting an existing business in median (with two lanes on each side) to reduce impact on his property</li> <li>• in his opinion, selected corridor threatens his lifestyle at his property</li> </ul>	<ul style="list-style-type: none"> <li>• met with property owner (on site)</li> <li>• indicated that development in median of highway is against MTO policy and to permit it at this location would be unsafe and not feasible because residents east of business (on north side of highway) would be in median</li> <li>• indicated that concerns relating to noise and visual impact will be taken into consideration during preliminary design and that measures such as minimizing the removal of existing vegetation, lowering the profile and possibly the construction of landscaped berms will be examined at this location</li> <li>• carried out a noise analysis adjacent to property to determine present and future noise levels</li> <li>• noise analysis determined that noise generated from future four-lane highway will be essentially the same as existing ambient levels at this location</li> </ul>
	Owns property north and south of existing highway within project limits	<ul style="list-style-type: none"> <li>• wanted to know if it was possible to build residence on property that falls within area to be protected for future interchange</li> <li>• indicated that past excavations in northerly section of his property have unearthed a number of archaeological artifacts, including arrowheads and knives</li> </ul>	<ul style="list-style-type: none"> <li>• met with property owner to review plans for selected corridor at his property</li> <li>• indicated that if he was denied a building permit, then he would be entitled to compensation for damages (through negotiations with Ministry's Property Section)</li> <li>• no known outstanding issues</li> </ul>

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# HIGHWAY 11/17 PLANNING AND PRELIMINARY DESIGN STUDY

## FOUR-LANING OF THE TRANS-CANADA HIGHWAY FROM MACKENZIE STATION ROAD TO 4.0 KM EAST OF PEARL

The Ministry of Transportation is currently conducting a Planning and Preliminary Design Study of the Trans-Canada Highway (Highway 11/17) from MacKenzie Station Road to 4.0 kilometers east of Pearl, a distance of 33 kilometers. This study is one of a series of studies currently underway to examine the upgrading of the Trans-Canada Highway to a four-lane divided highway between Thunder Bay and Nipigon.



This first Information Center is intended to provide the public with the opportunity to review the study background and the proposed improvement concepts. We are interested in hearing any comments or concerns you or your group may have regarding this project. In order to introduce you to the study and to provide the opportunity to discuss your concerns with Ministry of Transportation staff and their Consultants, a Public Information Center will be held on:

Tuesday, July 7, 1992

McKenzie Public School, Lakeshore Drive — 2:00 p.m. to 8:00 p.m.

Further information centers will be held during this study. The study is scheduled to be completed by the spring of 1993. You are encouraged to contact Ministry of Transportation staff throughout the course of the study if you have questions or concerns.

Upon completion of this planning study, a report required under the Environmental Assessment Act will be made available to the public. A notice will be published announcing the locations where the report will be available for viewing.

Comments regarding this study are being collected to assist the Ministry of Transportation in meeting requirements under the Environmental Assessment Act. Your comments will be kept on file for use during the study and, unless otherwise requested, may be included in the Environmental Study Report.

Comments and enquiries may be directed to:

Gordon Sawiak, Senior Project Manager  
Ministry of Transportation  
Planning & Design Section  
615 South James Street  
Thunder Bay, Ontario, P7C 4X9

Telephone: (416) 473-2131  
Toll Free: 1-800-465-5034

David McCann, Consultant Project Manager  
Parker Consultants  
1400 Rymal Road East  
Hamilton, Ontario. L0R 1P0

Telephone: (416) 385-3234  
Call Collect.



Ministry  
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Transportation

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Transports



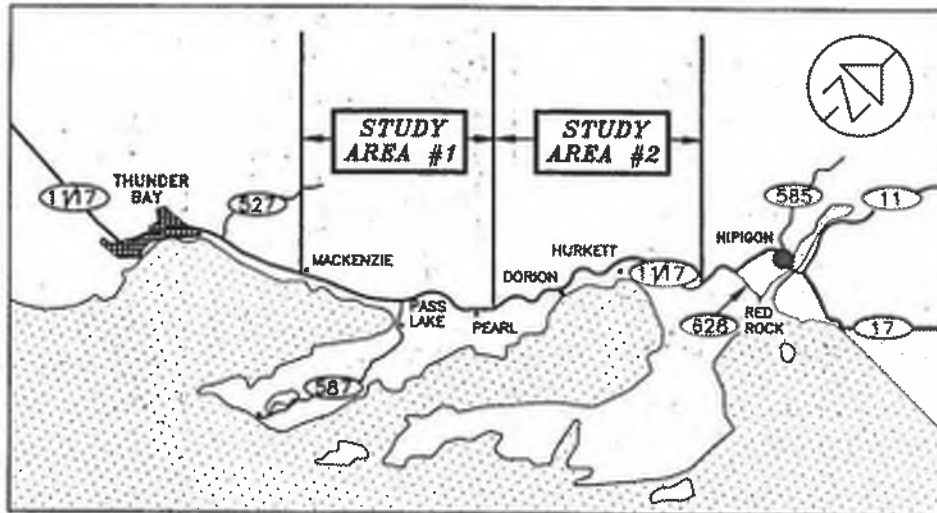
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**PUBLIC INFORMATION CENTRES  
HIGHWAY 11/17 FOUR-LANING PROJECTS**

**DISPLAY OF PREFERRED ALTERNATIVES**

During the last year, a series of Public Information Centres have been held to assist the Ministry of Transportation in evaluating alternative corridors for the four-lane highway within the study areas indicated below. Factors considered include property impacts, environmental and economic impacts, highway safety and costs. The evaluation process is now nearing completion and a preferred corridor has been selected by the ministry's project team. Public Information Centres will now be held to present the preferred corridor and to obtain further public comment before a final decision is made.



**STUDY AREA #1**

FROM MACKENZIE STATION ROAD EASTERLY  
33 KM TO 4 KM EAST OF PEARL

The information centres will be held as follows:

**Wednesday, June 16, 1993**      **Thursday, June 17, 1993**

**STRATFORD ROOM  
LANDMARK INN**

1010 Dawson Rd.  
Thunder Bay, Ontario

2:00 p.m. to 8:00 p.m.

**McKENZIE PUBLIC  
SCHOOL**

Lakeshore Drive  
Municipality of Shumiah

4:00 p.m. to 8:00 p.m.

Comments and enquiries may be directed to:

**Gordon Sawiak**  
Senior Project Manager  
Ministry of Transportation  
615 James Street South  
Thunder Bay, Ontario  
P7C 4X9

Telephone (807) 473-2131  
Toll Free: 1-800-465-5034

**STUDY AREA #2**

FROM 8 KM WEST OF QUIMET (EAST LIMIT OF STUDY  
AREA #1) EASTERLY 36 KM TO THE RED ROCK  
TOWNSHIP WEST BOUNDARY

The information centres will be held as follows:

**Wednesday, June 23, 1993**

**HURKETT COMMUNITY  
CENTRE**

West Highway 582  
Hurkett, Ontario

2:00 p.m. to 8:00 p.m.

**Thursday, June 24, 1993**

**DORION COMMUNITY  
CENTRE**

Dorion Loop Road  
Dorion, Ontario

2:00 p.m. to 8:00 p.m.

Comments and enquiries may be directed to:

**Linda Jackson**  
Senior Project Manager  
Ministry of Transportation  
615 James Street South  
Thunder Bay, Ontario  
P7C 4X9

Telephone (807) 473-2120  
Toll Free: 1-800-465-5034

These projects are two of a series of studies currently underway to examine the upgrading of the Trans-Canada Highway to a four lane divided highway between Thunder Bay and Nipigon. Comments and information are being collected to assist the Ministry in meeting the requirements of the Environmental Assessment Act. They will be maintained on file for use during the study and may be included in study documentation. With the exception of personal information, all comments received will become part of the public record.



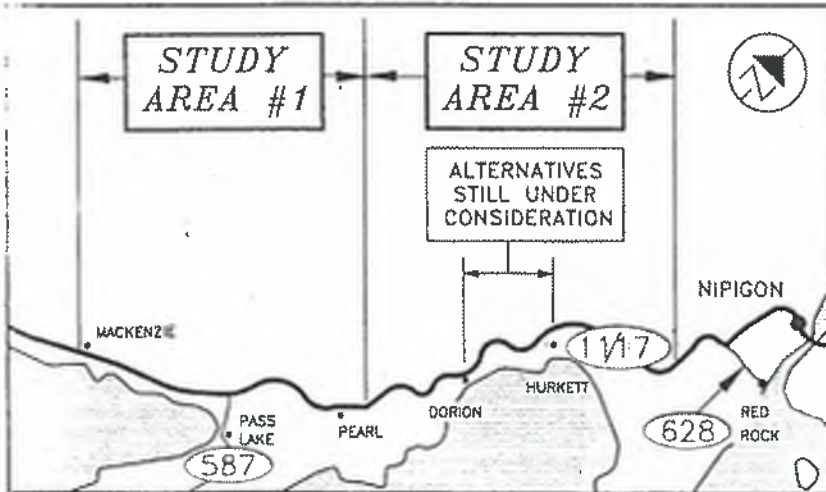
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**PUBLIC INFORMATION CENTRES  
HIGHWAY 11/17 FOUR-LANING PROJECTS**

The Ministry of Transportation (MTO) will be holding Public Information Centres to display the **SELECTED ALTERNATIVE** in the study areas shown on the map below. The **SELECTED ALTERNATIVE** is a refinement of the corridor presented at the last information centre.

These Public Information Centres will be held to provide property owners and the public with the opportunity to view the plans, make comments and discuss their concerns with MTO representatives and their consultants. Preliminary details and effects on properties will be identified.

In Study Area #2, **THREE ALTERNATIVES ARE STILL UNDER CONSIDERATION** in the section between Dorion and Hackett. The ministry is seeking public input on these three alternatives prior to making a decision on a selected alternative.



**STUDY AREA #1**

From MacKenzie Station Road Easterly 33 km to 4km East of Pearl (West Limit of Study Area #2)

The information centres will be held as follows:

Monday, March 7, 1994 Stratford Room Landmark Inn 1010 Dawson Road Thunder Bay, Ontario 2:00 p.m. to 8:00 p.m.	Tuesday, March 8, 1994 McKenzie Public School Lakeshore Drive Municipality of Shuniah Ontario 4:00 p.m. to 8:00 p.m.
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Comments and enquiries may be directed to:

Gordon Sawiak Senior Project Manager Ministry of Transportation 615 James Street South Thunder Bay, Ontario P7C 4X9	Dave McCann, P.Eng. Project Manager Parker Consultants Ltd. 1400 Rymal Road East Hamilton, Ontario L8W 3N9
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Telephone: 807-473-2131  
Toll Free: 1-800-465-5034

Telephone: 905-385-3234  
(CALL COLLECT)

**STUDY AREA #2**

From 8 km West of Oulmet (East Limit of Study Area #1) Easterly 36 km to the Red Rock Township West Boundary

The information centres will be held as follows:

Tuesday, February 22, 1994 Dorion Community Centre Dorion Loop Road Dorion, Ontario 2:00 p.m. to 5:00 p.m. 7:00 p.m. to 9:00 p.m.	Wednesday, February 23, 1994 Hurkett Community Centre West Highway 562 Hurkett, Ontario 2:00 p.m. to 5:00 p.m. 7:00 p.m. to 9:00 p.m.
--	--

Presentations will be made on both days at 7:30 p.m. followed by a question and answer session.

Comments and enquiries may be directed to:

Gordon Sawiak Senior Project Manager Ministry of Transportation 615 James Street South Thunder Bay, Ontario P7C 4X9	Jim Horton, P.Eng. Project Manager M.M. Dillon Limited 1425 Bishop Street Cambridge, Ontario N1R 6J9
--	---

Telephone: 807-473-2131  
Toll Free: 1-800-465-5034

Telephone: 519-823-8761  
(CALL COLLECT)

These projects are two of a series of studies currently underway to examine the upgrading of the Trans-Canada Highway to a four-lane divided highway between Thunder Bay and Nipigon. They are being conducted in accordance with the Environmental Assessment Act. Names and addresses associated with comments submitted to the ministry will not be included in public documentation.



Ministry  
of  
Transportation  
Ontario



PUBLIC INFORMATION CENTRES

Planning and Preliminary Design Study  
Highway 11/17 Four Laning Project From MacKenzie  
Easterly 33 km to 4 km East of Pearl

DISPLAY OF SELECTED ALTERNATIVE

The Ministry of Transportation will be holding Public Information Centres to display the SELECTED ALTERNATIVE for the study area shown on the map below. The SELECTED ALTERNATIVE is a refinement of the corridor presented at the last Public Information Centre held in March of 1994, and includes a minor change to the location of the highway in the Pearl area.

These Public Information Centres are being held to provide property owners and the public the opportunity to view the plans, make comments and discuss their concerns with MTO representatives and their consultant. Preliminary details and property effects will be identified.

- Insert Map Here -

THE PUBLIC INFORMATION CENTRES WILL BE HELD AS FOLLOWS:

Wednesday, May 31, 1995  
STRATFORD ROOM  
LANDMARK INN  
1010 Dawson Road  
Thunder Bay, Ontario  
2:00 p.m. to 8:00 p.m.

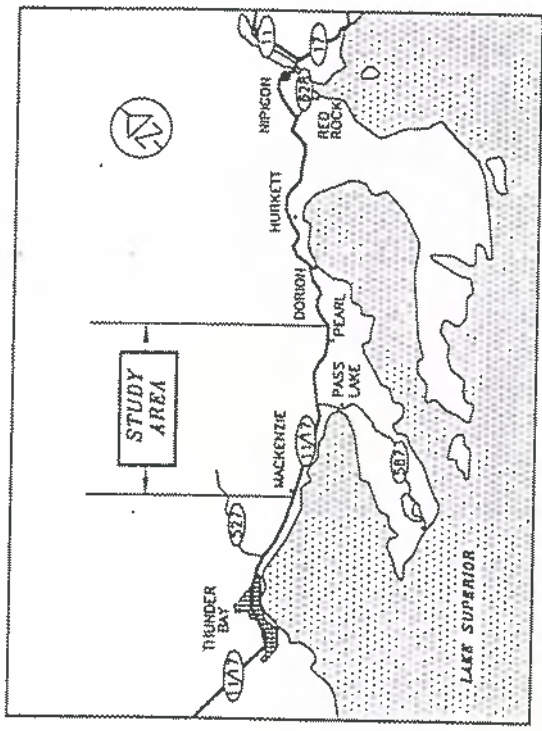
Thursday, June 1, 1995  
MCKENZIE PUBLIC SCHOOL  
LAKESHORE DRIVE  
Municipality of Shuniah  
Ontario  
4:00 p.m. to 8:00 p.m.

Comments and enquiries may be directed to:

Gordon Sawiak  
Senior Project Manager  
Ministry of Transportation  
615 South James Street  
Thunder Bay, Ontario  
P7C 4X9  
Telephone: (807) 473-2131  
Toll Free: 1-800-465-5034

David McCann  
Project Manager  
Parker Consultants Limited  
1400 Rymal Road East  
Hamilton, Ontario  
L8W 3N9  
Telephone: (905) 385-3234  
( CALL COLLECT )

This project is one of a series of studies currently underway to examine the upgrading of the Trans-Canada Highway to a four-lane divided highway between Thunder Bay and Nipigon. It is being conducted in accordance with the Provincial Highways Class Environmental Assessment. With the exception of personal information, all comments will become part of the public record.





**APPENDIX C**

**PLANNING ALTERNATIVES**



LEGEND

- ▬ HIGHWAY 11/17 (EXISTING)
- ▨ TWINNING TO NORTH (CONCEPT A)
- ▤ TWINNING TO SOUTH (CONCEPT B)
- ▥ NEW ALIGNMENT (CONCEPT C 1-1, C 1-2)

HIGHWAY 11/17 (EXISTING)  
 TWINNING TO NORTH (CONCEPT A)  
 TWINNING TO SOUTH (CONCEPT B)  
 NEW ALIGNMENT (CONCEPT C 1-1, C 1-2)



Not to Scale

To Nipigon

SECTION 1

PREFERRED CORRIDOR (C 1-2)

C 1-1

C 1-2

A

B

AMETHYST HARBOUR ROAD

SUNNYSIDE BEACH ROAD

CRYSTAL BEACH ROAD

HEIGHTS ROAD

LAKE SUPERIOR

MACKENZIE BEACH ROAD

MACKENZIE STATION ROAD

To Thunder Bay

HIGHWAY 11/17

LAKESHORE DRIVE

SECTION 1  
 MACKENZIE STATION ROAD  
 TO AMETHYST HARBOUR ROAD  
 ALTERNATIVES ANALYZED  
 AND EVALUATED

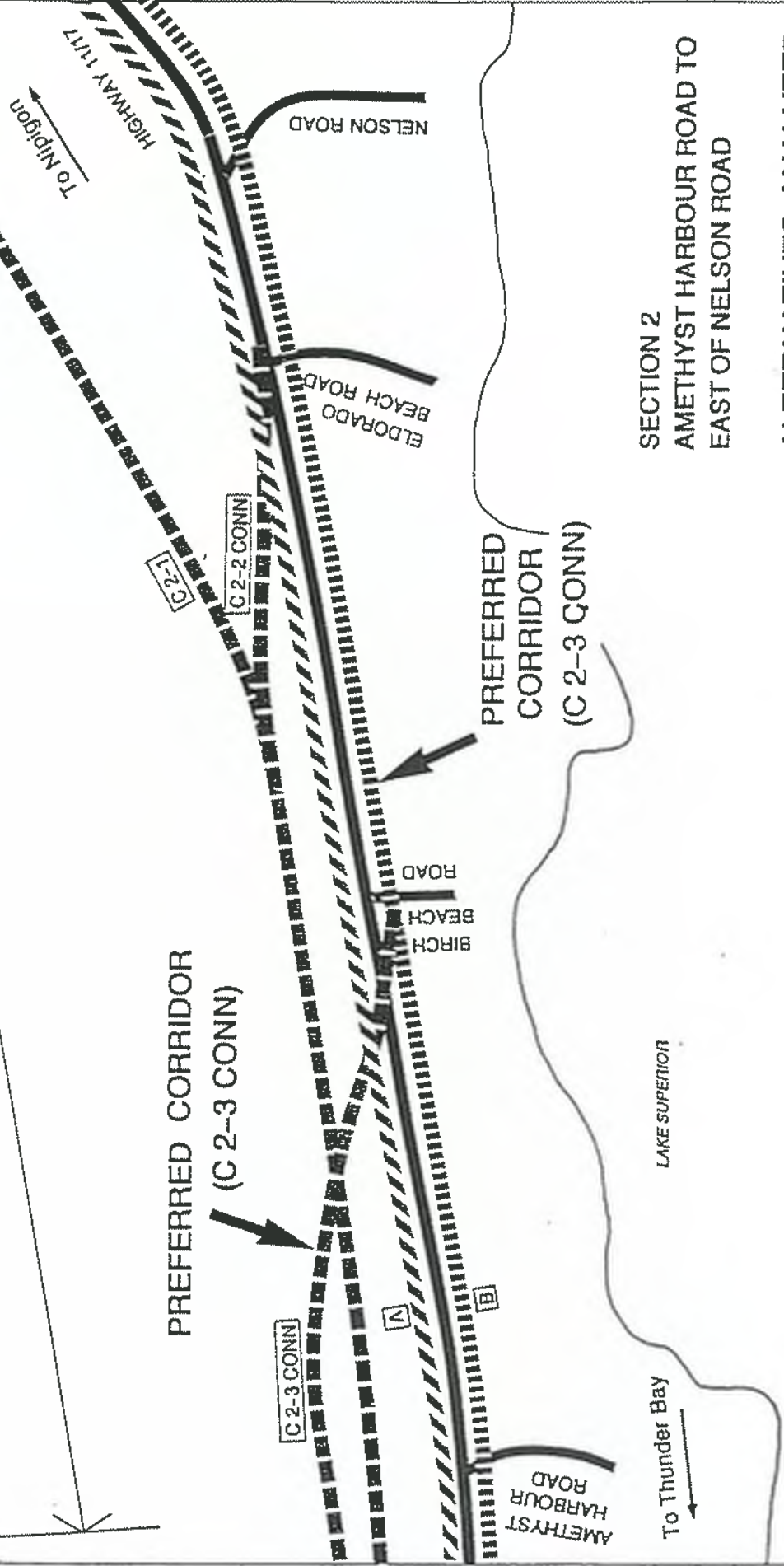


- LEGEND**
-  HIGHWAY 11/17 (EXISTING)
  -  TWINNING TO NORTH (CONCEPT A)
  -  TWINNING TO SOUTH (CONCEPT B)
  -  NEW ALIGNMENT (CONCEPT C 2-1, C 2-2 CONN, C 2-3 CONN)

HIGHWAY 11/17 (EXISTING)  
 TWINNING TO NORTH (CONCEPT A)  
 TWINNING TO SOUTH (CONCEPT B)  
 NEW ALIGNMENT (CONCEPT C 2-1,  
 C 2-2 CONN, C 2-3 CONN)

Not to Scale

SECTION 2



SECTION 2  
 AMETHYST HARBOUR ROAD TO  
 EAST OF NELSON ROAD

ALTERNATIVES ANALYZED  
 AND EVALUATED



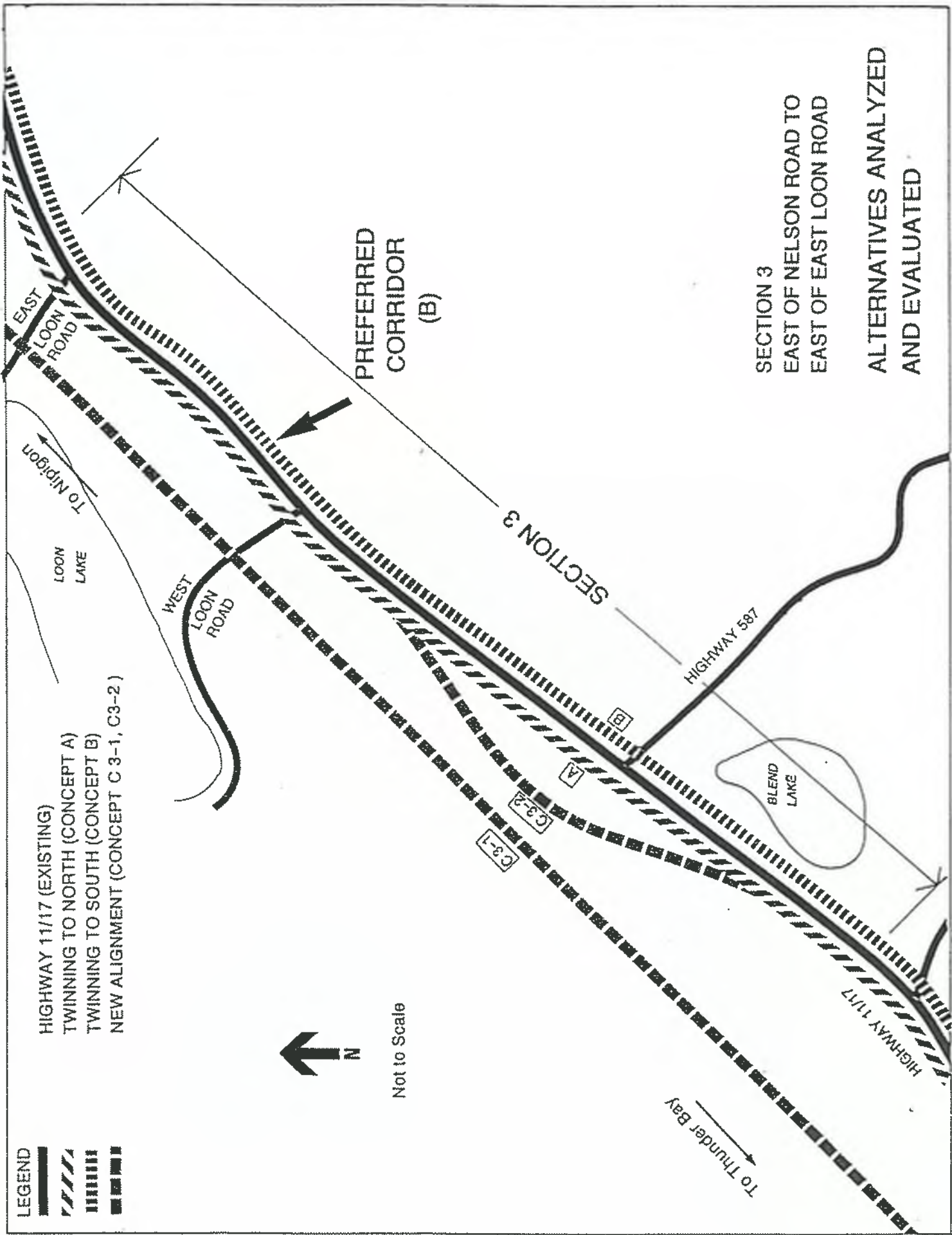
**LEGEND**

- ▬ HIGHWAY 11/17 (EXISTING)
- ▨ TWINNING TO NORTH (CONCEPT A)
- ▧ TWINNING TO SOUTH (CONCEPT B)
- ▩ NEW ALIGNMENT (CONCEPT C 3-1, C3-2)

HIGHWAY 11/17 (EXISTING)  
 TWINNING TO NORTH (CONCEPT A)  
 TWINNING TO SOUTH (CONCEPT B)  
 NEW ALIGNMENT (CONCEPT C 3-1, C3-2)



Not to Scale



SECTION 3  
 EAST OF NELSON ROAD TO  
 EAST OF EAST LOON ROAD

ALTERNATIVES ANALYZED  
 AND EVALUATED





LEGEND

- ▬ HIGHWAY 11/17 (EXISTING)
- ▨ TWINNING TO NORTH (CONCEPT A)
- ▧ TWINNING TO SOUTH (CONCEPT B)
- ▩ NEW ALIGNMENT (CONCEPT C 4-1, C 4-2, C 4-3)

HIGHWAY 11/17 (EXISTING)

TWINNING TO NORTH (CONCEPT A)

TWINNING TO SOUTH (CONCEPT B)

NEW ALIGNMENT (CONCEPT C 4-1, C 4-2, C 4-3)



Not to Scale

SECTION 4

To  
Thunder Bay

BASS  
LAKE

SILVER LAKE ROAD

A B

PREFERRED  
CORRIDOR  
(B)

C 4-1

C 4-2

C 4-3

ROAD NO. 5  
NORTH

ROAD NO. 5  
SOUTH

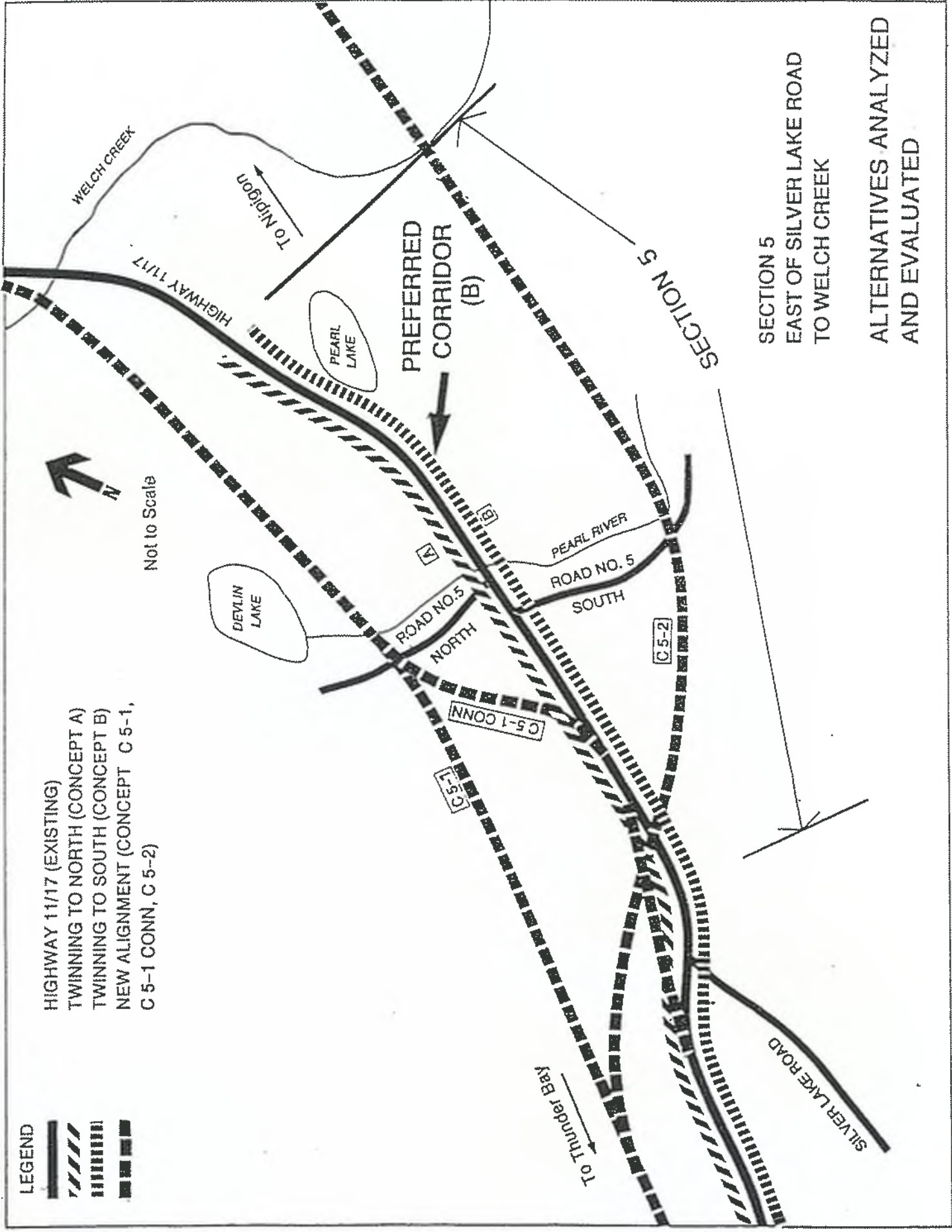
PEARL RIVER

HIGHWAY 11/17  
To Nipigon

DEVILIN  
LAKE

SECTION 4  
EAST OF LOON ROAD TO  
EAST OF SILVER LAKE ROAD  
ALTERNATIVES ANALYZED  
AND EVALUATED





**LEGEND**

- (dashed line) HIGHWAY 11/17 (EXISTING)
- (solid line with diagonal hatching) TWINNING TO NORTH (CONCEPT A)
- (solid line with vertical hatching) TWINNING TO SOUTH (CONCEPT B)
- (solid line with horizontal hatching) NEW ALIGNMENT (CONCEPT C 5-1, C 5-1 CONN, C 5-2)

Not to Scale

HIGHWAY 11/17 (EXISTING)  
 TWINNING TO NORTH (CONCEPT A)  
 TWINNING TO SOUTH (CONCEPT B)  
 NEW ALIGNMENT (CONCEPT C 5-1,  
 C 5-1 CONN, C 5-2)

SECTION 5  
 EAST OF SILVER LAKE ROAD  
 TO WELCH CREEK

ALTERNATIVES ANALYZED  
 AND EVALUATED

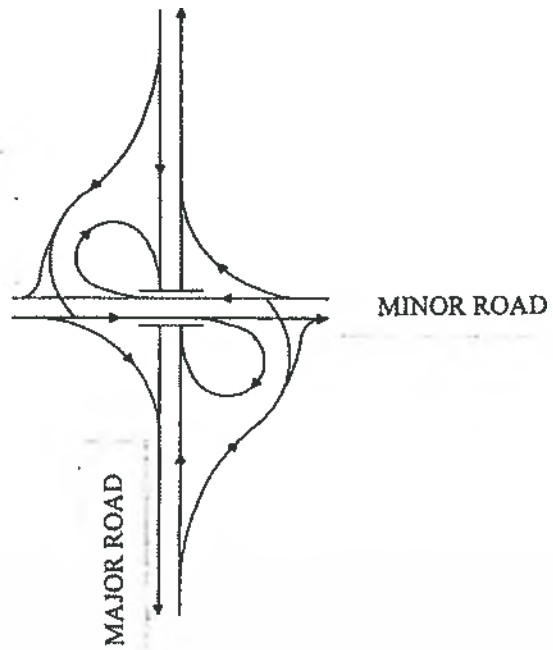


## APPENDIX D

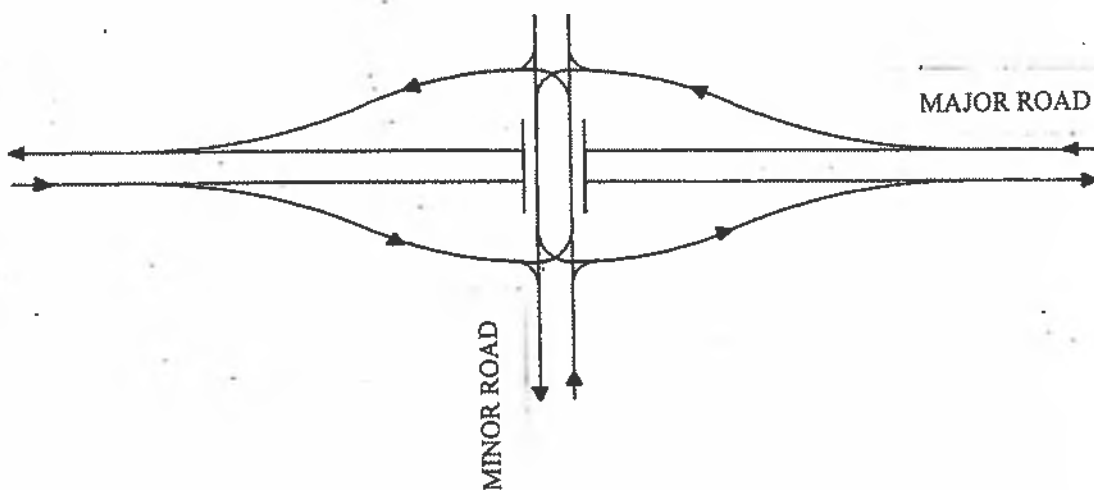
### SCHEMATIC SKETCHES OF INTERCHANGES



# SCHEMATIC SKETCHES OF INTERCHANGES



Parclo A Interchange



Diamond Interchange

