3.0 Transportation Needs Assessment

The purpose of this section is to summarize the analyses that was carried out to identify and assess the traffic operations deficiencies within the study area and required improvements. The additional and complete details are documented in the *Study Design* (Appendix B).

3.1 Assessment of Existing and Future Travel Needs

An assessment of existing and future travel needs was undertaken for existing Highway 69 as part of this study. The results are documented in the April 2004, *Traffic Operations and Collision Analysis Report* (see Appendix Q). This analysis included a review of historical and existing traffic conditions, future operations and capacity improvement requirements, assessment of intersection and entrance sight line deficiencies, historical collision experience, the identification of collision prone locations, and the identification of interim improvements that can be made to the existing two lane alignment to improve traffic operations and overall safety in the Highway 69 corridor. The key findings of the report are summarized below.

3.1.1 Historical and Current Traffic Conditions

A review of historical traffic growth within the Highway 69 study area was carried out for the years between 1955 and 2000. Average Annual Daily Traffic (AADT) has increased at an average growth rate of 4.2% to 4.4% per annum from 1955 to 1975, 1.1% to 1.5% per annum from 1975 to 1990, and between 0.8% and 1.7% per annum from 1991 to 2000. Summer Average Daily Traffic (SADT) has increased at a slightly higher rate than AADT, which reflects the growing popularity of this area for seasonal residents and tourists.

3.1.2 Highway 69 Mainline

Existing traffic data was provided by MTO for Year 2000. The data consisted of Average Annual Daily Traffic (AADT), Summer Average Daily Traffic (SADT), Summer Average Weekday Daily Traffic (SAWDT), Winter Average Daily Traffic (WADT), Design Hourly Volume (DHV), Peak Hourly Volume (PHV), Percentage Commercial Vehicle (%COMM), Accident Rate (AR), and Level of Service (LOS). The information is summarized in Exhibit 3-1.

Exhibit 3-1: Existing (Year 2000) Traffic Data

Mainline Section	AADT	SADT	SAWDT	WADT	DHV	PHV	%COM	AR	LOS
3.6 km North of Highway 559 to Highway 7182 (Shebeshekong Road)	6,000	7,700	6,900	4,850	716	881	13.7%	0.7	D
Highway 7182 (Shebeshekong Road) to Highway 644	5,900	7,550	6,750	4,750	712	843	12.4%	0.7	D
Highway 644 to Highway 529 S.	5,600	7,200	6,400	4,500	676	811	14.2%	0.9	D
Highway 529 S. to Highway 529 N.	5,550	7,100	6,350	4,500	670	727	16.8%	0.6	C

The traffic volumes on Highway 69 between Highway 559 and Highway 529 N. Junction are relatively constant throughout the study area. The traffic volume is higher on Highway 69 to the south of the study area between Parry Sound and Highway 559. As a result, the section of Highway 69 between Highway 559 and Highway 529 N. Junction functions more as a through route, as is evidenced by the relatively low number of turning movements at the major intersections located along Highway 69 within the study area.

As shown in Exhibit 3-1, the identified year 2000 AADT volumes on Highway 69 between Highway 559 and Highway 529 North Junction are between 5550 and 6000, and peak hour two-way volumes are between 727 and 881. These are within the reasonable capacity range for a two-lane Kings Highway of 780 - 870 per hour for two-way traffic. The capacity varies based on truck percentages.

Most sections of the highway are operating at the high range of Level of Service D, however the section between Highway 559 and Highway 7182 (Shebeshekong Road) is operating at the Level of Service D/E break over point. The Level of Service Analysis results for Year 2000 are shown in Exhibit 3-2.

Exhibit 3-2: Existing (Year 2000) Mainline Level of Service

Mainline Section	AADT	Peak Hour Volume	% Trucks	Volume / Capacity Ratio	Level of Service
3.6 km North of Highway 559 to Highway 7182 (Shebeshekong Road)	6,000	881	13.7%	0.49	D/E
Highway 7182 (Shebeshekong Road) to Highway 644	5,900	843	12.4%	0.45	D
Highway 644 to Highway 529 S.	5,600	811	14.2%	0.46	D
Highway 529 S. to Highway 529 N.	5,550	727	16.8%	0.44	D
Highway 529 N. to Highway 526	6,000	755	16.8%	0.46	D
Highway 526 to Highway 522	6,000	738	17.1%	0.45	D

3.1.3 Intersections

Summer weekday AM and PM peak hour intersection turning movement counts for the major intersections were undertaken by MTO in August 2000 and August 2001. Since the traffic counts were undertaken on different days of the week and in different years, the raw peak hour traffic data was adjusted to reflect a better level of consistency between intersections. The intersection Level of Service for the Year 2000 adjusted peak hour traffic volumes was calculated using Synchro, a state of the art intersection Level of Service analysis software that utilizes the Highway Capacity Method for Unsignalized Intersection Level of Service. The existing (Year 2000) AM and PM Peak Hour intersection Level of Service is shown in Exhibit 3-3.

Exhibit 3-3: Existing (Year 2000) Intersection Level of Service

Intersection Location	AM Peak Hour		PM Peak Hour	
	Overall	Minor Approach	Overall	Minor Approach
Woods Road	A	B	A	B
Highway 7128 (Shebeshekong Road)	A	C	A	C
Highway 644	A	B	A	B
Highway 529 S.	A	B	A	B
Highway 529 N.	A	B	A	B

As shown, all major intersections within the Highway 69 corridor are operating at reasonable Levels of Service during AM and PM peak hours and do not warrant signalization now or at any time over the next 20 years.

All of the intersections on Highway 69 between Highway 559 and Highway 522 have left turn lanes on the Highway 69 approaches, with the exception of Highway 7182 (Shebeshekong Road). A left turn lane warrant analysis was undertaken for the Shebeshekong Road intersection using Figure EA-26 from the MTO Geometric Design Manual. The analysis indicated that a northbound left turn lane meets the warrant.

A review of the peak hour traffic volumes on some of the side roads in the area identified that these roads are typically carrying very few vehicles (peak hour volumes of 22 or less) and do not warrant any improvements such as left turn lanes or slip-arounds. The Geometric Design Manual does not provide a specific methodology to determine when and where right turn lanes are required, however, the minimum hourly right turn channelization warrant is 60 vehicles per hour, which is not met by any of the intersections within the study area.

3.1.4 Forecast Future Conditions

Traffic forecasts for 2014 and 2024 are shown in Exhibit 3-4.

It should be noted that the traffic forecasts for the road sections located south of Highway 529 north junction tend to have growth rates between 0.67% to 1.43% per annum.

The future population and employment forecasts for the District of Muskoka, District of Parry Sound, Region of Sudbury, and City of Sudbury were reviewed to determine how the population and employment growth projections for these areas relate to the traffic growth forecasts on Highway 69. The analysis indicated that future population and employment is actually forecast to decrease in these areas and that any traffic growth that is forecast to occur on Highway 69 will be either related to through traffic growth or due to the tourism sector. Based on these observations and based on the historical traffic growth on Highway 69 within the study area, per annum growth rate of between 1% and 2.6% for the Highway 69 corridor are reasonable to use to forecast future traffic volumes and capacity requirements for this area.

Exhibit 3-4: Highway 69 Mainline Future Traffic Forecasts

Mainline Section	2014			2024		
	AADT	DHV	PHV	AADT	DHV	PHV
3.6 km North of Highway 559 to Highway 7182 (Shebeshekong Road)	6,800	820	1,000	7,400	890	1,090
Highway 7182 (Shebeshekong Road) to Highway 644	7,200	860	1,040	8,200	980	1,170
Highway 644 to Highway 529 S.	6,400	770	920	7,000	840	1,010
Highway 529 S. to Highway 529 N.	6,400	770	840	7,000	840	910

Future level of service was calculated for the 2004, 2014, and 2024 time periods and the results are shown in Exhibit 3-5.

Exhibit 3-5: Highway 69 Level of Service Forecasts

Mainline Section	2014			2024		
	PHV	V/C	LOS	PHV	V/C	LOS
3.6 km North of Highway 559 to Highway 7182 (Shebeshekong Road)	1,000	0.56	E	1,090	0.61	E

Mainline Section	2014			2024		
	PHV	V/C	LOS	PHV	V/C	LOS
Highway 7182 (Shebeshekong Road) to Highway 644	1,040	0.56	E	1,170	0.63	E
Highway 644 to Highway 529 S.	920	0.52	E	1,010	0.57	E
Highway 529 S. to Highway 529 N.	840	0.51	E	910	0.55	E

The traffic operations on the section of Highway 69 under study are estimated to function at Level of Service E throughout the next 20 years. The traffic Level of Service is forecasted to cross the D/E threshold in the 2003/2004 time period, is forecasted to remain near the low end of the Level of Service E range by 2014, and will remain at Level of Service E (midway between the D/E and E/F thresholds) in year 2024.

The Level of Service D/E threshold is traditionally used to define operational Level of Service when additional capacity is required on a road facility. The D/E point corresponds to a V/C ratio of 0.48 for the critical sections of Highway 69 within the entire study area. Based on the Level of Service E criteria, a widening from 2 to 4 lanes is warranted on Highway 69 between Highway 559 and Highway 529 south junction.

3.2 Collision Analysis

The collision analysis was undertaken as part of this study. It should be noted that the results presented below include collisions that occurred within the limits of the North Section as the collision pattern is similar throughout the study area.

3.2.1 Historical Collision Rates

Highway 69 was divided into three mainline sections and the historical rates of collisions reported for each section between 1975 and 2000 were reviewed to establish whether or not there were any patterns. The review indicated that annual collision rates range between 0.3 and 2.0 collisions per million vehicle kms traveled and that the large variation in rates could occur between successive years. The one pattern that appears to emerge from the data is that for some years, similar increases or declines in collision rates were observed at three of the four locations. This may suggest that the changes in collision frequencies may have been affected by natural factors such as poor weather conditions or increases in wildlife population; however, this hypothesis has no technical basis.

In summary, there are significant variations in rates of collisions from year to year and there does not appear to be any observable trends.

3.2.2 Recent Collision History

Detailed records for all collisions that have occurred on Highway 69 between 1996 and 2000 within the study area were provided by MTO. The collision records were aggregated and analyzed based on the following collision criteria:

- Time of Day;
- Location;
- Type of collision;
- Severity;
- Pavement conditions; and
- Ambient Weather Conditions.

The overall rate of collisions was calculated for the years between 1996 and 2000 for comparison with the provincial average. The collision rates range from 0.22 to 0.98 per million vehicle kilometres travelled (MVkm) within the study area. Based on the provincial average collision rate of 0.7 annual collisions per million vehicles (MVkm) traveled, 5 of the 9 sections have overall rates of collision that are higher than the provincial average.

Detailed collision statistics, collision rates by section and other associated collision information are provided in the *Traffic Operations and Collision Analysis Report* (Appendix Q).

3.2.3 Collision Prone Locations

In order to better define the locations of high incidences of collisions, the collision data was disaggregated into 1 km sections, and a collision rate was calculated for each section. This more concentrated level of analysis was used to identify 11 collision prone locations within the study area, where clusters of collisions with rates exceeding 0.95 collisions/MVkm have been reported over the five most recent recorded years.

The collision prone locations (CPL) were reviewed in terms of road geometry (substandard horizontal or vertical alignment), intersection/entrance sight line deficiencies, correlation with identified needs for passing lane improvements, correlation with identified warrant for left turn lanes, propensity for collisions with animals, and collision severity.

A detailed summary of factors associated with each CPL is provided in Appendix Q. In summary:

- Substandard vertical alignment and sight line deficiencies at intersection locations appear to be contributing factors;
- 8 out of 10 collision prone locations are at or near intersections;
- 5 out of 9 fatalities occurred within the identified collision prone locations;
- A large number of collisions involved driver error, speeding, and driver fatigue;
- Substandard intersection sight lines and sight triangles have been identified at several intersections as well a substandard vertical road alignment; and
- Some fatalities resulted from improper passing manoeuvres.

3.2.4 Vehicles

Based on the collision criteria identified in Section 3.2.2, the collision records were aggregated and analyzed. The collision pattern can be summarized as follows:

- Time of Day: Approximately 49% of all reported collisions occurred during daytime conditions, 47% occurred during night time. Only 3% of collisions occurred at dusk or dawn.
- Location: The vast majority of collisions (93%) occurred at non-intersection locations, which indicates that the traffic operations at intersections within the study area do not appear to be a problem.
- Type of Collision: The majority of collisions (84%) involve single vehicles, which suggests that high speeds, slippery pavement conditions, and sub standard horizontal or vertical alignments may be contributing factors. Of the remaining types of collisions, 5% were rear-end and 3% were turning or intersection related. There were no reported side-swipe collisions on Highway 69 within the study area.
- Severity: Approximately 79% of the collisions were reported as property damage, 24% involved bodily injuries, and 2% (9 out of 510) resulted in fatalities.
- Pavement Conditions: Approximately 58% of collisions occurred on dry pavement conditions, 9% on wet or slushy pavement, 13% with snow on the pavement, and 10% with ice on the pavement.
- Visibility: The majority of collisions (65%) occurred during clear conditions, 9% during rain or freezing rain, 23% during snow, and 2% during fog.

3.2.5 Wildlife

Approximately 33% of all collisions on this section of Highway 69 were wild animal related. There are high concentrations of wild animals crossings at specific locations along the highway. Collisions with wild animals are fairly common throughout the entire length of the Highway 69 study area.

3.2.6 Fatalities

Police reports were provided by the MTO for nine fatalities that occurred on Highway 69 within the entire study area for the period from 1996 to 2000. A review of each of the reports indicated that most of the fatalities were isolated incidents that involved either driver error or poor weather conditions, and do not appear to be related to road geometrics, excluding a fatality at Shebeshekong Road.

Even though there are ample passing lanes/opportunities near the location of many of the fatal collisions that involved improper passing, these incidents may not have occurred if the highway consisted of four lanes. However, a similar argument can be made for almost any two-lane highway in Ontario where fatal passing-related collisions have occurred.

3.3 Summary of Transportation Needs and Opportunities

There are a number of key issues arising from the analysis presented in the previous sections:

- Future traffic projections indicate a Level of Service ‘E’ throughout the next 20 years. There is an expectation that traffic is likely to increase based on historical trends and this can be expected to include the introduction of new business and residential land uses along the corridor. As access to the area improves, so do the opportunities to attract visitors, businesses and permanent or seasonal residents. If there is aggressive growth in a particular area then traffic will grow at a higher rate. If growth is subdued, then likewise, traffic will likely grow at the historical rate. Either way, the highway will be operating near or at capacity in the medium term.
- The majority of collisions (84%) that have occurred between 1996 and 2000 have been single vehicle. A large number are related to excessive speed, driver fatigue or inattention, or driver error associated with improper passing or turning manoeuvres. Except for one location (Shebeshekong Road), all of the intersections have left turn lanes. A turning lane is warranted at Shebeshekong Road. Few minor improvements are appropriate or economically feasible to effectively reduce collisions or improve capacity in the short term, with the exception of the passing lane extensions already being implemented and a left turn lane at Shebeshekong Road.
- There are alignment and sight distance deficiencies for the 110 km/h design speed which may contribute to collisions on this section of Highway 69. However, all of the horizontal elements and most of the vertical alignment elements meet the 90 km/h posted speed. There is strong anecdotal evidence (including comments from the local OPP detachment) of persistent speeding along this section. While improvements to the alignment and sight distance could be implemented, this may encourage even higher travel speeds through local communities and further conflict between passing/turning and through traffic.

- Highway 69 is an important route that connects rural communities, urban areas, First Nation communities and recreational areas within Northern Ontario, and local residents, and business owners rely on convenient and safe access to the highway. The inherent conflict between local traffic and long-haul through traffic will become a greater issue as traffic volumes increase.

- The tourism and recreation industry is a key component of the local economy, and providing a reliable, safe and convenient transportation system will continue to attract visitors and seasonal residents, thereby boosting the local economy.

- As part of the Trans-Canada Highway System (along with Highway 11), Highway 69 is one of the two vital highway links between Northern Ontario/Western Canada and Southern Ontario, via connection with Highway 400. Further traffic growth and the associated potential increase in risk of conflicts between local and through traffic will reduce the reliability or efficiency of goods movement between Northern and Southern Ontario.

- The section of Highway 69 between Nobel and Estaire is the final section of Highway 69 to be studied for four-laning. Given the strategic importance of the Highway 400/ Highway 69 corridor to the economy of Northern Ontario, the *Highway 69 Action Plan* specifically recommends completing the four-laning of Highway 69 to Sudbury as part of the long-term strategic transportation plan.

In summary, there are few additional benefits of improving and upgrading the existing two-lane highway, given the volume and nature of traffic travelling through the area on an average day. Such improvements would not be expected to significantly improve operations or reduce collisions in a major way. Conversely, improvements to Highway 69 may actually result in even higher travel speeds and passing manoeuvres through an area which provides an important local function. This could increase the potential for conflicts with vehicles accessing and exiting the highway from local road intersections and adjacent land uses.

Upgrading Highway 69 to a four-lane, controlled access facility will:

- Provide capacity beyond the 20 year horizon and reduce congestion during peak seasonal travel periods;

- Provide increased opportunities for safe passing;

- Eliminate turning movements along the highway by providing grade separated interchanges with ramps at key crossing roadways;

- Reduce travel time through the study area, and minimize impacts to traffic movement caused by roadway maintenance or unanticipated incidents;

- Physically separate opposing lanes of traffic;

- Remove the majority of heavy, high volume, high speed truck traffic from communities along the highway; and

- Provide a complete upgrading of a key strategic link between Southern Ontario and Northern Ontario (along with the two Highway 69 planning projects between Highway 522 and Estaire), drawing the economies and communities of these areas together.

3.4 Alternatives to the Undertaking (Alternative Solutions)

The *Environmental Assessment Act* requires that alternatives to the undertaking be considered in the scope of this study. Alternatives to the undertaking are defined as functionally different ways of addressing the identified problems and opportunities.

The Ministry of the Environment *Interim Guidelines on Environmental Planning and Approvals* advises proponents to conduct an initial screening of alternatives to the undertaking to determine which alternatives are reasonable. The guidelines state that it is important for the proponent to clearly document the reasons why a rejected alternative is not reasonable.

For this study, the judgment of reasonableness is based on the ability of the alternative to resolve the transportation problem(s) identified or to take advantage of an opportunity. In addition, the analysis considers the advantages and disadvantages of each alternative with respect to the environment. Alternatives which pass this combined test will be carried to the next phase of the project.

The transportation problems in the Highway 69 corridor that need to be addressed in the assessment of the alternatives to the undertaking are the need for additional road capacity, and the need for improved road safety and operational improvements. They are based on the following:

- the ability to provide reliable long term transportation service on Highway 69 in light of its role as a strategically important inter-regional and inter-provincial economic corridor;

- the ability to provide safe and efficient transportation for local residents and businesses, as well as the growing volumes of tourism and recreational traffic;

- the ability to minimize or mitigate adverse environmental effects; and

- the degree of consistency of the existing transportation infrastructure within the study area.

The following six types of alternatives to the undertaking were assessed as part of this study:

- Do Nothing;

- Transportation Demand Management;

- Non-Roadway Solutions (rail, air, transit etc.) - Improve Existing or Introduce New Facilities;
- Roadway Improvements (Existing Transportation Facilities) – excluding Highway 69;
- Localized Roadway Improvements- Existing Highway 69 Corridor; and
- Highway 69 Corridor Improvements.

These alternatives to the undertaking are further discussed below and in the *Study Design* (Appendix B).

3.4.1 Do Nothing

Do Nothing means to maintain the status quo of transportation infrastructure and services, with no significant changes or actions being taken to either manage demand, expand infrastructure, or improve operations. For this study, the Do Nothing alternative assumes all currently planned transportation infrastructure improvements to be undertaken by the local municipalities and the Ministry of Transportation will take place. Planned transportation improvements in the general vicinity of the study area include:

- Construction of a new four-lane Highway 69 by twinning on the east side of the existing highway from the Seguin River (Parry Sound) to Nobel;
- Construction of a new four-lane Highway 69 on a new alignment to the east of Nobel northerly to a the existing intersection of Highways 69 and 559;
- Extension of Highway 559 to the new Highway 69 alignment and construction of an interchange (the southern limit of this Route Planning Study Area);
- Addition of one new passing lane (2500 m) within the Henvey Inlet First Nation lands. Also, the addition of 170 m on the existing passing lane immediately north of Highway 529 south intersection. Finally, adding 260 m to another existing passing lane just north of the Shawanaga River Bridge.
- Introduction of safety-related measures such as fully paved shoulders, rumble strips, advisory signing and other traffic management techniques; and
- Continued highway maintenance to retain a reasonably safe and efficient system.

Since it is expected that traffic demands are likely to grow in the future and congestion will continue to worsen, the highway will not function well as a strategic link and road safety will deteriorate. As a result of this potential, the Do Nothing alternative does not reasonably resolve the anticipated future transportation problems in the study area, nor does it allow MTO to take advantage of improvement opportunities. The Do Nothing alternative, however, will be carried to the evaluation as a baseline for comparison to other alternatives.

3.4.2 Transportation Demand Management

Managing transportation demand includes the implementation of measures to sufficiently reduce, shift, or eliminate transportation demand, such that improved transportation infrastructure/operation within the study area is not required. Several ways in which transportation demand can be managed include:

- spreading peak period demand over longer periods (e.g. through encouragement of staggered work hours or goods delivery);
- shifting existing/future transportation origin/destination patterns to areas where there are fewer transportation infrastructure or/operation problems, and/or where better transportation opportunities exist (e.g. encouraging development in target areas);
- eliminating significant increase in transportation demand (e.g. through caps on development);
- directly managing the use of the existing transportation system so as to maintain demand at a level balanced with capacity (e.g. through metered access); and
- reducing vehicular demand by using fewer vehicles to carry the same amount (or more) of people and goods (e.g. encouraging High Occupancy Vehicle use and/or discouraging one-occupant vehicle use; promoting regional mass transit – bus and rail).

Transportation demand is a product of provincial, regional and municipal development policies. Development areas inherently create traffic demand based on the need to travel through, within and between such areas. MTO's mandate is to provide for the effective use of Provincial transportation facilities to address the needs of the regional, provincial and Trans-Canada traffic.

For the purposes of this study, managing transportation demand, is not a reasonable alternative to the undertaking as it fails to address operational deficiencies specifically within the Highway 69 corridor nor does it allow MTO to take advantage of improvement opportunities. The Provincial Government has deemed the Highway 69 corridor as an economically important corridor for the transportation of people and goods. As such, characteristics of demand management as indicated above are contradictory to the role and function of Highway 69. Also, the existing traffic patterns do not have “peaks” except Friday afternoon and Sunday afternoon which coincide with recreational traffic that typically has a wide variety of origins and destinations. Application of transportation demand management is more applicable to commuter traffic with more defined origin/destination patterns versus Highway 69 traffic that is typically comprised of local, recreational and commercial traffic.

Therefore, transportation demand management as an alternative to the undertaking is eliminated from further consideration.

3.4.3 Non-Roadway Solutions – Improve Existing or Introduce New Facilities

Transportation facilities or mode types may be improved or introduced to expand the capacity of the transportation system, offer a new choice to the user, and contribute to the resolution of the stated problems/opportunities. Non-roadway solutions would be air, rail, or water-based, requiring the associated infrastructure such as airports, railways, and lake/river/canal systems respectively. Rail-based solutions could be further subdivided into interurban passenger rail (e.g. VIA, inter-regional GO Transit trains), intra-urban passenger rail (e.g. Light Rail (LRT)) and freight rail (CNR, CPR).

The vast majority of trips in the study area are made using the automobile and truck. The scattered distribution of origins and destinations between the study area and beyond, and the modal transfer requirements likely to be necessary are not conducive to developing and sustaining large transit ridership. Highway 69 does not contain uniform and condensed developed urban density that would warrant additional transit service. This being the case, travellers would not be able to access final destinations removed from the immediate Highway 69 area using the Highway 69 bus service or the Toronto-Sudbury VIA Rail Service. Rather an intensive network of local transit would be required to serve the whole catchment area. This would be financially unsound for the local transit operation and consequently for the corridor transit operation.

Moving more people and goods by rail or water does provide additional capacity on Highway 69, but requires the development and provision of infrastructure and vehicle transportation modes at the terminal ends of the system. Safety on the existing Highway 69 corridor is not improved as existing road geometrics are maintained and vehicles continue to be required. Local accessibility to the Study Area and the Provincial highway network are not enhanced.

Improvements to non-roadway based facilities would therefore not adequately resolve the transportation problems along the Highway 69 corridor. This alternative will not be carried forward for further consideration.

3.4.4 Roadway Improvements (Existing Transportation Facilities) – Excluding Highway 69

Roadway solutions include improvements to existing transportation services and facilities, and the introduction of new services and facilities. Such solutions include:

- roadway infrastructure improvements (Township roads); and
- improvements to other Provincial transportation facilities.

3.4.4.1 Local Infrastructure Improvements

This alternative includes improving capacity through widening, twinning, grade separation, localized improvements, etc., to upgrade one or more existing local roads and thereby expand capacity and improve operations.

Widening local roads in the Study Area to accommodate long-distance through traffic is not a reasonable alternative to the undertaking since these roads primarily serve local trips, are short in nature, generally intersect existing Highway 69 and have scattered residential development. Mixing long-distance through traffic and local traffic creates other transportation network concerns:

- Local roads are not generally designed and maintained to standards required for high-speed, long-distance traffic. This creates operational, safety and maintenance concerns.
- Local roads serve as area access roads. The mix of slower-moving and turning traffic with high-speed through traffic also creates safety concerns.
- The local road network is discontinuous for north-south through travel through the study area. This reduces transportation efficiency for long-distance movements.

There are no local roads or secondary highways in the area that provide a direct north–south link and therefore infrastructural improvements would not be an effective alternative relative to Highway 69 improvements. Therefore this alternative will not be carried forward for further analysis.

3.4.4.2 Improvements to Provincial Highways

There are no other provincial highways near Highway 69 that would serve the north-south oriented traffic in the study area or the Georgian Bay corridor. Highway 529 is a secondary highway that is parallel to Highway 69 between Pointe au Baril Station and the Magnetawan River. However, this highway is designed to serve local traffic and is limited in total length to less than 20 km within a study area of approximately 70 km in length. In addition, existing Highway 69 was utilized as an improvement to correct deficiencies with Highway 529.

Highway 559 serves the south end of the study area, providing access westerly from Highway 69 to Killbear Provincial Park, Georgian Bay and other recreational destinations. Other secondary highways provide access from Highway 69 westerly into local communities and recreational and cottage properties in the study area and include Highway 644 at Pointe au Baril Station, Highway 529A (off Highway 529 serving Bayfield Inlet and Georgian Inlet), Highway 645 (off Highway 529 serving Byng Inlet) and Highway 526 serving Britt. Secondary Highway 522 at the north end of the study area connects Highway 69 to Highway 11 at Trout Creek.

Highway 11, although it is a parallel corridor to Highway 69, is not serving the same road users as Highway 69 and cannot be considered to be an appropriate replacement of an alternative route.

Since other roadway infrastructure improvements do not adequately resolve the transportation problems/opportunity within the Highway 69 corridor, this alternative will not be carried forward for further analysis.

3.4.5 Localized Roadway Improvements – Highway 69 Corridor

Localized improvements to the Highway 69 corridor would include provision of relatively minor traffic operational modifications such as passing lanes, truck climbing lanes, acceleration / deceleration lanes for turning traffic at intersections. Traffic management techniques such as: warranted traffic signals or pavement markings would also be included in these alternatives.

These types of measures do not significantly address the capacity or other associated problems identified in Section 3.0 and are being implemented in the short-term timeframe before the results of this study are implemented.

The recently constructed passing lanes in this area include one new passing lane and extension to two existing passing lanes. There has also been implementation of safety-related measures such as advisory signing.

Local roadway improvements will minimize adverse effects to the natural environment but will not resolve capacity deficiency on Highway 69 and not significantly improve the operations of this strategic transportation facility. However, these local roadways will provide support to Highway 69.

3.4.6 Highway 69 Corridor Improvements

Highway 69 Corridor Improvements include the following major improvements within the Highway 69 corridor:

- Twinning of the existing highway;
- New alignment alternatives; and
- Combination of the above.

Through a process of rationally eliminating other alternatives to the undertaking, Highway 69 Corridor Improvements are selected as the preferred Alternative to the Undertaking because of the following rationale:

- they will provide adequate geometrics and lane capacity to alleviate operational deficiencies on Highway 69;
- they will provide a standard of Highway facility consistent with recently constructed and/or approved four-laning initiatives on Highway 69 south of the project area;
- they will increase safety and operations and bring about opportunities such as developing/enhancing an economic corridor;
- they will have impacts on the social, economic and natural environment which can be mitigated; and
- they can be staged in such a way that funding can be incrementally applied as available and such that the demand for corridor improvements can be satisfied on a priority basis.

Therefore, "Highway 69 Corridor Improvements" is carried forward for further consideration

3.4.7 Summary of Assessment of Alternatives to the Undertaking

The summary assessment of alternatives to the undertaking by environmental/transportation factors is described in Exhibit 3-6.

In summary, only "Highway 69 Corridor Improvements" addresses the stated problems and opportunities and provides the optimal combination of benefits to transportation and low impacts to local communities and the environment as compared to the other alternatives.

3.5 Consultation on Needs Assessment

The public consultation methods used to solicit public participation and comment throughout the initiation of the planning process included:

- Public Information Centres;
- Newspaper advertisements;
- Bulk mailing of notices;
- Study Newsletter;
- Study Design (i.e. Environmental Assessment Proposal); and
- Website www.highway69.ca.

3.5.1 Public Information Centre #1 – October 2003

In October 2003, Public Information Centres (PICs) were held in the communities of Nobel, Pointe au Baril Station, Britt and Toronto. The purpose of these PICs was to inform the public of the initiation of the project, to obtain input on the Study Design including "alternatives to the

undertaking", identify study area constraints, and present corridor alternatives for comment and input.

The transportation, engineering and environmental information and the study process were explained to members of the public. Newsletters describing the study activities and the results of the work at the initiation stage were also presented at the PIC. Comment forms soliciting public input were provided for documenting comments and concerns.

In general, the majority of the public agreed with the need for the Highway 69 corridor improvements including the need for a new highway corridor. There was broad based support and recognition for the need to improve Highway 69 from Nobel to north of Highway 522. Nonetheless, many people expressed concerns about potential impacts to their property and to their quality of life. Specifically, common issues included property access, the impact on snowmobile trails, the need for businesses on the highway to be accessible and visible, and environmental and wildlife impacts.

The most frequent comments that were provided regarding the study included the following:

- Specific natural environment information related to aquatic, terrestrial and wildlife species, in addition to cultural areas of significance related to historic land use/communities, potential burial sites, ceremonial/spiritual areas, and hunting/fishing grounds;
- Questions regarding access locations to existing communities/businesses under a controlled access four-lane highway configuration;
- Concerns regarding existing highway safety (sight-distance/turning opportunities, speed, wildlife collisions etc.);
- Concerns regarding the limited extent of notification for this round of consultation. Concerns about inadequate notification for property owners and poor timing of the PICs for seasonal residents were noted;
- Potential impacts to snowmobile trails and the economic contribution snowmobiling provides to the local economy;
- Potential impacts to forest access for forestry resource operations; and
- Questions regarding construction timing and property acquisition.

Detailed comments received and the Project Team responses are included in Appendix F.

3.5.2 External Agency Input

A PIC preview session for invited External Agencies was held on October 21, 2003 at the Nobel United Ebenezer Church. The purpose of this session was to solicit views and comments to be considered as the study progresses and to present alternative corridors under consideration. This event was attended by representatives from the Ministry of Natural Resources (MNR), the Canadian Environmental Assessment Agency (CEA Agency), the Township of The Archipelago, and the Ontario Provincial Police (OPP). Members of other agencies and interest groups attended the PICs.

In addition, a meeting was held with the Ministry of Natural Resources on June 5, 2003 to introduce the study and to obtain initial comments and again on August 28, 2003 to present corridor alternatives and to obtain input from MNR. MNR noted their preference to twin Highway 69 along the existing corridor as much as possible to minimize natural environmental impacts. MNR also provided background environmental data in the study area from the Natural Resource and Values Information System (NRVIS); as well as a resource input package outlining environmental information and sensitivities in the study area.

3.5.3 Municipal Input

Presentations were made to the Township of The Archipelago and Carling Township prior to the first round of Public Information Centres to introduce the study and to seek input on the need for the project.

In general, all of the organized municipalities supported the highway improvements.

3.5.4 First Nation Input

An introductory meeting was held with the Chief and Council of each of the three First Nations in the South and North Study areas (Shawanaga, Magnetawan and Henvey Inlet) to introduce the project, seek permission to conduct field investigations and gather information about existing conditions. A second presentation was made just prior to the first round of Public Information Centres and Community Information Sessions (CIS).

Community Information Sessions were also held on the reserves at each of the three First Nation communities at the same time as the Public Information Centres.

In general, the First Nations agreed with the need for the Highway 69 corridor improvements including the need for a new highway corridor. There was broad based support and recognition for the need to improve Highway 69 from Nobel to north of Key River. Nonetheless, many people expressed concerns about potential impacts to their property and to their quality of life. Specifically, common issues included property access, pedestrian access under the new highway,

environmental and wildlife impacts, land rights, employment opportunities, emergency response time and collisions.

EXHIBIT 3-6: ALTERNATIVES TO THE UNDERTAKING					
CRITERIA	ALTERNATIVES				
	Do Nothing	Transportation Demand Management	Non Roadway Improvements (Rail, Air, Transit)	Localized Road Improvements (Existing Highway 69 Corridor)	Highway 69 Corridor Improvements
LONG TERM NEEDS					
Congestion Decreased	• Congestion will increase as traffic volumes increase	• Congestion will not decrease significantly	• May result in small decrease in congestion over short term as alternates modes are used	• Congestion will increase as traffic volumes increase	• Congestion reduced with significant capacity improvements
Safety Improved	• Collisions will increase as traffic volumes increase	• Safety will not improve	• Will not improve safety in existing highway corridor	• Minor safety improvements	• Safety improved with design/capacity changes
Accessibility Improved	• Accessibility reduced as traffic volumes increase	• Accessibility may not improve, may be reduced	• May improve regional accessibility. • May not improve local accessibility	• Minor effect on accessibility	• Accessibility improved with capacity improvements
Serve local needs	• Will not serve local needs	• Will not serve local needs well. Access to highway reduced	• Will not serve local needs well	• Will not serve local needs well	• Will serve local needs. Access restrictions possible
Can be staged	• Not applicable	• Can be staged	• Cannot be effectively staged	• Can be staged	• Can be staged
MINIMIZE IMPACT					
Minimize Economic Impact	• Congestion will cause economic impact	• Shifting Travel Patterns may cause economic impact	• Minimal impact on highway businesses. • Does not support area tourism focus	• Congestion will cause economic impact	• Increased traffic is a positive impact • Reduced access is a negative impact
Minimize Environmental Impact	• No impact	• Minimal impact	• Minimal impact if existing corridors used	• Minimal impact	• Some impacts, most of which can be mitigated
Minimize Socio/cultural effects	• Congestion will cause socio-cultural impacts	• High Impact Potential (i.e. staggered work hours / caps on development)	• Minimal impact	• Minimal impact	• Some impacts, most of which can be mitigated
CONSISTENT WITH EXISTING SYSTEMS					
Existing corridor available	• The existing highway corridor is available	• The existing highway corridor is available	• Two existing rail corridors, and existing highway, air and water corridors are available	• The existing highway corridor is available	• The existing highway corridor is available
Require different modes	• Possible modes include cars, trucks and buses	• Possible modes include cars, trucks and buses	• Requires another mode to access rail/marine/air facility of both ends of trip	• Possible modes include cars, trucks and buses	• Possible modes include cars, trucks and buses
Cost Effective	• The most cost effective solution considering capital cost	• A cost effective solution considering capital cost	• Not cost effective since significant additional infrastructure required to achieve local access	• A cost effective solution considering capital cost	• More costly solution. Costs may be offset by economic benefits to the area and improved Highway safety and operations
COMMENTS	• Will not meet the area's future needs • Minimal impact • Consistent with existing systems	• Will not meet the area's future needs • Impact on development • Consistent with existing systems	• Will not meet the area's future needs • Not consistent with existing systems • Does not adequately address long term needs as highways are the major method of transportation	• Will not meet the area's future needs. • Minimal impacts • Consistent with existing systems	• Will meet the area's future needs. • Some impact requiring mitigation • Consistent with existing systems
RECOMMENDATION	• Eliminate from further consideration	• Eliminate from further consideration	• Eliminate from further consideration	• Eliminate from further consideration	• Carry forward for further analysis