

The Effect of Urban Policies and Development Strategies  
on the  
Stimulation of Industrial Growth:  
A Case Study on Ingersoll, Ontario, Canada

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THE EFFECT OF URBAN POLICIES AND DEVELOPMENT STRATEGIES  
ON THE  
STIMULATION OF INDUSTRIAL GROWTH:  
A CASE STUDY ON INGERSOLL, ONTARIO, CANADA

BY

Brian G. Joiner

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**AUTHOR:** Brian G. Joiner

**SUPERVISOR:** Dr. W.A. Anderson

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## ABSTRACT

Several documents have been presented outlining the methods incorporated by large multinational corporations in their plant location process. These methods contribute to our knowledge of how companies choose a location in which to locate a manufacturing operation. The role of the region or municipality in preparing an appropriate atmosphere to coordinate with an industry's specific requirements has not been widely examined. The objective of this research paper is to examine the role played by the Town of Ingersoll, Township of South-West Oxford and County of Oxford in Southwestern Ontario in preparing a suitable land, infrastructure and zoning regulations package to facilitate the requirement for a joint General Motors and Suzuki automotive assembly plant. The results obtained from this research paper will aid in the awareness of the actions that occur to aid such a large industrial and economic expansions within a small agricultural society.



### ACKNOWLEDGEMENTS

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Brian G. Joiner

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## CHAPTER 1

### INTRODUCTION

One of the most crucial decisions to be made by corporate executives is the selection of a particular country or site for the location of a manufacturing operation. The relative importance of such decisions is immense as the decision normally involves a long-term commitment of monetary and human resources. The success of a firm may be contingent on the success of the choice of location. The growing dominance of multinational corporations and invasion of foreign direct investment in Canada will inevitably have an effect on Canada's national economy. The recent free-trade agreement agreed upon between the United States and Canada will also alter the nature and position of Canada's place in the world economy.

Implications such as these have led to questions revolving around the location criteria applied by large multinational corporations in the determination of a site for manufacturing production. In addition, what are the roles and impacts of the federal government and the municipality on such decision criteria?



Economic evolution arises from man's technological action upon the elements in his physical environment which are constantly changing (Isard, 1956, p.1).

Industry constitutes the basis of planning as it promises a diffusion and multiplication of those poles of decision and accumulation and establishes the priority of overall economic growth as a major indicator of development.  
(Roux, 1980: 71)

This research centres around the impacts of developmental strategies on the stimulation of industrial growth in Ingersoll, Ontario.

Ingersoll won the development contract over a number of other Canadian cities for a multimillion dollar General Motors and Suzuki automotive plant. Since the announcement of intended plant operations in August of 1986, the economic impacts on Ingersoll and surrounding counties have been staggering. Housing costs have increased, new housing developments have been initiated and speculation has prompted many firms at all levels of production to purchase land in the area.

Oxford County has rezoned 250 hectares of land for construction of the \$650 million plant. More than 2,000 employees will produce 200,000 vehicles per year in this plant, the largest Japanese plant ever built in Canada (Globe and Mail, 1986: A15). Thousands of spinoff jobs are expected as a result of the Japanese automakers agreement to meet the 60% Canadian content requirement of the Canada-U.S. auto pact. This labour agreement is unique to Canada, incorporating a Japanese style of



work teams instead of the traditional assembly line operations. When operating at peak capacity, the Ingersoll plant is expected to be one of the most efficient car manufacturing operations in the world (Winnipeg Free Press 1986: 16).

### 1-1: Hypothesis

The purpose of this thesis is to examine the effect of urban policies and development strategies on the stimulation of industrial growth in a region. The specific region to be studied is Ingersoll, located in Oxford County of Southwestern Ontario. Ingersoll, a small rural town of 8,500, has been chosen as the site for a large automotive plant, a joint venture with General Motors of Canada and Suzuki Motor Company. The announcement of the location decision concludes a planning strategy administered by three unnamed location consultants from Toronto. Ingersoll's Development Officer Ted Hunt established a proposal that catered to the needs and requirements set by General Motors and Suzuki in an attempt to encourage this General Motors industrial development to Ingersoll. Establishing a feasible site and implementation strategy to meet these demands included land acquisition, infrastructure improvements, labour and capital availability. The objectives of this research are to examine the attributes and incentives involved in the attraction of large industrial investments to rural regions.

## 1-2: Methodology

The methodology incorporated in this research included personal interviews with various local politicians in Ingersoll and Oxford County. Mayor Doug Harris and Development Officer Ted Hunt from the Town of Ingersoll, as well as Deputy Commissioner Elizabeth Ottaway from the County of Oxford's Department of Planning and Development supplied much information through interviews and publications. These interviews, in conjunction with analyses of planning documents and government statistics, gave insight into the policies and development strategies that have been implemented by the municipality and county to stimulate industrial development. A questionnaire (Appendix 1) sent to location analysts and company executives from CAMI Automotive Incorporated was unanswered due to the "highly confidential" (CAMI, 1988) nature of the information requested. This questionnaire proposed to determine the strength of factors such as land prices, land and capital availability, government incentives, market potential, infrastructure and linkages as well as their effects on the location decision. A newspaper investigation was conducted to examine the Federal and Provincial Government's financial incentives and policy alterations that supported the industrial location decision in favour of Ingersoll.



## CHAPTER 2

### LITERATURE REVIEW

Understanding the factors that influence the siting of factories is important in national and regional planning. An attempt to explain the location of a particular industry or to solve local and regional employment problems requires an awareness of how locations are chosen. The factors which influence industrial location are researched and understood by industrial geographers. However, there is an uncertainty as to how these factors operate and the relative importance of particular causal factors in specific cases (Smith, 1970: 73).

#### 2-1: Previous Studies

Previous studies have concentrated on determining the criteria that are important to an industry when locating a site for production. Criteria such as accessibility to input materials, markets, transport networks, labour availability, industrial linkages and others have played an integral role in determining site selection. The efforts of urban planners to stimulate economic and industrial growth in a region cannot be underestimated. Previous studies have shown the location criteria for various types of industries. K.C. Dhawan and Lawrence Kryzanowski, professors from Concordia University, published a report entitled High Technology Plant Location Decisions dealing with U.S.-based multinationals in the Canadian

Computer Industry. P.D. Dowling published a report entitled Bounding Methods for Facilities Location Decisions for his P.H.D. thesis at McMaster University. These studies have been useful as a guide in the formation of the guidelines for this research.

## 2-2: Traditional Industrial Location Theories

The traditional Weberian and Loschian theories on decision making criteria were reviewed as background information. An understanding of traditional views and perspective on industrial location strategies is a requisite for understanding and evaluating modern industrial location theories and their implementation in today's modern society and economic structure. Alfred Weber and August Losch are two twentieth century economists who have developed different theories of industrial location. The theory of least cost industrial location, derived from the works of German economist Alfred Weber, directed itself toward the determination of a location which would incur minimum costs (Greenhut, 1956: 254). Weber's model is a partial equilibrium theory of the firm concentrating on the location of one manufacturing firm with an emphasis on minimizing transport costs (Hoover, 1970: 3). August Losch developed a theory of industrial location called market area analysis. Losch's theory stated that within a market area there are many locations where total demand for a good is maximized, but there exists an optimal location where profits can be maximized (Smith, 1970: 74).



## 2-3: Location of Multinational Firms

The strategies employed by planners to facilitate economic growth include zoning changes, industrial and urban investment. These criteria follow a logical sequence which are sensitive to various factors in society culminating in numerous unpredictable consequences (Roux, 1980: 79). These are the unpredictable consequences with which the planner must later cope. The repercussions can be either advantageous or disadvantageous, and depending upon the outcome, the planner may be either praised or resented.

F.E.I. Hamilton (1974: 489) notes six factors developed by the Japanese that affect their corporation location choices. The use of government aid, the ratio of direct land costs to total costs, attention to hazards and physical environment, connections between parent, branch and subcontracted firms, an orderly location sequence in the evolution of multi-plant firms, and location innovation all play a vital role in locating a production site. In principal, location decisions are based on: (a) choice of market area in which to sell the product; (b) choice of an area from which shipments to market are desirable or competitive; and (c) selection of an optimal site in which to locate the industry (Hamilton, 1974: 495).

## 2-4: Industrial Development in Rural Areas

During the past thirty years, planning has favoured the micro-economic environment for both residential development and industrial location. Within this context, a 'micro-economic environment' refers to a region that relies on a small, undiversified economic base. Such regions are principally located in rural or peripheral areas that rely on agriculture or natural resources extraction for its economic prosperity. Secondary manufacturing activities and the provision of tertiary services are few in number and operate on a small scale of production.

Manufacturing operations are inclined to locate within close proximity to the labour force and market areas that have increasingly been moving outward to rural and urban peripheral areas. Recent trends in spatial planning are being focused on a redistribution of industrial growth in rural areas. The rationale behind this terminology stems from the idea that "growth does not appear everywhere at the same time but rather, appears in specific places" (Roux, 1970: 92). These industrial development trends in rural areas act as catalysts to stimulate further economic growth in a region.

Labour force recruitment has been a major factor for developers in relocating or distributing production facilities in the countryside. Based on the belief that workers in the countryside and small towns are commonly associated with good, serious, docile work (Roux, 1980: 92), industries have relocated



to rural regions to utilize these amiable workers. Furthermore, current social, aesthetic and environmental concerns make the rural areas look even more attractive.

Due to the difficulty of separating rural development from regional development, I will emphasize that a "rural" problem is a "regional" problem. This distinction can be made as the rural areas form part of a larger functioning economic system, the region.

The need for decentralizing commercial and industrial activities in rural areas has evolved from the necessity to enhance economic growth in relatively stagnant or slow-growing regions within growing economies (Bryant, 1980: 101). Bryant (1980: 101) characterizes rural areas as exhibiting low per capita incomes relative to other areas, a predominance of primary activities in the work force, underemployment of labour, population outmigration, shortage of capital and a low propensity for economic and social change. Rural development or industrial decentralization can be seen as an attempt to cultivate integration of the region into the mainstream of the economy and society.

Development in rural areas is not only concerned with growth of a system and an increase in Gross National Product (G.N.P.), but also implies a modification in the socio-economic structure of production (Bryant, 1980: 100). Table 2-1 suggests a move of industrial production to rural areas. A rural to urban population shift is occurring in conjunction with increases in

the percentages of provincial manufacturing in rural areas and rural labour force. This trend may be explained by individual preferences to enjoy the amenities of infrastructure, shopping facilities, entertainment diversity and other attractions found in large urban centres and away from their place of work in rural regions. An increase and improvement in transportation systems has facilitated the ability to comfortably and affordably commute to work. Freeways, commuter trains, subways, buses and other forms of mass-transit improvements enable people to commute further distances in less time than ever before.

Table 2-1. Ontario Rural Statistics

Characteristic	Year	
	1961	1971
% Rural Population	22.7	17.7
% Provincial Manufacturing in Rural Areas	11.9	12.0
% Rural Labour Force in Manufacturing	16.1	18.5

(Bryant, 1980: 104)

Increases in rural manufacturing are also attributed to the industrial movement of decentralization. Research in the United Kingdom has concluded that many industrial moves are distributional rather than developmental (Bryant, 1980: 105). Industrial relocations or evolution viewed from the distributional context is based on a firms preference to spatially segregate production facilities to optimize their proximity to more markets. Developmental moves are based on the belief that locating production facilities in an area will stimulate further economic and employment growth in a region



plagued with stagnant or declining opportunities in economic and employment growth.

Industrial parks have become an important component of the location criteria in the Western industrialized world (Barr, 1983: 423).

Existing studies on the location decision have been perhaps over occupied with analyzing the point of view of the firm and paying insufficient attention to the role of the site-providing agency, which to some extent could be said to choose the firm's location for it.

(Barr, 1983: 423)

Industrial parks present positive and purposeful location environments in which to locate a production facility. The extent to which the Ingersoll industrial park contributed to the attraction of General Motors and Suzuki's automotive plant will be examined. Incentives such as tax breaks, infrastructure developments and upgrading will be analyzed in order to ascertain their effect on attracting industrial development.

National and local government bodies may set out to influence industrial location when they believe that certain economic, social or strategic objectives can be achieved more readily by planning rather than by allowing manufacturers to locate where they please (Smith, 1971: 88). Regions are identified in terms of receiving full, partial or no government assistance as a means of presenting financial incentives for industrial stimulation. Industrial location may be restricted by limiting the freedom of choice of a site through land-use zoning

or tax penalties. These inhibiting limitations are placed on areas where new industrial development is discouraged for various reasons. Governments may encourage firms to locate in certain areas which need new development by offering financial inducements in the form of a loan, subsidy or tax incentive.

Through an understanding of the factors that influence the citing of factories we can establish the strength individual factors have on specific cases. Once these factors are determined, the strength of these determinants in stimulating economic growth can be evaluated. These are factors that are vital for the regional planner in an attempt to reduce regional disparities, lower unemployment, increase G.N.P. or stimulate economic growth in a region.

## CHAPTER 3

## PLANNING CONSIDERATIONS

## 3-1: Industrial Development

The major industrial development that has been attracted to Ingersoll is a joint General Motors of Canada and Suzuki Motor Company automobile manufacturing plant to be established under the name of 'CAMI'. CAMI is an acronym for Canadian Automotive Incorporated (County of Oxford, 1987: 1). This automotive manufacturing and assembly plant is expected to produce as many as two-hundred thousand vehicles annually. The facilities are presently under construction with the anticipated plant start-up date set for 1989. The plant will directly create over two-thousand jobs when operating at full capacity.

The automotive plant will manufacture and assemble motor vehicles intended to be sold in the North American market. Material and part supplies will be shipped mainly from Canadian and U.S. manufacturers as well as from offshore origins (County of Oxford, 1981: 1).

Free and secure access to U.S. markets remains intact as the Auto Pact safeguards and the 'Canadian Value Added' commitment remains in place for the 'Big Three' auto manufacturers (Department of External Affairs, 1987: 32). CAMI is included in this stipulation as part of General Motors of Canada. Under the Auto Pact, qualified producers can import vehicles and parts duty-free into Canada from anywhere in the world provided they



meet the required safeguards. Under the free-trade agreement, 50% of the direct costs of production for any vehicle must be incurred in Canada or the United States to qualify for duty-free treatment. Current Auto Pact regulations governing exports to the United States stipulate that overhead and other indirect operating costs are included with the requirement that 50% of the invoice price be incurred in Canada or the U.S. The new free-trade agreement raises this proportion to an equivalent of 70% (Department of External Affairs, 1987: 34). The free trade agreement will directly effect car assembly plants as there will be an increased demand for parts plants in Canada in an attempt to meet the Canadian content regulations. This demand will be beneficial in creating economic growth and increased opportunities in the auto manufacturing sector. CAMI's commitment to meet the Canadian content requirement will mean approximately \$200 million per year in purchases of Canadian auto parts (Vancouver Sun, 1986: D7). With specific reference to Ingersoll's CAMI plant, the free-trade agreement will allow both companies to export the plants production duty free into affluent U.S. markets. This gives General Motors and Suzuki a key advantage over other Japanese car makers operating in Canada who do not qualify for free-trade status.

The importance of establishing domestic parts plants to supply the CAMI plant has already been apparent. Collins and Aikman, an automotive textile manufacturer located in Ingersoll, has expanded existing facilities in preparation for its role as



sole provider of carpets for automobiles produced at the CAMI plant. Other local industries are planning for expansions while area townships and municipalities are preparing for further industrial growth. In particular, new parts plants have already announced openings in Woodstock (2), St. Mary's, Tillsonburg, and Ingersoll. The economic spin off effects of these developments will undoubtedly produce economic, employment, and population growth for the region.

### 3-2: Site Location

The CAMI automotive plant is partially located in the Town of Ingersoll and partially in the Township of South-West Oxford (Figure 3-1). The site includes a land area of approximately two-hundred-and-forty hectares (590 acres) straddling the boundary between the Town of Ingersoll and the Township of South-West Oxford. Because the property encompasses two different zoning regions, the two political units must cooperate to coordinate development schemes to facilitate the requirements for the plant. Included on the property is a municipal road and a street which are affected by construction of the plant facilities. South Street, which lies in the northern portion of the plant site, has been closed by municipal by-law. Clark Road, which lies in the southerly portion of the CAMI property, has been closed across the plant property and relocated along the southerly boundary adjacent to Highway 401. The location of these roads in conjunction with the CAMI plant facilities can be

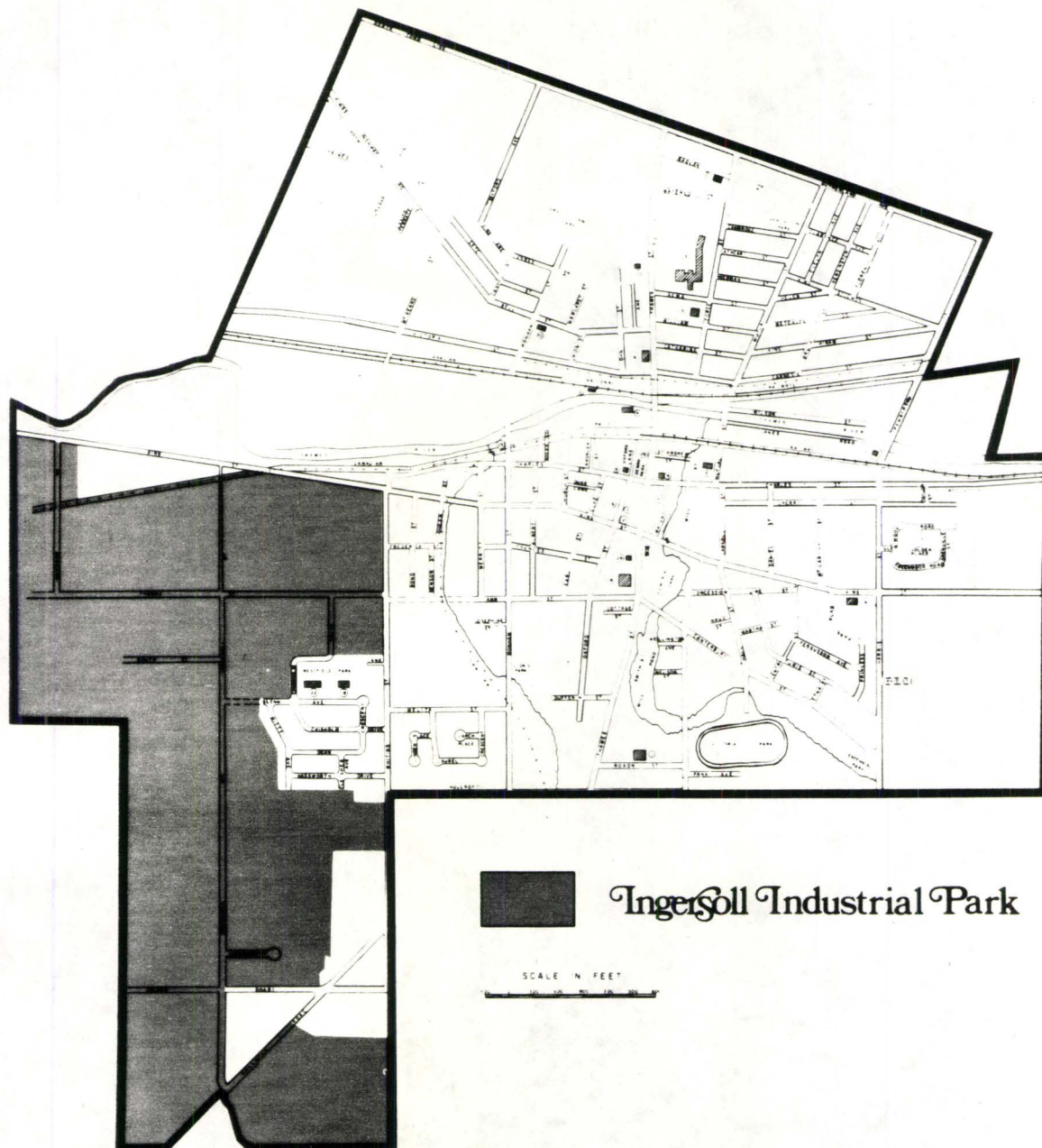
seen on Figure 3-1.

In the context of a regional setting for industrial location, Ingersoll is ideally located at the centre of Southwestern Ontario, a major manufacturing corridor for Eastern Canada and the United States. As can be seen from Figure 3-2, Ingersoll is within a 50 kilometre radius from many other major automotive facilities such as those located in Woodstock, Tillsonburg, St. Thomas, London, Stratford, Kitchener-Waterloo and Cambridge. Furthermore, Ingersoll is within a radius of 250 km from most other major automotive facilities in Southwestern Ontario including Windsor and Detroit, Sarnia, Buffalo and Niagara Falls, St. Catharines, Hamilton, Oakville, Brampton, Toronto and Oshawa.

Ingersoll's location offers easy access to existing car part plants, intermediate goods suppliers and a vast international market. In fact, Ingersoll is located within one day's trucking time to a market of 120 million people (Business and Finance, 1987: 13). It is near several ports on Lake Erie linking it to the St. Lawrence Seaway and midway between two of the main land gateways to the United States at Detroit and Buffalo. This offers access to the United States and overseas markets.

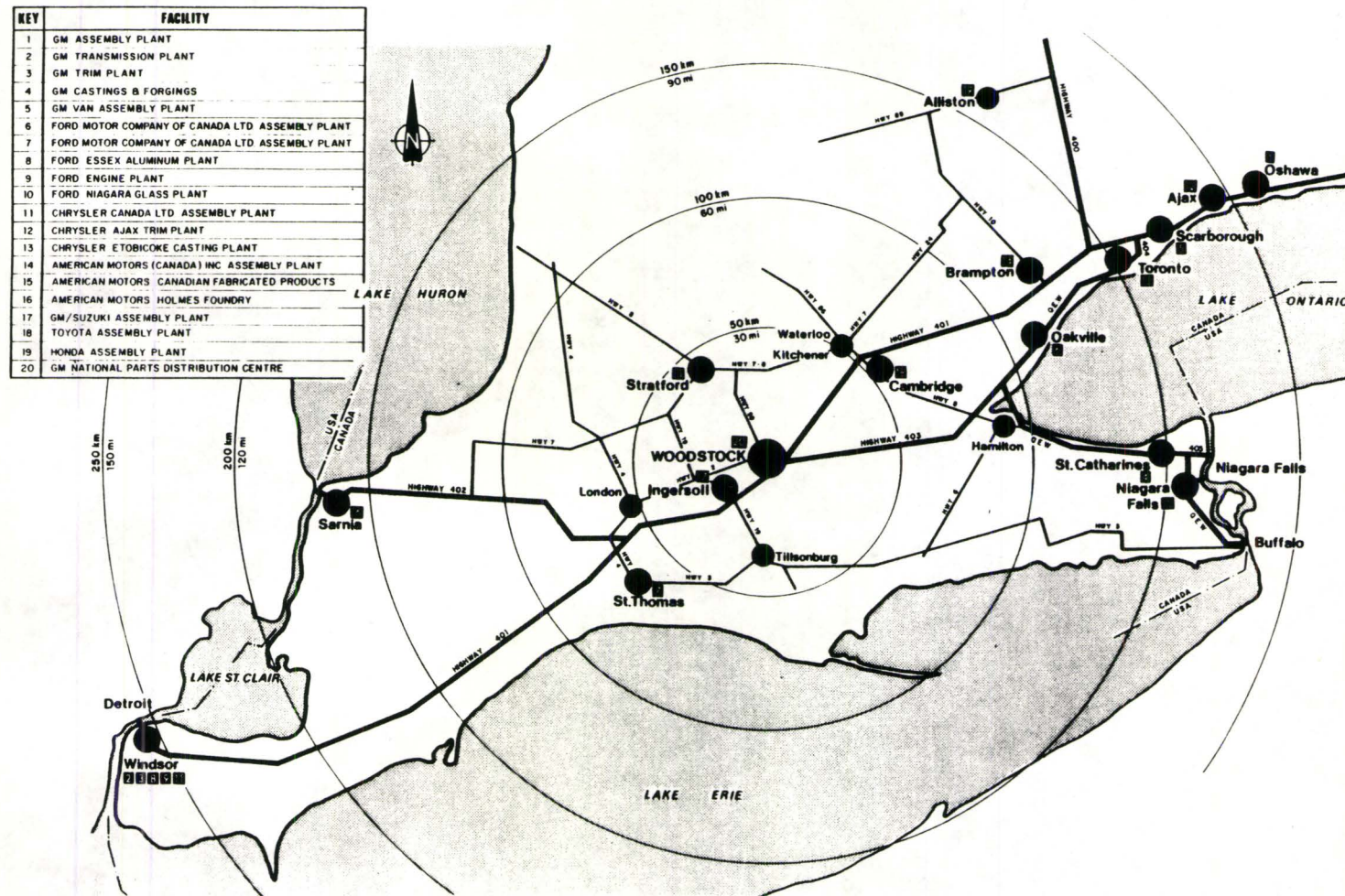


Figure 3-1. INGERSOLL TOWN BOUNDARIES



(Hunt, 1987)

Figure 3-2. LOCATION OF INGERSOLL IN SOUTHWESTERN ONTARIO



(Hunt, 1987)



### 3-3: Need for Development

While assessing the need for any industrial facility, there are two aspects which must be considered. First, there is the need in relation to the corporations' overall business strategy and second, there is a requirement in regard to economic development as viewed from the municipal level (County of Oxford, 1987: 16).

General Motors and Suzuki have clearly identified a necessity to establish a Canadian automobile assembly plant in order to serve the North American market. The CAMI plant will be a very unique joint development involving the cooperation of a North American and a Japanese automobile manufacturing company. The facility is much larger than other recently announced Japanese automotive developments in Canada. The reason for constructing this automotive assembly plant on such a large scale is for the intention to serve the entire North American market and not just Canada. This facility is being designed for the production of as many as two-hundred thousand vehicles per year with room for future expansion should the market indicate that expansion is warranted (County of Oxford, 1987: 16).

There is no question that the CAMI automotive plant will provide a much needed economic lift to the Town of Ingersoll and of the surrounding area. For many years now, the Town of Ingersoll has been actively pursuing industrial interests in the hope of securing new industry to broaden its economic base and increase its economic stability. Appendix 2 shows the existing

industries in Ingersoll. The total labour force employed by these 37 industries is 2,331 with the largest single employer, Fruehauf Canada Inc., employing 354 people (Ingersoll Fact Sheet, 1987: 8). Although the General Motors and Suzuki automotive plant is significantly larger than typical industrial developments in towns the size of Ingersoll, further, as indicated by their support and encouragement, this development also fits well within the general economic development strategies of both the Provincial and Federal governments. In fact, the employment directly created by the CAMI automotive plant will almost double the existing industrial employment. The Town of Ingersoll, the Township of South-West Oxford, and the County of Oxford consider the development to be in line with their capabilities and strategies for economic development.

In preparation for the inflow of residents expected in the near future, speculation on housing markets has more than doubled the property and house values in Ingersoll and area. Eight new housing developments (Appendix 3) are presently in construction phases while two additional developments are in the discussion stages. The total number of housing units planned for construction in these developments is 870 (Harris, 1987).

#### **3-4: G.M-Suzuki Site Selection Requirements**

Prior to carrying out their site selection, General Motors and Suzuki established specific location requirements appropriate for their development. Those location requirements included:



A) Location: Southwestern Ontario

- to be near both the Canadian and American markets and parts suppliers
- within 150 km of Metropolitan Toronto in order to provide quick and efficient access to specialized services, markets, and international airport facilities
- a good supply of labour within a 60 km radius
- a proximity in or close to a small town so as to have a strong traditional community spirit
- near a major highway transportation corridor

B) Site Characteristics

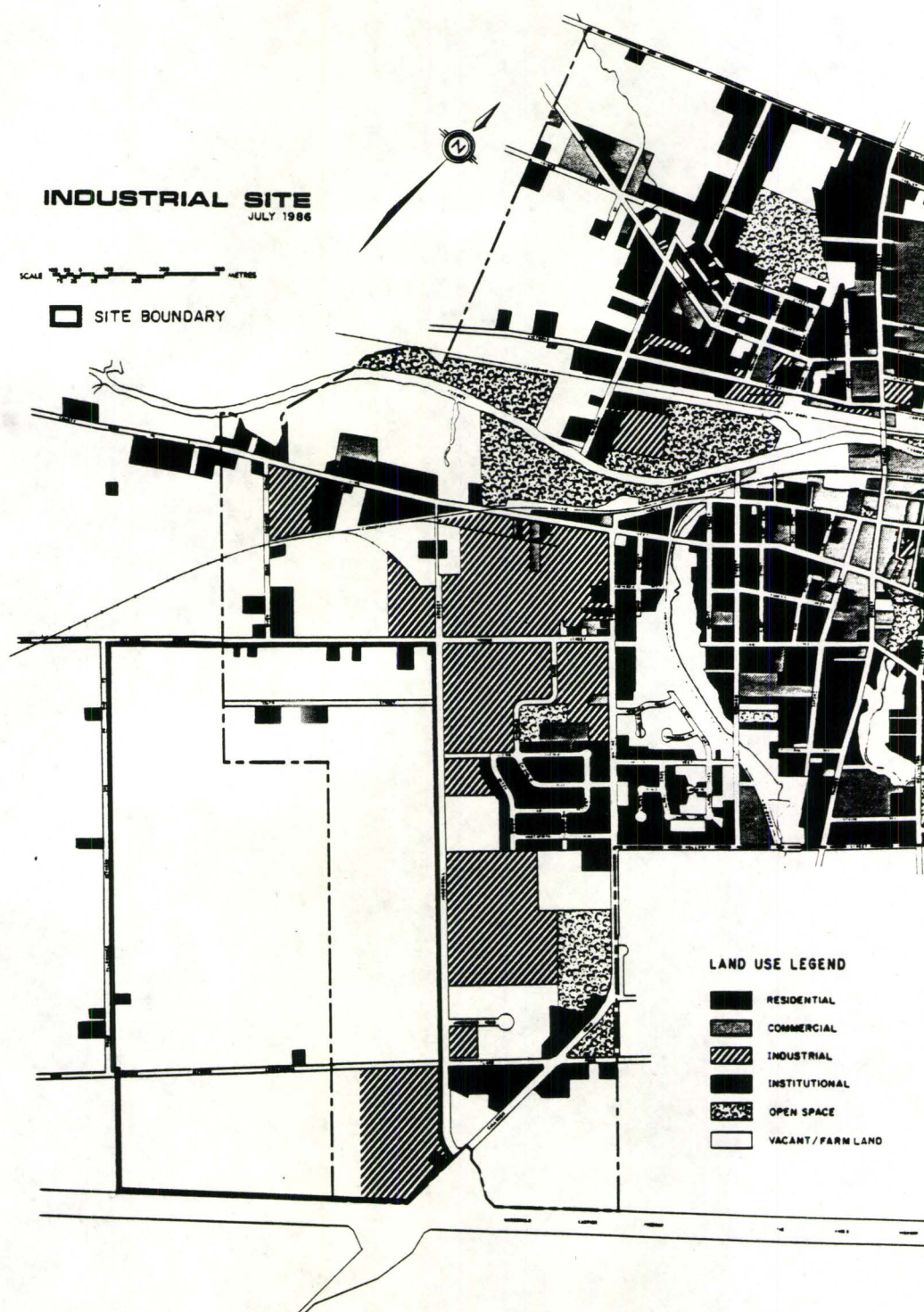
- site area of between 500 to 600 acres
- relatively flat and regularly shaped land area
- quick and efficient highway access
- on site rail service
- serviced or capable of being easily serviced
- an established industrial area
- contiguous to an existing built-up area
- avoidance, as much as possible of lands of high agricultural capability or which are environmentally sensitive.

(County of Oxford, 1987: 18)

In carrying out their site selection, General Motors and Suzuki considered many possible sites in Southwestern Ontario using the above criteria. Through a process of elimination, only a few sites were judged to be suitable. Five localities were identified as potential sites for the automotive facility,

including Barrie, Milton, Cambridge, St. Catharines and Ingersoll. In the overall analysis, the Ingersoll and South-West Oxford site was considered the best choice for fulfilling the criteria. Although the chosen site involves some agricultural land, it is clearly a logical extension of the Ingersoll built-up area and would fit in quite well with the existing industrial park directly to the east (Figure 3-2).

Figure 3-3. Ingersoll's Existing Land Use



(County of Oxford, 1987: 8)



Since a portion of these lands are high quality agricultural lands and the automotive facility is non-agricultural, its redesignation must be fully substantiated. Amendment 49 to Oxford County's Planning Area involves the redesignation of over half of the CAMI land site from 'Rural Buffer Policy Area' to 'Future Urban Growth Policy Area'. Since this amendment removes some farm land from the agricultural designation, it is required that the development be assessed in terms of the Foodland Guidelines Policy Statement of the Province of Ontario. Section 3.13 of the Foodland Guideline states that:

Where high capability agricultural lands have been identified, the use of these lands for productive agricultural purposes must be given priority in evaluating alternative uses. If the land is to be used for another purpose, the requirement must be justified. The need for the alternative use within the municipality or planning area must be documented, as must the reasons why lower capability or marginal land cannot be used (County of Oxford, 1987: 18).

Documentation of the need for the land use must cover four basic issues which include: i) the necessity for the land use; ii) the amount of land needed; iii) the reasons for the choice of location; iv) consideration given to alternate locations of lower capability agricultural land (County of Oxford, 1987: 18). The remainder of this section will outline these justifications in light of these Foodland Guideline requirements.

### 3-4 (i): Necessity for the Land Use

In order to serve the North American market, General Motors and Suzuki have determined that there is a need for an automobile manufacturing and assembly plant in Canada or the United States. Since the plant is to provide production for both Canada and the United States, the size requirement for this assembly plant is of a very large scale. Although the Foodland Guidelines suggest that necessity should be based on past records of demand and rates of industrial land consumption (County of Oxford, 1987:20), it is very rare and nearly impossible to predict a single industrial development of the magnitude presented by CAMI. Although the Town of Ingersoll has prepared for and stimulated industrial development by accumulating land and possessing an established industrial park, the amount of land required for this development would be extremely difficult to accommodate as one contiguous parcel.

In light of the local stagnant economic situation in Ingersoll and Oxford County, the need for development is great. The CAMI automotive plant will offer a significant boost to the maintenance and improvement of the economic situation of the Town for Ingersoll, the Township of South-West Oxford, and the County of Oxford as a whole. Locating the plant in Ingersoll will undoubtedly provide economic benefits for much of the surrounding region. The hard hit tobacco producing region to the south of Ingersoll is in great need of an economic lift and is a good example of the benefits of this program to the surrounding area.

It is expected that there will be a large increase in the 'inflow' of commuters who commute from other area municipalities to Ingersoll to work in the CAMI plant. Presently, commuting patterns to Ingersoll are relatively stable, with 1,755 persons commuting from various municipalities for employment in Ingersoll, while 1,550 Ingersoll residents travel to other areas in which to work (Census of Canada, 1982). Table 3-1 shows the commuter flow pattern for Oxford County for 1981.



Table 3-1. Commuter Flow for Oxford County, 1981

PLACE OF WORK										DESTINATION OF COMMUTERS																											
WOODSTOCK	INGERSOLL	TILLSONBURG	BLANDFORD-BLENHEIM	EAST ZORRA-TAVISTOCK	NORWICH	SOUTH-WEST OXFORD	ZORRA	OXFORD COUNTY	KIT-WAT & CAMBRIDGE	OTHER REGIONAL WATERLOO	BRANTFORD	PARIS	OTHER BRANT COUNTY	HALDIMAND-NORFOLK	ST THOMAS	OTHER ELGIN COUNTY	LONDON	OTHER MIDDLESEX COUNTY	STRATFORD	ST MARY'S	OTHER PERTH COUNTY	HURON	AVON	ELFERTH COUNTY	GUELPH	HAMILTON-WENTWORTH	MURRAY COUNTY	METRO TORONTO	REGIONAL NIAGARA	LAMINGTON	OTHER	TOTAL OUTFLOW					
WOODSTOCK	11,260	205	30	90	85	110	90	11,960	50	5	25	15	30	5	10	250	20	30	5	5	5	15		15	30			25	25	565							
INGERSOLL	595	2185	35	10	10	5	185	105	3110	5				15	30	10	415	10	15	5				5	5	15	30		10	20	625						
TILLSONBURG	115	155	3900				85	25	5	4285		20		435	5	180	85	20	20			5		5			15	5	10	25	835						
BLANDFORD-BLENHEIM	650	5		1580	20	20	5	2280	390	185	150	120	10	5		10	5	30			20		10	5	5	5	35		10	995							
EAST ZORRA-TAVISTOCK	1125	25	20	20	1200	10	5	2750	85	70	5	5				10	5	185	5	15			5			30		10	450								
NORWICH	1030	80	475	15	10	12495	40	35	4100	10		40	10	235	15		40		10			5			5	5	10	10		20	445						
SOUTH-WEST OXFORD	970	605	505	10	5	40	1160	30	3225	10		10		20		35	150	25	5						15	10	15		15	220							
ZORRA	475	315	5	10	20	5	65	1715	2650	15	5	5				5	795	25	185	110	25	5	10	10		5	20	5	5	45	1275						
OXFORD COUNTY	16,220	3575	4970	1735	1655	1275	2045	34,520	565	265	260	150	40	715	60	220	1755	140	480	120	45	40	25	25	30	70	55	140	15	50	210	5490					

OUTFLOW

COMMUTER FLOW OXFORD COUNTY 1981

STATISTICS CANADA

FIGURES ARE RANDOMLY ROUNDED

INFLOW	MUNICIPALITY		INFLOW	OUTFLOW	EMPLOYED LABOUR FORCE LIVING IN MUNICIPALITY	EMPLOYED LABOUR FORCE WORKING IN MUNICIPALITY
	WOODSTOCK		6060	1265	12,525	17,320
	INGERSOLL		1755	1550	3735	3940
	TILLSONBURG		2925	1220	5120	6825
	BLANDFORD-BLENHEIM		805	1695	3275	2385
	EAST ZORRA-TAVISTOCK		420	1660	3160	1920
	NORWICH		505	2120	4625	3000
	SOUTH-WEST OXFORD		490	2485	3645	1650
	ZORRA		685	2170	3925	2440
	OXFORD COUNTY		4960	5490	40,010	39,480

(Census of Canada, 1982)

In regard to the general economic strategies of both the Provincial and Federal governments, this automotive plant fits in very well with their overall plan. Specifically, there has been a trend in recent years toward encouraging a decentralization of commercial and industrial activity away from major metropolitan centres so as to assist development in the outlying areas. Since Ingersoll's economic growth was very slow prior to General Motors and Suzuki's announcement to locate in Ingersoll, Ingersoll qualified for maximum assistance from the Federal and Provincial governments. Ten million dollars were awarded from the Provincial government for infrastructure improvements. These improvements include road, rail, highway interchange, sewer, and fresh water well improvements or development. In total, \$112 million in federal and provincial, aid as well as local assistance was allotted for developments and improvements directly related to the CAMI development (Globe and Mail, 1986: A15). Table 3-2 outlines the breakdown of monetary incentives for the CAMI plant.

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Table 3-2. Government Financing Incentives for CAMI

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<u>Source</u>	<u>Millions of dollars</u>
Federal	57
Provincial	45
<u>Local</u>	<u>10</u>
TOTAL FINANCING	112
TOTAL CONSTRUCTION COST	650

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(Globe and Mail, 1986: A15).



Due to Provincial and Federal incentives, there is not expected to be an impact on the Mill Rate or industrial taxes for homeowners. Further, debentures for the Town of Ingersoll should be paid off in three to four years from taxes paid by CAMI (Hunt, 1987).

#### 3-4 (ii): Amount of Land Needed

The Foodland Guidelines required that consideration must be given to the amount of existing vacant land properly designated for such industrial purposes (County of Oxford, 1987: 21). In response to this requirement, the Town of Ingersoll has an established industrial park to accommodate new incoming industrial interests. Prior to the announcement by CAMI to locate in Ingersoll, four hundred and seventy-five acres of vacant land was available in Ingersoll's industrial park for potential industrial facilities. Due to the exceptionally large amount of land required by CAMI (600 acres) it was extremely difficult to find such a large, contiguous and regularly shaped parcel within any urban municipality. In an effort to provide a parcel of land of suitable size and land relief, the Town of Ingersoll and the Township of South-West Oxford presented a package of land encompassing 590 acres of land spanning Town and Township property (Figure 3-1).



### 3-4 (iii): Reasons for the Choice of Locations

The Foodland Guidelines require that consideration be given to the lowest capability farm land, logical extensions of existing communities and servicing possibilities (County of Oxford, 1987: 21). Locating tracts of low quality farm land in the County of Oxford is very difficult to obtain since over ninety percent of land is classified in the top three agricultural classes (County of Oxford, 1987: 21). Those sites of lower class lands associated with agricultural capabilities are generally far removed from an existing urban area. Due to the difficulty in finding lower capability farm land in Oxford County, it was difficult to avoid the higher capability farm land and still meet the locational requirements required by CAMI. Further, this lower capability farm land was inadequately located to maintain the development as a logical extension of an existing urban area which could provide the necessary infrastructure services.

### 3-4 (iv): Consideration given to Alternative Locations on Lower Capability Agricultural Land.

As the preceding section stated, consideration was given to alternate locations on lower capability agricultural lands. However, such lands are not widely available within Oxford County and certainly not in the size allotment required by CAMI nor are such lands available as a logical extension to an existing built-up area. Generally, it is difficult to avoid good agricultural

land when selecting a site in Southwestern Ontario, especially of this size and magnitude. The Ingersoll site does comply with the Foodland Guidelines requirement as a logical and rational expansion of an existing built-up area. Further, the Ingersoll site is already located within an area designated 'Rural Buffer' which imposes restrictions on agricultural operations. Thus, in conjunction with the Foodland Guidelines, the Ingersoll location in which to establish this multi-million dollar CAMI automotive plant is the most suitable and consistent with local, regional and provincial planning objectives.

Facilitating the required zoning change from 'rural buffer' to 'future growth policy area' was conducted by the Provincial Government through a Ministerial Order (Ottawa, 1987). Under the Planning Act, the Minister of Municipal Affairs has the authority to zone any property in the province. Although rarely executed where municipal zoning is already in place, zoning orders used to safeguard a provincial interest (Ministry of Municipal Affairs, 1985). The Ministerial Order allowed the zoning change to occur 'overnight', preceeding the required public notices and meetings. The benefits forecast for the region as a result of the CAMI automotive plant were estimated to far exceed the costs of losing the 260 hectares of agricultural land. Although public meetings and discussions were held for local residents, farmers, business owners and others to voice their objections, these forums were conducted after the zoning alteration became official. Despite this unusual method for

amending zoning regulations, no appeals were filed to the Ontario Municipal Board (O.M.B.).



## CHAPTER 4

### INDUSTRY REQUIREMENTS

An automobile manufacturing and assembly plant of a scale and nature such as Ingersoll's CAMI plant will require the establishment of both new and upgraded facilities as part of the servicing infrastructure for both the Town of Ingersoll and the Township of South-West Oxford. The facilities included in the infrastructure requirements include water supply, sewage disposal, waste disposal, hydro and natural gas utilities, road and railway services. The following chapter explains the infrastructure requirements required for the construction and implementation of this manufacturing operation and the efforts the Town of Ingersoll and Township of South-West Oxford to accommodate these infrastructure developments. Specifically, the financial assistance granted and zoning amendments implemented specific to the industry's requirements will help us understand how urban policies have aided the attraction of industrial and economic expansion to the Ingersoll and Oxford County region.

#### 4-1: Water Supply

An industrial development for the manufacture of automobiles will require a large amount of water for three main purposes:

- i) industrial processes involved with washing, rinsing and cooling
- ii) fire protection
- iii) potable water for use and consumption by workers.

The anticipated water requirements for the CAMI plant are approximately 5,680 litres per minute (County of Oxford, 1987: 10). Water supply in the Town of Ingersoll comes from groundwater sources known as aquifers. Since the Township of South-West Oxford does not have a municipal water supply system to serve this area, all water supply for the CAMI plant must come from the Town of Ingersoll. In order to provide an adequate water supply for CAMI's industrial requirements, improvements and expansions were required to Ingersoll's existing water system. Two new deep wells were required to supplement present water supply to satisfy CAMI's water needs. In order to provide the necessary water supply, two new deep wells will be required. The Town of Ingersoll, with subsidy assistance from the Provincial government, has agreed to bring two new wells into operation.

In addition to the water requirements stated in the preceding paragraph, there will be a requirement for 17,035 litres per minute for fire flow purposes (County of Oxford, 1987: 10). The addition of the two new wells will assist significantly toward meeting this demand. In addition to the two new wells,



CAMI has agreed to construct an on-site water storage facility. This water storage facility will utilize several high capacity pumps which will be brought into operation to increase the supply of water should an emergency situation ever occur.

#### 4-2: Sewage Disposal

The CAMI industrial development will be required to connect to the sanitary sewage system operated in the Town of Ingersoll by the Ontario Ministry of the Environment. The existing sewer line would not be adequate to accommodate the project flows from the automotive facility. The Town of Ingersoll is prepared to undertake this trunk sanitary sewer construction with financial assistance from the Province of Ontario.

#### 4-3: Waste Disposal

The CAMI automobile plant, as with any other industrial type of facility, will be producing both domestic type waste and industrial waste. The domestic type waste will generally consist of inert material suitable for disposal at the County of Oxford waste disposal site. All hazardous and non-hazardous waste produced on the site will be disposed of at Provincially licensed facilities. The domestic wastes will be disposed of at the County of Oxford landfill site located at Salford, seven kilometers from the automotive plant. As required under provincial law, General Motors and Suzuki will be required to dispose of their hazardous and non-hazardous industrial waste at



the proper facilities licensed for this purpose in the Province. Since there are several facilities in Southwestern Ontario capable of handling such industrial waste, no difficulty is expected to occur in their disposal. Further, since the Oxford County landfill site at Salford is a new facility, only opened in July of 1986, there are no foreseeable problems in disposing of the solid waste generated by the plant. It is expected that since this is a new and modern facility, it will be operating at a high level of efficiency and therefore reduce the amount of unnecessary waste to a minimum.

#### 4-4: Utilities

Natural gas, electric and telephone services are other necessary infrastructure requirements for the CAMI automotive plant. Accommodating the requirements for these services are not anticipated to create any problems for the supply agencies. Union gas currently has a main gas line that crosses the southern portion of the proposed site. Extension of gas services into the plant from this gas line is not anticipated to be any problem since it will not cross any public land.

Both Ontario Hydro and the Ingersoll Public Utilities Commission operate electrical facilities which could serve the industrial site. Ontario Hydro is expected to provide a dedicated line for the automotive plant while the Ingersoll Public Utilities Commission will act as a backup to the system.

Due to the large size of the automotive plant and the number

of people anticipated to employ (2,000) and extensive telephone system may be required. Through the services of Bell Canada, it is not expected that any difficulties would be encountered in providing service to this development.

#### 4-5: Storm Drainage

An industrial development involving as vast an area as this General Motors and Suzuki plant presents special concerns regarding storm drainage. Although the whole site is not intended to be developed immediately, there will be very large areas which will be covered by buildings, parking lots or storage areas. These buildings, structures and parking areas create impervious surfaces which do not allow for the natural drainage of rain water into the ground. Because of the large area of impervious surface which will be created on the proposed site, a large amount of storm water flow will be created. (County of Oxford, 1987: 13). If the storm water is not properly channeled, erosion problems can occur.

The Town of Ingersoll Engineering Department requires that storm sewers be constructed along Ingersoll Street to facilitate the anticipated increase in water flow. As with other services discussed previously, the town is prepared to undertake the construction of a sanitary sewer along Ingersoll Street with financial assistance from the Province of Ontario (Figure 4-1). In addition, CAMI has agreed to construct storm water retention ponds to assist in managing the storm water which may collect on the site.



#### 4-6: Road and Rail Services

Major improvements and additions to the transportation system in the vicinity of the CAMI automotive plant will be required in order to facilitate employee and visitor traffic as well as traffic associated with material deliveries and finished product shipments. Other transportation considerations include linkage with Highway 401 and access to rail service along the Canadian Pacific Railway line.

Currently, the boundary roads surrounding the proposed site are all two-lane roads. Highway 401 borders the CAMI property but no access will be allowed directly to the site from this expressway. In order to accommodate the anticipated increase in traffic flow directly related to the automobile plant, Ingersoll Street will be widened to four lanes between Culloden Road and Thomas Street (Figure 4-1). Along the northern boundary of the CAMI site, Thomas Street will be required to be reconstructed as it is not currently adequate to accommodate an increase in traffic flow. The road allowance between Lots 24 and 25, known locally as Wallace Road, will also require major reconstruction and improvement so as to accommodate an increased traffic flow since it is a major road on the perimeter of the site. The other major road work involves the relocation of Clark Road. Clark Road crosses the southerly portion of CAMI's land and is currently being relocated along the southerly boundary of the property as a service road adjacent to Highway 401. In addition, South Street, which crosses a portion of the northern part of the



automotive plant property, is to be closed by a municipal by-law.

With respect to rail facilities, General Motors and Suzuki have indicated a need for a rail service line to accommodate both the delivery of materials and the shipment of finished automobiles. Details are currently being worked out regarding the location of a spur line entering the northerly portion of the property from the existing Canadian Pacific Railway line. This line is located within several hundred metres of the northern boundary of the site. The exact location of the rail service line and the manner in which it will cross Thomas Street are still to be determined.

In order to facilitate the transportation requirements associated with the proposed automobile manufacturing development, improvements must be made on the interchange between Highway 401 and Culloden Road. The Ontario Ministry of Transportation and Communications has stipulated the necessary improvements to the interchange as a result of the anticipated increase in traffic volume. The government of Ontario has indicated that they will assume full responsibility for the design, construction, and cost of the 401 interchange.

## CHAPTER 5

## COMMUNITY PLANNING AND DECISION MAKING

## 5-1: Zoning Amendment

Amendment Number 49 to the official plan of the Oxford Planning area constituted the main alteration of planning documents facilitating the development of the CAMI automobile manufacturing plant. The purpose of the amendment is to change the designation of certain lands within the Township of South-West Oxford from 'Rural Buffer' to 'Future Urban Growth Policy Area'. The lands designated as 'future urban growth policy area' may now be used for industrial purposes including manufacturing, assembly, processing, warehousing, storage and related office and accessory facilities (Amendment Number 49, 1987: 2). Within the 'rural buffer policy area' the principal goal is to maintain agriculture as the prime economic activity. Permitted land uses in the 'rural buffer policy area' are agricultural as well as farm-related commercial and industrial purposes. The amendment also proposes to delete a portion of the arterial road, Clark Road, from the Town of Ingersoll Roads Plan. In addition, the amendment establishes a new policy which outlines the permitted uses on this redesignated land. This requirement stipulates that development in this area take place only on Level 1 services and that Level 1 municipal services may be extended from the Town of Ingersoll into the Township of South-West Oxford. The intention



of this policy amendment is to ensure that development on this specific industrial land shall take place only on full municipal services. These include storm drainage, water and sanitary sewage facilities, which all meet the specifications of the County of Oxford and the area municipalities (County of Oxford, 1987: 1). In order to facilitate the development requirement of industrial uses in accordance with this Plan, provisions were made enabling Level 1 municipal services to be extended from the Town of Ingersoll into this special industrial area. This area has been designated as 'future urban growth policy area within the Township of south-West Oxford. It is intended that development within this area shall be controlled by zoning by-laws passed by the local municipalities.

#### 5-2: Basis for Amendment

Part of the lands affected by Amendment Number 49 were designated 'rural buffe' in the Township of South-West Oxford. The lands affected are located adjacent to the Town of Ingersoll industrial park. The amendment was required in order to permit a major industrial development, CAMI, to occur as an extension of the Ingersoll industrial park.

The Amendment ensures that development on these lands occurs on full municipal services and to the same standards as industrial development within Ingersoll. It is required that a policy be established to outline the uses permitted on these lands. This policy would provide performance standards for



development on the subject lands, to require Level 1 services for the development and to allow the extension of municipal services from the Town of Ingersoll into the Township of South-West Oxford. The deletion of the present arterial road, Clark Road, is necessary to permit the realignment of this road to span the periphery of the CAMI plant land area.

## CHAPTER 6

### CONCLUSION

The relative location of urban centres and structural amenities play an integral role in presenting a favorable environment in which to locate industrial production facilities. Ingersoll's location in Southwestern Ontario, adjacent to main transport modes like highway 401, Canadian National and Canadian Pacific rail lines, as well as access to airport and dock facilities, link Ingersoll to the rest of the world. A large market surrounds Ingersoll, enabling the General Motors and Suzuki plant a massive market for production of Suzuki vehicles.

Qualifying for maximum financial assistance from both federal and provincial governments was a contributing factor for location analysts to choose Ingersoll in which to locate this large automotive plant. Facilitating the infrastructure requirements for the CAMI plant through a Provincial Ministerial Order to alter zoning regulations while providing a satisfactory site location as an extension and expansion of an existing built-up area made Ingersoll a feasible location for economic development.

Recent trends of industrial restructuring in favour of rural localities is expected to continue as a distribution of production facilities is an attractive alternative for multinational corporations. Although companies decisions to locate in rural areas is not based solely on developmental

pursuits for the region, a significant amount of development is attracted to the region as a result. Population and economic growth enhances the stability of the region while providing increased opportunities for the unemployed.

There is a definite need for further research on the role played by the municipal planner in providing a suitable environment for the stimulation of industrial and economic growth. Comparing strategies incorporated by various municipalities will enable a thorough understanding of the success of various municipal policies on the stimulation of specific types of economic growth. Only then can the planner successfully attract economic growth while minimizing unintended results.



APPENDICES

Appendix 1: Industrial Location Questionnaire

Appendix 2: Ingersoll and District Industries

Appendix 3: Ingersoll Housing Developments

Appendix 1: Industrial Location Questionnaire

26-01-88

CAMI Automotive Inc.  
1400 Hopkins St.  
Whitby, Ont.  
L1N 2C3

Dear Sir:

I am a fourth year Honours geography student at McMaster University in Hamilton. Presently I am working on my fourth year thesis based on the locational incentives contributing to the selection of Ingersoll for the site of the G.M.-Suzuki automotive plant.

Enclosed is a questionnaire concerning various aspects of location infrastructure and government incentives which may or may not have affected the decision to locate in Ingersoll.

I would appreciate it if you would have this questionnaire completed by someone who was involved in the location decision for the G.M.-Suzuki plant. Please return the completed questionnaire within 10 days of receipt.

Thank-you for your time and cooperation.

Sincerely,

Brian Joiner  
50 Thorndale Cres.  
Hamilton, Ont.  
L8S 3K2  
(416) 526-1507

**FIRM NAME:** \_\_\_\_\_  
**INDUSTRY :** \_\_\_\_\_

1. To what degree would you say that your firm's location decision was influenced with respect to the following:  
 (please circle a number between 1 and 7 for each, where 1 is very important and 7 is not very important)

		VI							NI
RESOURCE ORIENTED	- locate close to input materials or energy	1	2	3	4	5	6	7	
MARKET ORIENTED	- located close to market/consumers	1	2	3	4	5	6	7	
LABOUR ORIENTED	- locate in areas of desirable labour (skill, cost, availability)	1	2	3	4	5	6	7	
INTER-INDUSTRY ORIENTED	- linkage in production stages between firms	1	2	3	4	5	6	7	

2. Did the current location offer any Labour incentives which may have influenced your firm's location decision? Describe them. (ie. skill, availability, wages, unions)



McMASTER UNIVERSITY  
INDUSTRIAL LOCATION QUESTIONNAIRE

3. Did land prices and/or rent effect your location decision?  
Why or why not?
  
  
  
  
  
  
  
  
  
  
4. When locating your industry, were you more concerned with minimizing assembly costs ( costs associated with bringing materials and energy to the production site) or minimizing distribution costs (transporting the finished product to the market)? Why?
  
  
  
  
  
  
  
  
  
  
5. At the time of locating a production site, was additional area for expansion considered? Why or Why not?

McMASTER UNIVERSITY  
INDUSTRIAL LOCATION QUESTIONNAIRE

6. Did the government or any other agency offer incentives for your firm to locate at the current site? What were the incentives?
  
  
  
  
  
  
  
  
  
  
7. Was the availability of potential investors or financial institutions important in your decision process? Why or Why not?
  
  
  
  
  
  
  
  
  
  
8. Were personal contacts in the area important to your location decision? Why or Why not?
  
  
  
  
  
  
  
  
  
  
9. Were local amenities such as schools, recreation facilities, and parks important to your decision process? Why or Why not?

McMASTER UNIVERSITY  
INDUSTRIAL LOCATION QUESTIONNAIRE

10. Did the scale of operation effect your location decision in any manner? Why or Why not?
11. How many people or what agencies were involved in the locational decision? Why were they included in the decision process?
12. How much time was spent on the location decision process? Why?
13. How large of a search area was analyzed before determining the current location? Why?



**McMASTER UNIVERSITY  
INDUSTRIAL LOCATION QUESTIONNAIRE**

14. Please rank the following factors with regards to their relevant influence in your location decision process. ( 1 being the most important factor and 8 being the least important of the given items)

<u>RANK</u>	<u>CRITERIA</u>
=====	LABOUR
=====	TRANSPORTATION COST
=====	PERSONAL CONTACTS
=====	GOVERNMENT INCENTIVES
=====	LAND PRICES/RENT
=====	AREA FOR EXPANSION
=====	AVAILABILITY OF CAPITAL
=====	LOCAL AMENITIES

ANY ADDITIONAL COMMENTS:

## Appendix 2: Ingersoll and District Industries

ARC INDUSTRIES – industrial subcontracting & woodworking .....	27
ATLANTIC PACKAGING PRODUCTS LIMITED – corrugated boxes .....	54
BEACHVILLE LTD. – lime and limestone products .....	233
BELL-CAMP MANUFACTURING LTD. – material handling equipment, steel fabrication .....	20
BORDEN COMPANY LTD. – evaporated milk, fruit drink crystals .....	80
CANADA BUILDING MATERIALS – ready-mix concrete, blocks, brick .....	12
CANADA CEMENT LAFARGE LTD. – cement .....	157
CHICAGO VITREOUS (CANADA) LIMITED – enamel frits .....	26
COBI FOODS – frozen vegetables .....	57
COLLINS & AIKMAN (ONTARIO) INC. – automotive textiles .....	129
COMMAND AIR – mechanical installations .....	3
COYLE & GREER AWARDS CANADA LIMITED – trophies and awards .....	70
DELTA MACHINE & DESIGN – custom machine & tool work .....	3
D. J. CUSTOM PACKAGING – blisterforming & custom packaging .....	5
FRUEHAUF CANADA INC. – truck trailers .....	354
GLEDHILL EQUIPMENT – trucking .....	27
HAMMOND AIR CONDITIONING – mechanical installations .....	4
HARLAKEN SPECIALTY CO. LTD. – custom machining .....	1
INDEL CONTROL SERVICE INC. – design and build electronic controls .....	2
INFATOOL – machine tooling .....	11
INGERSOLL CHEESE CO. – cheese products .....	42
INGERSOLL FASTENERS – caps, screws, bolts .....	197
INGERSOLL MACHINE & TOOL CO. LTD. – trailer axles, steering gears, defence equipment .....	305
INGERSOLL PAPER BOX COMPANY LIMITED – paper boxes .....	38
KILDON MANUFACTURING LTD. – soaps .....	4
McLELLAND INDUSTRIES – veterinary products & supplements .....	2
OXFORD WELDING & MACHINE LTD. – maintenance services .....	14
P & H FOODS LTD. – poultry processing .....	170
QUALITY SCREW & MACHINE CO. – screw machine products .....	7
RIVERSIDE CONCRETE – ready-mix concrete .....	1
SCOTT (GEORGE) MACHINE & TOOL LTD. – custom machining .....	13
SCOTT DOUGLAS PLASTICS LTD. – injection moulding plastic products .....	43
SIVACO (ONTARIO) DIVISION OF IVACO – drawn wire .....	114
STEEL COMPANY OF CANADA LTD. (STELCO) – limestone and lime .....	71
THOMPSON ENGINEERING LTD. – flue cleaners .....	2
UNDERWOOD SHOES LIMITED – safety shoe distributor .....	14
WILLIAMS FORM HARDWARE & ROCK BOLT CO. LTD. – form hardware .....	9

HOME OF THE CAMI PLANT – production start-up Spring 1989

(Harris, 1987)

### Appendix 3: Ingersoll Housing Developments

- 1      **Walnut Grove Subdivision**  
Total Units - 233  
Phase I - 30 units under construction
- 2      **Reeves Realty**  
Total Units - 37  
Construction anticipated - 1988
- 3      **Thames Valley Estates**  
Total Units - 97  
Phase I - 27 units (lots) available for construction
- 4      **Maple Ridge Subdivision**  
Total Units - 335  
Phase I - construction anticipated in 1988 (70 lots)
- 5      **Hillcrest Subdivision**  
Total Units - 69  
Phase I - 25 units (lots) available for construction
- 6      **Towerview Subdivision**  
Existing subdivision  
15 lots remaining
- 7      **Townhouse Development**  
44 units with anticipated construction in 1988-89
- 8      **Woodhatch Subdivision**  
Draft plan being modified for 315 units  
Phase I - 40 units anticipated for 1988 construction

Two additional developments are in the discussion stage which would add an additional 82 units in 1988-89.

(Hunt, 1987)



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