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Appendix A: Original Environmental Study Report (1994) & Addendum (2000)

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The Corporation Of The County Of Victoria
Transportation And Public Works Department

SCUGOG RIVER CROSSING CLASS ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL STUDY REPORT

JANUARY 1994

EXECUTIVE SUMMARY

Introduction

The Scugog River between Lake Scugog and Sturgeon Lake, forms a 60 km long natural barrier to east-west vehicular travel in the County of Victoria. The Scugog River, being part of the Trent-Severn Waterway system, is also a major recreational resource and water transportation route.

Transportation links across the Scugog River exist at three locations within the Town of Lindsay, two of which accommodate the majority of vehicular crossing trips: the Wellington Street river crossing and the Lindsay Street North river crossing (refer to **Exhibit A**).

The need for a new crossing of the Scugog River was first recognized during the 1960's in a Functional Planning Study which established a functional design for a bridge linking Colborne Street (County Road 17) across the Scugog River. Due to funding constraints, the new crossing was not constructed at that time; however, some funding was made available for the completion of a temporary "upper tier road loop" system that utilizes the existing Wellington Street bridge and adjacent County road network. The need for additional crossing capacity of the Scugog River was confirmed in several "follow-up" studies undertaken by both the Town of Lindsay and County of Victoria during the 1970's and 1980's.

In recognition of the need for additional crossing capacity of the Scugog River, the Town of Lindsay has included the following reference to a future river crossing in its Official Plan:

> **"8.4.2 It is recommended that a bridge be constructed over the Scugog River to permit linkage of Highways 35 and 36. This would benefit the industrial areas located in the northeastern sector of Lindsay and reduce truck traffic within the central area of Town. In considering an additional bridge across the Scugog River, consideration should be given to the impact of bridge traffic on connecting road systems".**

In response to the conclusions and recommendations identified in previous studies and in accordance with the County of Victoria's policy to have an independent study conducted when a new County road/river crossing is considered, the County retained Totten Sims Hubicki Associates (1991) Limited (TSH) in May, 1991 to undertake a **Class Environmental Assessment and Preliminary Design Study** for a new crossing of the Scugog River in the vicinity of the Town of Lindsay.

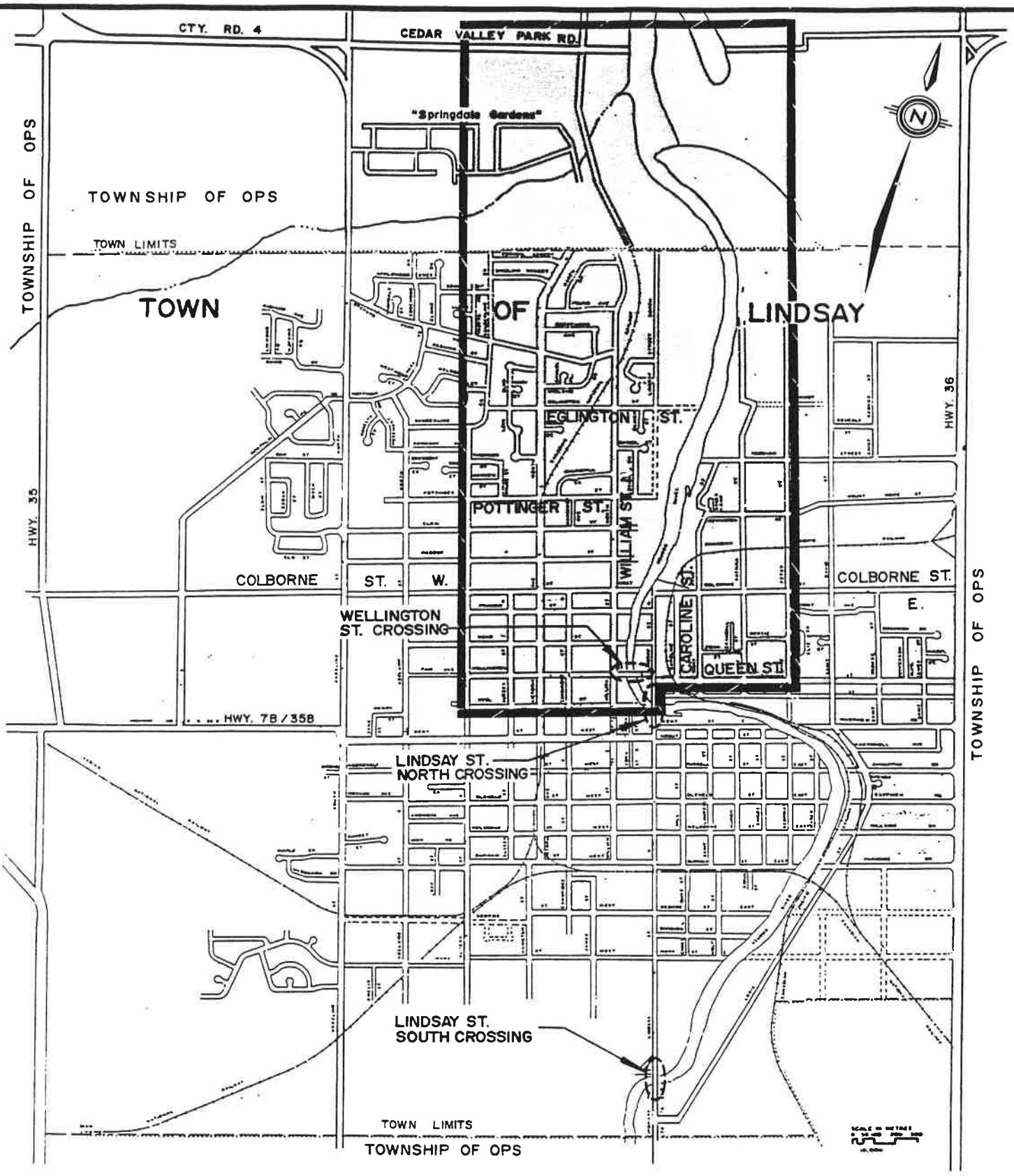
This Environmental Study Report (ESR) documents the planning and preliminary design components of the Environmental Assessment for the proposed new Scugog River crossing. The project falls within the scope of projects described in Schedule "C" of the "Class Environmental Assessment for Municipal Road Projects" (the Class EA) document that has been accepted by the Ministry of the Environment and approved by the Government of Ontario and is subject to the procedures of the environmental planning process outlined in the Class EA document.

Additionally, since the Scugog River is part of the Federally governed Trent-Severn Waterway, the Environment Assessment is also subject to the requirements outlined by the Federal Environmental Assessment Review Process (E.A.R.P.).

Summary: Conclusions and Recommendations

The following major conclusions and recommendations have resulted from the work undertaken as part of the Scugog River Environmental Assessment (additional conclusions and recommendations are contained in the main body of the report):

- *All potential Transportation System Management (TSM) and widening improvements should be implemented to maximize the existing river crossing capacity. Remaining improvements to be implemented include the construction of a continuous two-way centre turn lane on the existing Wellington Street bridge and northbound/southbound left turn lanes at the Wellington Street/Lindsay Street intersection;*
- *TSM and widening improvements to the existing Wellington Street bridge and adjacent intersections are recommended as the first phase of the resolution of the existing and future river crossing capacity problem. This solution alone however, will not resolve anticipated long-term river crossing capacity deficiencies nor existing problems with traffic infiltration and other transportation, environmental and economic concerns;*
- *With all TSM and widening improvements implemented, additional river crossing capacity in the Lindsay area will be required when one or both of the following "triggers" or thresholds have been realized:*
  - *The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or*
  - *Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure i.e. Level of Service E/F.*
- *It is anticipated that one or both of the above thresholds will be achieved by the year 2001;*
- *When additional future capacity is provided, it should result in the accommodation of the long-term (20 to 30 years) vehicular crossing requirements of the Scugog River;*
- *A future two-lane river crossing, generally connecting Colborne Street West and East (i.e. Colborne Street corridor) is recommended to provide long-term river crossing capacity. A new river crossing at this location:*
  - *Best satisfies long-term future river crossing capacity requirements. It is the only crossing alternative considered within the context of this Study that truly satisfies future crossing demands;*
  - *Maximizes the return on the investment in a new bridge crossing and maintenance (rehabilitation) of existing crossings;*



SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

STUDY AREA

LEGEND

STUDY AREA

EXHIBIT A

Summary: Conclusions and Recommendations continued

- *Provides the greatest accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to Lindsay;*
- *Complements the existing local, regional and provincial road network and the existing river crossings;*
- *Requires minimal property acquisition;*
- *Enhances pedestrian circulation along the Scugog River;*
- *Reduces the level of traffic infiltration on residential streets between Colborne Street and Wellington Street; and*
- *Satisfies/conforms to recommendations established and documented by the Commission on Planning and Development Reform in Ontario (Sewell Commission).*

- *All natural and social environmental impacts associated with a crossing in the Colborne Street corridor can be minimized through accepted mitigating measures; and*
- *As a minimum, property should be immediately protected in the Colborne Street corridor for a future river crossing. Failure to protect for a future crossing in this area could in the long-term result in negative traffic, safety, economic and social environmental impacts in the community.*

Study Area

For the purpose of the Environmental Assessment, the primary Study Area was defined as the area north of Peel Street, west of Saint Peter Street, east of Albert Street within the Town of Lindsay and south of Cedar Valley Park Road within the Township of Ops. In general, the Study Area encompassed the existing river crossings within the Town of Lindsay and the surrounding road network. However, it should be recognized that fundamental issues relating to transportation, socio-economic and cultural environments have been assessed for an area extending well beyond the Study Area and Town limits. Shown in **Exhibit A** is the Town of Lindsay and the primary Study Area.

Study Goal and Objectives

The **goals** of the Environmental Assessment were to:

- Re-examine the need for additional crossing capacity of the Scugog River in, or adjacent to the Town of Lindsay;
- Identify the scope and nature of the transportation improvements required to satisfy existing and future river crossing demand; and

- If appropriate, select a crossing location and identify any property that should be protected for its construction.

It is fundamental to recognize that all potential transportation improvements were considered in the context of projected area wide population and employment growth and with the existing and future Provincial, County and local transportation infrastructure.

In order to satisfy the **goals** of the Study, the following **objectives** had to be met:

- Identification and assessment of existing and future river crossing travel patterns based upon realistic and achievable estimates of future traffic growth within and adjacent to the Study Area;
- Review of all practical cost-effective Transportation Systems Management (TSM) and widening techniques to maximize capacity of existing river crossings;
- If necessary, review of all reasonable alternatives for the provision of another bridge crossing;
- If necessary, identification of a new river crossing that will form part of a transportation link that addresses future growth patterns, satisfies forecasted travel demand and is an integral component in the Provincial, County and local road network; and
- Identification of any measures needed to mitigate environmental and construction impacts associated with the provision of additional river crossing capacity.

Project Approach

The Scugog River Crossing Environmental Assessment was carried out in accordance with the "Class Environmental Assessment for Schedule "C" Municipal Road Projects" (the Class EA) and the Federal Environmental Assessment Review Process (E.A.R.P.).

Direction and control of the Environmental Assessment was provided by Mr. P.J. Seaton, P.Eng., County Engineer for the County of Victoria. Meetings were held with Mr. Seaton at "critical" points during the Study and prior to presenting the Study findings to the public.

A number of local Agencies, Federal/Provincial Ministries, Agencies and Authorities were contacted during the course of the Study for their comments and input relating to the Environmental Assessment.

This Environmental Assessment Report (ESR) has been prepared for the County of Victoria's consideration and approval. Following approval by County Council, the ESR will be filed at the County of Victoria Clerk's Office for the required thirty (30) calendar day review period. If no irreconcilable concerns are raised during the review period, the County of Victoria may proceed to construction.

Need and Justification Assessment

The need and justification for additional crossing capacity of the Scugog River was based on a review of the existing river crossing capacity, existing and anticipated future river crossing demand and the ability of the local and regional transportation network to accommodate such demand.

Existing River Crossing Demand and Network Traffic Conditions

The traffic analysis undertaken for the Study reflects local operating conditions and parameters within the Town of Lindsay and is consistent with current and accepted Canadian engineering standards.

The Wellington Street river crossing currently accommodates a daily river crossing demand of 10,800 (1991) vehicles per day Summer Average Weekday Traffic SAWDT (10,050 Average Annual Daily Traffic AADT) and operates within a capacity "range" of 9,800 to 11,400 vehicles per day. Although capacity is a variable parameter derived from peak period to daily volume relationships and directional split, it has been concluded that the **Wellington Street river crossing is currently operating at capacity.**

The Lindsay Street North river crossing currently accommodates a daily river crossing demand of 10,600 (1991) vehicles per day Summer Average Weekday Traffic SAWDT (9,800 Average Annual Daily Traffic AADT) and operates near capacity (10,800 to 13,100 vehicles per day).

The total existing (1991) river crossing demand of 21,400 vehicles per day (SAWDT) at the Lindsay Street North and Wellington Street crossings is within the range of the total combined capacity of the bridges of 20,600 to 24,500 vehicles per day.

The crossing capacity of the Wellington Street bridge is governed by the operation of the adjacent intersections at William Street and Lindsay Street North. During the p.m. peak hour, volumes using the Wellington Street/Lindsay Street North intersection currently exceed the effective capacity of the intersection which results in vehicles queuing over the Wellington Street bridge and impeding traffic operations at the Wellington Street/William Street intersection. Under these operating conditions, the potential for vehicular and pedestrian accidents significantly increases. **Not only does the volume of traffic exceed the physical capacity of the Wellington Street crossing as governed by the adjacent intersections, the level of service provided on the crossing greatly exceeds the operating conditions considered acceptable for the Town of Lindsay.**

Related studies previously undertaken by the County and Town have recommended that Traffic System Management (TSM) improvements be undertaken at the above noted intersections to extend the "capacity life" of the crossing. **A number of these recommendations have been implemented such as; repainting the northbound and southbound lanes on William Street to incorporate separate left turn lanes, and recently, new traffic controllers and revised signal timing and phasing plans have been installed at each intersection.** Previously recommended improvements which have not yet been implemented include, the construction of northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection and the construction of a continuous two-way centre turn lane on the Wellington Street bridge.

Summary: Need and Justification - Existing Conditions

Based on the assessment of existing (1991) conditions, the following major conclusions and recommendations have been established:

- *The Wellington Street river crossing is currently operating at capacity;*
- *The Lindsay Street North river crossing currently operating near capacity;*
- *The total existing (1991) river crossing demand at the Lindsay Street North and Wellington Street crossings is within the range of the total combined capacity of the bridges;*
- *Not only does the volume of traffic exceed the physical capacity of the Wellington Street crossing as governed by the adjacent intersections, the level of service provided on the crossing greatly exceeds the operating conditions considered acceptable for the Town of Lindsay; and*
- *All TSM improvements should be implemented, including a continuous two-way centre turn lane on the existing Wellington Street bridge and northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection, to maximize existing river crossing capacity.*

Future River Crossing Demand and Network Traffic Conditions

The future (2011) traffic projections were based on existing and future population and employment data developed in consultation with County and Town representatives. Local planners were also consulted in regards to the historical and future growth areas within and adjacent to the Town. In addition, sensitivity testing was undertaken to determine the impact of various areas of population and employment growth on preferred river crossing location(s). The 2011 river crossing projections, as determined from employment and population growth, were also audited against growth in historical traffic volume on the existing river crossings within the Town. **In general, varying the location of growth does not affect conclusions regarding the need for and location of a future river crossing.**

The traffic analysis undertaken as part of this Study indicates that the majority of existing and future river crossing trips have either an origin and/or destination within the Town of Lindsay. The river crossing distribution for the 2011 and 1991 planning horizons is as follows:

	2011	1991
• Internal-Internal	37 %	39%
• Internal-External	55 %	53%
• External-External	8 %	8%

Internal-Internal trips are those river crossings which have both origin and destination within the Town of Lindsay and External-External trips are those river crossings which have both origin and destination outside the Town of Lindsay.

The total projected future (2011) river crossing demand at the Lindsay Street North and Wellington Street crossings is well beyond the existing capacity of both bridges as shown below:

RIVER CROSSING	CAPACITY (veh/day)		DEMAND (SAWDT)	
	Existing	With TSM Improvements including Centre Turn Lane on Wellington St. bridge	1991	2011
Wellington Street	9,800 - 11,400	13,300 - 15,000	10,800	14,000 - 16,300
Lindsay Street North	10,800 - 13,100	13,500	10,600	13,700 - 16,100
TOTAL (veh/day)	20,600 - 24,500	26,800 - 28,500	21,400	27,700 - 32,400

The combined capacity of 26,800 to 28,500 vehicles per day assumes that all Transportation Systems Management (TSM) improvements, identified in the ESR and previous traffic operations and planning studies have been implemented, including the widening of the Wellington Street bridge to accommodate a continuous two-way centre left turn lane. It is fundamental to recognize that an additional lane on the existing Wellington Street structure will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections; thereby, resulting in the projected capacity being **extremely optimistic**.

With all TSM improvements implemented, including a centre turn lane on the Wellington Street bridge, additional river crossing capacity in the Lindsay area will be required when one or both of the following "triggers" or thresholds have been realized:

- **The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or**
- **Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure i.e. Level of Service E/F.**

It is anticipated that one or both of the above thresholds will be achieved by the year 2001.

Summary: Need and Justification - Future Conditions

Based on the assessment of future anticipated operating conditions on the local transportation network, the following major conclusions and recommendations have been established:

- *Even with TSM and widening improvements, it is anticipated that the total river crossing demand will reach the combined capacity of the Wellington Street and Lindsay Street North bridges by 2001, resulting in the need for additional crossing capacity;*
- *Should significant additional river crossing capacity not be provided in the future, the following transportation/traffic related impacts can be anticipated with some certainty:*
  - *Peak period congestion will continue to increase in severity over time on the existing river crossings and at the Wellington Street at William Street and Lindsay Street North intersections;*
  - *Increased congestion will compromise safe traffic operations on the local network;*
  - *Increased congestion will result in additional traffic infiltration on local residential roadways within the community particularly on roadways west of William Street between Colborne Street and Wellington Street;*
  - *Increased congestion on the existing river crossings and adjacent intersections will affect emergency service response times to certain areas of the community;*
- *Even if existing and future conditions on the existing crossings are not currently considered to warrant the provision of significant additional crossing capacity, it is clear that significant additional river crossing capacity will be required in the future and that failure to address this issue through at least the protection of a future crossing location will have serious impacts on traffic circulation within the community which will translate into economic and social environmental problems.*

Alternative Solutions To The Provision of Future River Crossing Capacity

Eight (8) alternative planning solutions to the river crossing capacity problem were identified as follows:

- The "Do Nothing" Alternative;
- Transportation Systems Management (TSM) Measures; (signal timing, update traffic controllers, pavement marking, turn lanes, etc.)
- Improve Existing Bus Transit Service;
- Widen Wellington Street Bridge to three lanes within the existing right-of-way;
- Reconstruct Wellington Street Bridge to four basic "through" lanes;
- Construct New River Crossing within the Colborne Street corridor;
- Construct New River Crossing within the Eglington Street/Orchard Park Road corridor; and
- Construct New River Crossing within the Springdale Gardens corridor.

Refer to **Exhibit B** for identification of the three alternative corridors considered for a new river crossing.

Assessment and Evaluation of the Alternative Solutions To The Provision of Future River Crossing Capacity

Prior to the evaluation of the alternative solutions, a qualitative and quantitative assessment of each alternative was undertaken utilizing engineering, transportation, natural environment, social environmental, economic environment, cultural environment and cost assessment criteria. A number of sub-factors (objectives) within each criteria group were also established. Following the assessment of the alternative solutions, an evaluation procedure was developed to determine the relative ranking of the alternative solutions.

The evaluation procedure allowed for technical data, preferences and opinions to be incorporated into the assessment. The relative importance of the criteria/sub-factors was not determined by the evaluation nor did the evaluation indicate where and what criteria should be used for comparing alternatives.

The evaluation that has been utilized to compare various alternatives to the undertaking, contributes to making the Environmental Assessment comprehensive and ensures that the evaluation can be followed in a clear and logical fashion and that all engineering, environmental, etc. issues are given thorough consideration.

As part of the evaluation, sensitivity testing was undertaken which permits identification of alternatives that will have ranking affected by the weighting given to a criteria group or a particular sub-factor. Input from the public was incorporated in the testing and assessment of various criteria/sub-factor weightings; particularly relating to social issues.

The evaluation of the various alternative solutions revealed that with a variety of weighting combinations for the criteria/sub-factors, a new river crossing in the Colborne Street corridor most often ranked as the preferred solution to the provision of future river crossing capacity.

Based on the results of the evaluation and in consideration of public concerns over the accuracy of predicted traffic and the current economic situation, a two phase preferred solution was selected to resolve the river crossing capacity problem.

The **first phase** being:

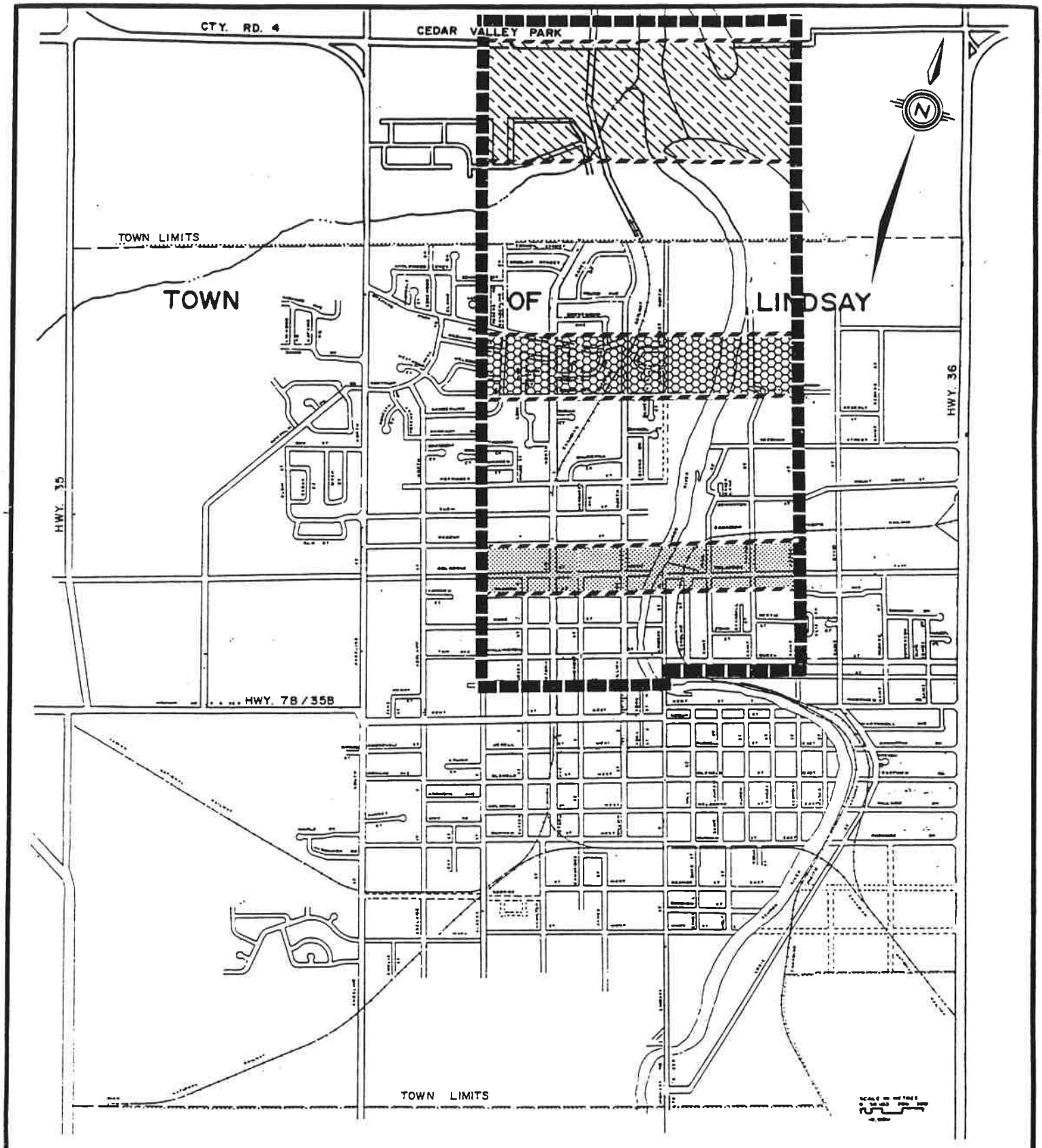
Widening of the Wellington Street bridge to 3 lanes to accommodate a continuous two-way centre turn lane and the construction of northbound/southbound left turn lanes at the Wellington Street/Lindsay Street North intersection; and

The **second phase** being:

The construction of a new river crossing in the Colborne Street corridor.

Below are some of the reasons why the Colborne Street corridor was selected as the second phase of the preferred solution to the provision of long-term river crossing capacity. Specifically, a new river crossing in the Colborne Street corridor will:

- Satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- **Best** satisfy long-term future river crossing capacity requirements. **It is the only crossing alternative that truly satisfies future crossing demand;**
- Maximize the capacity of the Wellington Street bridge i.e. **will ensure that an adequate level of service is provided on the Wellington Street bridge for 20 to 30 years;**
- Maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);
- Provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Complement the existing Provincial, County and local road network and provide a continuous link in the cross-town County Road arterial road network;
- Maximize the use of existing roadway infrastructure;
- Require only minor road improvements between William Street and Lindsay Street North on approaches to Colborne Street river crossing;
- Have no physical impact to properties on Colborne Street west of William Street or east of Lindsay Street North. Minimal property acquisition required on Colborne Street east of William Street and west of Lindsay Street North to accommodate approach roads; exact amount of property acquisition will be dependant on final design of access to Carew Park Apartments and the Colborne Street East/Lindsay Street North intersection;



LEGEND

- SPRINGDALE GARDENS
- ORCHARD PARK / EGLINGTON
- COLBORNE STREET
- STUDY AREA

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

ALTERNATIVE NEW RIVER CROSSING CORRIDORS

EXHIBIT B

- Have no physical impact on any recognized heritage buildings;
- Not require extensive relocation of existing services and utilities;
- Not affect traffic on existing river crossings during construction;
- Provide for greater transportation system "flexibility" and will enhance the network's ability to address emergency situations;
- Result in projected future traffic volumes on Colborne Street that are not dissimilar to **existing** volumes on other arterial roadways within the community i.e. Russell Street, Kent Street;
- Reduce levels of traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street. Other travel patterns within the community will not be significantly altered;
- Provide the greatest level of accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay;
- Have a positive impact on future development/re-development within the Town and enhance development of the industrial area in north-east Lindsay;
- Minimize the future consumption of land outside the Town of Lindsay;
- Be consistent with Town and County Official Plan policies, i.e. no requirements for major re-zoning from residential to commercial, etc.;
- Have minimal impact to existing vegetation, wildlife and water resources. Impact to water resources during construction can be mitigated;
- Minimize fuel consumption and air quality impacts as a result of long-term relief in levels of congestion throughout the river corridor and no out-of-way travel required for the majority of river crossing trips;
- Complement existing river pedestrian pathway system and will provide for improved pedestrian/bicycle opportunities across the Scugog River and to the adjacent parks and walkway system; and
- Provide for enhanced transit service and opportunities within the Town.

A new river crossing in the Colborne Street corridor is also consistent with the recommended Provincial policy statements established by the *Commission on Planning and Development Reform in Ontario (Sewell Commission)*. The Report (finalized in June 1993) prepared by the Commission presents recommendations for an improved planning system for Ontario. In brief, the recommendations relate provincial goals and planning policies that incorporate environmental and other considerations; some of which are:

- To promote new development within built-up areas of existing serviced lands i.e.

minimize "urban sprawl";

- To minimize the future consumption of land;
- To encourage economic growth opportunities within built-up areas of existing serviced lands;
- To minimize natural environmental impacts to wetlands, water resources, fisheries and area wildlife;
- To establish natural "linear" transportation links; and
- To maximize the utilization of the existing road infrastructure.

Below are some of the major issues and concerns that have been identified during the course of the Study regarding a Colborne Street river crossing; many of which relate to the social environment. Specifically, a new river crossing in the Colborne Street corridor will:

- Require minimal property acquisition on Colborne Street east of William Street and west of Lindsay Street North to accommodate approach roads;
- Result in an increase in traffic volumes on some portions of Colborne Street; although it must also be acknowledged that traffic on Colborne Street will continue to grow on an annual basis even without a new river crossing. Future volumes on Colborne Street, with a Colborne Street river crossing, will fall within a range considered acceptable for an arterial facility. Future volumes with/without a Colborne Street river crossing are shown on **Exhibit 9.1** in the ESR;
- May require measures to mitigate noise impacts on Colborne Street between William Street and the west river bank (i.e specifically for the Seniors' residence) as noise levels in this area are projected to increase in excess of the 5 dBA guideline. West of William Street and east of Lindsay Street North, noise levels are not projected to increase in excess of the 5 dBA guideline. Refer to **Section 9.4.3** of the ESR for a description of the noise assessment;
- Have no physical impact to buildings along Colborne Street; however, the increase in traffic may result in proximity impacts (noise, air quality, commercial traffic, safety, etc.); and
- Have aesthetic impacts to residents of the Seniors' residence and Carew Park Apartments on west river bank and to those individuals walking etc. along the adjacent river corridor.

The above issues and concerns were considered in the context of the evaluation of the various alternative solutions to the provision of future river crossing capacity. In summary, it is considered by the Study Team that the positive attributes associated with the Colborne Street crossing outweigh the potential negative attributes. All natural and social environmental impacts associated with a crossing in the Colborne Street corridor can be minimized through accepted mitigating measures. Mitigation techniques are described in **Section 9.7** of the ESR.

Below are some of the "main" reasons why the other primary alternative river crossing solutions were not selected to address long-term river crossing demands.

Implementation of TSM measures and widening of the Wellington Street bridge to three (3) lanes as a "stand alone" solution:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 9 to 10 years (from 1991)** requiring further provision of additional river crossing capacity;
- An additional lane on the existing Wellington Street structure will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections; thereby, resulting in the **9 to 10 year estimate being extremely optimistic**;
- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would provide no real improvement in the existing Provincial, County and local road network. Would not provide a continuous link in the cross-town County Road arterial road network;
- Cross section of existing Wellington Street structure could not be increased to accommodate an additional lane without significant upgrading to the structure including relocation of **major** utilities;
- Would result in a significant impact on traffic operations during construction;
- During construction, significant negative impact to businesses within community as a result of increased congestion on Kent Street and reduced river crossing opportunities;
- During construction, would significantly impact response times of emergency service vehicles accessing the eastern part of Town;
- Would not provide for greater transportation system "flexibility" nor enhance the network's ability to address emergency situations;
- Traffic infiltration will continue to increase on local residential streets between Colborne Street West/East and Wellington Street/Queen Street, exacerbating the accident potential to vehicles and pedestrians;
- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;

- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- Would not provide significant improvement in transit service and opportunities within the Town; and
- Would not enhance pedestrian movement opportunities across the Scugog River and may result in decrease in pedestrian safety as a result of reduced sidewalk widths to accommodate the widening.

It should also be recognized that the existing Wellington Street structure requires major rehabilitation. At the time rehabilitation works are initiated, the existing structure could be widened.

Reconstruction of Wellington Street bridge to four (4) basic lanes:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 15 to 20 years** (from 1991) requiring further provision of river crossing capacity;
- A new bridge structure would be required to accommodate 4 "through" lanes;
- River crossing would have undesirable geometrics (>7% grade) to satisfy 6.7 m navigation clearance requirement over the Scugog River. The height restriction of 6.7 m on the Scugog River, as dictated by Trent-Severn Waterway, is for river crossings north of the Lindsay Street locks. It has been assumed that all new river crossings may be required to maintain this height requirement. This assumption has been confirmed by Trent-Severn Waterway; however, this issue was not a major factor in determining the preferred solution to the provision of long-term crossing capacity nor was it an issue in ruling out reconstructing the Wellington Street bridge as a solution;
- Would not maximize the return on the investment in a new bridge crossing;
- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would not be compatible with the existing Provincial, County and local road network. **Major** road works/widenings would be required to adjacent intersections and connecting roads. Even with road network improvements, a continuous link in the cross-town County Road arterial road network could not be provided;
- Would require extensive relocation of major services and utilities;
- Would result in significant physical impact to existing properties and buildings

adjacent to the Wellington Street bridge and Wellington Street/William Street and Wellington Street/Lindsay Street North intersections, including the Queen Street United Church (heritage building) and auto dealership;

- Would result in significant physical impact to properties along Wellington Street west of William Street and east of Queen Street to accommodate road improvements;
- Would result in significant impact to contaminated lands on the south-east corner of the Wellington Street/William Street intersection adjacent to Wellington Street bridge. Cost of site decontamination/contaminant management may make widening of the structure infeasible;
- Would result in a significant impact on traffic operations during construction;
- During construction, significant negative impact to businesses within community as a result of increased congestion on Kent Street and reduced river crossing opportunities;
- During construction, would significantly impact response times of emergency service vehicles accessing the eastern part of Town;
- Would not provide for greater transportation system "flexibility" nor enhance the network's ability to address emergency situations;
- Traffic infiltration will continue to increase on local residential streets between Colborne Street West/East and Wellington Street/Queen Street, exacerbating the accident potential to vehicles and pedestrians;
- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;
- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- Would not provide significant improvement in transit service and opportunities within the Town; and
- Would not enhance pedestrian movement opportunities across the Scugog River.

Construction of a new river crossing in the Eglington Street/Orchard Park Road corridor:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;

- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 11 to 16 years** (from 1991) requiring further provision of river crossing capacity;

- Would not maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);

- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;

- Would not be compatible with existing Provincial, County and local road network. **Major** network improvements would be required including the upgrading/widening of existing roads on both sides of river and construction of new road(s) on east side of river;

- Even with road network improvements, a continuous link in the cross-town County Road arterial road network could not be provided. It should also be noted that there are no existing east-west collector roads north of Colborne Street;

- **Major** property acquisition requirements on the east side of the river crossing to accommodate new approach road(s);

- Potential for increased traffic in the east-west and north-south directions in the vicinity of the Eglington Street corridor (this includes collector roads - Orchard Park Road, Victoria Avenue and the County Road - Colborne Street). It should be recognized that Victoria Avenue was **not** constructed to function as a major arterial;

- Does not provide long-term reduction in traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street;

- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;

- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;

- Significant impact to mature trees and vegetation on east/west river bank;

- Potential for proximity and social environmental (noise, air quality, safety, commercial traffic, etc.) impacts greater than what may be anticipated with Colborne Street river crossing due to the minimal amount of traffic volumes in the corridor today;

- Would not minimize fuel consumption and air quality impacts throughout the river corridor; and

- Minimal improvement to pedestrian movement opportunities across the Scugog River.

Construction of a new river crossing in the Springdale Gardens corridor:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 8 to 12 years** (from 1991) requiring further provision of river crossing capacity;
- Traffic volumes on a new crossing would be low i.e. crossing would be under-utilized;
- Would not maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);
- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would not be compatible with the existing Provincial, County and local network. **Major** network improvements would be required i.e. construction of new roads(s) on both sides of river and upgrading to existing road(s) on north - west side of river;
- Provides minimal improvement in transportation network flexibility - northern river crossing location is not convenient. Anticipated development patterns within the Town would result in out-of-way travel;
- **Major** property acquisition and consumption of undeveloped lands on both the east and west sides of the river crossing to accommodate new roads i.e. major unwarranted addition to and extension of the existing road infrastructure;
- Does not provide long-term reduction in traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street;
- Potential for increased traffic in the north-south directions on Victoria Avenue; it should be recognized that Victoria Avenue was not constructed to function as a major arterial;
- Not an efficient planning solution as some lands in the northern area may not be serviced and a new roadway may result in some development pressure i.e. **"urban sprawl"** and limited development potential in/adjacent to the Class "1" wetland area;
- In the short-medium term, existing serviced land within the Town would not be fully utilized;
- Represents inappropriate investment in infrastructure including roads, sewers, water, schools, police, fire etc. to service development that may be attracted beyond the existing Town limits;
- In the short-medium term, opportunities for economic growth within the Town will

be limited due to transportation system constraints.

- Major potential for impact to the natural environment, specifically to the Provincially significant Class "1" wetland;
- Potential for proximity and social environmental (noise, air quality, safety, commercial traffic, etc.) impacts greater than what may be anticipated with Colborne Street river crossing due to the undisturbed nature of the surrounding area;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- No "practical" improvement to transit service and opportunities within the Town; and
- No "practical" improvement to pedestrian movement opportunities across the Scugog River.

A river crossing located in the "Springdale Gardens/Cedar Valley Park Road" corridor is not consistent with the recommended Provincial policy statements established by the *Commission on Planning and Development Reform in Ontario (Sewell Commission)*. Furthermore, the construction of a northern river crossing would reflect poor growth management practices and an inefficient use of taxpayer's dollars.

A river crossing constructed in the Springdale Gardens/Cedar Valley Park Road corridor is not consistent with the recommended planning guidelines identified in the Ministry of Transportation of Ontario (MTO) "*Transit-Supportive Land Use Planning Guidelines*" and the Transportation Association of Ontario (TAC) "*Guide to Transit Considerations*". Listed below are a few of the "key" conclusions and recommendations identified in the MTO and TAC transit planning guidelines which are applicable to the issue regarding the location of a new Scugog River crossing:

- Contiguous development should be encouraged within new areas being built-up so that planned transit service may be phased in efficiently along permanent routes to ensure that new subdivisions are located within a suitable distance of existing transit service;
- New development should be encouraged to locate within an existing area rather than in an isolated location to take advantage of existing activities and transit infrastructure;
- Reduce scattered residential or commercial development in isolated rural areas which can not be served by transit at a reasonable cost. Extensions to transit are more cheaply implemented in areas contiguous to those already serviced;
- Avoid designating additional land for urban development until densities in existing urban areas begin to approach target levels set out in official plans;
- Transit friendly subdivisions will result in an enhanced quality of life, less vehicle intrusions and reduced air pollution and fuel consumption;
- Unfavourable road design may lead to incomplete or duplicate coverage and a lack

of direct principal road connection between neighbouring communities may prevent continuity of service; and

- To improve the attractiveness of transit, arterials and collectors should be designed to provide as direct route as possible, to minimize trip length and travel time and to avoid backtracking. Roads which permit direct and efficient routing for transit vehicles also reduce the costs for transit operations, and result in a more comfortable ride for passengers.

Summary: Alternative Solutions - Assessment and Evaluation

The assessment and evaluation of alternative planning solutions to resolve the river crossing capacity deficiencies has resulted in the following major conclusions:

- *The evaluation of the various alternative solutions revealed that a new river crossing in the Colborne Street corridor most often ranked as the preferred solution to the provision of long-term river crossing capacity;*
- *A new river crossing in the Colborne Street corridor best satisfies long-term future river crossing capacity requirements. It is the only crossing alternative considered within the context of this Study that truly satisfies future crossing demands and maximizes the investment in a new bridge crossing;*
- *A new river crossing in the Colborne Street corridor will ensure that an adequate level of service is provided on the Wellington Street bridge for 20 to 30 years;*
- *A new river crossing in the Colborne Street corridor is consistent with the recommended Provincial policy statements established by the Commission on Planning and Development Reform in Ontario (Sewell Commission) and recommended planning guidelines identified in the Ministry of Transportation of Ontario (MTO) "Transit-Supportive Land Use Planning Guidelines" and the Transportation Association of Ontario (TAC) "Guide to Transit Considerations";*
- *A new river crossing in the Colborne Street corridor would be compatible with the existing Provincial, County and local road network;*
- *A new river crossing in the Colborne Street corridor is the only planning alternative that requires minimal additional infrastructure improvements (i.e. roads) and property acquisition; and*
- *In general, varying the location of growth within and adjacent to the Town of Lindsay does not affect conclusions regarding the need for and location of a future river crossing.*

Public Involvement

Public involvement has been an important, integral and ongoing component of the Scugog River Crossing Environmental Assessment. Throughout the Study, area residents were given the opportunity to provide meaningful input into the Study. By continually providing individuals and interest groups with the opportunity to identify their concerns and special knowledge, the Study Team was able to respond to specific concerns. A public participation program comprising of two formal Public Information Centres (held on November 27, 1991 and June 3, 1992) was designed to establish a sound understanding of the public's views and to inform the public of the Study progress and findings. An additional public meeting on December 15, 1992 with the County Transportation and Public Works Committee was held following submission of the Draft ESR.

Based on discussions with the public and correspondence received during the course of the Study, it can be concluded that the majority of the public who provided input, concur that an additional river crossing within the Town is required in the near future. The provision of additional river crossing capacity by means of constructing a bridge at Colborne Street is supported by a majority of those residents who have indicated a preference for a crossing location.

The preferred solution, i.e. a new river crossing at Colborne Street, was generally supported by the Public; however, there are individuals and interest groups who are opposed to a river crossing at the Colborne Street location. Some members of the public also question the need and justification for a new crossing. A comprehensive summary of public input is included in the ESR and petitions of those against and those in support of a river crossing at Colborne Street are included in **Appendices A9 and A10** respectively.

Interest Group Involvement

Contact was maintained throughout the course of the Study with the following groups:

- Town of Lindsay Mayor's Bridge Task Force; and
- People Against Colborne Expansion (P.A.C.E.).

Both of the above interest groups have indicated during the course of the Study that they do **not** support a Colborne Street river crossing.

While the Scugog River Crossing Class Environmental Assessment was underway, the Town of Lindsay's Mayor initiated a Bridge Task Force which undertook a survey of "taxpayers" within the Town. The survey was distributed in the Town only and inserted in the March 1992 interim tax bill. A detailed summary of the results of the survey and findings of the Bridge Task Force is contained in **Section 2.4.2** of the ESR.

Assessment and Evaluation of Alternative Design Concepts

The Colborne Street river crossing alignment alternatives as described in **Section 8.0** of the report were assessed utilizing similar methodology and criteria as employed in the quantitative and qualitative assessment of the alternative solutions to the provision of future river crossing capacity; however, it should be recognized that the difference(s) between the design concepts generally relate

to geometrics and the structure.

Strategy for the Provision of Future Crossing Capacity

Based on an economic and cash flow analysis, the following strategy is recommended:

Phase 1: Rehabilitate the existing Wellington Street structure **now** (i.e. 1994) and construct a centre turn lane on the bridge and northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection; and

Phase 2: Construct a new river crossing in or after 1998 (i.e. a four year delay from 1994). After four years the present value of constructing a new river crossing plus current widening costs (Wellington Street bridge) is less than the cost of building a new bridge now.

In considering the implementation strategy, it should be recognized that the economic analysis did not account for potential losses to the tourist/business community as a result of reduced river crossing opportunities during construction/rehabilitation.

Preliminary Cost Estimates

Phase 1:

The cost to widen of the existing Wellington Street structure to 3 lanes has been estimated at $ 366,000 in 1992 dollars (exclusive of cost to relocate major utilities and additional structural costs associated with rectifying other deficiencies). The cost to rehabilitate the Wellington Street bridge has been estimated at $ 285,000 (exclusive of any costs associated with a widening). **In summary, the total cost to rehabilitate, widen the Wellington Street bridge to 3 lanes and construct northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection could be in the $ 750,000 to $ 1,000,000 range.**

Phase 2:

The preliminary project cost estimate associated with the provision of a **Colborne Street crossing (2 lane capacity) of the Scugog River (including provisions for sidewalks) and the associated approach roadways is $3,850,000** in 1992 dollars, excluding property acquisition, utility relocation, engineering and contingency costs. Minimal property acquisition will be required; definitive property requirements can be identified once access to Carew Park Apartments is resolved and the Colborne Street East/Lindsay Street North intersection is finalized at the detail design stage. Utility relocation costs will be minimal.

Conclusions and Recommendations

Long range planning is fundamental to the economic viability of a community; effective planning must recognize the inherent relationship between land use and transportation. The work

summarized in this Environmental Study Report (ESR) clearly recognizes this relationship and the associated environmental impacts. As well, conclusions with respect to the need for additional crossing capacity and the assessment and evaluation of alternative methods of providing additional capacity have been made in the broad framework of societal issues. Summarized in the following tables are the "key" conclusions and recommendations resulting from the Study.

Summary: Conclusions and Recommendations

The work undertaken as part of the Scugog River Environmental Assessment has resulted in the following conclusions and recommendations:

- *All potential Transportation System Management (TSM) and widening improvements should be implemented to maximize the existing river crossing capacity. Remaining improvements to be implemented include the construction of a continuous two-way centre turn lane on the existing Wellington Street bridge and northbound/southbound left turn lanes at the Wellington Street/Lindsay Street intersection;*
- *TSM and widening improvements to the existing Wellington Street bridge and adjacent intersections are recommended as the first phase of the resolution of the existing and future river crossing capacity problem. This solution alone however, will not resolve anticipated long-term river crossing capacity deficiencies nor existing problems with traffic infiltration and other transportation, environmental and economic concerns;*
- *With all TSM and widening improvements implemented, additional river crossing capacity in the Lindsay area will be required when one or both of the following "triggers" or thresholds have been realized:*
  - *The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or*
  - *Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure i.e. Level of Service E/F.*
- *It is anticipated that one or both of the above thresholds will be achieved by the year 2001;*
- *An additional lane on the Wellington Street bridge will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections resulting in the 2001 capacity projection being extremely optimistic. In addition, the widening may result in a decrease in pedestrian safety as a result of reduced sidewalk widths;*
- *The existing Wellington Street structure requires major rehabilitation. At the time rehabilitation works are initiated, the existing structure could be widened to accommodate a continuous centre turn lane;*

Summary: Conclusions and Recommendations continued

- *Additional river crossing capacity, by means of a new river crossing in the Colborne Street corridor should be provided to safely and efficiently accommodate long-term (20 to 30 years) vehicular crossing requirements of the Scugog River. The other alternatives considered within the context of the Study do not satisfy a fundamental requirement to accommodate long-term river crossing demands and to provide long-term relief to capacity conditions on the Wellington Street river crossing;*
- *Based on the financial/cash flow analysis undertaken for the Study, it was found that it would be financially desirable to rehabilitate and widen the existing Wellington Street structure now and construct a new river crossing in or after 1998;*
- *As a minimum, property should be immediately protected in the Colborne Street corridor for a future river crossing. Failure to protect for a future crossing in this area could in long-term result in negative traffic, safety, economic and social environmental impacts in the community;*
- *The planning guidelines identified by the Sewell Commission, MTO and TAC, appear to substantiate conclusions made by the County relative to a river crossing in the Colborne Street corridor;*
- *All natural and social environmental impacts associated with a crossing in the Colborne Street corridor can be minimized through accepted mitigating measures;*
- *The construction of a river crossing in the Colborne Street corridor will require the re-classification of Colborne Street - east of William Street to the river crossing to a County Road, through an amendment to the Town of Lindsay's Official Plan; and*
- *It must be acknowledged that a river crossing to the north of Town may be required in the future; further long-range (i.e. beyond 20 years) planning work is required by the County, Town and Township of Ops.*

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CLASS ENVIRONMENTAL ASSESSMENT
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1.0 INTRODUCTION

1.1 Background

The Scugog River between Lake Scugog and Sturgeon Lake, forms a 60 km long natural barrier to east-west vehicular travel in the County of Victoria. The Scugog River is also an integral part of the Trent-Severn Waterway and provides an important transportation corridor for boating activities.

The Town of Lindsay is the only major urban centre located on the Scugog River and is the site for three of the four existing vehicular bridge crossings of this watercourse. Over the last decade, a number of transportation planning and traffic operations studies have identified the need for additional vehicular crossing capacity of the Scugog River within the Town of Lindsay. In particular, these studies have concluded that additional crossing capacity is required to accommodate future traffic demands.

The need for a new crossing of the Scugog River was first recognized during the 1960's in a Functional Planning Study which established a functional design for a bridge linking Colborne Street (County Road 17) across the Scugog River. Due to funding constraints, the new crossing was not constructed at that time; however, some funding was made available for the completion of a temporary "upper tier road loop" system that utilizes the existing Wellington Street bridge and adjacent County road network. In 1977/1978, the Town of Lindsay conducted a Traffic Operations Study which reconfirmed the future need for additional crossing capacity of the Scugog River.

In 1986, the Town of Lindsay in recognition of the need for a new crossing, requested that the County of Victoria undertake a Study to determine the future location for a new crossing of the Scugog River. In response to the Town's request, the County undertook the Scugog River Crossing Traffic Study. The Study recommended that a new crossing of the Scugog River be located within a "Corridor" north of the existing Wellington Street bridge, between Colborne Street and the westerly extension of Orchard Park Road within the Town of Lindsay. It was also recommended in the Traffic Study that an Environmental Assessment be undertaken to address, in detail, the need and justification for a new river crossing and to consider the environmental and engineering factors associated with the selection of a specific site for a new river crossing.

In 1989, the Town of Lindsay, in conjunction with the County of Victoria and the Ministry of Transportation (MTO), undertook the Town of Lindsay Traffic Operations Study. It was concluded in the Study that the Wellington Street bridge is at capacity and that traffic management techniques and minor intersection improvements could provide additional river crossing capacity for a maximum of 5 to 6 years; however, intersection operations would not achieve the level of service considered desirable by the Town. Furthermore, it was noted in the Traffic Operations Study that river crossing demand will increase to the point where the Wellington Street bridge will have to be re-constructed to a minimum four (4) lane cross-section or a new crossing be constructed to the north. The Study further concluded that the most practical location for a new river crossing from a purely traffic operations and transportation planning perspective would be between Wellington Street and Pottinger Street. The Study represented a thorough review of transportation issues on a systems-wide basis and included an assessment of various alternative solutions to resolve traffic concerns.

As can be noted from the above, the need for additional river crossing capacity has been confirmed in several studies. The importance of the crossing in terms of compatibility with the transportation

network of the Town and County has also been recognized in previous studies.

In recognition of need for additional crossing capacity of the Scugog River, the Town of Lindsay has included the following reference to a future river crossing in its Official Plan:

> **"8.4.2 It is recommended that a bridge be constructed over the Scugog River to permit linkage of Highways 35 and 36. This would benefit the industrial areas located in the northeastern sector of Lindsay and reduce truck traffic within the central area of Town. In considering an additional bridge across the Scugog River, consideration should be given to the impact of bridge traffic on connecting road systems".**

In response to the conclusions and recommendations identified in previous studies and in accordance with the County of Victoria's policy to have an independent study conducted when a new County road/river crossing is considered, the County retained Totten Sims Hubicki Associates (1991) Limited (TSH) in May, 1991 to undertake a **Class Environmental Assessment and Preliminary Design Study** for a new crossing of the Scugog River in the vicinity of the Town of Lindsay.

1.2 Study Area

For the purpose of the Environmental Assessment, the primary Study Area was defined as the area north of Peel Street, west of Saint Peter Street, east of Albert Street within the Town of Lindsay and south of Cedar Valley Park Road within the Township of Ops. In general, the Study Area encompassed the existing river crossings within the Town of Lindsay and the surrounding road network. However, it should be recognized that fundamental issues relating to transportation, socio-economic and cultural environments have been assessed for an area extending well beyond the Study Area and Town limits.

Shown in **Exhibit 1.1** is the Town of Lindsay from a regional (area-wide) perspective and shown in **Exhibit 1.2** is the Town of Lindsay and subject Study Area from a local perspective.

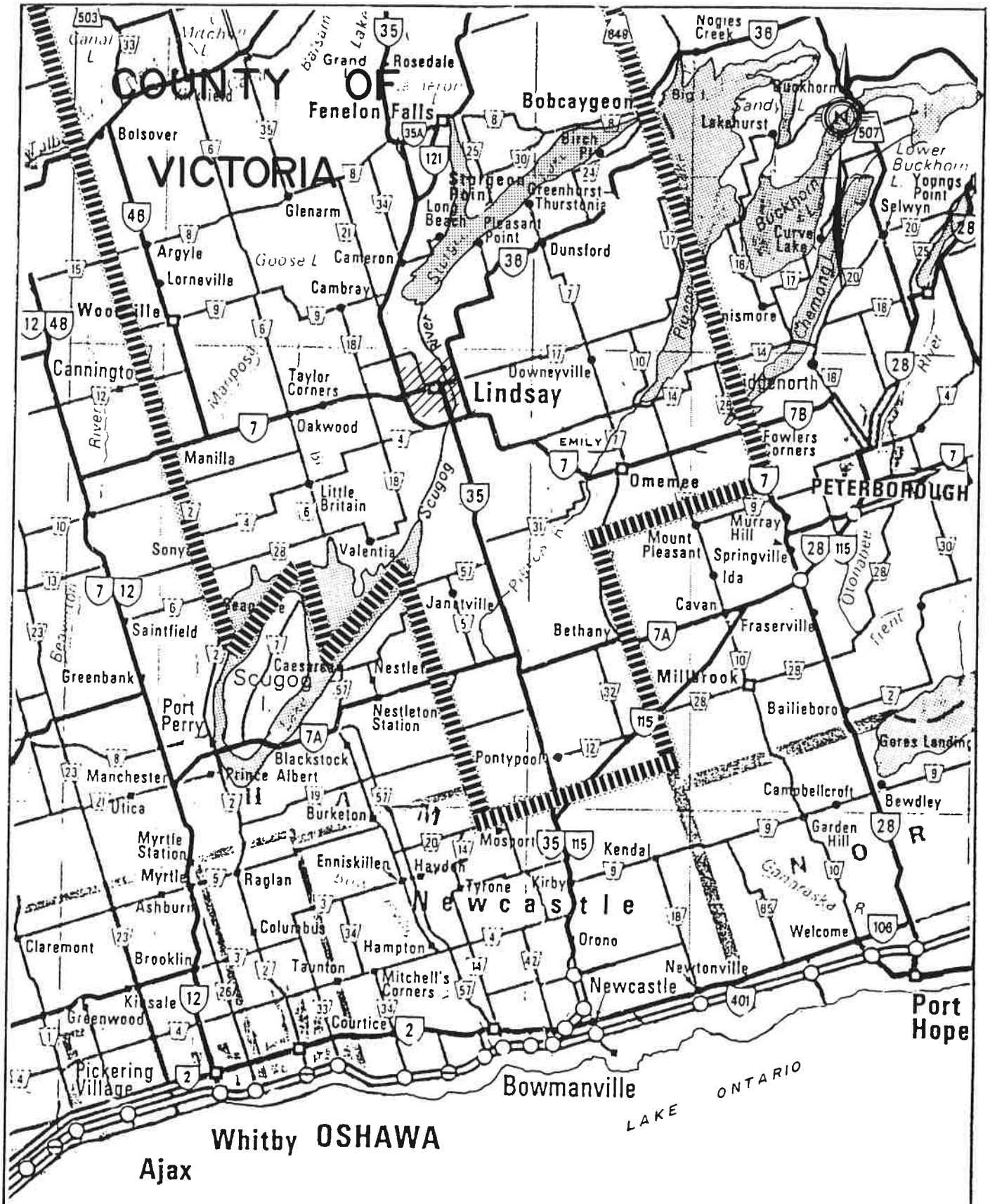
1.3 The Environmental Study Report

This Environmental Study Report (ESR) documents the planning and preliminary design components of the Environmental Assessment for the proposed new Scugog River crossing. The project falls within the scope of projects described in Schedule "C" of the "Class Environmental Assessment for Municipal Road Projects" (the Class EA) document that has been accepted by the Ministry of the Environment and approved by the Government of Ontario and is subject to the procedures of the environmental planning process outlined in the Class EA document.

Additionally, since the Scugog River is part of the Federally governed Trent-Severn Waterway, the Environment Assessment is also subject to the requirements outlined by the Federal Environmental Assessment Review Process (E.A.R.P.).

Included in this ESR is a discussion of the following:

- Need and justification for a new crossing of the Scugog River based on existing and



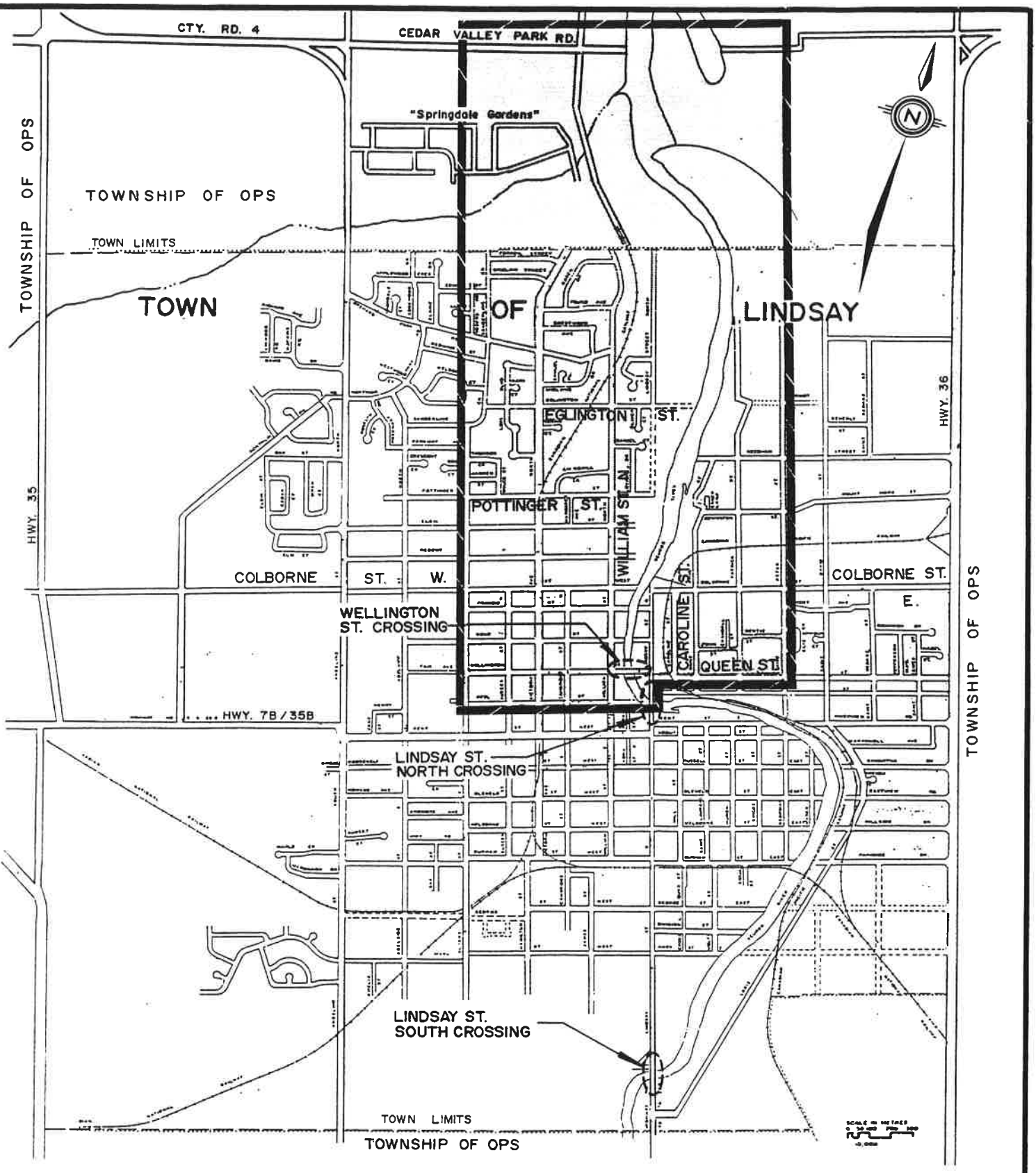
SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

TOWN OF LINDSAY
REGIONAL CONTEXT

LEGEND

COUNTY OF VICTORIA BOUNDARY

EXHIBIT 1.1



SCUGOG RIVER CROSSING
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LEGEND

STUDY AREA

STUDY AREA - LOCAL CONTEXT

EXHIBIT 1-2

long-term transportation requirements from a local and regional perspective;

- Existing natural and socio-economic/cultural environmental conditions;
- Assessment and evaluation of alternative solutions to provide additional river crossing capacity;
- Assessment and evaluation of alternative design concepts for the preferred solution to the provision of additional river crossing capacity; and
- Potential environmental impacts and mitigating measures associated with implementing the preferred solution.

The subject ESR has been prepared for the County of Victoria's consideration and approval. Following approval by County Council, the ESR will be filed at the County of Victoria Clerk's Office for the required thirty (30) calendar day review period. If no irreconcilable concerns are raised during the review period, the County of Victoria may proceed to construction.

1.4 Study Goal and Objectives

The **goals** of the Environmental Assessment were to:

> **Re-examine the need for additional crossing capacity of the Scugog River in, or adjacent to the Town of Lindsay, identify the scope and nature of the improvements required to satisfy existing and future river crossing demands and if appropriate, select a crossing location and identify any property that should be protected for its construction. All potential transportation improvements were considered in the context of projected area wide population and employment growth and with the existing and future Provincial, County and local transportation infrastructure.**

In order to satisfy the **goals** of the Study, the following **objectives** had to be met:

- Identification and assessment of existing and future river crossing travel patterns based upon realistic and achievable estimates of future traffic growth within and adjacent to the Study Area;
- Review of all practical cost-effective Transportation Systems Management (TSM) and widening techniques to maximize capacity of existing river crossings;
- If necessary, review of all reasonable alternatives for the provision of another bridge crossing;
- If necessary, identification of a new river crossing that will form part of a transportation link that addresses future growth patterns, satisfies forecasted travel demand and is an integral component in the Provincial, County and local road network; and
- Identification of any measures needed to mitigate environmental and construction impacts associated with the provision of additional river crossing capacity.

2.0 PROJECT APPROACH

2.1 The Environmental Assessment Process

The Scugog River Crossing Environmental Assessment was carried out in accordance with the "Class Environmental Assessment for Schedule "C" Municipal Road Projects" (the Class EA) and the Federal Environmental Assessment Review Process (E.A.R.P.).

The Environmental Assessment was conducted based on a phased approach as detailed in **Exhibit 2.1**. The process involved the following major activities:

Phase 1 - Data Inventory and Needs Assessment

- Research previous studies;
- Identify and document the problem;
- Review the existing and projected river crossing demands;
- Analyse and determine the existing river crossing capacity and future capacity requirements; and
- Summarize the need for transportation improvements from a regional and local perspective.

Phase 2 - Development and Evaluation of Alternative Solutions

- Identify the natural, social and cultural environmental and economic conditions within the context of the Study;
- Identify and assess the alternative solutions to the problem including the "do nothing" alternative;
- Conduct Public Information Centre/Meeting No. 1;
- Evaluate the alternative solutions to the problem using a comprehensive evaluation process which recognizes technical as well as environmental issues; and
- Select the preferred solution based on the evaluation and input received from the public, interest groups, government agencies, etc.

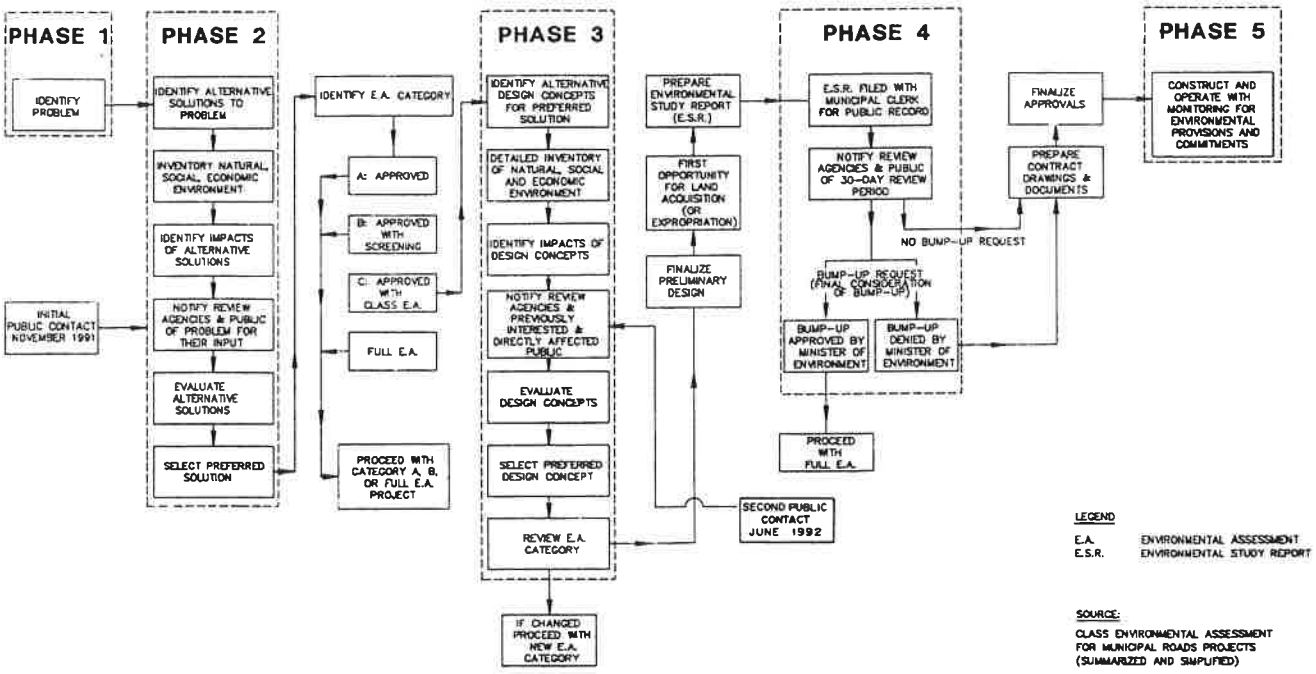
Phase 3 - Development of Alternative Design Concepts and Evaluation

- Identify and assess the alternative design concepts for implementing the preferred solution to the problem;
- Conduct Public Information Centre/Meeting No. 2;
- Evaluate the alternative design concepts based on similar methodology and criteria used to evaluate the alternative solutions (Phase 2);
- Select the preferred design concept based on the evaluation and input received from the public, interest groups, government agencies, etc.;
- Prepare preliminary design plans for the preferred design concept;
- Document findings in an Environmental Study Report (ESR); and
- Present the ESR to the County of Victoria Council members.

ENVIRONMENTAL PROCESS

- THIS STUDY WILL FOLLOW THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS AS OUTLINED IN THE DOCUMENT ENTITLED "CLASS ENVIRONMENTAL ASSESSMENT FOR MUNICIPAL ROAD PROJECTS" APPROVED BY THE MINISTER OF THE ENVIRONMENT IN APRIL OF 1987.
- THE FOLLOWING FLOW CHART ILLUSTRATES THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS:

PLANNING AND DESIGN PROCESS FOR CLASS EA TYPE MUNICIPAL ROADS PROJECTS



- IF ANY CONCERNS RAISED DURING THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS CANNOT BE RESOLVED, ANY PERSON OR PARTY MAY REQUEST THAT THE MINISTER OF THE ENVIRONMENT "BUMP-UP" THIS STUDY TO AN INDIVIDUAL ENVIRONMENTAL ASSESSMENT. ULTIMATELY, THE DECISION TO AUTHORIZE A "BUMP-UP" RESTS WITH THE MINISTER OF THE ENVIRONMENT.

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

THE ENVIRONMENTAL PROCESS

EXHIBIT 2-1

Phase 4 - File ESR

- File the ESR with the County Clerk for public record.

The filing of the ESR will conclude the planning and preliminary design stage of the project. The ESR will be filed in the public record and be made available for review by the public for the thirty (30) calendar day review period. The ESR will be available for review at the County of Victoria municipal building during the office hours noted below:

County of Victoria
P.O. Box 9000
26 Francis Street
Lindsay, Ontario
K9V 5R8

Office hours:
Monday to Friday: 8:30 a.m. to 4:30 p.m.

If no outstanding concerns are brought forward during the review period, the County of Victoria may proceed to construction.

The Class EA contains a provision which allows for changing the status of a project from a Class EA to an Individual Environmental Assessment. This is called a "Bump-Up" provision. Members of the public, interest groups and government agencies, etc. may request that an Individual Environmental Assessment be prepared for a specific project if they feel their concerns have not been addressed through the Class EA planning process. The Minister of the Environment determines whether or not this is necessary and the decision in this regard is final. If the "Bump-Up" is granted, the project cannot proceed unless an Individual Environmental Assessment is prepared. The Individual Environmental Assessment is subject to a formal government review and approval and may result in a formal public hearing. If anyone wishes to request a "Bump-Up" of the Scugog River Crossing Class Environmental Assessment, they must submit a written request, by the end of the thirty (30) calendar day review period, to the Minister of the Environment at the following address with a copy to the proponent:

The Honourable Bud Wildman
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

Mr. P. J. Seaton, P.Eng.
County Engineer
County of Victoria
P.O. Box 9000
26 Francis Street
Lindsay, Ontario
K9V 5R8

2.2 Internal Involvement

General direction for the Environmental Assessment has been provided by Mr. P.J. Seaton, P.Eng., County Engineer, County of Victoria. Meetings were held with the County Engineer at "key" points in the Study and prior to presenting the Study findings to the public.

The following Sub-Consulting firms assisted TSH in the Environmental Assessment:

- Archaeological Services Incorporated (Archaeological and Heritage Assessment);
- Soils Investigated Services Limited (Geotechnical Investigation), and

- Northway Map Technology Limited (Aerial Mapping).

The following Government Departments, Special Interest Groups, etc. within the County of Victoria were contacted at the project initiation stage through correspondence notifying them of project commencement and requesting their comments:

- Town of Lindsay Engineering Department;
- Town of Lindsay Fire Department;
- Town of Lindsay Police Department;
- Town of Lindsay Water Board;
- Town of Lindsay CATV;
- Town of Lindsay Hydro;
- Kawartha Region Conservation Authority;
- Haliburton, Kawartha, Pine Ridge District Health Unit;
- County of Victoria Board of Education;
- Peterborough-Victoria-Northumberland and Newcastle R.C.S.S. Board;
- Township of Fenelon;
- Village of Fenelon Falls;
- Township of Ops;
- People Against Colborne Expansion (P.A.C.E.);
- Town of Lindsay Parks and Recreation Board (contacted following project initiation);
- Town of Lindsay - LACAC Association (contacted following project initiation); and
- Town of Lindsay Mayor's Bridge Task Force (contacted following project initiation).

During the course of the Study, a number of the aforementioned departments, etc. provided input relative to the project. Refer to **Appendix A**, specifically **Appendix A1**, for a comprehensive summary of related project correspondence.

2.3 External Involvement

External Ministries, Agencies and Authorities contacted during the course of the Study are as follows:

a) **Federal Ministries:**

- Department of Indian and Northern Affairs;
- Canada Coast Guard;
- Environment Canada - Environment Protection Service; and
- Environment Canada - Trent-Severn Waterway.

b) **Provincial Ministries:**

- Ministry of the Environment;
- Ministry of Natural Resources;
- Ministry of Government Services;
- Ministry of Colleges and Universities;
- Ministry of Northern Development and Mines;
- Ministry of Municipal Affairs;

- Ministry of Industry and Trade;
- Ministry of Correctional Services;
- Ministry of Education;
- Ministry of Citizenship and Culture;
- Ministry of Energy;
- Ministry of Health;
- Ministry of Treasury and Economics;
- Ministry of Agriculture and Food;
- Ministry of Transportation;
- Ministry of the Solicitor General;
- Ministry of Tourism and Recreation;
- Ministry of Community and Social Services; and
- Ministry of the Attorney General.

c) **Agencies and Authorities:**

- Association of Conservation Authorities of Ontario;
- Niagara Escarpment Commission;
- Chiefs of Ontario;
- Ontario Provincial Police;
- CN Rail;
- Ontario Hydro;
- Consumers Gas;
- Trans Northern Pipeline;
- Unitel Communications Incorporated; and
- Bell Canada.

During the course of the Study, a number of the aforementioned Ministries, Agencies and Authorities provided input relative to the project. A summary of the "key" comments received from Federal and Provincial Ministries, Agencies and Authorities are noted in **Table 2.1**; additional comments and relevant correspondence is included in **Appendices A1 and A2.**

2.4 Public and Interest Group Involvement

During the Environmental Assessment, the public, and various interest groups in addition to Federal and Provincial Ministries, Agencies and Authorities, have had several opportunities to make comments, identify issues and provide additional information/data relative to the Study. Comments and information provided by the public and interest groups have broadened the information base and has facilitated good decision making during the course of the Study.

The thrust of the public participation was to allow for the early exchange of ideas between the Study Team and the public. By continually providing individuals and interest groups with the opportunity to identify their concerns and special knowledge, the Study Team was able to respond to specific issues and comments. A total of five (5) formal contacts with the public have been made in conjunction with the preparation of this report, and are as follows:

TABLE 2.1
SUMMARY OF THE "KEY" COMMENTS RECEIVED FROM FEDERAL AND PROVINCIAL MINISTRIES, AGENCIES AND AUTHORITIES

CONTACT	COMMENT	ACTION TAKEN OR RESPONSE
Ministry of the Environment	• Method of addressing and evaluating the social environment is in accordance with the requirements for Environmental Assessments for road and bridge projects.	• Comment acknowledged
Ministry of Natural Resources	• Mitigating measures must be implemented to avoid the discharge of sediment into the Scugog River during construction.	• Mitigating measures addressed and identified in Section 9.7.
	• Fishery surveys should be carried out in the detail design stage in the spring or early summer.	• Comment acknowledged
	• Construction in Scugog River is only permitted between July 1st and March 15th of any given year.	• Comment acknowledged
	• Recommend consideration be given to a river crossing south of the Springdale Gardens area to minimize potential impacts to Class "1" wetlands.	• Comment acknowledged
Trent-Severn Waterway	• ESR should address the Federal Environment Review Process (E.A.R.P).	• Federal requirements addressed in accordance with the E.A.R.P guidelines.
	• Any new crossing of the Scugog River must receive the written approval of the Trent-Severn Waterway.	• Comment acknowledged
	• Confirmation of river bed profile and testing for river bed contaminants must be completed prior to the written approval of Trent-Severn Waterway.	• Profile of river bed undertaken, testing of river bed for contaminants to be undertaken in detail design stage; no known contaminants to date.
	• Minimum navigation clearances must be maintained.	• Navigation clearances maintained in preliminary/conceptual design; however, may be potential for reduced clearances.
Ministry of Municipal Affairs	• Local municipalities should be contacted for their comments with respect to their Official Plans in association with the project.	• Undertaken as part of the Environmental Assessment.
Ministry of Transportation	• Comments regarding Draft ESR - see MTO letter dated April 21, 1993 in **Appendix A2.**	• MTO comments addressed - see TSH letter to County dated May 26, 1993 in **Appendix A2.**
Ministry of Citizenship and Culture	• Satisfied that the Ministry's concerns regarding this project have been met.	• Comment acknowledged
Ministry of Tourism and Recreation	• Planning and development should consider nature of boating traffic on the Scugog River (i.e. amount, height etc.).	• Considered in the assessment of alternative design concepts.

1. **Notice of Study Commencement**

   - Letters were written to Federal and Provincial Ministries, Agencies and Authorities advising them of the Study commencement, inviting input and informing them of the contact at the County of Victoria and at Totten Sims Hubicki Associates, from whom they could obtain more information; and

   - Newspaper advertisements were also placed in the Lindsay Daily Post and Lindsay This Week at the initiation stage of the Study.

2. **Public Information Centre/Meeting No. 1** (also refer to Section 2.4.1)

   - Prior to the Information Centre/Meeting, the Ministries, Agencies, Authorities, individuals and interest groups expressing interest in the Study were mailed notices informing them of the status of the project and of the details regarding Public Information Centre/Meeting No. 1;

   - Newspaper advertisements were also placed in the Lindsay Daily Post and Lindsay This Week prior to the Information Centre/Meeting; and

   - Sign-in sheets and comment forms were available at the Information Centre/Meeting.

3. **Public Information Centre/Meeting No. 2** (also refer to Section 2.4.1)

   - Prior to the Information Centre/Meeting, the Ministries, Agencies, Authorities, individuals and interest groups expressing interest in the Study were mailed notices informing them of the status of the project and of the details regarding Public Information Centre/Meeting No. 2;

   - Property owners (or representatives thereof) along Colborne Street and in the area of the proposed river crossing were hand delivered notices of Public Information Centre/Meeting No. 2 by the Consultant;

   - Newspaper advertisements were also placed in the Lindsay Daily Post and Lindsay This Week prior to the Information Centre/Meeting; and

   - Sign-in sheets and comment forms were available at the Information Centre/Meeting.

4. **County Transportation and Public Works Committee Public Meeting** (also refer to Section 2.4.1)

   - Held by the County following submission of the Draft ESR; and

   - Prior to the meeting, the Public was notified through newspaper advertisements in the Lindsay Daily Post.

5. **Filing of ESR**

   - Following approval by County Council, this ESR will be filed in the public record (for 30 calendar days) and the public notified by means of newspaper advertisements and

mailings to interested individuals and groups.

During the course of the Study, follow-up discussions with concerned parties were held to address their specific issues, concerns and comments to the highest degree possible.

A copy of the newspaper advertisements and notices sent to interested parties are included in **Appendix A3.**

2.4.1 Public Information Centres/Meetings

Public Information Centre/Meeting No. 1:

Date: November 27, 1991

Location: Queen Street United Church
35 Lindsay Street North, Lindsay, Ontario

Format: Open House: 3:00 p.m. - 7:00 p.m.
Meeting: 7:00 p.m. - 8:30 p.m.

Attendance: 67

Purpose:

- To present information detailing the river crossing capacity problem(s), possible alternative planning solutions and associated impacts; and
- To obtain input and information from the public to assist in the evaluation of the alternative solutions to the river crossing capacity problem.

Public Input: A total of thirty-five (35) comment forms were returned in response to Public Information Centre/Meeting No.1.

Public Information Centre/Meeting No. 2:

Date: June 3, 1992

Location: Queen Street United Church
35 Lindsay Street North, Lindsay, Ontario

Format: Open House: 5:00 p.m. - 7:00 p.m.
Meeting: 7:00 p.m. - 8:30 p.m.

Attendance: 51

Purpose:

- To present the evaluation of alternative solutions and to identify the recommended solution to the river crossing capacity

problem;
- To present alternative design concepts and the associated impacts and to identify the preferred design concept; and
- To obtain input and information from the public to assist in the evaluation of the alternative design concepts.

Public Input: A total of eight (8) comment forms were returned in response to Public Information Centre/Meeting No.2.

The combined results of the comment forms returned from both Public Information Centres are summarized below:

(a) Additional river crossing required:

• Yes:	27
• No:	10
• Definitive conclusions cannot be drawn from comment form:	6
Total:	**43**

(b) Of the respondents who identified that an additional river crossing is required:

• Identified Colborne Street as the preferred location;	11
• Identified the Springdale Gardens area as the preferred location; and	4
• Not definitive in the identification of the preferred location. i.e. there is a problem but did not suggest a location for a new crossing.	12
Total:	**27**

Based on discussions with the public and correspondence received during the course of the Study, it can be concluded that the majority of the public who provided input, concur that an additional river crossing within the Town is required. The provision of additional river crossing capacity by means of constructing a bridge at Colborne Street is supported by a majority of those residents who have indicated a preference for a crossing location.

County Transportation and Public Works Committee Public Meeting:

Date: December 15, 1992, 7:00 p.m.

Prior to the meeting, copies of the Draft ESR were made available for review at the County Roads Office, County Administration Building, Town Hall, Lindsay Public Library and County Library. Copies of the Draft ESR were also issued, upon request, to interested parties/individuals.

Purpose:

- To provide an open forum for the public to present their comments and input regarding the Draft ESR; and
- To provide the opportunity for the County Transportation and Public Works Committee to listen to and consider the public comments/concerns in their recommendation to County Council regarding the conclusions and recommendations documented in the Draft ESR.

A comprehensive summary of the comments received in response to the Information Centres/Meetings and County Transportation and Public Works Committee Public Meeting are included in **Appendices A4 and A5**, respectively.

It should also be noted that a County Council meeting was held on June 17, 1993 which resulted in approval of the Draft ESR. Minutes of the meeting, specifically relating to the Draft ESR, and input received at the meeting are included in **Appendix A6**.

2.4.2 Town of Lindsay Mayor's Bridge Task Force

In January 1992, the Mayor of the Town of Lindsay initiated the formation of a Bridge Task Force. The main objectives of the Mayor's Bridge Task Force are listed below: (refer to **Appendix A7**)

- To investigate the need for a new bridge across the Scugog River;
- To investigate alternatives to the construction of a new river crossing that will address existing traffic concerns at and adjacent to the Wellington Street river crossing; and
- If the need for a new river crossing is established, then determine the preferred location, related social impacts and estimated costs.

The Mayor's Bridge Task Force report dated June 1, 1992, states that there currently is **not** a need for an additional crossing of the Scugog River and that various traffic system management improvements should be implemented at roadway intersections adjacent to the existing river crossings. A number of the recommendations proposed by the Mayor's Bridge Task Force were previously identified in the 1989 Traffic Operations Study and have been implemented by the County and Town of Lindsay. The Mayor's Bridge Task Force did identify that within ten (10) years, a new river crossing would be required and that it should be located in the Springdale Gardens/Cedar Valley Park Road corridor in the Township of Ops. The following list is a history of the "key" dates associated with the activities of the Mayor's Bridge Task Force:

- January 13, 1992 - appointment of Bridge Task Force members;
- February 5, 1992 - Bridge Task Force Meeting - Mr. P. J. Seaton, P.Eng., County Engineer distributed display and presentation material from Public Information Centre/Meeting No. 1. Members of the Bridge Task Force were asked to provide sample weightings to be used in the evaluation of alternative solutions to the river crossing capacity problem and the sensitivity testing associated with the alternatives. It should be noted that no sample weightings from the Task Force were provided to the County;

- February 26, 1992 - Bridge Task Force Meeting - Representatives of Totten Sims Hubicki Associates met with members of the Bridge Task Force to update the members on the progress of the Study and to address specific concerns;

- March, 1992 - Distribution of the Bridge Task Force questionnaire to approximately 4,000 Town of Lindsay residents, with just over 1,000 returned;

- April 22, 1992 - Bridge Task Force Public Meeting - The public meeting provided an open forum for input and comments to be made by individuals and interested parties. A total of nine (9) people made presentations;

- May 15, 1992 - letter from Mr. P.J. Seaton, P.Eng., County Engineer to chairperson and Members of the Bridge Task Force which included documentation on the evaluation process and those TSH personnel involved in the Study, excluding transportation staff (information was requested by Task Force);

- June 1, 1992 - Bridge Task Force Final Report; and

- June 8, 1992 - Town Council endorsement of Bridge Task Force Final Report.

The major findings of the March 1992 Bridge Task Force are summarized below:

- Total Number of questionnaires delivered 4,000
- Response Rate - 26 percent
- Number of people who felt they are inconvenienced at the Wellington Street crossing - 26 percent of respondents
- Crossing location preference:

Lindsay Street North	-	13%	
Wellington Street	-	23%	- 72%
Colborne Street	-	36%	
Orchard Park Road	-	9%	
County Rd. 4 (north of Lindsay)	-	11%	
No preference	-	8%	

- When is another bridge needed:

Now - 10 year	-	68%
Never	-	17%
Not noted	-	15%

Given the survey method and question ambiguity, it is somewhat difficult to provide a definitive interpretation of the results; however, it can generally be concluded that the residents appear to prefer a crossing in an area between the existing Lindsay Street North crossing and Colborne Street (72 percent of respondents) and that 68% of the respondents felt that a new crossing is needed in the **Now to the 10 year time frame.**

2.4.3 People Against Colborne Expansion (P.A.C.E.)

A special interest group, People Against Colborne Expansion (P.A.C.E.) was established prior to the commencement of the Scugog River Crossing Environmental Assessment to represent those citizens of the Town of Lindsay/County of Victoria who are opposed to a new river crossing at Colborne Street. Comments and input received from P.A.C.E. representatives (included in **Appendix A8**) expressing concerns regarding the Colborne Street river crossing have been considered in the assessment and evaluation of alternative solutions to the river crossing capacity problem. It should be recognized that specific concerns raised by P.A.C.E. representations have also been identified by local agencies, interested individuals and the Mayor's Bridge Task Force.

2.4.4 General

Petitions of "those against" and "those in support of" a Colborne Street river crossing were prepared by the public and are included in **Appendices A9 and A10**, respectively.

Articles printed in the Lindsay Daily Post that are related to the Scugog River Crossing Environmental Assessment are included in **Appendix A11**.

3.0 NEED AND JUSTIFICATION ASSESSMENT

In this section of the report, the need and justification for additional vehicular crossing capacity of the Scugog River are presented. The traffic analyses undertaken for the need and justification component was based upon consideration of the following:

- Existing traffic conditions and deficiencies on river crossings within the Study Area;
- Future river crossing demands and capacity requirements;
- Ability of the local and regional transportation network to accommodate future river crossing demands; and
- Potential Transportation Systems Management (TSM) techniques i.e. operational and/or minor physical improvements to resolve existing and future river crossing capacity constraints.

For the purpose of the Environmental Assessment, the traffic analyses has been based on existing (1991) conditions and projected traffic conditions for the 2011 planning horizon. Consistent with similar studies of this nature, a 20 year planning horizon was selected to represent long-term needs. Currently, a number of local municipalities in the Greater Toronto Area and outlining regions are undertaking transportation studies using 20 year planning horizons. A 20 year planning horizon permits engineers and planners to resolve or at least identify future transportation requirements. Based on discussions with Town and County staff, it was determined that projections beyond 20 years could not be defended and should not be used for this Study.

In dealing with the above issues, the Study has recognized the inherent relationship between transportation and land use (population and employment) on a regional basis in the analysis of traffic problems and the generation of potential solutions.

3.1 Existing Road Network

Illustrated in **Exhibit 3.1** are the various classifications for the existing road network within and surrounding the Town of Lindsay. Provided below is a summary of some of the "key" roadways that have been considered within the context of the Environmental Assessment:

Provincial Highways: i.e. Provincial rural arterial.

- **Highway 7** - a "basic" two (2) lane rural highway which extends in the east/west direction south of the Town of Lindsay between the County of Peterborough and Region of Durham;
- **Highway 36** - a "basic" two (2) lane rural highway which extends north/south from Highway 7 along the eastern limits of the Town of Lindsay through the Village of Bobcaygeon and into the County of Peterborough; and
- **Highway 35** - a "basic" two (2) lane rural highway which extends in the north/south

direction from the Highway 115 junction south of the Town of Lindsay through Victoria and Haliburton Counties and into the District Municipality of Muskoka. Highway 35 extends along the western limit of the Town of Lindsay.

Highways 36, 35, and 7 form a by-pass to the Town of Lindsay. This by-pass reduces the amount of traffic travelling through the Town. Currently, river crossing trips passing through the Town account for **less than 10%** of the existing total river crossing trips on the Wellington Street and Lindsay Street North bridges.

Provincial Connecting Links: i.e. arterial roadways within the Town of Lindsay maintained by the Town but under the overall jurisdiction of the Province of Ontario.

- **Highway 7B/35B (Kent Street West)** - a "basic" four (4) lane roadway which extends in the east/west direction from Sussex Street to Angeline Street. Kent Street West is the main street for downtown Lindsay; and
- **Highway 7B/35B** - a "basic" four (4) lane roadway which extends in the east/west direction from Angeline Street to the Highway 7/Highway 35 junction.

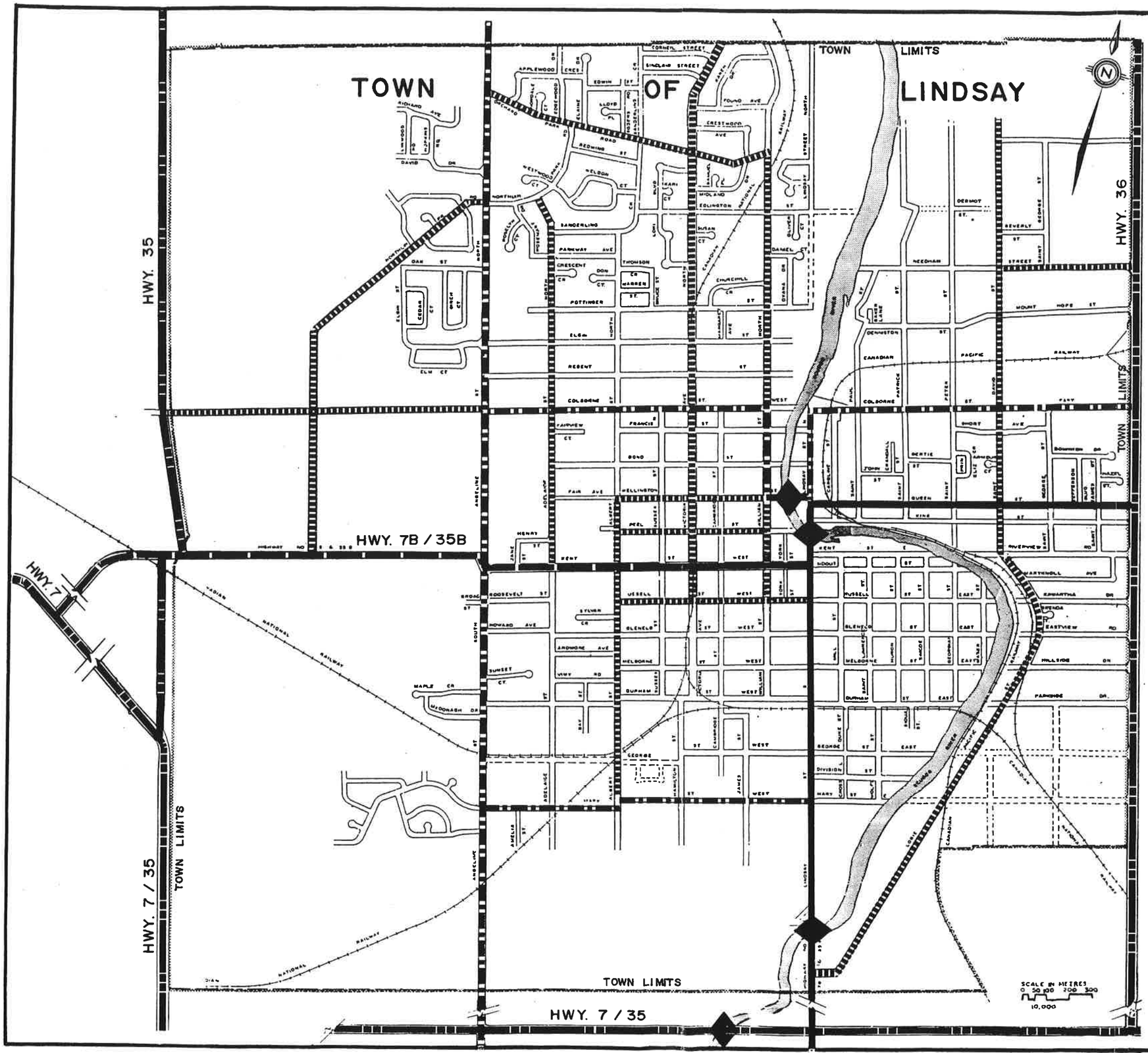
The Ministry of Transportation of Ontario (MTO) is currently in the process of transferring Provincial Connecting Links within the Province to local municipalities.

County of Victoria Roadways: i.e. arterial roadways within the Town of Lindsay but under the jurisdiction of the County of Victoria.

- **Angeline Street (County Road 4)** - a "basic" two (2) lane roadway which extends in the north/south direction from County Road 4 South (Township of Ops) to County Road 4 North (Township of Ops);
- **Mary Street (County Road 19)** - a "basic" two (2) lane roadway which extends in the east/west direction from Angeline Street to Lindsay Street South;
- **Lindsay Street North** - a "basic" two (2) lane roadway which extends in the north/south direction from Queen Street to Colborne Street East;
- **Colborne Street West/East (County Road 17)** - a "basic" two (2) lane roadway which extends in the east/west direction from Highway 35 to Highway 36, separated by the Scugog River; and
- **William Street** - a "basic" two (2) lane roadway which extends in the north/south direction from Wellington Street to Colborne Street West.

Town of Lindsay Roadways: - i.e. arterial roadways within the Town of Lindsay maintained by the Town.

- **Lindsay Street North** - a "basic" two (2) lane roadway which extends in the north/south direction from Kent Street West to Queen Street;
- **Lindsay Street South** - a "basic" two (2) lane roadway which extends in the north/south direction from Highway 7 to Kent Street West;



LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS (ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- "LOCAL" ARTERIAL

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ROAD CLASSIFICATIONS

- **Kent Street West** - a "basic" two (2) lane roadway which extends in the easy/west direction from Lindsay Street South to Sussex Street; and

- **Queen Street** - a "basic" two (2) lane roadway which extends in the east/west direction from Lindsay Street North to Highway 36.

The above highway and arterial roadway classifications form part of a hierarchical roadway system. In addition to the above noted roadways, a number of collector and local roads within the Town have been included in the Study.

The main considerations for road classification are existing and future public travel demands, land service based upon existing and expected land use and the overall continuity of the transportation system and road network. The following represents a summary of the basic characteristics of rural and urban arterials:

- Rural arterial:
  - accommodate large volumes of traffic at high speeds
  - serve as major link on network connecting major areas of population and employment
  - daily volumes range from 1,000 to 20,000 vehicles per day
  - up to 20 percent commercial truck traffic can be considered acceptable

- Urban arterial:
  - intended to carry large volumes of traffic
  - these streets serve the major traffic flows between the principle areas of traffic generation and also connect arterials and collectors
  - daily volumes range from 5,000 to 50,000 vehicles per day
  - all types of traffic use urban arterials - commercial vehicles may comprise as much as 20 percent of the total traffic volumes
  - urban arterials have 2 or more lanes and can be undivided or divided

Urban arterials within the Town such as Colborne Street West, William Street, Kent Street West, Highway 7B/35B and Lindsay Street North/South within the downtown vicinity, historically have typically accommodated daily traffic volumes in the 10,000 vpd+ magnitude. Daily traffic volumes on Kent Street West (main street), have reached volumes up to 20,000 vehicles per day.

The temporary "upper tier (arterial) road loop" (discussed in **Section 1.1**) established to provide a County link across the Scugog River is formed by the following County roads: William Street, Lindsay Street North, Colborne Street West and East and the Wellington Street bridge. Although there exists a continuous County link across the Scugog River, the circuitous nature, existing capacity constraints and the existing grid street network on both sides of the river results in considerable traffic infiltration on local residential streets.

It is important to note when examining the roadway network and street classifications in Lindsay that there are few east-west arterial standard roadways in the community and **none** north of Colborne Street.

The existing vehicular river crossings of the Scugog River play an integral function in the connection of the regions within and neighbouring the County of Victoria. The Scugog River arterial crossings are situated at the following locations: (refer to **Exhibit 3.1** for river crossing locations)

a) Within the Town of Lindsay

- Wellington Street;
- Lindsay Street North; and
- Lindsay Street South.

b) Outside the Town of Lindsay

- Highway 7/35 approximately 1.2 km south of the southern limit of the Town of Lindsay and approximately 1.2 km west of Highway 35.

The Wellington Street and Lindsay Street North crossings of the Scugog River are located in close proximity to each other and provide the first available crossing of the Scugog River between the Town of Lindsay and Village of Bobcaygeon and Township of Fenelon located to the north.

The Scugog River also provides a natural transportation route for water craft within and adjacent to the Study Area. Data provided by staff at Trent-Severn Waterway, indicates that 3,740 vessel movements were recorded at the Lindsay lockstation in 1991. The Lindsay lockstation is located immediately east of the Lindsay Street North river crossing.

Vertical clearance requirements over the Scugog River as directed by the Trent-Severn Waterway guidelines are as follows:

- 6.7 m Lindsay Street lockstation north to Sturgeon Lake; and
- 4.6 m Lindsay Street lockstation south to Lake Scugog.

Vertical clearances at the existing Scugog River vehicular crossings are listed below. Reduced clearances are permitted at these locations as the structures were constructed prior to the implementation of the 6.7 m vertical clearance requirement.

North of the Lindsay Street lockstation:

- Wellington Street bridge 4.56 m; and
- Lindsay Street North bridge 3.83 m.

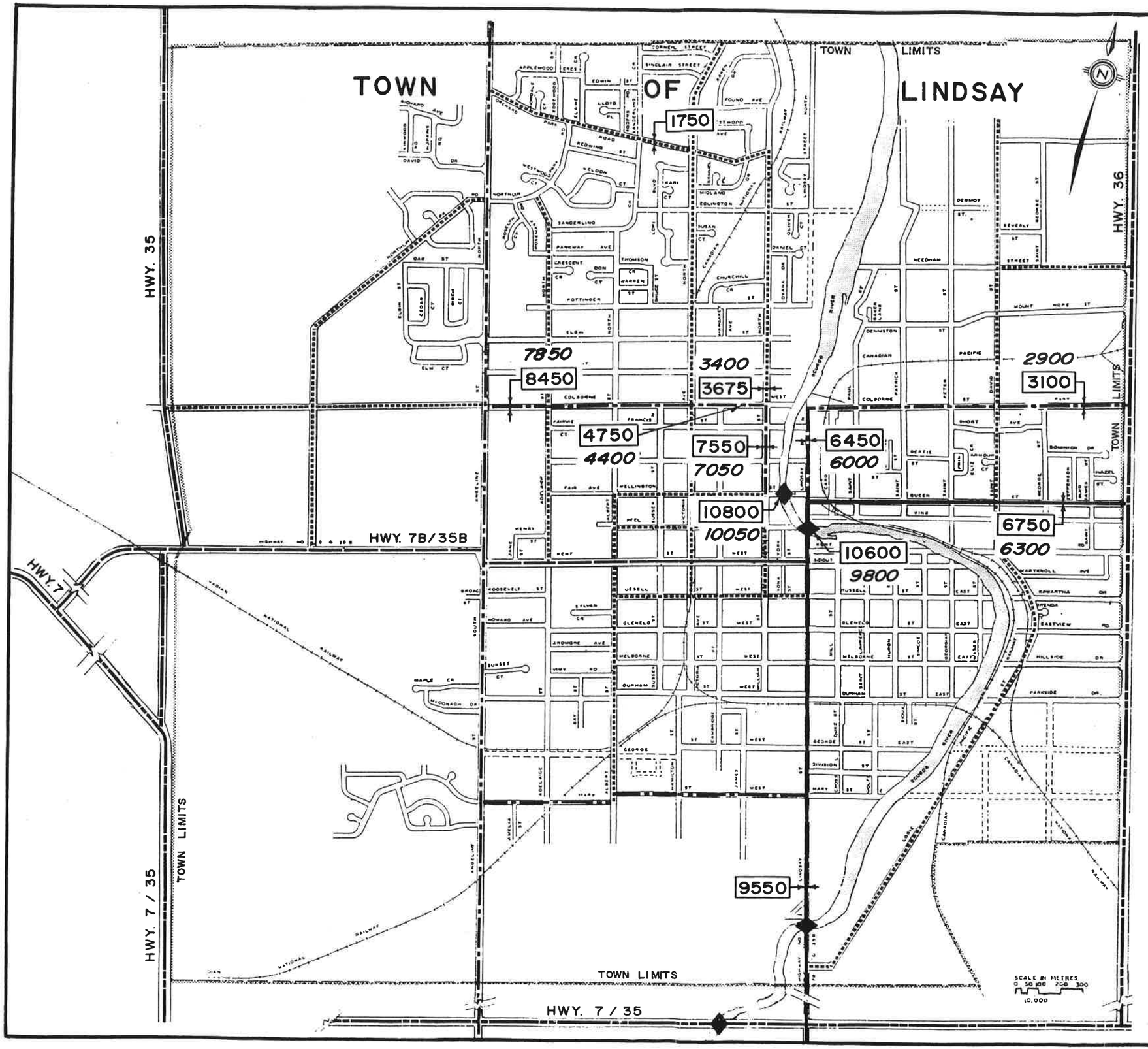
South of the Lindsay Street lockstation:

- Lindsay Street South bridge 4.29 m; and
- Highway 7 bridge 3.68 m.

In addition to vertical clearance requirements, the navigation channel is subject to a minimum width of 10 m with a 1.2 m draught throughout the Study Area.

3.2 Existing Traffic Volumes

Exhibit 3.2 illustrates the existing 1991 24-hour Summer Average Weekday Traffic (SAWDT) and Average Annual Daily Traffic (AADT) volumes for the main roadway sections within and adjacent to the Study Area. The existing traffic volumes were derived from 8-hour manual turning movement counts



LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS (ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- "LOCAL" ARTERIAL
- 6750 SAWDT - VEHICLES PER DAY
- 6300 AADT - VEHICLES PER DAY

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EXISTING 1991 - 24 HOUR TRAFFIC VOLUMES

EXHIBIT 3.2

and 24-hour automatic traffic recorder (ATR) counts collected by the County of Victoria and TSH staff. The 1991 volumes were audited or compared with historical traffic data (obtained from the County of Victoria and the 1989 Traffic Operations Study) to ensure that they were consistent with historical growth trends. The historical data indicates that traffic volumes within and adjacent to the Study Area have been increasing at an annual rate of approximately 2% to 3%.

Traffic operations analysis associated with this Study was undertaken for both SAWDT and AADT conditions. Summer average weekday volumes (SAWDT) are approximately 6% to 7% higher on the Wellington Street bridge than average annual daily volumes (AADT). It should be recognized that during the morning and afternoon peak periods, there is little or no difference between SAWDT and AADT volumes as traffic during these peak periods consists mainly of "commuter" traffic. Weekend traffic volumes were not considered within the context of this Study. Refer to **Sections 3.5 and 3.6** for further details on existing river crossing demand and capacity.

3.3 1986 Scugog River Crossing Traffic Study

As previously mentioned in **Section 1.1**, the 1986 Scugog River Crossing Traffic Study recommended that a new crossing of the Scugog River be located within a "Corridor" north of the existing Wellington Street bridge, between Colborne Street and the westerly extension of Orchard Park Road within the Town of Lindsay. The recommendation was based on an analysis of the origin and destinations of vehicle trips crossing the Scugog River within the Town of Lindsay. The 1986 origin and destination (O-D) data was collected through surveys conducted during the summer of 1986. The 1986 O-D data was calibrated to 1991 volumes as part of this Study. The 1991 river crossing total trip interchange table for the Wellington Street river crossing and Lindsay Street North river crossing is shown in **Table B2** in **Appendix B**. For the purpose of this Study, only those river crossing trips that cross the Wellington Street and Lindsay Street North bridges on a typical summer weekday have been considered in the traffic study completed for this Environmental Assessment. Given the comprehensive nature of the data and consideration of population, employment and traffic volume growth, it was determined that the 1986 river crossing trip data could be employed in the Scugog River Crossing Class EA.

The origin and destination river crossing data was aggregated into twelve (12) **internal zones (i.e. within the Town of Lindsay**) and six (6) **external zones (outside Lindsay)** as illustrated in **Exhibit 3.3**. Vehicular trips crossing the Scugog River having either an origin or a destination outside the Town of Lindsay must enter the Town (with the exception of those using Highway 7/35). The limits of the Town of Lindsay were therefore assumed as a Cordon line and six (6) external zones numbered 50 to 56 inclusive were established as follows:

- Zone 50 - Highway 35 at north-west limit of the Town of Lindsay;
- Zone 51 - Highway 36 at north-east limit of the Town of Lindsay;
- Zone 52 - Highway 36 at east limit of the Town of Lindsay;
- Zone 53 - Highway 7 east of Highway 36;
- Zone 54 - Lindsay Street South immediately north of the Lindsay Street South bridge;
- Zone 55 - County Road 4 at Highway 7/35; and
- Zone 56 - Highway 7B/35B at west limit of the Town of Lindsay.

3.4 Existing and Projected 2011 Population and Employment

The origin and destination river crossing trip table was extrapolated based on population and employment projections to represent existing and 2011 river crossing conditions. The technique used to extrapolate the trip interchange data is known as the "fratar" growth factor method. This is an accepted method of developing future zonal interchange data and the basic approach involves an iterative process where traffic between all zones is adjusted to reflect relative growth in population and employment in each zone.

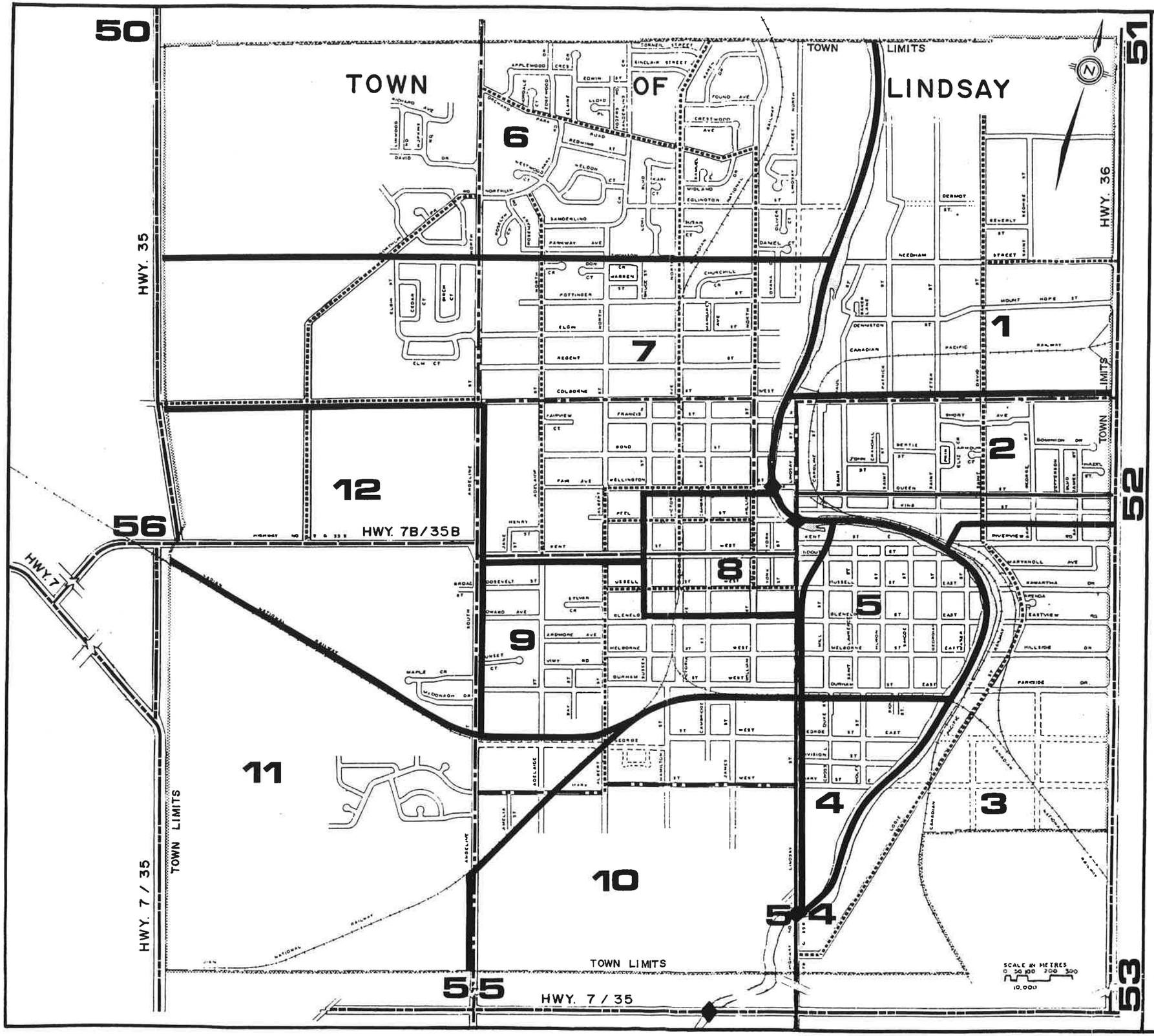
In order to project river crossing trips with either an origin or destination to an external zone, estimates of employment and population beyond the Lindsay boundaries for existing and the 2011 planning horizon were determined. Identified on **Exhibit 3.4** are the limits included in the population and employment assessment for the purpose of this Study. Shown on **Exhibit 3.5**, are the six (6) areas utilized for the Township of Ops.

Identified in **Table 3.1** are the external zones that river crossing trips with origins and/or destinations outside Lindsay were assigned to. In developing the assignment for river crossing trips to the internal/external zones, consideration was given to numerous factors that may dictate which routes to the specific zone are selected. These factors include:

- Travel time;
- Impedance or friction on the route selected, i.e. traffic congestion may be encountered at an intersection;
- Perception that one route is simpler than another; and
- Motorists general preference for right turns over left turns.

Provided in **Table 3.2** is a summary of the 1986, 1991 and 2011 population and employment projections for the internal and external zones. The 1986, 1991 and 2011 population and employment estimates have been based on data received from the following sources:

- County of Victoria - historical, existing and projected population data for the Towns/Townships/Villages within the County;
- Town of Lindsay - historical, existing and projected population data for the Town;
- Ministry of Revenue - enumerated 1985, 1988 and 1991 population data for the Town of Lindsay and Township of Ops;
- Ministry of Transportation of Ontario - 1986 census place-of-work data - used for the 1986 employment for Towns/Townships/Villages within the County of Victoria;



LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS (ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- ZONE BOUNDARY
- "LOCAL" ARTERIAL

SCUGOG RIVER CROSSING
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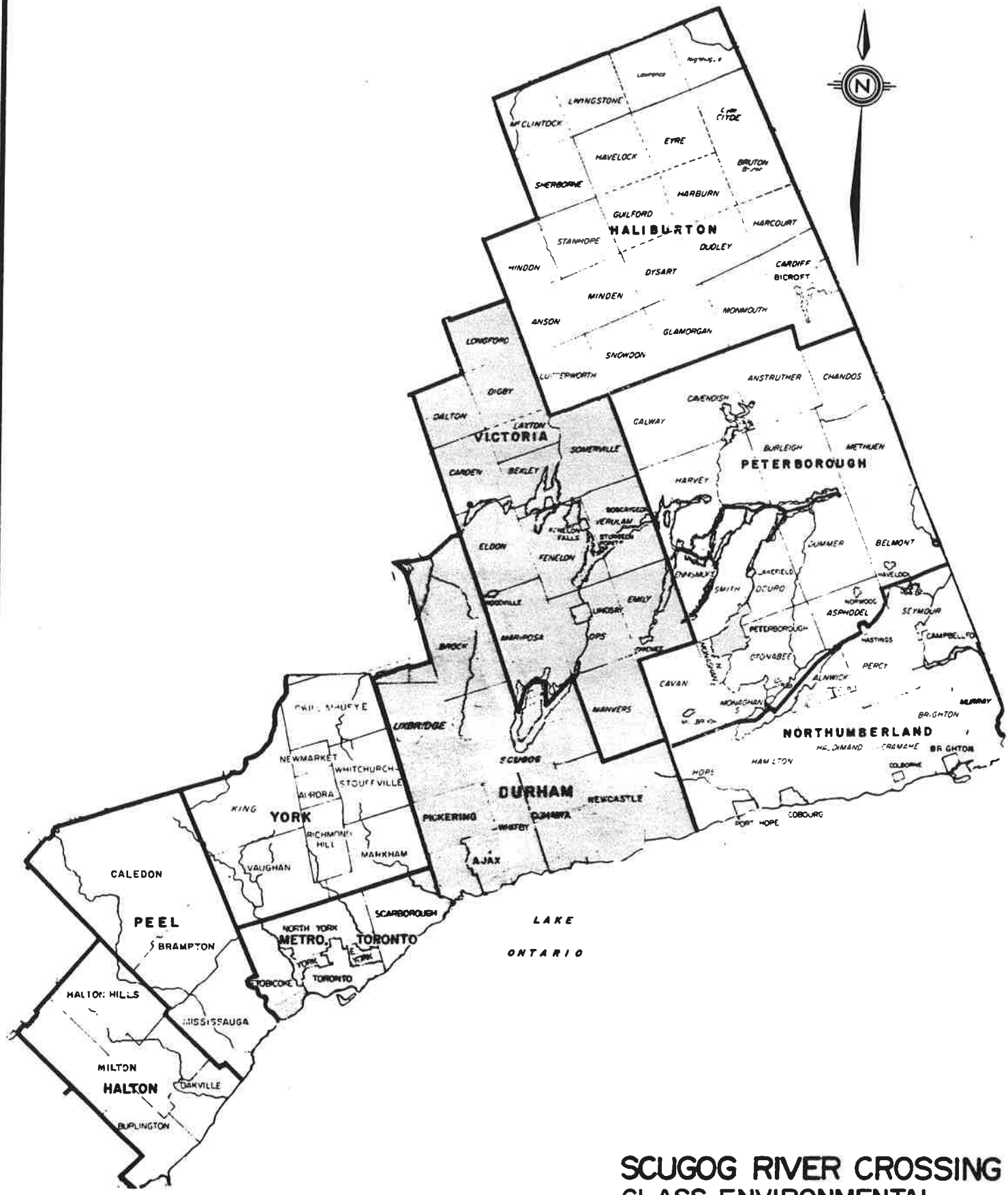
COUNTY OF VICTORIA

ORIGIN AND DESTINATION - INTERNAL & EXTERNAL ZONES

EXHIBIT 3.3



SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

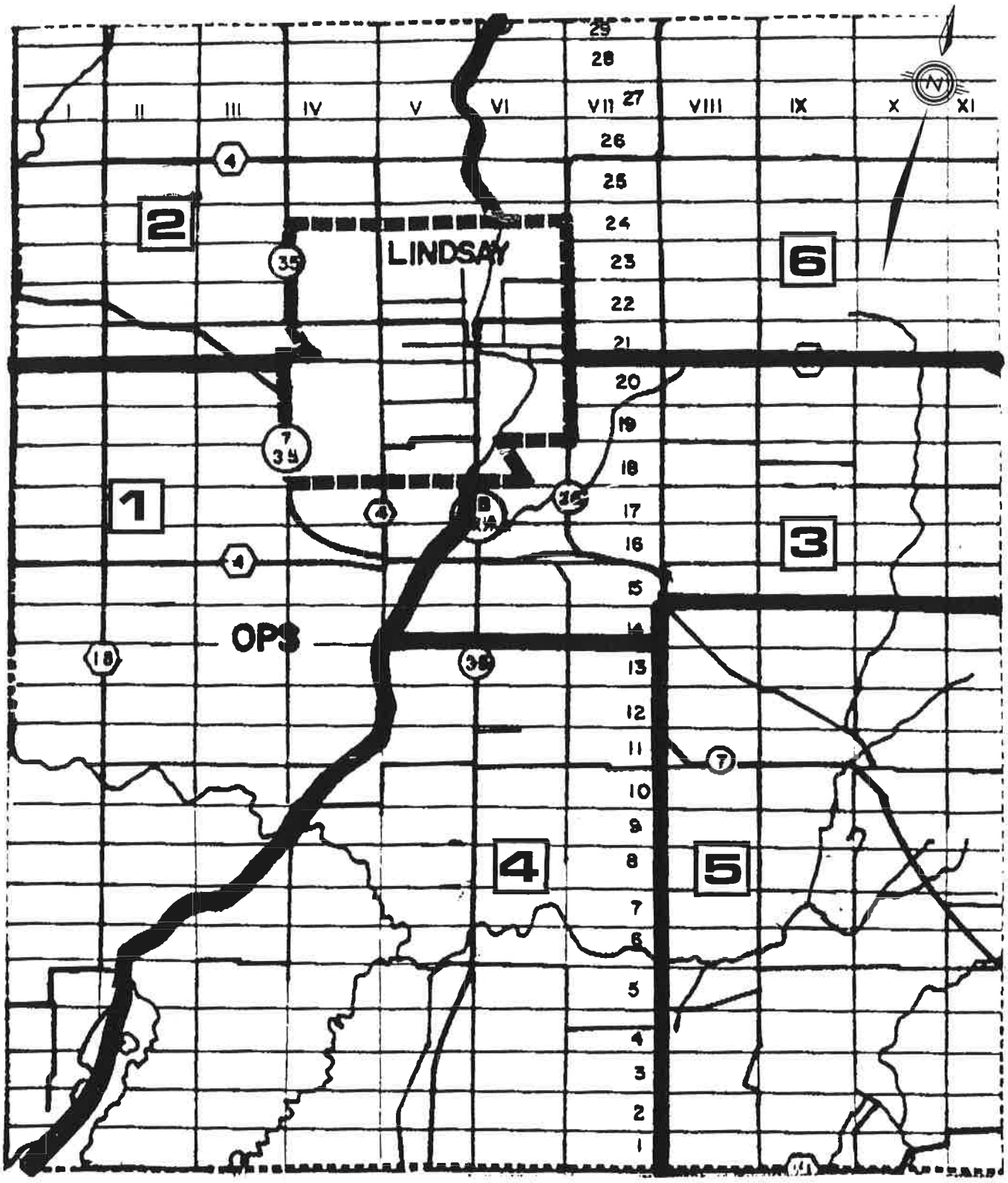
ORIGIN AND DESTINATION - STUDY AREA

LEGEND

STUDY AREA

N.T.S.

EXHIBIT 3-4



SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

ORIGIN AND DESTINATION - TOWNSHIP OF OPS ZONES

N.T. S.

EXHIBIT 3-5

TABLE 3.1
EXTERNAL REGIONS AND THEIR ASSOCIATED ZONES

EXTERNAL REGION	ZONE (50 through 56 inclusive)
Township of Ops - area 1	56
Township of Ops - area 2	50
Township of Ops - area 3	52
Township of Ops - area 4	54
Township of Ops - area 5	53
Township of Ops - area 6	51
Township of Emily	52
Village of Omemee	53
Township of Mariposa	56
Township of Manvers	54
Village of Woodville	56
Village of Bobcaygeon	51
Township of Verulam	51
Township of Eldon	50
Township of Fenelon	50
Village of Fenelon Falls	50
Township of Somerville	51
Township of Bexley	50
Township of Cardon	50
Townships of Laxton, Digby, Longford (LDL)	50
Region of Durham	.25(55)+.75(54)
Metropolitan Toronto	.25(55)+.75(54)
City of Peterborough	53

TABLE 3.2
1986, 1991 AND 2011 POPULATION AND EMPLOYMENT

ZONE	1986		1991		2011	
	POPULATION	EMPLOYMENT	POPULATION	EMPLOYMENT	POPULATION	EMPLOYMENT
INTERNAL						
1	1106	1920	1037	2198	1064	3392
2	1106	240	1037	275	1064	424
3	549	20	650	20	936	20
4	576	20	625	20	625	20
5	1120	120	1037	120	1066	120
6	2717	50	3284	50	6189	50
7	3376	1400	3998	1413	5721	1470
8	782	1230	851	1270	851	1440
9	2003	240	2173	266	2177	380
10	874	1750	809	1820	831	2118
11	314	1220	336	1429	634	2324
12	314	2110	372	2399	956	3640
Sub Total	14,837	10,320	16,209	11,280	22,114	15,398
EXTERNAL						
Ops 1	551	20	720	23	851	31
Ops 2	857	22	913	26	1758	35
Ops 3	636	30	743	34	808	46
Ops 4	483	20	572	20	637	20
Ops 5	455	5	513	5	579	5
Ops 6	469	10	483	14	614	26
Emily	5095	102	6005	102	9450	189
Omemee	871	571	890	583	1030	675
Mariposa	5439	761	6255	875	9080	1270
Manvers	4258	576	4905	664	7380	999
Woodville	598	531	645	573	800	711
Bobcaygeon	1785	1271	2060	1467	3330	2371
Verulam	3234	138	3700	158	5795	247
Eldon	2148	214	2380	237	3125	311
Fenelon	4894	240	5615	275	8260	405
Fenelon Falls	1797	1293	1865	1342	2210	1509
Somerville	1711	215	1825	229	2290	287
Bexley	987	307	1100	342	1540	479
Cardon	577	577	650	650	890	890
LDL	873	231	910	241	1215	308
Sub Total	37,718	7,134	42,749	7,860	61,642	10,814

TABLE 3.2
1986, 1991 AND 2011 POPULATION AND EMPLOYMENT

ZONE	1986		1991		2011	
	POPULATION	EMPLOYMENT	POPULATION	EMPLOYMENT	POPULATION	EMPLOYMENT
Durham	320000	115000	370000	132969	520000	186875
Toronto	2112759	2000000	2164759	2049225	2215048	2148438
Peterborough	60473	23439	63136	24471	74872	29020
Sub Total	2,493,232	2,138,439	2,597,895	2,206,665	2,809,920	2,364,333
TOTAL	2,545,787	2,155,893	2,656,853	2,225,805	2,893,676	2,390,545

- Ministry of Transportation of Ontario - Highway 401 Overview Study, 1989 - used for Region of Durham and Metropolitan Toronto employment and population data;

- City of Peterborough - Traffic Operations and Transportation Planning Review, 1990 - used for the City of Peterborough employment and population data;

- Ministry of Municipal Affairs - Municipal Directory - used as a supplement to the above sources in the determination of historical, existing and future population levels and household occupancies; and

- Discussions with staff at the Town of Lindsay, Township of Ops and the County of Victoria Planning Departments.

1991 and 2011 Total Employment Levels

The 1991 and 2011 total employment levels for the Towns/Townships, etc. considered within the context of this Study were determined by assuming the same population to employment ratio as in 1986. The 1986 total employment levels were based upon 1986 total employment civic census data.

Growth Strategies

For the internal zones within Lindsay and areas in the Township of Ops, two (2) growth scenarios were considered:

SCENARIO 1:
(Based on discussions with staff at the Town and Township Planning Departments)

- Town of Lindsay
  - majority of employment growth in Zones 1, 11 and 12 (i.e. in the north-east part of Town and in the Kent Street area west of Angeline Street)
  - majority of population growth in Zones 6 and 7 (i.e. in the area south of the Town limits and north of Colborne Street extending from the river to west of Angeline Street)

- Township of Ops
  - majority of employment growth in Areas 1, 2 and 3

- majority of population growth in Area 2

This scenario conforms to the future growth projections of the Town and County and recognizes the availability of undeveloped serviced land within the community.

SCENARIO 2:

- Town of Lindsay and Township of Ops
- for each zone/area the 1986 population to employment ratio as in 1986 was applied i.e. growth equally spread throughout the Town.

The population and employment data shown in **Table 3.2** is reflective of the Scenario 1 growth strategy.

The purpose of developing two (2) scenarios was to determine how sensitive the selection of the "ideal" river crossing location would be to the location of growth within the Town (the selection of the "ideal" river crossing is further discussed in **Sections 3.5** and **3.7**).

Using the established 1991 and 2011 employment and population levels, daily river crossing vehicle trips to/from each zone were calculated. This data was then applied to the 1986 trip data to estimate 1986 to 1991 and 1986 to 2011 growth factors. This process was undertaken for both growth scenarios.

3.5 Existing River Crossing Demand

The Wellington Street river crossing currently accommodates a daily river crossing demand of 10,800 (1991) vehicles per day Summer Average Weekday Traffic SAWDT (10,050 Average Annual Daily Traffic AADT) and the Lindsay Street North river crossing currently accommodates a daily river crossing demand of 10,600 (1991) vehicles per day SAWDT (9,800 AADT).

The existing river crossing demand is distributed as follows:

- Internal-Internal 39 %
- Internal-External 53 %
- External-External 8%

Where internal-internal river crossing trips have their origin and destination within Lindsay; external-external river crossing trips have their origin and destination outside of Lindsay.

Based on the percentage of external-external river crossing trips, it can be concluded that only a small percentage of the external river crossing trips would by-pass Lindsay if the opportunity existed. It should also be noted that commercial vehicle trips (truck traffic) represents approximately three (3) percent of total river crossings within Town.

The 1991 river crossing trips established for each zone were used to determine existing "ideal" river crossing locations(s). The "ideal" river crossing location represents a theoretical single ideal crossing location for all interzonal trips. Ideal crossings have been identified using **only** interzonal travel demand as the sole "selection" criteria. To determine the "ideal" river crossing location, the Method of Movements technique was employed where the movement of all river crossing trips about an arbitrary point are resolved. The resulting bridge site location represents a theoretical or "ideal" location and not necessarily a practical solution. Identified on **Exhibit 3.6** are two (2) "ideal"

TOWN OF LINDSAY

TOWN LIMITS

HWY. 35

HWY. 36

HWY. 7B/35B

HWY. 7

HWY. 7 / 35

TOWN LIMITS

TOWN LIMITS

HWY. 7 / 35

SCALE IN METRES
0 50 100 200 300
10,000

LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS(ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- (1) SCENARIO 1
- (2) SCENARIO 2
- "LOCAL" ARTERIAL

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

EXISTING 1991 IDEAL RIVER CROSSING LOCATIONS

EXHIBIT 7.6

crossing locations representing employment and population growth projections established for the **Scenario 1** and **Scenario 2** conditions previously described. Both scenarios identify the area between the existing Wellington Street river crossing and Colborne Street as the existing "ideal" river crossing corridor. Based on the sensitivity testing undertaken, it has been concluded that varying the location of population and employment growth within the Town and Township, **does not** result in significant variation in the "ideal" river crossing location. This result correlates directly with the fact that the majority of river crossing trips have either an origin or destination within the Town.

3.6 Existing River Crossing Capacity and Operating Conditions

The existing crossing capacities of the Wellington Street and Lindsay Street North bridges have been estimated using existing a.m. and p.m. peak hour operating parameters. However, it should be recognized that capacity is not a fixed measure and can vary depending upon:

- Peak hour factor i.e. percentage of traffic during peak hour; and
- Directional split.

Maximum capacity on the river crossings would be achieved with a 50/50 directional split, which is close to what is currently being achieved.

Although capacity is a variable parameter derived from peak period to daily volume relationships and directional split, it has been concluded that the **Wellington Street river crossing is currently operating at capacity and the Lindsay Street North river crossing is currently operating near capacity.** As noted in **Table 3.3**, Wellington Street river crossing operates within a capacity range of 9,800 to 11,400 vehicles per day. The total existing (1991) river crossing demand at the Wellington Street and Lindsay Street North crossings of 21,400 SAWDT (19,850 AADT) is within the range of the total combined capacity of the bridges, that being 20,600 to 24,500 vehicles per day.

TABLE 3.3
EXISTING 1991 - 24 HOUR RIVER CROSSING DEMAND AND CAPACITY

RIVER CROSSING	EXISTING DEMAND		CAPACITY (veh/day)
	(SAWDT)	(AADT)	
Wellington Street	10,800	10,050	9,800 - 11,400
Lindsay Street North	10,600	9,800	10,800 - 13,100
Total	21,400	19,850	20,600 - 24,500

The capacity of the existing Wellington Street and Lindsay Street North river crossings is dictated by the capacity of the Wellington Street/William Street and Wellington Street/Lindsay Street North signalized intersections. During the p.m. peak hour, volumes using the Wellington Street/Lindsay Street North intersection currently exceed the effective capacity of the intersection which results in vehicles queuing over the Wellington Street bridge and impeding traffic operations at the Wellington Street/William Street intersection. Under these operating conditions, the potential for vehicular and pedestrian accidents significantly increases. **Not only does the volume of traffic exceed the physical capacity of the Wellington Street crossing as governed by the adjacent intersections, the level of**

service provided on the crossing greatly exceeds the operating conditions considered acceptable for the Town of Lindsay. The Lindsay Street North crossing has a higher capacity as it is constrained for the most part only by one intersection (Wellington Street/Lindsay Street North).

Shown on **Table 3.4** are the existing 1991 volume to capacity (V/C) ratios, level of service (LOS) and delay for the Wellington Street/William Street and Wellington Street/Lindsay Street North intersections for the a.m. and p.m. peak hours.

TABLE 3.4
INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection/Approach	Volume/Capacity (v/c)		Level of Service (LOS)		Delay (sec/veh.)	
AM PEAK HOUR						
William St./Wellington St.						
• Overall Intersection	(0.539)	0.456	(B)	B	(9.4)	8.6
• Southbound left	(0.348)	0.287	(B)	B	(10.2)	9.9
• Westbound approach	(0.664)	0.581	(B)	B	(9.9)	8.6
Lindsay St./Wellington St.						
• Overall Intersection	(0.550)	0.496	(B)	B	(12.5)	11.9
• Southbound approach	(0.459)	0.354	(B)	B	(12.9)	12.0
• Eastbound approach	(0.681)	0.654	(C)	C	(17.4)	16.9
• Westbound left	(0.413)	0.469	(B)	B	(10.8)	11.8
PM PEAK HOUR						
William St./Wellington St.						
• Overall Intersection	(0.712)	0.838	(B)	C	(11.8)	16.5
• Southbound left	(0.560)	0.707	(B)	C	(12.6)	17.2
• Westbound approach	(0.825)	0.935	(C)	D	(15.2)	25.7
Lindsay St./Wellington St.						
• Overall Intersection	(0.984)	1.065	(E)	F+	(42.7)	> 60 sec
• Southbound approach	(0.966)	0.853	(D)	C	(39.1)	24.4
• Eastbound approach	(1.015)	1.263	(E)	F+	(50.7)	> 60 sec
• Westbound left	(0.475)	1.172	(B)	F	(11.9)	> 60 sec

Note: (SAWDT) conditions i.e. (0.475) - based on 1991 volumes
AADT conditions i.e. 1.172 - based on 1989 volumes

Level of service is a measure of the mobility of the traffic determined mainly by vehicle delay. For example, level of service "A" represents almost free flow conditions and corresponds to an average delay of less than 5 sec/vehicle. At level of service "E", an intersection is considered to be at capacity with resulting average delays of 40 to 60 sec/vehicle. At a level of service "F", forced flow conditions dominate.

The volume to capacity ratio indicates the degree of saturation under which the intersection is operating under. A volume to capacity ratio of 1.0 represents the "theoretical capacity" of an intersection. The "practical capacity" of an intersection is dependant upon the level of service considered acceptable for the surrounding environment and traffic patterns. For urban arterial roadways within regions similar in nature to the Town of Lindsay, it is considered desirable to design to standards representative of a level of service "C to D" with a corresponding upper limit volume to capacity ratio of 0.9. It is also fundamental to recognize that it is standard engineering practice to design roadways based on this method of intersection analysis.

The delay of an intersection and for individual movements is directly related to volume to capacity (V/C) ratios. When the V/C ratio exceeds 0.9, delay increases exponentially (Source: *Canadian Capacity Guide for Signalized Intersections*). Specifically, the average intersection delay represents the average waiting time which will be experienced by a vehicle approaching the intersection. The following ranges have been found applicable to intersections within Canada:

- average delay less than 30 sec. - acceptable operation;
- average delay between 30 sec. and 60 sec. - excessive waiting time, depending on design objectives; and
- average delay exceeding 60 sec. - excessive waiting times for individual intersection lanes or approaches to be judged in conjunction with the design objective; for an overall intersection operation such delays are usually not acceptable.

At the Wellington Street/Lindsay Street North intersection, the p.m. peak hour volume to capacity ratio (V/C) is 0.984 based on SAWDT conditions; where the acceptable volume to capacity ratio (V/C) range is 0.8 to 0.9. It should be noted that due to the peaking characteristics of traffic on the Wellington Street crossing, there are periods during the day when the crossing is operating below capacity.

It is fundamental to recognize that the existing spacing between the two intersections of 185 m will **not** permit efficient 2-way signal progression, which is required to achieve optimal operations given the prevailing directional splits of traffic during the a.m. and p.m. peak periods. Ideally, an intersection spacing of approximately 450 m is desirable for 2-way progression. Current practice is not to install signalized intersections at a spacing of less than approximately 220 m.

In some locations, capacity constraints in the short-term can be reduced by spreading out the peak hour traffic demand evenly over one and two hour periods (i.e. increasing the peak period). In order to "spread out" the peak period, a significant change in work schedules and travel patterns would be required. Initiatives to "spread out" the peak period on roadways in other municipalities have had little success (i.e. staggered work hours, flex-time, etc.). Given the nature and size of the Lindsay, and based upon discussions with local residents and people in the business community, this option was not considered to be a serious alternative to future physical improvements.

Related studies previously undertaken by the County and Town have recommended that Traffic System Management (TSM) improvements be undertaken at the above noted intersections to extend the "capacity life" of the crossing. **A number of these recommendations have been implemented such as; repainting the northbound and southbound lanes on William Street to incorporate separate left turn lanes, and recently, new traffic controllers and revised signal timing and phasing plans have**

been installed at each intersection. Previously recommended improvements which have not yet been implemented include, the construction of northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection and the construction of a continuous two-way centre turn lane on the Wellington Street bridge.

The analysis completed for this Study concluded that additional TSM improvements at the subject intersections (including signal timing revisions and northbound/southbound left turn lanes at the Wellington Street/Lindsay Street North intersection), could provide a **maximum** of 3-4 years (from 1991) of additional river crossing capacity. This does not satisfy the objective of this Study which is to determine a solution that will satisfy long-term river crossing capacity requirements.

Exhibit 3.7 illustrates the existing traffic volumes at the Wellington Street crossing compared to estimated peak capacity. As can be noted, during the noon and p.m. peak hours, there are periods where the current volumes exceed the service volume (capacity) at levels of service "D/E". This is a result of vehicles forcing their way across the bridge and through the signalized intersections at each end of the Wellington Street crossing using the following observed techniques:

- Reduction in vehicle headways (spacings); and
- An increase in vehicles passing through the intersections during the clearance periods (i.e amber/all red intervals).

The above operating characteristics result in a decrease in the level of safety associated with the operation of the crossing. Furthermore, as the approach roads and specific movements at the Wellington Street/William and Wellington Street/Lindsay Street North intersection become congested, drivers will infiltrate onto adjacent local residential streets.

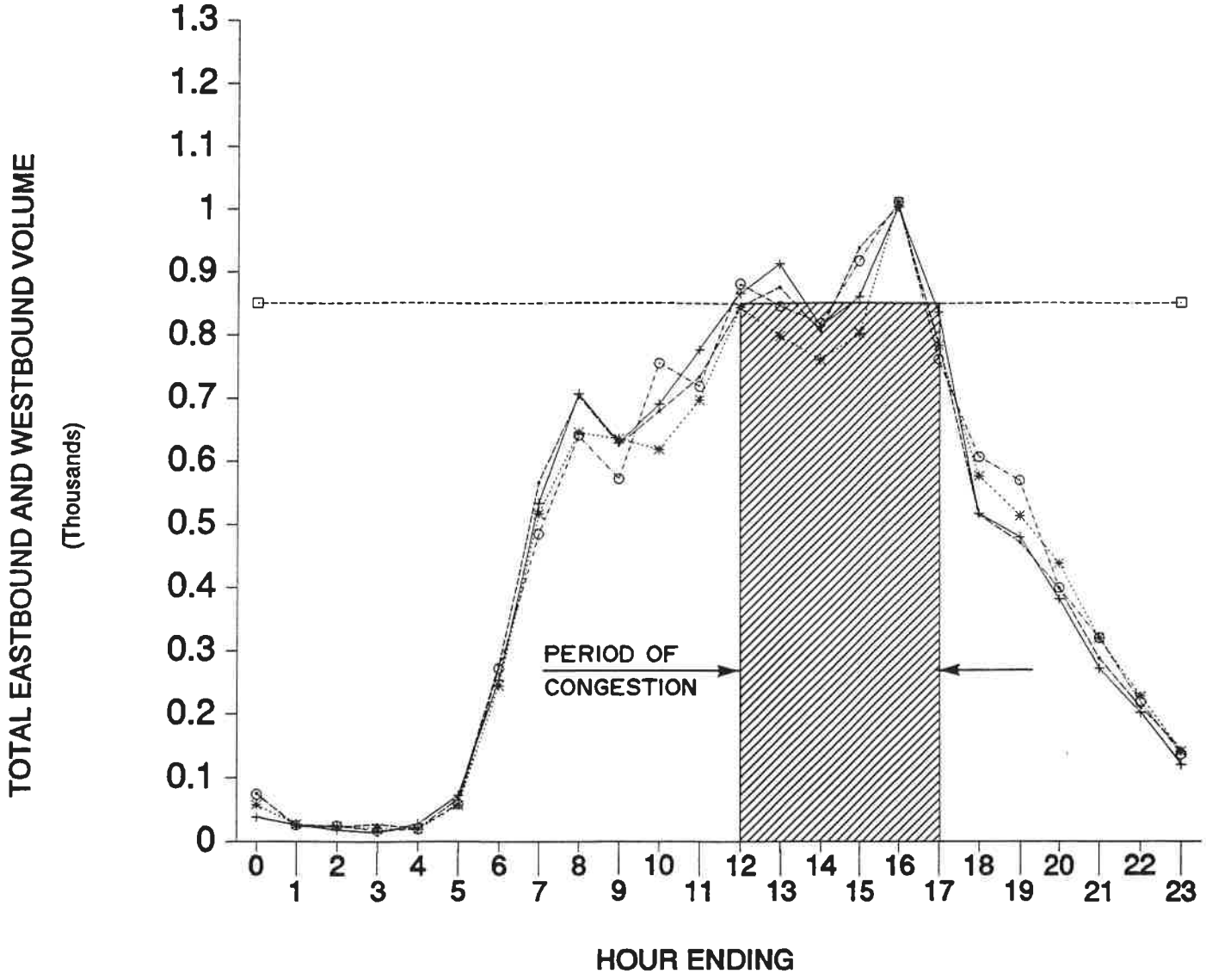
Traffic infiltration on local roads between Colborne Street East/West and Wellington Street/Queen Street has been identified in this Environmental Assessment as a significant vehicular and pedestrian safety hazard. This phenomenon currently exists for the following reasons:

- Congestion at the Wellington Street/William Street intersection; and
- The circuitous nature of the existing County Road (arterial) loop between Colborne Street East and West.

Traffic infiltration, a social environmental issue, is further discussed in Section 5.3.

3.7 2011 River Crossing Demand

To assess the potential impact(s) of future residential/employment growth within and adjacent to the Study Area on the existing river crossing capacity, river crossing trips were established for the year 2011. The total 2011 river crossing trips over the Wellington Street and Lindsay Street North bridges is projected to be within the range of 27,700 - 32,400 SAWDT (25,750 - 30,150 AADT) vehicles per day. This compares to an existing capacity of 20,600 - 24,500 vehicles per day. Illustrated on **Exhibits 3.8** to **3.10** inclusive are the 2011 trans-river crossing trips (internal-internal, internal-external and external-external).



WELLINGTON STREET BRIDGE

Legend

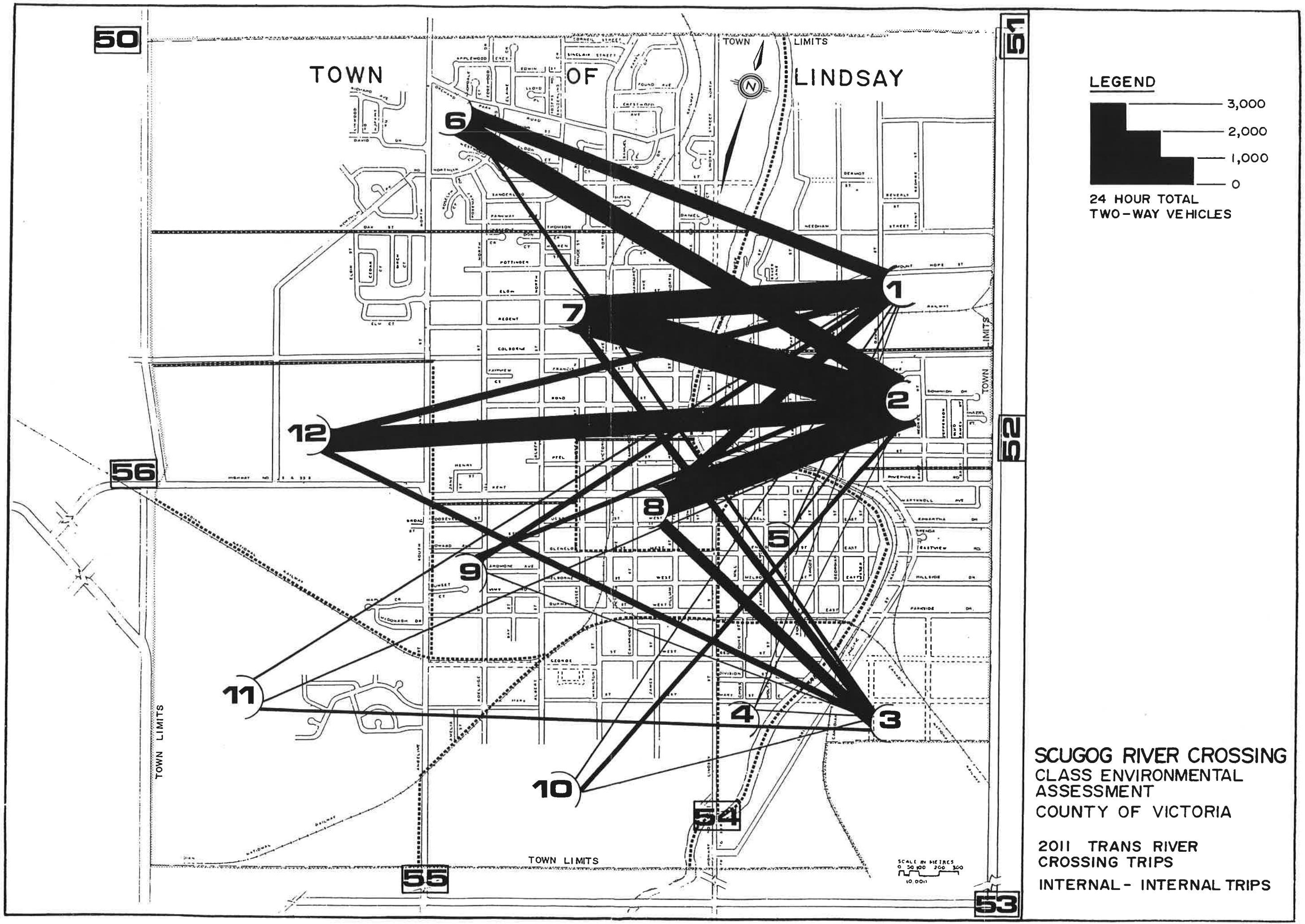
- Monday 19th
- Tuesday 20th
- Wednesday 21st
- Thursday 22nd
- LOS D/E

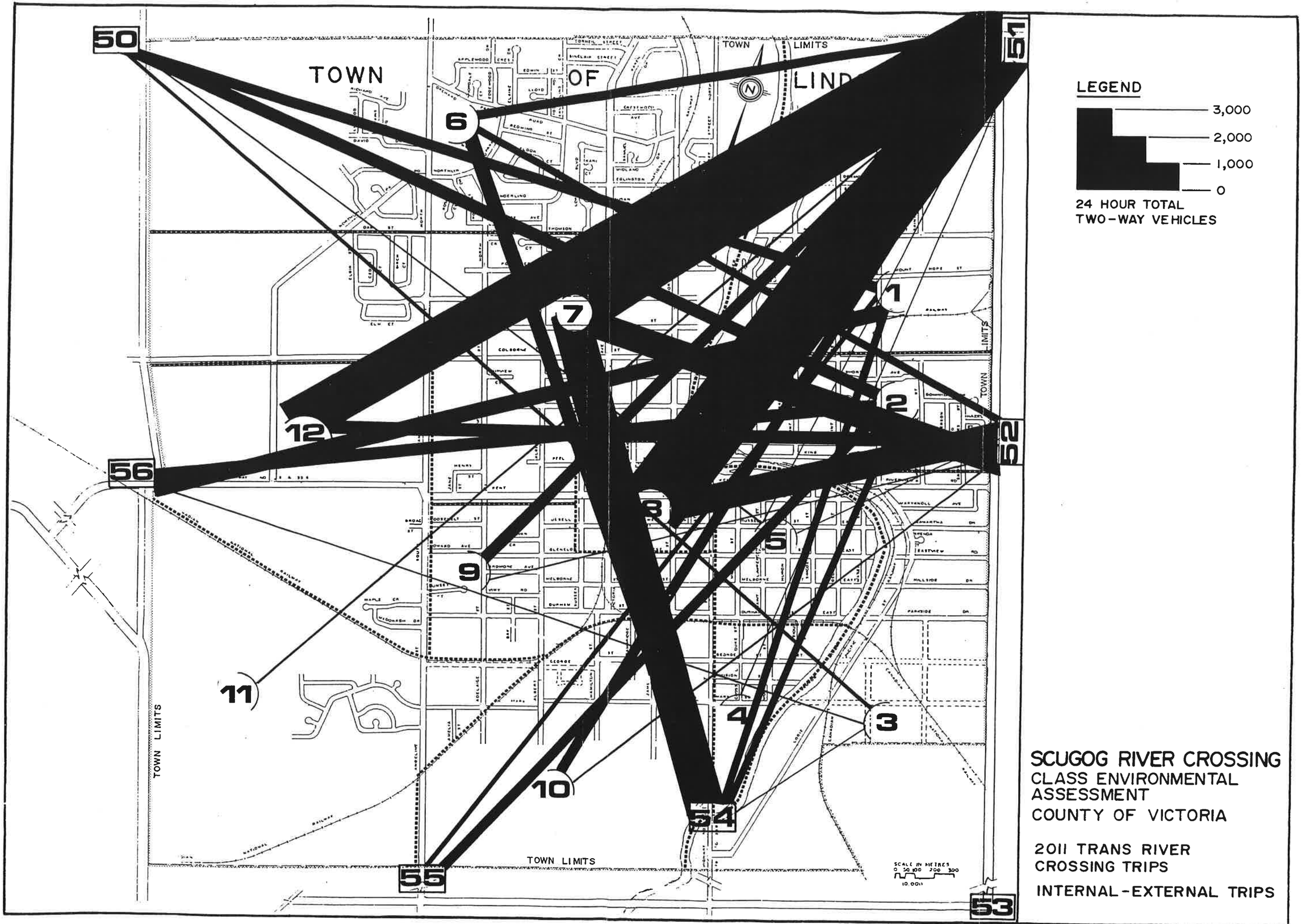
LOS = Level of Service

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

HOURLY CROSSING VOLUMES - AUGUST 1991

EXHIBIT 3-7


50
51
52
53
54
55
56
TOWN OF LINDSAY
TOWN LIMITS
TOWN LIMITS
TOWN LIMITS
TOWN LIMITS
1
2
3
4
5
6
7
8
9
10
11
12
LEGEND
3,000
2,000
1,000
0
24 HOUR TOTAL
TWO-WAY VEHICLES
SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA
2011 TRANS RIVER CROSSING TRIPS
INTERNAL - INTERNAL TRIPS



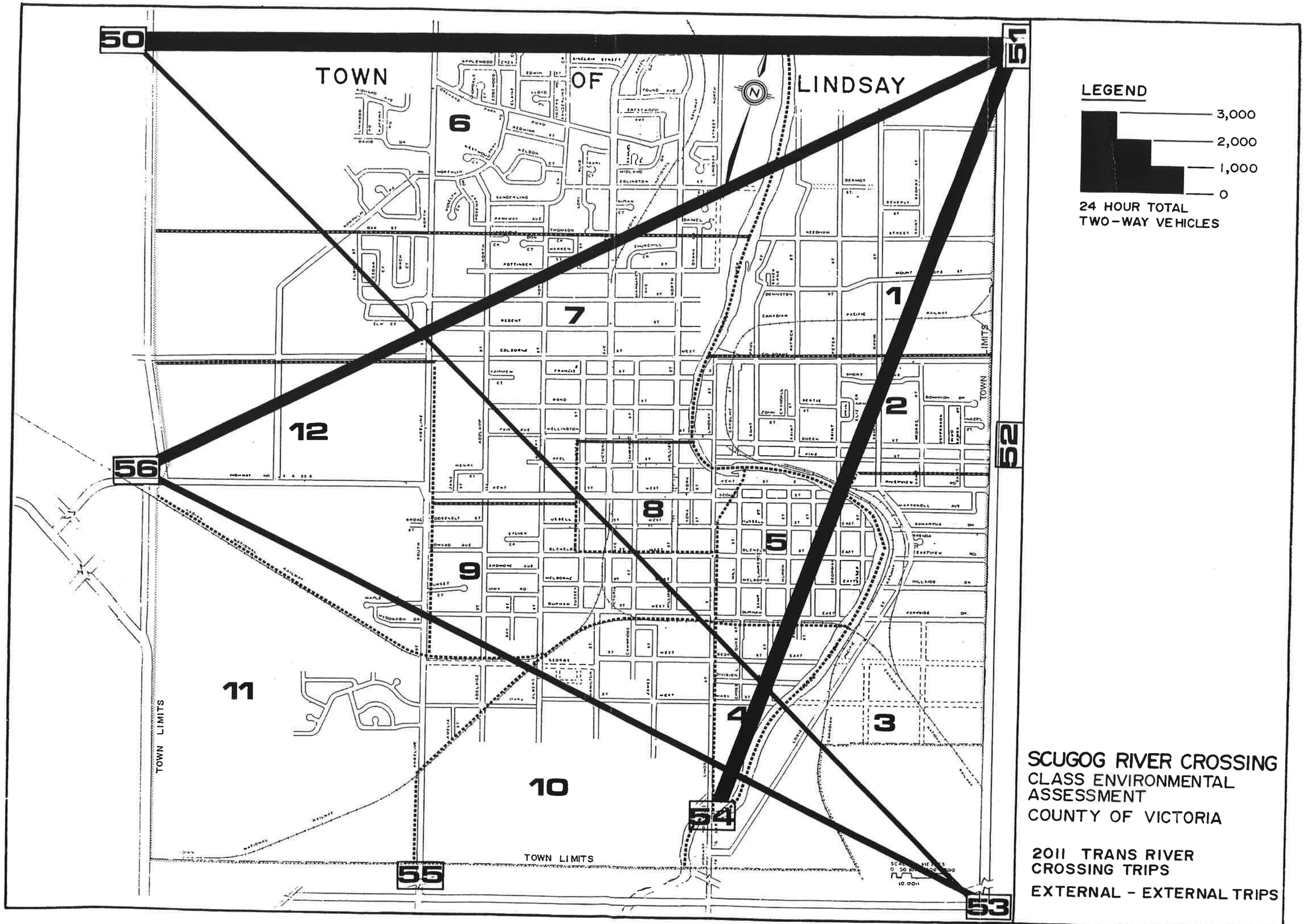
SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

2011 TRANS RIVER CROSSING TRIPS

INTERNAL-EXTERNAL TRIPS



SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

2011 TRANS RIVER CROSSING TRIPS

EXTERNAL - EXTERNAL TRIPS

Based on an examination of the 2011 projected trans-river crossing trips illustrated on **Exhibits 3.8 to 3.10** inclusive, it can be concluded that:

- Major trans-river crossings are between:
  - Internal zones 1 and 7, 2 and 7, 2 and 8;
  - Internal zone 7 and external zones 51 and 54;
  - Internal zone 8 and external zone 51; and
  - Internal zone 12 and external zone 51.

The 2011 river crossing trips by zone are also identified in **Table B3** in **Appendix B.** The distribution of 2011 and 1991 river crossing demand is as follows:

	2011	1991
• Internal-Internal	37 %	39%
• Internal-External	55 %	53%
• External-External	8 %	8%
TOTAL TRIPS (SAWDT)	27,700 - 32,400 veh/day	21,100 - 21,400 veh/day

The 2011 "ideal" river crossing locations are shown on **Exhibit 3.11.** Similarly to the 1991 conditions, there is no significant difference in "ideal" locations for the two employment and population scenarios considered for this Study. **In summary, the traffic analysis undertaken as part of this Study indicates that the majority of existing and future river crossing trips have either an origin and/or a destination within the Town of Lindsay and that the "ideal" river crossing corridor is located between Wellington Street and Colborne Street.**

3.8 2011 River Crossing Capacity and Operating Conditions

The river crossing demand in comparison to existing river crossing capacity as provided by the Wellington Street and Lindsay Street North river crossings is graphically illustrated on **Exhibit 3.12.**

Three methods of projecting future demand were utilized:

- Scenarios 1 and 2 as detailed in **Section 3.4**; and
- Scenario 3 - applying a 2.1 % growth factor (based on review of historical growth trends) to existing daily traffic volumes obtained from manual/automatic traffic counts.

The total projected (2011) river crossing demand at the Lindsay Street North and Wellington Street crossings is well beyond the existing capacity of both bridges as summarized in **Table 3.5.**

TABLE 3.5
SUMMARY OF EXISTING AND FUTURE RIVER CROSSING DEMANDS AND CAPACITIES

RIVER CROSSING	CAPACITY (veh/day)		DEMAND (SAWDT)	
	Existing	With TSM Improvements including Centre Turn Lane on Wellington St. bridge	1991	2011
Wellington Street	9,800 - 11,400	13,300 - 15,000	10,800	14,000 - 16,300
Lindsay Street North	10,800 - 13,100	13,500	10,600	13,700 - 16,100
TOTAL (veh/day)	20,600 - 24,500	26,800 - 28,500	21,400	27,700 - 32,400

The combined capacity of 26,800 to 28,500 vehicles per day assumes that all Transportation Systems Management (TSM) improvements, identified in the ESR and previous traffic operations and planning studies have been implemented, including the widening of the Wellington Street bridge to accommodate a continuous two-way centre left turn lane. It is fundamental to recognize that an additional lane on the existing Wellington Street structure will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections; thereby, resulting in the projected capacity being **extremely optimistic.**

With all TSM improvements implemented, including a centre turn lane on the Wellington Street bridge, additional river crossing capacity in the Lindsay area will be required when one or both of the following "triggers" or thresholds have been realized:

- **The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or**
- **Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure i.e. Level of Service E/F.**

It is anticipated that one or both of the above thresholds will be achieved by the year 2001.

3.9 Summary of Need and Justification Assessment

The need and justification for additional crossing capacity of the Scugog River was based on a review of the existing river crossing capacity, existing and anticipated future river crossing demand and the ability of the local and regional transportation network to accommodate such demand.

The traffic analysis undertaken for the Study reflects local operating conditions and parameters within the Town of Lindsay and is consistent with current and accepted Canadian engineering standards. These standards are typically used by traffic engineers/road designers in the determination of road requirements, etc. To use reduced engineering standards may result in operating conditions which may not be in the best public interest or give proper regard to safety issues. In addition, it would not be considered "good engineering and planning" practice as the

TOWN OF LINDSAY

TOWN LIMITS

HWY. 35

HWY. 36

HWY. 7B/35B

HWY. 7

HWY. 7 / 35

TOWN LIMITS

TOWN LIMITS

HWY. 7 / 35

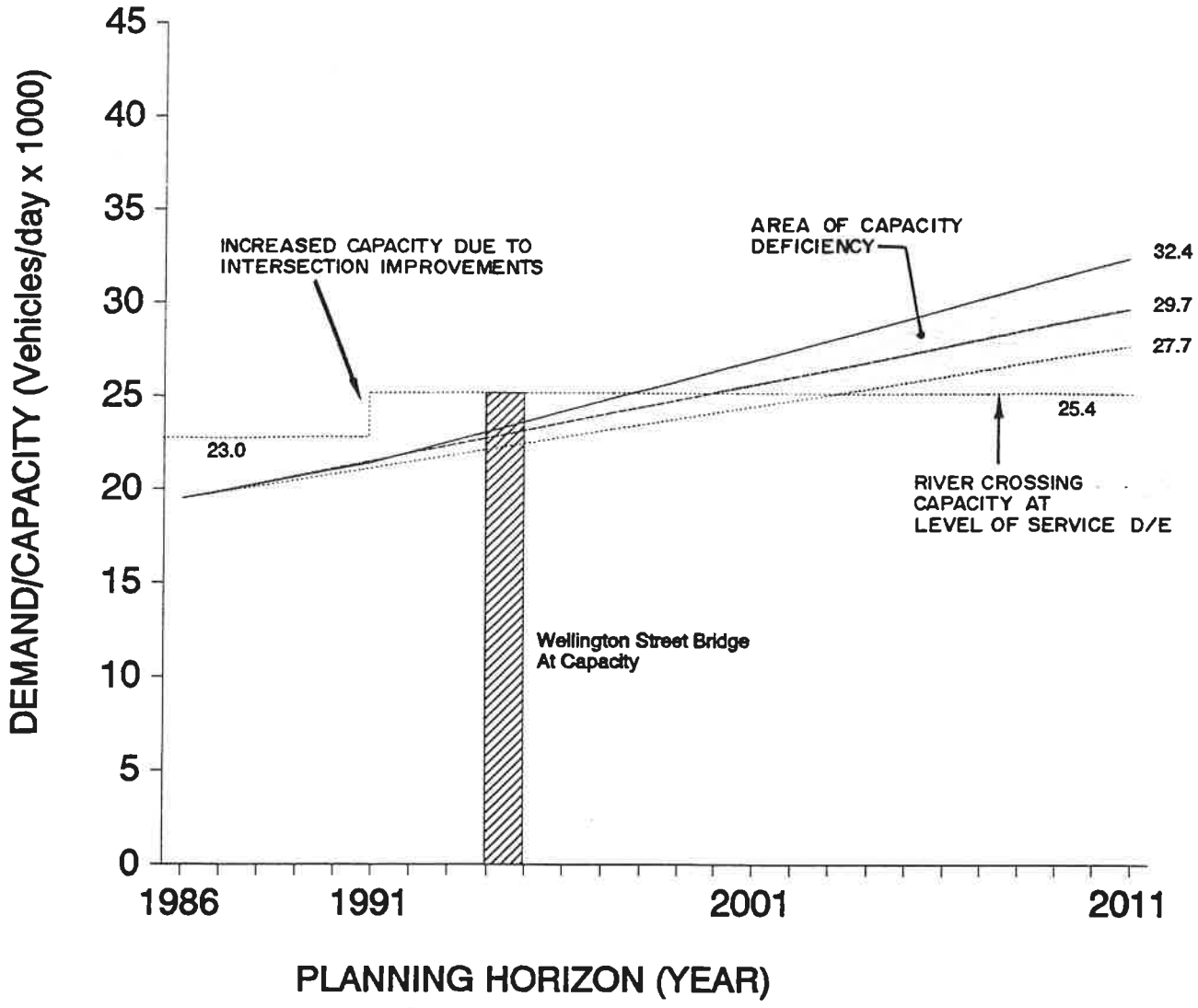
LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS(ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- (1) SCENARIO 1
- (2) SCENARIO 2
- "LOCAL" ARTERIAL

SCALE IN METRES
0 50 100 200 300
1:10,000

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

FUTURE 2011 IDEAL RIVER CROSSING LOCATIONS



WELLINGTON STREET AND LINDSAY STREET NORTH BRIDGES

RIVER CROSSING DEMAND

—— Scenario 1 (27.7 VPD x 1000)

---- Scenario 2 (29.7 VPD x 1000)

..... Scenario 3 (32.4 VPD x 1000)

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

RIVER CROSSING TRAFFIC DEMAND VS. CAPACITY

results of the EA Study would not identify all the possible existing and long-term deficiencies and problems. (For example: the public safety within the Town is impacted by the ability of local emergency units to provide service with minimal delays to both sides of the Scugog River).

Based upon the work undertaken as part of the need and justification analysis for this Study, the following conclusions and recommendations have been established:

- **The total existing (1991) river crossing demand is within the capacity range of the total combined capacity of the Wellington Street and Lindsay Street North river crossings. The Wellington Street river crossing is currently operating at capacity thereby compromising its ability to efficiently and safely accommodate vehicular and pedestrian river crossing trips;**

- **All potential Transportation System Management (TSM) and widening improvements should be implemented to maximize the existing river crossing capacity. Remaining improvements to be implemented include the construction of a continuous two-way centre turn lane on the existing Wellington Street bridge and northbound/southbound left turn lanes at the Wellington Street/Lindsay Street intersection;**

- **TSM and widening improvements to the existing Wellington Street bridge and adjacent intersections are recommended as the first phase of the resolution of the existing and future river crossing capacity problem. This solution alone however, will not resolve anticipated long-term river crossing capacity deficiencies nor existing problems with traffic infiltration and other transportation, environmental and economic concerns;**

- **With all TSM and widening improvements implemented, additional river crossing capacity in the Lindsay area will be required when one or both of the following "triggers" or thresholds have been realized:**

  - **The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or**

  - **Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure i.e. Level of Service E/F.**

- **It is anticipated that one or both of the above thresholds will be achieved by the year 2001;**

- **An additional lane on the Wellington Street bridge will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections resulting in the 2001 capacity projection being extremely optimistic. In addition, the widening may result in a decrease in pedestrian safety as a result of reduced sidewalk widths;**

- **The existing Wellington Street structure requires major rehabilitation. At the time rehabilitation works are initiated, the existing structure could be widened to**

accommodate a continuous centre turn lane;

- **When additional future capacity is provided, it should result in the accommodation of the long-term (20 to 30 years) vehicular crossing requirements of the Scugog River;**

- **Should significant additional river crossing capacity not be provided in the future, the following transportation/traffic related impacts can be anticipated with some certainty:**

  - **Peak period congestion will continue to increase in severity over time on the existing river crossings and at the Wellington Street at William Street and Lindsay Street North intersections;**
  - **Increased congestion will compromise safe traffic operations on the local network;**
  - **Increased congestion will result in additional traffic infiltration on local residential roadways within the community particularly on roadways west of William Street between Colborne Street and Wellington Street;**
  - **Increased congestion on the existing river crossings and adjacent intersections will affect emergency service response times to certain areas of the community;**

- **Even if existing and future conditions on the existing crossings are not currently considered to warrant the provision of significant additional crossing capacity, it is clear that significant additional river crossing capacity will be required in the future and that failure to address this issue through at least the protection of a future crossing location will have serious impacts on traffic circulation within the community which will translate into economic and social environmental problems.**

4.0 NATURAL ENVIRONMENT

A fundamental component of this Environmental Assessment was to undertake an inventory of the existing natural environment within the Study Area adjacent to the Scugog River. Field surveys were conducted to obtain an understanding of the surrounding natural environment and to identify environmentally sensitive areas.

This section of the ESR outlines the "key" natural environmental characteristics that have been identified. A summary of the natural environmental inventory undertaken for this Study is identified on **Exhibit 4.1.**

4.1 Vegetation

The composition, extent and age of existing vegetation increases in significance from south to north within the Study Area. Along Colborne Street west of the Scugog River, the most significant vegetation observed are Black Walnut trees. Many of these trees would be difficult to successfully relocate due to the age and extent of the root system. Black Walnut trees in this area are considered to be locally significant. The remaining vegetation within the Colborne Street river crossing corridor consists of: on the west bank of the Scugog River, naturally occurring Manitoba Maple, planted mature trees and deciduous shrubs and on the east bank of the Scugog River, naturally occurring Weeping Willows, a declining Manitoba Maple and peripherally several species of young deciduous trees.

North of the Colborne Street river crossing corridor near Pottinger Street, mature trees located along the Scugog River banks include Buckthorn, Cottonwood, White Elm, Manitoba Maple, Silver Maple, Poplar and Willow, many of which cannot be relocated due to size, probable sparse root systems and inaccessibility i.e. steep river bank slopes. Most of this plant material is in good condition.

The west bank of the Scugog River at Eglington Street is characterized by mature trees and a substantial herbaceous layer. Plant species are similar to those at Pottinger Street and would be equally difficult to relocate. The adjacent east river bank is characterized by a floodplain area of approximately 50 m of wet meadow comprised of ferns, Touch-me-nots and Dogwoods. Other plant material includes: Aspen, Purple Loosestrife and White Cedar.

The Orchard Park Road area near the Scugog River is characterized by mature river bank vegetation and well developed cattail marshes. Mature trees in this area include White Elm, Chokecherry and Manitoba Maple. Similarly, the Springdale Gardens river crossing corridor contains mature river bank vegetation, such as Black Willow, and is home to many species of flora and fauna. Mature trees in this area include primarily White Cedar intermixed with deciduous tree species such as Sugar Maple, Manitoba Maple, White Elm and Paper Birch.

4.2 Woodlots and Wildlife

As with vegetation and treed areas, the presence of natural wildlife along and adjacent to the river corridor escalates towards the north end of the Study Area.

In the southern part of the Study Area, the wildlife is limited to water oriented rodents such as

muskrat, birds, squirrels, domestic ducks and geese and Canada geese and gulls.

In the Pottinger Street area, the composition, extent and age of treed areas are such that small rodents, songbirds and waterfowl could nest in and/or migrate through. The accompanying understorey of grasses and shrubs i.e. Queen Anne's Lace, Goldenrod, Curled Dock, Chicory, Vetch, Wild Grape, Staghorn Sumac, Chokecherry and Virginia Creeper offer excellent refuge and forage opportunities for wildlife. As well, the Eglington Street area also provides very good wildlife cover and songbird feeding/nesting opportunities.

Substantial woodlots within the Study Area are located in the Orchard Park Road and Springdale Gardens river crossing areas. This northern region is characterized by open fields in conjunction with treed areas which provides an ideal foraging and migratory area for both large and small animals such as deer, fox, skunk and racoon. This area also accommodates breeding and feeding habitat for Provincially Significant animal species such as the Black Tern colonial waterbird, Least Bittern and Marsh Wren.

4.3 Water Resources

Within the Colborne Street river crossing corridor, the river substrate is completely algae covered indicating an enriched water system (25 degrees celsius). An enriched water system is a result of excessive nutrients such as phosphates and nitrogen compounds from fertilizers or industrial processes which causes excessive plant growth (algae). The algae eventually dies off, decomposes and uses up available oxygen in the water which in turn limits fish usage. Near the river banks, no cyprinidae (minnows) were noted (i.e. lack of forage fish inhabiting species such as muskie or bass) but occasionally larger fish were observed surfacing to feed.

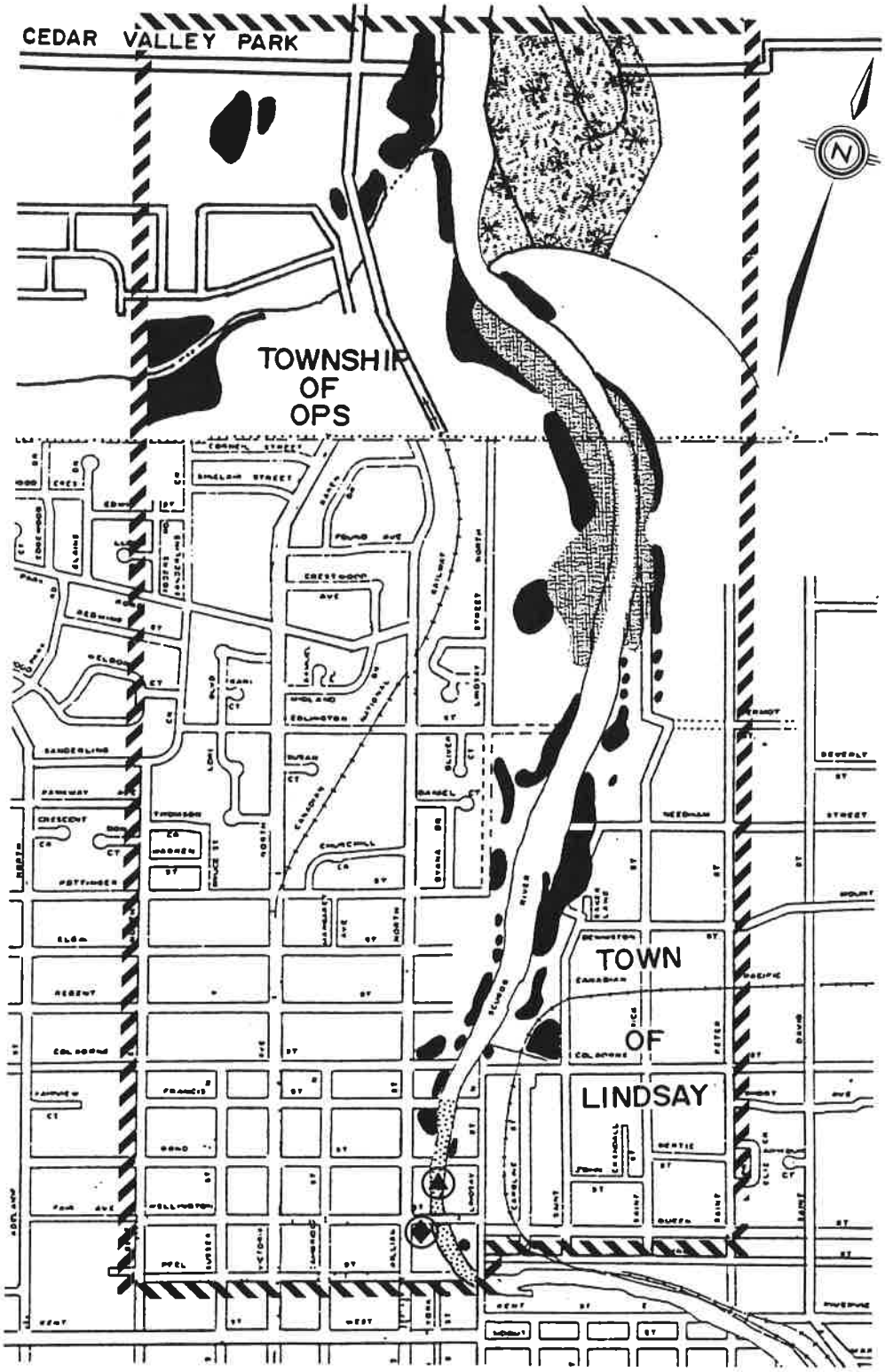
In the vicinity of the Pottinger Street river crossing corridor, the water is very slow moving and the river substrate is algae coated (limiting feeding and spawning opportunities for fish). Further to the north near Eglington Street, no minnows were observed and the western shoreline is covered with muck suggesting sediment problems, as well, some algae was evident.

Within the Orchard Park Road river crossing corridor in the wetland area on the east river bank, there are extensive warm water fish spawning and waterfowl opportunities. Similarly, the Class "1" wetland in the northern end of the Study Area provides for spawning opportunities for many sport fish such as bass, yellow perch and muskellunge (Regionally significant) and is also a nesting area of three osprey (bird) families (Regionally significant).

Representatives from the Ministry of Natural Resources have indicated that construction would not be permitted within the Scugog River during spawning season (March 16 to June 30 of any given year). During spawning season, fish travel from Sturgeon Lake southerly into the Scugog River to spawn and return to Sturgeon Lake with their young. The Town of Lindsay Official Plan has identified spawning grounds in the Bond Street area.

4.4 Wetland Areas

An "Unclassified" wetland area has been identified on the east river bank within the Orchard Park Road area approximately 250 m north of Eglington Street. An "unclassified" wetland indicates that



LEGEND

- STUDY AREA
- CLASS I WETLAND
- UNCLASSIFIED WETLANDS
- SENSITIVE AREA
- SIGNIFICANT VEGETATION
- SPAWNING GROUNDS
- CONTAMINATED LANDS

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

NATURAL ENVIRONMENT

N.T.S.

the area has not officially been designated by the Ministry of Natural Resources as a Class wetland having Provincial significance.

The Ministry of Natural Resources has classified the wetland area on the east river bank between the old railway crossing at Springdale Gardens and the Township of Fenelon, as a **Class "1" Wetland.** The Class "1" designation signifies the highest priority type for a wetland and is a **Provincially significant wetland.** The Ministry of Natural Resources have indicated that they do not support any construction or development that would have potential impact to the subject Class "1" wetland.

4.5 Contaminated Properties

The Ministry of Natural Resources, Ministry of Environment, Kawartha Region Conservation Authority and the Town of Lindsay were contacted regarding potential contaminants both in the Scugog River and on lands adjacent to the river within the Study Area. Currently, there are no known contaminants (i.e. pcb, spilled oil, etc.) in the river bed within the Study Area. Trent-Severn Waterway require that prior to their approval of construction within the river (i.e. realignment/dredging of the navigation channel etc.), sample testing of the river bed for physical contaminants is required. As there is no known record of existing river bed contaminants in the Colborne Street vicinity (based on discussions with the Ministry of the Environment, Ministry of Natural Resources and Kawartha Regional Conservation Authority), it has been proposed that sampling of the river bed be undertaken in the detail design phase of the project.

The lands adjacent to the Scugog River in the south-east quadrant of the Wellington Street/William Street intersection (former location of Lindsay Hydro) have been identified as being contaminated with coal tar. The full extent of this contamination is not known and would be difficult to estimate unless a detailed site investigation is initiated. Removal of this contaminant could potentially be extremely costly (as its full extent can not be quantified until a detailed site investigation is completed) with negative impacts to the environment. Presently these lands are used as parking facilities and construction impacting this property is not permitted. As the extent of land that the coal tar covers is not known, any construction to the adjacent roadways (i.e. Wellington Street and William Street) and/or sidewalks has been considered as a potential impact.

5.0 SOCIO-ECONOMIC AND CULTURAL ENVIRONMENT

An integral part of the Environmental Assessment was to reasonably address societal issues i.e. " the human factor" relative to the river crossing capacity problem and possible planning solutions. As part of the Study, the review of potential socio-economic and cultural impacts extended beyond the specified Study Area. "Key" components of the social environment considered throughout the Environmental Study and discussed in this report include land use, noise impacts, aesthetic/visual intrusion, heritage resources, etc. As part of the Study, an in-depth assessment of socio-economic and cultural factors relative to each alternative planning solution to the river crossing capacity problem was undertaken. It is important to recognize that for a project of this nature, each alternative solution has some degree of impact affecting the social fabric of the community. It should also be noted that the level and scope of the assessment of the social environment for this project has been considered acceptable by the Ministry of the Environment.

Based on input from individuals and interest groups during the course of the Study, it is apparent that social concerns are a main issue and include, but are not limited to, the following:

- Pedestrian safety;
- Traffic (vehicular and commercial);
- Noise pollution; and
- Visual impacts.

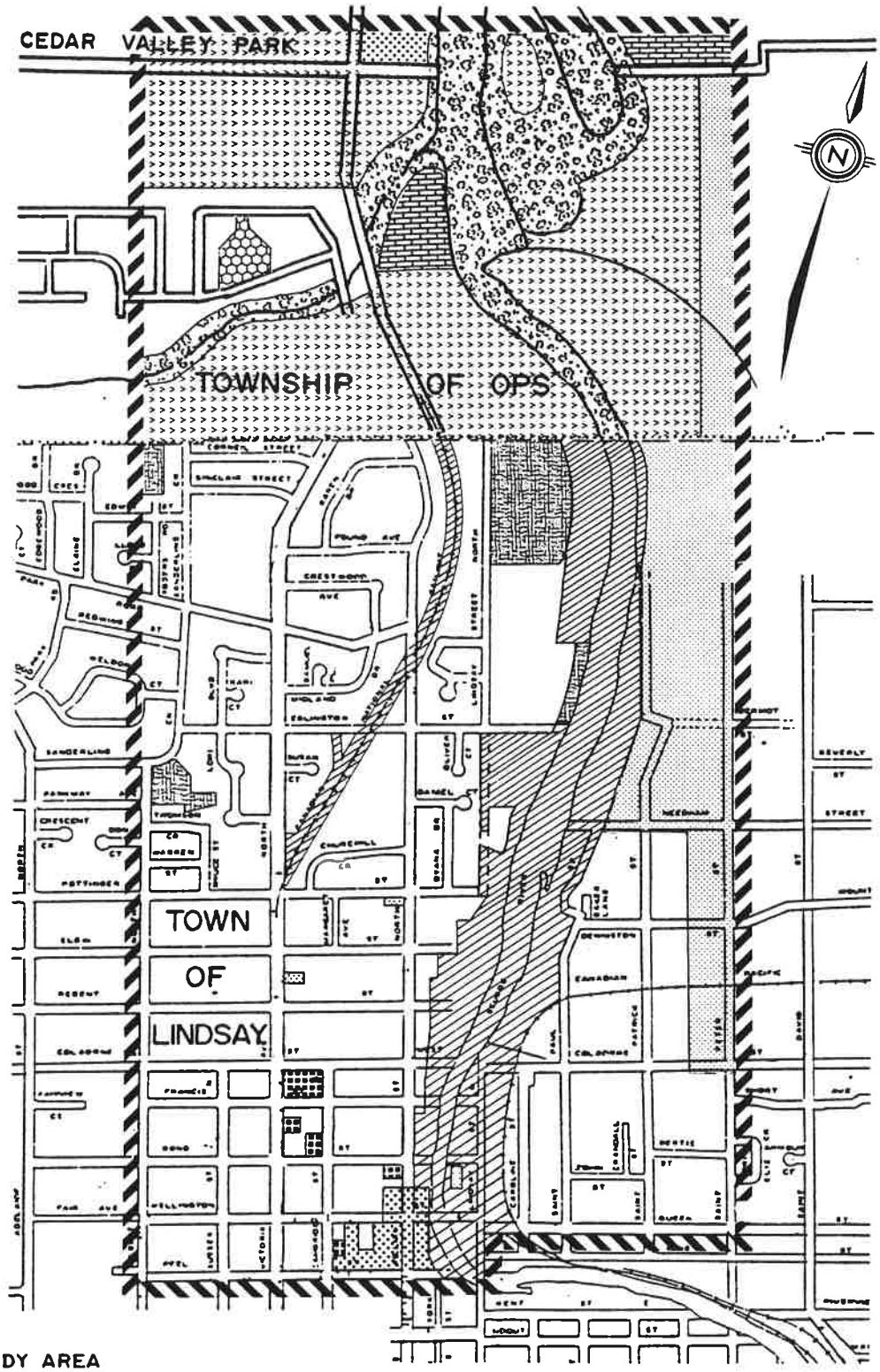
Societal concerns were considered as part of the need and justification for additional crossing capacity and in the assessment and evaluation of alternative methods of providing additional capacity. As previously mentioned, it is fundamental to recognize that each alternative solution has some degree of social impact, including the "Do Nothing" alternative. The goal when selecting a preferred alternative is to determine that solution which ranks the most desirable when considering a "combination" of criteria i.e. environmental and technical concerns.

5.1 Existing Land Use

Illustrated on **Exhibit 5.1** are the existing land uses within the Study Area, identified in accordance with the Town of Lindsay Zoning By-Law 45-78 and the Township of Ops Zoning By-Law 88-27.

Within the Town of Lindsay, land use is generally characterized by single family residential units/ commercial development on the west side of the river and industrial/vacant/residential lands on the east side of the river. In recent years, residential development has occurred in the north-west part of the Town. Kent Street, west of Lindsay Street South, represents downtown Lindsay and accommodates a well established commercial sector. A significant commercial zone has also been developed on Kent Street west of Angeline Street. Industrial land use within the Town has generally been confined to the north-east region of Lindsay.

Development in the Township of Ops has traditionally occurred around the perimeter of Lindsay. Based on recent growth trends in employment and population, residential development has been concentrated within the north-western area of the Township, with commercial and industrial development occurrence in the east/north-east regions adjacent to the Town of Lindsay.



LEGEND

- STUDY AREA
- INDUSTRIAL ZONE
- COMMERCIAL ZONE
- AGRICULTURAL ZONE
- WASTE MANAGEMENT ZONE
- SPECIAL STUDY AREA
- PARK ZONE
- ENVIRONMENTAL PROTECTION
- COMMUNITY FACILITY ZONE
- INSTITUTION ZONE
- RESIDENTIAL

SOURCE: TOWN OF LINDSAY, ZONING BY-LAW 45-78
TOWNSHIP OF OPS, ZONING BY-LAW 88-27 N.T.S.

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COUNTY OF VICTORIA

EXISTING LAND USE

Existing land use along the west portion of Colborne Street is predominately single family residential comprising of older homes. A three (3) story Seniors' residence is located on the south-east corner of the Colborne Street West/William Street intersection. In addition, an apartment complex comprising of three (3) low rise buildings is located on the west river bank, between Colborne Street and Pottinger Street. Existing land use along Colborne Street East is characterized mainly by single family residential, industrial and vacant lots. Park lands for passive recreational pursuits are located on the east and west river banks, north of Colborne Street (refer to **Section 5.4**).

Colborne Street, east and west of the river crossing is well travelled and is designated as a County Road (arterial road) in the Town of Lindsay Official Plan (with the exception between William Street and the river, where Colborne Street West is designated as a local road).

Land use on Pottinger Street is predominantly classified by older, well established single family residential dwellings. Pottinger Street, designated as a local road, travels westerly from the river dead-ending at Elgin Park. On the east side of the river, Denniston Street designated as a local road, does not presently connect to Highway 36 and terminates in a vacant lot east of St. Peter Street. It is proposed to extend Denniston Street to link with Mount Hope Street. Development along Denniston Street it is predominately single family residential with light industrial development concentrated east of St. Patrick Street.

North of Pottinger Street, the land use on Eglington Street is presently single family residential. Eglington Street (local road) runs west from the top of the river bank to Victoria Avenue. The subdivision west of the Eglington Street/Victoria Avenue intersection further precludes the opportunity of extending Eglington Street westerly beyond Sanderling Crescent. Land use within the Eglington Street crossing corridor east of the river includes a residential trailer park, private property, vacant fields and industrial uses. The closest municipal road right-of-way, St. Patrick Street, is separated from the river by a long parcel of private property. Needham Street to the south and Fleetwood Road to the north provides the only direct linkage to Highway 36 within the immediate vicinity.

Land use along Orchard Park Road is primarily residential. The Town of Lindsay Official Plan designates Orchard Park Road as a collector road. In order to connect Orchard Park Road to the western edge of the river bank, a new road must be constructed east of William Street. The new extension of Orchard Park Road would be required to traverse approximately 1500 m of field, treed areas and potentially conflict with existing/proposed developments on Lindsay Street North and William Booth Crescent. Land use along the corridor linking Fleetwood Road with the eastern river bank is predominately agricultural and industrial; approximately 2000 m of new road would be required to complete the linkage to Fleetwood Road.

Land use in the northern portion of the Study Area accommodates agricultural, single family residential and a trailer park. The Township of Ops Official Plan designates lands along this corridor as agricultural, tourist commercial (trailer park), residential, environmental protection, water management industrial and general industrial (holding). Land use east of the Scugog River is characterized by agricultural lands, wetland forest, the Lindsay Sewage Plant and Ops Landfill sites. Toward the Scugog River are open lagoon basins serving the sewage plant.

5.2 Official Plan Policies and Provincial/Agency Recommendations

A significant portion of the Scugog River and adjacent lands within the Study Area have been designated as an Environmental Protection Zone and/or Sensitive Area under the Town of Lindsay and Township of Ops Official Plans.

The Township of Ops Official Plan states that an amendment is not required in the event that a new river crossing with connecting roads is constructed.

The Town of Lindsay Official Plan states that if a new river crossing is located within or adjacent to an Environmental Protection Zone and/or Sensitive Area as described by Schedule "B" of the Town's Official Plan, an environmental report in accordance with Section 6.6 of the Official Plan is required. Additionally, for the reclassification of a road depicted as on Schedule "D" of the Town's Official Plan to a higher category (i.e. collector to arterial), a justification report in accordance with Section 9.19 of the Town's Official Plan is required. As documented by the Town's Planning staff, if the subject ESR addresses those requirements stated in Sections 9.19 and 6.6 of the Official Plan, then the above supplementary reports are not required. As part of the Environmental Assessment, the requirements of the Sections of 6.6 and 9.19 of the Towns Official Plan have been addressed. (Included in **Appendix C** are the Town of Lindsay and Township of Ops Official Plan Policies pertaining to this issue).

As part of the Study, a review of recommendations and guidelines by Provincial bodies and Transportation Agencies was undertaken. Recently, a report was published by the *Commission on Planning and Development Reform in Ontario (Sewell Commission)*. The report (finalized in June 1993) prepared by the Commission presents recommended Provincial policy statements for an improved planning system for Ontario. In brief, the recommendations relate provincial goals and planning policies that incorporate environmental and other considerations. The recommended policy statements established by the Sewell Commission that are specifically relevant to the issues associated with a new crossing of the Scugog River include the following:

Community Development and Infrastructure Policies

Goal:

> "The goal is to manage growth and change to foster communities that are socially, economically, environmentally and culturally healthy, and that make efficient use of land, new and existing infrastructure, and public services and facilities."

Recommendations:

- To encourage economic opportunities that enhance job possibilities and broaden the economic base of communities, a supply of zoned land will be maintained sufficient to meet anticipated needs;
- Communities will be planned to minimize the consumption of land, promote the efficient use of infrastructure and public service facilities, and, where transit systems exist or may be introduced in the future, promote the use of public transit;
- The efficiency of transportation systems shall be maximized by coordinating transportation plans

with those of other relevant jurisdictions, integrating transportation modes, and making optimal use of existing transportation systems before proceeding with system expansion;

- In existing built-up areas served by public sewage and water systems, intensification and mixed uses will be encouraged in existing built-up areas by appropriate land-use designations and zoning;

- Extensions to the built-up areas served by public sewage and water systems may be permitted only if the following conditions are met:

    - new development areas are logical extensions of the existing built-up areas, and will be served by public sewage and water systems;

    - a strategy for the development, staging, and financing of the infrastructure for the extension is adopted;

    - opportunities for the efficient use of land, infrastructure, and public service facilities through intensification and mixed uses in existing built-up areas are provided;

    - the extension will have a compact form and a mix of uses and densities that efficiently use land, infrastructure, and public service facilities; and

    - if the extension is to include quality agriculture land, it must be demonstrated there is no reasonable practical alternative to accommodating the growth.

- The continuous linear characteristics of significant transportation and infrastructure corridors and rights-of-way, including abandoned railway corridors, will be protected.

Natural Heritage and Ecosystem Protection and Restoration Policies

Goal:

"The goal is to protect the quality and integrity of ecosystems, including air, water, land and biota; and where quality and integrity have been diminished, to restore or remediate to healthy conditions."

Recommendations:

- Development shall not be permitted in significant ravines, rivers, streams and natural corridors, and in the habitat of endangered, threatened and vulnerable species. Development shall not be permitted in significant woodlots south of the northern boundaries of the District of Muskoka and Counties of Haliburton, Hastings, Lennox and Addington, Frontenac, and Lanark. Development shall not be permitted on adjacent and related lands if it adversely affects the integrity of the natural feature or ecological functions of the areas included in this statement. New infrastructure shall be located outside of these significant features unless it is demonstrated there is no reasonable alternative;

- In the Great Lakes region, development shall not be permitted within provincially significant

wetlands. On adjacent lands, development may be permitted only if it does not result in any of the following: loss of wetland functions; subsequent demand for future development that will have an adverse effect on existing wetland functions; conflict with existing site specific wetland management practices; and loss of contiguous wetland area. New infrastructure shall be located outside provincially significant wetlands unless it is demonstrated there is no reasonable alternative. Approval authorities shall consider alternative methods and measures for minimizing impacts on wetland functions when reviewing proposals to construct transportation, communications, sanitation, and other such infrastructure in provincially significant wetlands;

- Except for the areas identified in the paragraphs above, areas of natural and scientific interest, ground water recharge areas and significant wildlife habitat and shorelines will be classified into areas where either a) no development is permitted or b) development may be permitted only if it does not adversely affect the integrity of these features and functions for which the area is identified. In the Great Lakes region, locally significant wetlands will be classified into areas where either a) no development is permitted or b) development may be permitted only if it does not adversely affect these wetland functions;

- Except for the areas identified in paragraphs one and two above, development on lands adjacent to lakes, rivers, and streams may be permitted only if it does not impair water quality or adversely affect shoreline vegetation, bank stability, and wildlife habitat;

- There shall be no net loss of fish habitat within the same water course and development will create a net gain where possible. Development may be permitted only if there are no adverse effects on, or is no net loss of, fish habitat within the same watercourse;

- Development may be permitted on hazardous sites only if it does not present a risk to public safety, public health and property; and

- In decisions regarding development, every opportunity will be taken to: improve the quality of air, land, water, and biota; maintain and enhance biodiveristy compatible with indigenous natural systems; and protect, restore, and establish natural links and corridors.

Recommended planning guidelines have also been prepared by the Ministry of Transportation of Ontario (MTO) and the Transportation Association of Ontario (TAC) in the documents "*Transit-Supportive Land Use Planning Guidelines*" and "*Guide to Transit Considerations*", respectively. Listed below are a few of the "key" conclusions and recommendations identified in the MTO and TAC transit planning guidelines which are applicable to the issue regarding the location of a new Scugog River crossing:

- Contiguous development should be encouraged within new areas being built-up so that planned transit service may be phased in efficiently along permanent routes to ensure that new subdivisions are located within a suitable distance of existing transit service;

- New development should be encouraged to locate within an existing area rather than in an isolated location to take advantage of existing activities and transit infrastructure;

- Reduce scattered residential or commercial development in isolated rural areas which can not be served by transit at a reasonable cost. Extensions to transit are more cheaply implemented in areas contiguous to those already serviced;

- Avoid designating additional land for urban development until densities in existing urban areas begin to approach target levels set out in official plans;

- Transit friendly subdivisions will result in an enhanced quality of life, less vehicle intrusions and reduced air pollution and fuel consumption;

- Unfavourable road design may lead to incomplete or duplicate coverage and a lack of direct principal road connection between neighbouring communities may prevent continuity of service; and

- To improve the attractiveness of transit, arterials and collectors should be designed to provide as direct route as possible, to minimize trip length and travel time and to avoid backtracking. Roads which permit direct and efficient routing for transit vehicles also reduce the costs for transit operations, and result in a more comfortable ride for passengers.

5.3 Traffic Infiltration

Existing vehicular travel patterns indicate that traffic infiltration is occurring on local north-south residential streets between Colborne Street West/East and Wellington Street/Queen Street. The traffic infiltration is a direct result of vehicular delays at intersections adjacent to the Wellington Street river crossing. Specifically, vehicles infiltrate on local north-south roadways in order to approach the Wellington Street bridge from the east-west. Vehicles approaching the Wellington Street bridge from the east and west avoid the following movements currently experiencing congested conditions during peak travel periods:

Wellington Street/Lindsay Street North

- Southbound right turn and Eastbound left turn

Wellington Street/William Street

- Southbound left turn and Westbound right turn

It has been estimated that the majority of the traffic infiltration is occurring on local roads on the west side of the river, specifically between Victoria Avenue and William Street south of Colborne Street.

The result of traffic infiltrating between Colborne Street West and Wellington Street has been the increase in severity and number of accidents at the Wellington Street/Cambridge Street intersection (located just west of the Wellington Street bridge). Traffic signals have recently been installed at this intersection which should provide some improvement in the accident potential.

Traffic signals have recently been installed at the Colborne Street West/Victoria Avenue intersection. Given the existing river crossing opportunities, a signalized intersection at this location may increase traffic infiltration on Sussex Street and Albert Street, both local residential streets. Alexander Public School is on the corner of Colborne Street West and Sussex Street; adjacent to the School on Sussex Street, there is an active area with parental drop-off/pick-up, children walking/bicycling and bus activity (no existing sidewalks on Sussex Street). Based on visual inspections of pedestrian/vehicle travel patterns

in this area, an increase through traffic on local roads such as Sussex Street would not be desirable from a safety perspective.

It should be noted that some residents have expressed concern regarding pedestrian safety associated with increased traffic volumes; specifically on Colborne Street. As a result of these concerns, additional field surveys comprising of visual observations were conducted along and adjacent to Colborne Street from Highway 36 to west of Angeline Street and in the Orchard Park Road area from the river to Angeline Street. Furthermore, discussions were held with staff of the local Board of Education who indicated that there were not any serious concerns with pedestrian (specifically school children) safety on Colborne Street. The main conclusion that was established from the visual inspections is that increasing "through" type traffic on roads which are designated as local residential roadways and have low volumes (in comparison to an arterial), is not desirable from a pedestrian and vehicular safety perspective. This conclusion is based on consideration of a number of transportation characteristics, some of which are listed below:

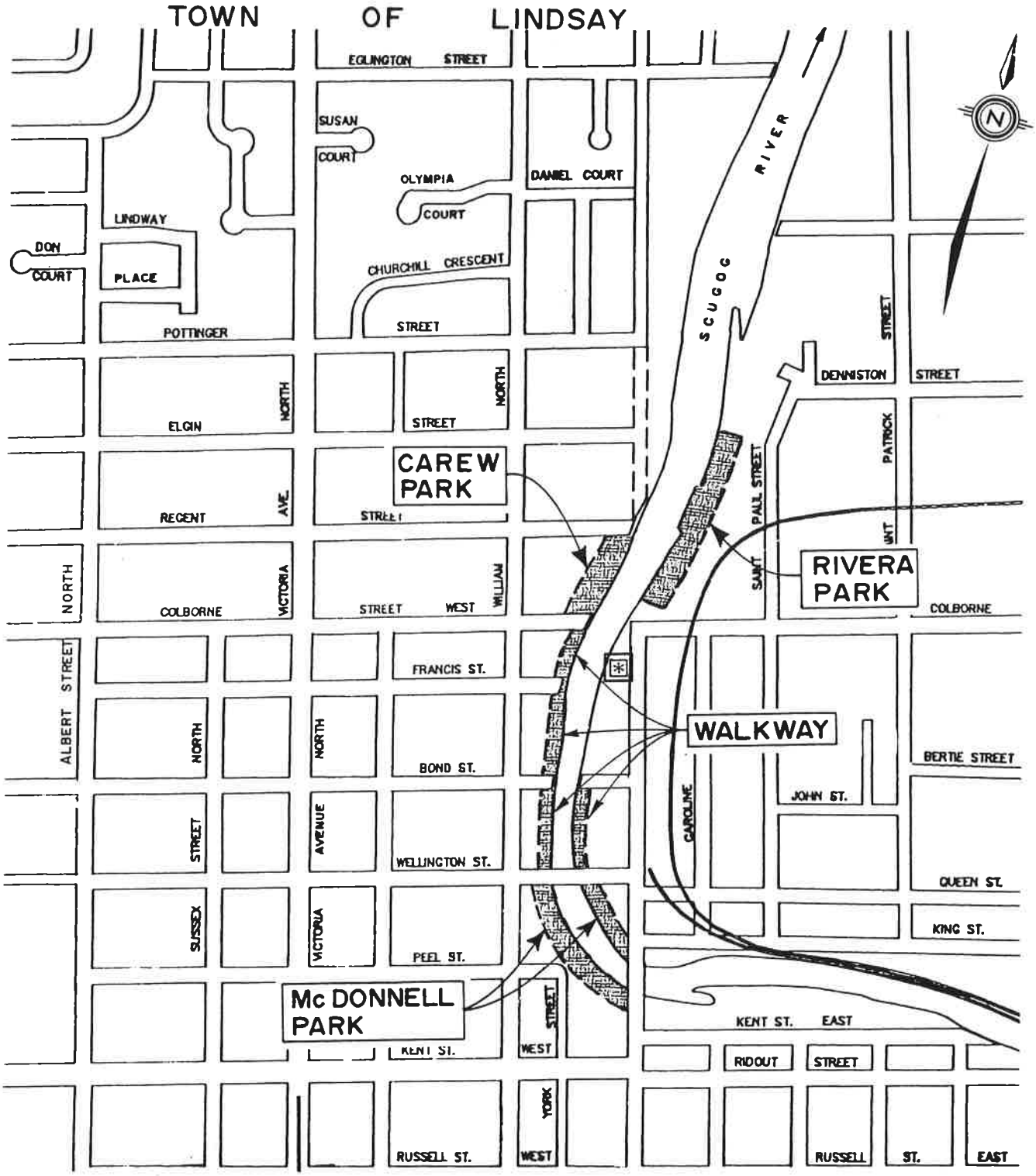
- Side walks are often not provided on local roads;
- Pedestrians utilizing local residential roadways do not anticipate high traffic volumes and higher speeds; and
- Vehicles "short-cutting" on local residential roadways usually are doing so to avoid other congested areas within Town and are often not as aware of local pedestrian movements/patterns.

5.4 Recreational Areas

The well developed park and open space system along the Scugog River in the Town of Lindsay acts as a passive recreation resource. Noted below are the lands within the Study Area designated as park space under the jurisdiction of the Lindsay Parks and Recreation Board (illustrated on **Exhibit 5.2**):

- **McDonnell Park** - on the east and west side of the river generally between the Lindsay Street North and the Wellington Street crossings. Parking for this area is available on the surrounding grounds;
- **Pedestrian walkway** - on the west side of the river from McDonnell Park to Colborne Street West (west walkway crosses underneath Wellington Street bridge);
- **Pedestrian walkway** - on the east side of the river from the Wellington Street bridge to Bond Street. Docking facilities are adjacent to the walkway which are often utilized by the local Skylark Tour riverboat;
- **Rivera Park** - on the east side of the river north of Colborne Street East to just south of Denniston Street. Public parking and docking facilities are also available; and
- **Carew Park** - on the west side of the river from Colborne Street West north to approximately Regent Street. Public parking and docking facilities are not available.

The entire stretch of the Scugog River within the Study Area appears to represent good fishing



LEGEND

SHAFT MACHINE BUILDING AND ADJACENT LAND

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

RECREATIONAL AREAS
(LINDSAY PARKS AND RECREATION BOARD)

N.T.S.

EXHIBIT 5-2

opportunities. The travel of pleasure boats up and down the Scugog River is also an important recreational opportunity within the Study Area and beyond.

From visual surveys conducted, recreational use of the Pottinger Street, Eglington Street and Orchard Park Road river bank areas appears minimal. Recreational opportunities are confined to passive uses such as walking, bird watching, fishing, adventure play and cross-county skiing. North of Eglington Street on the west bank, the land developers have stabilized the banks with gabion baskets in anticipation of future use for passive recreation and possibly small craft tie-up. Public usage of this region is not promoted as the majority of this part of the river corridor is privately owned.

In the northern section of the Study Area, the existing land use on both sides of the river preclude recreation, other than informal "wilderness" play for youngsters. As the Scugog River widens and reverts back to more natural character, sport fishing opportunities increase. As well, the aesthetic appeal of the banks and river is increased for those boating along this meandering course. The larger collection of trailers at the westerly edge of Cedar Valley Park Road signifies the popularity of this area for tourists and seasonal visitors.

5.5 Heritage Resources

Illustrated on **Exhibit 5.3** are the buildings within the Study Area that are classified as having historical significance. Input regarding heritage resources was provided by the Town of Lindsay's Local Architectural Conservation Advisory Committee (LACAC), Archaeological Services Incorporated and TSH architectural staff. The majority of the heritage resources within the Study Area are located on the west side of the river between Peel Street and Colborne Street West. The buildings that fall within the Study Area that are officially designated under the Ontario Heritage Act are:

- Old County Court Building - 26 Francis Street;
- 19 Francis Street; and
- 21 Francis Street.

The remaining heritage buildings shown on **Exhibit 5.3** are classified by LACAC as either Priority Type "A" or Priority Type "B" with Priority Type "A" being the more significant of the two categories. It should be noted that LACAC continually update their list of heritage resources and the most recent information available (February 1992) at the time that this Study was undertaken has been used.

5.6 Archaeological Assessment - Phase 1

Archaeological Services Incorporated was retained by TSH to conduct a preliminary archaeological assessment of the Study Area. A copy of the Report is included in **Appendix D**. The Study found that there are no registered prehistoric or historic archaeological sites within or adjacent to the Study Area due largely to the lack of archaeological survey data for the area. The closest registered site is six kilometres from the Study Area and is a prehistoric site of unknown size and cultural affiliation.

However, the survey report concluded that there is a high potential for the identification of a significant number of sites within the immediate vicinity of the Study Area and that with the proximity of water

(water being one of the most commonly used variables for predictive modelling of site location) attests to this areas's obvious significant potential for the location of archaeological resources. The archaeological assessment recommended that all undisturbed areas within the selected crossing area be subjected to a detailed archaeological field survey (refer to **Section 9.4.1**).

6.0 UTILITIES AND MUNICIPAL SERVICES

An inventory of utilities and municipal services in the Study Area was undertaken for the Environmental Assessment. Specifically, the following utilities/municipal services have been identified as being potentially impacted:

- Existing Lindsay Street North bridge
  - gas main
- Existing Wellington Street bridge
  - suspended watermain
  - Bell cable
  - Lindsay CATV cable
- Colborne Street
  - sanitary sewer crossing the river from the Pump House at the terminus of Colborne Street West
  - Bell overhead lines crossing the river.
- Eglington Street
  - 2.4 kv overhead hydro lines crossing the river from the old Hydro substation at the terminus of Eglington Street.

LEGEND

- LACAC PRIORITY 'A'
- LACAC PRIORITY 'B'
- 'DESIGNATED' HERITAGE BUILDING
- SOUTHERN STUDY AREA BOUNDARY

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

HERITAGE RESOURCES

N.T.S.

EXHIBIT 5-3

7.0 IDENTIFICATION AND EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROVISION OF FUTURE RIVER CROSSING CAPACITY

7.1 Alternative Solutions To The Provision of Future River Crossing Capacity

In this section of the report, the review of alternative solutions to the provision of future river crossing capacity is discussed. The following alternative solutions were considered within the context of the Study.

- The "Do Nothing" Alternative;
- Transportation Systems Management Measures;
- Improve Existing Bus Transit Service;
- Widen Wellington Street Bridge to three lanes within the existing right-of-way;
- Reconstruct Wellington Street Bridge to four basic "through" lanes;
- Construct New River Crossing within the Colborne Street corridor;
- Construct New River Crossing within the Eglington Street/Orchard Park Road corridor; and
- Construct New River Crossing within the Springdale Gardens corridor.

Exhibit 7.1 illustrates the three (3) crossing corridor locations that were evaluated for a new river crossing of the Scugog River.

7.1.1 The "Do Nothing" Alternative

This alternative was included to provide a base to which the other alternative solutions could be compared. Under this planning alternative, no measures to improve or increase vehicular capacity within the existing river crossing corridor were considered.

In addition, it is important to recognize that the Wellington Street river crossing requires major structural rehabilitation work which could involve closure of the bridge for at least one construction season. Without additional crossing capacity, serious traffic problems could result during bridge rehabilitation.

7.1.2 Transportation System Management (TSM) Measures

Transportation System Management (TSM) measures include various methods of maximizing existing river crossing capacity. Typical TSM measures include the implementation of improved traffic signal equipment, improved signal timing/phasing and/or widening of intersections to accommodate turning lanes etc. Such typical TSM improvements were considered for the Wellington Street/William Street and Wellington Street/Lindsay Street North intersections to extend the "capacity life" of the Wellington Street river crossing. **A number of these recommendations have been implemented such as; repainting the northbound and southbound lanes on William Street to incorporate separate left turn lanes, and recently, new traffic controllers and revised signal timing and phasing plans have been installed.** Improvements which have not yet been implemented include the construction of northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection.

It should also be noted that Transportation Demand Management (TDM) measures were assessed from a general perspective. TDM measures include car pooling, flexible working hours, bicycle opportunities,

etc. Based on a preliminary assessment undertaken by the Study Team, it was concluded that TDM measures would not significantly reduce projected vehicular demands on the existing river crossings nor provide a solution to the provision of future river crossing capacity requirements.

7.1.3 Improve Existing Bus Transit Service

Currently, transit vehicles do not play a large role in the movement of persons across the Scugog River. The improvement of transit service would consist of increasing the flexibility of the transit service by providing a greater route area and frequency of service.

7.1.4 Widen Wellington Street Bridge to 3 Lanes Within Existing R.O.W.

Widening the existing Wellington Street bridge has been considered in past studies as a method of increasing the river crossing capacity. This option was therefore considered as an alternative solution in the Environmental Assessment. Widening the existing Wellington Street bridge within the existing right-of-way (R.O.W.) would consist of widening the existing pavement on the structure to accommodate a centre turn lane without impacting the buildings adjacent to the bridge. The width of the Wellington Street bridge (including sidewalks) is 12.80 m. Presently there are two travel lanes crossing the river with a total width of 8.53 m. There are sidewalks on both sides of the bridge with a total width of 4.27 m. The eastbound approach to the Lindsay Street North intersection can accommodate a left turn lane movement of approximately 120 vehicles per hour (1991 left turn demand is 160 vehicles per hour) and one (1) shared through/right turn lane. There is one shared through/left/right turn lane on the westbound approach to the William Street intersection.

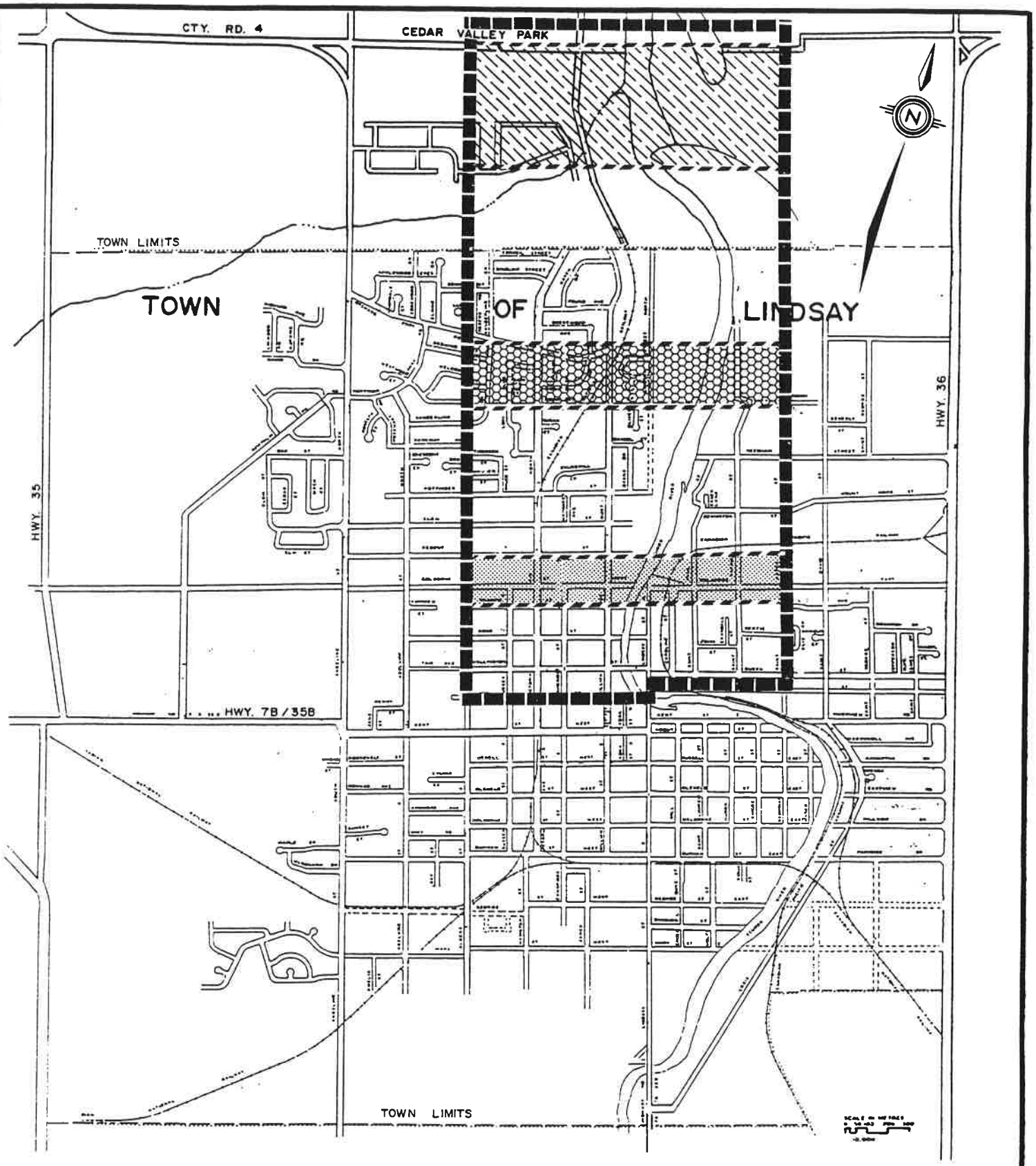
In order to widen the Wellington Street bridge to accommodate a centre turn lane, the existing width of both sidewalks would be reduced to below desirable standards (desirable sidewalk width is 2.0 m) The MTO recommended lane width for a structure of this nature is 3.5 m which can not be accommodated given the existing right-of-way and sidewalk requirement. A substandard lane width of 3.0 m (with 1.9m sidewalks) would be the maximum that could be achieved which would reduce lane capacity and safety.

The Trent-Severn Waterway will permit an existing vehicle crossing of the Scugog River to maintain its navigation clearance provided the structure is not reconstructed. Since widening of the Wellington Street Bridge to accommodate three (3) lanes within the right-of-way would not require a complete new structure, the existing navigation clearance of 4.56 m could be maintained.

It should be noted that when the Wellington Street structure is rehabilitated, an additional lane could be constructed at that time; however, the cross-section of the existing Wellington Street river crossing **could not** be increased to accommodate an additional lane without significant upgrading to the structure including relocation of existing major utilities.

7.1.5 Reconstruct Wellington Street Bridge to 4 Basic "Through" Lanes

This alternative requires the reconstruction of the existing Wellington Street bridge beyond the present right-of-way. Reconstruction is required as the existing structure is not capable of accommodating the additional lanes and corresponding vehicle loads. A new structure at this location would require significant improvements to the adjacent road network and would result in major property impacts;



LEGEND

- SPRINGDALE GARDENS
- ORCHARD PARK / EGLINGTON
- COLBORNE STREET
- STUDY AREA

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

ALTERNATIVE NEW RIVER CROSSING CORRIDORS

EXHIBIT 7-1

particularly adjacent to the existing river crossing.

7.1.6 Construct New River Crossing

To rectify the river crossing capacity problem, the construction of a new river crossing was also considered as an alternative solution. For the assessment of certain criteria i.e. the socio-economic environment, compatibility with local and regional road networks, etc., the three corridors were evaluated in a "broad" sense beyond the specified Study Area.

Each new river crossing corridor was evaluated separately as an alternative solution to the problem. This approach was applied as each alternative location was unique with regard to the impact both environmentally and from an engineering perspective. This method of evaluating each new crossing location as a separate alternative was approved by the Ministry of the Environment for this Environmental Assessment.

The three (3) crossing corridor locations considered within the context of the Environmental Assessment are as follows:

- Colborne Street River Crossing Corridor (located in Central Lindsay);
- Eglington Street/Orchard Park Road River Crossing Corridor (located in north Lindsay); and
- Springdale Gardens River Crossing Corridor (located north of Lindsay town limits).

The size of the individual corridors were determined by reviewing potential connections between Wellington Street and Cedar Valley Park Road. In essence, the entire area north of Wellington Street to beyond the Town limits were considered for a future new river crossing. However, for the purpose of the comprehensive environmental inventory and evaluation, it was necessary to select within the Study Area, specific corridors. It should be noted that some residents have questioned the width of the Colborne Street corridor in comparison to the Springdale Gardens corridor, i.e. they have stated that the Colborne Street corridor is too narrow. In consideration of this concern, it is fundamental to recognize that the corridor boundaries were selected based on a thorough review of "all practical" crossing points within the Study Area.

7.2 Assessment and Evaluation of the Alternative Solutions To The Provision of Future River Crossing Capacity

Prior to the evaluation of the alternative solutions, a qualitative and quantitative assessment was undertaken to determine the most appropriate planning alternative(s) for the provision of additional transportation capacity across the Scugog River. The assessment of the alternative solutions was based on the following evaluation criteria:

- Transportation;
- Economic Environment;
- Social Environment;
- Cultural Environment;

- Natural Environment;
- Engineering; and
- Cost.

For each of the above criteria, sub-factors were established as identified in **Table 7.1.** Included in **Table 7.2** is a comprehensive assessment summary for each alternative considered within the context of the Environmental Assessment. Following the assessment of the alternative solutions, an evaluation procedure was developed to determine the relative ranking of the alternative solutions. The evaluation allowed for technical data, preferences and opinions to be incorporated into the assessment. The relative importance of the criteria/sub-factors was not determined by the evaluation nor did the evaluation indicate where and what criteria should be used for comparing alternatives.

Outlined below are the **"key objectives"** of the evaluation methodology:

- **To organize data on alternatives and criteria which can be used to compare improvement options;**
- **To undertake sensitivity testing to accommodate the opinions of individuals, interest groups and government agencies;**
- **To assist in systematic evaluation and determination of the levels of mitigation required; and**
- **To improve accountability by ensuring that the evaluation is defensible.**

The assessment that has been utilized to compare various alternatives to the undertaking, contributes to making the environmental assessment procedure comprehensible and ensures that the steps can be followed in a clear and logical fashion and that all engineering and environmental issues are given thorough consideration.

TABLE 7.1
CRITERIA/SUB-FACTORS
ASSESSMENT OF ALTERNATIVE SOLUTIONS

CRITERIA/SUB-FACTORS	DESCRIPTION
1. TRANSPORTATION · Capacity · Future Demand · River Crossing Flexibility · Network Compatibility · Emergency Services · Safety · Pedestrian Movement	The ability of the planning alternative to address existing and anticipated capacity deficiencies in the river crossings and network, accommodate emergency services, enhance transportation safety and offer network flexibility which refers to the ability of the system to accommodate traffic diversions due to unexpected incidents. Also addresses the ability of each alternative to enhance pedestrian movement.
2. ECONOMIC ENVIRONMENT · Future Development/Re-Development Potential · Accessibility To Town Areas	The effect that the planning alternative may have on development potential in the community and/or local economy. This would include how each alternative may impact employment levels and residential development within and adjacent to the Study area.
3. SOCIAL ENVIRONMENT · Noise Impacts · Traffic Infiltration · Property Impacts · Aesthetics · Recreation	The effect that the planning alternative may have on the surrounding communities in terms of noise, visual/aesthetic impact, traffic infiltration, property etc.
4. CULTURAL ENVIRONMENT · Archaeological Resources · Heritage Resources	The effect that the planning alternative may have on existing archaeological and heritage sites.
5. NATURAL ENVIRONMENT · Vegetation · Woodlots and Wildlife · Water Resources · Air Quality · Wetland Areas · Impact on Potentially Contaminated Property	The effect that the planning alternative may have on existing vegetation/wildlife habitat, water quality, air quality etc.
6. ENGINEERING · Impact on Existing Capacity During Construction · Impact on Existing Capacity during Rehabilitation of Wellington Street Bridge · Construction Complexity · River Crossing Geometrics · Road Construction/Upgrading · Major Services /Utility Conflicts	The effect that the planning alternative may have on the river crossing capacity from a construction/engineering perspective.
7. COST	Capital cost of construction.

7.3 Selection of Preferred Solution To The Provision of Future River Crossing Capacity

As part of the evaluation, sensitivity testing was undertaken which permits identification of alternatives that will have ranking affected by the weighting given to a criteria group or a particular sub-factor. Summarized in **Table 7.3** are the weightings for criteria groups/sub-factors and the associated scores based on the assessment outlined in **Table 7.2.** Input from the public was incorporated in the testing of various criteria/sub-factor weightings. The output of this exercise is an ordering or prioritization of the alternatives. This method of evaluation, known as the **"multi-factorial hypothesis"**, is flexible enough to accommodate sensitivity testing to determine the effect of changing weights assigned to each criteria group or sub-factor. The sensitivity testing permits identification of alternatives that will have ranking affected by the weighting given to a criteria group or a particular sub-factor. The "multi-factorial hypothesis" method has been accepted by the Ministry of Transportation and has been successfully used in previous environmental studies within the Province of Ontario.

The evaluation of the various alternative solutions revealed that with a variety of weighting combinations for the criteria/sub-factors, a new river crossing in the Colborne Street crossing corridor most often ranked as the preferred solution to the provision of long-term river crossing capacity problem (refer to Table 7.4).

Based on the results of the evaluation and in consideration of public concerns over the accuracy of predicted traffic and the current economic situation, a two phase preferred solution was selected to resolve the river crossing capacity problem.

The **first phase** being:

> Widening of the Wellington Street bridge to 3 lanes to accommodate a continuous two-way centre turn lane and the construction of northbound/southbound left turn lanes at the Wellington Street/Lindsay Street North intersection; and

The **second phase** being:

> The construction of a new river crossing in the Colborne Street corridor.

Below are some of the reasons why the Colborne Street corridor was selected as the second phase of the preferred solution to the provision of long-term river crossing capacity. Specifically, a new river crossing in the Colborne Street corridor will:

- Satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- **Best** satisfy long-term future river crossing capacity requirements. **It is the only crossing alternative that truly satisfies future crossing demand;**
- Maximize the capacity of the Wellington Street bridge i.e. **will ensure that an adequate level of service is provided on the Wellington Street bridge for 20 to 30 years;**
- Maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);

TRANSPORTATION

SUB-FACTORS

1. CAPACITY
2. FUTURE DEMAND
3. RIVER CROSSING FLEXIBILITY
4. NETWORK COMPATIBILITY
5. EMERGENCY SERVICES
6. SAFETY
7. PEDESTRIAN MOVEMENT

Table 7.2

– ASSESSMENT MATRIX –

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

			IMPROVEMENTS TO EXISTING ROADWAYS		CONSTRUCT NEW RIVER CROSSING		
DO NOTHING	**TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES**	**IMPROVE EXISTING BUS TRANSIT SYSTEM**	**WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS**	**WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)**	**COLBORNE ST. CORRIDOR**	**EGLINGTON ST. CORRIDOR**	**SPRINGDALE GARDENS CORRIDOR**
1. Increased congestion at the Wellington/Lindsay Streets and Wellington/William Streets intersections will result in capacity constraints on Wellington Street bridge. This congestion will result in spillover traffic onto adjacent residential roadways on both sides of the river within the Study area. Operating conditions for private, commercial and transit vehicles will continue to deteriorate over time, i.e. increased delay and reduced level of service. Lack of east-west crossing capacity will result in increased volumes on Kent Street during peak periods exacerbating existing congestion problems.	1. Increased congestion at the Wellington/Lindsay Streets and Wellington/William Streets intersections will result in capacity constraints on Wellington Street bridge. This congestion will result in spillover traffic onto adjacent residential roadways on both sides of the river within the Study area. Optimization of signal timing, intersection improvements, etc. would provide short term relief to capacity problems but will not provide significant increase in the river crossing capacity. Operating conditions for private, commercial and transit vehicles will continue to deteriorate over time, i.e. increased delay and reduced level of service. Lack of east-west crossing capacity will result in increased volumes on Kent Street during peak periods exacerbating existing congestion problems.	1. Increased congestion at the Wellington/Lindsay Streets and Wellington/William Streets intersections will result in capacity constraints on Wellington Street bridge. This congestion will result in spillover traffic onto adjacent residential roadways on both sides of the river within the Study area. Improved transit service would provide minimal relief to capacity problems but will not provide significant increase in river crossing capacity. Operating conditions for private, commercial and transit vehicles will continue to deteriorate over time, i.e. increased delay and reduced level of service. Lack of east-west crossing capacity will result in increased volumes on Kent Street during peak periods exacerbating existing congestion problems.	1. Capacity of approaches would be moderately improved. Without removal of buildings adjacent to Wellington Street river crossing, substandard lane widths, turning radii etc. would be employed resulting in a reduction in the potential river crossing capacity. Short term improvements to the operating conditions and level of service on the Lindsay Street and Wellington Street River crossings for private, commercial and transit vehicles. Lack of east-west crossing capacity will result in increased volumes on Kent Street during peak periods exacerbating existing congestion problems.	1. High Capacity would be provided by westbound approach from Hwy 36. Limited capacity would be provided by eastbound approach as Wellington Street is not a through road. Redesign/construction of the adjacent intersections would provide an increase in river crossing capacity. Significantly improved traffic operations and level of service on the Lindsay Street and Wellington Street river crossings for private, commercial and transit vehicles. Marginal relief to capacity problems on Kent Street.	1. Both eastbound and westbound approaches to the river crossing would provide high capacity between Hwy. 36 and Angeline Street Significantly improved traffic operations and level of service on the Lindsay Street and Wellington Street river crossings for private, commercial and transit vehicles. Some relief to capacity problems on Kent Street.	1. High capacity on westbound approach to river crossing could be achieved if major road works are undertaken. Limited capacity on eastbound approach as there would not be a direct route to the river crossing. Moderately improved traffic operations and level of service on the Lindsay Street and Wellington Street river crossings for private, commercial and transit vehicles. Minimal relief to capacity problems on Kent Street.	1. Both eastbound and westbound approaches to the river crossing would provide high capacity. Intersection would only be required on the westbound approach Minimal improvement to traffic operations and level of service on the Lindsay Street and Wellington Street river crossings for private, commercial and transit vehicles. Minimal relief to crossing capacity problems on Kent Street.
2. Capacity deficiency on Wellington Street bridge during peak periods for existing and future planning horizons. 3. No additional river crossing flexibility provided. Lindsay Street bridge is only river crossing alternative within the Study area if the Wellington Street bridge is blocked/closed due to emergency or an accident. 4. No physical impact to existing road network. Designation of new County Roads would not be required.	2. As traffic volumes increase, a threshold volume of traffic will be reached beyond which further modifications and/or utilization of other traffic management system measures will not be effective. Will add 3-4 years of capacity to Wellington Street bridge. 3. No additional river crossing flexibility provided. Lindsay Street bridge is only river crossing alternative within the Study area if the Wellington Street bridge is blocked/closed due to emergency or an accident. 4. No physical impact to existing road network. Designation of new County Roads would not be required.	2. Capacity deficiency on Wellington Street bridge during peak periods for existing and future planning horizons. 3. No additional river crossing flexibility provided. Lindsay Street bridge is only river crossing alternative within the Study area if the Wellington Street bridge is blocked/closed due to emergency or an accident. 4. No physical impact to existing road network. Designation of new County Roads would not be required.	2. Capacity of the Wellington Street river crossing would be increased but not to the extent required to satisfy anticipated demand. Will add 9-10 years of capacity to Wellington Street bridge. 3. No additional river crossing flexibility provided. Lindsay Street bridge is only river crossing alternative within the Study area if the Wellington Street bridge is blocked/closed due to emergency or an accident. 4. No physical Impact to existing road network. Designation of new County Roads would not be required.	2. Capacity of the Wellington Street river crossing would satisfy future demand for 15-20 years. 3. No additional river crossing flexibility provided. Lindsay Street bridge is only river crossing alternative within the Study area if the Wellington Street bridge is blocked/closed due to emergency or an accident. 4. Bridge widening would not be compatible with the existing County and Town road system. Network improvements would be required. Designation of new County Roads may be required.	2. Provides maximum relief of congestion on Wellington Street bridge. Wellington Street bridge will reach capacity again in 20-30 years. 3. Provides for maximum river crossing flexibility of the alternatives in the event Wellington Street or Lindsay Street bridges are blocked/closed due to emergency or an accident. 4. River crossing would be compatible with the existing County and Town road network including direct connections with Hwy 36. and Angeline Street. No network improvements would be required. County Road designation would only be required on Colborne Street between William Street and river crossing.	2. Does not provide long term relief of congestion on Wellington Street bridge. Wellington Street bridge will reach capacity again in 11-16 years. 3. Provides adequate river crossing flexibility in the event Wellington Street or Lindsay Street bridges are blocked/closed due to emergency or an accident. Some delays may be experienced on the north-east side of the river leading to the Eglington Street crossing. 4. River crossing would not be compatible with the existing County and Town road network. Network improvements would be required - upgrading and/or widening existing roads on both sides of river and construction of new road(s) on north-east side of river. Future network could potentially provide direct connections to Hwy 36. and Victoria Avenue. Future network would not compliment existing road system. Designation of new County Roads would be required.	2. Does not provide long term relief of congestion on Wellington Street bridge. Wellington Street bridge will reach capacity again in 8-12 years. 3. Provides minimal additional river crossing flexibility in the event Wellington Street or Lindsay Street bridges are blocked/closed due to emergency or an accident. Northern location is not convenient. 4. River crossing would not be compatible with the existing County and Town network. Network improvements would be required - construction of new road(s) on both sides of river and potentially some upgrading work to existing road(s) on north-west side of river. Future network could provide direct connections to Hwy 36. and Victoria Avenue and compliment existing road system. Designation of new County Roads would be required.

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

			IMPROVEMENTS TO EXISTING ROADWAYS		CONSTRUCT NEW RIVER CROSSING		
DO NOTHING	**TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES**	**IMPROVE EXISTING BUS TRANSIT SYSTEM**	**WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS**	**WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)**	**COLBORNE ST. CORRIDOR**	**EGLINGTON ST. CORRIDOR**	**SPRINGDALE GARDENS CORRIDOR**
5. Increased congestion will result in greater response times for emergency service vehicles. Existing river crossings preferably located with respect to distance from Town's emergency departments. Does not provide additional access across river in the case of an emergency. 6. Increase in congestion and traffic infiltration will result in an increase in vehicle/pedestrian related accident potential within and adjacent to the Study area. Safety to pedestrians that cross Wellington Street at the east end of the bridge to rejoin the McDonnell Park walkway on the east side of the Scugog River will decrease as traffic volumes over bridge increase. 7. No change in pedestrian movement across river.	5. Minimal improvement to response times for emergency service vehicles. Existing river crossings preferably located with respect to distance from Town's emergency departments. Does not provide additional access across river in the case of an emergency. 6. Minimal relief of congestion on Wellington Street bridge will result in limited decrease in the vehicle related accident potential adjacent to existing river crossings. In the long term, increases in congestion and traffic infiltration will result in an increase in vehicle/pedestrian related accident potential within and adjacent to the Study area. Safety to pedestrians that cross Wellington Street at the east end of the bridge to rejoin the McDonnell Park walkway on the east side of the Scugog River will decrease as traffic volumes over bridge increase. 7. No change in pedestrian movement across river.	5. Increased congestion will result in greater response times for emergency service vehicles. Existing river crossings preferably located with respect to distance from Town's emergency departments. Does not provide additional access across river in the case of an emergency. 6. Increase in congestion and traffic infiltration will result in an increase in vehicle/pedestrian related accident potential within and adjacent to the Study area Safety to pedestrians that cross Wellington Street at the east end of the bridge to rejoin the McDonnell Park walkway on the east side of the Scugog River will decrease as traffic volumes over bridge increase. 7. No change in pedestrian movement across river.	5. Short term improvement in response times for emergency service vehicles crossing the Scugog River. Existing river crossings preferably located with respect to distance from Town's emergency departments. Does not provide additional access across river in the case of an emergency. 6. Additional capacity on the Wellington Street crossing will result in a short term reduction in vehicle related accident potential at the Wellington Street at William Street and Wellington Street at Lindsay Street intersections. Continual increase in traffic infiltration and long term increase in congestion will result in an increase in vehicle/pedestrian related accident potential within and adjacent to the Study area. Safety to pedestrians that cross Wellington Street at the east end of the bridge to rejoin the McDonnell Park walkway on the east side of the Scugog River will decrease as traffic volumes over bridge increase. 7. No change in pedestrian movement across river.	5. Significant improvement in response times for emergency service vehicles crossing the Scugog River. Existing river crossings preferably located with respect to distance from Town's emergency departments. Does not provide additional access across river in the case of an emergency. 6. Additional capacity on the Wellington Street bridge will result in a reduction in vehicle related accident potential at the Wellington Street at William Street and Wellington Street at Lindsay Street intersections. Continual increase in traffic infiltration will result in an increase in vehicle/pedestrian related accident potential within and adjacent to the Study area. Safety to pedestrians that cross Wellington Street at the east end of the bridge to rejoin the McDonnell Park walkway on the east side of the Scugog River will decrease as traffic volumes over bridge increase. 7. No change in pedestrian movement across river.	5. Significant improvement in response times for emergency service vehicles crossing the Scugog River. Location adequate with respect to Town's emergency departments. Provides additional access across river in case of an emergency. 6. Additional river crossing capacity will result in reduced vehicle related accident potential within and adjacent to the Study area. Decrease in traffic infiltration will result in a decrease in vehicle/ pedestrian related accident potential on residential streets between Colborne and Wellington Streets. (this includes children travelling to/from school) Increase in vehicle/pedestrian related accident potential on the Colborne Street approaches to the bridge. 7. Additional river crossing for pedestrians and enhanced access to Rivera Park and Carew Park on the east and west sides of river. Existing walkway along west bank of river can be maintained. (Adjacent to Senior's Residence)	5. Moderate improvement in response times for emergency service vehicles crossing the Scugog River. Location not desirable with respect to the Town's emergency departments. Provides additional access across river in case of an emergency. 6. Additional river crossing capacity will result in reduced vehicle accident potential within and adjacent to the Study area. Partial reduction in traffic infiltration will result in a short term decrease in vehicle/pedestrian related accident potential on residential streets between Colborne and Wellington Streets. (this includes children travelling to/from school) Increase in vehicle/pedestrian related accident potential on residential streets leading to Eglington Street crossing (including Orchard Park Road and Colborne Street). 7. Minimal improvements in pedestrian access across the river.	5. Does not provide improved response times for emergency service vehicles crossing the Scugog river due to distance from the Town's emergency departments. Provides additional access across river in case of an emergency. 6. Additional river crossing capacity will result in reduced vehicle related accident potential within and adjacent to the Study area. Minimal reduction in traffic infiltration will result in a slight decrease in vehicle/pedestrian related accident potential on residential streets between Colborne and Wellington Streets. Increase in vehicle/pedestrian related accident potential on residential streets leading to north river crossing. This includes local streets in Springdale Gardens, Orchard Park Road and Victoria Avenue. 7. No improvement in pedestrian access across the river.

ECONOMIC ENVIRONMENT

SUB-FACTORS

1. FUTURE DEVELOPMENT/RE-DEVELOPMENT POTENTIAL
2. ACCESSIBILITY TO TOWN AREAS

Table 7.2

– ASSESSMENT MATRIX –

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

			IMPROVEMENTS TO EXISTING ROADWAYS		CONSTRUCT NEW RIVER CROSSING		
DO NOTHING	**TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES**	**IMPROVE EXISTING BUS TRANSIT SYSTEM**	**WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS**	**WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)**	**COLBORNE ST. CORRIDOR**	**EGLINGTON ST. CORRIDOR**	**SPRINGDALE GARDENS CORRIDOR**
1. Development and/or redevelopment potential of lands within and adjacent to study area significantly compromised due to lack of river crossing capacity. Undeveloped serviced lands within the Town would not be highly utilized because of lack of network transportation capacity. 2. Access to all areas of the Town will deteriorate. Corridor location provides direct access between existing developed areas but does not provide direct access or capacity to potential future growth areas.	1. Negligible improvements to development and/or redevelopment potential of lands within and adjacent to study area. Undeveloped serviced lands within the Town would not be highly utilized because of lack of network transportation capacity. 2. Access to all areas of the Town will deteriorate. Corridor location provides direct access between existing developed areas but does not provide direct access or capacity to potential future growth areas.	1. Development and/or redevelopment potential of lands within and adjacent to study area significantly compromised due to lack of river crossing capacity. Undeveloped serviced lands within the Town would not be highly utilized because of lack of network transportation capacity. 2. Access to all areas of the Town will deteriorate. Corridor location provides direct access between existing developed areas but does not provide direct access or capacity to potential future growth areas.	1. Minor increase in river crossing capacity will result in a short term increase in development and/or redevelopment potential within and adjacent to existing river crossing corridor (Wellington Street) Undeveloped serviced lands in the Town would not be highly utilized because of lack of network transportation capacity. 2. Short term improvements in accessibility to areas of the Town in the vicinity of existing river crossing corridor. Corridor location provides direct access between existing developed areas but does not provide direct access or capacity to potential future growth areas.	1. Increased river crossing capacity will result in increased development and/or redevelopment potential within and adjacent to existing river crossing corridor (Wellington Street) Undeveloped serviced lands the Town would not be highly utilized because of lack of network transportation capacity. 2. Significant improvements in accessibility to areas of the Town in the vicinity of the existing river crossing corridor (Wellington Street). Corridor location provides direct access between existing developed areas but does not provide direct access or capacity to potential future growth areas. Access to existing properties adjacent to Wellington Street bridge significantly impacted.	1. Increased river crossing capacity will result in increased development and/or redevelopment potential within and adjacent to study area. Good location from a planing perspective. Undeveloped serviced lands in the north-east and north-west parts of Town could be highly utilized. 2. Access to all areas of the Town will be improved. Provides direct route from north-west to north-east areas of Lindsay. Corridor location provides direct access between existing and potential future growth areas. Accessibility to Carew apartment buildings and Senior's Residence on Colborne Street at William Street can be maintained.	1. Increased river crossing capacity will result in increased development and/or redevelopment potential within and adjacent to study area. Undeveloped serviced lands in Town would be moderately utilized. 2. Access to all areas of the Town will be somewhat enhanced. Not a direct route from north-east to north-west areas of Lindsay. Corridor location provides somewhat direct access to existing and potential future growth areas.	1. Increased river crossing capacity will result in increased development potential in northern regions of Lindsay and Ops Township. Undeveloped serviced lands within the Town would not be highly utilized. Not an efficient planning solution as some lands in the northern area may not be serviced; additional expenses could be incurred by the Town/Township and developers. Limited development potential in or adjacent to the wetland areas. 2. Only access through the northern portion of the Town and areas in Ops Township will be enhanced. Corridor location provides limited direct access to potential future growth areas.

NATURAL ENVIRONMENT

SUB-FACTORS

1. VEGETATION
2. WOODLOTS AND WILDLIFE
3. WATER RESOURCES
4. AIR QUALITY
5. WETLAND AREAS
6. IMPACT ON POTENTIALLY CONTAMINATED PROPERTY

Table 7.2

— ASSESSMENT MATRIX—

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

DO NOTHING

1. No impact to existing vegetation
2. No woodlots near existing river crossings. No impact to wildlife habitat.
3. No degradation of Scugog River water quality or fish habitat.
4. Reduced levels of air quality in future due to substantial increases in traffic congestion and volumes within and adjacent to existing river crossings. Detailed assessment not undertaken.
5. No wetlands near existing river crossings.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES

1. No impact to existing vegetation.
2. No woodlots near existing river crossings. No impact to wildlife habitat.
3. No degradation of Scugog River water quality or fish habitat.
4. Reduced levels of air quality in future due to substantial increases in traffic congestion and volumes within and adjacent to existing river crossings. Detailed assessment not undertaken.
5. No wetlands near existing river crossings.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

IMPROVE EXISTING BUS TRANSIT SYSTEM

1. No impact to existing vegetation.
2. No woodlots near existing river crossings. No impact to wildlife habitat.
3. No degradation of Scugog River water quality or fish habitat.
4. Reduced levels of air quality in future due to substantial increases in traffic congestion and volumes within and adjacent to existing river crossings. Detailed assessment not undertaken.
5. No wetlands near existing river crossings.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

IMPROVEMENTS TO EXISTING ROADWAYS

WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS

1. Minimal impact to existing vegetation adjacent to Wellington Street bridge.
2. No woodlots near existing river crossings. No impact to wildlife habitat.
3. No degradation of Scugog River water quality or fish habitat.
4. In the long term, reduced levels of air quality due to substantial increases in traffic congestion and volumes within and adjacent to existing river crossings. Detailed assessment not undertaken.
5. No wetlands near existing river crossings.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)

1. Moderate impact to existing vegetation adjacent to Wellington Street bridge.

   Major impact to mature trees adjacent to Wellington Street west of William Street to Victoria Street to accommodate road widening/upgrading.
2. No woodlots near existing river crossings No impact to wildlife habitat.
3. Negligible degradation of Scugog River water quality or fish habitat. Any construction impacts can be mitigated. Potential impact on spawning area can be mitigated.
4. Significant relief of congestion will result in somewhat reduced levels of air quality within and adjacent to existing river crossings. Detailed assessment not undertaken.
5. No wetlands near existing river crossings.
6. Major impact to potentially contaminated lands at the south-east corner of the William St/Wellington St intersection (location of old Lindsay Hydro). Removal of contaminated land would be required.

CONSTRUCT NEW RIVER CROSSING

COLBORNE ST. CORRIDOR

1. No evidence of aquatic vegetation on either slope of the river bank.

   Potential impact to a narrow band of vegetation on east and west bank which provides habitat for water rodents, nesting opportunities for birds and shade for fish.

   Potential impact to black walnut trees along north side of Colborne Street east of William. The only significant vegetation in area.
2. No woodlots near Colborne Street river crossing. Minimal impact on water rodents and bird wildlife.
3. Potential impact to water quality if bridge pier required can be mitigated. Dredging of river bed not required.

   Potential impact on spawning area can be mitigated.

   Enriched water system limiting fish usage. Lack of forage fish (minnows) inhabiting species such as muskie/bass.
4. Long term relief of congestion and traffic volumes will result in a potential improvement in air quality in the Wellington Street crossing corridor. Potential for a decrease in the air quality within the Colborne Street crossing corridor. Detailed assessment not undertaken.
5. No wetlands near Colborne Street river crossing. Note that the river crossing area is within lands designated in the Town of Lindsay's By-Law as a Special Study Area where construction is not permitted. The Town's By-Law may require amending.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

EGLINGTON ST. CORRIDOR

1. No evidence of aquatic vegetation on either slope of the river bank.

   Vegetation on both east/west sides of river provide significant retention. Significant impact to mature trees and herbaceous layer on west bank and plant species that are difficult to relocate.
2. No woodlots near the Eglington Street river crossing. Significant impact to wildlife as the corridor provides good wildlife cover and feeding/nesting opportunities.
3. Potential impact to water quality if bridge pier required can be mitigated. Dredging of river bed may be required. Limited feeding or spawning opportunities. Lack of forage fish (minnows) inhabiting species such as muskie/bass.

   Potential impact on spawning areas can be mitigated.
4. Moderate relief of congestion and traffic volumes will result in a potential short term improvement in air quality in the Wellington Street crossing corridor. Potential for major decrease in the air quality in the Eglington Street crossing corridor due to the limited undeveloped nature of the corridor. Detailed assessment not undertaken.
5. No wetlands in the immediate vicinity of the river crossing. Approximately 250m north of the river crossing there are "Unclassified Wetlands" on the east side of the river. May be impacted during construction.

   Note that the river crossing area is within lands designated in the Town of Lindsay's By-Law as a Special Study Area where construction is not permitted. The Town's By-Law may require amending.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection.

SPRINGDALE GARDENS CORRIDOR

1. Significant impact to mature river bank vegetation on west side of river.

   Many species of flora and fauna within the corridor.
2. Substantial woodlot in corridor. Area provides habitat for large and small animals. (deer, fox, racoon, etc.) Nesting area to 3 Osprey bird families (Regionally Significant)
3. Potential impact to water quality if bridge pier required can be mitigated. Dredging of river bed may be required.

   Potential impact to spawning area on the east bank. Spawning area in the wetlands for many sport fish. (bass, yellow perch, muskellunge).
4. Short term relief of congestion and traffic volumes will result in a potential for some improvement in air quality in the Wellington Street crossing corridor. Potential for major decrease in air quality in the Springdale Gardens crossing corridor due to the undeveloped nature of the corridor. Detailed assessment not undertaken.
5. Potential for major impact to "Class 1" (highest environmental priority) wetlands on the east side of the river.

   Note that the river crossing area is within lands designated in the Township of Ops By-Law as a Environmental Protection Zone where construction is not permitted. The Townships' By-Law may require amending.
6. No impact to potentially contaminated land at the south-east corner of the William Street/Wellington Street intersection. (Location of old Lindsay Hydro) Construction affecting these grounds is currently not permitted.

SOCIAL

SUB-FACTORS

1. NOISE IMPACTS
2. TRAFFIC INFILTRATION
   (Also Refer to Transportation - Safety)
3. PROPERTY IMPACTS
4. AESTHETICS
5. RECREATION

Table 7.2

—ASSESSMENT MATRIX—

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

DO NOTHING

1. Noise levels will continue to increase as a result of additional volumes on existing river crossings and approaches.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street.
3. No property acquisition required.
4. No aesthetic impact.
5. No impact to existing recreational sites/boaters.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES

1. Noise levels will continue to increase as a result of additional volumes on existing river crossings and approaches.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street.
3. No property acquisition required.
4. No aesthetic impact.
5. No impact to existing recreational sites/boaters.

IMPROVE EXISTING BUS TRANSIT SYSTEM

1. Noise levels will continue to increase as a result of additional volumes on existing river crossings and approaches.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street.
3. No property acquisition required.
4. No aesthetic impact.
5. No impact to existing recreational sites/boaters.

IMPROVEMENTS TO EXISTING ROADWAYS

WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS

1. Noise levels will continue to increase as a result of additional volumes on existing river crossings and approaches.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street.
3. No property acquisition required.

   Bridge widening and adjacent intersection improvements will be within the existing right-of-way.
4. Minimal aesthetic impact.
5. No impact to existing recreational sites/boaters.

WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)

1. Noise levels will continue to increase as a result of additional volumes on existing river crossings and approaches.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street. Impact to on-street parking opportunities on Wellington and Queen Streets.
3. Potential for substantial property acquisition.

   Removal of buildings on the north and/or south side of the existing bridge would be required to accommodate new structure (removal of Queen Street United Church would be required).

   Potential for removal of buildings at and adjacent to the Queen/Wellington at William and Lindsay Street intersections to accommodate connection to new bridge.

   Road widening of remaining Wellington Street west to Victoria Avenue could be accommodated within existing right-of-way.

   Road widening of remaining Queen Street east to Hwy 36 could be accommodated within existing right-of-way.
4. Significant visual impact due to the removal of buildings adjacent to the existing Wellington Street bridge.

   Visual impact due to the upgrading/road widening on Queen Street and Wellington Street. (including the removal of trees along Wellington Street)

   Visual impact due to the increase in required height of the new bridge.
5. No impact to recreational areas and boater traffic.

CONSTRUCT NEW RIVER CROSSING

COLBORNE ST. CORRIDOR

1. Minimal decrease in noise levels within the existing river crossing corridor (Wellington Street) and adjacent streets.

   Potential for minor increase in noise levels on Colborne St. east of the river, and west of William Street. Noise levels will increase on the west river bank by the Senior's Residence and Carew Park apartments.
2. Potential for significant decrease in traffic infiltration on residential streets between Wellington/Queen Street and Colborne Street.

   The majority of traffic infiltration is currently occurring between Victoria Avenue and William Street on the west side of the river. The most significant improvements should be realized in this area.
3. Minimal property acquisition required on the east and west approaches to the river crossing (including Colborne at William and Lindsay Street intersections).

   No buildings physically impacted.

   Proximity impacts (Visual, noise and increased traffic) to homes on Colborne Street east and west of river.
4. Significant visual impact to apartment buildings and Senior's Residence on west side of river and parklands on east/west side of river.
5. Possible impact to recreational areas and boater traffic if bridge pier(s) in river required.

EGLINGTON ST. CORRIDOR

1. Minimal decrease in noise levels within the existing river crossing corridor (Wellington Street and adjacent streets.

   Potential for moderate increase in noise levels due to the undisturbed nature of the east side of river and the minimal traffic volumes currently on the adjacent roads.
2. In the long term, increase in traffic infiltration on the north-south residential roadways between Wellington/Queen Street and Colborne Street. Potential for increased traffic in the east-west and north-south directions in the vicinity of the Eglington Street corridor (this includes Orchard Park Road and Colborne Street)
3. Potential for major property acquisition requirements on east side of the river crossing to accommodate new approach road. Some potential for physical impact to buildings on east side of river.

   Potential property/physical impact to buildings on Eglington Street immediately at the west river bank.

   Road widening/upgrading on west side of river could be accommodated within the existing right-of-way.

   Proximity impacts (Visual, noise and increased traffic) to homes throughout the Eglington Street corridor.
4. Moderate visual impact to homes adjacent to west side of river.

   Moderate visual impact to homes on east side due to new road construction required.
5. Possible impact to recreational areas and boater traffic if bridge pier(s) in river required.

SPRINGDALE GARDENS CORRIDOR

1. Minimal decrease in noise levels within the existing river crossing corridor (Wellington Street) and adjacent streets.

   Potential for significant increase in noise levels due to the undisturbed nature of the surrounding area.
2. Increased levels of traffic on the north-south residential roadways between Wellington/Queen Street and Colborne Street. Potential for traffic infiltration on both north-south and east-west residential roadways in the northern part of the Town and Ops Township.
3. Major property acquisition of undeveloped lands on both the east and west side of the river crossing.

   No buildings physically impacted.

   Proximity impacts (Visual, noise and increased traffic to homes in Springdale Gardens and areas west of the river between Colborne Street and Orchard Park Road.
4. Moderate visual impact on east/west of river due to new road construction required.
5. Possible impact to recreational areas and boater traffic if bridge pier(s) in river required.

CULTURAL ENVIRONMENT

SUB-FACTORS

1. ARCHAEOLOGICAL RESOURCES
2. HERITAGE RESOURCES

Table 7.2

– ASSESSMENT MATRIX –

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

DO NOTHING	TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES	IMPROVE EXISTING BUS TRANSIT SYSTEM	IMPROVEMENTS TO EXISTING ROADWAYS		CONSTRUCT NEW RIVER CROSSING		
			WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS	WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)	COLBORNE ST. CORRIDOR	EGLINGTON ST. CORRIDOR	SPRINGDALE GARDENS CORRIDOR
1. No adverse impact on registered archaeological sites. 2. No physical impact to heritage structures.	1. No adverse impact on registered archaeological sites. 2. No physical impact to heritage structures.	1. No adverse impact on registered archaeological sites. 2. No physical impact to heritage structures.	1. No adverse impact on registered archaeological sites. 2. No physical impact to registered heritage structures. No property/physical impact to Queen Street United Church designated on LACAC's priority "B" list. No property/physical impact to 6 Wellington Street on the north side of the Wellington St. bridge designated on LACAC's priority "B" list. Building does not front Wellington Street.	1. No adverse impact on registered archaeological sites. 2. No physical impact to registered heritage structures. Removal of Queen Street United Church required to accommodate new bridge structure. Significant potential for physical/property impact to heritage buildings on Wellington St (24-30) located immediately west of Wellington at William Street intersection. (Designated on LACAC's priority "A" list). No physical and/or property impact to 45 Cambridge Street designated on LACAC's priority "A" list. No property/physical impact to 6 Wellington Street on the north side of the Wellington St. bridge designated on LACAC's priority "B" list. Building does not front Wellington Street.	1. Potential for prehistoric archaeological resources. Existing development minimizes potential for uncovering archaeological resources. 2. No physical impacts to registered heritage structures. No physical impact to LACAC "A" priority buildings at 4 Colborne Street E. (Crandell House) and at 95 Lindsay Street N. (Shaft building). Potential for minimal property impacts to 95 Lindsay Street N. No physical impact to LACAC priority buildings on Colborne Street west of river crossing. Potential for property impact to LACAC "B" priority buildings at the Colborne/William Street intersection.	1. Potential for prehistoric archaeological resources. 2. No physical impact to registered heritage structures. Potential property/physical impact on LACAC "B" priority buildings on the west side of the Scugog River at 3 Eglington Street and at the Hydro substation.	1. Potential for prehistoric archaeological resources. 2. No heritage buildings on either side of Scugog River.

ENGINEERING

SUB-FACTORS

1. IMPACT ON EXISTING CAPACITY DURING CONSTRUCTION
2. IMPACT ON EXISTING CAPACITY DURING REHABILITATION OF WELLINGTON STREET BRIDGE
3. CONSTRUCTION COMPLEXITY
4. RIVER CROSSING GEOMETRICS
5. ROAD CONSTRUCTION/UPGRADING
6. MAJOR SERVICES/UTILITY CONFLICTS

Table 7.2

– ASSESSMENT MATRIX –

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

DO NOTHING

1. No construction impacts.
2. Rehabilitation of existing Wellington Street structure will likely require partial closure of structure. No detour other than Lindsay Street bridge. Serious traffic congestion could result.
3. No construction undertaken. - no complexity
4. No improvement to geometric quality of approaches and/or existing river crossings.
5. No road improvements undertaken to existing river crossings or adjacent intersections.
6. No impact to services and/or utilities.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES

1. Minor impact on existing crossing capacity during intersection reconstruction.
2. Rehabilitation of existing Wellington Street structure will likely require partial closure of structure. No detour other than Lindsay Street bridge. Serious traffic congestion could result.
3. No construction complexity involved in the TSM improvements.
4. Minimal improvement to geometric quality of approaches and/or existing river crossings.
5. Minor road improvements required at the adjacent intersections to the Wellington Street river crossing.
6. Negligible impact on services and/or utilities.

IMPROVE EXISTING BUS TRANSIT SYSTEM

1. No construction impacts.
2. Rehabilitation of existing Wellington Street structure will likely require partial closure of structure. No detour other than Lindsay Street bridge. Serious traffic congestion could result.
3. No construction undertaken. - no complexity
4. No improvement to geometric quality of approaches and/or existing river crossings.
5. No road improvements undertaken to existing river crossings or adjacent intersections.
6. No impact on services and/or utilities.

IMPROVEMENTS TO EXISTING ROADWAYS

WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS

1. Significant impact on existing crossing capacity due to increased congestion on Wellington/Lindsay Streets river crossings during construction. Major traffic disruption could result.
2. Rehabilitation of existing Wellington Street structure would be undertaken during the widening. See Note 1. above.
3. Potential for significant construction complexity in widening of the existing Wellington Street bridge structure.

   Major structure/bridge deck repairs may be required to support additional loads. A detail structural evaluation is necessary.

   Construction would be completed in stages so one traffic lane over the bridge could remain open. Detours to the Lindsay Street bridge would also be required.

   No change in the minimum height of the bridge over the Scugog River.
4. Minor improvement in the river crossing geometrics. Without removal of adjacent buildings, the lane widths and turning radii will be substandard. Minimal improvement in geometric quality of approaches.
5. Minor road improvements to the adjacent intersections to the Wellington Street river crossing.
6. Potential for significant impact on existing services and/or utilities.

WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)

1. Major impact on existing crossing capacity due to increased congestion on Wellington/Lindsay Streets river crossings during construction. Complete reconstruction of structure required.
2. Rehabilitation would not be required as new structure would be constructed. See Note 1. above.
3. Major complexity in the construction of a new river crossing on Wellington Street. New bridge would be required to satisfy navigation clearance of 6.71m - 22' (existing height is approx. 4.57m - 15') Construction staging and detours of traffic would be required.

   The alignment of Wellington Street crossing would be shifted south. The alignment change and height of structure would significantly alter the geometrics of the adjacent intersections.

   If the buildings on the north side of the bridge, east of the river are not removed, then access could not be provided via Wellington Street.
4. Major improvement to the quality of roadway geometrics of the Wellington Street river crossing and approach roads.

   The river crossing alignment may require an undesirable grade on the downward slope to the Lindsay Street intersection.
5. Major improvements to the surrounding road network (including the up-grading/widening of Wellington Street to Victoria Avenue and Queen Street to Hwy 36). The Wellington at William and Lindsay Streets intersections would require redesign.
6. Potential for major impact on existing services and/or utilities.

CONSTRUCT NEW RIVER CROSSING

COLBORNE ST. CORRIDOR

1. Negligible impact on existing crossing capacity. Some delays maybe realized at the Colborne Street at Lindsay Street and William Street intersections.
2. Provides for additional river crossing capacity during rehabilitation of Wellington Street bridge.
3. Some construction complexity involved to accommodate the pumping station, the Lindsay St. N. intersection and the CN Rail bridge with a 6.71m (22') navigation clearance.
4. The river crossing would provide acceptable geometrics. The eastbound downward slope may require an undesirable grade to the Lindsay Street intersection. Could be addressed through relocation of intersection or removal of railway structure.

   Existing Colborne Street east/west approaches to river crossing would provide high quality.
5. Minor road improvements to approach roads and adjacent intersections.

   Minor improvements to Colborne Street/Angeline Street and Colborne Street/Victoria Avenue intersections may be required to accommodate future traffic demands regardless of a bridge at Colborne Street.

   Potential for signalization on Colborne Street at William, Lindsay Streets and Hwy 36.

   NOTE:
   Under existing roadway conditions signals warranted on Colborne Street at Victoria Avenue.
6. Moderate impact on services and/or utilities.

EGLINGTON ST. CORRIDOR

1. No impact on existing crossing capacity.
2. Provides for additional river crossing capacity during rehabilitation of Wellington Street bridge.
3. Minimal construction complexity.
4. The river crossing and approaches would afford provision of excellent geometrics as there are no constraints on either side of the river crossing.
5. Major road improvements to the existing road network such as Eglington Street between river crossing and Victoria Avenue. Construction of new westbound approach on east side of river required.

   Potential for signalization on Colborne Street at Victoria Avenue and/or Colborne Street at William Street and on Eglington at William Street. Physical and/or operational improvements may also be required on Eglinton Street at Victoria Avenue and on east side of connection to Hwy 36.

   NOTE:
   Under existing roadway conditions signals warranted on Colborne Street at Victoria Avenue.
6. Moderate impact to services and/or utilities.

SPRINGDALE GARDENS CORRIDOR

1. No impact on existing crossing capacity.
2. Provides additional river crossing capacity during rehabilitation of Wellington Street bridge.
3. Moderate construction complexity due to proximity to wetland areas.
4. The river crossing and approaches would afford provision of excellent geometrics as there are no constraints on either side of the river crossing.
5. Major construction of approach roads required on east and west side of river.

   Potential for signalization of Colborne Street/Victoria Avenue.

   NOTE:
   Under existing roadway conditions signals warranted on Colborne Street at Victoria Avenue.

   Physical/operational improvements may also be required on Victoria Avenue at Orchard Park Road and on Orchard Park Road at Angeline Street and on east side connection to Hwy 36.
6. Negligible impact on services and/or utilities.

COST

- NOT INCLUDING PROPERTY, ENGINEERING OR CONTINGENCY COSTS
- 1992 UNINFLATED DOLLARS
- NOT INCLUDING UTILITY RELOCATION COSTS

Table 7.2

– ASSESSMENT MATRIX –

EVALUATION OF ALTERNATIVE SOLUTIONS

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE PROBLEM

			IMPROVEMENTS TO EXISTING ROADWAYS		CONSTRUCT NEW RIVER CROSSING		
DO NOTHING	**TRANSPORTATION SYSTEM MANAGEMENT (TSM) MEASURES**	**IMPROVE EXISTING BUS TRANSIT SYSTEM**	**WIDEN AND IMPROVE WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS WITHIN EXISTING R.O.W. (3 LANES) NO REMOVAL OF ADJACENT BUILDINGS**	**WIDEN WELLINGTON ST. BRIDGE & ADJACENT INTERSECTIONS (4 BASIC LANES)**	**COLBORNE ST. CORRIDOR**	**EGLINGTON ST. CORRIDOR**	**SPRINGDALE GARDENS CORRIDOR**
1. No construction cost but increase in "marginal" travel costs for users.	1. Upgrade existing traffic controllers approximately $10,000 per intersection. Intersection improvements approximately $90,000 Increase in "marginal" travel cost for users.	1. Increased transit operating and capital costs. Increase in "marginal" travel cost for users.	1. On the basis that the existing structure is adequate, which is not confirmed, a preliminary cost estimate to complete the bridge widening to three (3) traffic lanes is calculated at; Structure - $276,000 (includes sidewalks) Roadworks - $90,000 (includes adjacent intersection improvement costs only) In the long term increase in "marginal" travel cost for users.	1. Preliminary cost estimate for the reconstruction of existing Wellington Street structure to accommodate four through lanes with a centre turn lane is calculated at; Structure with retaining walls - 2.5 to 3 million (includes sidewalks) Roadworks - 1.2 million Navigable clearance of 22' used. Decrease in the "marginal" travel cost for users.	1. Preliminary cost for the construction of two basic lane facility is calculated at; Structure - 3.4 million (includes sidewalks) Roadworks and signals, etc. $0.4 million. Navigable clearance of 22' used. Decrease in the "marginal" travel cost for users.	1. Preliminary cost for the construction of two basic lane facility is calculated at; Structure - $2.5 million (includes sidewalks) Roadworks and signals - $1.7 million. Navigable clearance of 22' used. In the long term increase in "marginal" travel cost for users.	1. Preliminary cost for the construction of two basic lane facility is calculated at; Structure - $2 million (includes sidewalks) Roadworks and signals - $1.65 million. Navigable clearance of 22' used. In the long term increase in "marginal" travel cost for users.

TABLE 7-3

EVALUATION OF ALTERNATIVE SOLUTIONS TO THE UNDERTAKING

- THE FOLLOWING PROCEDURE, WAS DEVELOPED TO DETERMINE THE RELATIVE RANKING OF THE IDENTIFIED ALTERNATIVE SOLUTIONS:
  - assign weights to evaluation criterion and to sub-factors within each criterion
  - score each subfactor (-1 to -3 for negative impact, 0 for no impact or change, +1 to +3 for positive impact)
  - formulate "point" score for each criterion & determine total project score (Sum of Criterion Scores)
  - see panel 8 for sample calculation

CRITERIA WEIGHTING	SUMMARY OF EVALUATION CRITERIA	SUB FACTOR WEIGHTING	DO NOTHING	TSM	TRANSIT	WIDEN WELLINGTON STREET BRIDGE 3 LANES WITHIN R.O.W.	WIDEN WELLINGTON STREET BRIDGE 4 BASIC LANES	CONSTRUCT NEW RIVER CROSSING		
								COLBORNE STREET	EGLINGTON STREET	SPRINGDALE GARDENS
10	A. CRITERION: TRANSPORTATION									
	1. PROVISION OF HIGH CAPACITY CROSSING	20	-3	-2	-3	1	2	3	2	3
	2. ADDRESSES FUTURE CROSSING DEMAND	20	-3	-2	-3	0	2	3	0	-1
	3. RIVER CROSSING FLEXIBILITY	15	-3	-3	-3	-3	-3	3	1	0
	4. NETWORK COMPATIBILITY	20	0	0	0	0	-2	3	-3	1
	5. EMERGENCY SERVICES	5	-3	-2	-3	1	2	2	1	0
	6. SAFETY	15	-3	-2	-3	-1	1	2	1	1
	7. PEDESTRIAN MOVEMENT	5	0	0	0	0	0	3	0	0
	CRITERION SCORE		-7.5	-5.5	-7.5	-1.2	0.7	9.3	0.5	2.5
20	B. CRITERION: ECONOMIC ENVIRONMENT									
	1. IMPACT ON FUTURE DEVELOPMENT/REDEVELOPMENT POTENTIAL	50	-3	-3	-3	-1	1	3	2	1
	2. ACCESSIBILITY TO TOWN AREAS	50	-3	-3	-3	-1	1	3	2	1
	CRITERION SCORE		-20.0	-20.0	-20.0	-6.7	6.7	20.0	13.3	6.7
20	C. CRITERION: NATURAL ENVIRONMENT									
	1. IMPACT ON EXISTING VEGETATION	15	0	0	0	0	-2	-2	-3	-3
	2. IMPACT ON EXISTING WOODLOTS AND WILDLIFE	25	0	0	0	0	0	0	-2	-3
	3. IMPACT ON WATER RESOURCES	25	0	0	0	0	0	-1	-1	-2
	4. IMPACT ON WETLAND AREA	20	0	0	0	0	0	0	-1	-3
	5. IMPACT ON AIR QUALITY	10	-3	-3	-3	-2	-1	-1	-2	-3
	6. IMPACT ON POTENTIALLY CONTAMINATED PROPERTIES	5	0	0	0	0	-3	0	0	0
	CRITERION SCORE		-2.0	-2.0	-2.0	-1.3	-3.7	-4.3	-10.7	-17.3
20	D. CRITERION: SOCIAL ENVIRONMENT									
	1. NOISE IMPACTS	30	-3	-3	-3	-3	-3	-1	-2	-3
	2. TRAFFIC INFILTRATION	30	-3	-3	-3	-3	-3	3	-2	-3
	3. PROPERTY IMPACTS	20	0	0	0	0	-3	-1	-3	-3
	4. AESTHETICS AND VISUAL INTRUSION	15	0	0	0	0	-3	-3	-1	- |
	5. RECREATIONAL IMPACTS	5	0	0	0	0	0	-1	-1	-1
	CRITERION SCORE		-12.0	-12.0	-12.0	-12.0	-19.0	-0.7	-13.3	-17.3
10	E. CRITERION: CULTURAL ENVIRONMENT									
	1. IMPACT ON EXISTING ARCHAEOLOGICAL RESOURCES	50	0	0	0	0	0	-1	-1	-1
	2. IMPACT ON EXISTING BUILT HERITAGE RESOURCES	50	0	0	0	0	-3	-1	-2	0
	CRITERION SCORE		0.0	0.0	0.0	0.0	-5.0	-3.3	-5.0	-1.7
10	F. CRITERION: ENGINEERING									
	1. IMPACT ON EXISTING CROSSING CAPACITY DURING CONSTRUCTION	20	0	-1	0	-2	-3	-1	0	0
	2. IMP. ON EXIST. CROSS. CAP. DURING REHAB. OF WELLINGTON ST. BRIDGE	20	-3	-3	-3	0	0	3	3	3
	3. CONSTRUCTION COMPLEXITY OF RIVER CROSSING	15	0	0	0	-2	-3	-2	-1	-2
	4. RIVER CROSSING GEOMETRICS	10	0	0	0	1	1	1	3	3
	5. ROAD CONSTRUCTION/UPGRADING	25	0	-1	0	-1	-3	-1	-3	-3
	6. MAJOR SERVICES AND UTILITY CONFLICTS	10	0	0	0	-2	-3	-1	-1	0
	CRITERION SCORE		-2.0	-3.5	-2.0	-3.5	-6.7	-0.5	-0.3	-0.5
10	G. CRITERION: COST	100	0	0	0	0	-3	-3	-3	-3
	CRITERION SCORE		0.0	0.0	0.0	0.0	-10.0	-10.0	-10.0	-10.0
	TOTAL PROJECT SCORE:		-43.5	-43.0	-43.5	-24.7	-37.0	10.5	-25.5	-37.7

TABLE 7·4

SUMMARY OF EVALUATION CRITERIA WEIGHTING SENSITIVITY

SENSITIVITY ANALYSIS	CRITERIA WEIGHTING							EVALUATION RANKING OF THE ALTERNATIVE SOLUTIONS TO THE UNDERTAKING							
	TRANSPORTATION	ECONOMIC ENVIRONMENT	NATURAL ENVIRONMENT	SOCIAL ENVIRONMENT	CULTURAL ENVIRONMENT	ENGINEERING	COST	DO NOTHING	TSM	TRANSIT	WIDEN 3	WIDEN 4	COLBORNE STREET	EGLINGTON STREET	SPRINGDALE GARDENS
1	40	5	5	5	5	40	0	7	6	7	4	6	1	3	2
2	15	15	15	15	15	15	10	7	6	7	2	5	1	3	4
3	20	10	10	10	10	20	20	6	5	6	2	7	1	3	4
4	10	20	20	20	10	10	10	7	6	7	2	4	1	3	5
5	10	10	10	10	10	10	40	3	2	3	1	7	4	5	6
6	25	10	15	10	10	20	10	7	6	7	2	5	1	3	4
7	5	5	40	40	5	5	0	4	3	4	2	6	1	5	7
8	10	10	25	25	10	10	10	4	3	4	2	6	1	5	7
9	10	25	10	10	25	10	10	7	6	7	3	5	1	2	4

EXAMPLE CALCULATION OF CRITERIA SCORE (CRT SCORE)

$$\text{CRITERION SCORE} = \frac{\sum(\text{subfactor weighting} \times \text{score})}{(\text{maximum possible score (300)})} \times \text{CRITERIA WEIGHTING}$$

* EXAMPLE CALCULATION OF CRITERIA SCORE USING SECTION A: CRITERIA - TRANSPORTATION "DO NOTHING" ALTERNATIVE

$$\text{CRITERION SCORE} = \frac{((-3\times20)+(-3\times20)+(-3\times15)+(0\times20)+(-3\times5)+(-3\times15)+(0\times5))}{((3\times20)+(3\times20)+(3\times15)+(3\times20)+(3\times5)+(3\times15)+(3\times5))} \times 10$$

CRITERION SCORE = -7.5

IT SHOULD BE RECOGNIZED THAT THE SCOPE OF THE EVALUATION AND THE DETERMINATION OF THE WEIGHTINGS FOR THE EVALUATION CRITERIA WERE A MATTER OF JUDGEMENT. ACCORDINGLY, IT WAS CONSIDERED ESSENTIAL TO CONDUCT SENSITIVITY TESTING TO DETERMINE THE EFFECT OF CHANGING WEIGHTS ASSIGNED TO EACH CRITERIA. THE ABOVE TABLE SUMMARIZES THE RESULTS OF THE SENSITIVITY TESTING.

THE EVALUATION PROCEDURE REVEALED THAT, ALMOST WITHOUT EXCEPTION, THE COLBORNE ST. CROSSING ALIGNMENT IS THE PREFERRED LOCATION FOR THE ESTABLISHMENT OF A NEW CROSSING OF THE SCUGOG RIVER, TO ACCOMMODATE FUTURE RIVER CROSSING DEMANDS TO THE YEAR 2011.

- Provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Complement the existing Provincial, County and local road network and provide a continuous link in the cross-town County Road arterial road network;
- Maximize the use of existing roadway infrastructure;
- Require only minor road improvements between William Street and Lindsay Street North on approaches to Colborne Street river crossing;
- Have no physical impact to properties on Colborne Street west of William Street or east of Lindsay Street North. Minimal property acquisition required on Colborne Street east of William Street and west of Lindsay Street North to accommodate approach roads; exact amount of property acquisition will be dependant on final design of access to Carew Park Apartments and the Colborne Street East/Lindsay Street North intersection;
- Have no physical impact on any recognized heritage buildings;
- Not require extensive relocation of existing services and utilities;
- Not affect traffic on existing river crossings during construction;
- Provide for greater transportation system "flexibility" and will enhance the network's ability to address emergency situations;
- Result in projected future traffic volumes on Colborne Street that are not dissimilar to **existing** volumes on other arterial roadways within the community i.e. Russell Street, Kent Street;
- Reduce levels of traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street. Other travel patterns within the community will not be significantly altered;
- Provide the greatest level of accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay;
- Have a positive impact on future development/re-development within the Town and enhance development of the industrial area in north-east Lindsay;
- Minimize the future consumption of land outside the Town of Lindsay;
- Be consistent with Town and County Official Plan policies, i.e. no requirements for major re-zoning from residential to commercial, etc.;
- Have minimal impact to existing vegetation, wildlife and water resources. Impact to water resources during construction can be mitigated;
- Minimize fuel consumption and air quality impacts as a result of long-term relief in levels

of congestion throughout the river corridor and no out-of-way travel required for the majority of river crossing trips;

- Complement existing river pedestrian pathway system and will provide for improved pedestrian/bicycle opportunities across the Scugog River and to the adjacent parks and walkway system; and

- Provide for enhanced transit service and opportunities within the Town.

A new river crossing in the Colborne Street corridor is also consistent with the recommendations established by the *Commission on Planning and Development Reform in Ontario (Sewell Commission)*, the Ministry of Transportation of Ontario ("*Transit-Supportive Land Use Planning Guidelines*") and the Transportation Association of Ontario ("*Guide to Transit Considerations*"); specifically, a river crossing at Colborne Street will (also refer to **Section 5.2**):

- Promote new development within built-up areas of existing serviced lands, i.e. minimize "urban sprawl";

- Minimize the future consumption of land;

- Encourage economic growth opportunities within built-up areas of existing serviced lands;

- Minimize natural environmental impacts to wetlands, water resources, fisheries and area wildlife;

- Establish a natural "linear" transportation link;

- Maximize the utilization of the existing road infrastructures; and

- Promote cost effective and efficient transit opportunities.

Below are some of the "main" reasons why the other primary alternative river crossing solutions were not selected to address long-term river crossing demands.

Implementation of TSM measures and widening of the Wellington Street bridge to three (3) lanes as a "stand alone" solution:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;

- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 9 to 10 years (from 1991)** requiring further provision of additional river crossing capacity;

- An additional lane on the existing Wellington Street structure will result in substandard/undesirable lane widths, turn radii, etc. due to physical constraints at the adjacent intersections; thereby, resulting in the **9 to 10 year estimate being extremely optimistic**;

- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would provide no real improvement in the existing Provincial, County and local road network. Would not provide a continuous link in the cross-town County Road arterial road network;
- Cross section of existing Wellington Street structure could not be increased to accommodate an additional lane without significant upgrading to the structure including relocation of **major** utilities;
- Would result in a significant impact on traffic operations during construction;
- During construction, significant negative impact to businesses within community as a result of increased congestion on Kent Street and reduced river crossing opportunities;
- During construction, would significantly impact response times of emergency service vehicles accessing the eastern part of Town;
- Would not provide for greater transportation system "flexibility" nor enhance the network's ability to address emergency situations;
- Traffic infiltration will continue to increase on local residential streets between Colborne Street West/East and Wellington Street/Queen Street, exacerbating the accident potential to vehicles and pedestrians;
- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;
- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- Would not provide significant improvement in transit service and opportunities within the Town; and
- Would not enhance pedestrian movement opportunities across the Scugog River and may result in decrease in pedestrian safety as a result of reduced sidewalk widths to accommodate the widening.

It should also be recognized that the existing Wellington Street structure requires major rehabilitation. At the time rehabilitation works are initiated, the existing structure could be widened.

Reconstruction of Wellington Street bridge to four (4) basic lanes:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;

- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 15 to 20 years** (from 1991) requiring further provision of river crossing capacity;

- A new bridge structure would be required to accommodate 4 "through" lanes;

- River crossing would have undesirable geometrics (>7% grade) to satisfy 6.7 m navigation clearance requirement over the Scugog River. The height restriction of 6.7 m on the Scugog River, as dictated by Trent-Severn Waterway, is for river crossings north of the Lindsay Street locks. It has been assumed that all new river crossings may be required to maintain this height requirement. This assumption has been confirmed by Trent-Severn Waterway; however, this issue was not a major factor in determining the preferred solution to the provision of long-term crossing capacity nor was it an issue in ruling out reconstructing the Wellington Street bridge as a solution;

- Would not maximize the return on the investment in a new bridge crossing;

- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;

- Would not be compatible with the existing Provincial, County and local road network. **Major** road works/widenings would be required to adjacent intersections and connecting roads. Even with road network improvements, a continuous link in the cross-town County Road arterial road network could not be provided;

- Would require extensive relocation of major services and utilities;

- Would result in significant physical impact to existing properties and buildings adjacent to the Wellington Street bridge and Wellington Street/William Street and Wellington Street/Lindsay Street North intersections, including the Queen Street United Church (heritage building) and auto dealership;

- Would result in significant physical impact to properties along Wellington Street west of William Street and east of Queen Street to accommodate road improvements;

- Would result in significant impact to contaminated lands on the south-east corner of the Wellington Street/William Street intersection adjacent to Wellington Street bridge. Cost of site decontamination/contaminant management may make widening of the structure infeasible;

- Would result in a significant impact on traffic operations during construction;

- During construction, significant negative impact to businesses within community as a result of increased congestion on Kent Street and reduced river crossing opportunities;

- During construction, would significantly impact response times of emergency service vehicles accessing the eastern part of Town;

- Would not provide for greater transportation system "flexibility" nor enhance the

network's ability to address emergency situations;

- Traffic infiltration will continue to increase on local residential streets between Colborne Street West/East and Wellington Street/Queen Street, exacerbating the accident potential to vehicles and pedestrians;
- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;
- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- Would not provide significant improvement in transit service and opportunities within the Town; and
- Would not enhance pedestrian movement opportunities across the Scugog River.

Construction of a new river crossing in the Eglington Street/Orchard Park Road corridor:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 11 to 16 years** (from 1991) requiring further provision of river crossing capacity;
- Would not maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);
- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would not be compatible with existing Provincial, County and local road network. **Major** network improvements would be required including the upgrading/widening of existing roads on both sides of river and construction of new road(s) on east side of river;
- Even with road network improvements, a continuous link in the cross-town County Road arterial road network could not be provided. It should also be noted that there are no existing east-west collector roads north of Colborne Street;
- **Major** property acquisition requirements on the east side of the river crossing to accommodate new approach road(s);
- Potential for increased traffic in the east-west and north-south directions in the vicinity of the Eglington Street corridor (this includes collector roads - Orchard Park Road,

Victoria Avenue and the County Road - Colborne Street). It should be recognized that Victoria Avenue was **not** constructed to function as a major arterial;

- Does not provide long-term reduction in traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street;
- Accessibility between existing built-up areas and undeveloped serviced lands within and adjacent to the Town of Lindsay restricted by lack of network transportation capacity;
- Development of the industrial area in north-east Lindsay restricted by lack of network transportation capacity;
- Significant impact to mature trees and vegetation on east/west river bank;
- Potential for proximity and social environmental (noise, air quality, safety, commercial traffic, etc.) impacts greater than what may be anticipated with Colborne Street river crossing due to the minimal amount of traffic volumes in the corridor today;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor; and
- Minimal improvement to pedestrian movement opportunities across the Scugog River.

Construction of a new river crossing in the Springdale Gardens corridor:

- Would not satisfy the long-term (2011) vehicular and pedestrian transportation needs within and adjacent to the Town;
- Would not maximize the capacity of the Wellington Street bridge. **The Wellington Street bridge will reach capacity in 8 to 12 years** (from 1991) requiring further provision of river crossing capacity;
- Traffic volumes on a new crossing would be low i.e. crossing would be under-utilized;
- Would not maximize the return on the investment in a new bridge crossing and maintenance of existing crossings (including rehabilitation of Wellington Street bridge);
- Does not provide the best solution in terms of an "ideal" crossing location for existing and future river crossing trip distribution;
- Would not be compatible with the existing Provincial, County and local network. **Major** network improvements would be required i.e. construction of new roads(s) on both sides of river and upgrading to existing road(s) on north - west side of river;
- Provides minimal improvement in transportation network flexibility - northern river crossing location is not convenient. Anticipated development patterns within the Town would result in out-of-way travel;

- **Major** property acquisition and consumption of undeveloped lands on both the east and west sides of the river crossing to accommodate new roads i.e. major unwarranted addition to and extension of the existing road infrastructure;
- Does not provide long-term reduction in traffic infiltration on residential streets between Colborne Street West/East and Wellington Street/Queen Street;
- Potential for increased traffic in the north-south directions on Victoria Avenue; it should be recognized that Victoria Avenue was not constructed to function as a major arterial;
- Not an efficient planning solution as some lands in the northern area may not be serviced and a new roadway may result in some development pressure i.e. **"urban sprawl"** and limited development potential in/adjacent to the Class "1" wetland area;
- In the short-medium term, existing serviced land within the Town would not be fully utilized;
- Represents inappropriate investment in infrastructure including roads, sewers, water, schools, police, fire etc. to service development that may be attracted beyond the existing Town limits;
- In the short-medium term, opportunities for economic growth within the Town will be limited due to transportation system constraints.
- Major potential for impact to the natural environment, specifically to the Provincially significant Class "1" wetland;
- Potential for proximity and social environmental (noise, air quality, safety, commercial traffic, etc.) impacts greater than what may be anticipated with Colborne Street river crossing due to the undisturbed nature of the surrounding area;
- Would not minimize fuel consumption and air quality impacts throughout the river corridor;
- No "practical" improvement to transit service and opportunities within the Town; and
- No "practical" improvement to pedestrian movement opportunities across the Scugog River.

A river crossing located in the "Springdale Gardens/Cedar Valley Park Road" corridor is not consistent with the recommendations established by the *Commission on Planning and Development Reform in Ontario (Sewell Commission)*, the Ministry of Transportation of Ontario ("*Transit-Supportive Land Use Planning Guidelines*") and the Transportation Association of Ontario ("*Guide to Transit Considerations*") - also refer to **Section 5.2.** Furthermore, the construction of a northern river crossing would reflect poor growth management practices and an inefficient use of taxpayer's dollars.

In summary, all potential Transportation System Management (TSM) and widening improvements should be implemented to maximize the existing river crossing capacity. Remaining improvements to be implemented include the construction of a continuous two-way centre turn lane on the existing Wellington

Street bridge and northbound/southbound left turn lanes at the Wellington Street/Lindsay Street intersection.

Furthermore, additional river crossing capacity, by means of a new river crossing in the Colborne Street corridor should be provided to safely and efficiently accommodate long-term (20 to 30 years) vehicular crossing requirements of the Scugog River. The other alternatives considered within the context of the Study do not satisfy a fundamental requirement to accommodate long-term river crossing demands and to provide long-term relief to capacity conditions on the Wellington Street river crossing.

As a minimum, property should be immediately protected in the Colborne Street corridor for a future river crossing. Failure to protect for a future crossing in this area could in long-term result in negative traffic, safety, economic and social environmental impacts in the community.

8.0 IDENTIFICATION AND EVALUATION OF ALTERNATIVE DESIGN CONCEPTS FOR THE PREFERRED SOLUTION TO THE PROVISION OF FUTURE RIVER CROSSING CAPACITY

8.1 Design Issues

Subsequent to the determination that a new river crossing in the Colborne Street corridor represents Phase 2 of the preferred solution to resolve the identified river crossing capacity problem, alternative design concepts for a Colborne Street river crossing were developed. (Phase 1 being the widening of the Wellington Street bridge to 3 lanes to accommodate a continuous two-way centre turn lane and the construction of northbound/southbound left turn lanes at the Wellington Street/Lindsay Street North intersection.

Recognizing the existing environmental conditions, the following design issues for a Colborne Street crossing were taken into consideration in conjunction with the development of alternative design concepts:

Natural Environment:

- From a natural environmental perspective, the design should minimize the degree of impact on existing aquatic environment within the Scugog River. In addition, the design should limit the impact to areas of natural environment located east and west of the river crossing.

Social Environment:

- The design should be consistent with existing land uses and Official Plan policies;
- The design should further enhance the Lindsay Parks system and access opportunities;
- Property acquisition including impacts to the Carew Park Apartment parking lot should be minimized; and
- The design should recognize the proximity of the Seniors' residence on the west side of the river south of Colborne Street, and take measures where practical to mitigate noise/aesthetic impacts.

Cultural Environment:

- The design should minimize disruption to surrounding heritage resources.

Engineering:

- The crossing must be designed in accordance with Provincial engineering standards. Geometric design criteria adopted for developing the preliminary conceptual approach roads and bridge designs are summarized in **Tables 8.1 and 8.2**;
- The river crossing must be designed recognizing geotechnical classification of the site. Site Investigations Services Limited was retained by Totten Sims Hubicki Associates to undertake a soils investigation at the proposed Colborne Street crossing location; the report is included in **Appendix D**; and
- The design of the crossing must accommodate the existing pump house at the terminus of Colborne Street West, ensure access to adjacent properties and provide safe and

TABLE 8.1
ROADWAY DESIGN CRITERIA

Parameter	Design Criteria
• Design Speed	50 kph
• Operating Speed	50 kph
• Minimum Stopping Sight Distance	65 m
• Equivalent Vertical Curve	
- Crest	K = 8
- Sag	K = 5 (illuminated condition)
• Gradients	
- Maximum	6.0%
- Minimum	0.5%
• Roadway Width	
- Through Lanes	3.35 m
- Turn Lanes	3.35 m
- Sidewalk	2.0 m

Source: Ministry of Transportation of Ontario

* 3.35 based on existing geometrics of Colborne Street East

TABLE 8.2
BRIDGE DESIGN CRITERIA

Parameter	Design Criteria
• Minimum Navigation Clearance of Scugog River - north of Lindsay Street Locks	
- Vertical	6.7 m*
- Horizontal	10.0 m
- Draught	1.2 m

Source: Trent-Severn Waterway

* Still subject to discussion - reduction in clearance heights may be feasible.

8.2 Alternative Design Concepts

Recognizing the above noted design issues, four (4) alternative river crossing concepts including two (2) Colborne Street East/Lindsay Street North intersection design concepts were developed for evaluation. Shown in **Tables 8.3 and 8.4** are the major elements for each alternative design considered.

TABLE 8.3
ALTERNATIVE COLBORNE STREET RIVER CROSSING DESIGNS

DESIGN ISSUES	FOUR SPAN WITH CN RAIL OVERPASS	FOUR SPAN WITHOUT CN RAIL OVERPASS	THREE SPAN WITH CN RAIL OVERPASS	THREE SPAN WITHOUT CN RAIL OVERPASS
Navigation Height Clearance - 6.7 m required (TSW)	6.7 m	6.7 m	5.3 m	6.7 m
Navigation Channel - 10 m required (TSW) - 1.2 m draught required (TSW)	existing channel maintained, no dredging required	existing channel maintained no, dredging required	remarking of channel required, no dredging required	remarking of channel required, no dredging required
River Crossing Geometrics - maximum desired grade 6% (MTO)	7.2 %	5.2 %	5.2 %	5.2 %
Bridge Piers In River	2	2	1	1
Cost (million of dollars - 1992) excluding: - approach works - utility relocations - property acquisitions - engineering and contingency allowances	3.55	3.50	3.25	3.40

NOTES:

- TSW - Trent-Severn Waterway - governing body for the Scugog River (Federal jurisdiction)
- The existing grade on the Wellington Street bridge is 5.2 %
- For each alternative there are similar impacts to the natural, cultural and social environment.

TABLE 8.4
ALTERNATIVE COLBORNE STREET EAST/LINDSAY STREET NORTH
INTERSECTION DESIGNS

DESIGN ISSUES	LINDSAY STREET NORTH INTERSECTS COLBORNE STREET EAST AT A 70 DEGREE ANGLE	REDESIGN OF THE COLBORNE STREET EAST AT LINDSAY STREET NORTH INTERSECTION
Intersection geometrics - turning lanes - approach grades etc.	Adequate	Desirable
Parking/Pedestrian Opportunities and Access For Adjacent Park System	Adequate	Desirable
Cost of Roadworks (1992 dollars) excluding: - traffic signals - Colborne Street East roadworks	130,000	50,000

NOTE: There is some potential that in the future the Lindsay Parks and Recreation Board will provide parking facilities for the Shaft Machine Building at 95 Lindsay Street North and adjacent river area on the lands east of Lindsay Street North south of Colborne Street East. With a redesign of the Colborne Street East/Lindsay Street North intersection, a parking facility could be provided on the west side of Lindsay Street North and south of Colborne Street East.

8.3 Assessment and Evaluation of Alternative Design Concepts

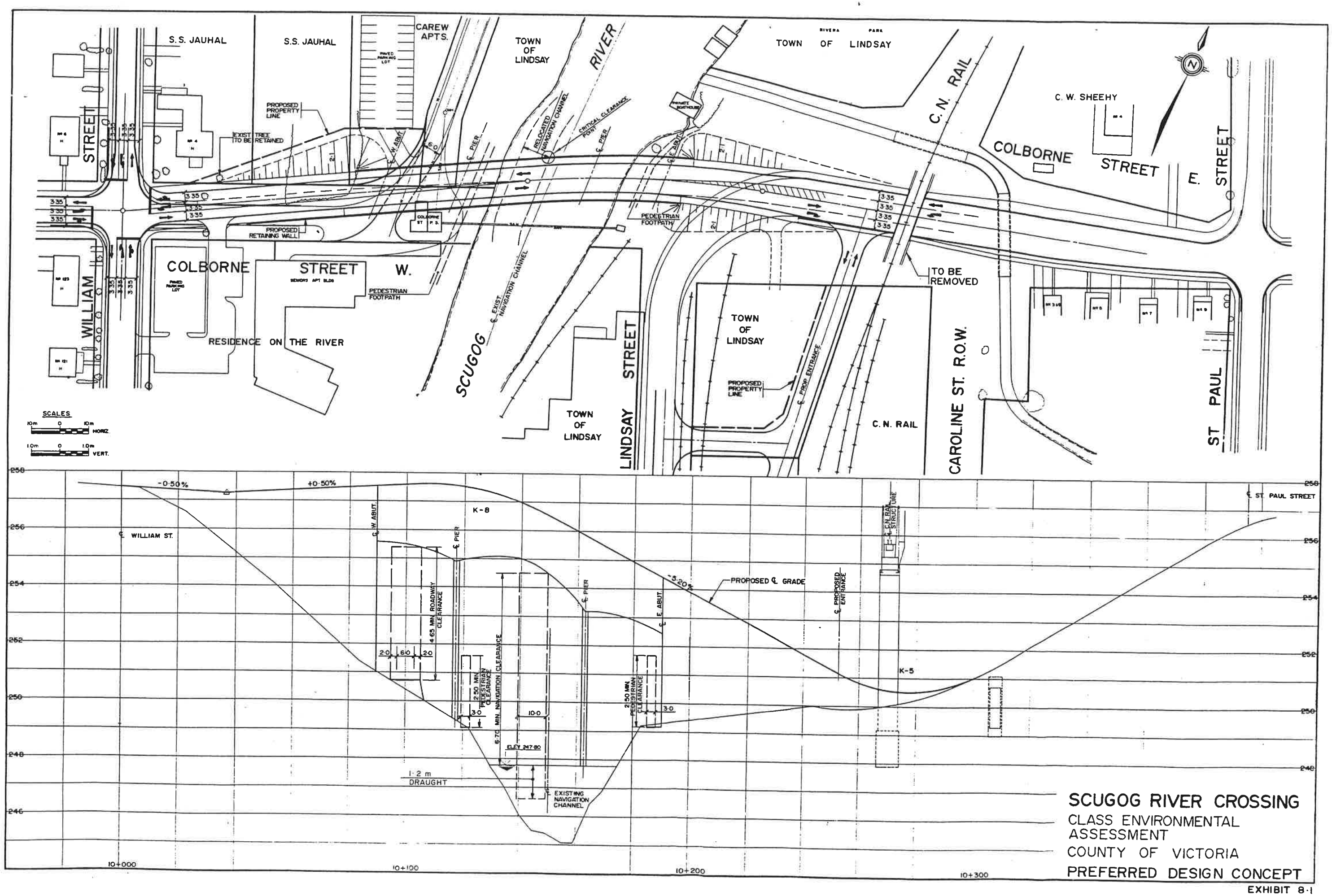
The alternative design concepts established were assessed and evaluated based on similar criteria/sub-factors and evaluation methodology as undertaken for the evaluation of alternative solutions to the river capacity problem.

8.4 Selection of the Preferred Design Concept

As a result of the assessment and evaluation process, **the three span bridge structure without the CN Rail overpass** was determined to be the preferred river crossing design concept and the **redesign of the Colborne Street East/Lindsay Street North intersection** was selected as the preferred intersection design concept. This intersection including the potential intersection at Caroline Street with Colborne Street East is still subject to change depending upon the Town's future plans for the Shaft building and the lands on the south-east corner of the existing Colborne Street East/Lindsay Street North intersection. It should be noted that CN Rail has no future plans to reinstate the rail line which uses the subject CN structure. **Exhibits 8.1 and 8.2** illustrate the preferred design concept.

The aforementioned design concept was selected as the preferred design for the following reasons:

- Similar costs for the alternative river crossing and intersection design concepts;
- The overall construction complexity and impact to the natural environment within the Scugog River will be reduced with a bridge design incorporating one (1) bridge pier;
- Superior geometrics on the approach roads and the river crossing;
- Redesign of the Colborne Street East/Lindsay Street North intersection would eliminate the need for pedestrians to cross Lindsay Street North to reach east river bank by integrating with the Town's development plans for the lands on the south-east corner; and
- Design complements the existing and future parking facilities and pedestrian walkway systems in the area of the crossing.



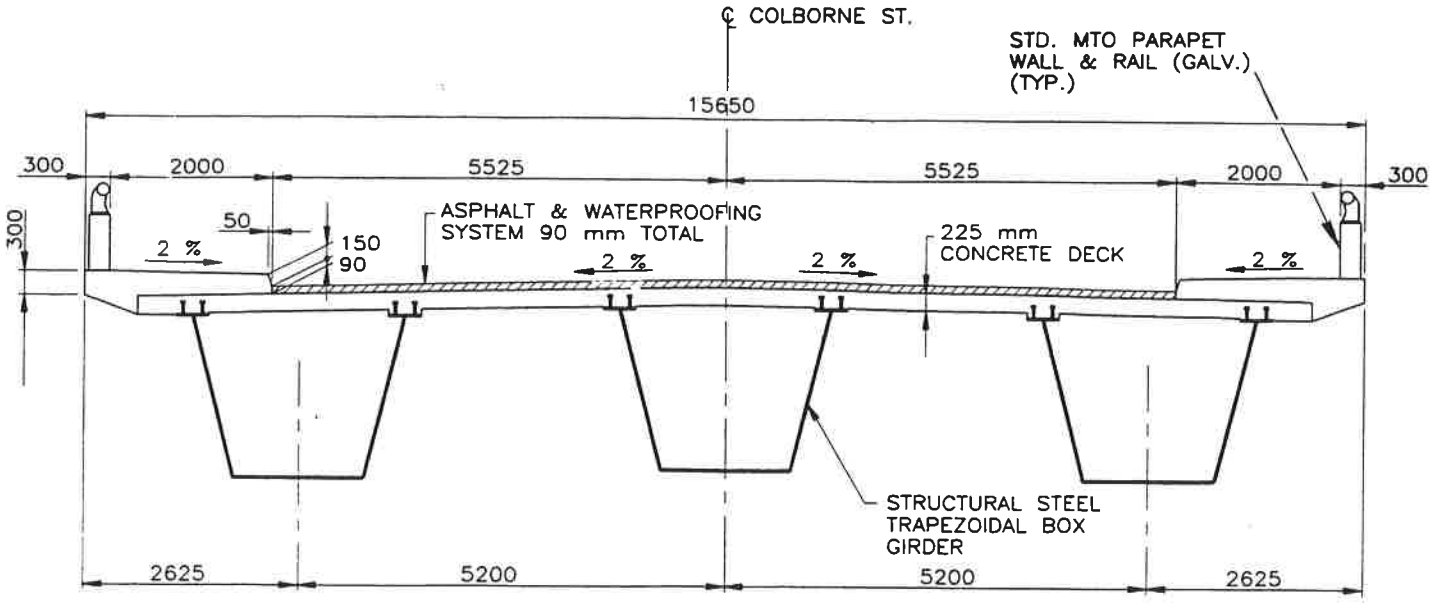
SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

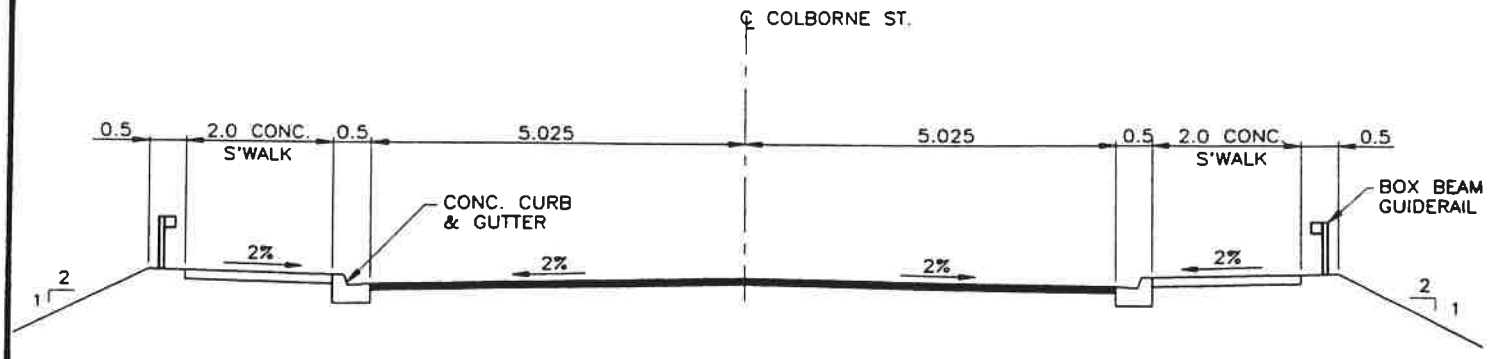
PREFERRED DESIGN CONCEPT

EXHIBIT 8-1



TYPICAL DECK SECTION

N.T.S.



TYPICAL ROADWAY SECTION

N.T.S.

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

PREFERRED DESIGN CONCEPT TYPICAL SECTIONS

EXHIBIT 8

9.0 THE SELECTED DESIGN FOR THE PREFERRED SOLUTION TO THE PROVISION OF FUTURE RIVER CROSSING CAPACITY

9.1 Description of the Selected Design

The following points provide a summary description of the selected design for a Colborne Street river crossing:

- The bridge structure will accommodate two (2) traffic lanes;
- The bridge structure could provide 6.7 m vertical navigation clearance, 10.0 m horizontal navigation clearance and 1.2 m draught as required by Trent-Severn Waterway, a lower clearance may be possible and would be more desirable from a design perspective provided approval can be obtained from the canal authority;
- The maximum grade on the river crossing is 5.2 % (the same as existing grade on the Wellington Street bridge);
- Removal of CN Rail overpass on Colborne Street East will be required to accommodate the preferred design;
- One (1) bridge pier located within the Scugog River will be required;
- No dredging of river bed will be required;
- Pedestrian walkways along the east and west side of the river will be accommodated by the proposed bridge structure configuration;
- Minimal property acquisition will be required to accommodate new crossing structure and approach roads;
- Separate left turn lanes and shared through/right turn lanes will be accommodated on all approaches to the Colborne Street West/William Street intersection;
- A separate eastbound right turn lane, westbound left turn lane, northbound left turn lane and northbound right turn lane will be provided at the Colborne Street East/Lindsay Street North intersection (subject to confirmation of the intersection design); and
- Town's development plans could result in closure of Lindsay Street North.

There is potential that traffic signals will be warranted at the Colborne Street East/William Street intersection; from a capacity perspective, it is recommended that traffic signals be installed in conjunction with the construction of the new river crossing. It is also recommended that operations at the intersections adjacent to the new river crossing be monitored following construction.

The 2011 SAWDT link volumes along Colborne Street are shown in **Exhibit 9.1**. A range for the traffic volumes was provided for both "without" and "with" a Colborne Street river crossing. The range for

2011 "without" a new river crossing is representative of a 2.1 to 3.0 % per annum growth rate which is based on historical trends in vehicle growth in the area. The range for "2011" with a new river crossing at Colborne Street represents Lindsay Street North continuing to operate as an arterial (low volume in the range) and Lindsay Street North operating as a local/collector road (high volume in the range).

The following issues relative to the design of the crossing will be addressed as part of the "detail design" phase of the project:

- Pedestrian access to the river crossing (including handicap access);
- Pedestrian movements along the river in the area of the crossing;
- Access to the Carew Park Apartments. Two options have been considered: one being to maintain the existing Colborne Street access and the other to provide access via Elgin Street. The Pottinger Street access would not be impacted by either of the two access options. Both options are functional, however the Elgin Street access is preferred from a traffic operations perspective; and
- Short-term and long-term mitigating measures as a result of the river crossing, specifically relating the natural and social environment, such as aesthetic and noise impacts.

9.2 Preliminary Cost Estimates

Based on an economic and cash flow analysis, the following strategy is recommended:

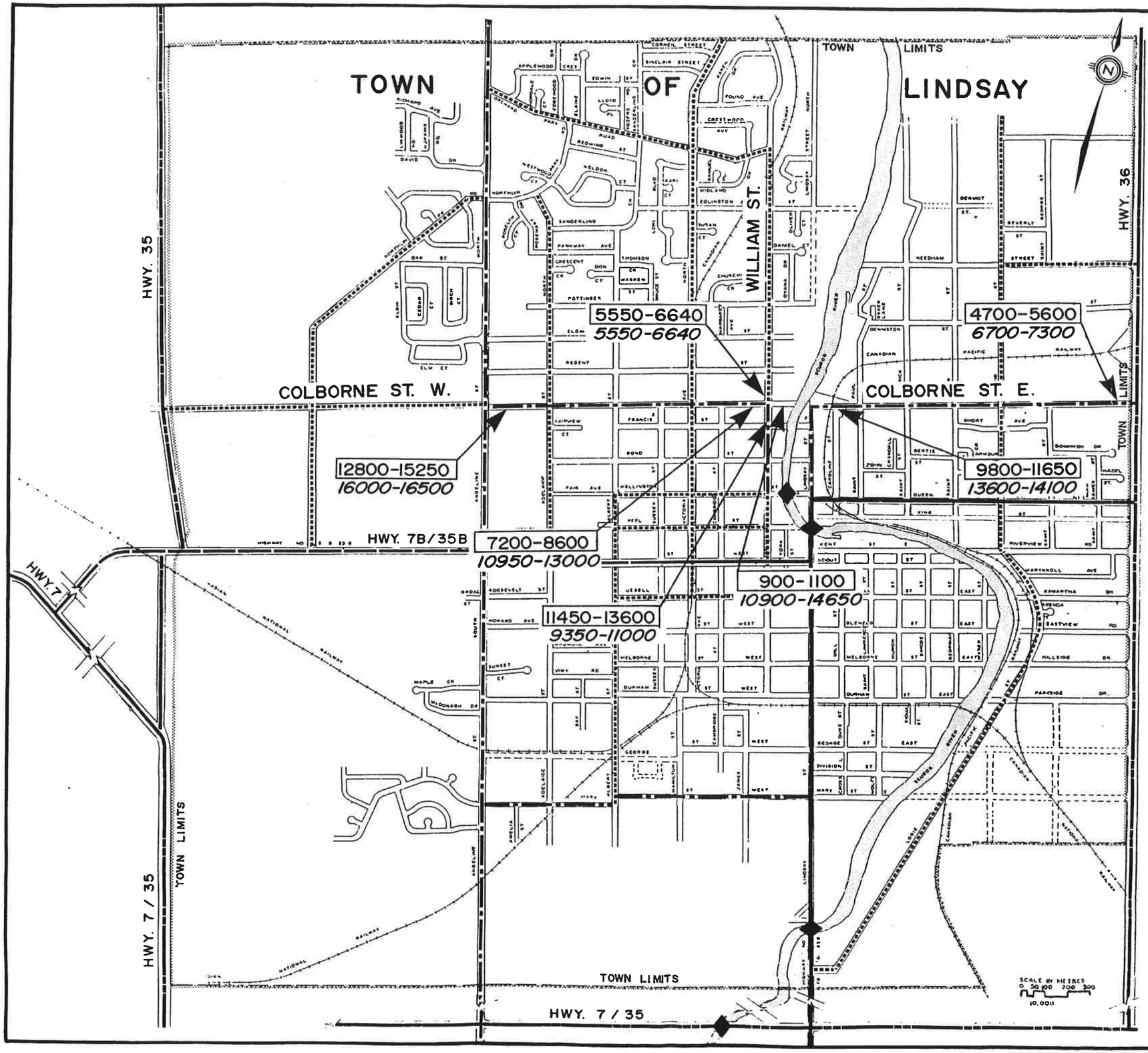
Phase 1: Rehabilitate the existing Wellington Street structure **now** (i.e. 1994) and construct a centre turn lane on the bridge and northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection; and

Phase 2: Construct a new river crossing in or after 1998 (i.e. a four year delay from 1994). After four years the present value of constructing a new river crossing plus current widening costs (Wellington Street bridge) is less than the cost of building a new bridge now.

In considering the implementation strategy, it should be recognized that the economic analysis did not account for potential losses to the tourist/business community as a result of reduced river crossing opportunities during construction/rehabilitation.

Phase 1:

The cost to widen of the existing Wellington Street structure to 3 lanes has been estimated at **$ 366,000** in 1992 dollars (exclusive of cost to relocate major utilities and additional structural costs associated with rectifying other deficiencies). A detailed structural condition survey was not undertaken as part of the EA as the main thrust of the Study was to focus on long-term improvement scenarios. Based on a visual bridge inspection undertaken in 1991, the cost to rehabilitate the Wellington Street bridge was estimated at $ 285,000 (exclusive of any costs associated with a widening). It should be noted that the bridge inspection identified that these costs could increase if the rehabilitation work is not undertaken within the next 1 to 3 years (from June 1991) as extensive repairs could be required eg. scarification and overlay of the concrete deck. **In summary, the total cost to rehabilitate, widen the**



LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS (ARTERIAL)
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- 4700 — 2011 SAWDT WITHOUT COLBORNE ST. BRIDGE
- *6700* — 2011 SAWDT WITH COLBORNE ST. BRIDGE
- "LOCAL" ARTERIAL

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

PROJECTED 2011 TRAFFIC VOLUMES

EXHIBIT 9-1

Wellington Street bridge to 3 lanes and construct northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection could be in the $ 750,000 to $ 1,000,000 range.

Phase 2:

The preliminary project cost estimate associated with the provision of a **Colborne Street crossing** (2 lane capacity) of the Scugog River (including provisions for sidewalks) and the associated approach roadways is **$ 3,850,000** in 1992 dollars, excluding costs associated with property acquisition, utility relocation, structural appurtenances, engineering and contingency costs. The breakdown of the cost for the construction of the selected design is as follows:

• Structure	$ 3,400,000
• Roadworks and Traffic Signals	$ 400,000
• Reconstruction of Colborne Street East/Lindsay Street North intersection	$ 50,000

It should be noted that minimal property acquisition will be required; definitive property requirements can be identified once access to Carew Park Apartments is resolved and the Colborne Street East/Lindsay Street North intersection is finalized at the detail design stage. Utility relocation costs will also be minimal.

9.3 Drainage and Storm Water Quality Considerations

It is proposed that drainage for the Colborne Street crossing structure be directed to existing storm sewer systems located on William Street and Colborne Street East.

If required, suitable storm water "Best Management Practices" (BMP's) will be incorporated in the design of the project to control the quality of storm drainage associated with the crossing structure. This issue will be further discussed with representatives of the Ministry of Natural Resources, the Trent-Severn Waterway and the Ministry of the Environment during the detail design phase of the project.

9.4 Socio-Economic and Cultural Environment Issues

Below are some of the major issues and concerns that have been identified during the course of the Study regarding a Colborne Street river crossing; many of which relate to the social environment. Specifically, a new river crossing in the Colborne Street corridor will:

- Require minimal property acquisition on Colborne Street east of William Street and west of Lindsay Street North to accommodate approach roads;

- Result in an increase in traffic volumes on some portions of Colborne Street; although it must also be acknowledged that traffic on Colborne Street will continue to grow on an annual basis even without a new river crossing. Future volumes on Colborne Street, with a Colborne Street river crossing, will fall within a range considered acceptable for an arterial facility. Future volumes with/without a Colborne Street river crossing are shown on **Exhibit 9.1** in the ESR;

- May require measures to mitigate noise impacts on Colborne Street between William

Street and the west river bank (i.e specifically for the Seniors' residence) as noise levels in this area are projected to increase in excess of the 5 dBA guideline. West of William Street and east of Lindsay Street North, noise levels are not projected to increase in excess of the 5 dBA guideline. Refer to **Section 9.4.3** for a description of the noise assessment;

- Have no physical impact to buildings along Colborne Street; however, the increase in traffic may result in proximity impacts (noise, air quality, commercial traffic, safety, etc.); and

- Have aesthetic impacts to residents of the Seniors' residence and Carew Park Apartments on west river bank and to those individuals walking etc. along the adjacent river corridor.

The above issues/concerns were considered in the context of the evaluation of the various alternative solutions to the provision of additional river crossing capacity. It should be emphasized that the Study Team has recognized that there is a potential for social impacts associated with each of the alternative planning solutions; however, the selection of the preferred solution(s) is not solely based on social issues but a combination of considerations such as transportation requirements, social and natural environmental impacts, engineering and cost. In summary, it is considered by the Study Team that the positive attributes associated with the Colborne Street crossing outweigh the potential negative attributes.

9.4.1 Archaeological Assessment - Phase 2

Phase 2 of the archaeological assessment concentrated on that area encompassing the proposed Colborne Street river crossing. The detail Study did not result in the recovery of any significant cultural remains and concluded that the proposed bridge crossing be cleared of any further archaeological assessment.

Both Phase 1 and Phase 2 archaeological reports were sent to the Ministry of Cultural and Communications for review; the Ministry has approved both reports and cleared the site of requiring further archaeological assessment. Both reports are contained in **Appendix D.**

9.4.2 Property Acquisition/Heritage Resources

To accommodate the proposed Colborne Street river crossing, some property acquisition will be required on the east side of William Street north of Colborne Street West. The extent of the acquisition is dependant on the location of the access to the Carew Park Apartments. On the east side of the subject river crossing, property (owned by the Town of Lindsay) will be required to accommodate the approach to the bridge and the realignment of Lindsay Street North. The proposed Colborne Street river crossing will not physically impact designated or LACAC priority heritage resources.

9.4.3 Noise Impacts

As part of the Environmental Assessment, a noise analysis was conducted along Colborne Street West and East based on 2011 projected traffic volumes "with" and "without" a Colborne Street river crossing.

Based on the Ministry of the Environment standards an increase of less than 5 decibels (dBA) does not warrant mitigating measures and that an increase of 3 dBA or less is not noticeable to the human hear. The results of the noise assessment indicate that measures to mitigate noise impacts may be required on Colborne Street between William Street and the west river bank (i.e specifically for the Seniors' residence) as noise levels in this area are projected to increase in excess of the 5 dBA guideline (i.e. possible increase of 5 to 10 dBA).

Following the calculation of the sound levels along Colborne Street, the noise mitigation effort required by the MTO/MOE protocol was used for this Study to assess the impacts. It is dependant on the total sound level and the amount of change. It can be summarized as follows:

- If change in the sound level above the future ambient (2011) is between 0 and 5 dBA, then no mitigation effort is required;

- If the change in sound level above the future ambient (2011) is greater than 5 dBA, then the feasibility of attenuating noise should be investigated. The objective is to reduce sound levels, where warranted, to as close to 55 dBA or preconstruction ambient as is technically or economically feasible. The mitigation effort should consider the following:

  - Investigate noise control measures on right-of-way;
  - If project cost is not significantly affected, then introduce noise control measures within the right-of-way; and
  - Noise control measures, where introduced, should achieve a minimum of 5 dBA attenuation.

The methodology used to predict sound levels for the future conditions was as follows (using the STAMSON version 4.1 noise modelling software):

- Identify the noise sensitive areas (NSA) and noise sources within the area under consideration;

- Locate receiver sites at select locations in the NSA at a distance of:
  - 3.0 m from the building and at a height of 1.5 m above the existing ground for day time sound levels;
  - 4.5 m above existing ground in the plane of the building for night time sound levels; and

- Predict the anticipated sound levels at the receiver sites using STAMSON.

Based on the analysis, it was found that private homes and outdoor living areas (OLA) west of William Street and on the east side of the proposed crossing will **not** have noise impacts greater than 5 dBA.

On the east of William Street and west of the river, the results of the assessment found that no mitigation is required to the private home on the north-east corner of the Colborne Street/William Street intersection (i.e. increase of less than 5 dBA).

On the south-east corner of the Colborne Street/William Street intersection (i.e. the Senior's residence) it has been projected than noise levels adjacent to the Senior's Residence may increase by 5 to 10 dBA. Noise mitigating measures should be considered that effectively reduce the predicted levels by 5 dBA and

as close to preconstruction levels as technically and economically feasible.

It should be noted that mitigating measures for noise impacts are not required for public areas including park lands. Specific details of the mitigating measures which may be required, including a noise wall, will be addressed in the detail design phase of the project through discussions with representatives of the County of Victoria, Town of Lindsay and the Seniors' residence.

9.5 Public Responses to the Construction of a River Crossing at Colborne Street

A new river crossing at Colborne Street, was generally supported by the Public; however, there are individuals and interest groups who are **opposed** to a river crossing at the Colborne Street location. Some members of the public also question the need and justification for a new crossing. Below are some of the basic comments and concerns raised during the course of the Study, from those against and those in support of a Colborne Street crossing. This is not a complete list; a comprehensive summary of public input is included in **Appendix A**. Petitions of those against and those in support of a river crossing at Colborne Street are included in **Appendices A9 and A10** respectively.

Comments of those opposed to a Colborne Street river crossing:

- The duration of the vehicular congestion periods on the Wellington Street river crossing and adjacent intersections does not warrant the cost of constructing a new river crossing;
- Physical and operational improvements should be implemented on the existing crossings and adjacent intersections to extend the capacity "life" of the existing crossings; specifically at/adjacent to the Wellington Street bridge;
- A Colborne Street river crossing will have major **social** impacts (more so than a northern crossing) to the adjacent residential properties; such as, increased traffic volumes and noise, reduced pedestrian safety and increased truck traffic;
- A Colborne Street river crossing will decrease the aesthetics of the river park system and result in a visual impact to residents of the Seniors' residence and Carew Park apartments;
- A Colborne Street river crossing will result in a decrease in property values and increase in property taxes on lands in the area of Colborne Street; and
- A new river crossing at Colborne Street will impact the viability of downtown businesses.

Comments of those in support of Colborne Street river crossing:

- The delays on the existing Wellington Street river crossing are excessive and an additional river crossing is required;
- A river crossing at Colborne Street will improve the ability of emergency vehicles to get to the east side of the river for a serious fire/accident;

- A river crossing at Colborne Street would result in less impact, than a northern crossing, to the social and natural environment;
- A river crossing at Colborne Street would not significantly increase traffic on Colborne Street as much of the existing traffic crossing the river already uses this roadway; and
- A river crossing at Colborne Street will not have a negative impact on downtown businesses.

It should be noted that based upon the information provided on the comment forms from the Public Information Centres and from written correspondence during the course of the Study, it appears that those citizens who are opposed to a river crossing linking east and west Colborne Street, **generally** reside in the Colborne Street West area. Listed in **Table 9.1** are some of the comments from those opposed to a Colborne Street river crossing and the corresponding action taken.

9.6 Utilities and Municipal Services

The proposed Colborne Street river crossing will not impact any major existing or proposed utilities within the Colborne Street river crossing corridor. However, during construction, measures should be taken to ensure the existing sanitary sewer crossing the river from the sanitary sewage pumping station is not impacted.

9.7 Mitigating Measures

By virtue of the process by which the preferred solution to the river crossing capacity problem was selected, many environmental concerns related to the project have been mitigated. However, short-term construction related environmental impacts and long-term issues related to the conceptual design of the river crossing are addressed in this section.

The proposed mitigating measures are both specific and practical in terms of cost benefit.

9.7.1 Short-Term Construction Related Environmental Impacts

The County of Victoria commits to carrying out the mitigating measures contained in **Table 9.2** to ensure that the construction of the proposed river crossing will have a minimal affect on the environment.

9.7.2 Long-Term Environmental Issues

Long-term environmental issues have also been recognized as part of the Environmental Assessment. The issues, along with the mitigating measures proposed which will be implemented in conjunction with the construction of the Colborne Street river crossing are summarized in **Table 9.3**.

TABLE 9.1
SUMMARY OF THE "KEY" COMMENTS OF THOSE OPPOSED TO A COLBORNE STREET RIVER CROSSING AND ACTION TAKEN

COMMENT	ACTION TAKEN OR RESPONSE
• North ring road would be best long-term solution to existing river crossing capacity problem.	• Northern crossing considered as an alternative solution to the problem i.e. Springdale Gardens crossing. A northern crossing would promote development of unserviced lands north of Town. Environmental constraints may preclude significant levels of development on the east side of the river.
• Pedestrian safety concerns (including seniors and children).	• Considered in evaluation process. Additional field surveys were conducted to review pedestrian safety issues. The assessment of safety issues included a review of pedestrian safety in the area of local schools; specifically in the Colborne Street and Orchard Park Road vicinities.
• Accessibility to Seniors' residence and apartment buildings on Colborne Street east of William Street.	• Both vehicular and pedestrian accessibility can be maintained, details of access to Carew apartments to be finalized in detail design.
• Visual/noise impacts to residents of the Seniors' residence and apartment buildings on Colborne Street east of William Street.	• Considered in evaluation process. Methods of noise attenuation, such as noise barriers, to be finalized in detail design in conjunction with discussions with the Town, County and Owners of Seniors' residence.
• Do current traffic conditions actually reflect a "problem"?	• Philosophical argument - industry standards employed to assess nature/level of existing problems - local operating parameters used in analysis.
• Impact to residents on Colborne Street west of William Street and east of Lindsay Street North.	• Proximity impacts - potential increase in noise does not require mitigating measures. Future development on Colborne Street west of Angeline Street will impact traffic growth and requirements for road improvements in that area.
• When will signals be required on Colborne Street?	• Traffic signals were installed at Colborne Street West/Victoria Avenue intersection in 1993. Based on existing traffic volumes, it is anticipated that traffic signals will be required at William Street even without a river crossing at Colborne Street. Traffic signals would be recommended at William Street in conjunction with a Colborne Street crossing.
• Recommended improvements to Wellington Street river crossing and adjacent intersections as an alternative to the construction of a new crossing.	• Operational and geometric improvements addressed in evaluation of alternatives and in the 1989 Operations Study. TSM and a centre turn lane would provide only short term improvements in existing capacity restraints. Significant physical improvements i.e. reconstruction of the Wellington Street bridge would result in major social and cultural impacts.
• The impact of truck traffic along Colborne Street with a Colborne Street river crossing.	• Potential for increase in commercial vehicle volumes. Existing truck traffic on Colborne Street West of river and Wellington Street river crossing is in the 2 to 5% range. An arterial roadway can reasonably be expected to carry up to 20% trucks.
• Effect on social and economic environment underestimated for the Colborne Street alternative.	• Sensitivity tests undertaken in the evaluation to account for various levels of importance (weighting) of criteria (i.e. social, natural environment, etc.) and associated sub-factors.

TABLE 9.2
POTENTIAL SHORT-TERM CONSTRUCTION RELATED ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATING MEASURES

FACTOR AFFECTED	ENVIRONMENTAL IMPACT	MITIGATING MEASURES
Natural Environment		
1. Fisheries	• Disruption of spawning periods in the river due to construction at river crossing.	• Restrict work to be undertaken within river during spawning periods; March 16 to June 30 inclusive of any given year.
	• Loss of fish habitat during construction of new or modified river crossing structures and/or re-channelization.	• Careful installation of sandbags between construction zone and river to minimize disruption in watercourse. Details to be developed at final design stage.
		• Minimize construction period within watercourse.
2. Water Quality	• Chemical contamination of river from construction operations.	• General contamination: Prohibit the placement of construction debris or empty fuel or pesticide containers within 30 m of the river.
		• Fuel contamination: Control equipment re-fuelling and maintenance and storage of fuel containers.
		• Storage of materials: Prohibit storage of waste, surplus organic material and topsoil on areas adjacent to river.
		• Watering from dewatering: Discharge water either into settling basin or vegetated buffer area.
3. Erosion and Sedimentation	• Sediment transport in storm water run-off.	• Minimize extent and period of surface exposure, particularly for drainage ditches and slopes.
	• Slope erosion and stability.	• Incorporate all erosion and sedimentation control measures in accordance with MTO's and MNR's current guidelines.
4. Vegetation	• Loss of vegetation to accommodate selected design of river crossing.	• Limits of work to be delineated in field prior to construction commencement to minimize environmental impacts.
		• Vegetation that is subject to significant environmental damage should be fertilized to accelerate recovery.
	• New or increased exposure of vegetation.	• Pre-stress trees in advance of grading operations.
	• Damage to trees in close proximity of working area.	• Erect snow fence leading around dripline of trees in close proximity to work area, do not allow traffic/working equipment around dripline.
		• Consider local modifications in grading to reduce impact on vegetation in close proximity to work area.
5. Air quality	• Reduced air quality due to dust.	• Apply water and calcium during construction.
	• Reduced air quality due to open burning.	• Open burning will not be permitted.
Social Environment		
1. Maintenance of Road Traffic	• Delays to traffic due to construction	• Maintain traffic movements to local residents at all times. Stage construction to minimize delays. Utilize flag persons.
2. Assurance of Traffic Safety	• Roadway safety compromised due to construction activities	• Standard construction safety practices to be carried out on site.
		• Require Contractor to conform to the construction requirements of the "Manual of Uniform Traffic Control Devices".
3. Noise	• Increased noise levels	• Adhere to municipal bylaw hours of construction operation. Ensure proper maintenance of construction equipment.

TABLE 9.3
LONG-TERM ENVIRONMENTAL ISSUES

FACTOR AFFECTED	ENVIRONMENTAL IMPACT	MITIGATING MEASURES
Natural Environment		
1. Vegetation	• Loss of vegetation to accommodate selected design.	• River crossing designed to minimize removal of vegetation adjacent to crossing. • Re-vegetation proposed in strategic locations to ameliorate the negative environmental impact of vegetation loss.
2. Water Quality	• Reduced water quality due to motor vehicle contaminants contained in roadway run-off.	• Provide storm sewer connections to existing storm sewers on either side of river crossing and employ stormwater BMP's if required to reduce discharge of contaminants to receiving watercourse.
	• Reduced water quality due to road salting operations.	• Road salting operations to be carefully monitored on river crossing with a view to reducing salt applications.
3. Fisheries	• Loss of fisheries due to construction of river crossing structure and watercourse channelization.	• Construction details developed at detail design stage be reviewed by both MNR and Trent-Severn Waterway in accordance with the policies set forth in the Fisheries Act prior to construction in order to ensure no net loss of fisheries habitat.
Social Environment		
1. Aesthetics	• Reduced ambience of river corridor.	• Provide planted vegetation surrounding river crossing to help restore natural setting.
2. Noise	• Refer to **Section 9.4.3.**	

COUNTY OF VICTORIA

SCUGOG RIVER CROSSING – PHASE 2

COLBORNE STREET BRIDGE

ADDENDUM TO THE 1994 ENVIRONMENTAL STUDY REPORT

Prepared By:

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Thornhill, Ontario
L3T 7N9

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1.0 INTRODUCTION

The Scugog River forms a natural barrier to east west travel through Victoria County, and in particular, within the Town of Lindsay. Within Lindsay, the majority of movements that cross the Scugog River occur at either the Wellington Street or the Lindsay Street North bridges. The need for additional crossing capacity was first recognized in 1960 and reconfirmed in the 1970's and 1980's. In response to this long-standing identified need, the County undertook a Class Environmental Assessment and Preliminary Design Study for a new crossing of the Scugog River. To quantify the problem and to assess the impact to the Environment, the 1994 Environmental Study Report (ESR) reviewed the issues in detail for the area bound by Peel Street, St. Peter Street, Albert Street and Cedar Valley Park Road. In this study, Colborne Street was selected as the preferred location for a new crossing of the Scugog River because it:

- Satisfies long-term future river crossing demand
- Provides a continuous link in the cross-town County Road arterial road network
- Results in projected future traffic volumes on Colborne Street that are similar to existing volumes on other arterial roadways within the community (e.g. Russell Street, Kent Street)
- Has a positive impact on future development / redevelopment within the Town of Lindsay by promoting development within the current urban boundary
- Maximizes the use of the existing road network
- Requires the least amount of property
- Has a negligible impact to the natural environment. Other corridors reviewed (Orchard Park and Springdale Gardens) would result in significant impacts to vegetation and wetlands

The Environmental Study Report recommended a two-phase strategy to address the river crossing capacity:

Phase 1 - Widen the Wellington Street Bridge and construct northbound and southbound left turn lanes at the Wellington Street/Lindsay Street North intersection (based on the 1994 ESR). This improvement would provide crossing capacity in the order of 26,800 veh./day. Construction on Wellington Street was completed in 1995.

Phase 2 - When crossing demand reaches 26,800 veh./day additional crossing capacity will be provided by a Colborne Street crossing of the Scugog River.

In response to a "bump-up" request on the 1994 ESR, the Ministry of the Environment (and Energy) reviewed and approved the County's planning process, subject to the following conditions (see Appendix A for a copy of the Ministry's June 24, 1994 letter):

Prior to proceeding with Phase 2 the County of Victoria shall:

1. Publish a notice advising the public that traffic thresholds have been realized.
2. Invite the public and agencies to comment on the design (and construction) of the Colborne Street Bridge.
3. Document and evaluate the anticipated environmental effects and the methods of minimizing these effects, particularly the social and economic impacts
4. Compile this analysis in an addendum for public and agency review for a minimum of 30 days.

The need to evaluate and document the existing environment recognizes that the timing for the implementation of Phase 2 would likely occur beyond the original approval granted to the 1994 ESR, which is subject to a five-(5) year limit. In 2000, the County of Victoria retained Cole, Sherman & Associates limited to undertake the approvals and design associated with Phase 2, the Colborne Street Bridge as the thresholds for this improvement (as identified in the 1994 ESR) has been realized.

2.0 PROJECT APPROACH

Environmental Assessment requires decision makers to identify and consider the effects a proposed project will have on the natural, social and economic environment before irreversible decisions are made. The "Class Environmental Assessment for Municipal Road Projects" is a provincially approved planning process that allows municipalities such as Victoria County, to plan and construct facilities such as the proposed Colborne Street Bridge, without formally submitting an Environmental Assessment Report to the Minister of the Environment for review and a decision on approval. The original Environmental Study Report adhered to this process (see Figure 1 for Class EA process). The original approval granted to the 1994 ESR is subject to a five (5) year limit. Therefore, in addition to the conditions placed by the Ministry of the Environment, the lapse of time also requires the filing of an addendum. In accordance with the Class EA process:

> "The proponent shall review the planning and design process and the current environmental setting to ensure that the project and the mitigation measures are still valid given the current planning context. The review shall be recorded in an addendum to the ESR which shall be placed on the public record."[1]

The format of this addendum therefore provides a review of:

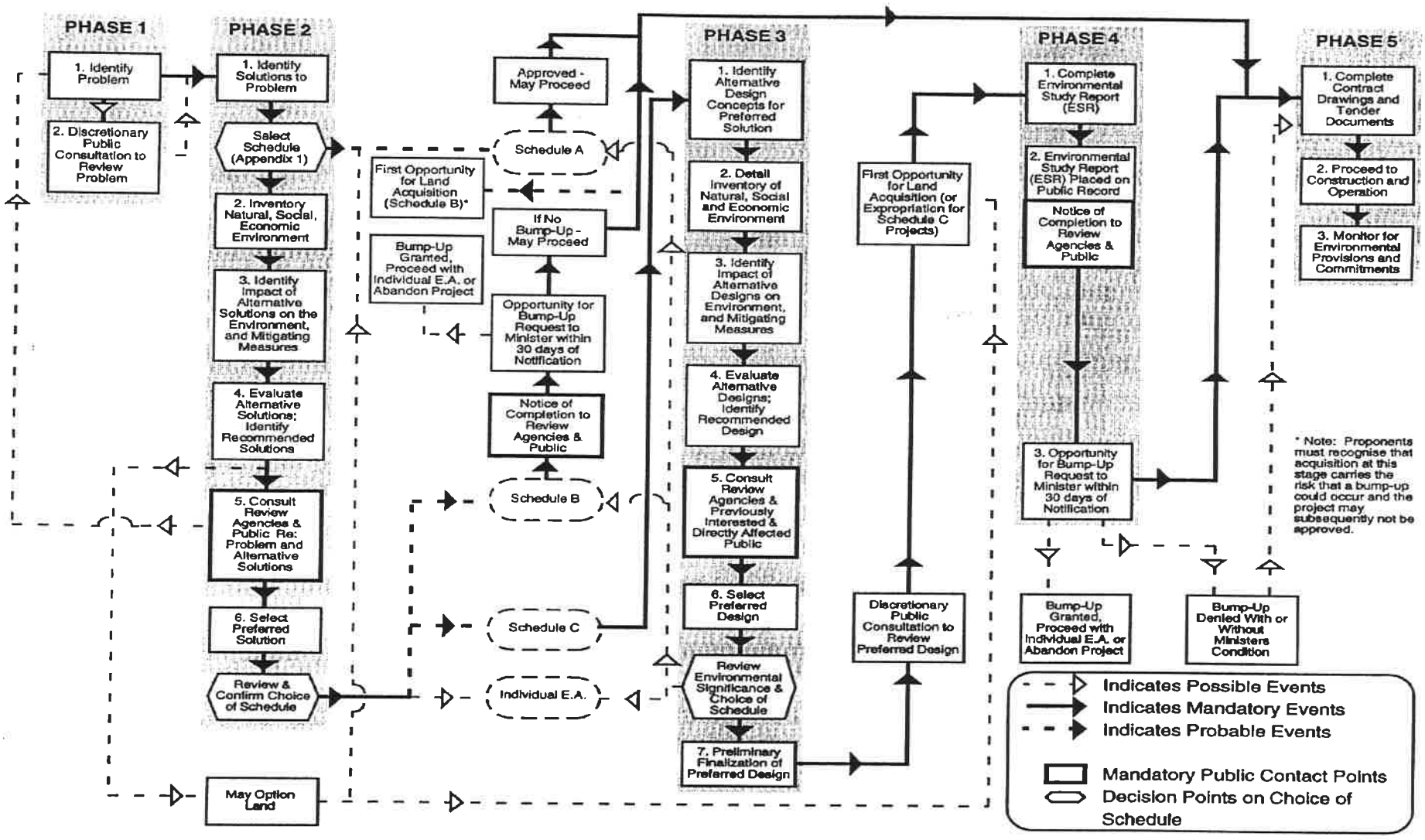
- Consultation and Agency Input;
- The Problem Statement (Need and Justification Assessment);
- Inventory of the Environment and Environmental Effects
- Selection and Refinement of the Preferred Design.

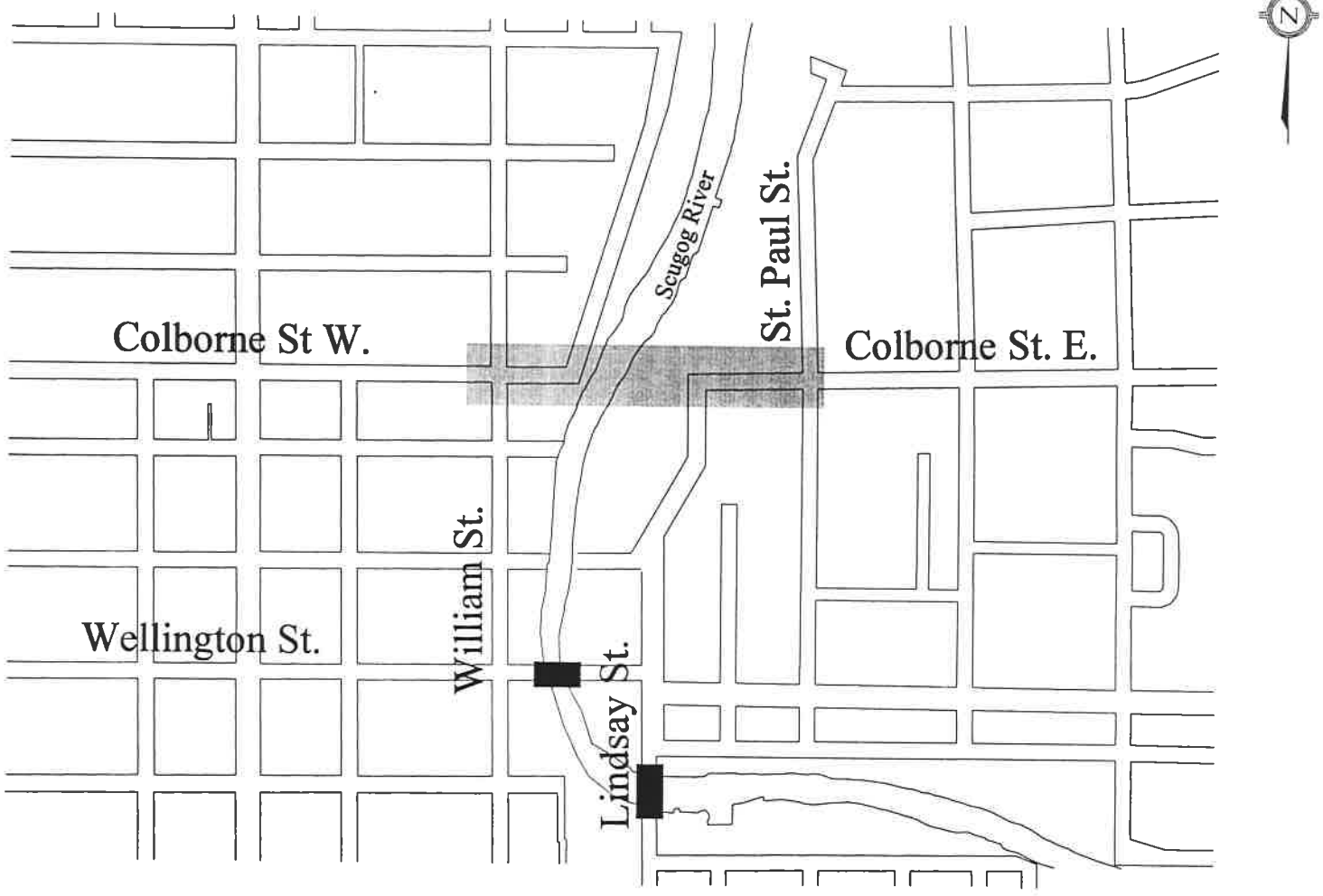
The need to evaluate and document the existing environment recognizes that Phase 2 of the 1994 ESR would occur sometime in the future and that conditions may change which would warrant modifications to the recommended crossing. As identified by the thorough and complete analysis and consultation contained in the 1994 ESR, the recommended crossing is the Colborne Street corridor. As clarified in the MOE letter dated September 12, 1994 (see appendix A) it is not the intent of the MOE to require the County to revisit the selection of Colborne Street as the preferred corridor but to examine the impacts in greater detail and develop measures to minimize these impacts to the extent possible. Therefore, this addendum focuses on the Study Area shown in Figure 2.

Also, the Trent-Seven Waterway, through Parks Canada is under federal jurisdiction. Therefore, the Canadian Environmental Assessment Act also applies. This report also serves as documentation required to satisfy the federal requirement. All federal approvals will be directed through the Trent-Severn Waterway who will act as the Responsible Authority for this project.

[1] P. 82, "Class Environmental Assessment for Municipal Road Projects"

Figure 1: Class Environmental Assessment Process





COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

STUDY AREA
FIGURE 2

DESIGN	SCALE N.T.S.	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	

2.1 PUBLIC AND AGENCY INPUT

In response to the Ministry's requirements the County released a notice informing the public that traffic thresholds have been realized and to invite comment on the design. The notice was distributed by:

- A newspaper advertisement in the Lindsay Daily Post (June 20, 2000 edition) and Lindsay This Week (June 20,2000);
- Mailouts to all public agencies;
- 25 hand delivered flyers to all properties with one block of William St. at Colborne Street and Colborne Street at St. Paul Drive.

Copies of notices and distribution lists are contained in Appendix B.

2.1.1 Public and Interest Group Involvement

To advise the public that the traffic thresholds have been realized and to invite comment on the design of the crossing, a Public Consultation Centre (PCC) was held on:

Tuesday, June 27, 2000
3:00 p.m. to 5:00 p.m. and 7:00 p.m. to 9:00 p.m.
County Administration Building
Victoria Room
26 Francis Street

The PCC was an open-house format with staff and display material highlighting process and the current preliminary design. In total, 37 attendees sign-in. Copies of display material, sign-in sheets and comment forms are contained in Appendix C.1 and are summarized in Table 1.

In addition, a supplementary presentation / question and answer session was held at the senior's residence on July 18th 11:00am -12:15pm. Approximately 20 residents attended. The meeting was also attended and recorded by on-site management. Communications with management and the owners for the senior's apartments and the Carew Apartments are contained in C.2.

Table 1: Summary of Issues Raised by Public

Issue	Response
Explore other possible locations.	Alternative corridors thoroughly examined in 1994 ESR. This decision is not being revisited as part of this Addendum
Defer project until traffic congestion is more pronounced	The original threshold was determined in the 1994 ESR and was set to "trigger" the expansion of the transportation infrastructure at the limit of the capacity, which affords reliable service since major projects such as the Colborne Street bridge take time to develop and secure funds.
Traffic increase along Colborne Street, impacts to school and seniors residence	Increases in traffic along Colborne Street is anticipated. This issue is reviewed in section 4.2 of this addendum.
Speeding concerns	Commitment to monitor speed once bridge is constructed and operational (see section 7.3.3)
Increased noise	Noise analysis conducted as part of original 1994 ESR (see section 9.4.3).
Water quality due to runoff (salt, oil, etc.)	Development of a storm water management plan (see section 6.1.1 and Appendix F).
Vehicular and pedestrian access to seniors building and Carew Apartments	Pedestrian and vehicular access to Carew Apartments, senior's residence and parks to be reinstated as part of the recommended solution (see section 6.2.4 of this addendum).
Negative impacts to housing values in proposed area	See section 4.2 of this Addendum for discussion on indirect impacts to properties along Colborne Street within Lindsay
Fire and medical response time	Overall improved response time for emergency services within Lindsay. Reinstatement of access to Carew Apartments and senior's residence to maintain service to these two properties.
Traffic lights at Colborne and William	Signals at the Colborne Street / William Street are included as part of the overall project.
Landscaping for retaining wall	See section 6.2.2 and Figure 9 for details.

2.1.2 External Involvement

In preparation of this Addendum, several agencies were contacted. Highlights of comments received to date are summarized in Table 2 with copies of key correspondence in Appendix D.

Table 2: Summary of Correspondence with External Team Members

Agency	Contact Person	Comment on the undertaking
Town of Lindsay Parks and Recreation Dept.	Jane Lunn	Ease of accessibility to parklands. Vehicular access to Rivera Park. Continuity of aesthetics between proposed development and existing parkland.
Heritage and Libraries Branch.	John MacDonald	If the preferred alternative has potential impacts on cultural heritage resources that a cultural heritage resource assessment be prepared.
Lindsay Water and Sewer Commission	Donald W. Barkey	Maintain 0.4m clearance from roof of pumping station to bottom of bridge beam. Provide adequate protection to pumping station during construction, and access road to station to remain open for building maintenance. Pier foundation will be sited 3.4m from north-east corner of pumping station and a 3.05m clearance from the wet well to bottom of bridge beam.
Canadian Coast Guard	Al Robertson	Maintain a clearance of 4.6m above waterway and that no support pier is constructed in the river.
Kawartha Region Conservation Authority	Jeff Schueyer	Hydraulics and Storm water management must be addressed.
Parks Canada – Trent-Severn Waterway	J. Wayne Mitchell	Maintain a clearance of 4.6m above waterway and that no support pier is constructed in the river.
Fire Department	Terry Jones	Largest truck 3.6 m.
Ambulance	Bob Duchene	Supports the construction of the bridge. Bridge reduces response time.

3.0 UPDATE TO PROBLEM STATEMENT

3.1 THE 1994 NEED AND JUSTIFICATION ASSESSMENT

To summarize, the 1994 ESR provided the need and justification for additional crossing capacity over the Scugog River. Based on the assessment of existing (1991) conditions, the following major conclusions and recommendations were established:

- The Wellington Street river crossing is operating at capacity;
- The Lindsay Street North river crossing is operating near capacity;
- The total existing (1991) river crossing demand at the Lindsay Street North and Wellington Street crossings is within the range of the total combined capacity of the bridges;
- Not only does the volume of traffic exceed the physical capacity of the Wellington Street crossing as governed by the adjacent intersections, the level of service provided on the crossing greatly exceeds the operating conditions considered acceptable for the Town of Lindsay; and

3.2 CONFIRMING THE ORIGINAL PROBLEM STATEMENT

The 1994 ESR estimated that traffic would continue to grow at a rate of 2% to 3% and therefore the traffic volumes across the two existing bridges would exceed the threshold by the years 2000 / 2001. However, recognizing the economic uncertainty that existed during the recessionary years in the early 1990's, it was proposed that the Colborne Street bridge be deferred until

> ***"The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day" (page vii 1994 ESR, Executive Summary)***

The original threshold was set to "trigger" the expansion of the transportation infrastructure at the limit of the capacity (versus once severe congestion is occurring), which affords reliable service since major projects such as the Colborne Street bridge take time to develop and secure funds.

Traffic counts conducted in 1997 and 1999 (see Table 3) indicate that traffic growth has averaged 3.6% per year, which has accelerated the timing for the Colborne Street Bridge over the Scugog River. Traffic across the two existing bridges routinely approach 26,800 vehicles per day. In addition, the threshold was exceeded 2 out of 10 survey days with the 1999 average weekday volumes at approximately 96% of the threshold volume. Therefore, in keeping with the conclusions of the 1994 ESR, the threshold requirement has been realized.

Table 3: Summary of Observed Traffic Counts Across the Scugog River

Traffic Counts from Summer 1997

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Weekday Average	1991 SAWDT	Average Annual Growth Rate
Wellington Street										
Eastbound	3399	6460	6563	6116	6232	6614	5030	6397		
Westbound	4024	6226	5960	6006	6174	6457	5310	6165		
TOTAL	7423	12686	12523	12122	12406	13071	10340	12562	10800	2.7%
Lindsay Street										
TOTAL	9097	13032	13740	12806	13237	14530	12763	13469	10600	4.5%
TOTAL	**16520**	**25718**	**26263**	**24928**	**25643**	**27601**	**23103**	**26031**	**21400**	3.6%
Threshold	26800	26800	26800	26800	26800	26800	26800	26800	26800	
Percent of Threshold	62%	96%	98%	93%	96%	**103%**	86%	97%	80%	

Traffic Counts from Fall 1999

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Weekday Average	1991 AADT	Average Annual Growth Rate
Wellington Street										
Eastbound	N/C	N/C	N/C	6679	6274	5170	N/C			
Westbound	N/C	N/C	N/C	7510	6396	5577	N/C			
TOTAL	N/C	N/C	N/C	14189	12670	10747	N/C	12535	10050	3.1%
Lindsay Street										
TOTAL	N/C	N/C	N/C	14746	13196	11266	N/C	13069	9800	4.2%
TOTAL	-	-	-	**28935**	**25866**	**22013**	-	**25605**	**19850**	3.6%
Threshold				26800	26800	26800		26800	26800	
Percent of Threshold				108%	97%	**82%**		96%	74%	

N/C - Not Counted

L:\Munitrans\Documents\2000Proj\00026 Scugog Bridge\memos\[threshold evaluation.xls]Sheet1

3.2.1 Impacts of Ministry of Transportation Projects on Proposed Colborne Bridge

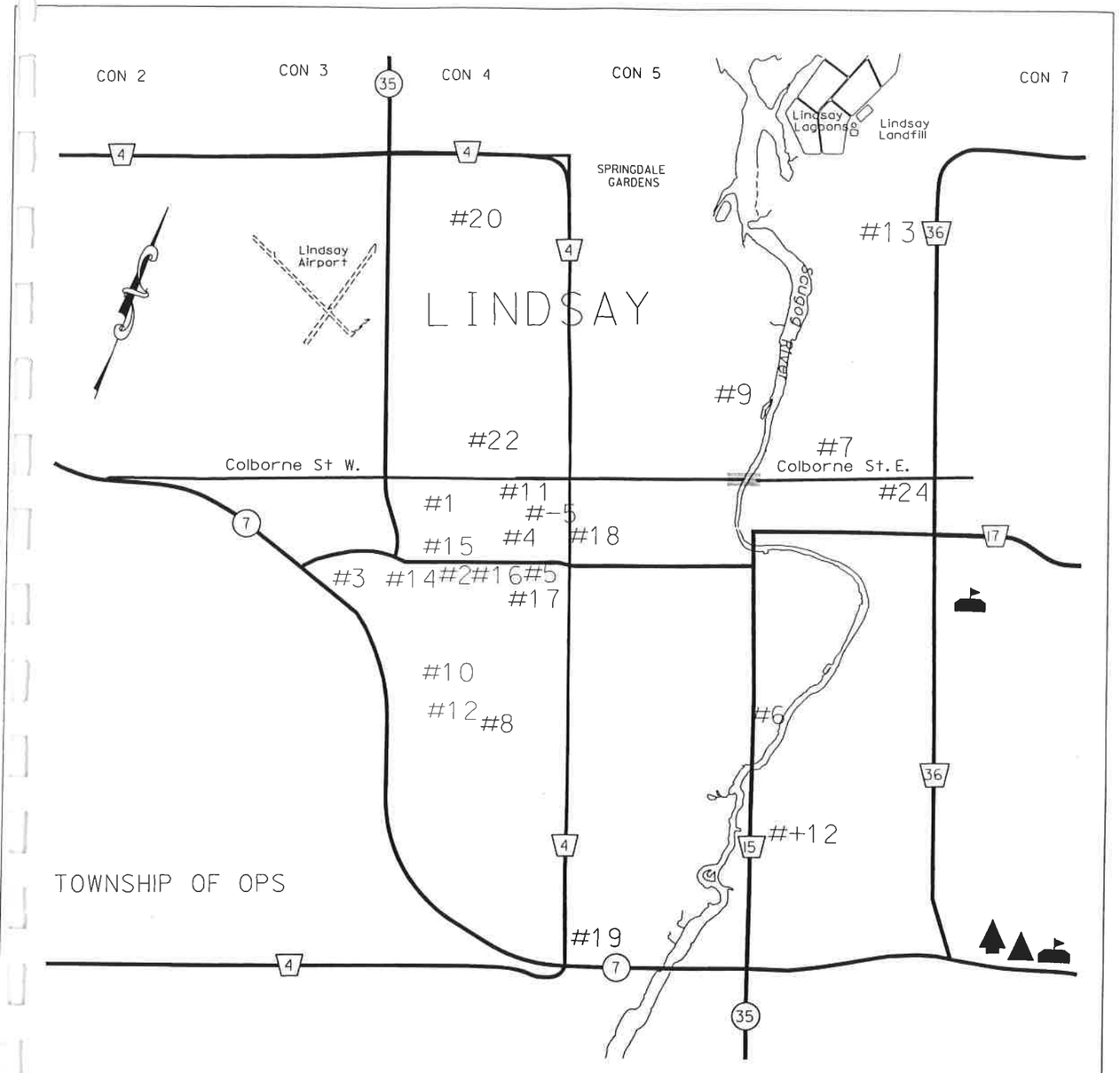
The Ministry of Transportation of Ontario is planning improvements to the Highways in the Lindsay Area. However, the likelihood that trips are diverted away from the proposed Colborne Street bridge is low since less than 10% of the traffic on the Wellington and Lindsay bridges are external in origin and destination (see page 16 of 1994 ESR).

3.2.2 Development Driven Historical and Future Traffic Growth

Tables 4 and 5 together with Figure 3 quantifies and locates the existing and proposed developments since 1994 which would potentially impact the demand for additional crossings of the Scugog River. Recognizing that over 90% of the existing river crossing traffic on Wellington Street and Lindsay Street is generated within the Town of Lindsay, the increase in traffic can largely be attributed to new development. Since filing the ESR 1994 study developments contributing to changes in traffic volumes include:

Table 4: Existing developments within Lindsay since 1994

Description		Figure 3
Wilson Fields	A 70 acre sports field complex: baseball diamonds & soccer fields.	1
Zellers Expansion	20,000 sq. ft increase in store area at new location Former location is now a Discount Pharmacy.	2
Ford Dealership	Relocated to larger site & more repair facilities with possible expansion for Honda Dealership.	3
Kelsey's	Chain Restaurant.	4
Wendy's	Wendy's Restaurant and Tim Horton's Drive through replaced Beaver Lumber Company.	5
Beaver Lumber	Relocated from Kent Street to Lindsay Street South. to a larger premises.	6
Abex Plant	Closed for environmental cleanup reasons. Land now available for redevelopment.	7
Richmond Homes (staples)	Built 15 homes in 1999.	8
Rivermill Village	38 new units in 1998.	9
LOF	Factory closed & moved production out of County.	10
Heritage way	100 units.	11
St Dominic's	New Catholic primary school with 409 student capacity.	12



COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

FIGURE 3

DESIGN	SCALE	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	

In addition, based on known development proposals listed below, it is reasonable to expect continued growth in traffic in the future.

Table 5: Proposed developments within the Town of Lindsay

Description		Figure 3
Super Jail	**Opening 2001** - Facility designed for 1200 <2 yr. minimum security prisoners (with pre trial holding cells for individuals accused of serious crime) Early info on staff is some 300 total 160 of whom work standard day shift	13
Wal-Mart	**Official Plan & Zoning apps expected early 2000** - Land purchased or optioned for a 22-acre Complex one 100,000 sq. ft unit & 4 others proposed gross floor area 204,000 sq. ft. proposed changes to Greenfield Road/#7/#35N intersection.	14
Loblaws relocation	**Town Planning approval received** - From current location on Angeline street North No information on possible new tenants of old building but assume some business interests.	15
Canadian Tire Expansion (under construction)	**Site plan application received** - Adjacent Land purchased for proposed store expansion including Garden Center.	16
Lindsay Golf Club Relocation	**Opening 2001/2002** – Relocating club to 150-acre property to accommodate a planned 18-hole course.	17
Lindsay Hospital	**Expansion** - to acquire some/most of Lindsay Fair board property North of the existing Hospital site.	18
Fair Board	**Possible relocation** to 75 acre parcel on Angeline Street S @ Hwy #7 in conjunction with new Farm Mutual Head office	19
Jennings Creek Estates -	**124 lots with draft approved**. Balance of North West Secondary Plan is dependent on North West Trunk sewer and Plant capacity allocations.	20
Richmond Homes (staples)	**Under construction** - 15 lots under active development.	8
Midland & Samuel	**Under construction** - 26 lots serviced 2 built.	22
Heritage way	**Under construction** - project has 41 condo in progress	11
Extend-a-Care	Proposed 66 beds facility.	24

Therefore, as predicted in the 1994 ESR, traffic demand across the Scugog River continues to increase thereby reaffirming the need for the proposed Colborne Street bridge across the Scugog River. In addition, all the recent and planned developments in the Town of Lindsay are consistent with the anticipated development patterns in the 1994 ESR. Therefore, the addendum will continue to use the anticipated travel demand patterns and projected traffic along Colborne Street as identified in the 1994 ESR.

4.0 EXISTING ENVIRONMENT

The 1994 ESR evaluated a number of alternative solutions based on a detailed inventory of the environment within the area bound by Peel Street, Saint Peter Street, Albert Street and Cedar Valley Park Road. The analysis concluded that the Colborne Street Crossing was the preferred corridor since it represents the best solution to satisfy future crossing demand with the fewest negative impacts to the natural, social and economic environment. Notwithstanding, the MOE required the County of Victoria to ensure that environmental impacts and public concerns of implementing Phase 2, the Colborne Street Crossing be addressed. The following sections discuss the scope and magnitude of the potential environmental effects of implementing the Colborne Street Crossing. Measures taken to minimize these impacts are discussed in greater detail in section 6.

4.1 NATURAL ENVIRONMENT

The natural environment is defined as air quality, vegetation and water resources. FRi Ecological Services conducted a field review to ensure that the vegetation and water resource conditions in the Study Area are unchanged from those reported in the 1994 ESR. A copy of the FRi report is contained in Appendix E. In addition, the issue of water resource impacts was discussed with the Kawartha Region Conservation Authority and the Trent-Severn Waterway. Implementing the Colborne Street Bridge will result in the anticipated effects to the natural environment:

- On a global level, the Colborne Street Bridge will reduce congestion and out of the way travel which minimizes fuel consumption and air quality impacts.
- The increase in pavement will increase storm water runoff quantity and reduce stormwater quality.
- The fill slopes for the west approach will affect a number of Black Walnut trees and Manitoba Maples.

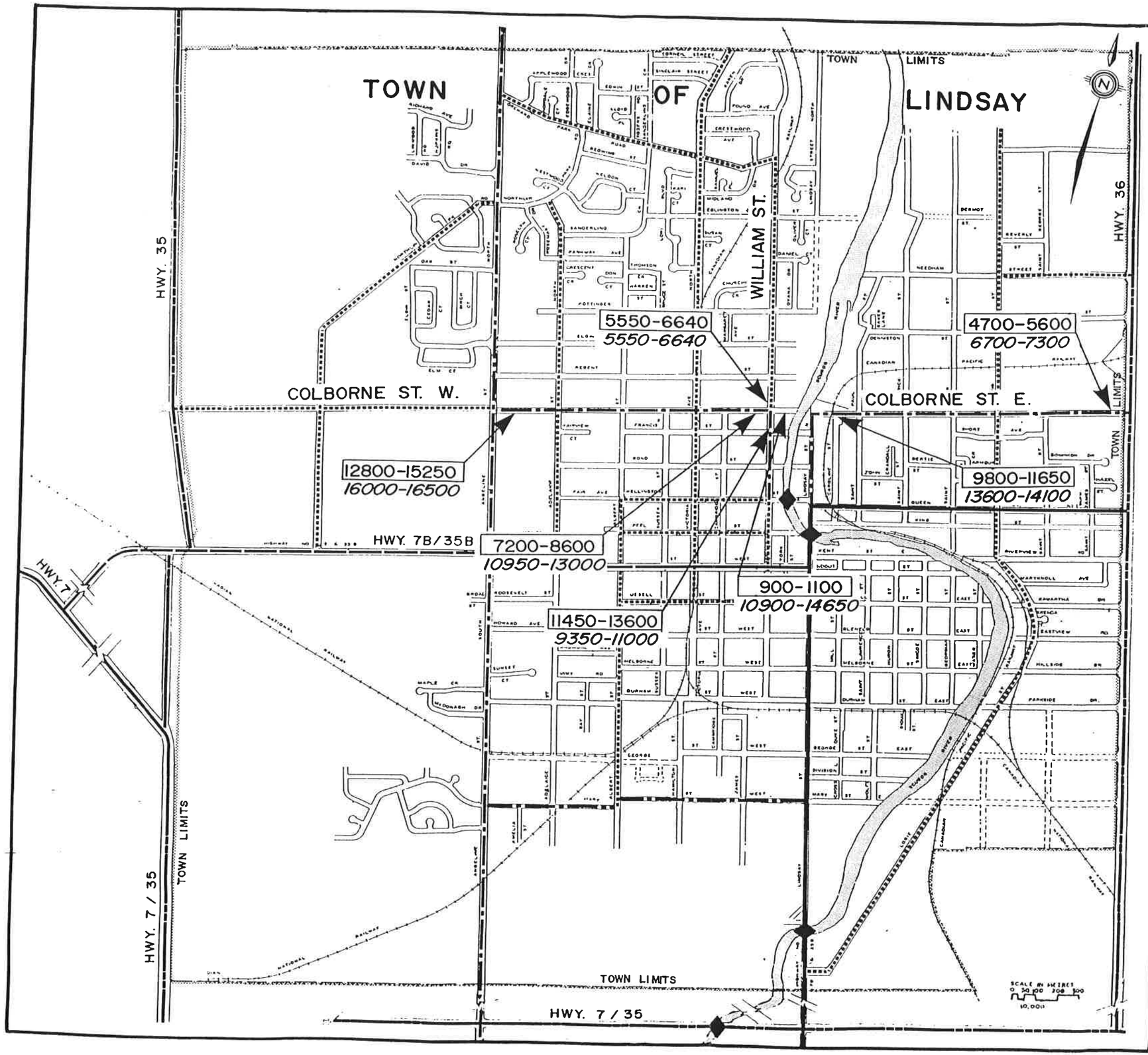
4.2 SOCIAL AND ECONOMIC ENVIRONMENT

The social and economic impacts of implementing Phase 2 considers the "human factors" and includes noise impacts, aesthetic/visual intrusion, compatibility with adjacent land uses, impacts to business and property. In terms of an overall inventory of the social and economic environment, field verification and discussions with local officials confirm that the key features have not changed since the filing of the 1994 ESR. The benefits to society resulting from the implementation of additional transportation capacity across the Scugog River is well documented in the 1994 ESR. Two of the key reasons that Colborne Street was selected as the preferred solution are:

1. As recognized in the Town's and County's Official Plan, Colborne Street is designated an arterial road. As described in the 1999 Transportation Association of Canada's "Geometric Design Guide for Canadian Roads" typical volumes of traffic for an arterial road range between 5,000 to 30,000 vehicles per day. Arterial roads accommodate all vehicular types, including commercial traffic (up to 20% of the total traffic volume). Urban arterials within the Town of Lindsay, such as Colborne Street West, William Street, Kent Street West and Lindsay Street typically accommodate traffic volumes in the 10,000 vehicles per day magnitude.
2. The central location of Colborne Street improves access to existing development and will have a positive impact on future development / re-development within the Town. As evident in Figure 3, development in Lindsay continues to focus in the central part of Town.

Notwithstanding the arterial designation, for residents that live along Colborne Street, direct impacts such as changes to access and property loss, as well as indirect impacts such as increases in traffic and traffic-related noise are primary concerns. To determine the potential for direct and indirect impacts, the traffic volumes for proposed bridge were identified. As discussed in Section 3 of this addendum, recent counts reinforce the traffic estimating methodology used during the 1994 ESR. The increases of traffic volumes is anticipated (see Figure 4) but volumes are still well within normal operating parameters for arterial roads and are comparable to existing volumes on other Lindsay arterial roads. : Even without the proposed bridge, traffic volumes along Colborne Street continue to increase. Based on the projected volumes, the noise assessment conducted as part of the 1994 ESR determined that only the existing Senior's Residence, south of Colborne would experience noise level increases greater than 5 decibels.

With respect to direct impacts, namely property and access, the Town of Lindsay and the County of Victoria own all the required property on the east side of the Scugog River. West of the Scugog River, lands north and south of the existing Colborne Street right-of-way are in private ownership. Implementation of the Colborne Street Bridge may require some property.



LEGEND

- PROVINCIAL HIGHWAYS
- HIGHWAY CONNECTING LINKS
- COUNTY ROADS (ARTERIAL
- COLLECTOR ROADS
- LOCAL ROADS
- RIVER CROSSINGS
- 4700 — 2011 SAWDT WITHOUT COLBORNE ST. BRIDGE
- *6700* — 2011 SAWDT WITH COLBORNE ST. BRIDGE
- "LOCAL" ARTERIAL

FIGURE 4

SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

PROJECTED 2011 TRAFFIC VOLUMES

Source: 1994 ESR

EXHIBIT 9-1

Therefore, the socio-economic features in the surrounding area that may be affected by the implementation of Phase 2 (the Colborne Street Bridge) include:

- "Residence on the River" Senior's apartment – Based on the 1994 ESR, this three storey, multi-unit residential building is most susceptible to potential impacts due to its proximity to the proposed bridge. This includes increased noise, visual impacts, reduced air quality and dust during construction. Other direct impacts include vehicular and pedestrian accessibility both during construction and in the long term (for the service/delivery area).
- Accessibility to Parkland – Carew Park and Riveria Park on the west and east side of the Scugog River, respectively are used by the surrounding communities. Colborne Street provides vehicular and limited pedestrian (there are no sidewalks serving Carew Park) access. Riveria Park also provides a base of operation for the Skylark Tours, which is a local tour boat operation along the Scugog. This access must be preserved.
- Carew Apartments – immediately west of Carew Park are two three-storey buildings each containing 52 residential units. Parking is provided by three main lots and the southern most lot is approximately 25 metres north of Colborne Street. Vehicular access to the apartment buildings is provided by a private circulation road that connects directly to Colborne Street and Pottinger Street.

4.3 HERITAGE AND ARCHAEOLOGICAL ASSESSMENT

As was concluded in the 1994 ESR, no historical structures will be affected by the proposed bridge across the Scugog River. Furthermore, the closest heritage feature, the Shaft Building, was demolished by the Town of Lindsay in the spring of 2000.

With respect to archaeological features, the ESR found that there are no registered prehistoric or historic archaeological sites within or adjacent to the Study Area. The report identified a high potential for the identification of a significant number of sites within the immediate vicinity. However, based on the recent construction of the pumping station, siphon, the Shaft building demolition and the Lindsay Street realignment, very little undisturbed area remains within the selected crossing area.

4.4 TECHNICAL ISSUES

In addition to the geotechnical information collected as part of the 1994 ESR, recent geotechnical data was collected by Alston Associates Inc. This information is contained in Appendix E.

An inventory of utilities and municipal services in the Study Area was undertaken. Key features that have changed since the 1994 ESR include:

- the removal of the CN bridge
- the reconstruction of Lindsay Street
- the Colborne Street West Sewage Pumping Station is now constructed

5.0 THE SELECTED DESIGN

Considerable public and agency input was received during the development and selection of the 1994 ESR recommended design. As stipulated in the MOE's original bump-up requirement, the preferred alternative incorporates measures to minimize impacts on the must be based upon the existing environment and address public and agency concerns. The following sections highlight the original design and the proposed changes to further minimize negative effects and maximize positive effects.

5.1 THE 1994 ESR RECOMMENDED DESIGN

As illustrated in Figure 5, the 1994 ESR recommended design had the following important features:

- Three-span steel box beam bridge with one pier within the Scugog River
- 6.7 metre clearance over Scugog River
- provision of a service road connection to the "Residence on the River" and the pumping station
- no vehicular or pedestrian connection between Carew Park / Carew Apartments and Colborne Street
- approach roads constructed on sloped embankments (2:1 side slopes) with a retaining wall for the west approach, immediately north of the senior's residence
- traffic count signals at the William Street / Colborne Street intersection

One of the most significant negative impacts on the ***social environment*** resulting from the bridge concept contained in the 1994 ESR is on the "Residence of the River" seniors apartment. A number of north facing rooms within the senior's facility face an existing concrete retaining wall (part of the facility's service entrance). The introduction of the bridge and the west approach road retaining wall will result in a greater number of units with a limited view. In addition, the original ESR identified that of all the surrounding properties, only the senior's apartment would be exposed to a significant increase in noise (greater than 5 d.b.a.). From a positive impact on the ***social environment***, the 1994 design proposed to encourage connections between the new bridge and the surrounding parklands.

From the ***natural environment*** perspective, the 1994 ESR raised concerns over negative impacts to the river and water quality. However, the recommended design relied on a pier in the river and did not address stormwater quality issues.

One of the reasons that the Colborne Street corridor was selected was to minimize impacts on the ***economic environment*** since only modest investments were required to connect the bridge to the surrounding transportation network. The design in the 1994 ESR was estimated to cost approximately $ 4 million. As indicated in the 1994 ESR, the benefit to the economic environment includes, but is not limited to, supporting future development / redevelopment with the Town of Lindsay.

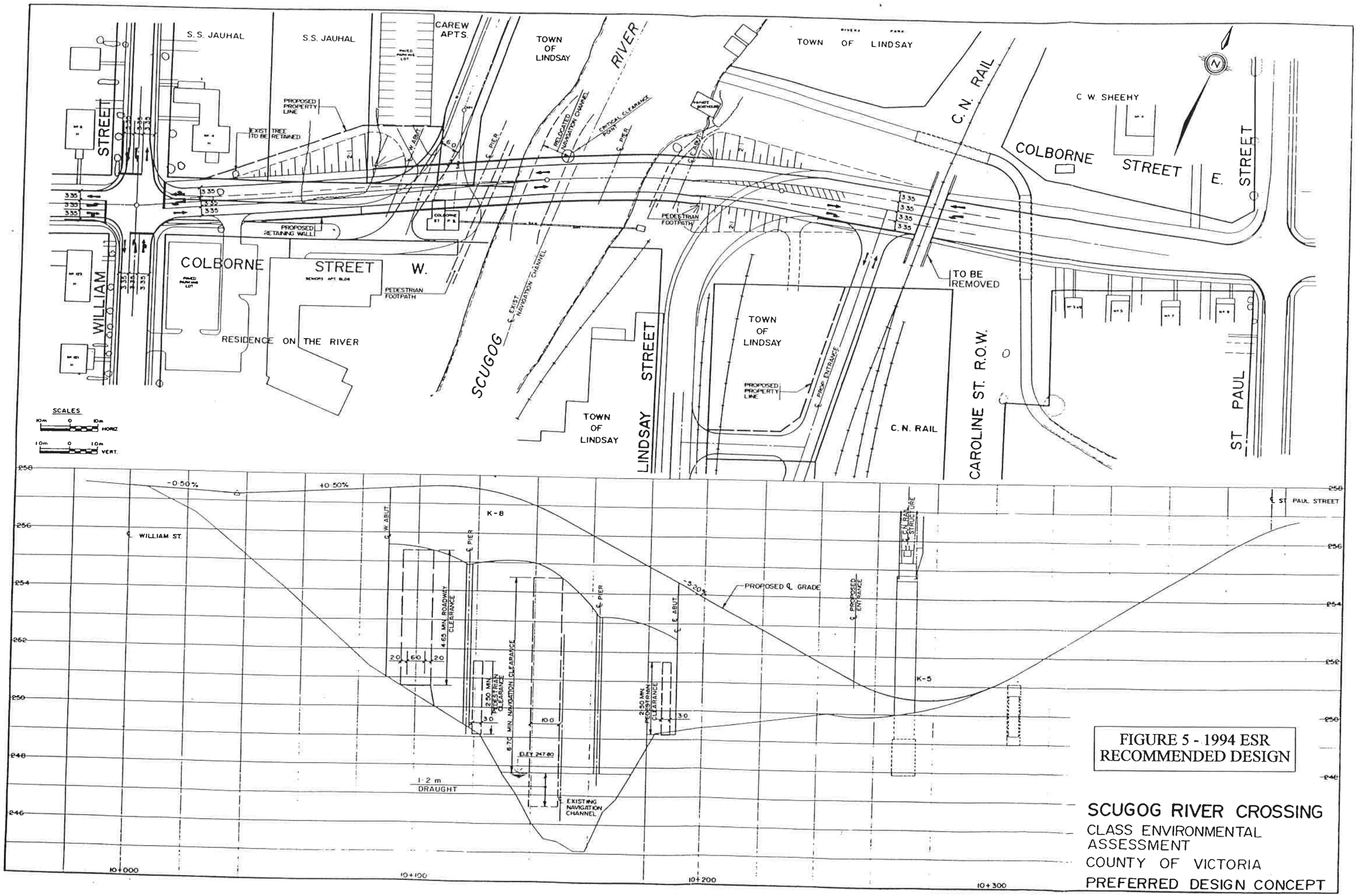


FIGURE 5 - 1994 ESR
RECOMMENDED DESIGN

SCUGOG RIVER CROSSING

CLASS ENVIRONMENTAL ASSESSMENT

COUNTY OF VICTORIA

PREFERRED DESIGN CONCEPT

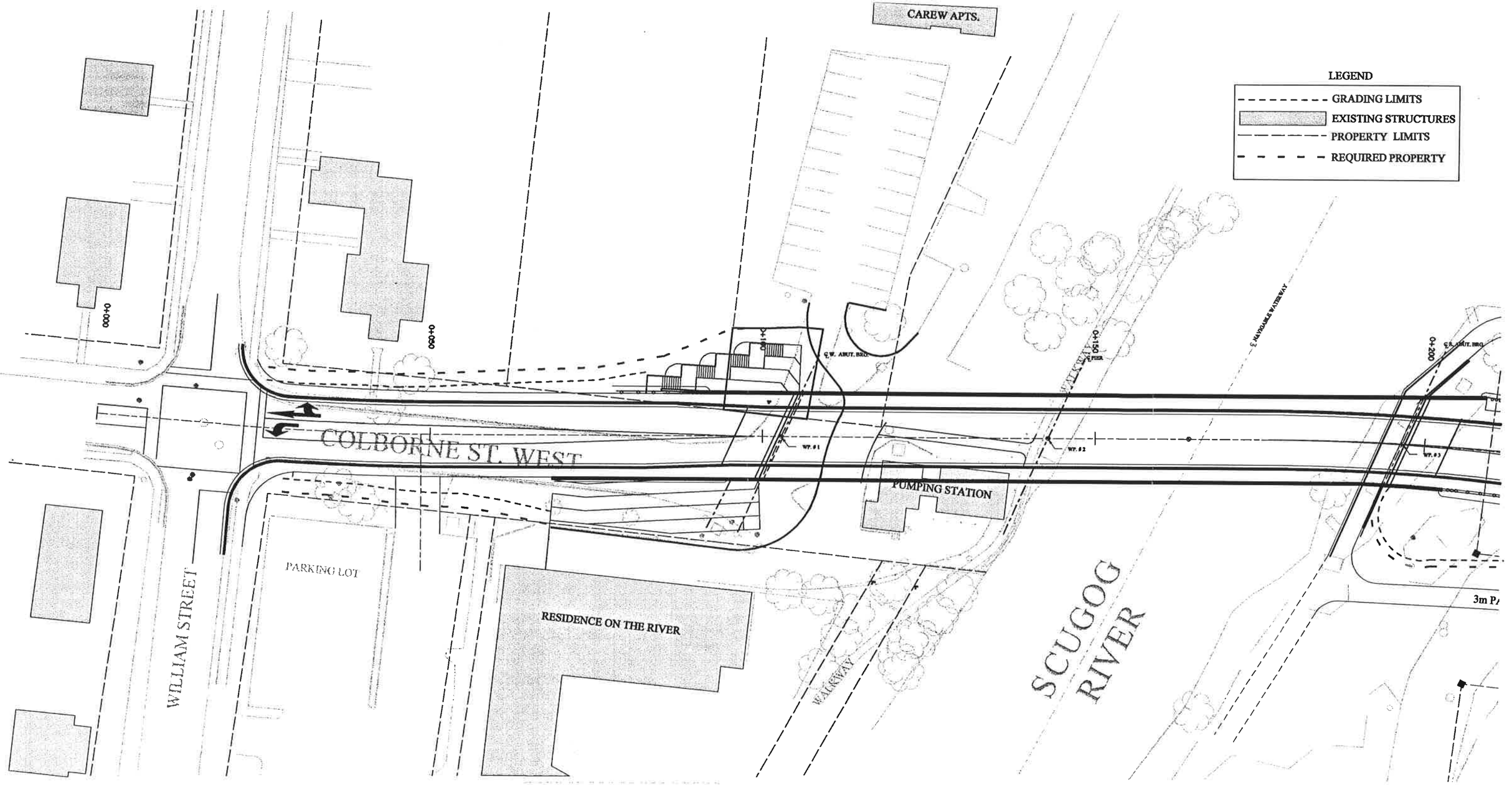
5.2 THE 2000 DESIGN PROPOSAL

In an effort to further minimize the 1994 impacts, the design was revisited. Figures 6 to 8 represent the current proposal and are based on the confirmation of the environment and public and agency input. Table 6 highlights the differences between the 1994 ESR recommended design and the 2000 Design Proposal.

Table 6: Comparison of Designs

1994 ESR Design	The 2000 Design	Rationale for Change
Two span bridge with centre pier in the Scugog River	Two span bridge with no piers in the River	- Avoid impacts on navigation channel - No impact on flow of river
Vertical retaining wall on west bridge approach, north of "Residence on the River"	Landscaped terraces on west bridge approach, north of "Residence on the River"	- Reduce visual impact
6.7 metre clearance over Scugog River	4.6 metre clearance over Scugog River	- More consistent with clearances under Wellington and Lindsay North bridges - Lower profile to reduce the visual impact of the proposed bridge - Reduce overall project cost
Retain service access driveway to "Residence on the River" with 4.65 metre clearance	Lower service access driveway to "Residence on the River" with 4.3 metre clearance	- Lower profile to reduce the visual impact of the proposed bridge.
Sidewalks on both sides	Sidewalks on both sides with connecting stairs /paths	- To provide connections between Colborne Street and Carew Park and Riveria Park.
Steel Box Beam Girder Construction	Precast Concrete Girder Construction	- Cost savings

Details on mitigating measures are discussed in Section 6 of this Addendum.



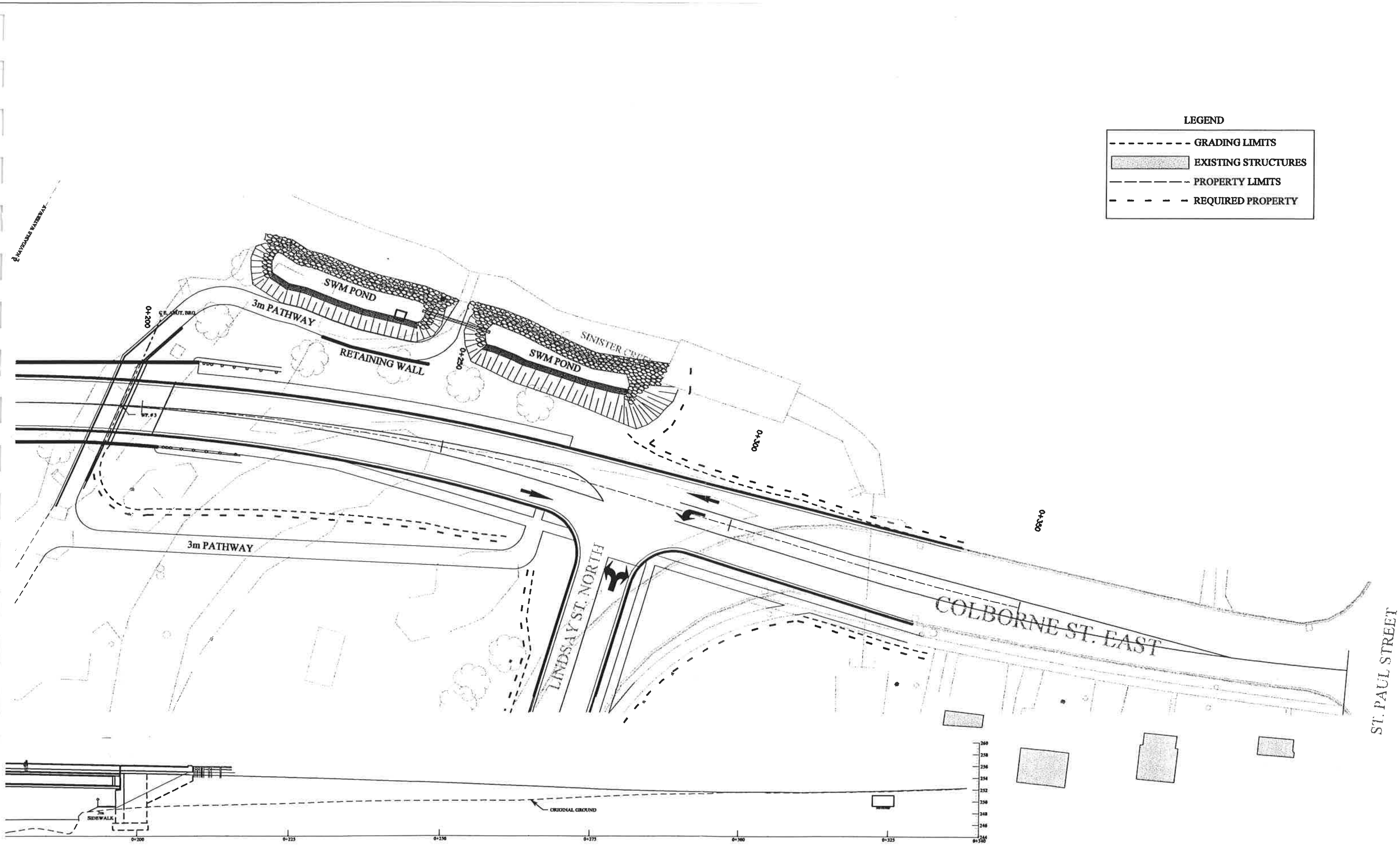
COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

PLAN AND PROFILE

FIGURE 6

DESIGN	SCALE N.T.S.	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	



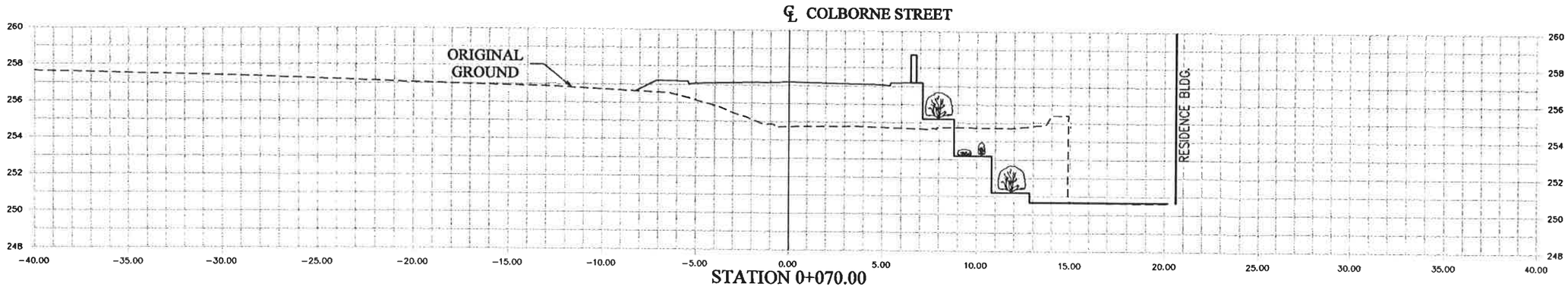
COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

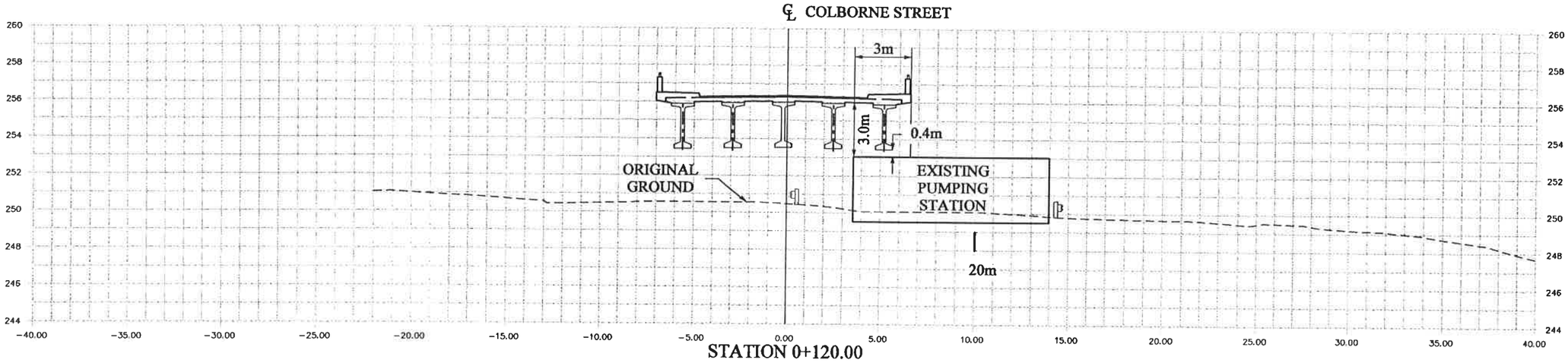
PLAN AND PROFILE

FIGURE 7

DESIGN	SCALE N.T.S.	
DRAWN	REVIEWED	DRAWING NO.



STATION 0+070.00



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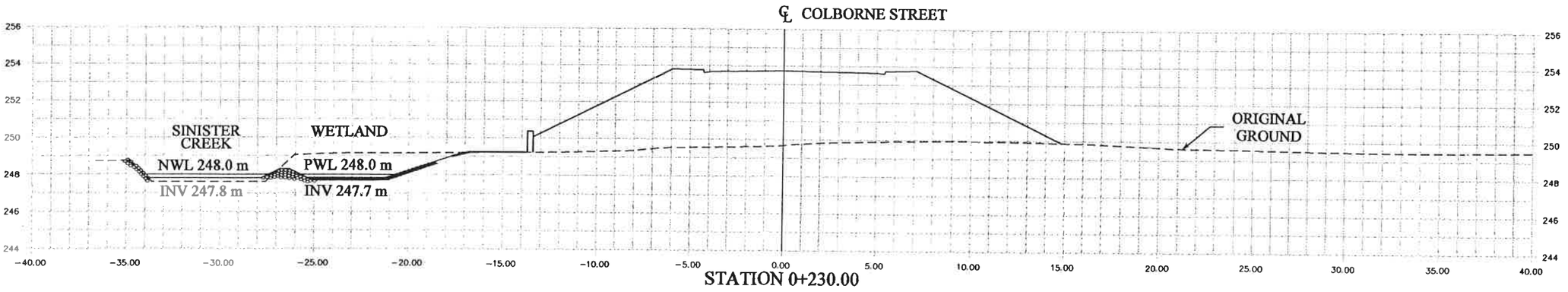

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COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

COLBORNE STREET
CROSS-SECTIONS

FIGURE 8

DESIGN	SCALE H 1:250	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	

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5.3 PRELIMINARY COST ESTIMATE

	2000 Proposal	1994 ESR (1)
Structure	$2.5 M	$3.4 M
Roadworks and Traffic Signals	$0.5 M	$0.4 M
Total (2)	**$3.0 M**	**$3.8 M**

Notes: (1) In 1992 dollars
(2) Excludes property.

5.4 PROPERTY

Right-of-way requirements include the road itself and the amenities "behind the curb" or boulevard. In addition, special additional needs may include grading limits and special features such as stormwater facilities. Based on the preliminary design conducted as part of this addendum, property may be required at the following locations:

Table 7: Property requirements

Parcel #	Location	Total Area
1	N\E corner of William St. and Colborne St. West. (center lot)	222m^2
2	Carew Apartment north side of Colborne St. West.	177m^2

However, additional property will be required to reinstate the road connection to the Carew Apartment as well as to provide replacement parking. This is discussed in greater detail in section 6.2.4.

6.0 ENVIRONMENTAL CONCERNS AND MITIGATION MEASURES

During the planning process, issues and concerns were raised. Details of the following commitments will be revisited during detail design and refined as necessary.

6.1 NATURAL ENVIRONMENT

6.1.1 Hydraulic Analysis / Stormwater Management

In response to discussions with the Kawartha Regional Conservation Authority, hydraulic impacts and a stormwater management plan are required for this project. The results of this analysis are contained in Appendix F.

As outlined in Section 4.2 of this report the social-economic environment has not changed – except for the removal of the Shaft Building and the CN overpass. Colborne Street is still designated as an arterial road, and the results of the 1994 ESR, which identified the need for an additional river crossing in the Colborne Street alignment, are still valid. On the other hand, all the adjacent sensitive properties such as the "Residence on the River", seniors apartment, the Carew apartments and the parkland are still in place.

6.1.2 Erosion Control

Sediment and erosion controls will be installed throughout the construction area, maintained frequently and in response to storm events. These controls will consist of sediment fences; check dams in swales and restoration of exposed soils with vegetative cover within 45 days of the start of work. Sediment and erosion controls will remain in place and be maintained until such time as the vegetation has taken root sufficiently to provide adequate protection for the watercourses.

6.1.3 Watercourse and Fisheries Protection

To avoid adverse impacts during construction;

- areas for refueling of machinery will be located well away from any watercourse or drainage ditches.
- all stockpiling activities will be conducted away from watercourses.
- machinery will be prohibited in the watercourse.

Construction will be carried out during the low flow season when dry weather is expected for several days and when revegetation can be immediate. Permanent flows will be bypassed around the working area to maintain downstream baseflow and to minimize sediment transport.

Sediment laden water in the working area must be first pumped to a temporary sediment control basin or through a filter bag or dense vegetation prior to outletting to the floodplain or roadside ditches. Additional measures such as silt fences or check dams may be required depending on the site specific conditions. Dissipaters will be available to spread the pumped water out through the discharge zone.

For areas where embankments may encroach upon stream channels, opportunities to steepen side slopes to reduce the impact will be pursued. Edge treatment will be undertaken to provide for a combination of bank and slope stability, and fish and wildlife habitat functions.

6.1.4 Vegetation Protection and Restoration

The necessary tree protection (i.e. snow fence) will be erected at the edge of tree removal areas to prevent incidental or accidental damage to adjacent forest areas or specimen trees. New plantings will compensate for any loss of existing trees and vegetation that is necessary for the construction of the bridge.

All construction debris and litter will be removed frequently. All stockpiles will be removed upon completion of the works and the site restored under the location, as appropriate.

6.2 SOCIAL AND ECONOMIC ENVIRONMENT

6.2.1 Reduced Road Profile

In order to reduce the impact of the proposed bridge on the senior's residence, the road profile must be lowered. There are three elements that dictate the vertical profile of the Colborne Street Bridge:

- **Navigable water clearances** – At the time of the 1994 ESR, vertical clearances along the Scugog River were 6.7 metres north of the Lindsay lockstation and 4.6 metres south of the lockstation. Based on a recent application, the boundary has been shifted north to Colborne Street (see Appendix B for correspondence with the Canadian Coast Guard and the Trent-Severn Waterway). Therefore, the current design provides 4.6 metres of clearance over the navigation channel.
- **Service Road for pumping station and senior's residence** – The Ontario Highway Bridge Design Code requires a minimum clearance of 4.65 m. However, recognizing that this would not be considered a public roadway, but an access road serving only the pumping station and the senior's residence a reduced clearance may be considered. Based on our discussions with affected parties, the vehicle height to use the service road are:

  Emergency Services (Fire) vehicle height - 3.6 metres
  Capital Environmental Resources (waste management contractor)- 4.25 metres

  Therefore a minimum clearance of 4.3 metres and lowering of the grade for the service road will further reduce the height of the bridge.

- **Pumping Station** – The proposed alignment for the bridge places part of the existing pumping station under the proposed Colborne Street bridge. We have allowed a minimum clearance of 0.4 metre between the roof for the pumping station and the underside of the bridge girders. The operators of the pumping station have agreed to this clearance.

Inclusion of all three adjustments results in an overall lower bridge.

6.2.2 Visual Impacts - West Abutment Treatment

Several options are available to the current proposal for a conventional concrete type retaining wall as identified in the 1994 ESR. Based on preliminary discussions with reinforced earth retaining wall manufacturers, a reinforced earthen system would greatly reduce visual impacts to the senior's residence shown on the south side of the west approach. Figure 6 illustrates a possible wall design that could be used in this situation and also allows for the introduction of stairs to provide access from Colborne Street to Carew Park. Figure 9 illustrates some examples of the type of wall system proposed for this project.

6.2.3 Noise, Dust and Vibration Impacts

During Construction – construction activities will be limited to daylight hours during weekdays only. This will limit noise and vibration impacts to the surrounding properties. The contractor will be responsible for dust suppression during the limit of the contract.

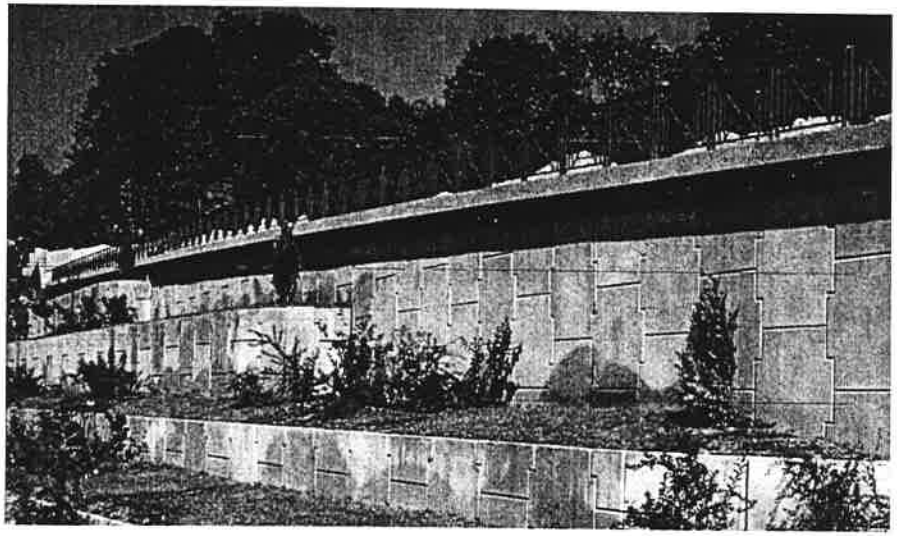
Post Construction - Based on the noise analysis conducted as part of this project, noise impacts will result in ambient level increases of greater than 5 decibels for the senior's residence. The County will continue to work with the owners / operators of the seniors apartment to determine the preferred mitigating measure. This may include but is not limited to noise walls along the road and/or additional soundproofing for the building itself and is subject ongoing discussions with the owners of the senior's residence.

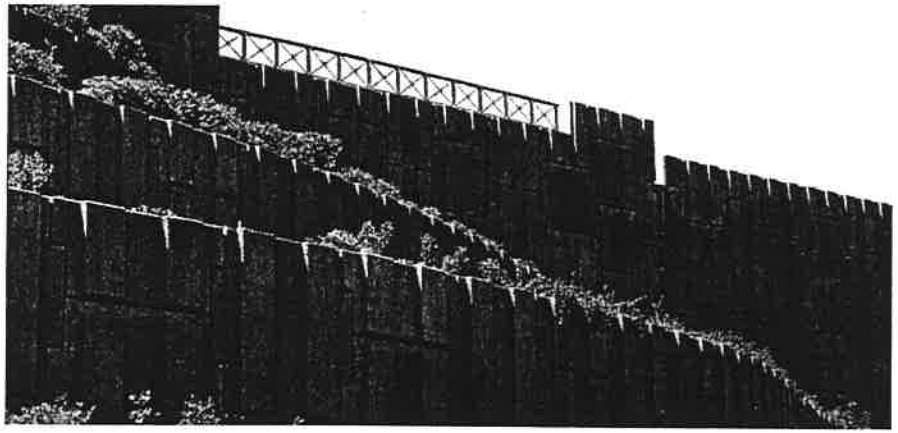
6.2.4 Bridge Construction

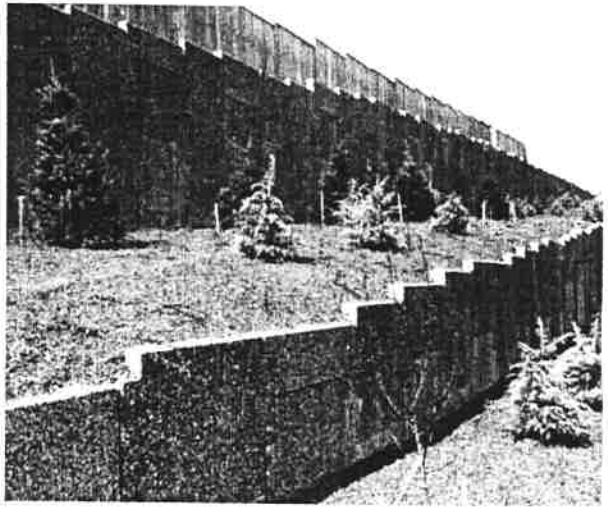
The General Arrangement is based on the use of precast concrete girders. We have recommended the use of precast concrete girders as a cost-effective method of construction.

These girders are transported by truck (likely Highway 7 or Highway 35 to County Road 36, then west along Colborne Street to the east bank of the Scugog River) to be spliced on-site. Girder lengths and construction staging methodologies have been developed in consultation with a girder fabricator.

Given that the use of concrete girders limits the use of vertical and horizontal curves on the bridge, all changes to the road alignment must occur on the approach roads. Limits of construction are the William Street on the west side and immediately west of the western most residence on Colborne Street East.







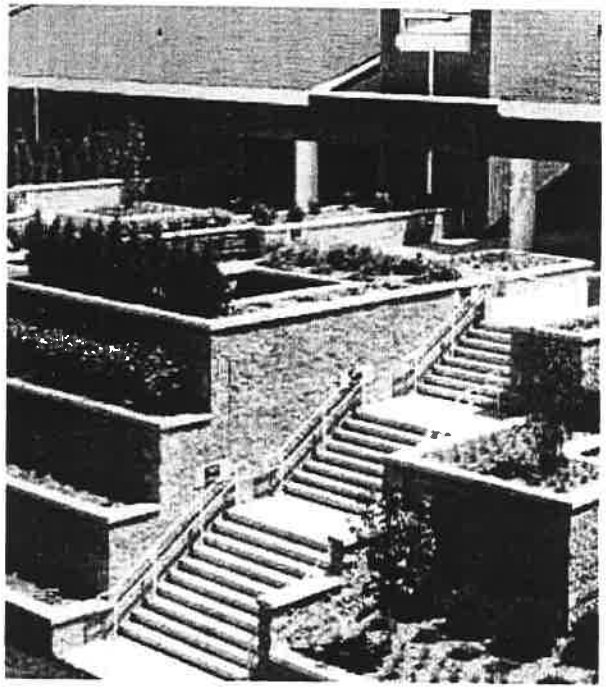


Figure 9: Examples of Reinforced Earth Retaining Wall Systems

Cole, Sherman & Associates

6.2.5 Access

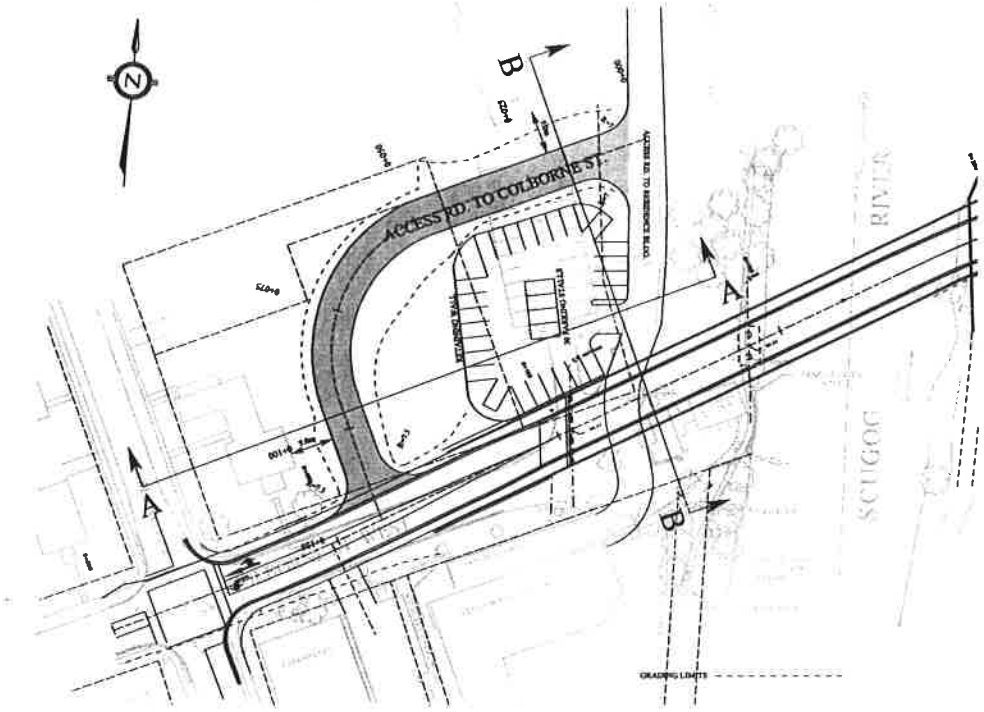
During Construction – for servicing and emergency response, access will be maintained during all stages of construction.

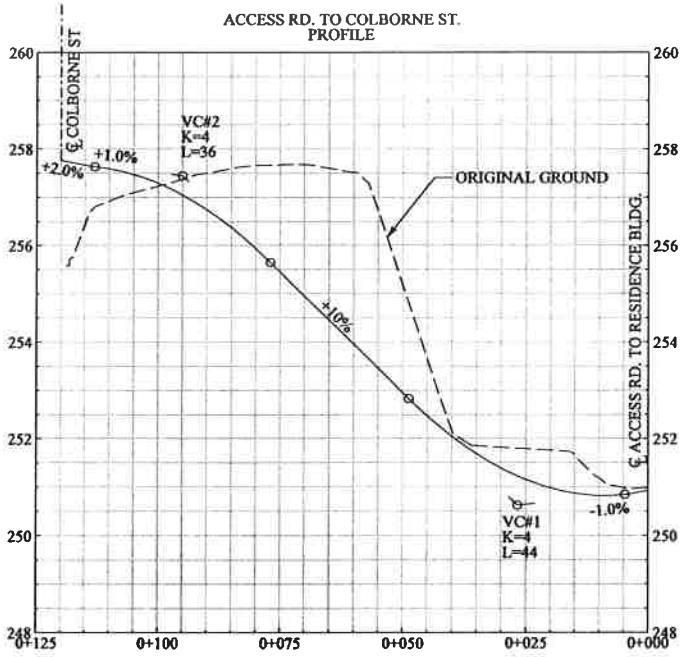
Post Construction – Pedestrian accessibility to Carew Park and Riveria Park will be enhanced with sidewalks on Colborne Street and connecting stairs/paths to the parks. Vehicular access to Carew Park, the Carew Apartments, the pumping station and the seniors residence will be via Colborne Street and Pottinger Road. The 1994 ESR proposed to reduce vehicular access to the Pottinger Road connection only. This would require the 1,400 vehicular trips made per day to/from Colborne to redirect to Pottinger Road.

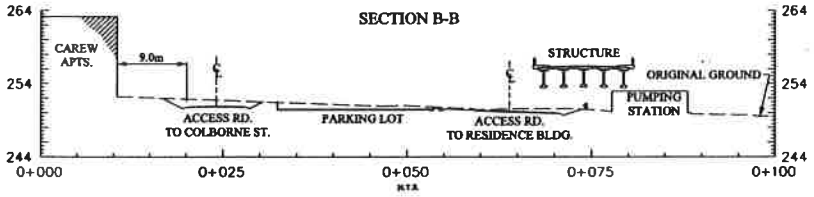
Concerns raised by property owners and members of the public during the preparation of this addendum suggested a need for the reinstatement of a connection from Carew Park to the road network. Three options have been prepared in response:

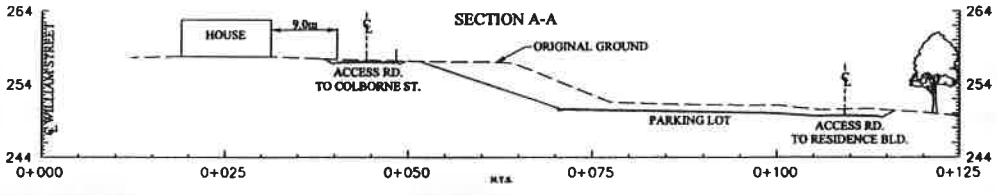
- Option 1 (Figure 10) – Two way access to Colborne Street. Additional property will be required to provide this connection. Impacts include the removal of the south parking lot for the Carew Apartments and loss of vegetation immediately west of the Carew Apartments.
- Option 2 (Figure 11) – Two way access to William. Additional property will be required to provide this connection. Impacts include the partial removal of the south parking lot for the Carew Apartments, loss of vegetation immediately west of the Carew Apartments and probably turn restrictions at the proposed Access road / William Street intersection due to the proximity to the Colborne Street / William Street intersection.
- Option 3 (Figure 12) – Westbound, one way connection to Colborne Street. Although impacts to property are modest, the steep grade in combination with the angle of intersection with Colborne Street will result in substandard sight lines and would require the elimination of the sidewalk on the north side of Colborne Street. Serious operational and safety issues eliminate this option from further consideration.

Based on the anticipated impacts, Option 2 is the preferred solution. Given that it provides the greatest flexibility for providing replacement parking and better line of sight (versus a connection onto Colborne Street. These options have been forwarded to the Carew Apartments for their review and comment.









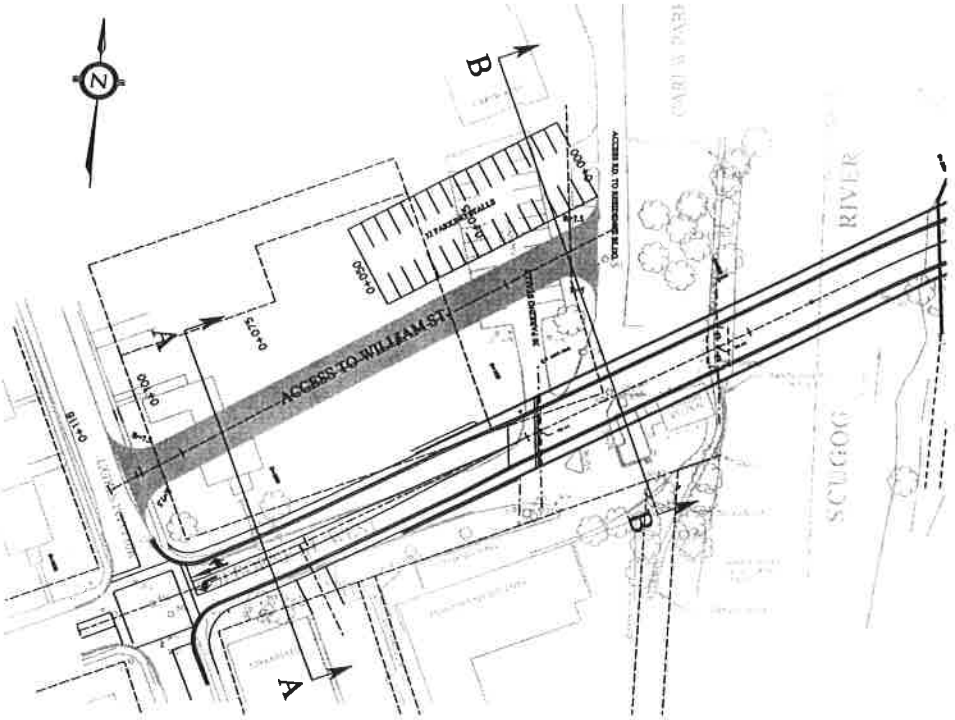
COLE, SHERMAN

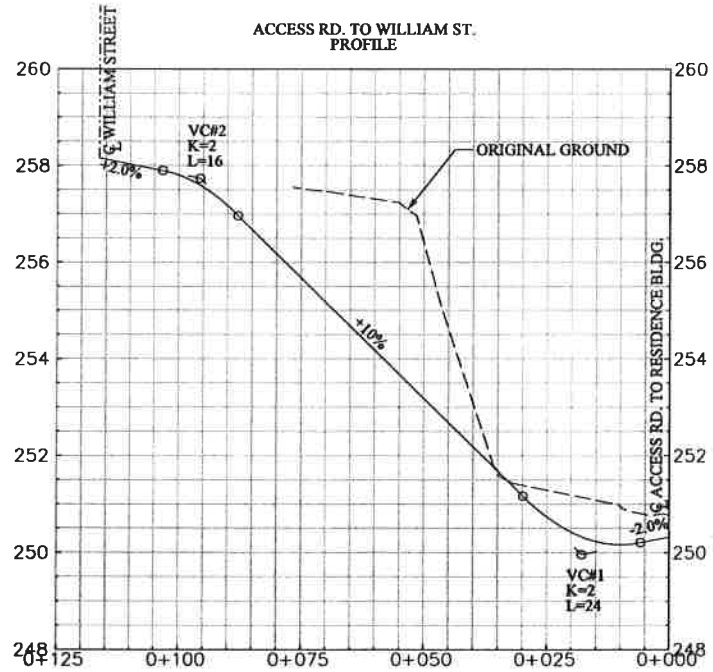
SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

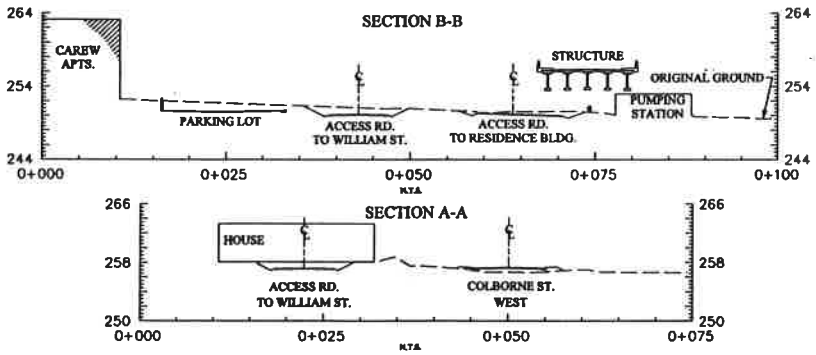
FIGURE 10
ACCESS TO COLBORNE ST.

SCALE

DESIGN	SCALE H 1:500 V 1:50	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	







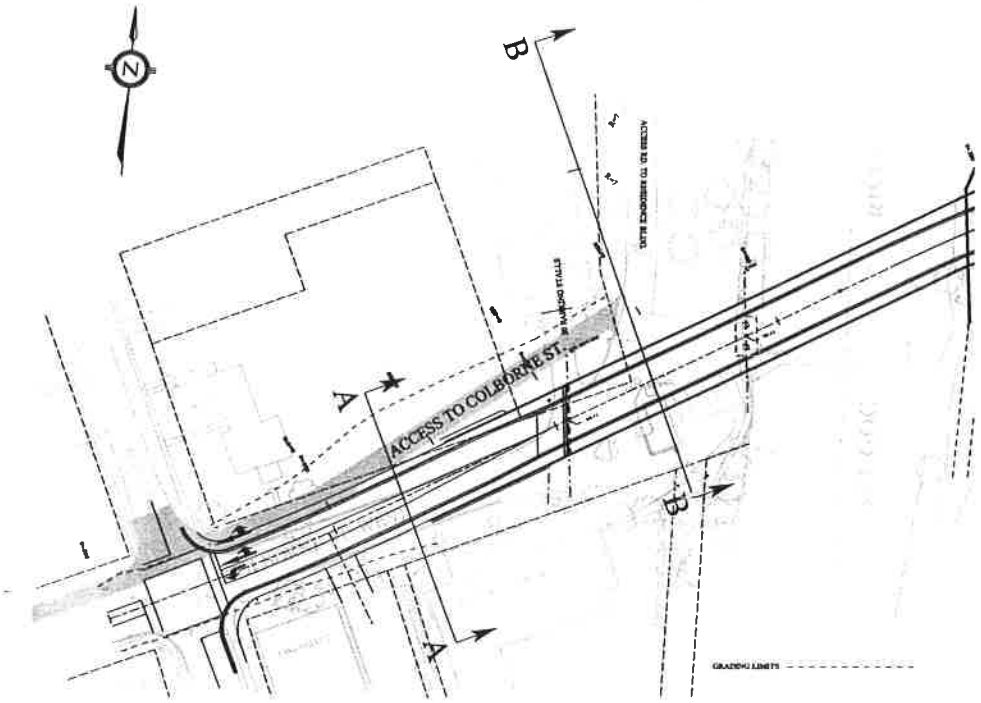
COLE, SHERMAN

SCUGOG RIVER CROSSING PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

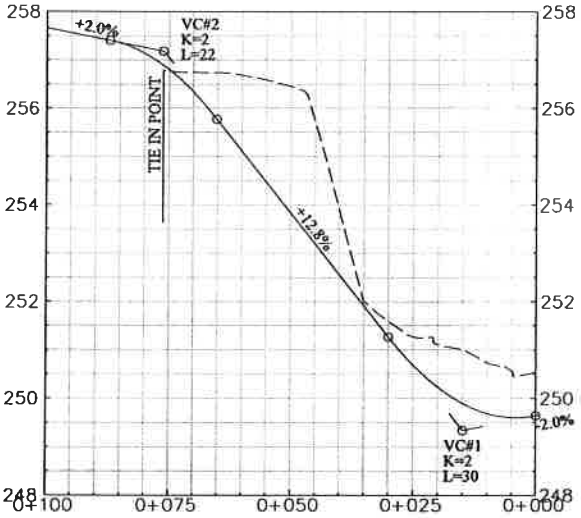
FIGURE 11
ACCESS TO WILLIAM ST.

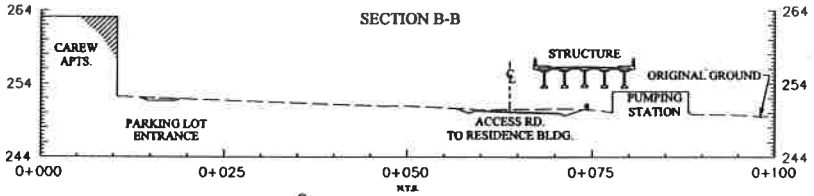
SCALE

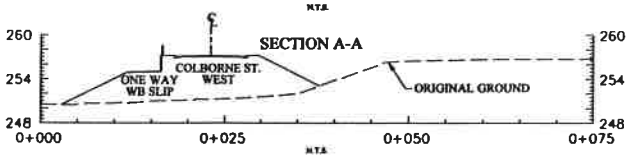
DESIGN	SCALE H 1:500	V 1:50
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	



ONE WAY WB SLIP
PROFILE







COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

FIGURE 12
ONE WAY WB SLIP

SCALE

DESIGN	SCALE H 1:500	V 1:50
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	

7.0 SUMMARY OF NET EFFECTS AND COMMITMENTS

7.1 POSITIVE EFFECTS

As originally identified in the 1994 ESR, the implementation of Phase 2, the Colborne Street Bridge, results in the following benefits:

- Satisfies the long-term vehicular and pedestrian transportation needs within and adjacent to the town
- Complements the existing Provincial, County and local road network through the use of existing roadway infrastructure currently dedicated to arterial type operations
- Is consistent with arterial road traffic patterns in Lindsay
- Minimizes physical impacts since the majority of the property required is currently in public ownership with physical impacts to property limited to three properties in the immediate vicinity of Colborne Street, east of William Street
- Provides the greatest level of accessibility between existing built-up areas and undeveloped, serviced lands within the Town of Lindsay
- Minimizes congestion and out-of-way travel resulting for trips crossing the Scugog River.

7.2 NEGATIVE EFFECTS AND MITIGATING MEASURES

The environmental issues, which have been recognized as part of this study, along with the mitigating measures, proposed in Table 8 below will be implemented in conjunction with the Colborne Street Bridge over the Scugog River.

Table 8: Summary of Negative Effects and Mitigating Measures

Factor Affected	Environmental Impact	Mitigation Measure
Natural	Increased storm water quantity and decreased storm water quality	Implementation of a storm water management pond.
	Watercourse and Fisheries protection	Construction details developed during detailed design will be in accordance with Fisheries Protection Act
	Impacts to trees at west approach	Where possible, preserve and protect existing trees. New landscaping on east and west approaches will compensate for landscaping removed
Social and Economic	Noise Impacts on Senior's Residence	During construction – construction activities will be limited to daylight hours on weekdays only Post construction – the County will continue to work with the owners to determine the preferred mitigating measure.
	Visual impacts	Lowering road profile will reduce the overall visual impact of the bridge Implementing a terraced retaining wall with landscaping north of the Senior's residence will improve aesthetics of west approach
	Access to parks	Connections will be provided between Colborne Street and Carew Park and Riveria Park via paths and stairs. Details are part of ongoing discussion with Parks and Recreation Department.
	Vehicular Access to Carew Apartments, Senior's Residence and Pumping Station	Access to the pumping station and Senior's Apartment will be via a new service road under the proposed bridge. The County will develop an acceptable vehicular access plan (see section 6.2.4) in consultation with the Carew Apartments, the senior's residence and other directly affected agencies.

7.3 COMMITMENTS

7.3.1 Communication Prior to Construction

In keeping with the requirements of the MOE's conditional approval, the County shall publish a notice advising that traffic thresholds have been realized and that the Colborne Street will proceed to construction. At this time, the public will be invited to comment on the details of the design and construction.

7.3.2 Monitoring During Construction

Throughout the entire construction phase of the project, County of Victoria staff will be present to supervise all construction activities, as well as to address concerns of adjacent residences and businesses. The amounts of dust and noise created as a result of the construction will be closely monitored and attempts will be made, where possible, to minimize these amounts. Traffic and pedestrian safety will also be closely monitored throughout the construction phase. Inconvenience as a result of the construction is expected, however, the contractor will be required to ensure that the safety of motorists and pedestrians using Colborne Street and bisecting roads is not jeopardized at any time during the construction process. In addition, the degree to which construction activities impact upon adjacent properties and the environment as a whole will be closely monitored and mitigated as necessary, in order to prevent unnecessary ill effects as a result of the construction.

7.3.3 Post Construction Monitoring

Upon completion of the construction phase of the project, the County of Victoria will continue to monitor Colborne Street to ensure that the road is functioning as it is intended. This monitoring programme will extend well beyond the limits of the Study Area to determine if secondary impacts as anticipated by the public (increased speed, congestion at other intersections) materialize. Traffic and pedestrian safety will continue to be closely monitored, in order to determine if any additional alterations are required to further increase the level of safety for both motorists and pedestrians.

Appendix A – MOE Approval of January 1994 Environmental Study Report

Ontario

Minister
Ministre

Ministry of Environment and Energy

Ministère de l'Environnement et de l'Énergie

135 St. Clair Avenue West
Suite 100
Toronto ON M4V 1P5

135, avenue St. Clair ouest
Bureau 100
Toronto ON M4V 1P5

44939

Mr. P.J. Seaton, P.Eng.
County Engineer
County of Victoria
P.O. Box 9000
26 Francis Street
Lindsay, Ontario
K9V 5R8

Dear Mr. Seaton:

I have reviewed the requests to bump-up the proposed Scugog River Crossing in the County of Victoria and have decided that an individual environmental assessment is not warranted at this time.

However, in order to ensure that the social and economic impacts of phase 2 on the surrounding environment are addressed, the denial of the bump-up is contingent upon the completion of the following conditions:

(1)

- Prior to the implementation of Phase 2 the County of Victoria is to ensure that the preferred alternative is evaluated and documented based upon the existing environment, public and agency input, anticipated environmental effects, in particular the social and economic impacts of phase 2 on the surrounding environment, and methods of minimizing negative effects and maximizing positive effects. This information will be compiled in an addendum.

(2)

- This addendum is to be made available for review by government agencies and the public for a minimum of 30 days following the issue of the Notice of Filing Addendum.

... 2

(3)

- Prior to proceeding with phase 2 of the undertaking, the proponent shall publish a notice advising the public that traffic thresholds have been realized and phase 2 will be initiated. At this time, the public will be invited to comment on the detail design and construction of the Colborne Street bridge.

In addition, I direct the County to contact the Southeastern Regional Office and the Peterborough District Office during the detailed design phase in order to resolve any technical issues that may arise.

Yours sincerely,

Original signed by Minister

JUL 14 1994

C.J. (Byd) Waldman
Minister

cc: S.M. Beale, Totten, Sims, Hubicki Assoc.
B. Ward, Southeastern Region
J.L. Bourque, Peterborough District Office

CORPORATION OF THE
COUNTY OF VICTORIA

ADMINISTRATION BUILDING
26 Francis Street
P.O. Box 9000
LINDSAY, Ontario
K9V 5R8
Telephone (705) 324-9450

TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
P. Jeffrey Seaton, B.A.Sc., P.Eng
Road Superintendent
and County Engineer

July 25th, 1994

Mr. Derek Doyle
Director
Environmental Assessment Branch
Ministry of Environment and Energy
250 Davisville Avenue
5th Floor
Toronto, Ontario
M4S 1H2

Dear Mr. Doyle:

Re: Minister's Denial, Scugog River Crossing Bump-Up Request

As you know, the County recently completed an expensive, long and thorough Environmental Assessment (EA) on the above project. We persevered in the face of considerable local opposition as it was important to determine the preferred bridge location and establish a methodology to clearly define need. Our intention with the two phase solution recommended in the ESR was to confirm the Colborne Street alignment knowing that when the traffic trigger was met we would have to re-evaluate that decision if significant and unanticipated changes in development patterns, etc., had occurred.

Unfortunately, the wording of the Minister's letter has led to an interpretation that the alignment issue is still open. If, in fact, the Minister's letter means exactly that then we have completely wasted some $137,000 in EA expenses as we could have simply repaired and widened the Wellington Street Bridge without the extensive EA and without considerable conflict between the County and the Town.

Subject to your confirmation that, within understood limits, the new structure alignment is established as Colborne Street and the condition for an amendment to the ESR is confined to detail design and mitigation of impacts on that alignment, the County will be able to proceed.

If, however, we have not settled alignment then I will recommend that the County appeal the Minister's decision to cabinet and/or simply not proceed with the repair/widening project as without a

new structure alignment we have not established a solution for the original planning period. Why widen the Wellington Street Bridge to three lanes if we will have to consider a four lane bridge on that alignment in the near future.

For further information on this concern please find attached a copy of our press release and the resultant article in the local paper.

I would appreciate your response by August 20th, 1994 to suit our Committee schedule. I am,

Yours truly,

P. Jeffrey Seaton, P. Eng.
County Engineer

PJS/keb
Attch.

c.c. K. Logan, Warden, County of Victoria
D. Allingham, Totten Sims Hubicki Associates

Ontario

Ministry of Environment and Energy

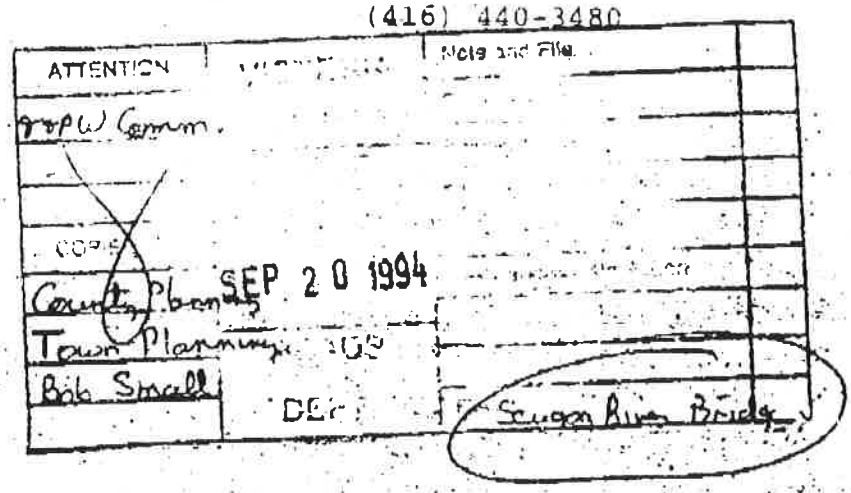
Ministère de l'Environnement et de l'Énergie

250 Davisville Avenue
Toronto ON M4S 1H2

250, avenue Davisville
Toronto ON M4S 1H2

(416) 440-3480

September 12, 1994



Mr. P.J. Seaton, P.Eng.
County Engineer
County of Victoria
P.O. Box 9000
26 Francis Street
Lindsay, Ontario
K9V 5R8

Dear Mr. Seaton:

Thank you for your letter of July 25, 1994 concerning the Scugog River Crossing and your request for confirmation that the new structure alignment is established at Colborne Street and the condition for an addendum to the ESR is confined to detail design and mitigation of impacts on that alignment. Please accept my apologies for the delay in replying.

As outlined in the June 24, 1994 letter from the Minister, the County of Victoria is to ensure that prior to implementing Phase 2, the preferred alternative is evaluated and documented based upon the existing environment, public and agency input, anticipated environmental effects, the net social and economic impacts of Phase 2 on the surrounding environment, and methods of minimizing negative and maximizing positive effects. This information will be compiled in an addendum and this addendum is to be made available for review by government agencies and the public for a minimum of 30 days.

Prior to proceeding with Phase 2, the proponent shall publish a notice advising the public that traffic thresholds have been realized and Phase 2 will be initiated. **At this time the public will be invited to comment on the detail design and construction of the Colborne Street crossing.**

The County has also been advised to contact the Southeastern Regional Office and the Peterborough District Office during the detailed design phase in order to resolve any technical issues that may arise.

Our interpretation of these conditions is that the Colborne Street corridor is protected until traffic thresholds have been met, at which time Phase 2 of the undertaking may be initiated and the public will be invited to comment on the detail design and construction of the Colborne Street bridge. It is not the Ministry's intent to have the County assess alternative locations for the crossing.

I trust this response meets your requirements and satisfies the County's desire to settle this issue once and for all.

Yours sincerely,

Derek Doyle
Director
Environmental Assessment Branch

cc: S.M. Beale
Totten, Sims, Hubicki Associates

B. Ward
MOEE - Southeastern Region

J. Bourque
MOEE - Peterborough District Office

EA File No. MU-1039-06

AW/jay
WP100\0883F

Appendix B – Public and Agency Notification

County of Victoria

Notice of Public Consultation Centre

For the Proposed Colborne Street Bridge across the Scugog River In the Town of Lindsay

In 1994, the Ministry of the Environment approved the County's proposed Colborne Street crossing of the Scugog River, once thresholds of traffic volumes crossing the Scugog River exceed 26,800 vehicles per day. Based on periodic counts across the Wellington Street and Lindsay Street North bridges, this threshold is routinely exceeded. Therefore, the County of Victoria is proposing to design and construct the Colborne Street Bridge over the Scugog River

PUBLIC CONSULTATION CENTRE:

The purpose of this Consultation Centre is to obtain comments on the preliminary design. The Consultation Centre will be on:

Tuesday June 27, 2000
3:00 p.m. to 5:00 and 7:00 to 9:00 p.m.
County Administration Building
Victoria Room
26 Francis Street

COMMENTS:

Comments and information regarding this study are welcome to aid in the planning of this undertaking. This material will be maintained on file for use during the study. With the exception of personal information, all comments will become part of the public record.

For further information, or to be added to the mailing list, please contact:

P. Jeff Seaton, P.Eng.
County Engineer
County of Victoria
26 Francis Street
P.O. Box 9000
Lindsay, Ontario, K9V 5R8

e-mail: pjseaton@countyofvictoria.on.ca

Leonard Rach, P.Eng.
Project Manager
Cole, Sherman & Associates
75 Commerce Valley Drive East,
Thornhill, Ontario, L3T 7N9

e-mail: leonard_rach@urscorp.com

County of Victoria

Notice of Filing of Addendum

For the Class Environmental Assessment for the Proposed Colborne Street Bridge across the Scugog River In the Town of Lindsay

The Environmental Study Report for the above project, prepared in accordance with the Class Environmental Assessment for Municipal road Projects, was issued in January 1994. The Ministry of the Environment granted conditional approval based on:

> *"Prior to the implementation of Phase 2 (the proposed Colborne Street Bridge across the Scugog River) the County of Victoria is to ensure that the preferred alternative is evaluated and documented based upon the existing environment, public agency and input, anticipated environmental effects, in particular the social and economic impacts of phase 2 on the surrounding environment, and methods of minimizing negative and maximizing positive effects. This information will be compiled in an addendum.*
> *This addendum is to be made available for review by government agencies and the public for a minimum of 30 days following the issue of the Notice of Filing the Addendum"*

Details of the revised project are contained in an Addendum to the Environmental Study Report, which by this notice is hereby placed in the public record for a 50-calendar day review period. The documents are available for inspection at the following locations:

Office of the County Clerk
County of Victoria
County Administration Building
26 Francis Street
Lindsay, ON, K9V 5R8
Telephone: (705) 324-9450

Office of the Town Clerk
Town of Lindsay
Town Hall
180 Kent Street West
Lindsay, ON, K9V 2Y6
Telephone (705) 324-6171

Lindsay Public Library
Reference Department
190 Kent Street West
Lindsay, ON
K9N 2Y6
Telephone (705) 324-5632

COMMENTS:

Written comment to the County Clerk is invited by October 17, 2000. If further concerns regarding this project cannot be resolved in discussion with the municipality, a person may request the Minister of the Environment to "Bump up" the project to an individual environmental assessment. "Bump up" requests must be received by the Minister at the address below by October 18, 2000 and must be copied to the County Engineer. If no "bump up" request is received it is the County's intention to proceed to design and possible construction in 2001.

Minister of the Environment
2 St. Clair Avenue West
Toronto, ON
M4V 1L5

Notice Issued August 28, 2000.

For more information, please contact:

P. Jeff Seaton, P.Eng.
County Engineer
County of Victoria
26 Francis Street
P.O. Box 9000
Lindsay, Ontario, K9V 5R8

e-mail: pjseaton@countyofvictoria.on.ca

Address	Name
"Mr. David Beach District Manager York Durham District Office Ministry of the Environment 230 Westney Rd. S. Ajax, Ontario L1S 7J5"	Mr. Beach
"Mr. Richard Raebum-Gibson District Officer Peterborough District Office Ministry of the Environment 1477 Lansdowne St. W. Peterborough, Ontario K9J 7M3"	Mr. Raebum-Gibson
"Mr. Ken Rovinelli, Manager Development and Contract Engineering Management Board Secretariat 777 Bay Street, 15th Floor Toronto, Ontario M5G 2E5"	Mr. Rovinelli
"Mr. Peter Carruthers Environmental Assessment Co-ordinator Heritage Policy and Program Development Ministry of Citizenship, Culture, and Recreation 400 University Avenue, 4th Floor Toronto, Ontario M7A 2R9"	Mr. Carruthers
"Mr. Michael Williams Director Environmental Assessment and Approvals Branch Ministry of the Environment 2 St. Clair Avenue West, 14th Floor Toronto, Ontario M4V 1L5"	Mr. Williams
"Ms. Dianne McArthur Rogers Plans Administration Branch Ministry of Municipal Affairs 777 Bay Street, 14th Floor Toronto, Ontario M5G 2E5"	Ms. McArthur Rogers
"Mr. Doug Howell, District Manager Peterborough District Office Ministry of Natural Resources 300 Water Street P.O. Box 6500 Peterborough, Ontario K9J 8N1"	Mr. Howell
"Mr. Ray Valaitis	

Rural Planning
Central and Northern Ontario
Ministry of Agriculture Food and Rural Affairs
95 Dundas Street
Brighton, Ontario
K0K 3H0" Mrs. Valaitis

"Mr. Jeff Pinkney
Business Development Consultant
Ministry of Economic Development and Trade
Peterborough District Office
300 Water Street, South Tower, 2nd Floor
Peterborough, Ontario
K9J 8M5" Mr. Pinkney

"Ms. Ruth Alves
Administrative Officer
Health Services Division
Ministry of Health
Hepburn Block. 10th Floor
80 Grosvenor Street
Toronto, Ontario
M7A 1R3" Ms. Alves

"Mr. Malcolm MacLean, Director
Construction and Operations Division
Ministry of Transportation
Garden City Tower, 2nd Floor
301 St. Paul St.
St. Catharines, Ontario
L2R 7R4" Mr. MacLean

"Mr. Tim Austin
Operational Manager
Rural Metro Toronto Ambulance Services,
Lindsay Station
50 Mount Hope Street
Lindsay, Ontario
K9Z 5G4" Mr. Austin

"Mr. Brian McCormick
Manager
Environmental Services and Approvals
Ontario Hydro Services Company
483 Bay Street
Toronto, Ontario
M5G 2P5" Mr. McCormick

"Ms. Helen Howes, Director
Corporate and Environmental Affairs
Ontario Power Generation
700 University Avenue
Toronto, Ontario
M5G 1X6" Ms. Howes

"Mr. Ian Macnab, District Manager Kawartha Region Conservation Authority R.R. 1 Lindsay, Ontario K9V 4R1"	Mr. Mcnab
"Mr. Trevor Lewis, Director Development Services Town of Lindsay 180 Kent St. W. Lindsay, Ontario K9V 2Y6"	Mr. Lewis
"Mr. Mike Hutton, Fire Chief Town of Lindsay 180 Kent St. W. Lindsay, Ontario K9V 2Y6"	Mr. Hutton
"Mr. Randy Martin, Police Chief Town of Lindsay 180 Kent St. W. Lindsay, Ontario K9V 2Y6"	Mr. Martin
"Mr. Donald W. Barkey Lindsay Water and Sewer Commission 50 Wolfe Street Lindsay, ON K9V 2J2"	Mr. Barkey
"Mr. A. Robertson Navigable Waters Protection Officer Canada Coast Guard, Prescott Base P.O. Box 1000 Prescott, Ontario K0E 1T0"	Mr. Robertson
"Mr. Barry Harper Lindsay Com Cable 55 George Street West Lindsay, ON K9V 4V6"	Mr. B. Harper
"Mr. Peter Hoenselaar Bell Canada 4th Floor, 364 Water Street Peterborough, ON K9J 7B4"	Mr. P. Hoenselaar

Appendix C – Public Consultation

Appendix C.1 – Public Consultation Centre

PIC BOARDS

1.) Welcome to PIC #1 - Purpose of the Public Information Centre (text)
2.) Project Background (text)
3.) The Class EA Process (chart)
4.) Planned modifications original design (text)
5.) The ESR Preliminary Design (plan – copy from ESR)
6.) The proposed Bridge (plan and profile, see Figures 5 and 6)
7.) Examples of Key features (text – see Figure 8)
8.) What's Next , Thank You (text)

\\S099NW01\DATA\PLANNING\99421 Warden EA\ESR\PIC #1\Warden PIC #1 Boards.doc

Welcome to the Public Information Centre
for the
Colborne Street Bridge Across the Scugog River

Please sign in here.

Purpose of this Public Information Centre

The purpose of this Centre is to introduce you to the project and obtain comments so your input can be considered during the planning, design and construction of this project.

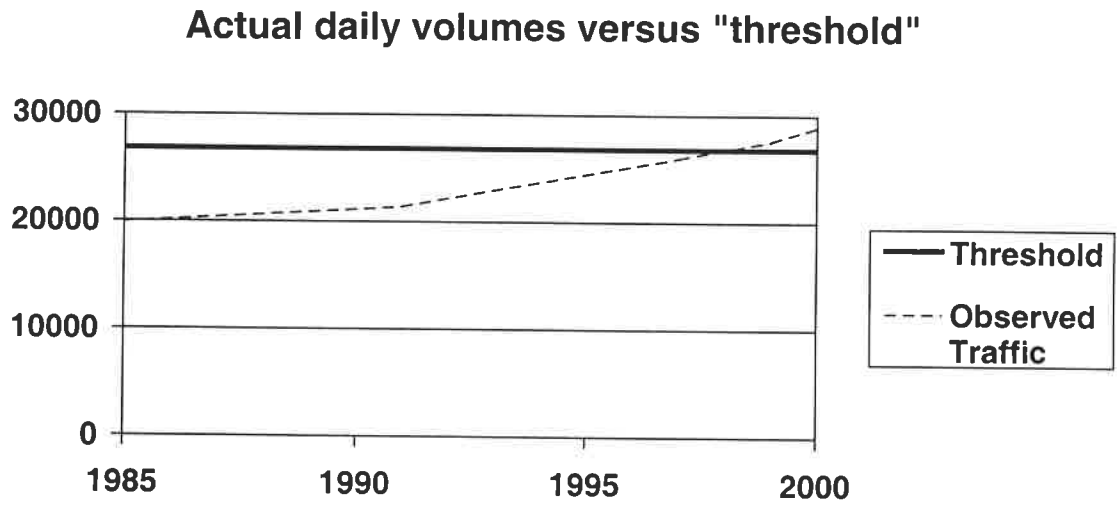
Members of the Study Team are available to discuss and answer any questions you may have.

Study Background

In 1994, the County of Victoria completed an Environmental Study Report that recommended the construction of a new road crossing of the Scugog River at Colborne Street, in the Town of Lindsay.

The Ministry of the Environment conditionally approved the County's proposal. The condition allowed the Colborne Street bridge to proceed once traffic volumes on the Wellington Street and Lindsay Street North bridges exceeded 26,800 vehicles per day.

Since 1994, traffic volumes have continued to grow and now the traffic warrants have been met:



The County is now proceeding with the design and possible construction as early as 2001.

What's Next

All material presented today will be reviewed and finalized subject to comments received during this round of Public Consultation.

Following this Public Information Centre, the Addendum to the Environmental Study Report (ESR) will be placed on the Public Record. Victoria County may proceed to Detail Design and Construction following the 30-day review period provided that no bump-up requests have been received.

Thank You

Thank you for attending this Public Information Centre.

Comments and information regarding this study are welcome to aid in the planning of this undertaking. Please provide us with any comments you have relating to the alternatives presented today by completing a comment sheet. The deadline for comments is July 14, 2000.

If you have any questions or comments after today's meeting, please contact:

P. Jeff Seaton, P.Eng.
County Engineer
County of Victoria
26 Francis Street
P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Phone (705) 324-9450
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

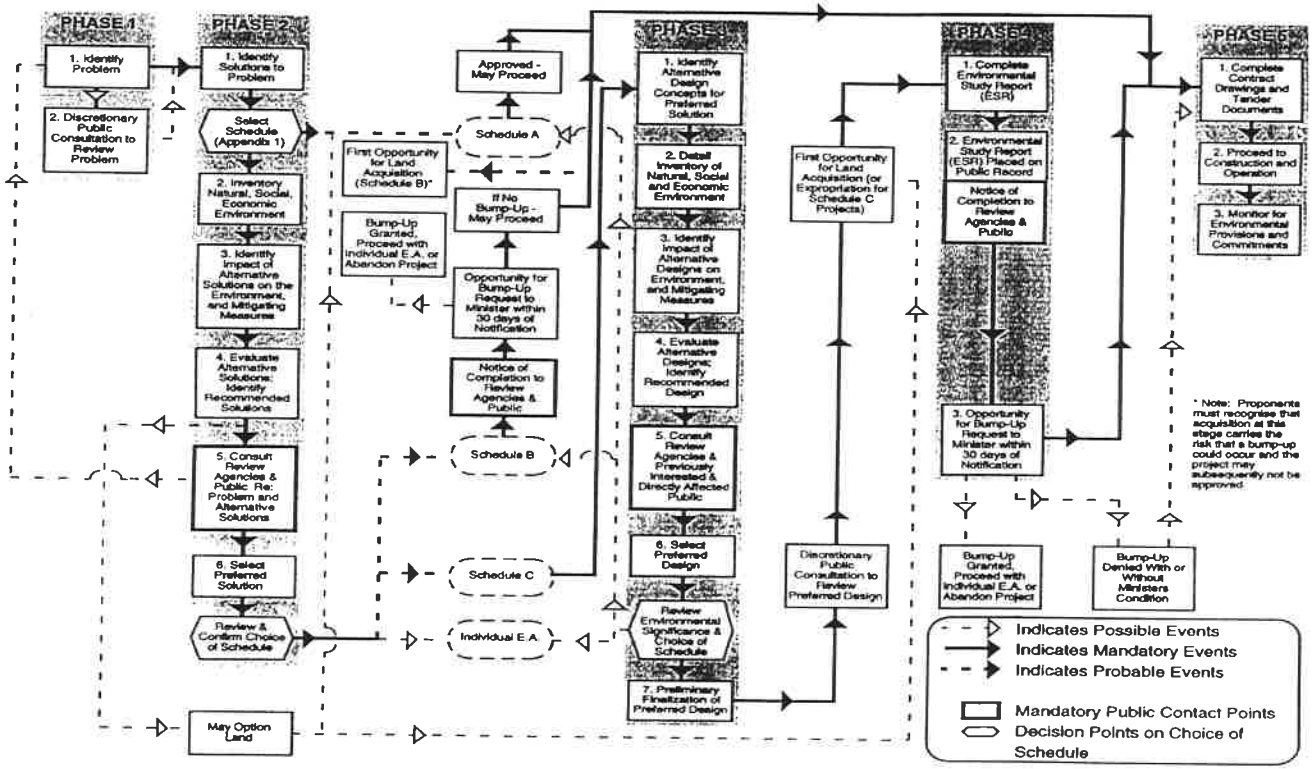
Leonard Rach, P.Eng.
Project Manager
Cole, Sherman & Associates
75 Commerce Valley Drive East,
Thornhill, Ontario, L3T 7N9

Phone (905) 882-4401
Fax (905) 882-4399
e-mail: leonard_rach@urscorp.com

The Class Environmental Assessment Process

The planning and approvals process follows the Class Environmental Assessment (EA) Process for Municipal Road Projects. Approvals under the Class EA process are valid for a period of five years. Therefore the original approvals have lapsed and therefore an addendum to the original report must be prepared and filed with the Ministry of the Environment.

After this round of consultation, interested parties will have a final opportunity to comment on this project during a 30-day review period. By signing in, you will receive notice prior to the commencement of the 30-day review.



Planned Modifications to the Original Design

1994 Design	Current Design	Rationale for Change
Two span bridge with centre pier in the Scugog River	Two span bridge with no piers in the River	- Avoid impacts on navigation channel - No impact on flow of river
Vertical retaining wall on west bridge approach, north of "Residence on the River"	Terraces on west bridge approach, north of "Residence on the River"	- Reduce visual impact
6.7 metre clearance over Scugog River	4.6 metre clearance over Scugog River	- More consistent with clearances under Wellington and Lindsay North bridges - Lower profile to reduce the visual impact of the proposed bridge - Reduce overall project cost
Retain service access driveway to "Residence on the River" with 4.65 metre clearance	Lower service access driveway to "Residence on the River" with 4.3 metre clearance	- Lower profile to reduce the visual impact of the proposed bridge.
Sidewalks on both sides	Sidewalks on both sides with connecting stairs /paths	- To provide connections between Colborne Street and Carew Park and Riveria Park.
Steel Box Beam Girder Construction	Precast Concrete Girder Construction	- Cost savings

County of Victoria

Notice of Public Consultation Centre

For the Proposed Colborne Street Bridge across the Scugog River In the Town of Lindsay

Sign-In Sheet
(please print)

June 27th, 2000

Name	Mailing Address/Property Owner (if different)	Phone No.
[redacted]		

County of Victoria

Notice of Public Consultation Centre

For the Proposed Colborne Street Bridge across the Scugog River In the Town of Lindsay

Sign-In Sheet
(please print)

June 27th, 2000

Name	Mailing Address/Property Owner (if different)	Phone No.
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County of Victoria

Notice of Public Consultation Centre

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Notice of Public Consultation Centre

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[redacted]		

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

To: Jeff Seaton, Engineer for County — July 12, 2000

Dear Mr. Seaton:

The sensor used for the traffic count is listed as the "axle" type. Please clarify that the traffic sensor was measuring the number of axles that were crossing over it. A copy of the count data for June 1997 is enclosed.

Please also fax me this same raw data for the two bridges from the 1999 Autumn count.

Please fax me this data and the answer to the question regarding the sensor on July 13 so that I can respond by July 14 as required below.

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

Name: [redacted]

Address:

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

To begin phase 2, a threshold of 26,800 vehicles per day over the 2 existing bridges must have been realized but the sensor used in the traffic counts in 1997 and, presumably in 1999, appears to have measured axles, not vehicles. Therefore, the vehicle count would be less than half of the purported number as there would have been a considerable number of trucks with more than 2 axles.

Certainly, also, some attention needs to ~~pay~~ be paid to the social and environmental costs of this bridge and, although the County contends that they addressed some of these issues in the 1994 ESR, they need to be revisited. It cannot be assumed that there have been no changes in the last 6-7 years.

I have cited some of my concerns in a letter to Mr. Dan Newman, Minister of the Environment and I enclose that letter with this Comment form.

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

Name [redacted]

Addre

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

CORPORATION OF THE COUNTY OF VICTORIA
26 Francis Street, P. O. Box 9000
Lindsay, Ontario
K9V 5R8
Telephone: (705) 324-9450
Fax: (705) 324-1750

TO: Peter Petrosoniak

FAX NUMBER: 3248223

FROM:

P. Jeffrey Seaton, P. Eng.
COUNTY ENGINEER
Transportation and Public Works Department
Direct Extension - 270

MESSAGE:

Re your FAX of July 13th
I was away yesterday & my tech is on Vacation so I will have to send the traffic data next week. Your comments will be considered even though they are rec'd after the July 114 th date.
With regard to the sensor By specifying "axle" it identifies a device that relies upon wheel pressure on an air tight tube to measure each wheel. The devices are sufficiently sophisticayted that they can detect 2 axle, three axle etc all the way to 8 axle vehicles and report. The alternative device senses the presence of a vehicle. We use only axle type traffic counters as they are the industry standard for specific studies.

DATE: 07/14/2000 **TOTAL PAGES (including this cover)** 1

06/20/97
14:46:56

County of Victoria
P.O. Box 9000, 26 Francis Street
Lindsay, ON, K9V 5R8
705-324-9450

*** Basic Count Print (#302) ***

Site ID : LINDSAY ST.
Info 1 : 30m NORTH OF KENT ST
Info 2 : SOUTH OF BRIDGE

Data Starts : 15:00 on 06/12/97
Data Ends : 14:00 on 06/19/97
Adj. Factor : 1.000%

Lane #1 Info :
Lane Mode : Normal

Sensor Used : Axle

Lane 1 Basic Count Print

Date DW	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Total
061297T																1016	1145	945	760	642	561	454	343	176	6083
061397F	92	95	49	44	39	102	340	594	737	800	934	960	1040	933	1003	1133	1090	949	875	729	602	526	335	440	14530
061497S	188	163	91	66	42	75	181	391	524	748	935	1014	1001	950	858	933	801	758	795	597	511	509	314	250	12763
061597S	173	129	102	54	35	45	59	115	245	357	596	755	722	733	685	662	620	542	564	542	651	406	240	116	9097
061697M	50	43	16	29	23	109	316	559	779	809	770	936	987	905	925	1043	949	874	762	641	567	446	315	183	13032
061797T	71	69	33	32	34	106	328	572	786	805	856	943	1014	912	964	1088	1020	876	819	690	628	534	337	414	13740
061897W	87	49	22	25	34	90	314	542	765	813	788	894	987	885	902	962	942	803	764	640	573	443	287	180	12806
061997T	124	54	27	31	38	86	312	525	750	817	798	862	987	865	878										7154
Month	785	602	340	261	251	622	1830	3188	4548	5187	5677	6354	6745	6190	6215	6807	6687	5747	5337	4491	4173	3419	2281	2369	89205
Percent	1%	1%	0%	0%	0%	1%	2%	4%	5%	6%	6%	7%	8%	7%	7%	8%	7%	6%	6%	5%	4%	4%	3%	2%	
ADT	112	86	48	37	35	88	261	455	654	741	811	907	963	884	887	972	955	821	762	641	596	488	335	195	12744

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Totals :	9097	13032	13740	12806	13237	14530	12763
# Days :	1	1	1	1	1	1	1
ADT :	9097	13032	13740	12806	13237	14530	12763
Percent:	10%	15%	15%	14%	15%	16%	14%

Mon-Fri: 67345 (75%)
ADT: 13469
Sat-Sun: 21860 (25%)
ADT: 10930
Avg Per: 530

[redacted]

July 11, 2000

The Honorable Dan Newman, P.C.
Scarborough Southwest
Minister of the Environment
135 St. Clair Ave. W., 12th Floor
M4V 1P5

Dear Mr. Newman,

This is to bring to your attention the move by the County of Victoria to build a bridge across the Scugog River at Colborne St. before meeting the requirements spelled out by former Minister of Environment and Energy, Bud Wildman, in his letter of July 14, 1994 (enclosed).

In it, he requires that "prior to the implementation of Phase 2 the proponent is to ensure that the preferred alternative is evaluated and documented based upon the existing environment, public and agency input, anticipated environmental effects, in particular the social and economic impacts ... on the surrounding environment." To date, none of this has been done and we, in this community, are not aware that this is to be done, but already the project is proceeding with detailed designs and the unmistakable impression that the Bridge is a "done deal".

Here are the issues:

1. The Bud Wildman letter requires that traffic thresholds across the existing 2 bridges have been realized and/or the intersections next to the existing bridges "exhibit signs of failure." I submit that none of the intersections has shown any signs of failure and, furthermore, the County does not pretend to show that they do. The threshold of 26,800 vehicles per day over the 2 bridges was exceeded only on one day in 1997 (and that was a Friday in the summer in cottage country) and once in a 1999 study. In fact, on a Friday in the fall of 1999, the day's count was only 22,605, not dissimilar to the 1991 daily average of 19,850. Only 10 days in total were counted, seven in 1997 and three in 1999, and I would suggest that these counts do not confirm that the threshold requirements are fulfilled.

More importantly, however, is the fact that the threshold number is meaningless without a context. The number was merely an estimate by the engineering firm that authored the Environmental Study Report (ESR) of 1994 of when additional river crossing capacity might be required. It was an estimate of traffic volumes at which the intersections surrounding the existing bridges would become congested. It was reasonable in 1994 to estimate such a number, but, in

2000, we must empirically re-evaluate the intersections and see whether they are indeed congested. Clearly, experience shows that they are not congested at present, especially since improvements were made to the Wellington Street Bridge after 1994, and there is no evidence produced by the County that they are. Thus, the intersections are not exhibiting signs of failure and, therefore, the threshold value of 26,800 vehicles per day needs to be reviewed. By extension, the Minister's conditions of 1994 have not been met and the Bridge plans should not proceed.

2. The reason for opposition to this Bridge by the residents of the area is the anticipation of damage to the social and natural environments of the surrounding communities should a bridge be built at Colborne St. This Bridge would be a direct link between two major highways, Hwy 35 to the west and Road 36 (formerly Hwy 36) to the east. This will necessarily increase vehicular traffic through this residential neighbourhood and especially frightening is the expected increase in truck traffic. The natural environment, including the air that we breathe and the water of the Scugog River, will also most definitely be adversely affected. Minister Wildman required that these issues be addressed. So far, these have not been addressed since the 1994 ESR.

Furthermore, I would like to draw attention to a letter written by a Ministry of Transportation engineer in 1993 about this project. In it, he says that "there is therefore the possibility that until the congestion problem becomes more pronounced and inflicts itself on the urban population, the County may be alone in its decision to pursue construction of a new bridge." As a resident of this area, I can say that there is no congestion problem and it definitely has not inflicted itself on us. This engineer also questions whether guidelines produced by the ESR authors "can be literally applied when there seem to be indications from some of the public and local politicians that such delays may be more acceptable than the c[redacted]ts and impacts of a new bridge and the consequent increases of heavy traffic in this area of the community." This reflects my earlier comments that the threshold figure of 26,800 vehicles should not be held sacrosanct as there is no proof that that number translates into congestion. In addition, the costs and impacts of a new bridge are too high.

In summary, I suggest that the conditions set out by your Ministry in the 1994 letter that need to be met before proceeding to erection of a Colborne Street Bridge have, in fact, not been met and I would request your review of this matter.

Please feel free to reach me should you require any further clarification. Thank you for your consideration of this issue.

Sincerely,

[redacted]

p.c. Mr. Jeff Seaton, Engineer, County of Victoria
Mr. Chris Hodgson, M.P.P., Victoria-Haliburton
Mr. John O'Reilly, M.P., Victoria-Haliburton
Lindsay Town Council

Ministry
of the
Environment

2 St. Clair Ave. West
Toronto ON M4V 1L5

Ministère
de
l'Environnement

2, avenue St. Clair Ouest
Toronto ON M4V 1L5

Ontario

ATTENTION	VICTORIA COUNTY	Note and File
		Discuss With
	RECEIVED	Please Answer
		Note & Return to Me
COPIES TO	AUG - 4 2000	Investigate & Report
Cole Shea		Take Appropriate Action
	ROADS DEPARTMENT	
		File

File Number 68822

July 26, 2000

[redacted]

Dear [redacted]:

I am responding on behalf of the Minister of the Environment, the Honourable Dan Newman, to your letter of July 11, 2000, regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Construction of the proposed bridge cannot take place without final *Environmental Assessment Act* (EAA) approval. In order to receive final EAA approval for the proposal, the County of Victoria will need to fulfill the conditions imposed on the proposal in 1994, to the satisfaction of the Ministry of the Environment.

As such, the County of Victoria is in the process of preparing an addendum to their Environmental Study Report as required by the conditional bump-up denial imposed on the proposal. When completed, a Notice of Filing of Addendum will be issued and the addendum will be available for public and government review for a minimum of thirty days. During this time, any member of the public or government agency may request that the status of the proposal be elevated (bumped-up) to an individual environmental assessment.

I encourage you to contact the County of Victoria to discuss your concerns. If your concerns remain at the end of the planning process, you may submit a request for a bump-up at that time.

If you have any questions, please contact Ms. Catherine McLennon of this branch at (416) 314-7222.

Thank you again for your letter regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Yours sincerely,

ORIGINAL SIGNED
BY
DAVE STASEFF

for Michael J. Williams
Director
Environmental Assessment & Approvals Branch

c: Mr. Jeffrey Seaton, County of Victoria

COPY

July 12, 2000

[redacted]

The Honorable Dan Newman, P.C.
Scarborough Southwest
Minister of the Environment
135 St. Clair Ave W., 12th Floor
M4V 1P5

Dear Mr. Newman:

This letter is in regard to the construction of a bridge by the County of Victoria across the Scugog River at Colborne St. in the Town of Lindsay.

Mr. Bud Wildman, former Minister of Environment and Engergy, in his letter of July 14, 1994 to Mr. T. Ron Campbell of Lindsay, required that:-

1) The combined traffic volumes on the Wellington Street and Lindsay Street North bridge crossings approach 26,800 vehicles per day; and/or

2) Either the Wellington Street/Lindsay Street North or Wellington Street/William Street intersections start to exhibit signs of failure.

May we ask what the criteria is for vehicles per day. How often must this criteria be met? How many times per week, how many times per month, how many times per year. On only one occasion in 1997 did the traffic count reach 26,800.

The required 26,800 vehicles per day was arrived at by the Environmental Study Report (ESR) of 1994 prior to the widening of the Wellington Street bridge and the reconstruction of the intersection of Wellington and William Street and the reconstruction of the Wellington and Lindsay Street N. intersection. It would appear that with these improvements, and no sign of intersection failures, a new traffic criteria should be forthcoming.

The reason for the opposition to the Colborne St. crossing by the residents of the area, is that if the traffic exceeds the new criteria, this would adversely affect the natural environment, ie the water in the Scugog River, and the air we breath. Not only would this increase traffic through a core residential district, there are two elementary schools which would be directly subjected to this traffic pollution.

Page 2. Cont...

Page 2 Cont. . .

The Honorable Dan Newman, P C

We would appreciate your consideration in this matter

Yours very truly

[redacted]

p.c. Mr. Jeff Seaton, Engineer, County of Victoria
Mr. Chris Hodgson, M.P.P. Victoria-Haliburton-Brock

68797

July 12, 2000

[redacted]

The Honorable Dan Newman, P.C.
Scarborough Southwest
Minister of the Environment
135 St. Clair Ave W., 12th Floor
M4V 1P5

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Page 2. Cont...

Page 2 Cont.....

The Honorable Dan Newman, P.C

We would appreciate your consideration in this matter.

Yours very truly

[redacted]

p.c. Mr. Jeff Seaton, Engineer, County of Victoria
Mr. Chris Hodgson, M.P.P. Victoria-Haliburton-Brock

Ministry
of the
Environment

2 St. Clair Ave. West
Toronto ON M4V 1L5

Ministère
de
l'Environnement

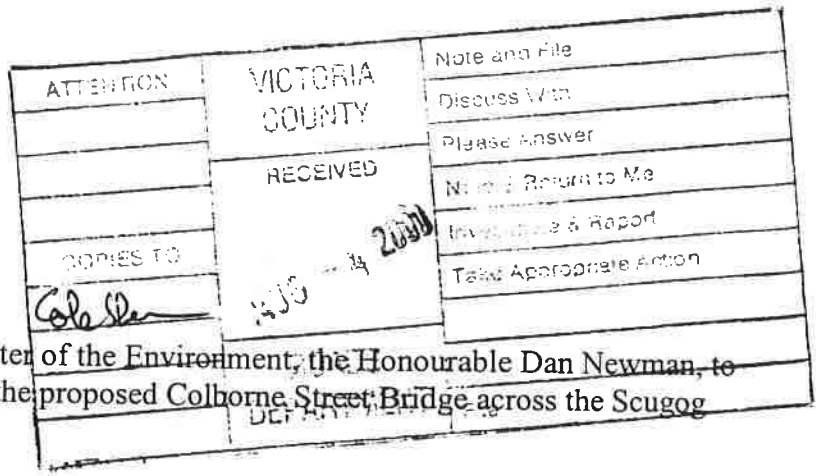
2, avenue St. Clair Ouest
Toronto ON M4V 1L5

Ontario

File Number 68797

July 28, 2000

[redacted]



Dear [redacted]:

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Construction of the proposed bridge cannot take place without final *Environmental Assessment Act* (EAA) approval. In order to receive final EAA approval for the proposal, the County of Victoria will need to fulfill the conditions imposed on the proposal in 1994, to the satisfaction of the Ministry of the Environment.

As such, the County of Victoria is in the process of preparing an addendum to their Environmental Study Report as required by the conditional bump-up denial imposed on the proposal. When completed, a Notice of Filing of Addendum will be issued and the addendum will be available for public and government review for a minimum of thirty days. During this time, any member of the public or government agency may request that the status of the proposal be elevated (bumped-up) to an individual environmental assessment.

I encourage you to contact the County of Victoria to discuss your concerns. If your concerns remain at the end of the planning process, you may submit to the Minister a request for a bump-up at that time.

If you have any questions, please contact Ms. Catherine McLennon of this branch at (416) 314-7222.

Thank you again for your letter regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Yours sincerely,

for Michael J. Williams
Director
Environmental Assessment & Approvals Branch

c: Mr. Jeffrey Seaton, County of Victoria

AGAINST ~~For~~

County of Victoria

June 27, 2000 - Public Consultation Centre
the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form

It would appear that the engineers have been requested to design a bridge which would do the least good and the most harm.

Harm (1) The town spent $100,000 to attract boaters to Riviera Park - now someone is proposing a bridge overhead

(2) The pumping station has just been enlarged - a bridge may preclude any future expansion.

(3) The increased traffic will pass one nursing home two seniors residences, two schools and will impact on the students from two other schools

(4) The intersection at Colborne & Angeline is already busy. Two thousand new residences are planned for Lindsay - a number of them on Angeline St. N making this intersection even busier.

(5) Traffic will be drawn away from the downtown businesses.

Good. (1) 100 vehicles per day will save up to five minutes

More Harm. (6) There will be no traffic damper will be in place if traffic is allowed to flow unhindered in a straight line along Colborne. At least there is one in place (now)

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

7) Traffic lights do not work as traffic dampers. There are often more accidents after an intersection has been signalized than before

8) Ambulances must obey the Highway Traffic Act and slow down or stop at a red light. It is conceivable that with the volume at bridge it could take longer for an ambulance to get to the hospital than it does at present

I've a lot more to say but my hand is getting tired.

[redacted]

68871

Telephone (705) 328-1807

The Honorable D. Newman, M.P.,
Minister of the Environment,
Suite 100,
135 St. Clair Avenue West,
Toronto, Ont.,
M4V 1P5

July 13, 2000

Dear Sir,

Re: Proposed Colborne Street Bridge, Lindsay.

Lindsay is a slightly old-fashioned town and that is part of its charm. Fortunately being a little old fashioned allows the opportunity to learn from other's mistakes. Two weeks ago the O.M.A. released the results of a three year study in which they found that each year nearly 1,000 premature deaths in Ontario are caused by pollution. In Boston they are spending 12B (U.S.) to bury an arterial road which cuts across their waterfront. In Toronto they are trying to figure out what to do with the Gardiner Expressway. The lesson here is: **You don't put an arterial road through a populated area.**

Our officials tell us that we must have a fourth bridge over the Scugog River in order to alleviate the traffic congestion. They state that now the magical number of 26,800 has been reached they have the green light to go ahead and build a bridge at Colborne Street. The official body or agency, which chose this mystical figure, was possibly working with data, which was inadequate, inappropriate or invalid. Even during "rush minute" it is rare that any vehicle is delayed more than two light changes. This can hardly be construed as intersection failure. No doubt with proper expertise and to-day's technology even that could be reduced.

County officials have presented this bridge as a "done deal". As you can see from the enclosed newspaper clipping Mr. J. Seaton, Victoria County Engineer, has stated that this bridge will be build "regardless" of any environmental studies. Even the Town Council gave their approval with the comment that the county is going to build it no matter how we vote. If Town Council feels that way you can image how impotent the average citizen feels. Surely, a bridge that will have such a massive negative effect on a town cannot be erected based on environmental information which is at least seven years old. The county presented its bridge design in June and gave the population thirty days to comment. It seems a little too convenient that the thirty days just happens to be at the start of summer when so many people are either on vacation or planning one. With the interim government in place does the county really have the authority to charge ahead with such a project?

Nearly all Lindsay's new development is west and south, because the town is fast becoming a bedroom community for Oshawa and others. If anything the need for another bridge is becoming less, not more. The province is studying the possible widening of Highway 35. The 401 is south of town as the 407 will be when it is built. Most of the goods, services and inmates for the new jail will be travelling Hwy. 35 and those coming from the west can use the existing south ring road. I'm sure they're in no hurry to reach their destination.

The question must be asked, "how many other towns with a population of 17,000 have four bridges crossing one river". There would no doubt be a public outcry if the Federal or Provincial governments were found to be funding such a project. The homeless were rioting at Queens Park, people died from

apparent lack of adequate water testing facilities, low cost housing is practically unavailable in many areas including Victoria County a family doctor is a rare commodity in Lindsay, existing bridges and roads are in need of repair, the list goes on. In other words, there are a lot more important things on which to spend money than an unnecessary bridge.

If we really must have a bridge it should be a pedestrian bridge linking the two parks. At least that way the bridge project will do a little good and not the enormous amount of damage an arterial road would create.

Yours truly,

[redacted]

cc. - Mr. J. Seaton

Residents of seniors' home want no part of bridge

By [redacted]
This Week

[redacted] will uproot and move from the place she's lived in for 11 years—all because of a bridge. [redacted] lives at the Residence on [redacted] and isn't happy with the County's new bridge which will connect Colborne Street east and west.

Her windows directly face the road where the bridge is to be located and she doesn't want to put up with the noise of construction crews as well as a new wall which will block her view of the Scugog River.

"It's going to be noisy morning, noon and night. I'm right in a puddle of noise, dirt, sirens and squealing brakes," she said as a jackhammer at the new pump house relentlessly echoed in the distance.

"I've already lived through the dirt and noise at the pump house and I couldn't experience it again. I won't get used to it at my age and I shouldn't have to listen to it. Once they start (construction) I will get out."

[redacted] was attended an open house held Tuesday expressing some of her concerns to Victoria County engineer, Jeffrey Seaton and representatives from Cole, Sherman Consulting Engineers from Toronto.

They held the mandatory session at the county building to gauge the public's reaction and receive input.

"We have to let people know what we are doing...and it's part of the environment study update," said Mr. Seaton.

An environment study was done in 1994 to learn of the impact the bridge would have on the area but it needed to be updated to make sure nothing has changed.

Mr. Seaton said the County was given a "green light" to construct the bridge once 26,800 vehicles crossed the bridges on Lindsay Street and Wellington Street in a 24-hour time period which was accomplished. He hopes construction will begin in 2001.

And once the environment study is complete the public will get 30 days to review it.

"There's an opportunity for a bump-up. The public has an opportunity to object to the environment study for a number of reasons," said Mr. Seaton.

"If the Minister of the Environment agrees (with the public's concerns) we won't be able to use the study and will have to go back to do an individual environmental assessment."

But regardless, the bridge will be built and Mr. Seaton said it will look like the existing bridge on Wellington Street.

"We designed a bridge with no piers and a terrace. We've also designed stairs and ramp access to the parks on the east and west side," said Len Rach, the head of Cole, Sherman's municipal roads division. Cole, Sherman was hired for the job because they had outstanding ideas, said Mr. Seaton.

"One reason Cole, Sherman won it (the job of designing the structure) is because they had a bunch of great ideas to make it look appealing," said Mr. Seaton.

He was also referring to the height of the bridge which will be lower than what was originally designed in 1994. And this will cut the cost of the project to approximately $3 million instead of $4 million.

"The original design of the bridge was 6.7 metres above the water now it will be 4.6 metres," said Mr. Rach.

But the height of the bridge still irks those who live at the Residence on William.

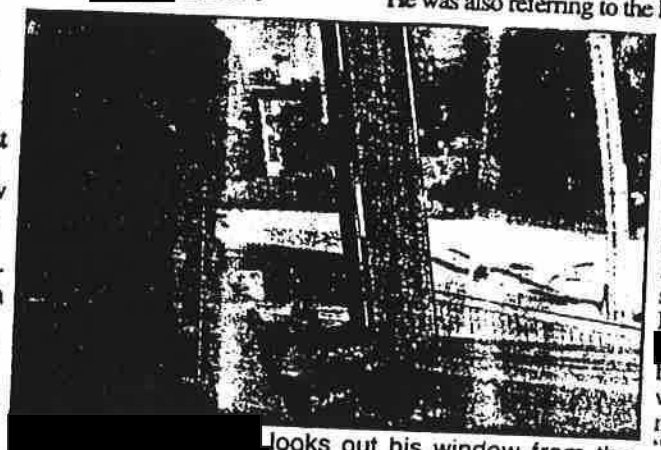
[redacted] the senior home's administrator said the wall will be constructed 13.4 metres from the residence.

"Would you want to sleep with your window open with diesel trucks roaring by?," she questioned.

"It also means 34 per cent of the rooms will be difficult to live in. And we don't have enough information to decide if we can live with it."

But [redacted] doesn't need anymore information. He also lives at the Residence on [redacted] and is worried about the car pollution which will come into his room.

"It will be detrimental to my health and spoil my view," he said.



[redacted] looks out his window from the Residence on [redacted]. A proposed new bridge will be bad for his health and his view. photo [redacted]

V.B. word "regardless"

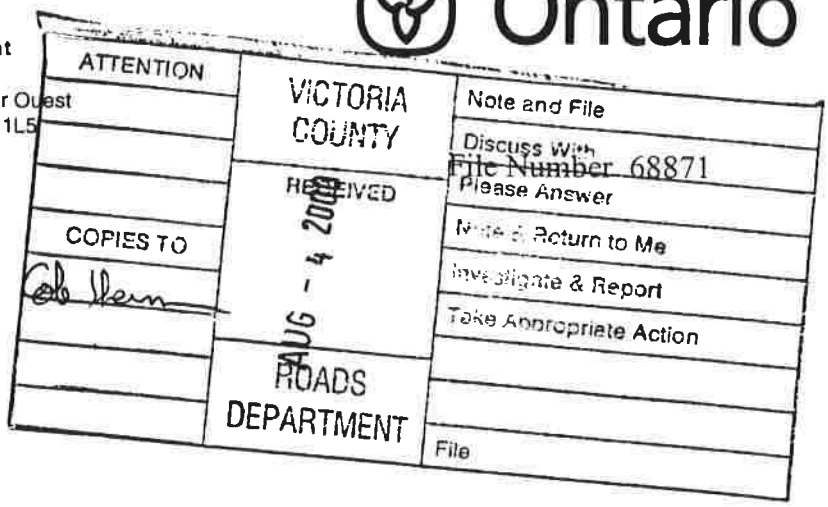
Ministry
of the
Environment

2 St. Clair Ave. West
Toronto ON M4V 1L5

Ministère
de
l'Environnement

2, avenue St. Clair Ouest
Toronto ON M4V 1L5

Ontario



July 28, 2000

[redacted]

Dear [redacted]:

I am responding on behalf of the Minister of the Environment, the Honourable Dan Newman, to your letter of July 13, 2000, regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Construction of the proposed bridge cannot take place without final *Environmental Assessment Act* (EAA) approval. In order to receive final EAA approval for the proposal, the County of Victoria will need to fulfill the conditions imposed on the proposal in 1994, to the satisfaction of the Ministry of the Environment.

As such, the County of Victoria is in the process of preparing an addendum to their Environmental Study Report as required by the conditional bump-up denial imposed on the proposal. When completed, a Notice of Filing of Addendum will be issued and the addendum will be available for public and government review for a minimum of thirty days. During this time, any member of the public or government agency may request that the status of the proposal be elevated (bumped-up) to an individual environmental assessment.

I encourage you to contact the County of Victoria to discuss your concerns. If your concerns remain at the end of the planning process, you may submit a request to the Minister for a bump-up at that time.

If you have any questions, please contact Ms. Catherine McLennon of this branch at (416) 314-7222.

Thank you again for your letter regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Yours sincerely,

Michael J. Williams
Director
Environmental Assessment & Approvals Branch

c: Mr. Jeffrey Seaton, County of Victoria

June 27/2000.

County of Victoria

June 27, 2000 - Public Consultation Centre

~~For~~ the Proposed Colborne Street Bridge across the Scugog River

In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Have you done a social & or economic study?
Have you done an environmental study? I don't
mean the one done 6 years ago.
What happens to the salt & oil runoff from the bridge
Does it go in the river ~~or~~ into the sewer system
Without access from William Colborne has to keep
delivery trucks out into 140 William. The road
in front of the Canoe Apts is a PRIVATE ROAD
However this bridge fit the Town of Lindsays official
plan
How does the extra traffic affect the schools in the
area. Children must cross Colborne - NO TRAFFIC LIGHTS
What about air & noise quality.
Is William ST N & S going to become a STOP STREET
I hate to think of the poor pedestrian at the corner.
Not enough information available at the open House
Are you trying to push this bridge before the County
becomes a City?
We are all voters & taxpayers down here

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

This is my second comment form

PLEASE TURN OVER

WHO – How & When was the traffic survey done?

Why was the Lindsay ST Bridge included when I daresay a lot of vehicles are not going west at the corner of Queen ST, but East. Also people coming West on Queen turn Southon Lindsay because they are going downtown or just there South. Why not just take the survey on the Wellington ST Bridge which is the bridge the Colborne ST Bridge is supposed to relieve. I hope you don't believe people are going to continue up Lindsay ST to the Colborne ST Bridge to go left.

County of Victoria

June 27, 2000 - Public Consultation Centre
~~For~~ the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

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(1) Since a majority of the people living in (area) apts are renters we are concerned about access for ambulance - buses - and other motor vehicles if one road is to be blocked at one end

(2) There has been no assessment of the quality - and the noise caused by a) construction for a long period and b) day to day traffic (we moved here because it was quiet (PRIVATE RD) and very peaceful on the river

(3) Where will the run-off from traffic go - will (gas) oil drain into river - what about water quality for ducks and fish?

(4) All of Colborne St will be affected - we have to cross the road, and the children crossing the street

(5) Will there be traffic lights at Colborne and Weersin?

(6) How exactly the residents of the nursing home be affected? They have been inconvenienced by noise and dust from building of water sewage pipes

(7) Since the river will be cut off again? Or is used by large numbers of people - residents and tourists.

(8) Who took the car count on the bridge?

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[redacted]

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(1 of 3)

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Poorly planned information session. Do you have anyone working to address gerontology issues? What is the average age of the people who live in this area? 65+. Can older persons hear well in groups with no set forum to relay information. No. Can the seniors in [redacted] attend. Transportation issues for them. Perhaps the meeting should be held in their residence to allow for mobility. Seniors standing for a couple hours.

It seems to be a way not to answer questions and keep the public at bay.

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[redacted]

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No hand-out.

(274)

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Impossible to hear all arguments. The town made it impossible for comments to be recorded besides this format. No secretary. ~~What~~ Who is taking all peoples comments Town Engineer walked out of meeting. (Jeff Seaton). Scott Thorburn only one answering questions adequately. ~~As~~ If I am new to the area do I not get a public forum to revisit issues ~~to~~ such as other proposed sites.

* No study has been done on the impact of the house values in the proposed area. Taxes.

How long does it take to get across the bridges we have. The town joke being Lindsay's 5 min RUSH TIME.

Alexandra school is on Colborne. I am fearful of an accident. Will the speed be put to 30KM around the Scho

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[redacted]

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(3 of 8)

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

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Meetings being held during summer. People out of town on holidays. Away to push through an idea that is not popular. The engineering department obviously in favour not listening with an open mind. How about know my comments will be recorded?

How do you walk off the bridge, for seniors?

Where is someone from school board? Funny meeting held last day of school.

Who is having a hard time crossing existing bridge? Does 2 min going another direction really impact these people substantially. Even for fire or ambula. How many emergencies can not go up Kent.

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[redacted]

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(4 of 4)

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
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30 KM/hour around schools.

# of lights on the street to allow traffic does this defeat the purpose.

How about Cambridge St Traffic will need a light to allow traffic to enter.

Lights / lights / lights

Study on impact of lights, will people use other no major routes to circumvent lights. For example turning on Francis instead of waiting for lights at the corner.

Will need a turn lane to go right onto Colborne going to down town.

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[redacted]

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June 27, 2000 - Public Consultation Centre
. For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

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I am disgusted.
I know (now) nothing.

Many questions were asked, and answered individually, by several people. Everyone talked at once — as a result, we now know nothing.

Each person has a different answer, from a different person — and no conclusions.

And the ones answering our questions do not know what we think. As I said, I am disgusted. [redacted]

Let's have a public meeting where everybody hears everything that is said

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Name: [redacted]

Address

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I am a North Side resident for 11 years of [redacted]
and have experienced the months of construction
of the Pump House — having still many
days for their construction -
Judging from my experience of this - I cannot
conceive the situation that is going to arise
if a bridge is constructed -
What would you think of this situation
if your dear Mother was a resident
of 140

This should not be on Colborne St
Farther North

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[redacted]

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- not enough information
- poor presentation - NO PRESENTATION
("I will have to check - look it up or we will have to look at"

Copies of comments be provided so we can address all issues & concerns

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[redacted]

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June 27, 2000 - Public Consultation Centre
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We live in Career Park & our worry is that access will be difficult for vehicular traffic if we do not have access from the South. Several people rely on BUS SERVICE to get to Doctors, Shopping etc. Question traffic lights at Colborne & William St. We almost need them now without the bridge! May we have a Town Hall meeting to permit questions after the speaker finishes?? Is this another 5 year plan - It seems that for the last 40 years every 5 years the bridge surfaced.

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[redacted]

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- there is but one proposal → no apparent options
- there is not complete information → a package to review would be helpful
- you speak of alternate or connecting roadway access → where are the drawings?
- it is difficult to comment when I do not feel I have truly been given all the information
- the residents of Residence on [redacted] who attended today have expressed frustration at the poor acoustics in this room, the expectation that they should have to stand to glean information → this was a concern years ago as well
- many frail residents, who are interested are not able to attend what opportunity do they have to comment, particularly with no package of information to share
- picture of landscape 'options' → do these accurately reflect what is proposed or is this an approximation → what exactly will the Seniors be looking at? bridge / walls → is there a rendering of the view from [redacted] north facing rooms?

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[redacted]

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June 27, 2000 - Public Consultation Centre
. For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

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(1) What is the position of the expired class environmental assessment? Will this have to be redone completely or an addendum? When will this begin? What is the legislation for an addendum?

(2) How does a bridge at Colborne with only 1 (single) road access to the Carew apartments fly with fire, police, medical services?

(3) What is the basis of the 26,300 traffic count on the Wellington St. Bridge? When were the counts taken? What type of vehicles? What time of day were these counts taken?

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[redacted]

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COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

(1) This bridge is environmentally unsound for the entire town of Lindsay. Simple logic proves this. - A/ it affects our PARK SYSTEM
B/ - AIR QUALITY / NOISE POLLUTION
C/ - TRAFFIC Hazards.
D/ Impacts upon Residential neighborhood even if it is a county designated road. and its surrounding environs

(2) Has this been discussed at the City of Kawartha Lake organization or is it being rammed through before it is effected? What type of infrastructure situation does this produce?

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

Name: [redacted]

Address:

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COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

CAN YOU PLEASE PROVIDE COPIES OF THE VISUAL MATERIALS ON DISPLAY.

THE SKYLARK VIII TOUR BOAT OPERATION HAVE CONCERNS WITH LOSS OF PARKING AND LOSS OF VISIBILITY TO THE PUBLIC.

[redacted]

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

leave your comment sheets in the box
ded or mail/fax them (by July 14, 2000) to:

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y of Victoria
ncis Street, P.O. Box 9000
ay, Ontario, K9V 5R8
05) 324-1750
: pjseaton@countyofvictoria.on.ca

COLE, SHERMAN

DOCUMENT TRANSMITTAL

TO: [redacted]

[redacted]

[redacted]

ATTENTION: [redacted]

PROJECT No: CN20800026

YOUR REF.

DATE: July 19, 2000

We are enclosing the following documents related to the subject project. Please report shortages if any.

Drawing No.	CSA Drawing No.	Dwg. Rev.	No. of Copies	Description / remarks / action
1	ALT2_V1-1.DGN		1	PLAN AND PROFILE

Comments:

Please find enclosed a copy of the plan and profile for the Colborne St. river crossing project as you requested. If you have any concerns regarding the material please call me at the number below (ext 191).

Sent by: [redacted]

COLE, SHERMAN & ASSOCIATES LTD.
75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 Tel: (905) 882-4401 Fax: (905) 882-4399
e-mail: colesherman@urscorp.com
internet: www.colesherman.com

County of Victoria

June 27, 2000 - Public Consultation Centre
. For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

1/ The Gardenier Expressway currently carries 200,000 cars daily. I do not believe that these two 2 lane bridges carry 1/4 of what the Gardenier Expressway carries. The figures are suspect.

2/ The Council and the County have refused to control the truck traffic using Colborne St as a town by pass. Much of the opposition may subside if they would control the traffic seriously and deny trucks of over 20,000 G.V.W. from using it.

3/ There are several schools located on Colborne St with users of as young as 6 years of age using the sidewalks. The sidewalks are not protected by boulevards and therefore the children will be within 5 or six feet of the fast moving traffic.

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential

[redacted]

ne box to:

County of Victoria

June 27, 2000 - Public Consultation Centre
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In the Town of Lindsay

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5/ I resent the fact that this has been presented as a done deal without the required O M B. approval or the public's right to object ~~to~~ to the project, to cost and without either provincial ~~of~~ or federal funds in place!

6/ I feel that if a bridge is needed that it should be located north of the town in the area of the old railway bridge. I don't want to hear any more lame excuses that it can't be north because there is no County road there and Colborne St W. is a county road. Guess what! there is no more county and only the new city exists therefore it can and should be located there away from the residential areas. A bridge there would allow a true by pass to exist

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be [redacted]

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ATTENTION | VICTORIA COUNTY | Note and File | Discuss With | Please Answer | Note & Return to Me | Investigate & Report | Take Appropriate Action | File

RECEIVED JUL - 7 2000 ROADS DEPARTMENT

COPIES TO

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

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This is great news for the trucking industry and for all the other people whose mandate seems to be [illegible] their [illegible] & [illegible] [illegible] the cost. But for those who have chose the [illegible] part of Lindsay for a place to live in relative peace & quiet its a disaster. I guess we're at the stage when apparently the truckers & those rushing through is more important than those poor residents of [illegible] [illegible]. I [illegible] the wellness know peace & quiet again. [illegible] Park apartments [illegible] presently [illegible] [illegible] than along Lindsay but that too will [illegible] a thing of the past if this bridge is built. I've a feeling that [illegible] the how many comments [illegible] are received the bridge will be built anyway - Sad!

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[redacted]

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Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

P.S. [illegible] known as a civilized county if we don't learn from mistakes of the past! e.g. cars #1 people #2.

County of Victoria

June 27, 2000 - Public Consultation Centre
~~For~~ the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

My concerns are that when (if) the bridge is built what egress the residence of 2 colborne st will have to colborne street If not will we have a second entrance for safety fire/ambulance. If we don't will the Pottinger st entrance be improved ie roadway repaired levelled & widened. If this plan goes through we will lose one of the two fire Hydrants will we gain that back or will we have to worry whether one will be sufficient in case of fire

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

County of Victoria
June 27, 2000 - Public Consultation Centre
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To begin with, I don't believe this meeting was given enough notice to all the public & why pick last day of School & beginning of holidays as the time ??

This whole bridge idea is a waste of money when there are far more critical projects - health care, schools, etc. etc.

This proposal will bring more noise, pollution right through the middle of town. You should be thinking up & the future & if a bridge is to be built it should be further north, perhaps Thornton Bridge Rd.

Why have an expressway (which it must be) it will be right through the middle of town ?? There are many seniors, retired people who don't come from the big city for some peace & quiet, & young families with children (schools) in this area.

This would also destroy the lovely park area by the river, just cleaned & to be fixed up by the town. The many river requirements as set down by the Ministry of the Environment are not being adhered to !!

July 12/00

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[redacted]

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COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

(1) Insufficient information was provided at the County meeting to develope an informed opinion as to any merits of the proposals shown. Information that was provided was either obscure, misleading or incorrect. For example the cost of the 'Project' was quoted at 2.1 million by Raymond Koch, Project Engineer, Tate Sherman Rogers where as John Macklin was quoted in Lindsay This Week at 4 million

(2) No handouts were provided at the meeting, and no unified presentation was given. The informal & disorganized format resulted in vague and questionable responses depending on who & how many of the County representatives you spoke to. Answers were often vague or not forthcoming.

(3) Information regarding alternative access route required for the Parcels A, B & C and 140 William was not presented at the meeting until the County was specifically questioned in regard to it. This access being a major concern and impact on the proposal.

(4) If the issues papers are so confused by your comments, consider the Public A few of many, many concerns raised by this meeting

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

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June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

WISH TO REGISTER OBJECTION TO A PROPOSED COLBORNE ST BRIDGE - A BRIDGE ESSENTIALLY TOO CLOSE TO EXISTING 2 BRIDGES - CONNECTING 2 MAJOR HIGHWAYS THROUGH A RESIDENTIAL, SCHOOL AREA — CONCERN RE: INCREASED TRUCK TRAFFIC WHICH IS ALREADY A PROBLEM.

HAVE NOT SEEN ANY SIGNIFICANT DOCUMENTATION - STATING 26,800 VEHICLE CROSSINGS IS A REGULAR EVENT - ± 10 DAYS COUNTED - TIN 1877 BY S in 1888 - I BELIEVE THE CASE IS WEAK.

NO EVIDENCE CLEARLY DEFINING "FAILURE OF EXISTING BRIDGES." ? WHERE IS THE "CONGESTION"
NO DOCUMENTATION OF SOCIAL, ECONOMIC & HEALTH IMPACT OF THIS BRIDGE i.e. 140 WILLIAM ST.

THIS SEEMS TO BE A "DONE DEAL" - NOT A QUESTION OF WHETHER - BUT WHEN - WHERE is the environment) PUBLIC or AGENCY INPUT TO ANTICIPATED ENVIRONMENTAL EFFECTS

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria on ca

- affect my ability to cross the street safely
- disturb my daily routines

The proposed bridge will block my view of the river.

In addition,:

- rumbling of trucks, air brakes and horns startle me
- mobility problems associated with arthritis etc. will make it very difficult for me to negotiate the proposed stairs that are part of the bridge to allow public access to the waterfront – it will no longer be possible for me to access the waterfront parks safely at a convenient distance from my home

More traffic means more accidents.

Winter road salt and sand used on the bridge will affect the aquatic life and quality of the water in the Scugog River – this is the town's drinking water.

The increased noise, dust, air pollution and run-off from salt and sand used in the winter will affect the wildlife in the nearby 'ecologically sensitive area'.

We moved to Lindsay to escape the congested and noisy urban environment – why is the County trying to destroy what attracted us to this area in the first place?

Economic Concerns

How much more will my taxes increase to pay for maintaining an unnecessary bridge?

Adding more traffic to Colborne Street will mean making a left turn will be even more difficult.

The downtown area businesses will suffer if more traffic is diverted.

Will the town compensate me if I fall on the stairs attached to the proposed bridge during inclement weather?

Noise Concerns

I usually keep my windows open in the summer. There goes my peace and quiet!

Creating a connection between Hwy 35 and Hwy. 36 is like creating an expressway. The County should provide noise barriers for the residents, schools and play areas on Colborne Street.

This information has been compiled with the assistance of P.A.C.E. (People Against the Colborne Street Extension)

What others have said about the proposed Colborne Street Bridge...

"Have you heard the one about... "
" I can't hear anything. Another huge truck just sped by, and then slammed on its air brakes."

Air Quality

Increased road traffic will result in additional air quality concerns.

I moved from a larger city to escape traffic and air pollution.

Why is the County trying to encourage 'urban sprawl'?

Health and Safety

The quieter environment of Lindsay is ideal for my children.

More trucks and cars will pass by my children's schools. Who will protect them from speeding vehicles and trucks that have longer stopping distances?
I am concerned about my children's safety.

My family member/child already has asthma or allergies. The bridge will create air pollution and affect the health of my family.

People with respiratory conditions or asthma will experience difficulties due to the increased traffic.

Lowering the speed of the traffic and adding traffic signals will only increase traffic congestion and create more air pollution.

As a senior with heart problems, my physician has advised me to take walks as a 'safe' form of exercise. I routinely walk along the linear walkway of parkland beside the Scugog River. A bridge over the Scugog River will disturb the peaceful setting and the increased noise, dust and air pollution asspciated with the traffic over the bridge will destroy the quiet parkland and take away any healthful benefits I derive from the relaxing and tranquil environment of the waterfront parks.

More traffic means more accidents.

I am afraid of falling on icy or wet stairs (part of the proposed bridge) and I will be forced to give up my walks along the river for a significant part of the year – which will affect my health.

Community Issues

Who benefits from the proposed bridge? We don't need it or want it.

The Scugog River is the source of the Town's drinking water. Why over-burden it with another bridge?

Why is the County encouraging people not to go into the Town?
Building a bridge at Colborne Street would direct traffic away from the downtown business district. Why is the County trying to take business away from the local merchants?

What effect will the bridge have on my taxes?

Premature construction of a new bridge will be very costly – has the County really considered the savings associated with deferral of the proposed bridge. It may be possible that deferral of the proposed bridge would result in savings well in excess of the cost of structural widening and/or rehabilitation of existing bridges.

My family and I walk along the river walks – the peacefulness and openness of this system of riverside parks is something we cherish about this community. Access to these parks improves the quality of our lives.

Lindsay is a unique community.
Many of us are seniors who chose to live here during our retirement. The additional noise, dust and traffic created by the proposed bridge will:

- disturb my sleep
- result in more frequent window cleaning

I am a resident of Lindsay. The proposed Colborne Street Bridge crossing is no longer necessary as a result of the recent improvements to the Wellington Street bridge.

Building another bridge would negatively affect the local environment. There would be an increase in **traffic, dust, air pollution and noise** in my neighbourhood. The increase in traffic will be very disruptive to my **community** and may affect the **health and safety** of my family.

In addition, the proposed bridge would be a visual intrusion on the Scugog River shoreline and river and destroy the natural environment of the riverside parks and walkways.

The Town of Lindsay has spent millions of taxpayer dollars in the restoration and preservation of parkland along the Scugog River. Clearly, the proposed bridge will ruin this natural setting and adversely affect the use and enjoyment of the Scugog River area.

I am also concerned about the effects the proposed bridge will have on directing traffic away from the downtown business area. I believe we should spend our tax dollars in other areas, instead of on the construction and maintenance of another bridge that will result in a negative impact on the environment and the community.

I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

_____

_____

_____

Name: _____ Signature _____

Address _____ Phone No. _____

----------Please separate here ----------

Name : _____ Signature. _____

Address: _____ Phone No. _____ (RESIDENT)

I would like P.A.C.E (People Against the Colborne Street Extension) to share my views about the bridge with the following people:

(Add a ✓ for those you want to inform)

Mayor of Lindsay	YES ☐	No ☐	
County Councillor	YES ☐	No ☐	Please specify name(s) _____
Lindsay Councillor	YES ☐	No ☐	Please specify name(s) _____
Local school trustee	YES ☐	No ☐	Please specify name(s) _____
MPP, Mr. Hodgson	YES ☐	No ☐	
MP, Mr. O'Reilly	YES ☐	No ☐	
Others			

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

Since we are or should be, Conscious of our environment, keep any structures that will interfere with the jewel - being of our ecosystem [illegible] increasing the risk of Respiratory and other ailments [illegible]

Name: [redacted]

Address: [redacted]

----------Please separate here ----------

[redacted]

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County Councillor	YES	☐	No ☐	Please specify name(s) _____
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cal school trustee	YES	☐	No ☐	Please specify name(s) _____
ᵇ, Mr. Hodgson	YES	☑	No ☐	
Mr. O'Reilly	YES	☑	No ☐	

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

Why tolerate more pollution.

Name: [redacted]

Address [redacted]

----------Please separate here ----------

Name : [redacted]

Address [redacted]

I would like P.A.C.E (People Against the Colborne Street Extension) to share my views about the bridge with the following people:

(Add a ✓ for those you want to inform)

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County Councillor	YES ☐	No ☐	Please specify name(s) _____
Lindsay Councillor	YES ☐	No ☐	Please specify name(s) _____
Local school trustee	YES ☐	No ☐	Please specify name(s) _____
MPP, Mr. Hodgson	YES ☑	No ☐	
MP, Mr. O'Reilly	YES ☑	No ☐	

Others _____

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

We could use some side walks along water way - For people with Children Needed More than Bridge

Name: [redacted]

Addres[redacted]

----------Please separate here ----------

Name :[redacted]

Address:[redacted]

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:
THE COUNTY MUST DECIDE WHICH IS MORE IMPORTANT
THE QUALITY OF LIFE OF LINDSAY RESIDENTS OR
~~FREE~~ PLEASING 16 WHEELERS

Name: [redacted]

Address [redacted]

----------Please separate here ----------

Name : [redacted]

Address: [redacted]

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(Add a ✓ for those you want to inform)

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MPP, Mr. Hodgson	YES ☑	No ☐		
MP, Mr. O'Reilly	YES ☐	No ☐		
Others				

OVER

I am a resident of Lindsay. The proposed Colborne Street Bridge crossing is no longer necessary as a result of the recent improvements to the Wellington Street bridge.

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Additional Comments/Concerns – please use reverse side of sheet if required:

_____

_____

Name: [redacted]

Address

----------Please separate here ----------

Name : [redacted]

Address:

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

Suggest you build bridge farther north
I oppose the Colborne St. bridge

Name: [redacted]

Address [redacted]

----------Please separate here ----------

Name : [redacted]

Address [redacted]

I would like P.A.C.E (People Against the Colborne Street Extension) to share my views about the bridge with the following people:

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I wish to register my objection to this bridge proposal on social, economic, health and safety and environmental grounds.

Additional Comments/Concerns – please use reverse side of sheet if required:

I have respiratory problems from CA + Coronary Heart Disease. I never have had thinking it was a good spot but there has been construction over done + I shudder to think of it for another 2-3 yrs. After the traffic congestion would be bad enough.

Name: [redacted]

Address [redacted]

----------Please separate here ----------

Name : [redacted]

Address [redacted]

I would like P.A.C.E (People Against the Colborne Street Extension) to share my views about the bridge with the following people:

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MPP, Mr. Hodgson	YES ☑	No ☐		
MP, Mr. O'Reilly	YES ☑	No ☐		
Others				

[redacted]

[redacted]

Dear [redacted]

You aked me to write to you regarding my viewpoint concerning the proposed Colborne St. Bridge. I see such a bridge as a detriment to the Town of Lindsay.

Junctions between major highways should bipass towns rather than involving them in to-day's major form of air pollution destructiveness.

Keeping our town clean and free of pollution is more than just an asset to ourselves, since it will thus continue to attract visitors to the entire Kawartha area, our province and town.

That's my viewpoint in an nutshell statement.

Of course, such a bridge would necessitate a new name for our street, but perhaps we could ask for that anyway. How about Carew Park Avenue? Now that would probably be the most distinctive name in good old Lindsay Town.

Yours truly,

[redacted]

copy included.

July 14, 2000

Mr. P. Jeff Seaton, P.Engineer, County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario
K9V 5R8

Dear Mr. Seaton

As a resident [redacted] it greatly disturbs me that the proposed Colborne Street crossing has not taken into account the effects the change in traffic structure will have on the community.

Parkview Public School has anaphylactic children in attendance. One of these students is my own daughter, she has minutes to attain medical attention or death will occur due to life threatening peanut allergy. The intersection at Colborne/Adelaide and that of Colborne/Angeline are on the emergency route for the school. How are these intersections impacted by the bridge? How is the safety at the Colborne/Angeline intersection affected? The numbers of accidents that have occurred at the Colborne/Angeline intersection warrant the concern.

Were does this project fit into societies increased concerns for the environment? The particular areas are air and water quality. What noise pollution considerations or studies have taken place? What will the increasing traffic using this route do to the air quality?

I want to become more involved. Please till me how I will be notified of my opportunities to become involved.

Sincerely,

[redacted]

"P. Jeffrey Seaton" <pjseaton@countyofvictoria.on.ca>

07/17/2000 02:21 PM
Please respond to
"P. Jeffrey Seaton"

To: "[redacted]
cc: [redacted]
<jmacklem@countyofvictoria.on.ca>
Subject: Re: PROPOSED COLBORNE STREET BRIDGE

I would be more than happy to review the extensive data made available in the 1993 study that examined the Northern Crossing, looked at traffic flows and concluded that the Colborne Street crossing provided the longest period of relief to the Town's center core structures. In the MOE review of that study it was decided that the work was sufficient to determine that the new bridge location would be on the Colborne Street alignment Recently we determined that there had been no substantive change to the earlier work in terms of new destinations. In fact all the recent developments in Town and those planned increase the attractiveness of the Downtown core and the mall area West of that. Bringing traffic across the River North of the Colborne Street Corridor would simply mean that we needed to create a North South arterial through the residential area from Springdale Gardens to the Mall/Downtown

I have copied this response & your original to the County Warden Mr. John Macklem as well as to Mr. Scott Thorburn who represents the Consultants hired to update the Environmental Assessment

You will be afforded an opportunity to make your concerns known as part of the public review process. I would simply ask you to review the whole study prior to continuing with the objections as voiced below

Jeff Seaton

----- Original Message -----
From: [redacted]
To: JEFF SEATON
Sent: Monday, July 17, 2000 12:02 PM
Subject: PROPOSED COLBORNE STREET BRIDGE

DEAR JEFF, KINDLY PARDON MY LARGE CAPITAL LETTERS IN GREEN FONT; I AM NOT YELLING JUST BLIND AND COMPUTER INEPT.

I WISH TO MAKE KNOWN TO YOU AND THE POWERS THAT BE, THAT I AM TOTALLY OPPOSED TO THIS PROPOSED COLBORNE STREET BRIDGE OVER THE SCUGOG.

I DO NOT FEEL ENOUGH ATTENTION IS BEING PAID TO THE PROBLEMS OF NOISE AND AIR POLLUTION THE BUILDING OF A BRIDGE WILL CAUSE ALL THE RESIDENTS AT [redacted], THE CAREW APARTMENTS AND THE HOMES, SCHOOL, CHURCH AND OTHER APT. BUILDINGS FOUND ON COLBORNE ST W. AS WELL, I DO NOT

BELIEVE ANY CONCERN IS BEING SHOWN FOR PEDESTRIAN SAFETY IN THE AREA WHAT WITH GREATLY INCREASED VEHICULAR MOVEMENTS IN THIS AREA. ALSO, THE PROPOSED THUNDERBIRD ROAD BRIDGE SITE SEEMS TO HAVE BEEN FLUFFED OFF ALTHOUGH IT WOULD AFFECT FAR FEWER PEOPLE THAN COLBORNE ST.

I WOULD ALSO ASK THAT I BE SENT A COPY OF THE ENVIRONMENTAL ASSESSMENT WHEN FINISHED AND NOTIFIED WHEN POSSIBLE APPEALS WILL BE ENTERTAINED. WOULD YOU PLEASE FORWARD A COPY OF THIS TO THE COUNTY WARDEN. THANKYOU. YOURS SINCERELY,

[redacted]

P.S. PLEASE ACKNOWLEDGE RECEIPT OF THIS EMAIL; THANKYOU.

DEAR MESSRS. SEATON AND BROWN: WOULD YOU PLEASE BE SO KIND AS TO ADD THE FOLLOWING ADDENDUM TO MY EMAIL TO YOU OF JULY 17TH INSTANT REGARDING THE *PROPOSED COLBORNE STREET BRIDGE,* THANKYOU.

IN CONCLUSION, I WOULD ASK MR. SEATON, HIS CONSULTANT, THE MEMBERS OF COUNTY COUNCIL AND ADVOCATES OF THIS PROPOSED BRIDGE TO ASK THEMSELVES THIS QUESTION.....WOULD YOU WANT YOUR FAMILIES, PARENTS, GRANDPARENTS OR CHILDREN TO LIVE WITHIN A 100 FEET OR SO OF THIS PROPOSED BRIDGE WITH IT`S

ATTENDANT NOISE, DIRT, DUST, EXHAUST FUMES OR HAVE THEM WALK ALONG COLBORNE WITH INCREASED VEHICULAR TRAFFIC POSING A PEDESTRIAN SAFETY THREAT??.....***IF YOU ANSWER HONESTLY, I THINK YOU DO NOT.***

YOUR`S SINCERELY,

[redacted]

County of Victoria

June 27, 2000 - Public Consultation Centre

~~For~~ the Proposed Colborne Street Bridge across the Scugog River

In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Reasons that I have recieved to justify the construction of the Colborne St. Bridge and spending (approx) $5 000,000 after all road accesses and purchase of property needed to complete project could be more benificial to the people of Victoria County and not just a few people living in the East Ward of Lindsay. If proposed plan were moved out to between the new Jail and Dump. I'm sure that the bridge design would span almost any part of the Scugog River and it would make the town accessible from any direction for emergency vehicles, transports and tourists.

ATTENTION	VICTORIA COUNTY	Note and File
		Discuss With
	RECEIVED	Please Answer
		Return to M.
COPIES TO	JUL 19 2000	Please Respond

Your comments will be kept on file for use during the study and may be ~~included in study documentation~~. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them ~~(by July 14, 2000)~~ to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

The Bridge MUST be built on the proposed site.

The comfort of millions of drivers is more important than that of a few with mostly imaginary reasons to object.

ATTENTION	VICTORIA COUNTY	Note and File
	RECEIVED	Discuss With
		~~Please Answer~~
		~~Note & Return to Me~~
COPIES TO		Investigate & Report
	JUL - 7 2000	Take Appropriate Action
	ROADS DEPARTMENT	File

[redacted]

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
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e-mail: pjseaton@countyofvictoria.on.ca

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Who will pay for this. - Victoria County will be disolved, leaving tax payers of Lindsay to foot the bill!

Pollution namely Carbon Monoxide floating down on [redacted]

Traffic lights produce more pollution. Has the Ministry of Health been notified concerning the Residence on [redacted]

The original Environmental Assesement did not take into account traffic increases on Colborne St. due to the construction of the new PRISON!

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

From: Mr. Stan Kalosza
14 Francis St.
Lindsay Ontario
K9vV 3R6

July 13/2000

Mr J. Seaton
County Engineer
Victoria County

Dear Sir:

Re: Colborne St. Bridge

I am a resident at [redacted]. Lindsay and am writing this letter of objection for the proposed Colborne St bridge. To begin with I did attend the information session at the County Administration building on June 27/2000 to view the proposal . I was some-what puzzled to find there was no formal question and answer period that all in attendance could participate in a group as a whole. This in my opinion prevented the residents from hearing what one another had to say about the bridge resulting in both confusion and more than likely the same question being asked once . rather than another question which had not being asked. I also understood that there was to be alternate bridge designs on display but found only one being displayed.

Also the consultants of the firm Cole Sherman and Associates could not at many times answer questions presented by residents . The answers to these questions were important to the citizens and myself and on many occasions found the Consultants either could not answer them as they did not have enough information at the time or tried to avoid the questions entirely

I also wish to question who or what group of persons came up with the figure of 26800 vehicles per day who use the Lindsay St bridge and the Wellington St bridge would necessitate the construction of another bridge. How does this number come into play ? It has also been mentioned that the "failure of an intersection " would also warrant construction of a new bridge. What in your word constitutes failure. I understand it to be if one has to wait more than 2 cycles of lights before passing through an intersection this constitutes an intersection failure. I myself do not feel this wait to be an inconvenience. I must also question who provided you with the traffic counts and perhaps some more raw data into actual times and dates these counts were performed on.

I would also like to bring to your attention that I can only see an increase in traffic along Colborne Street . You will be creating a major East West corridor through town which can only increase traffic not decrease traffic. I'm sure you do not have to be reminded that there are numerous schools along Colborne St. both east and west of the river and this would most definitely be a SAFETY hazard for all children using Colborne. Is safety not your number one concern above all other issues related to the building of the bridge ? My children always leave the house with my comment to have a "good and a safe day " above all else, and you have not as of yet demonstrated to me that this is your prime concern.. I can visualize cars traveling eastward along Colborne St . with their only concern in mind be to "beat the lights" at Colborne and William St. resulting in speeding along Colborne St.

And if one was heading downtown to the Lindsay St and Kent St. area and observed cars stopped at Lindsay and Colborne I would tend to think one would start making right turns at Victoria and Cambridge Streets and then turning left at Francis and Bond Streets to by-pass the lights at Colborne and Lindsay. This again creates another SAFETY hazard for children playing or walking in those areas.

I bought a house on Francis St for the peace, and safety it presents for both my wife and children and I feel that this will all be forfeited with the construction of the new bridge.

This is not mentioning the fact that the value of my house could possibly drop as a result increased Air Pollution, noise pollution , and traffic pollution all contributing to lowering the re-sale price of my house. This is all very ironic to me as I planned to retire in Lindsay and did not think that I would one day wish to sell my home because of the above mentioned items.

Will traffic lights be introduced at certain intersections along Colborne East from Angeline to William St. If so, this would certainly slow down traffic, but at the cost of more noise and air pollution to the residents of the general area. Again the "beat the light" syndrome would surely develop resulting in speeding cars along the route and thus prevent the residents of their right to a generally quiet, and safe area for living

The Residence of William Street although faced with the same problems as listed above will most certainly experience the most suffering. We both know that excessive levels automobile produced pollutants can only cause increased levels of poor health among its inhabitants. This is fact which I am sure you do not wish to refute. Their enjoyment of their location close to the river will surely be destroyed by the bridge. I for one have always treated senior citizens with the utmost respect with regards to their latter years in life and to erect a bridge directly beside their home is certainly not only a disgrace to them but an even greater discredit to yourself for not ensuring their general health and longevity. I would have to say that further study is required on this topic as I cannot accept this requirement was met in the previous environmental assessment.

In ending I wish to lodge my objection to the construction of the Colborne St bridge based on the above facts and that the previous environmental assessment of 1994 does not meet with todays requirements.

Mr. Seaton, you have a most beautiful and enjoyable town in which to live providing a true country atmosphere rich in both heritage and warm thoughts from its citizens. My wife is constantly remarking to me on how much she enjoys living here and hopes we never have to move. I remark back to her with "Lindsay is truly one of the most last discovered secrets left in Ontario" and that it a most satisfying pleasure to live and raise my family here. Mr Seaton please do not create another Markham here.

Respectfully,

[redacted]

Appendix C.2 – Correspondence with Carew Apartments and Residents on the River Senior's Apartments

Memorandum

Date:	August 21, 2000
To:	File
From:	[redacted]
Project No.	CN20800026
Subject:	**Site Meeting at** [redacted]

Met with [redacted] property manager for [redacted] Information obtained:

- Three buildings with a total of 162 units
- Southern most building has 50 units (42 one bedroom and 8 two bedroom)
- Parking for three buildings is divided on the lot. For the southern building, there are 41 tenant parking spaces plus 8 visitor spaces. 11 of the spaces in the southern lot provide outlets for block heaters.
- All three buildings are fully occupied.

URS COLE, SHERMAN
a member of the URS group of companies

Facsimile

Date: August 18, 2000 | Project No. CN20800026

To: [redacted] | From: S. Thorburn

Firm: [redacted] | Transmitted by:

Fax. No.: [redacted] | Page 1 of 1

Subject: Scugog River Bridge

MESSAGE:

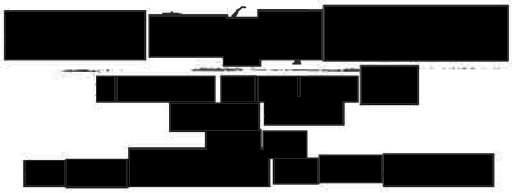
Further to your August 10, 2000 letter, I will be in Lindsay on Monday August 21, 2000 and would be pleased to meet with you and the owners so that your comments can be included in the Addendum prior to filing.

I propose we meet at 11 am in the County Offices (Mr. Seaton) will confirm the availability of a meeting room. If we need to change the time, please call Mr. Seaton's office as soon as possible to reschedule.

Cole, Sherman & Associates Limited
75 Commerce Valley Drive East
Thornhill, Ontario L3T 7N9
tel. 905-882-4401 fax. 905-882-4399
www.colesherman.com

☐ *Original will follow by mail*

L:\PLANNING\CN20800026\Documents\letters and faxes\Carew.doc



August 10, 2000

Scott Thornburn
Cole, Sherman Consulting Engineers
75 Commerce Valley Drive East
Thornhill, Ontario
L3T 7N9

Dear Mr. Thornburn

Following our telephone conversation this morning, I indicated scheduled vacations posed difficulties setting a meeting time.

The Owners and Management of [redacted] ***do*** wish to have their comments included in the Addendum and were very concerned to learn your time frames were so tight as to not accommodate the scheduled two-week vacations. Since you indicated that the filing process would proceed without this meeting I will make myself available, Monday August the 21 for such purposes.

Sincerely

[redacted]

Call back August 14th
- mail box full.

c.c. [redacted]

Ministry
of the
Environment

2 St. Clair Ave. West
Toronto ON M4V 1L5

Ministère
de
l'Environnement

2, avenue St. Clair Ouest
Toronto ON M4V 1L5

Ontario

July 19, 2000

[redacted]

Dear [redacted]:

I am responding on behalf of the Minister of the Environment, the Honourable Dan Newman, to your letter of July 6, 2000, regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

The County of Victoria is in the process of preparing an addendum to its Environmental Study Report as required by the conditional bump-up denial imposed on the proposal in 1994. When completed, a Notice of Filing of Addendum will be issued and the addendum will be available for public and government review for a minimum of thirty days. During this time, any member of the public or government agency may request that the status of the proposal be elevated (bumped-up) to an individual environmental assessment.

I encourage you to contact the County of Victoria to discuss your concerns. If your concerns remain at the end of the planning process, you may submit a request for a bump-up at that time.

If you have any questions, please contact Ms. Catherine McLennon of this branch at (416) 314-7222.

Thank you again for your letter regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Yours sincerely,

for Dave Stuart

Michael J. Williams
Director
Environmental Assessment & Approvals Branch

c: Mr. Jeffrey Seaton, County Engineer, County of Victoria

[redacted]

68734

The Honorable Dan Newman
Minister of the Environment
135 St. Clair Avenue West
12th Floor
M4V 1P5

July 6, 2000

Dear Mr. Minister:

I am appalled at what appears to be a flagrant abuse of the Class EA process with respect to the proposed crossing over the Scugog River at Colborne Street in Lindsay, Ontario. When this bridge was originally proposed in 1994, the County of Victoria was advised by your Ministry that certain conditions *had* to be *fulfilled prior* to implementation of Phase 2 of the process. Specific conditions were imposed by a previous Minister of the Environment and are as follows:

> Prior to the implementation of Phase 2 the proponent is to ensure that the preferred alternative is evaluated and documented based on the existing environment, public agency input, anticipated environmental effects, in particular the social and economic impacts of phase 2 on the surrounding environment, and methods of minimizing negative effects and maximising positive effects. This information will be compiled in an addendum.
>
> This addendum is to be made available for review by government agencies and the public for a minimum of 30 days following the issue of the Notice of Filing Addendum.
>
> Prior to proceeding with phase 2 of the undertaking the proponent shall publish a public notice advising that the traffic thresholds have been realized and phase 2 will be initiated. At this time the public will be invited to comment on the detail design and construction of the Colborne Street bridge.

After a complete and accurate assessment of all aspects of the environment is undertaken, it will become blatantly apparent, to everyone, that the Colborne Street Crossing is not a preferred alternative. The environmental impacts are too great. Where, Mr. Minister is

this assessment? I have not seen the required addendum. Where is the economic assessment on my business?

As the owner of the [redacted], I was incensed to learn from my property manager that detailed drawings of the proposed crossing were presented at the public consultation session. It appears the County of Victoria is trying to complete the detailed drawings of the bridge before documenting the impacts to the environment in an addendum. You can clearly see (from the above excerpt) that this course of action cavalierly disregards the conditions imposed by your predecessor.

Further, during this sham of a "public consultation" my property manager had to *ask* for copies of the drawings indicating the placement of the bridge. Why was information so essential to the operation of my buildings and to the lives of the two hundred families who live there not forthcoming?

To add insult to injury, the drawings of the proposed bridge indicate that there is considerable encroachment on my property. Why was I not informed of this intent? Does this mean that the County intends to acquire my property, against my will, for a bridge that is not needed?

Mr. Minister, I believe that the Town of Lindsay opposed this crossing in 1993/94 on environmental grounds and passed a motion to that effect. I and others believe in following processes - particularly when they are designed to safeguard the rights of citizens and protect the environment. Why has the Ministry of the Environment not fulfilled its obligation to the people of Lindsay by ensuring that the conditions imposed are carried out? If the County does not abide by these conditions, should they not be required to start this bridge proposal from square one and do it properly?

The process conducted to date has degenerated into a disgusting sham. Mr. Seaton, the Country engineer, was quoted in the Lindsay newspaper as saying that this bridge *will be constructed.* Mr. Minister, please ensure that the EA process and the conditions imposed operate in a manner that is both faithful to the mandate of the Ministry of the Environment and respectful to the people of Ontario.

Yours truly,

[redacted]

CORPORATION OF THE
COUNTY OF VICTORIA

ADMINISTRATION BUILDING
26 Francis Street
P.O. Box 9000
LINDSAY, Ontario
K9V 5R8
Telephone: (705) 324-9450 (Ext. 272)
Fax: (705) 324-1750

TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
P. Jeffrey Seaton, B.A.Sc., P. Eng.
Road Superintendent
and County Engineer

ST

August 21st, 2000

[redacted]

Dear [redacted]

Re: Colborne Street Bridge

Further to your letter of August 8th, 2000 relative to this project, I have provided a number of specific answers below and indicated that others can be found in the Addendum to the 1994 ESR to be released August 28th, 2000. A copy of that document will be sent upon finalization.

With regard to "substantial compensation" as referenced in your letter, the County is prepared to mitigate where reasonable and to purchase/replace certain lands from the Carew Apartments property. Where no property is required (Residence on William Street) we will be guided by the Expropriations Act regarding injurious affection. I am also prepared to "cost out" various reasonable mitigations; i.e. the terraced retaining wall and offer cash in lieu.

Q&A:

1. (a) Yes, Lindsay Daily Post – June 20th, 2000 and Lindsay This Week – June 20th, 2000.

2. (a) Yes, in terms of the traffic trigger, the ESR itself presents a package for review that is the "technical justification".

(b) No additional traffic counts were made by Cole Sherman.

(c) See attached. Traffic actuated sensor (axle count ÷ 2),

(d) No.

3. Intended to be released next week (August 28th, 2000).

4. We are proposing a 50-day public review period. The detailed design phase is subject to the Class EA process being completed. Construction in Spring 2001 is best current estimate.

5. Conceptual estimates are $3.0 million, excluding property. If Federal/Provincial Infrastructure program develops and we qualify – assume $2 million external and balance on tax rate (likely spread out over 2 years). If no COIW program applies, our 5 year capital plan shows it as a 100% local cost in 2003-2004.

6. See earlier. Market value where land taken. Injurious affection as defined – subject to ongoing negotiations.

7. County Council has an approved budget for 2000 that includes the ESR and design funds. The Transition Board is working on the City's 2001 budget and may make it part of their recommendation to the new City Council. Ultimately the decision to fund the construction in 2001 or later is the new City Council.

8. Yes, see Table 6 of ESR (draft).

9. We have approval from Trent Severn to design a bridge with a specified navigational clearance. When detailed information is available we will submit that design for approval under Section 5 of the Navigable Waters Act. I anticipate that that will occur in January – March of 2001.

I am,

Yours truly,

P. Jeffrey Seaton, P. Eng.
County Engineer

PJS/keo
Encl.

c.c. Cole Sherman

MILLER THOMSON LLP

Barristers & Solicitors

Markham Toronto Edmonton Calgary
Washington D.C.

600 60 Columbia Way
Markham, ON, Canada L3R 0C9
Tel 905 415 6700
Fax 905 415 6777
www.millerthomson.ca

Direct Line 905 415 6710
E-mail: jbdeall@millerthomson.ca

August 8, 2000

P. Jeff Seaton, P. Eng.
County Engineer
County of Victoria
26 Francis Street
P.O. Box 9000
LINDSAY ON K9V 5R8

Dear Mr. Seaton:

Re: Proposed Colborne Street Bridge

We are retained by [redacted] and by the owner of the [redacted] to assist them with respect to the County's proposal to construct a new bridge over the Scugog River at Colborne Street in the Town of Lindsay.

As you know, the [redacted] is located at the [redacted] while the [redacted] are located [redacted]. Both of our clients' properties would be significantly impacted by the proposed bridge. We have been instructed by our clients to put the County on notice that both of them expect to receive substantial financial compensation if the project proceeds.

In order that we may properly advise our clients, we would also appreciate receiving answers to the following questions:

1. The Minister's July 14, 1994 letter denying the bump-up request required that the County publish a notice advising the public that traffic thresholds have been realized and phase 2 will be initiated.

   (a) Was the "Notice of Public Consultation Centre" for the June 27, 2000 public meeting intended to comply with that condition?

   (b) When and where was the Notice published?

MILLER THOMSON LLP

2. You previously provided to one of our clients a January 17, 2000 Memorandum from Cole, Sherman entitled "Threshold Evaluation for Scugog River Crossing".

   (a) Is the January 17 Memorandum intended to be the technical justification for proceeding with the Colborne Street Bridge project?

   (b) Did Cole, Sherman carry out any of the traffic count work, or have they simply summarized information provided to them by the County?

   (c) Can you provide copies of the information provide to Cole, Sherman by the County? If not included in that information, can you advise as to the dates on which "periodic counts" were conducted by the County and the methodology employed?

   (d) Are there any other data, studies or reports on which the County relies to confirm that one or both of the thresholds have been realized? If so, can you provide copies?

3. What is the status of the ESR Addendum? If the Addendum is not yet available, can you provide a copy of the consultants' terms of reference?

4. What is the current schedule for the Notice of Filing of Addendum, the Addendum review period, detailed design and construction?

5 What is the estimated cost of the bridge? How is it proposed that the project will be funded? Is the project dependent on federal and/or provincial infrastructure funding?

6. What compensation does the County propose to pay to the owners of properties impacted by the new bridge?

7. Will the necessary decision to proceed with the bridge project be made by the current County Council or will those decisions be deferred to the Council of the City of Kawartha Lakes?

8. Will the County need to acquire lands not currently in public ownership in order to construct the Colborne Street bridge?

9. Has the County obtained approval under section 5 of the *Navigable Waters Protection Act* to construct the bridge? If not, what is the proposed timing of such an application?

[redacted]

We would appreciate answers to these questions as soon as possible.

Yours very truly,

[redacted]

Ministry
of the
Environment

2 St. Clair Ave. West
Toronto ON M4V 1L5

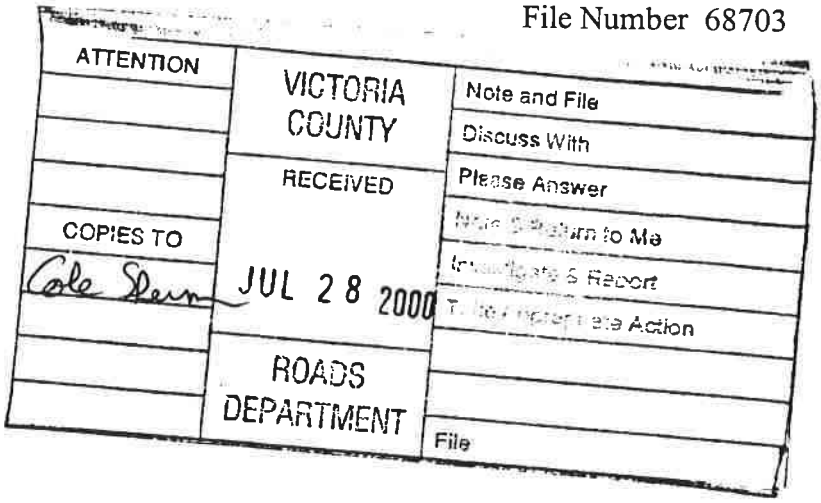
Ministère
de
l'Environnement

2, avenue St. Clair Ouest
Toronto ON M4V 1L5

Ontario

File Number 68703

July 19, 2000



[redacted]

Dear [redacted]

COPY

I am responding on behalf of the Minister of the Environment, the Honourable Dan Newman, to your letter of July 7, 2000, regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

The County of Victoria is in the process of preparing an addendum to their Environmental Study Report as required by the conditional bump-up denial imposed on the proposal in 1994. When completed, a Notice of Filing of Addendum will be issued and the addendum will be available for public and government review for a minimum of thirty days. During this time, any member of the public or government agency may request that the status of the proposal be elevated (bumped-up) to an individual environmental assessment.

I encourage you to contact the County of Victoria to discuss your concerns. If your concerns remain at the end of the planning process, you may submit a request for a bump-up at that time.

If you have any questions, please contact Ms. Catherine McLennon of this branch at (416) 314-7222.

... 2

Thank you again for your letter regarding the proposed Colborne Street Bridge across the Scugog River in the Town of Lindsay.

Yours sincerely,

for Michael J. Williams
Director
Environmental Assessment & Approvals Branch

c: Mr. Jeffrey Seaton, County Engineer, County of Victoria

[redacted]

68703

The Honorable Dan Newman
Minister of the Environment
135 St. Clair Avenue West
12th Floor
Toronto, Ontario
M4V 1P5

July 7, 2000

Dear Mr. Minister:

I am deeply concerned by the manner in which the rights of residents of the Town of Lindsay are being violated in connection with the proposed Colborne Street Bridge across the Scugog River. This bridge was originally proposed in the early 1990s and was opposed by the Town of Lindsay and numerous community stakeholders on environmental grounds.

[redacted] brought a number of issues to the attention of the Ministry of Environment in 1994, clearly indicating that the social and economic environment had not received an adequate assessment. The then Minister of the Environment recognized this deficiency and imposed a number of conditions that the proponent, the County of Victoria, had to fulfill. The conditions are very clear. One of the conditions is excerpted below:

> *Prior to the implementation of Phase 2 the proponent is to ensure that the preferred alternative is evaluated and documented based on the existing environment, public agency input, anticipated environmental effects, in particular the social and economic impacts of phase 2 on the surrounding environment, and methods of minimizing negative effects and maximizing positive effects. This information will be compiled in an addendum.*
>
> *This addendum is to be made available for review by government agencies and the public for a minimum of 30 days following the issue of the Notice of Filing Addendum.*

Mr. Minister, it is obvious that the proponent has *not fulfilled these requirements*, since an addendum has not been completed. In fact, the community was led to believe that other alternatives would be rigorously evaluated when it became apparent that it is preposterous to place a bridge on Colborne Street. Placement of a bridge at this location would divert truck traffic through a residential neighborhood characterized by four schools, various seniors' apartments, churches and our retirement residence. Further, the economic impacts on the [redacted] have not been assessed.

[redacted]

July 7, 2000

The residents at the [redacted] have a *right* to the use and enjoyment of the outside facilities. Any proposal for a bridge at this location would be disruptive and disturbing to our residents. A bridge would completely obstruct the view of the riverside parks from the [redacted]. The increase in traffic, particularly truck traffic, created by more vehicles choosing to take this proposed new route, would create an unacceptable increase in noise, air emissions and dust. This would permanently affect the use and enjoyment of the outdoor facilities, seriously erode the quality of life and detrimentally affect the health and safety of the residents living at the [redacted]

The concerns of the residents of the Town of Lindsay deserve to be considered in a rigorous and thorough evaluation process – not in the piecemeal, *ad hoc* way they were addressed at the recent public consultation session. No attempt has been made by officials from the County of Victoria to assess the special concerns and needs of the fragile population of seniors who live at the [redacted]. The comment sheets were not even printed in larger print for residents with visual problems and written information was not available for use by the hearing impaired.

It is one indignity after another. Is the County of Victoria trying to prevent our residents from participating in the Class EA process? It was only as the result of a direct request from our administrator at the [redacted] that Mr. Seaton, the County Engineer, agreed to meet with our residents. We recognize that Mr. Seaton is not obligated, under the Class EA process, to hold another meeting. Surely, however, the County of Victoria was aware that in order to assess the environmental impacts of the proposed bridge on the population which would be subjected to the most negative impacts (the residents at the [redacted]) accommodations would have to be made to ensure that our residents were not denied their right to participate in this process.

Mr. Minister, it appears as if the residents of Lindsay have to assume the oversight role to ensure that the conditions imposed by your Ministry are not ignored by a proponent. This, certainly, is not your intent.

The construction of a bridge in this area will place an unconscionable burden on the residents at the [redacted] This is the final home of these seniors, many of whom have helped build this community and contributed so much to this area. They deserve more consideration and respect in the decisionmaking process associated with this proposed bridge project.

July 7, 2000

Mr. Minister please ensure that the EA process operates in a manner that is consistent with the mandate of the Ministry of the Environment and respectful to the people of this province. Finally, we are requesting your intervention to guarantee that all the conditions imposed by your predecessor are complied with in a timely fashion.

Yours truly,

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

I NEED ENOUGH INFORMATION FOR A COMMENT AND ~~to~~ I HAVE NOT BEEN SUPPLIED WITH ANY HANDOUTS WE NEED a COMPLETE PACKAGE OF PROPOSED ALTERNATIVES FOR THE OWNERS PERUSAL

What is the new proposed response time for Fire + Medical

WILL REQUIRE COMPLETE PACKAGE

[redacted]

Provided At PIC
copies of access options (3)

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

County of Victoria

June 27, 2000 - Public Consultation Centre
For the Proposed Colborne Street Bridge across the Scugog River
In the Town of Lindsay

COMMENT FORM

Thank you for taking the time to provide us with feedback regarding the information presented at this Public Information Centre. If you require more space, please attach additional paper to this form.

Not all the alternative designs were presented. It is difficult to comment when only one design is presented.

No information was available to take home to review.

I appreciated the opportunity to meet the consultants + to talk with them and other residents.

I would have liked to have enough information to provide meaningful comment - I do not have this yet, but hope to by the deadline of July 14.
What is the impact on the river, the residents, the traffic patterns? How much does this cost?

Please send me a copy of the traffic counts Summer 1997 - Fall 1999 Thanks

Your comments will be kept on file for use during the study and may be included in study documentation. Names and addresses will be kept confidential.

[redacted]

Please leave your comment sheets in the box provided or mail/fax them (by July 14, 2000) to:

P. Jeff Seaton, P.Eng., County Engineer
County of Victoria
26 Francis Street, P.O. Box 9000
Lindsay, Ontario, K9V 5R8
Fax (705) 324-1750
e-mail: pjseaton@countyofvictoria.on.ca

Appendix D – Agency Correspondence

URS COLE, SHERMAN
a member of the URS group of companies

Facsimile

Date:	August 17, 2000	Project No.	cn20800026
To:	Jane Lunn	From:	Larry Lamontagne
Firm:	Town of Lindsay	Transmitted by:	
Fax. No.:	(705) 324-2051	Page 1 of	2
Subject:	Colborne St. River Crossing		

MESSAGE:

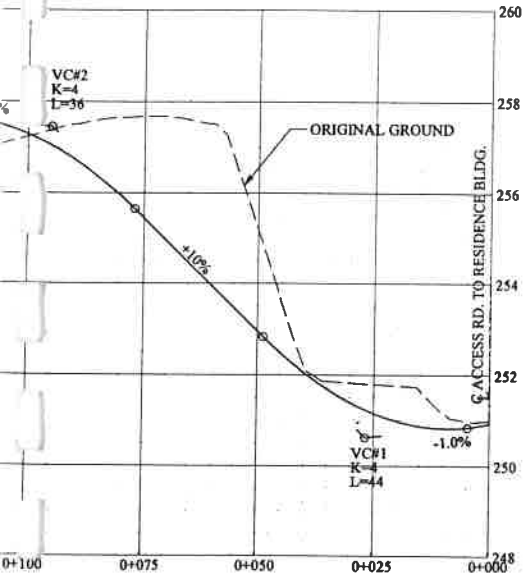
Attached are the profiles for the two access alternatives. Also I just wanted to comment on your response regarding the parking and drop-off area. The existing parking would be shifted south by approximately 40m due to the location of the proposed structure. A three meter path will route patrons from the parking lot to the park lands.

Thank you,

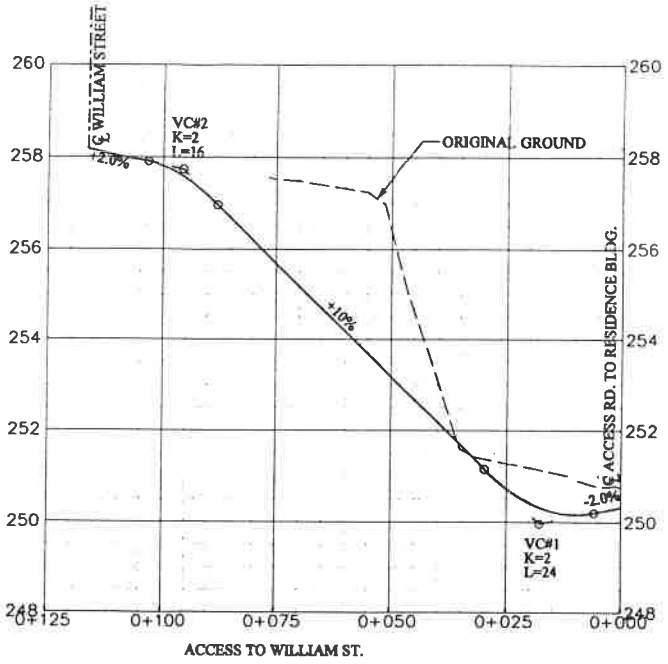
Larry

Cole, Sherman & Associates Limited
75 Commerce Valley Drive East
Thornhill, Ontario L3T 7N9
tel. 905-882-4401 fax. 905-882-4399
www.colesherman.com

☐ *Original will follow by mail*



ACCESS TO COLBORNE STREET



ACCESS TO WILLIAM ST.

SCALE H 1:100
V 1:50

Jane Lunn, R.D.M.R.
Director of Parks and Recreation
(705) 324-6171
Extension 307
Fax (705) 324-2051

Town of Lindsay
Parks and Recreation Dept
180 Kent Street West
Lindsay, Ontario
K9V 2Y6

August 16, 2000

Mr. Larry Lamontagne
Cole, Sherman
VIA FAX ONLY: 905-882-4399

Dear Mr. Lamontagne,

Thank you for your letter received August 16, 2000 proposing ramp access to William Street and requesting clarification with respect to vehicle access into Rivera Park. As I mentioned earlier, I will take this information forward to the Parks and Recreation Services Committee for direction and the clarification you requested.

In terms of the ramp access, it would be helpful to know grades to determine accessibility of your two proposals. With respect to the vehicle access, this is something I would want the Committee to comment on. My immediate impression is that they would want vehicle access directly into the existing parking area if possible to allow for drop-off of patrons to the Skylark VIII and for general parking. The Committee may view this differently.

In terms of the storm water management pond, it is appreciated that this would need to be addressed at a detailed design stage. It would still be my position that such design would occur through an accredited landscape architect familiar with the safety and aesthetic issues related to public park planning.

As noted, I will forward your letters on to the Parks and Recreation Services Committee and have a response back to you in September. In the event you have further information in terms of gradients for the ramps, this would be most helpful.

Yours truly,

Jane Lunn R.D.M.R.
Parks & Recreation Director

cc Parks and Recreation Services Committee
Garry Dumas

URS COLE, SHERMAN
a member of the URS group of companies

Facsimile

Date:	August 11, 2000	Project No.	CN208000026
To:	Jane Lunn	From:	Larry Lamontagne
Firm:	Town of Lindsay	Transmitted by:	
Fax. No.:	705-324-2051	Page 1 of	3
Subject:	Colborne St. River Crossing		

MESSAGE:

Please see the attached letter and figure.

Cole, Sherman & Associates Limited
75 Commerce Valley Drive East
Thornhill, Ontario L3T 7N9
tel. 905-882-4401 fax. 905-882-4399
www.colesherman.com

☒ *Original will follow by mail*

L:\PLANNING\CN208000026\Documents\letters and faxes\JANELUNNFAX.doc

URS COLE, SHERMAN
a member of the URS group of companies

Ms. Jane Lunn, R.D.M.R.
Town of Lindsay
Parks and Recreation Department
180 Kent Street West
Lindsay, Ontario
K9V 2Y6

Dear Ms. Lunn:

Re: Colborne Street River Crossing

In response to your fax dated July 28, 2000 this letter is to address your concerns with our design.

In regards to vehicular access into Rivera Park, we are lacking digital and survey information north of Sinister Creek and cannot conceive a proper access plan. Although we do need clarification on the type of access required into Rivera Park (e.g. vehicles to access and park for the Skylark II boat tours, grass cutting vehicles etc.). This will also help us with the planning of the parking on the south-east side of the bridge and to help provide pedestrian access from the north and the south to Rivera Park from Colborne Street.

As for the storm water management ponds, they were not part of the original ESR but the Conservation Authority has since required the installation of the ponds. The aesthetics of the pond are to be discussed with the County and dealt with at the detailed design stage.

There are a couple of options for "accessible access" from William Street down to the park properties. One is to provide a ramp alongside the stairs on the north-west side of the structure. The other would run along one of the roads that have been proposed to join the road that runs in front of the Carrew Apartments; one connecting to William Street and the other connecting to Colborne Street (Figure A).

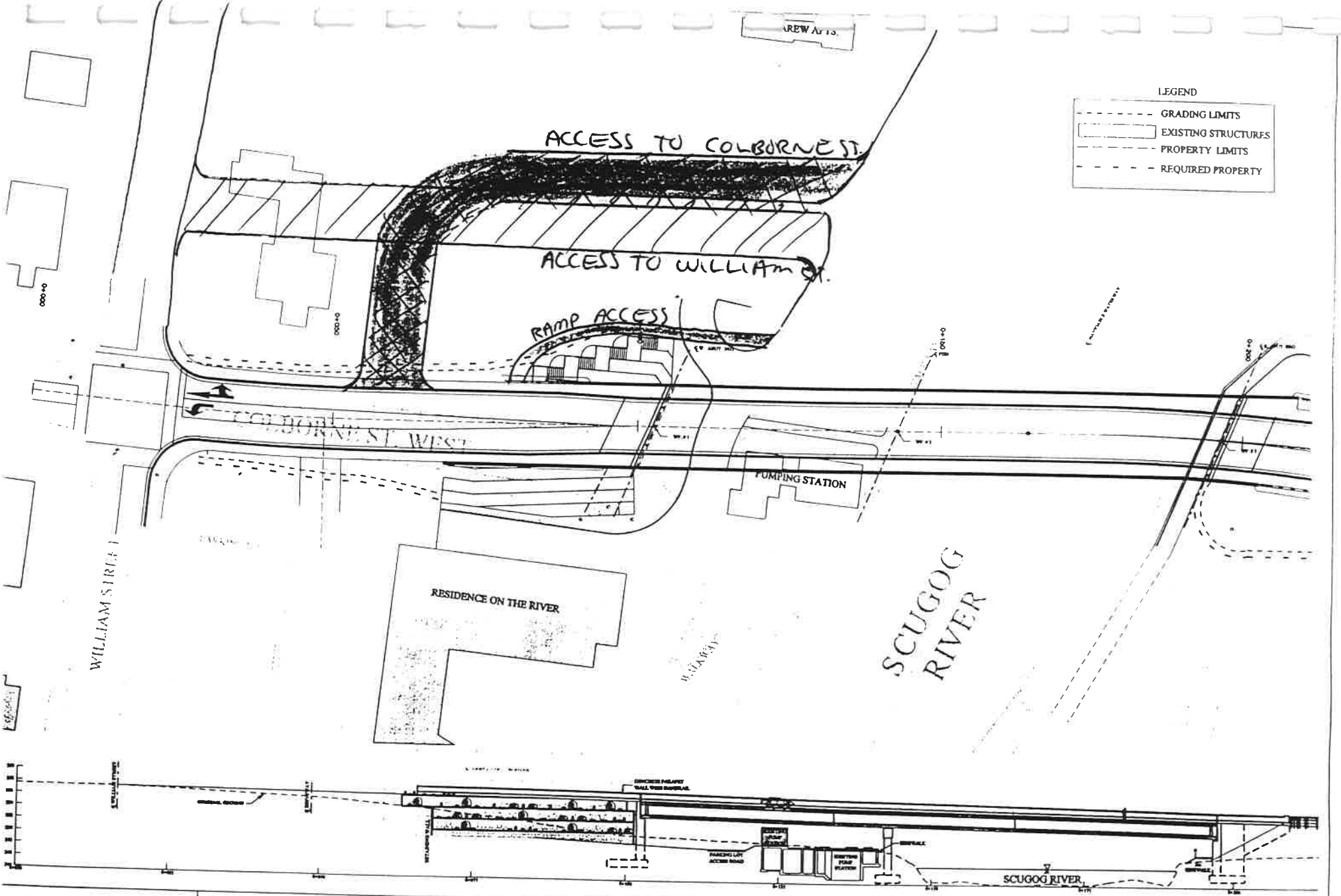
If you have any questions or concerns please feel free to contact me.

Yours very truly,

COLE, SHERMAN & ASSOCIATES LIMITED

Larry Lamontagne
Engineering Technologist

Cole, Sherman & Associates Limited
75 Commerce Valley Drive East,
Thornhill, Ontario L3T 7N9
tel. 905-882-4401 fax. 905-882-4399
www.colesherman.com



COLE, SHERMAN

14, 2000 11:13:53

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

PLAN AND PROFILE

DESIGN	SCALE N.T.S.	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	

Jane Lunn, R.D.M.R.
Director of Parks and Recreation
(705) 324-6171
Extension 307
Fax (705) 324-2051

Town of Lindsay
Parks and Recreation Dept.
180 Kent Street West
Lindsay, Ontario
K9V 2Y6

June 20, 2000

Mr. Larry Montagne
Cole, Sherman & Associates
75 Commerce Valley Drive East
Thornhill, ON L3T 7N7
(via regular mail and fax: 905-882-4399)

Dear Mr. Montagne,

Re: Colborne Street River Crossing – Lindsay

Thank you for providing the plan and profile for the above project. I trust you received my earlier fax dated June 6, 2000 which provided you with a copy of the Lindsay Street Re-alignment Agreement (between the Town and the County) and how it relates to this project. Based upon a review of your plans in the context of the referenced Agreement, I would note the following comments:

- The minimum navigational clearance of 4.5 metres has been met in this plan (I understand the Skylark staff have also reviewed these plans and are comfortable with it understanding the bridge height will be comparable to the Wellington Street bridge).
- Pedestrian walkways under the bridge and beside the water are indicated on both sides of the river. I trust the outlined width meets the minimum 3 metres requirement as per the Agreement. I would also anticipate there would be some sort of barrier between the walk and the river for safety reasons. I also anticipate the slopes of the pathway are likely exaggerated on the current diagram and they will be relatively level to provide ease of access to pedestrians.
- The design does not appear to show pedestrian stairways on the north and south side of the bridge to allow access to the bridge/road from the parklands. We would also want to have pedestrian access from the riverfront trail to Colborne street on the west side of the river as well. (One access point similar to Wellington Street bridge would be sufficient).
- The river-crossing is also to provide for vehicular access to Rivera Park which is on the north side of the bridge. This is currently deficient on your plans.
- At such point as you prepare more detailed drawings, we will also be interested in the grades

and materials to be used on the lands abutting the parklands, anticipating that these lands would need to 'fit in' and be maintained to a park standard.

I have copied Mr. Seaton at the County understanding that he is managing a public meeting process on this project to ensure that he is also aware of our comments and concerns on this matter. Please call if you have any questions regarding our input into your designs. Otherwise, we look forward to reviewing further plans and details on this project.

Yours truly,

Jane Lunn, R.D.M.R.,
Parks & Recreation Director

cc. Parks and Recreation Services Committee
Garry Durnan, Parks & Open Space Manager
Trevor Lewis, Director of Development Services
P. Jeffrey Seaton, County Engineer

Jane Lunn R.D.M.R.
Director of Parks and Recreation
(705) 324-6171
Extension [illegible]
Fax (705) 324-2051

Town of Lindsay
Parks and Recreation Dept
180 Kent Street West
Lindsay Ontario
K9V 2Y6

June 6, 2000

Mr. Larry LaMontaine
Cole Sherman
VIA FACSIMILE ONLY 1-905-882-4399

Dear Mr. LaMontaine,

Re: Colborne Street River Crossing – Lindsay

Further [illegible] our telephone conversation, attached please find relevant excerpts of the Agreement I [illegible] relating to the re-alignment of Lindsay-Colborne Street, which also addressed [illegible] lating to the parkland and the bridge. In particular, I would bring to your [illegible] *e 13 of the Agreement* which indicates the County has agreed to provide a walkway under the bridge with minimum width requirements, pedestrian access to the bridge and vehicle access into Rivera Park (north park area).

As I also mentioned to you, we of course also have an interest in the design on the west side of the river where a riverfront trail also exists. I understand you will be forwarding me preliminary plans which I look forward to reviewing. If you have any questions with respect to the document attached, please feel free to call.

Yours truly,

Jane Lunn, R.D.M.R.
Parks & Recreation Director

cc John McCormack, CAO
Parks and Recreation Services Committ[illegible]

FWISNER

FAX to LIZA GERVAIS CJA.

3. Based on the above, it is considered that flood control for 50 year protection without overflow of the highway as proposed in the previous reports will result in significantly higher costs and a review by the approval agencies.

A preliminary analysis of risk management is included in Appendix 2 for discussion with MTO. Regardless of the option selected, it is always possible that some overtopping may occur and minimizing overflow depths and traffic impacts should be considered. Thus, risks related to highway overflow have to be reviewed and mitigation by improving the major system, as analyzed by McCormick and discussed in Appendix 3, should be implemented after review by the design team.

Yours very truly,

COLE, SHERMAN & ASSOCIATES LTD.

We may discuss with RD these conclusions.

Brian Hurd, P.Eng.
Project Manager

Liza Gervais, P.Eng.
Water Resources Engineer

Paul Wisner, Ph.D., P.Eng
Water Resources Advisor

LG
Enclosure

THEN ~~WE~~ ASSUMED ~~FROM~~ PREVIOO STUDY
4. ~~WE~~ SIMPLE MAXIMUM LEVEL GAGE
TO BE INSTALLED TO PROVIDE A REALISTIC
BASIS FOR THE ~~RISK IS REQUIRED~~
CONCLUSION A REVIEW OF RISK IN 5-10 YEARS.

---

1. ~~SINCE THE~~ NON CALIBRATED MODEL
~~MAY~~ OVERESTIMATE THE PEAK
FLOWS ~~AND~~ IT CAN BE USED TO ~~R~~ LOW COST
MAJOR DRAINAGE SYSTEM IMPROVEMENTS
TO REDUCE PONDING DEPTH ~~FOR~~ RARE STORMS
2. HIGH COST SOLUTIONS SUCH AS SIGNIFICANT
DOWNSTREAM IMPROVEMENTS ANT CNR
CULVERT TWINNING MAY REQUIRE A STUDY
PROGRAM APPROVED BY ~~RCA~~ AND SHOULD BE
~~BASED~~ ON A MORE REALISTIC MODEL

THIS AGREEMENT made this 30th day of January, 1998 amongst

THE CORPORATION OF THE COUNTY OF VICTORIA
(hereinafter called the "County")

OF THE FIRST PART

and

THE CORPORATION OF THE TOWN OF LINDSAY
(hereinafter called the "Town")

OF THE SECOND PART

and

THE BOARD OF PARK MANAGEMENT
FOR THE TOWN OF LINDSAY
(hereinafter called the "Board")

OF THE THIRD PART

WHEREAS

1. The County has jurisdiction over those highways affected by this Agreement, being Lindsay Street North and Colborne Street East.

2. The County now owns, or is in the process of acquiring, those lands shown illustrated as Parcels 2, 4, 5, 7 and 8 upon the Drawing entitled *Existing Lindsay Street North Alignment* Plan I, prepared by P. Furniss and dated November 14, 1997, a copy of which Drawing is annexed hereto as Schedule I.

3. The Town now owns those lands which abut the said Lindsay Street North and Colborne Street East shown illustrated as Parcels A and B on the said Schedule I above referred-to.

4. Control and management of parkland owned by the Town being vested in the Board, the Board is executing this Agreement to acknowledge and confirm its consent to all such provisions as are herein contained that might in any way be deemed to fall within or affect the jurisdiction of the Board.

5. It is deemed mutually beneficial to the County and the Town, both in the interest of public safety and for the purpose of consolidating the holdings of both the Town and the County in the vicinity of the intersection of Lindsay Street North and Colborne Street East, for the said Lindsay Street North to be re-aligned.

6. The County and the Town have therefore agreed, on the terms and conditions of this Agreement, to proceed with the re-design and re-alignment of the said Lindsay Street North.

IN CONSIDERATION of the mutual covenants expressed and other good and valuable consideration, THE PARTIES AGREE AS FOLLOWS:

Re-alignment

1 The County agrees to re-align that portion of Lindsay Street North substantially as shown illustrated upon the Drawing entitled Proposed Lindsay Street North Re-alignment Plan II prepared by P. Furniss and dated November 14, 1997, a copy of which Drawing is annexed hereto as Schedule II.

8. The parties agree that the construction of the Lindsay Street North re-alignment and the transfer and exchange of lands as above provided for shall be completed no later than December 31, 1999.

9. The parties agree that the conveyances by each of them as contemplated in this Agreement are conditional upon each such party complying with the procedures required by that party's By-law governing the sale and disposal of Real Property.

Future River Crossing

10. In the event that the County should at some future date come to construct a river-crossing at Colborne Street, the County agrees that, in conjunction with the construction of such river-crossing, it will further re-construct the new intersection of Lindsay Street North and Colborne Street East substantially as illustrated upon the Drawing entitled *Proposed Lindsay Street North Re-alignment* Plan III, prepared by P. Furniss and dated November 14, 1997, a copy of which Drawing is annexed hereto as Schedule III.

11. In the event that the County should at some future date come to construct a river-crossing at Colborne Street, and accordingly should come to re-construct the new intersection of Lindsay Street North and Colborne Street East as provided for in paragraph 10 above, then, in contemplation of such construction, the Town shall transfer and convey to the County such part of the lands shown identified as Parcel 6 on the attached Schedule IV as may be required to ensure that the County obtains a minimum twenty-six (26) metre right-of-way for purposes of the re-aligned Lindsay Street North. In such event also, and at the same time, the County would transfer and convey to the Town those lands lying between the toe slope of the fill section and the adjoining Town lands, subject to the County's retaining a minimum twenty-six (26) metre right-of-way.

12. In the event that approval should, at some future date, come to be given for the County's constructing a river-crossing at Colborne Street, the Town and the Board agree that neither will object to any bridge so constructed having a minimum navigational clearance of four and one-half (4.5) metres.

13. In the event that the County should at some future date come to construct a river crossing at Colborne Street, the County shall be responsible for the plans, specifications, drawings and design of any such river crossing but hereby agrees that:

(i) any such design and construction will allow for a pedestrian walkway abutting the east side of the River, the width of which walkway shall be no less than three (3) metres. Any costs associated with the operation, maintenance and repair of such walkway would be the Town's responsibility.

(ii) any such design and construction will incorporate pedestrian stairways providing for direct access to the Town parklands on the east bank of the Scugog River abutting the bridge on both its north and south sides.

(iii) the design of the approach road for any such river-crossing will include provision for vehicular access to the Town's Rivera Park. The County shall not, however, be in any way responsible for any cost associated with the construction of any such means of ingress and egress to and from the said Rivera Park.

14. The parties acknowledge that the original location of Colborne Street as laid out on Registered Plan 15P and Registered Plan 1, both for the Town of Lindsay, differs from the location of Colborne Street as travelled, as illustrated upon the Plan of Survey prepared by William K. Coe Limited, Ontario Land Surveyors, and deposited in the Land Registry Office for the Registry Division of Victoria (No. 57) at Lindsay, Ontario as Reference Plan 57R-7758.

The parties agree that upon completion of the re-alignment of Lindsay Street North as provided for in this Agreement the County shall retain jurisdiction over the whole of Colborne Street as travelled, including the minimum twenty-six (26) metre right of way, and including but not limited to that portion of the said right of way which traverses the southerly portion of Part 1 on the said Plan 57R-7758.

Upon the completion of construction, in the event that the County should at some future date construct a river crossing at Colborne Street, the County will commence those steps necessary to stop up and close that portion of Colborne Street as originally laid out on Registered Plans 15P and 1 lying west of the new intersection with Lindsay Street North, south of the approach work as constructed, and north of those lands shown identified as Parcel 6 on the attached Schedule III. The

County will seek such authorization as may then be necessary to permit the County to transfer and convey to the Town for park land purposes the said portion of road so stopped up and closed.

The parties hereby acknowledge that the payment of all of the advertising costs associated with the closing and stopping up of the subject public highway and the sale of it will be the responsibility of the County.

The Town acknowledges that the Council of the County is obliged to give consideration to the proposal to close and sell the lands and to any objection thereto, to hear any person who claims his or her land will be prejudicially affected by the closure and sale, and to determine the matter on the merits without regard to this Agreement.

Consideration and Costs

14 The parties agree that all conveyances of land referred-to in this Agreement, if those conveyances are completed, shall be for nominal consideration.

Except as otherwise specifically provided for in this Agreement, the parties agree that each will be responsible for its own costs associated with the negotiation, preparation and execution of this Agreement and with the preparation and execution of such other documentation as may be necessary to give effect to the provisions herein contained.

Compliance

16 The parties acknowledge that the obligations contemplated by this Agreement are subject to compliance with all federal, provincial and municipal laws, rules, regulations and by-laws. The parties further acknowledge that the provisions of this Agreement shall not fetter the discretion of either the County or Town Councils in any way.

Schedules Forming Part of Agreement

17 The parties understand and agree that the following Schedules I, II, III and IV attached to this Agreement, are incorporated in and form part of this Agreement:

(a) Schedule I - *Drawing entitled Existing Lindsay Street North Alignment Plan I prepared by P. Furniss and dated November 14, 1997.*

(b) Schedule II - *Drawing entitled Proposed Lindsay Street North Re-alignment Plan II prepared by P. Furniss and dated November 14, 1997.*

(c) Schedule III - *Drawing entitled Proposed Lindsay Street North Re-alignment Plan III prepared by P. Furniss and dated November 14, 1997.*

(d) Schedule IV - *Drawing entitled Proposed Lindsay Street North Re-alignment Plan IV prepared by P. Furniss and dated November 14, 1997.*

Entire Agreement

18 This Agreement constitutes the entire agreement amongst the parties pertaining to the subject-matter hereof and supersedes all prior agreements, arrangements, understandings, negotiations and discussions, whether oral or written, of the parties pertaining to such subject matter.

Amendment

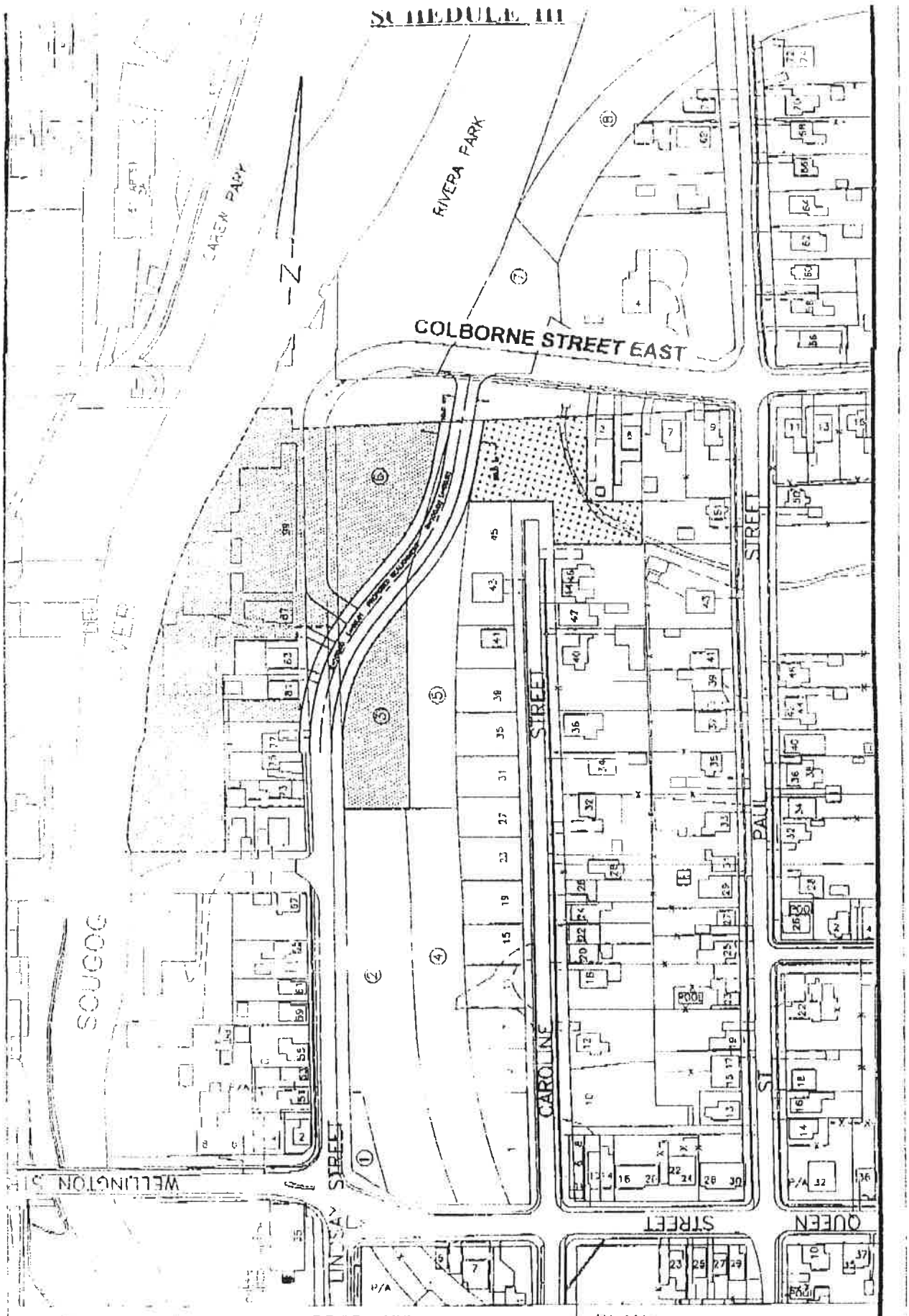
19 No amendment, supplemental or modification of this Agreement shall be binding unless executed in writing by the party to be bound thereby.

Waiver

20 No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision (whether or not similar) nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.

Future Assurances

21 The parties agree to do or cause to be done all acts or things necessary to implement and carry into effect this Agreement to its full extent.


SCHEDULE III
RIVERA PARK
COLBORNE STREET EAST
CAROLINE STREET
ST PAUL STREET
QUEEN STREET
LINDSAY STREET
WELLINGTON ST
SOUCOC
PROPOSED
LINDSAY STREET NORTH
RE-ALIGNMENT
DWG & DESIGN : P. FURNISS
DATE: Nov. 1st 1997
SCALE:
1 : 2000
PLAN:
III

Ministry of Citizenship, Culture and Recreation
400 University Avenue
Toronto ON M7A 2R9

Ministère des Affaires civiques, de la Culture et des Loisirs
400 avenue University
Toronto ON M7A 2R9

Ontario

Heritage and Libraries Branch
Heritage Operations Unit
Tel:(416)314-7132 Fax:(416)314-7175

16 June 2000

Leonard Rach
Project Manager
Cole, Sherman & Associates
75 Commerce Valley Dr. East
Thornhill ON L3T 7N9

RE: Proposed Colborne Street Bridge Across the Scugog River, Class Environmental Assessment, Town of Lindsay, Victoria County, MCzCR File 16EA003

A principal concern of this Ministry is the adverse effects that undertakings such as the above mentioned may have on cultural heritage resources. If a preferred alternative is determined to have the potential to have an impact on cultural heritage resources, then this office would recommend that a cultural heritage resource assessment be prepared as part of the Environmental Assessment. If any significant cultural heritage features are identified, then any negative impacts would have to be mitigated by either avoidance or documentation.

Consequently, this Ministry recommends that, subsequent to the finalisation of a preferred route, that the proponent carry out a cultural heritage resource assessment of the areas to be impacted by construction and mitigate, through avoidance or documentation, adverse impacts to any significant cultural heritage resources found. No demolition, grading, filling, or any form of soil disturbances, should take place in the areas proposed to be impacted prior to the issuance of a letter from the Ministry of Citizenship, Culture and Recreation indicating that all cultural heritage resource concerns have met licensing and resource conservation requirements.

It is recommended that a licensed archaeological consultant be retained to prepare an assessment (detailed determination of potential) of the areas to be impacted by construction that initially determines their need for further testing. Where such areas are determined to require further testing, a licensed archaeological consultant should carry out such work according to the standards outlined in this Ministry's Archaeological Assessment Technical Guidelines.

Cultural heritage resources include all resources or features of historical, architectural, or archaeological interest. All archaeological work must be performed by a licensed consultant according to this Ministry's Archaeological Assessment Technical Guidelines. The local LACAC

should be consulted concerning the historical background of the areas to be impacted and any heritage buildings that may be present.

Should you wish to discuss this matter further, please do not hesitate to contact me.

Sincerely,

John MacDonald
Heritage Planner

c. Jeff Seaton, County Engineer, County of Victoria

Ministry of Citizenship, Culture and Recreation
77 Bloor St W
Toronto ON M7A 2R9

Ministère des Affaires civiques, de la Culture et des Loisirs
77 rue Bloor O
Toronto ON M7A 2R9

Ontario

→ Terry
No Obj.
Thanks for info
[illegible]

Cultural Programs Branch
Archaeology and Heritage Planning Unit
Tel:(416)314-7146 Fax:(416)314-7175

RECEIVED JUN 25 1997 VICTORIA COUNTY PLANNING DEPT.

JUN 23 '97

12 June 1997

Municipal Works Department
Town of Lindsay
180 Kent Street West
Lindsay ON K9V 2Y6

RE: Recommendation for Clearance of Archaeological Resource Concerns, and Licensing Concerns, Colborne Street West Sewage Pumping Station and Colborne Street Forcemain Alignment Corridor, Town of Lindsay, County of Victoria

This office has reviewed the report prepared by Northeastern Archaeological Associates for the Stage 1/2 archaeological assessment of the above project. No archaeological resources were documented. The report recommmends that there are no further concerns. This office concurs with that recommendation.

Given the above, this Ministry is satisfied that concerns for cultural heritage resources have been met. If deeply buried cultural remains (including human remains) are discovered during construction activities, this office should be notified immediately.

This letter also acknowledges **review and approval for project 96-08 under licence 96-023** of the report entitled "Colborne St. Forcemain Alignment Corridor, Town of Lindsay" submitted to fulfil the requirements of the Ontario Heritage Act, R.S.O. 1990. If it has not already been done, two additional copies of the report should be submitted to the Archaeology & Heritage Planning Unit for archival purposes.

Should you wish to discuss this matter further, please do not hesitate to contact me.

Sincerely,

Malcolm Horne

Malcolm Horne
Heritage Planner

c. Hugh Tracy, Manager, Environmental Engineering, Delcan Corporation, 133 Wynford Drive, North York ON M3C 1K1
Northeastern Archaeological Associates

1

Post-it™ Fax Note 7671	Date June 24/97 # of pages ▸ 1
To Terry Edwards	From Carolyn Glaser
Co./Dept. County Planning	Co. Town Planning
Phone #	Phone #
Fax # 324-1750	Fax #

COLE, SHERMAN

CONSULTING ENGINEERS

June 12, 2000
Our Ref.: CN20800026.00

Mr. Donald W. Barkey
Process Superintendent
Lindsay Water & Sewer Commission
50 Wolfe Street
Lindsay, Ontario
K9V 2J2

Dear Mr. Barkey:

RE: Colborne Street Bridge over Scugog River

Further to my meeting with you and Dan Lynch on June 2, 2000, we understand that you will accept the 0.4 metre clearance from the roof of the pumping station to the bottom of the prestressed concrete beam. In addition, the contract documents for this project will ensure that adequate protection is provided to the pumping station during construction, and that the access road will remain open for building maintenance during construction.

To address your request for clearance dimensions:

(i) The pier foundation will be sited 3.4 metres from the north-east corner of the pumping station; and

(ii) The wet well clearance to the bottom of the prestressed concrete girder is 3.05 metres. However, you should note that the access hatches will be clear of the girder.

We are enclosing appropriate plan and profile drawings for your review.

As well, for your information, we are planning to hold a Public Information Meeting for the proposed Colborne Street Bridge project in the Victoria Room of the County Administration Building on June 27, 2000 from 3 p.m. to 5 p.m. and 7 p.m. to 9 p.m.

I trust that you will find this material satisfactory. Should you have questions or require any further information, please do not hesitate to contact me.

Yours very truly,
COLE, SHERMAN & ASSOCIATES LTD.

Leonard Rach

Leonard Rach, P.Eng.
Head, Municipal Roads

LR/lh

Encl.

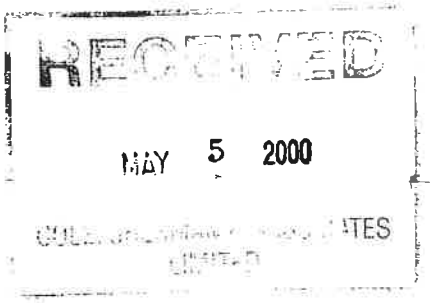
cc: P. Jeffrey Seaton, P. Eng.
County of Victoria

COLE, SHERMAN & ASSOCIATES LTD.
75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 ▲ Tel: (905) 882-4401 ▲ Fax: (905) 882-4399
Internet: www.colesherman.com

50 WOLFE STREET
LINDSAY, ONTARIO
K9V 2J2

TEL: (705) 878-1282
FAX: (705) 328-3122

May 1, 2000



Mr. Scott Thorburn
Cole, Sherman Consulting Engineers
75 Commerce Valley Dr. East
THORNHILL, ON.
L3T 7N9

Dear Sir:

Re: Proposed Colborne Street Bridge over Scugog River

We have reviewed the clearance envelope drawing that you have provided to us with your letter, dated April 20, 2000 relative to the Proposed Colborne Street Bridge over the Scugog River. The Lindsay Water and Sewer Commission finds that the bridge deck clearances shown over the pumping station appear adequate at this time as proposed to facilitate operations of the Colborne St. Pumping Station.

The only exception appears to be the one I-beam support shown at 0.4m within the 3m infringement area of the proposed south bridge deck over the pumping station building roof. The other concerns that we have at the present time that has not been addressed at this stage is protection of the pumping station facility during bridge construction, and provision of vehicular access to the station for maintenance and operations purposes during bridge construction.

We trust that you will address these concerns to us at the Lindsay Water and Sewer Commission at your earliest convenience.

Yours truly,

Donald W. Barkey,
Process Superintendent,
& Management Team Rep.

Cc D. Lynch

Fisheries and Oceans Canada
Pêches et Océans Canada

Coast Guard
Garde côtière

Central & Arctic Region
Région du Centre et de l'Arctique

P.O. Box 1000
Prescott, Ontario
K0E 1T0

May 12, 2000

8200-00-6077

Mr. Scott Thornburn
Cole Sherman
75 Commerce Valley Drive East
Thornhill, Ontario
L3T 7N9

Dear Sir:

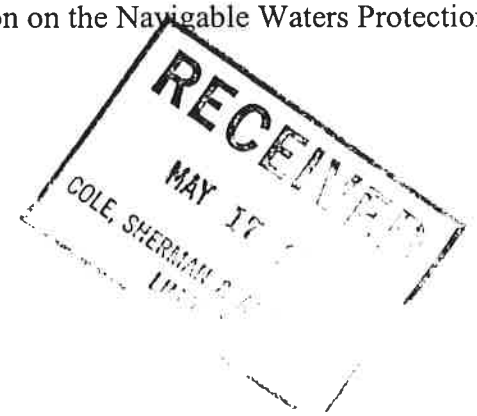
Re: Colborne Street Bridge over the Scugog River, Town of Lindsay, County of Victoria

I have reviewed the above proposal (reference Cole Sherman letter January 17, 2000) and discussed this project with Mr. Wayne Mitchell of the Trent Severn Waterway.

As noted in Mr. Mitchell's letter to you of March 28th, 2000, the reduction of the vertical clearance to 4.6m is acceptable. I am in full agreement with this; however, I too require a clear span over the existing navigational channel (centered on the river) as the Scugog River is quite narrow through Lindsay and is not capable of supporting two way traffic with the centre pier.

As you are aware, the proposed bridge is subject to the full requirements of the Navigable Waters Protection Act, formal approval as well as approval by the Trent Severn Waterway and the Canadian Environmental Assessment Act. Along with the application for the bridge, construction methodology and timing information is required for my review.

Please contact me if you require further information on the Navigable Waters Protection Act.



Yours truly,

A. Robertson
Navigable Waters Protection Officer
Canadian Coast Guard
Prescott Base

cc. Regional Office
Trent Severn Waterway – W.Mitchell

Canada

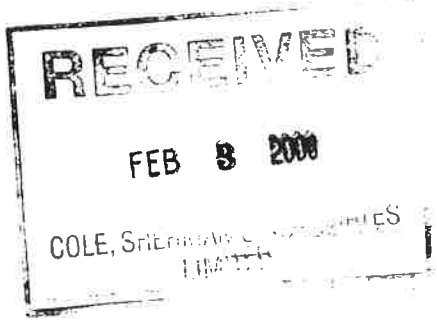
Canadian Coast Guard | Garde côtière canadienne

P.O. Box 1000, 401 King St.
Prescott, Ontario
K0E 1T0

Your file *Votre référence*

Our file *Notre référence*
8200-00-6077

February 1, 2000



Cole, Sherman Consulting Engineers
75 Commerce Valley Drive East
Thornhill, Ontario
L3T 7N9

Attn: Len Rach, P. Eng.

Dear L. Rach

Re: Colborne Street Bridge – Scugog River, County of Victoria, Province of Ontario

Receipt is acknowledged of your correspondence in connection with the above-noted work.

Your application is currently under review. Should our review disclose the need for additional information, you will be notified. In addition, your application has been referred to the Fish Habitat Branch of our Department for review under the provisions of the federal Fisheries Act. You may be contacted directly by the Branch concerning implications under the Act.

You are advised not to proceed with construction until all proper approvals are obtained.

Please refer to our file number with any future correspondence.

If you have any questions or wish further information, please contact this office at (~~519~~) ~~383-1863~~.
(613) 925-2065 x 255 Brenda x 142.

Yours truly,

A. Robertson
Navigable Waters Protection Officer
Canadian Coast Guard
Prescott Base

cc: Regional Office
HM

COLE, SHERMAN

CONSULTING ENGINEERS

January 17, 2000
Our Ref.: CN20800026.00

Marine Navigation Services
Canadian Coast Guard
344 Slater St., 6th Floor
Ottawa, Ontario
KIA ON7

Attention: Mr. A. Robertson

Dear Mr. Robertson

RE: Proposed Colborne Street Bridge over the Scugog River

The County of Victoria has retained Cole, Sherman & Associates Ltd. to amend the 1995 Environmental Assessment Approval and prepare a detailed design for the proposed Colborne Street bridge over the Scugog River. Prior to undertaking the design, we must establish the design criteria for the proposed structure. In this regard, we are requesting your consideration of reducing the current 6.7 metre navigational clearance to 4.6 metres.

For your information, we have attached a copy of the preferred plan and profile as approved in the original 1994 ESR. Three shortcomings of this configuration have been identified which include:

1. the construction of a pier within the Scugog River,

2. a shift in the navigation channel to accommodate a 6.7 m navigational clearance envelope, and

3. significant visual impacts on the *"Residents on the River"* senior's apartments.

It is our intent to prepare a bridge design that eliminates the pier within the river to allow the continued use of the deepest part of the river for navigation purposes and at the same time, our goal is to reduce the impact on the seniors apartments. However, to achieve this, we must lower the profile of the western part of Colborne Street and increase the span length, which affects the structural depth of the bridge deck. We are confident that this can be achieved with no apparent impacts to navigational operation on the Scugog River.

As illustrated in Attachment B, there are four bridges currently crossing the Scugog River within the Town of Lindsay. The existing vertical clearances for each bridge are:

- Wellington Street 4.56 metres
- Lindsay Street North 3.83 metres

- Lindsay Street South 4.29 metres
- Highway 7 3.68 metres

The Lindsay Street Lockstation is situated immediately east of the Lindsay Street North Bridge. It is our understanding that the Trent-Severn Waterway has assigned a 6.7 metre vertical clearance requirement from the Lindsay Street Lockstation to Sturgeon Lake but only a 4.6 metre vertical clearance from the Lindsay Street Lockstation to Lake Scugog.

To achieve a 6.7 metre clearance from Sturgeon Lake to the locks, the Wellington Street Bridge and the Lindsay Street North Bridge must be raised by 2.14 metres and 2.87 metres respectively. From a municipal perspective, raising these bridges by over 2 metres is impractical and likely impossible because of the potential property and community impacts which would affect the approach roads well beyond the immediate area of the two bridges.

We would request your consideration of shifting the boundary for the 4.6 metre vertical clearance from the Lindsay Street Lockstation to the northern Limits of the Town of Lindsay. This action would provide for a compatible vertical clearance on the proposed Colborne Street brdige with the current requirements south of the Lindsay Lockstation. If this change is accepted, then the proposed Colborne Street Bridge would provide for a minimum clearance of 4.6 metres over a 10-metre wide navigation channel.

We would be pleased to meet with you to discuss this request as well as confirm any other requirements that you may have with respect to this project.

Yours very truly,

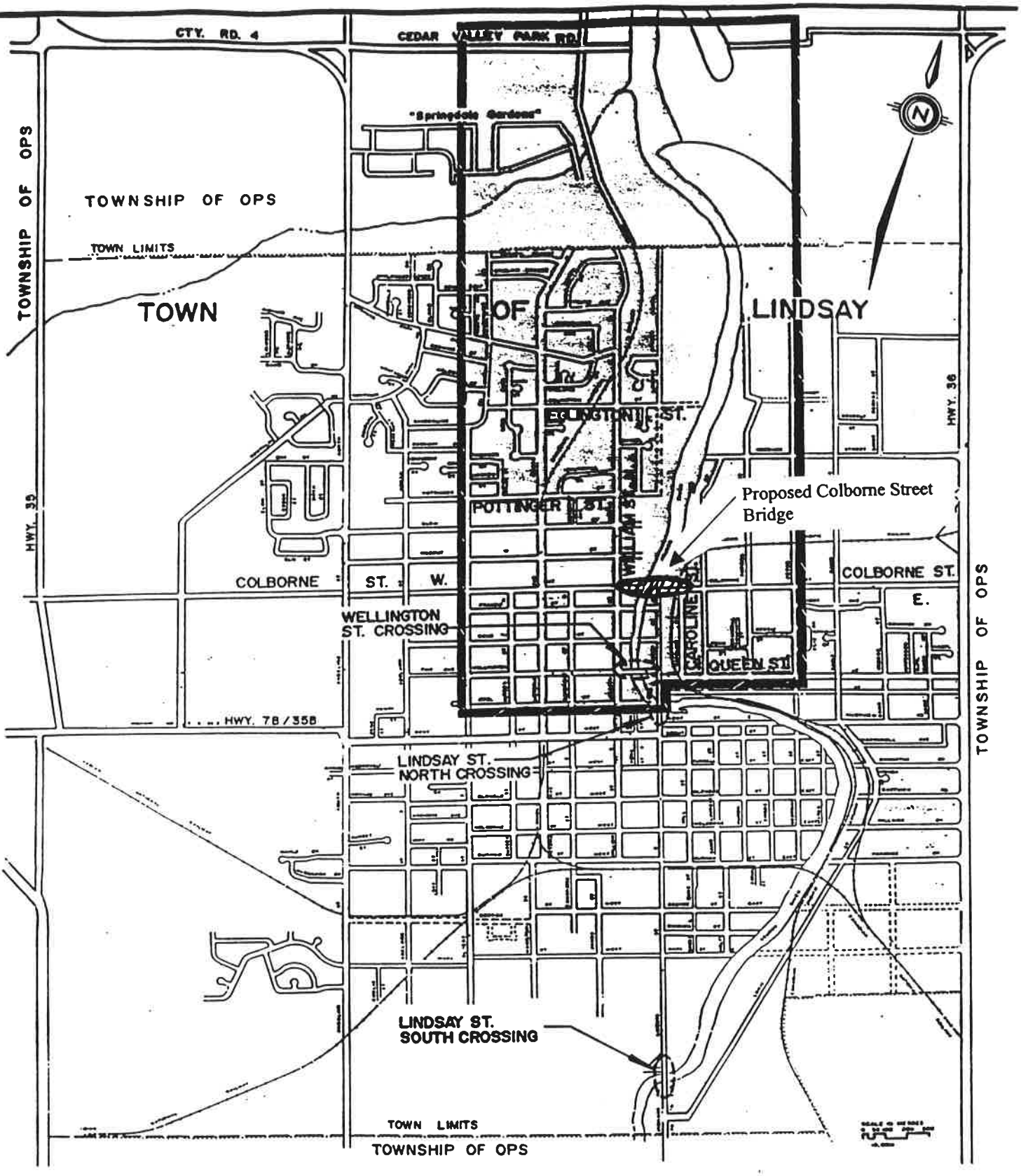
COLE, SHERMAN & ASSOCIATES LTD.

Leonard Rach

Len Rach, P.Eng.
Head, Municipal Roads

ST:
Enclosures

c. W. Mitchell, Trent-Severn Waterway
P.Jeffrey Seaton, P.Eng. County of Victoria



SCUGOG RIVER CROSSING
CLASS ENVIRONMENTAL ASSESSMENT
COUNTY OF VICTORIA

STUDY AREA

LEGEND

STUDY AREA

EXHIBIT

COLE, SHERMAN

CONSULTING ENGINEERS

MINUTES OF MEETING

PROJECT NAME:	Colborne Street Crossing, Lindsay	**MEETING No.**	1
PROJECT No.	CN20800026	**DATE:**	March 21,2000
LOCATION:	Kawartha Region Conservation Authority and Site Meeting	**TIME:**	
PRESENT:	Brian Plazek, CSA		
	Jeff Schueyer, Kawartha R.C.A.		
PURPOSE:	Discuss CA requirements for stormwater management and flood hazard analysis		

Items	Description
1	The CA would require an analysis of the impacts associated with the proposed stream crossing on the 100-year storm event. A HEC-2 model would be required to establish the floodline in the vicinity of the new crossing.
2	The Trent Severn Waterway has established peak flows along the Scugog River. The contact would be Mr. Bruce Kitchen (705 750 4901).
3	The Conservation Authority will look at the stream banks to confirm whether any erosion control is required at the new crossing. They will report to CSA shortly.
4	The Conservation Authority has concerns regarding the potential impacts of discharging water from the new roadway to Sinister Creek due to the exisitng erosion problems along that system.
5	Scugog River is considered to be a warm water system. Walleye spawning grounds maybe impacted upon by the proposed works. The design will have to address the potential impact on fisheries.
6	The CA would not support direct discharge to the river. Water discharged to Sinister Creek would have to be pretreated. Level 1 control is to be provided.
7	The approval requirements for Sinister Creek have to be confirmed. CSA will check with Ms. Joan Chamberlain (Trent Severn Waterway) to confirm their involvement in the approval process.

PLEASE NOTE: If your records of this meeting do not agree with this document, or if there are any omissions, please advise the writer at once, otherwise the contents of this document shall be assumed accurate and correct.

COLE, SHERMAN & ASSOCIATES LTD.

75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 ^ Tel: (905) 882-4401 ^ Fax: (905) 882-4399

Internet: www.colesherman.com

Items	Description
8	The CA would require quality but not quantity control. The CA did not have any initial concerns regarding the construction of a quality control facility adjacent to Sinister Creek provided it was located downstream of the old railway culvert. If located upstream of this crossing the CA would require a hydraulic analysis to be completed. The Town would have to approveany works associated with Sinister Creek.
9	The CA was not aware of any ice jam occurrences in the vicinity of the proposed crossing. It was noted that much of the channel remains open all year.
10	The maximum-recorded water level at the proposed crossing is 248.25m. The channel in the vicinity of the proposed crossing has never been overtopped.
11	The CA would require an Erosion and Sediment Control Plan to be prepared. All work within the river is to be protected. The use of a silt curtain is a possible means of isolating the work from the main flow.
12	The DFO concerns would be handled by the Trent Severn Waterway.
13	During the construction activity, careful consideration must be given to the boating activity.
14	The Conservation Authority is to provide CSA with a digital copy of the aerial photo and the 1:10000 mapping covering the study area.

After the meeting with the Conservation Authority Mr. Plazek, Senior Water Resources Engineer visited the site and had the following comments:

i) Sinister Creek from its outlet to the abandoned railway culvert is experiencing significant erosion activity. The discharging of uncontrolled flow from the roadway to this system may have a negative impact on its current condition.

ii) West of the Scugog River there is little opportunity to provide quality control. The area is currently developed.

iii) East of the Scugog River there is an opportunity to construct a stormwater management facility adjacent to Sinister Creek. The existing erosion activity could be corrected at the same time. As the wetland would service an area that is greater than that associated with the road and bridge construction, its added benefit would more than offset any negative impacts associated with not providing quality control west of the river.

iv) It appears that there is sufficient room adjacent to Sinister Creek to construct a long linear wetland/wetpond facility. Permission would have to be obtained from the Town to construct the facility as it would be located on their property.

v) Historically, erosion has not been a problem at the proposed crossing location.

Submitted by: Brian Plazek

Distribution:

CS COLE, SHERMAN — FAX SHEET

TO:	Trent Severn Waterway	**DATE:**	March 21, 2000
ATTENTION:	Wayne Mitchell	**TIME:**	10:33 AM
FAX No.:	705-742-9644		**Please deliver the following**
FROM:	Scott Thorburn		5 **Page(s)**
PROJECT No.:	CN20800026		**(which include this cover sheet)**
RE:	**Colborne Street Bridge over the Scugog River**		

Message:

Further to my voice mail message, Cole, Sherman and Associates Ltd. are in the process of amending the 1995 ESR that supported the construction of the Colborne Street Bridge over the Scugog River. The following letter was transmitted to the Canadian Coast Guard. In addition, we are discussing this project with the Conservation Authority and the County Engineer is discussing this project with Skylark Tours (Lindsay Tour Boat Operator).

Please review the attached material and call me to discuss.

Yours truly,

Scott Thorburn

Transmitted by: _____

☐ **Original will follow by mail**

If you do not receive all pages, or if the document is illegible, please contact us immediately.

I:\PLANNING\CN20800026\Documents\letters and faxes\trent severn waterway fax.doc

75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 Tel: (905) 882-4401 Fax: (905) 882-4399
email: colesherman@urscorp.com
internet: www.colesherman.com

COLE, SHERMAN — FAX SHEET

TO:	Canadian Environmental Assessment Agency	**DATE:**	July 5, 2000
ATTENTION:	Diane Damman	**TIME:**	3:28 PM
FAX No.:	519-745-8391		**Please deliver the following**
FROM:	Scott Thorburn		1 **Page(s)**
PROJECT No.:	CN20800026.00		**(which include this cover sheet)**
RE:	**Scugog River Bridge**		

Message:

Our contacts at the Federal Level include:

- Al Robertson, Navigable Waters Protection Officer
  Canadian Coast Guard, Prescott Base

- Wayne Mitchell, Realty Manager for Superintendent
  Trent-Severn Waterway, Parks Canada

Through Cole, Sherman's environmental subconsultant (FRi Ecological Services Inc.) I understanding that the Trent-Severn Waterway is prepared to act as the responsible authority for this project.

Please call if you have any further questions.

Jeff,

Wayne Mitchell has requested a copy (with appendices) of the 1994 ESR.

Can you forward a copy to Wayne?

Thanks

Scott.

c. P. Jeffrey Seaton, County Engineer (705) 324-1750

Transmitted by: _____

☐ **Original will follow by mail**

If you do not receive all pages, or if the document is illegible, please contact us immediately.

75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 Tel: (905) 882-4401 Fax: (905) 882-4399
email: colesherman@urscorp.com
Internet: www.colesherman.com

Canadian Heritage Patrimoine canadien

Parks Canada **Parcs Canada**

Trent-Severn Waterway
P.O. Box 567
Peterborough, Ontario
K9J 6Z6
(705) 742-9267
Fax (705) 742-9644

Voie navigable Trent-Severn
B.P. 567
Peterborough, Ontario
K9J 6Z6
(705) 742-9267
Fax (705) 742-9644

Your file / Votre référence

Our file / Notre référence

8500/T90-LIN-100

Mr. Scott Thornburn
Cole Sherman
75 Commerce Valley Drive East
Thornhill, Ontario
L3T 7N9

28 March, 2000

Dear Mr. Thornburn:

Re: Colborne Street Bridge over the Scugog River
Town of Lindsay, County of Victoria
Your File No. CN20800026

Reference is made to your letter dated January 17, 2000, to Mr. Al Robertson, Marine Navigation Services, Canadian Coast Guard. We should like to point out that Parks Canada, Trent-Severn Waterway, has the ultimate responsibility as administrators of the Federal Crown's jurisdiction over the Trent-Severn Waterway and all connecting lakes and rivers for granting approval for works. Any proposal that may have the potential to alter the beds and/or high water marks, or effect navigation or water quality, of the bodies of water under the jurisdiction of Parks Canada, Trent-Severn Waterway, must be submitted to the Trent-Severn Waterway office for our review and approval.

The construction of the above-described bridge in Lindsay will also require a formal approval under the Navigable Waters Protection Act from Marine Navigation Services, Canadian Coast Guard. It is our understanding that you have contacted the Canadian Coast Guard with regard to this proposal.

The Trent-Severn Waterway has reviewed your proposed change to the clearance height of the proposed bridge over the Scugog River and we would like to inform you that the Waterway is agreeable to the proposed navigational clearance of 4.6 metres. The Waterway would not be agreeable to the placement of a bridge support pier in the river. A bridge support pier would be considered an obstruction to navigation and, therefore, would not be acceptable.

Please be aware that it will be necessary for the owner of the bridge to enter into a formal agreement with the Trent-Severn Waterway for the construction, maintenance and repair of the bridge. In this regard we will require copies of the final construction drawings when they have been completed.

..../2

We trust the aforementioned responds to your immediate questions with regard to this matter. Should you have additional questions or wish to discuss this matter please feel free to contact this office.

Yours truly

J. Wayne Mitchell
Realty Manager
for
Superintendent
Trent-Severn Waterway

cc Mr. Al Robertson, Canadian Coast Guard
Mr. P. Jeffrey Seaton, County of Victoria

COLE, SHERMAN

CONSULTING ENGINEERS

April 20, 2000
Our Ref.: CN20800026.00

Lindsay - Ops Fire Department
9 Cambridge Street West
Lindsay, Ontario
K9V 4C4

Dear Sir/Madam:

RE: Proposed Colborne Street Bridge over the Scugog River

The County of Victoria has retained Cole, Sherman & Associates Ltd. to amend the 1995 Environmental Assessment Approval and prepare a detailed design for the proposed Colborne Street bridge over the Scugog River. Prior to undertaking the design, we must establish the design criteria for the proposed structure. In this regard, we are requesting your consideration of vertical clearances between the proposed bridge and the Colborne Street pumping station as well as the proposed access road arrangement.

For your information, we have attached a copy of our preliminary plan and cross-sections. Key elements that constrain the bridge location and layout include:

1. Piers cannot be constructed within the Scugog River and avoid impacts on the pumping station currently under construction.
2. The profile of the west approach should be as low as possible to reduce visual impacts on the *"Residents on the River"* senior's apartments.
3. The horizontal alignment must match the intersections of Colborne Street West at William Street at the west limit and Lindsay Street at Colborne Street East at the east limit.

As illustrated on the attached drawing, the overlap between the bridge and the existing pumping stations is approximately 25%. The clearances between the concrete girders and the roof of the pumping station are illustrated in the two cross-sections.

We would be pleased to meet with you to discuss the proposed arrangement and to confirm any other requirements that you may have with respect to this project.

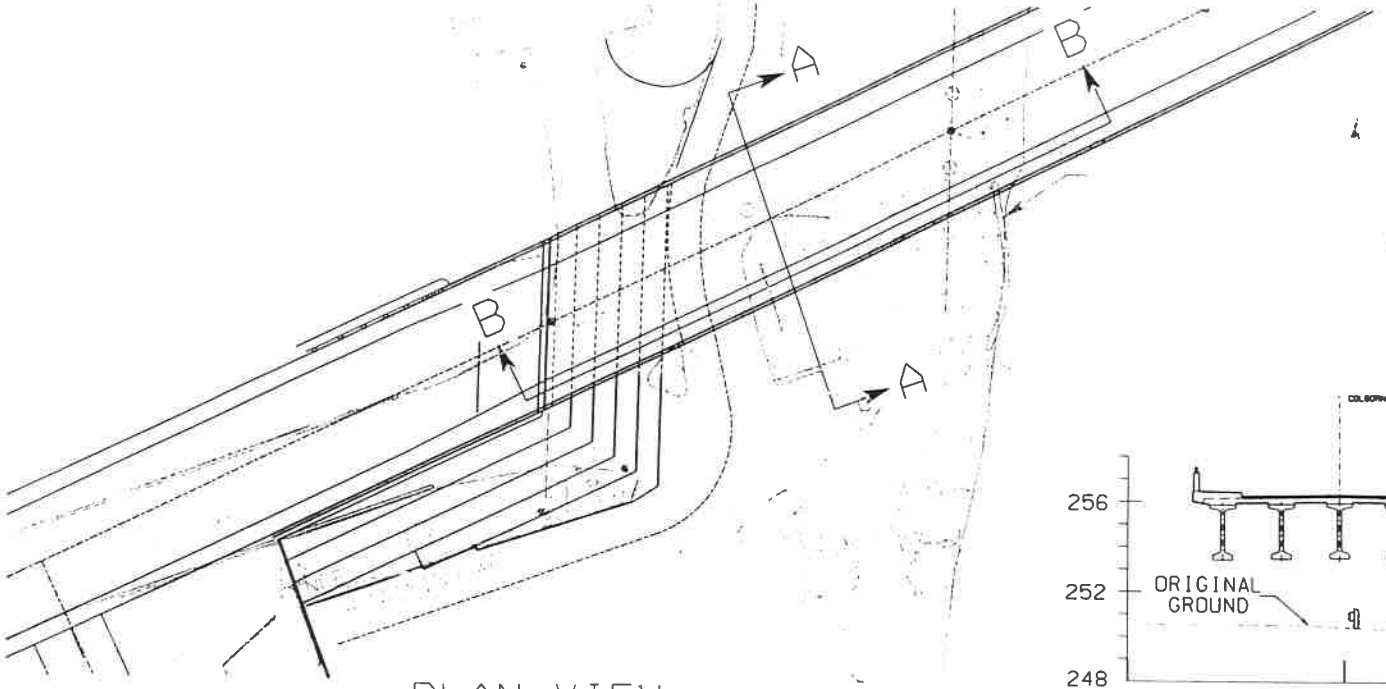
Yours very truly,

COLE, SHERMAN & ASSOCIATES LTD.

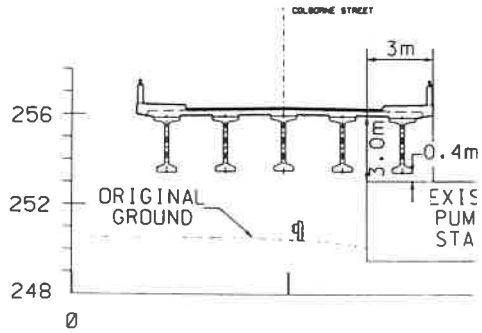
Scott Thorburn, P.Eng.
Senior Transportation Engineer

c. P.Jeffrey Seaton, P.Eng, County of Victoria

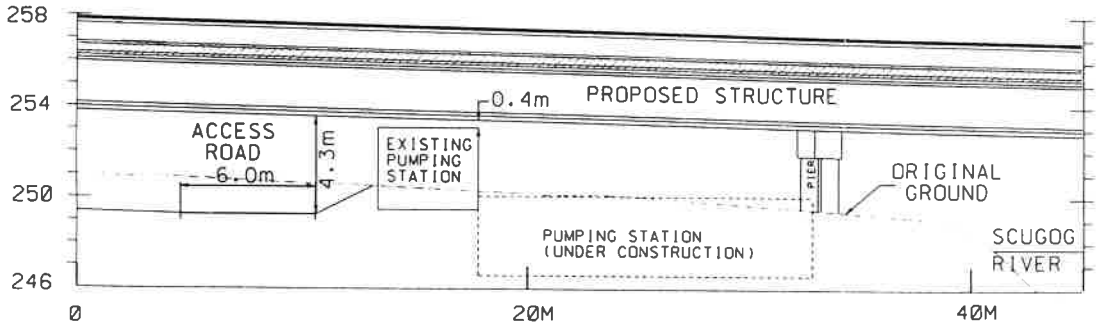
COLE, SHERMAN & ASSOCIATES LTD.
75 Commerce Valley Drive East, Thornhill, Ontario L3T 7N9 ^ Tel: (905) 882-4401 ^ Fax: (905) 882-4399
Internet: www.colesherman.com



PLAN VIEW
SCALE 1:500



CROSS SECTIC
SCALE 1:250

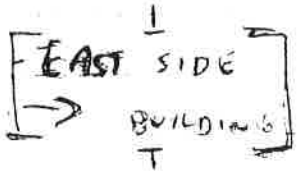


CROSS SECTION B-B
SCALE 1:250

- SCUGOG RIVER CROSSING
UTILITY INFORMATION CONTACTS
- LYNDSAY ON. COLBORNE ST W & E

THE GREER GALLOWAY GROUP INC
(705) 743-5780
STEVE CLARK
HE SENT DIGITAL FILE G-101 ON FEB 7/2000

EMERGENCY SERVICES (LINDSAY - OPS FIRE DEPARTMENT)
FIRE CHIEF
(705) 324-5731 911 SERVICE - ENTIRE VICTORIA COUNTY
TERRY JONES CALLED ON FEB 4/2000
GAVE ME LARGEST TRUCK SPECIFICATIONS
HEIGHT 3.6m
LENGTH 12.25m



CLERKS OFFICE LINDSAY
(705) 324-6171 FORWARDED ME TO STORM
PAUL FURNISS - PAUL YOUNGE 235
COUNTY OF VICTORIA
(705) 324-9450
DARRYL DARLING 1280 TALKED ON FEB 9/2000
HE WILL SEND PROPERTY INFO & ASSESSMENT ROLLS FOR STUDY AREA.
CALLED PAUL IN MARCH RE DRAINAGE CALCS ECT. * NOT AVAILABLE

LINDSAY CATV - COMCABLE
MR. BARRY HARPER
(705) 878-9000
SPOKE ON FEB 4/2000
MAIL PLAN OF AREA

LINDSAY COMCABLE
55 GEORGE ST W
L
K9V 4V6

LINDSAY WATER BOARD

DAN LYNCH → FORWARDED TO JASON BROAD

TEL (705) 878-1282

FAX (705) 328-3122

LA PAUL FURNISH AIR ENGINEERING NO

FEB 9/2000

~~SPOKE TO JASON~~ JASON LEFT MESSAGE TO FAX REQUEST FOR SITE, FAXED PLAN TO JASON ON FEB 10/2000

BELL CANADA

(705) 876-2235

PETER HOENSELAAR

4FL 364 WATER ST.

PETERBOROUGH

K9J 7B4

SPOKE TO PETER ON FEB 10/2000, WILL SEND COPY OF PLAN FOR HIS MARKUP.

LINDSAY HYDRO

BOB TRUAX

(705) 324-3575

SPOKE ON FEB 4/2000 WILL SEND COPY OF PLAN FOR HIS MARKUP

CAPITAL ENVIRONMENT RESOURCES INC

(705) 324-0752

AL HUSSY

CALLED ON FEB 4/2000 RECEIVED ~~THE~~ LARGEST TRUCK SPECS THAT SERVICES THE RESIDENCE ON THE RIVER BUILDING

HEIGHT 14FT → 4.27m

LENGTH 30FT → 9.14m

WIDTH 10FT → 3.048

882-4401 151

COLESHILL

ENBRIDGE GAS

WHITBY (905) 668-9341

~~LARRY SHAW~~

CALLED LARRY ON FEB 10/2000 TO GET CONTACT FOR LYNDSAY AREA I LEFT MESSAGE

FRANK CHOLEWA 884-9105

↳

BRIAN BLACK

TALKED TO JIM ARNOT @ RICHMOND HILL OFFICE SAID TO SEND TO RICHMOND HILL OFFICE ATTENTION TO FRANK CHOLEWA AND IF THERE IS ANY PROBLEM IT WILL THEN BE FORWARDED TO BRIAN BLACK

SENT DRAWING ON FEB 25/00

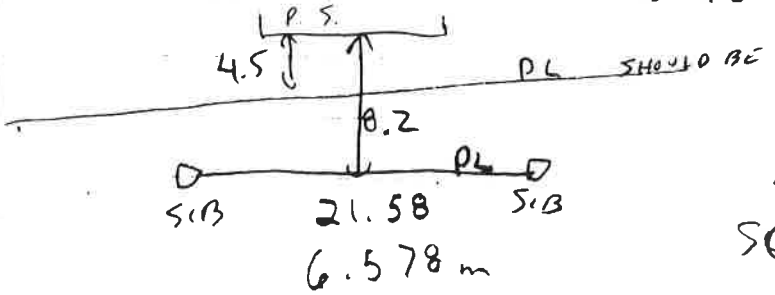
GREER GALLOWAY GROUP INC

(705) 743-5780 STEVE CLARK, P. ENG.

FAX (705) 743-9592

EMAIL MUNICIPAL@GREERGALLOWAY.COM

RE: PUMPING STATION SITE PLAN G-101



FEB 7/2000

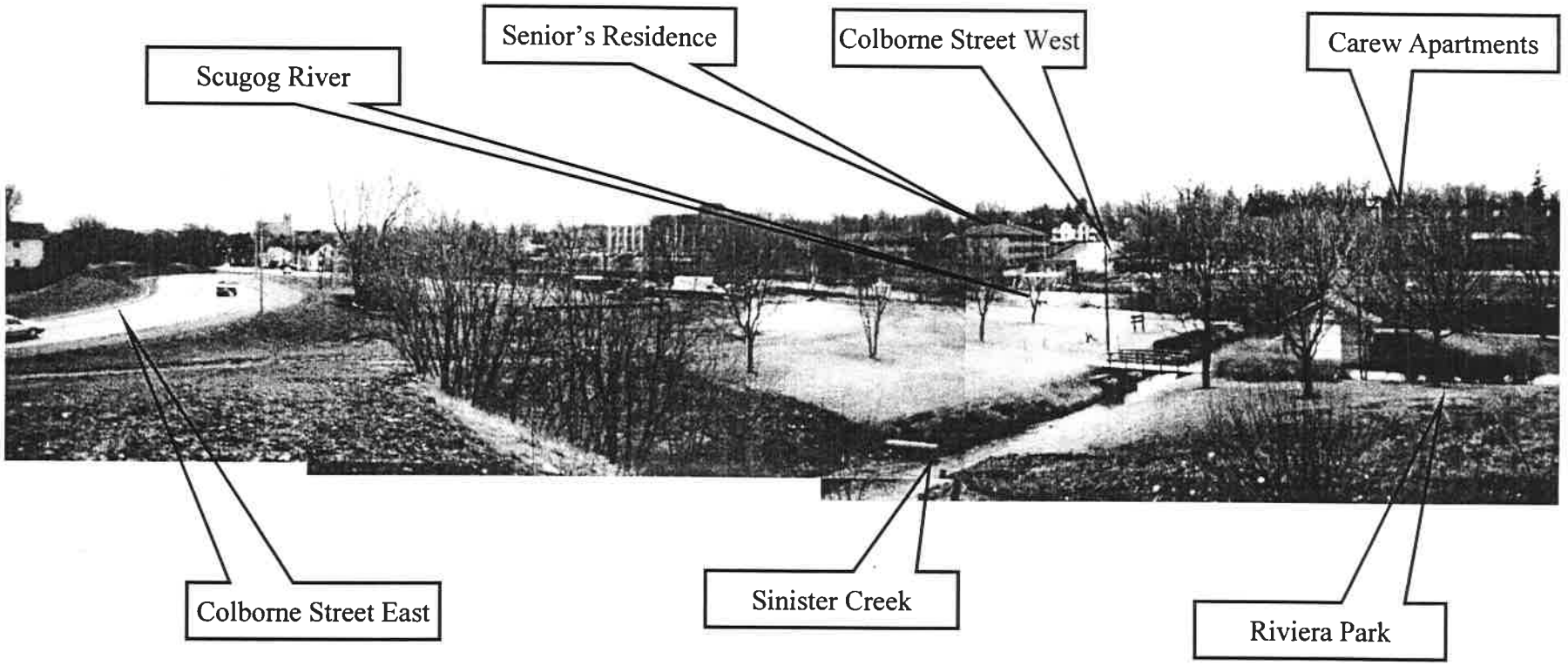
LYNDSAY

SEWAGE FLOW

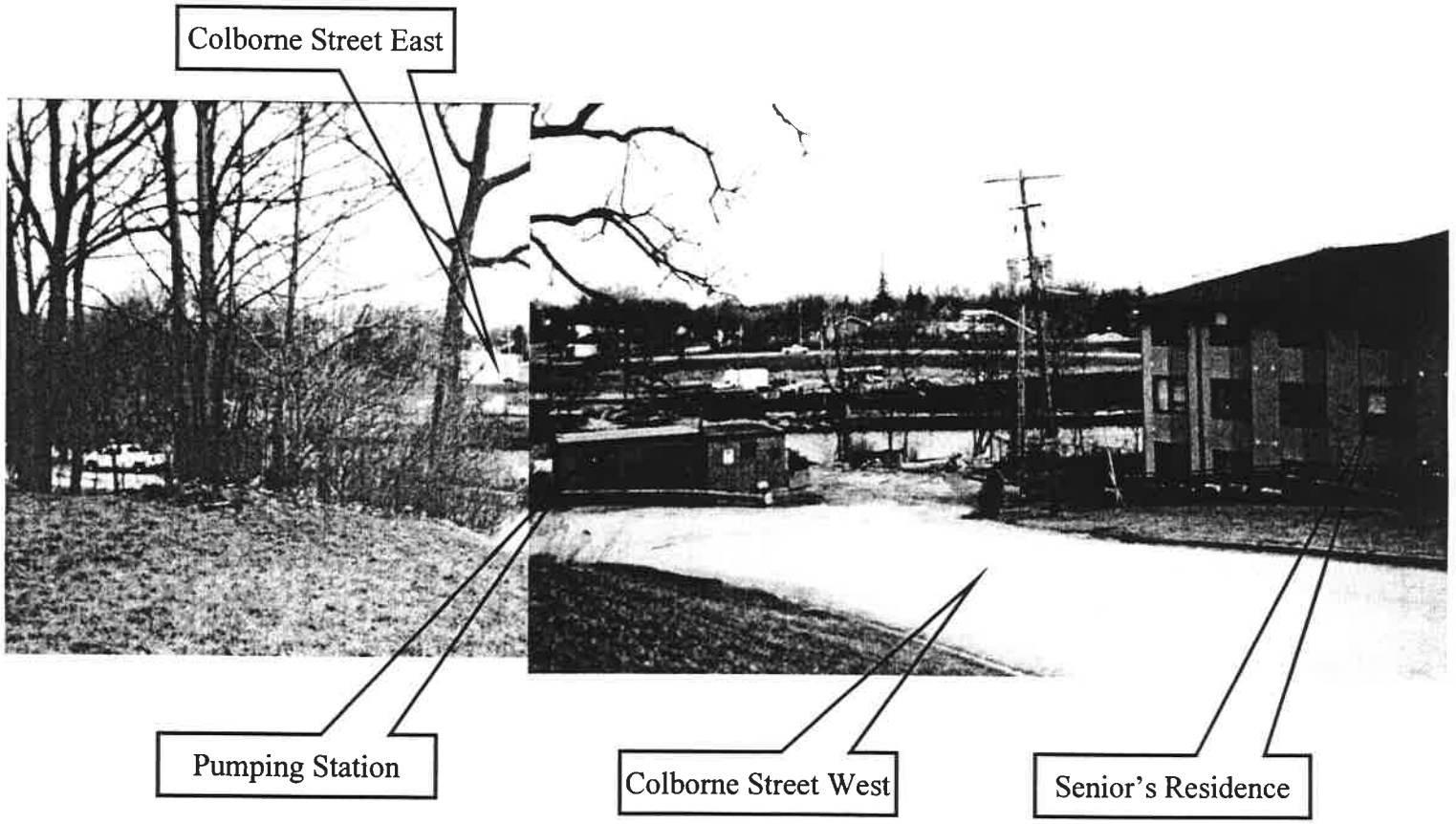
CLC

Appendix E – Site Photos, Environmental and Geotechnical Reports

East Bank of Scugog River



West Bank of Scugog River



Senior's Residence

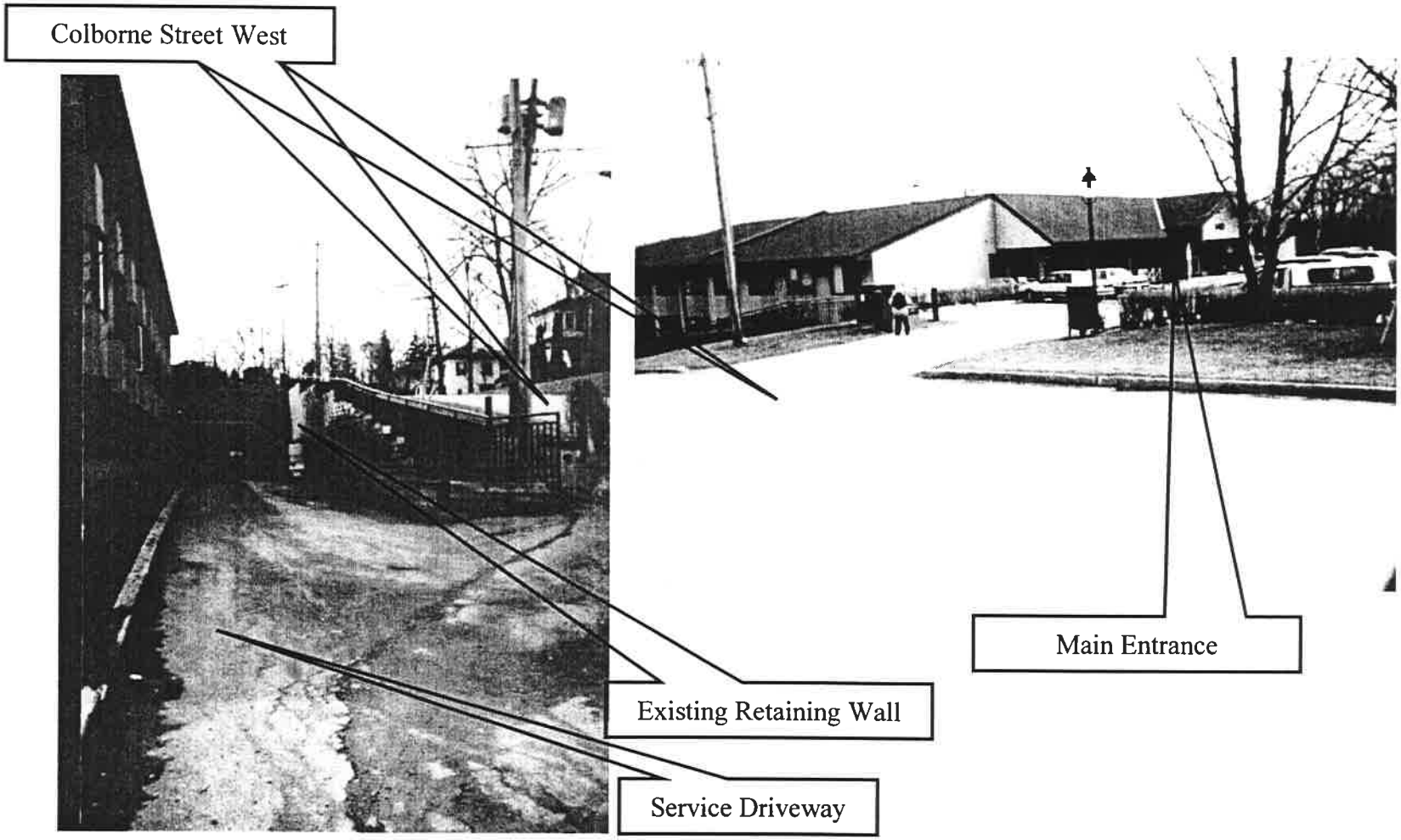
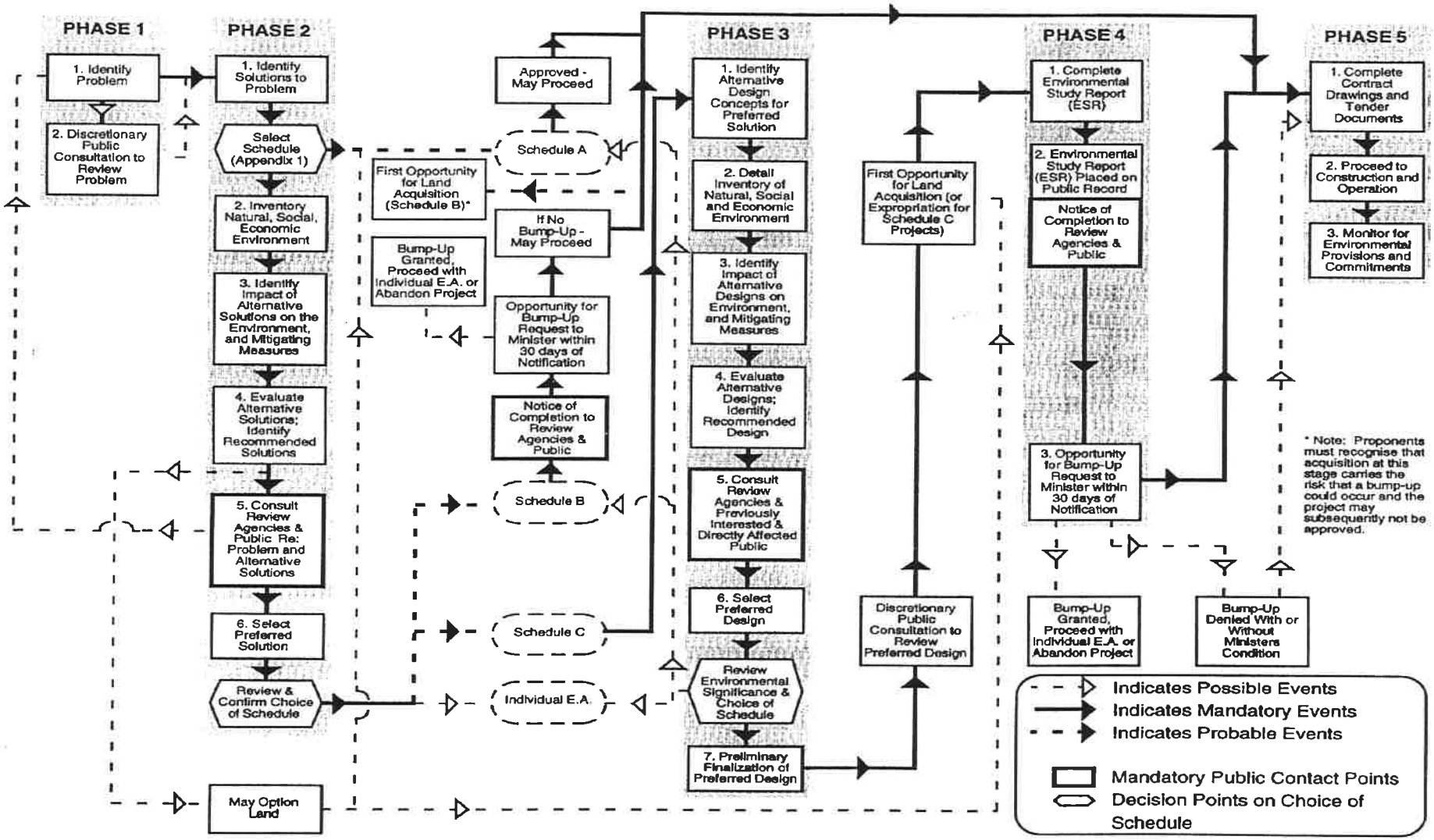
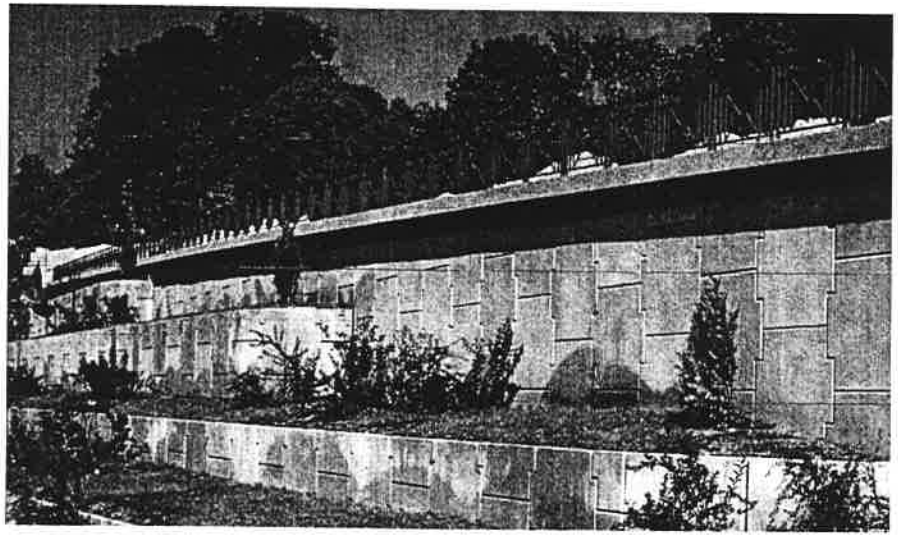
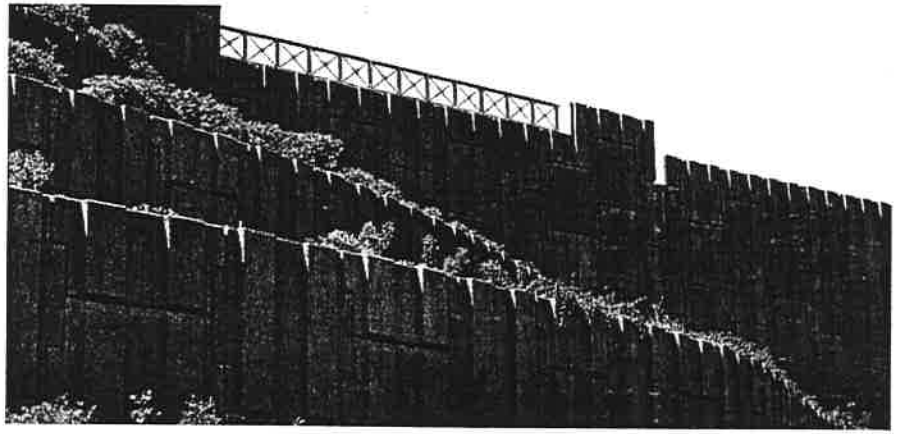
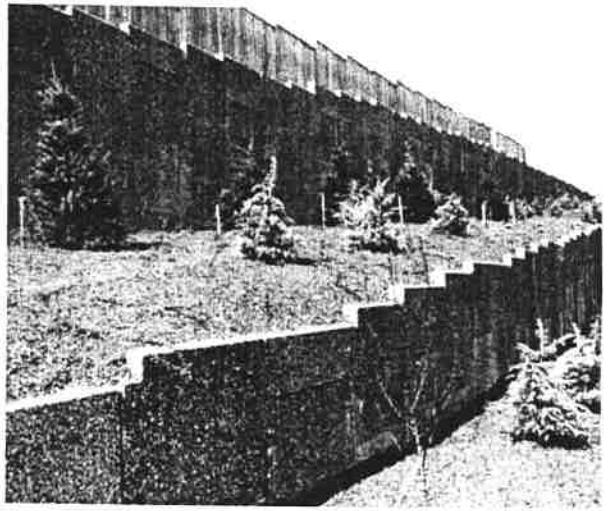


Figure 1: Class Environmental Assessment Process









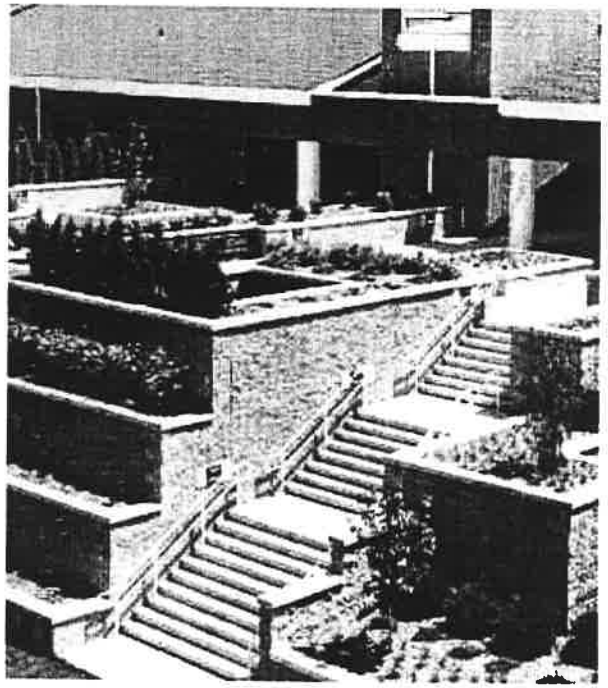


Figure 9: Examples of Reinforced Earth Retaining Wall Systems

Cole, Sherman & Associates

FRi
ECOLOGICAL SERVICES

Memorandum

TO Scott Thorburn

DATE December 10 1999

FROM [illegible] FRi Ecological Services

RE: Project No. 208100.06 Scugog River Bridge

We conducted our field review to ensure that conditions noted in the ESR still apply on December 8-9, 1999. We visited each site identified as classified/unclassified wetland on the natural environment map of the ESR. We found the conditions in these areas unchanged from those reported in the ESR.

The map indicates a sensitive area in the Scugog River just upstream of the proposed Colbourne Street crossing. The report does not however, indicate any further details regarding this sensitive area. We assume that the sensitivity of this site is related to the known fish spawning grounds in the Bond Street area. This area remains unchanged as well.

The significant vegetation outlined in the report ranges from riparian communities important for erosion control, shade and nutrient transfer to locally significant species; Black Walnut (*Juglans nigra*). These features remain intact recognizing that there are no specific descriptions of each area in the ESR. The current installation of a siphon line under the Scugog River at the Colbourne Street corridor has resulted in some minor changes to the riparian vegetation. It is evident that at least a few Manitoba Maples (*Acer negundo*) have been removed to facilitate the installation. There are also a few Manitoba Maple trees that have been removed from the embankment near the Carew Apartments on the north side of Colbourne Street just west of the crossing. The proposed fill slopes at the west approach of the crossing will affect a number of Black Walnut trees.

1875 Seymour Street, Suite 1 North Bay ON P1B 8G4
Phone:(705) 476-0085
Fax:(705) 476-5631
E-Mail:fri@fricorp.com
Internet:www.fricorp.com

[illegible] developments at Melbourne Point [illegible] docking facility corridor are not mentioned in the ESR. Consultation with Jeff Seaton at the [illegible] office indicated that these developments occurred after the preparation of the ESR. At least one area of significant vegetation appears to have been affected by this [illegible] may be changes to the water quality and fish habitat as a result of the placement of [illegible] baskets and docking facilities.

The ongoing installation of the siphon line at Colbourne Street may have impacts on the water quality and fish habitat caused from increased sedimentation. A current silt curtain was in place at the time of the site visit but did not appear properly. It may be advisable to visit the site again after completion of this [illegible] that any degradation of the site is documented before the crossing is [illegible].

[illegible] study area [illegible] remain [illegible] [illegible] changes [illegible] [illegible] Pottinger Street.

alston associates inc.
consulting engineers

geotechnics
construction materials testing

GEOTECHNICAL INVESTIGATION
PROPOSED NEW BRIDGE
SCUGOG RIVER
LINDSAY, ONTARIO

Ref. No. 99-124
13 April 2000

Prepared for:

Cole, Sherman & Associates Ltd.
75 Commerce Valley Drive East
Thornhill, Ontario
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Ref. No. 99-124

CONTENTS

APPENDIX

ENCLOSURES

1.0 INTRODUCTION

Alston Associates Inc. has been retained by Cole, Sherman & Associates Ltd. to carry out a geotechnical investigation a the site of a proposed new bridge crossing to the Scugog River in Lindsay, Ontario. Authorization to proceed with this investigation was given by Steve Jacobs, P.Eng. Of Cole, Sherman on 29 October 1999.

The purpose of this investigation has been to determine the subsurface conditions at the location of the proposed bridge structure, and based on these data, to provide geotechnical engineering recommendations pertaining to the design of bridge foundations and the bridge approach embankments.

A preliminary geotechnical study pertaining to the area of the proposed crossing was carried out by Site Investigation Services Limited, and reported under their Project Number 4061. That work was undertaken in 1992.

2.0 FIELDWORK

The fieldwork for this investigation was carried out in two components. A site visit was made on 21 January 2000 by a principal engineer of Alston Associates in company with a principal engineer from Cole, Sherman. That visit was made to inspect the conditions which were contacted in an excavation made to construct the pumping station adjacent to the Scugog River. In the course of that visit, the condition of the sides of the excavation into the bedrock stratum were observed as well as the character of the fill soil which provides the overburden at this location.

For the current program of geotechnical study, four boreholes (201 through 204) were advanced at the site on 3 April 2000. Each of these boreholes was advanced to the depth of refusal to advancement of boreholes using a conventional auger drill rig. Standard penetration tests were carried out at frequent intervals of depth in the boreholes to take representative soil samples and to measure the penetration index (N-value) of the in situ soils. Observations of groundwater conditions which were apparent at the time of

advancing the boreholes were made and the results of those observations are provided on the Borehole Log Sheets.

The fieldwork for this study was supervised by an experienced soils technologist from this office who laid out the positions of the boreholes in the field; effected the drilling, sampling and in situ testing; observed groundwater conditions; and prepared field borehole log sheets.

3.0 SITE AND SUBSURFACE CONDITIONS

Full details of the subsurface conditions contacted in the boreholes are provided on the Record of Boreholes 201 through 204. Records of boreholes previously advanced at the site are attached in Appendix 'B'. The following paragraphs are intended to provide a commentary on these data.

In the western portion of the project extending east from Williams Street to the base of the slope wets of the pumping station, Borehole 201 shows that the native soil strata consist of a deposit of silty fine sand overlying silty clay which is in turn underlain by claybound sand and flaggy rock pieces at Elevation 248.3± m. The condition of the native soil deposits at this location is characterized by standard penetration test N-values ranging from 18 to 49, which indicates that the sandy soil deposits are compact, and the silty clay material is hard.

At the foot of the hill on Colborne Street West, Borehole 202 showed that the native soil deposits are overlain with a random fill which consists of silt, clay, stone, brick and asphalt pieces. The fill overlies a 1± m thick layer of organic soils which is in turn underlain by a 0.7± m thick layer of very stiff to hard silty clay soil (measured N-value 31 blows/300 mm).

Close to the west river bank and also on the east side of the river, the overburden soils consist of fill materials which are up to about 3 m thick, and which lie on a thin layer of dense silty sand to sandy gravel (measured N-values greater than 40 blows/300 mm). The

fills appear to be random ranging from compact sand and gravel in Borehole 204 to layers of sand, topsoil, and silt with clay lumps at other locations. Intermittently, the fill materials are underlain by soft, spongy organic soils.

Bedrock at the site consists of limestone which is highly fractured with occasional interbedding seams of shale and having discontinuities which are infilled with the overlying soil material.

Inspection of the excavation made for the pump house indicates that the weathered and fractured bedrock is relatively permeable. However, it is relevant that dewatering of the excavation was effected by pumping techniques.

4.0 DISCUSSION AND RECOMMENDATIONS

The proposed development will consist of a two span bridge. Presently it is proposed that there will be a single pier located close by the existing pumping station on the west bank of the river. The east bridge abutment is to be placed close by the east river bank, and the west abutment close by the foot of the hill on Colborne Street West. There has been an agreement made with the County of Victoria that the foundations for the pier on the west bank of the river will be positioned at the elevation of the base slab of the pump house.

It would be possible to support bridge foundations on the compact to dense native soil which overlies the fractured bedrock stratum at the locations of the east and west abutments. Bearing pressures at serviceability limit states (SLS) and ultimate limit states (ULS) of 250 kPa and 600 kPa, respectively would be appropriate for foundations resting on undisturbed, compact to dense native soil. However, recognizing the relative thinness of the competent overburden soil, it may be advantageous to remove the soil and construct concrete foundations on the surface of the bedrock stratum. A table of bearing pressure values is given below for foundations supported by bedrock.

Foundation Level	Allowable Bearing Pressure at Serviceability Limit States (MPa)	Factored Bearing Pressure at Ultimate Limit States
resting on bedrock surface	1.0	N/A
bearing at a depth of 0.6 m below rockhead	1.5	N/A

4.1 Approach Embankments

4.1.1 Unreinforced Engineered Fill

The approach embankments to the abutments will be up to about 5 m high. To provide for satisfactory long term performance of the embankments, existing uncontrolled fill and soft soils should be removed to the surface of the dense basal silty sand to sand and gravel stratum. Satisfactory performance of the embankment would then be provided assuming that this were to be constructed using suitable granular fill material (OPSS Granular B Type 1 or select subgrade material) which is compacted to a dry density of not less than 97% of the material's standard Proctor maximum dry density. The side slope for such engineered fill materials may be designed at a gradient of 50% (1V:2H).

On the west side of the Scugog River, the toe of the south side of the embankment will be constrained by the position of the existing residence on the river. In order to accommodate the proposed positioning of the bridge and to maintain satisfactory access to the residence, it will be necessary to retain the south side of the embankment at a gradient which is steeper than 50%. This may be achieved by providing a conventional retaining wall structure, or alternatively by mechanically stabilizing the engineered fill.

4.1.2 Retaining Wall Structure

A retaining wall may be designed using the following soil parameters:

Bearing pressure at Elevation 249 to 251

at ULS, 500 kPa
at SLS, 200 kPa

Coefficient of active earth pressure

for horizontal grade 0.27
for 50% gradient 0.45

Unit weight of engineered fill, 22 kN/m^3

It is presumed that the retaining wall would include drainage facilities such that there would be no build up of hydrostatic pressure within the fill.

4.1.3 Mechanically Stabilized Segmental Retaining Wall

The alternative of adopting a design of a mechanically stabilized segmental retaining wall on the south face should be considered. For this case, the facia segments may be selected to provide a visual effect which is attractive to the residents of the residence. The design of the mechanically stabilized structure would be made on the basis of the following soil parameters:

Angle of internal friction, 34°

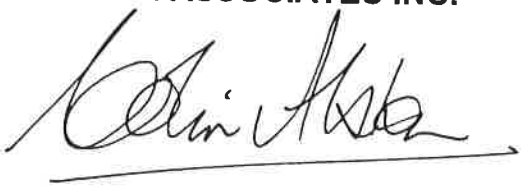
Unit weight, 22 kN/m^3

Using these data, we have prepared a preliminary design for mechanically stabilized earth structure which is 5 m high. This shows that the use of geogrid reinforcement with a width of reinforcement (measured from the face of the segments of 4 m and placed at a vertical increment of 0.6 m) would provide adequate reinforcement. The four lower sheets of reinforcement should have an ultimate strength of 50 kN/m if the reinforcement is constructed of multi-strand polyester fibres, and 100 kN/m if the geogrid is constructed of high density polyethylene (HDPE) material. The upper sheets should have strengths of 40 and 80 kN/m for polyester and HDPE product, respectively.

5.0 LIMITATIONS OF REPORT

The Limitations of Report, as quoted in Appendix 'A', are an integral part of this report.

ALSTON ASSOCIATES INC.



Colin Alston, P.Eng.

/jt

APPENDIX 'A'

Appendix 'A'

LIMITATIONS OF REPORT

The conclusions and recommendations in this report are based on information determined at the test hole locations. Soil and groundwater conditions between and beyond the test holes may differ from those encountered at the test hole locations, and conditions may become apparent during construction which could not be detected or anticipated at the time of the soil investigation.

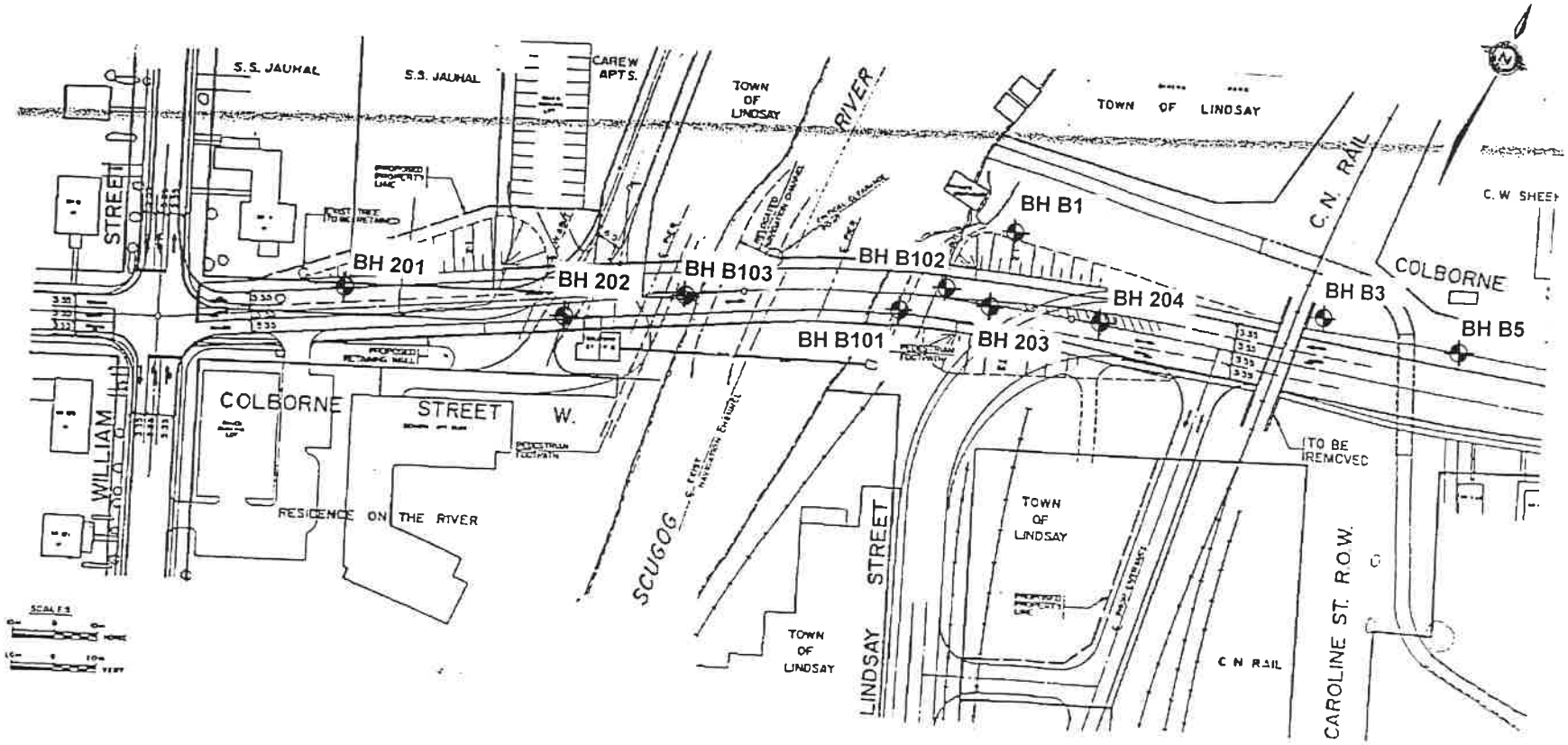
The design recommendations given in this report are applicable only to the project described in the text, and then only if constructed substantially in accordance with details of alignment and elevations stated in the report. Since all details of the design may not be known to us, in our analysis certain assumptions had to be made as set out in this report. The actual conditions may, however, vary from those assumed, in which case changes and modifications may be required to our recommendations.

This report was prepared for Cole, Sherman & Associates Ltd. by Alston Associates Inc. The material in it reflects Alston Associates Inc. judgement in light of the information available to it at the time of preparation. Any use which a Third Party makes of this report, or any reliance on decisions which the Third Party may make based on it, are the sole responsibility of such Third Parties.

We recommend, therefore, that we be retained during the final design stage to review the design drawings and to verify that they are consistent with our recommendations or the assumptions made in our analysis. We recommend also that we be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered in the test holes. In cases where these recommendations are not followed, the company's responsibility is limited to accurately interpreting the conditions encountered at the test holes, only.

The comments given in this report on potential construction problems and possible methods are intended for the guidance of the design engineer, only. The number of test holes may not be sufficient to determine all the factors that may affect construction methods and costs. The contractors bidding on this project or undertaking the construction should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the subsurface conditions may affect their work.

ENCLOSURES



Borehole Location Plan
Scugog River Bridge
Lindsay, Ontario

Drawing No. 1
Ref No 99-124
April 2000
Scale: as shown

Cole, Sherman & Associates Limited	Augering and Split Spoon Sampling	BOREHOLE NO: 201
Scugog Bridge		PROJECT NO: 99-124
Lindsay, Ontario	PROJECT ENGINEER: CA	ELEVATION: 255.6 (m)

SAMPLE TYPE: AUGER | NO RECOVERY | CORING | DYNAMIC CONE | SHELBY TUBE | SPLIT SPOON

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

DEPTH(m)	INSTRUMENTATION DATA	REMARKS	Field Vane Shear Strength 20 40 60 80 / N-Value 20 40 60 80	PLASTIC M.C. LIQUID 10 20 30 40	SOIL SYMBOL	Soil Description	SAMPLE TYPE	SAMPLE NO	SPT(N)	ELEVATION(m)
0.0		Borehole cave-in at 5.9 m and water level at 5.6 m below ground surface on completion.				90 mm ASPHALTIC CONCRETE				255.6
						compact, brown, damp sand, some gravel (Granular Base)		1	14	
1.0										255.0
						compact, moist, brown SILTY fine SAND		2	27	
2.0										254.0
								3	29	
						hard, grey SILTY CLAY frequent stone fragments		4	55	253.0
3.0										
								5	49	252.0
4.0										
								6	38	
										251.0
5.0						compact, wet, grey CLAYBOUND SAND some gravel		7	16	
6.0 ▼										250.0 ▼
								8	18	
7.0										249.0
			50/125			hard, grey stony CLAY		9	50/125	248.0
8.0						END OF BOREHOLE (Refusal to auger advancement)				

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consulting engineers

LOGGED BY: JDB	COMPLETION DEPTH: 7.8 m
REVIEWED BY: CA	COMPLETE: 00 04 03
	Page 1 of 1

00/04/10 09:47AM (AAL85FV)

Cole, Sherman & Associates Limited	Augering and Split Spoon Sampling	BOREHOLE NO: 202
Scugog Bridge		PROJECT NO: 99-124
Lindsay, Ontario	PROJECT ENGINEER: CA	ELEVATION: 250.8 (m)

SAMPLE TYPE: AUGER | NO RECOVERY | CORING | DYNAMIC CONE | SHELBY TUBE | SPLIT SPOON

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

DEPTH(m)	INSTRUMENTATION DATA	REMARKS	Field Vane Shear Strength (20 40 60 80) / N-Value (20 40 60 80)	PLASTIC M.C. LIQUID (10 20 30 40)	SOIL SYMBOL	Soil Description	SAMPLE TYPE	SAMPLE NO	SPT(N)	ELEVATION(m)
0.0		Borehole dry and cave-in at 1.8 m below ground surface on completion.				80 mm ASPHALTIC CONCRETE				250.8
						compact asphalt, silt, clay, stone, brick, sand FILL		1	35	
1.0								2	18	250.0
						very loose		3	3	249.0
2.0						soft, spongy, brown partly organic SILT		4	9	
						soft, spongy, black granular PEAT				248.0
3.0						very stiff to hard, brown SILTY CLAY some embedded sand and gravel		5	31	
			23/150			grey, weathered CLAYEY LIMESTONE FLAGS		6	23/150	247.0
4.0						END OF BOREHOLE (Refusal to auger advancement)				
5.0										246.0
6.0										245.0
7.0										244.0
8.0										243.0

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consulting engineers

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REVIEWED BY: CA

COMPLETION DEPTH: 4.0 m
COMPLETE: 00 04 03

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Cole, Sherman & Associates Limited	Augering and Split Spoon Sampling	BOREHOLE NO: 203
Scugog Bridge		PROJECT NO: 99-124
Lindsay, Ontario	PROJECT ENGINEER: CA	ELEVATION: 249.8 (m)

SAMPLE TYPE: AUGER | NO RECOVERY | CORING | DYNAMIC CONE | SHELBY TUBE | SPLIT SPOON

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND

DEPTH(m)	INSTRUMENTATION DATA	REMARKS	Field Vane Shear Strength 20 40 60 80 / ▲N-Value▲ 20 40 60 80	PLASTIC M.C. LIQUID 10 20 30 40	SOIL SYMBOL	Soil Description	SAMPLE TYPE	SAMPLE NO	SPT(N)	ELEVATION(m)
0.0		Borehole moist and open on completion.				compact damp, brown sand, some gravel FILL		1	25	249.8
1.0						loose dark brown topsoil, some ash, FILL		2	6	249.0
2.0						loose, moist, brown sand, silt, occasional clay lumps some gravel, FILL		3	9	248.0
						dense, moist, brown SILTY fine SAND some gravel, trace clay		4	45	
3.0						END OF BOREHOLE (Refusal to auger advancement)				247.0
4.0										246.0
5.0										245.0
6.0										244.0
7.0										243.0
8.0										242.0

alston associates inc.
consulting engineers

LOGGED BY: JDB | COMPLETION DEPTH: 2.7 m

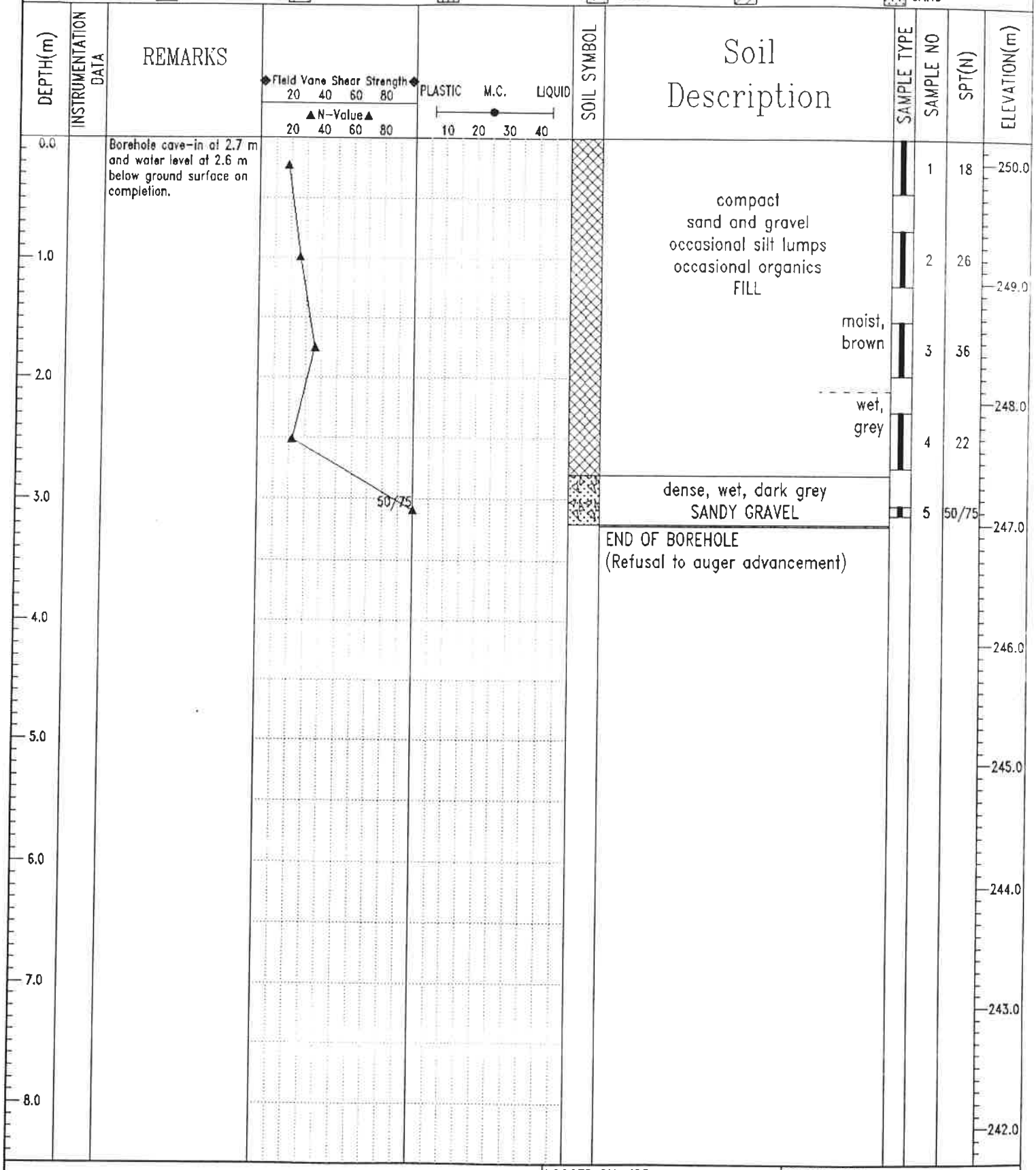
REVIEWED BY: CA | COMPLETE: 00 04 03

00/04/10 09:49AM (AALBSFV)

Cole, Sherman & Associates Limited	Augering and Split Spoon Sampling	BOREHOLE NO: 204
Scugog Bridge		PROJECT NO: 99-124
Lindsay, Ontario	PROJECT ENGINEER: CA	ELEVATION: 250.2 (m)

SAMPLE TYPE: AUGER | NO RECOVERY | CORING | DYNAMIC CONE | SHELBY TUBE | SPLIT SPOON

BACKFILL TYPE: BENTONITE | PEA GRAVEL | SLOUGH | GROUT | DRILL CUTTINGS | SAND



alston associates inc. consulting engineers	LOGGED BY: JDB	COMPLETION DEPTH: 3.2 m
	REVIEWED BY: CA	COMPLETE: 00 04 03
		Page 1 of 1

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Appendix F – Hydraulic Analysis and Stormwater Management Plan

Stormwater Management Report

Proposed Scugog River Crossing in the Town of Lindsay

1.0 Introduction

1.1 General

The Town of Lindsay has proposed a structure crossing Scugog River connecting Colborne Street West and East from William Street to Saint Paul Street. Cole, Sherman & Associates Limited has been retained by the Town to prepare preliminary drawings for construction of the bridge crossing the Scugog River and to identify the preferred stormwater management measures to address flow from the new roadway. This report describes the criteria used for the design of the stormwater management facility, presents details of the preferred plan, and discusses any potential hydraulic effects on the Scugog River resulting from construction of the proposed bridge.

1.2 Existing Topography and Drainage

Colborne Street West and East naturally drain toward the Scugog River. The eastern catchment area extends approximately 200 m from the riverbank to Colborne Street East. The western floodplain is approximately 110 m extending from the riverbank to William Street. Flow from Colborne Street East is drained north to Sinister Creek, where it is taken directly to Scugog River.

Under existing condition, significant erosion is occurring along Sinister Creek while the Scugog River appears to be relatively stable.

1.3 Proposed Drainage Coordination

Under proposed conditions, runoff from the new crossing would be directed easterly to Sinister Creek. A new swale grass lined swale would be constructed to safely convey the flow from the roadway to the creek. The total catchment area is estimated to be 0.44 ha of paved area. The profile shown in Figure 3 identifies approximately 260m of new roadway would discharge to Sinister Creek. A short

length of new roadway located at the west limit of the site would discharge to an existing storm sewer system at Colborne Street West.

2.0 Stormwater Management Plan

2.1 Approach

Sinister Creek provides limited quality control for runoff to the Scugog River and at the present time is experiencing significant erosion activity. The proposed stormwater management plan is to construct a linear wetland that parallels the south edge of the watercourse extending from the inlet of an existing box culvert to the Scugog Ringer. This facility would be designed to provide the required quality control for runoff from the new roadway as well as stabilize the existing southerly channel bank. The stormwater quality control to be provided would be in accordance with the requirements of the Kawarthra Region Conservation Authority (KRCA). Details of the facility are provided in the following sections.

2.2 Design Details

The proposed stormwater wetland facility will be located immediately adjacent to the south side of Sinister Creek. The following provides details of the selected design. A plan and cross-section of the proposed works is included in Figures 1 and 2.

i) Quality Cell Elevation Calculations

The elevation of the quality cell is controlled by the elevation of Sinister Creek. The invert of Sinister Creek at the downstream limit of the proposed facility is approximately 247.8 m. To ensure that the wetland remains inundated even during drought periods, the wetland bottom would be 0.1 m below the adjacent channel. Assuming a mean depth of 0.2 m within Sinister Creek, the average depth of water within the wetland would be 0.3 m. Separating the wetland from the watercourse would be a 0.5 m high permeable berm, constructed of 200 to 300 ϕ rip rap. The permeable berm would allow the water level within the wetland to rise and fall with that of Sinister Creek.

ii) **Quality Cell Sizing and Grading**

Since the runoff eventually goes to Lake Scugog, the KRCA requires that Level 1 Protection (80% removal of total suspended solids) be provided with 24-hour extended detention time. This is in accordance with the MOE guidelines.

The quality control cell has been designed as a wetland facility with an average water depth of 0.3 m. The facility would provide treatment for runoff from the roadway with some additional treatment for the Sinister Creek flows. The 1994 MOE SWM Practices Planning and Design Manual recommends a total volume of 140 m^3/ha (for IMP = 85% and Level 1 Protection), of which 100 m^3/ha represents the permanent pool volume. For the subject property, the following criteria were used for design of the quality cell.

- assumed level of imperviousness (paved roadway) = 95%
- required permanent pool volume = 100 m^3/ha x 0.44 ha = 44 m^3

Extended detention will be provided by the 40 m^3/ha extended detention volume as specified in the MOE manual.

- required extended detention volume = 40 m^3/ha x 0.44 ha = 18 m^3

The combined permanent pool volume and extended detention volume (design volume) is equal to approximately 62 m^3.

The following design parameters were used for the wetland:

- minimum pool depth = 0.1 m
- average permanent pool depth = 0.3 m
- protected side slope = 3:1

The actual permanent pool volume being provided with the proposed design is approximately 60 m^3 (required volume is 44 m^3). The actual extended detention volume is approximately 50 m^3 (required volume is 18 m^3) resulting in a total quality cell volume of 110 m^3. As the quality cell has been designed well in excess of that required, the proposed wetland facility will provide a greater level of control than that required.

Outflow from the wetland would be via a permeable berm that extends the entire length of the facility. As outflow from the wetland would not occur until the water level in Sinister Creek has receded, it is anticipated that the drawdown time associated with the extended detention volume would exceed the 24 hour required detention time.

iii) Landscaping Plan

The banks of the wetland facility would be topsoil and seeded with a native mix and an erosion mat placed in order to provide immediate protection from the flows along Sinister Creek. Groupings of cat tail plugs are to be provided to promote a quick establishment of a wetland ecosystem. Additional shrub and tree plantings would be provided along the periphery of the wetland for shading.

3.0 Conclusions

Results of the analysis confirmed that with implementation of the proposed stormwater management plan the required quality control would be provided. In addition, an existing erosion hazard along Sinister Creek would be corrected.

4.0 Hydraulic Analysis

4.1 Introduction

A hydraulic analysis was completed based on the observed flows from the dam and surveys of the land surrounding the proposed bridge site. The analysis was completed to determine the potential impacts of the proposed crossing of Scugog River. Details of the structure are provided in Figure 3.

As evident from the section as provided in Figure 3, the bridge structure will span the entire width of the river. The closest bridge abutment is 5 m from the normal water level, at an elevation of 247.8 m and is at the high-recorded water level of 248.4m.

4.2 Collection of Data

Based on discussions with representatives of the Trent Severn Waterway, it is apparent that there is no streamflow data for the Scugog River at the subject crossing. There is, however, an estimated high water level of 248.4 as provided by the KRCA, which is approximately 0.3 m above the existing riverbank.

Based on discussions with Mr. Bruce Kitchen of the Trent Severn Waterway, it is our understanding that the water level at the dam upstream of the proposed crossing has never been overtopped. All of the stop logs however have on occasion been removed with the maximum water level approaching the top of the weir structure. Based on this information, a peak flow estimate of 55 m^3/s was established for the system and used as a secondary check for the flood hazard analysis complete at the proposed crossing, located downstream of the dam.

4.3 Analysis of Proposed Structure

An HEC-RAS model was established (see Figure 4 for section locations) to determine the effects of the proposed structure on the Scugog River floodlines. The proposed bridge structure has two abutments constructed on the floodplains and a single 1.2 m diameter pier, which is constructed on the west bank. The west

abutment begins approximately 40 m from the riverbank at an elevation of 249.3 m, while the east abutment is constructed approximately 5 m from the riverbank at an elevation of 248.4 m. The east abutment, which is the closest to the channel, is at the same elevation as the highest observed water level.

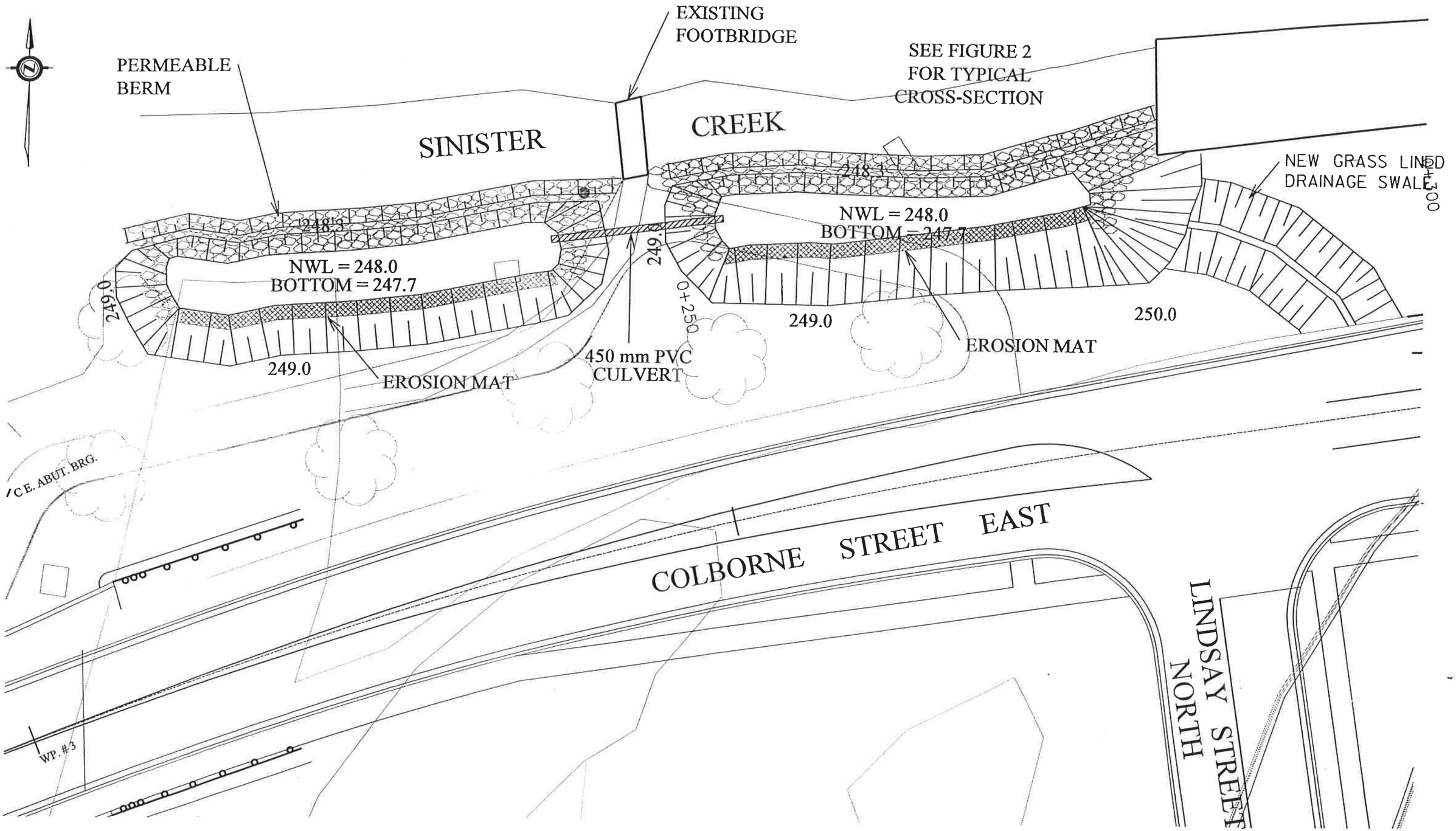
Using the HEC-RAS model and a high water level of 248.4 m, the flow within the channel was estimated to be in the order of 65 m^3/s, which compares with that estimated (55 cms) at the upstream dam. HEC-RAS simulations were undertaken based on a starting high water level of 248.4 m and a maximum flow of 65 m^3/s. The results as summarized in Table 3.1 confirmed that there would be very little change in the water surface profile along the study reach. The maximum change was 0.01 m.

Table 3.1 Results of the HEC-RAS Modelling

River Sta	Q Total (m^3/s)	Min Ch El (m)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m^2)	Top Width (m)
200	65	244.95	248.41	0.6	108.79	47.85
180	65	244.95	248.41	0.6	108.75	47.83
160	65	244.95	248.41	0.6	108.71	47.81
140	65	244.95	248.41	0.6	108.66	47.80
120	65	244.95	248.41	0.6	108.62	47.78
102.5	Bridge					
100	65	244.95	248.4	0.6	108.57	47.77
80	65	244.95	248.4	0.6	108.53	47.75
60	65	244.95	248.4	0.6	108.49	47.74
40	65	244.95	248.4	0.6	108.44	47.72
20	65	244.95	248.4	0.6	108.40	47.70
0	65	244.95	248.4	0.6	108.36	47.69

4.4 Conclusion

Results of the hydraulic analysis confirmed that the proposed bridge crossing would not have any significant impact on the existing flood hazard condition.



COLE, SHERMAN

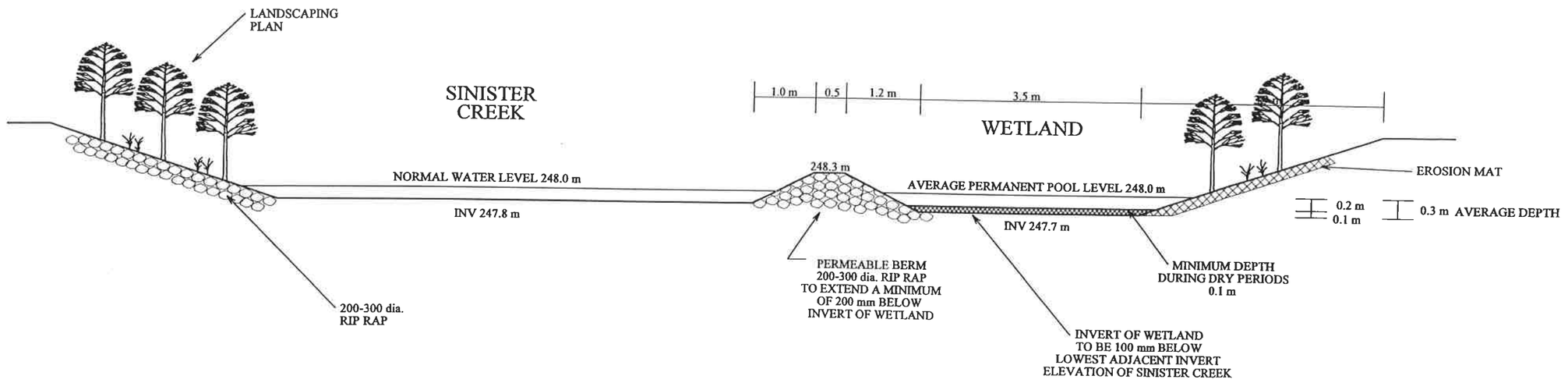
SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

STORMWATER MANAGEMENT
POST DEVELOPMENT OPTIONS

Figure 1

DESIGN	SCALE V 1:250	
DRAWN	REVIEWED	DRAWING NO.

EXTENDED DETENTION VOLUME = 22 m³



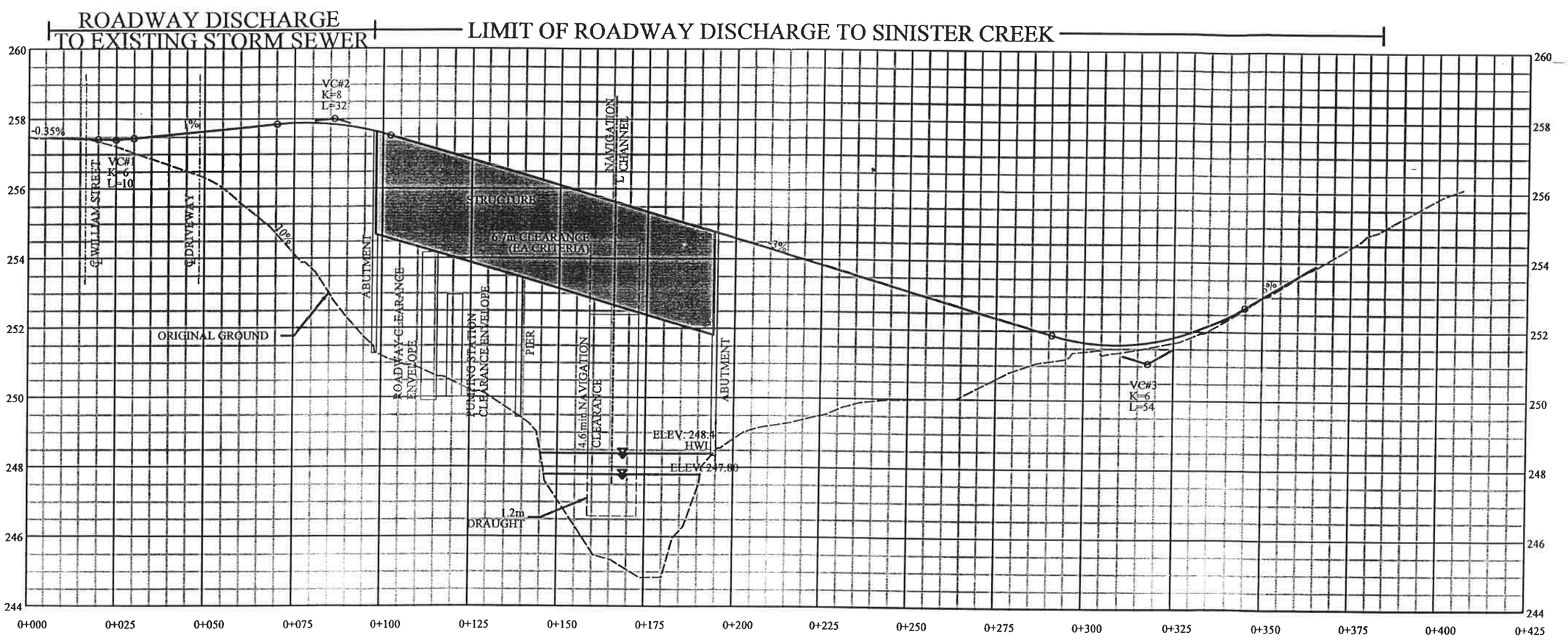
COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

TYPICAL CROSS-SECTION OF PROPOSED WETLAND DESIGN

Figure 2

DESIGN	SCALE 1:75	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	



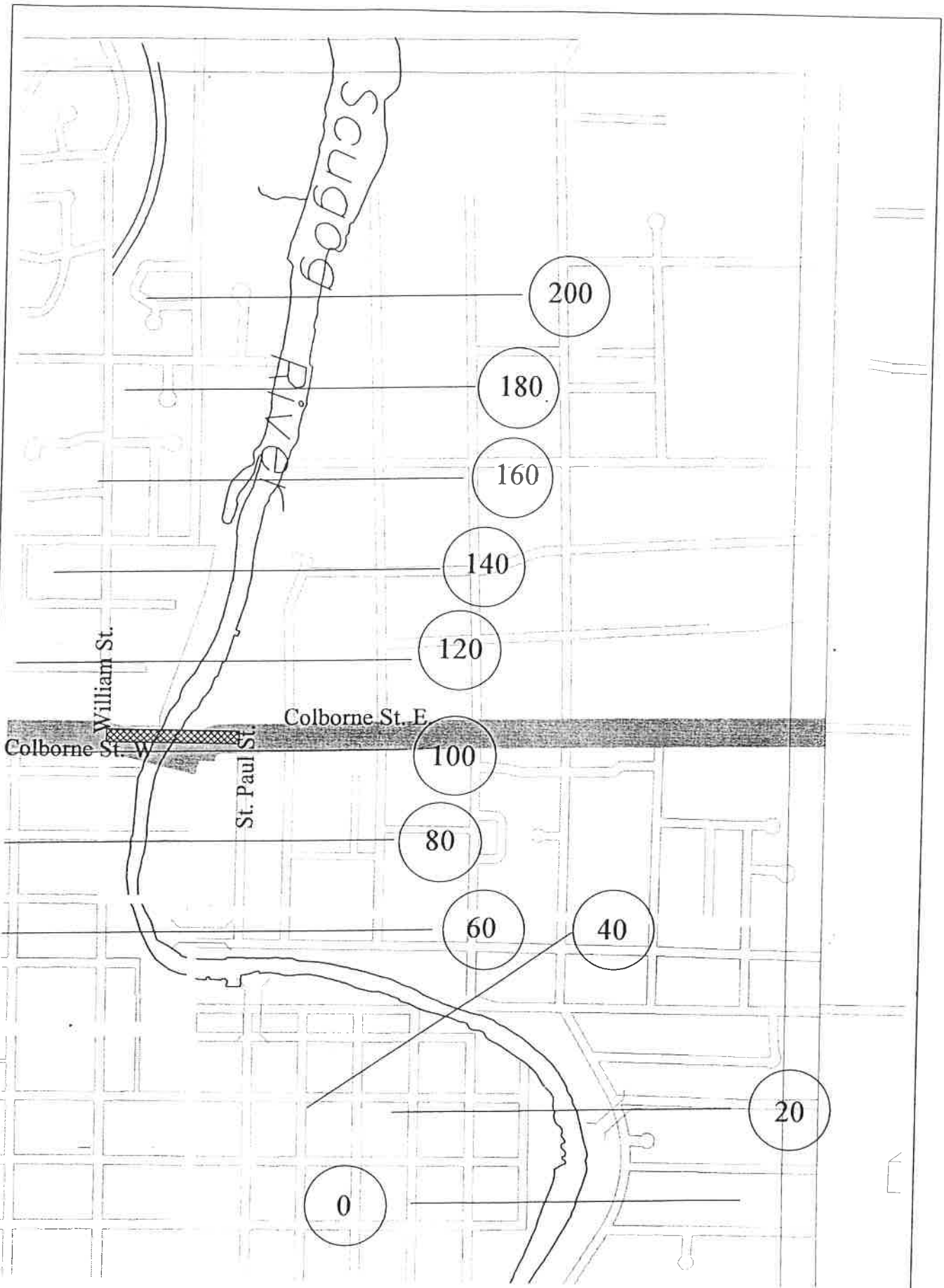
COLE, SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

SCUGOG RIVER CROSSING
PROFILE

Figure 3

DESIGN	SCALE H 1:1250	V 1:125
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	



COLE SHERMAN

SCUGOG RIVER CROSSING
PRELIMINARY DESIGN
COLBORNE ST. WEST TO COLBORNE ST. EAST
TOWN OF LINDSAY

HEC-RAS SECTION LOCATIONS
Figure 4

DESIGN	SCALE NTS	
DRAWN	REVIEWED	DRAWING NO.
DATE	SHEET NO.	