1991

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Jordan Marijana. Alexander

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ON THE ALLOCATION OF TRANSPORTATION COSTS
IN MUNICIPAL PROJECTS

by

Jordan Marijana Alexander

A Thesis
Submitted to the Faculty of Graduate Studies and Research
through the Department of Geography in
Partial Fulfilment of the Requirements for the
Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada

October, 1991
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ABSTRACT

ON THE ALLOCATION OF TRANSPORT COSTS
IN MUNICIPAL PROJECTS

by
Jordan Marijana Alexander

As the public sector utilizes the development approvals process to channel transportation costs associated with new projects to the private sector, claims as to differential treatment in the handling of development applications have surfaced. Consequences of inequity not only fall on developers, but also adversely affect municipalities. The purpose of this study was to investigate the claim of inequity and report findings of its nature.

A thorough compilation of land use, legal and planning documents rendered a project set of commercial developments well supported by authority. Analyses were conducted on results from projects in Kingston, Ontario where transportation consequences of each were probed by types, scales, values, applicants, etc., in an attempt to discover whether there was differential treatment, and if so, along what lines. The findings refuted the claim of differential treatment in Kingston.

The study should prove useful for developers and municipalities who both have a stake in equitable administration. The study design can be extended to cover other cities and land use categories.
ACKNOWLEDGMENTS

Throughout this endeavour, Dr. Blenman provided understanding, guidance and an abundance of patience. I appreciate his lessons which extended well beyond this thesis, and I believe will continue to surface in years to come. Thank you.

Thanks also to committee members, Professor Caruso and Professor Krause, whose teachings in and out of class have shaped my career goals.

I also thank my fellow grad students with whom I endured the trials and tribulations of the M.A. quest. Somewhere between Wayne State, 'copious' readings, and the never-ending H-S debate, I really enjoyed myself.

I thank my dear friends, Judy and Enid, who provided support and lodgings and endured never-ending discussions of how to define 'commercial development'.

My fiance not only encouraged me, but also ensured I maintained perspective from start to finish. Although I never said it often enough, his support and unconditional love helped me get through so many rough spots. I thank you, Gary, and I love you.

Finally, I respectfully thank the Geography Department for its support and graduate assistant appointments. In allowing me to give something back, I met, taught and learned from so many interesting students, by far adding significantly to my experience at Windsor.
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CHAPTER 1

THE STUDY

Genesis:

We are looking for some guidelines that will help us as a [transportation engineering] profession help the public and the policy makers for whom we work cope with the evolving relationship between development and transportation.\(^1\)

Traditionally, the public sector has been responsible for providing society's needed transportation facilities (Chadda & Carter, 1986). Pressures of increased development, however, are overtaxing the abilities of local governments to provide adequate transportation (D. Hodge, 1990). Whereas earlier concerns related to the efficiency of the transport network at a proposed development site, current attention is focused on issues of equity, i.e. who pays to support the service and who benefits (Baumgaertner & Chadda, 1986; Chadda & Carter, 1986; D. Hodge, 1990). In Ontario, municipalities have begun channelling transportation costs associated with new projects to the private sector utilising the development approvals process and subdivision/servicing agreements imposed as conditions of approval (Local Improvements Act, R.S.O. 1980, c.250; Development Charges Act, 1989 S.O., c.58).

A new commercial establishment can have significant impacts on the transportation network as this

---

type of development generates a large volume of traffic (Bartholomew, 1955; Shuldiner, 1965; Northam, 1979; Deakin and Skabardonis, 1985; Chadda and Carter, 1986). The costs of transportation improvements associated with the new development are often allocated between a municipality and the developer.

A former employer, a transportation engineer in Whitby, Ontario, had worked in several cities across Canada where it appeared municipalities had different methods of allocating the cost of transportation improvements resulting from developments: the burden of transportation improvements seemed to fall with inconsistent proportions on developer and municipality. An early report by Proctor & Redfern (1976) had pointed to variation in amounts assessed by municipalities in Ontario, and absence of consistent, philosophical justification.

The issue of equity in the allocation of transportation costs has emerged as a concern in current literature (Chadda & Carter, 1986; Baumgaertner & Chadda, 1986; D. Hodge, 1990) and will be of importance for municipal administration. MacIsaac (1982, p. 45) claimed developers are not totally adverse to direct fair share assessments so long as municipal policies are clear at the onset of their project planning, and so long as such assessment policies equitably reach all other new projects of like nature.
The legal authority given a municipality to administer new development proposals presumes the exercise is non-discriminatory (Bullock v. Scarborough [1959] H.C.), and fair (Homex v. U of Wyoming (1980) S.C.C.). The municipality has no power to subdivide a land use class or make some projects within a class subject to regulations and others not. Projects offering similar services or merchandise must be treated alike under the Municipal Act R.S.O. 1980 (c.302). The Whitby engineer's claim, then, is tantamount to one of differential treatment which, if true, flies in the face of the emerging equity standard whose minimum requirement is equal treatment.

Consequences of inequity in the handling of municipal projects include direct and opportunity costs to the municipality. Direct costs of appeals to the Ontario Municipal Board by applicants perceiving unjust treatment might be avoided if municipalities handled projects in a consistent manner. If projects exhibit identifiable inherent characteristics, for example similar functions, locations and scales, then handling should reflect these attributes. If differential treatment of projects in the same land use category occurs or is thought to occur by applicants/developers, certain projects may be avoided as the associated burdens of development appear too costly or the approvals process appears too lengthy and complicated. As a result, the municipality may suffer opportunity costs
of projects foregone because of the perceived heavy burdens
associated with certain types, locations or scales of
project.

Opportunity costs to the municipality may result
from:
(1) substituted lesser value projects due to total transport
costs associated with projects;
(2) substituted types of projects (i.e. more retail than
service functions) leading to a possible distortion of mix
of uses; and
(3) locational switching (i.e. moving projects to a
different area of the city where development approval is
perceived to be easier) may lead to spatial distortion of
land use in the municipality.

It is the intent of this investigation to shed
some light on the claim of differential treatment of
transportation costs, for only in that way could equity be
breached. Closer investigation is required so that
municipalities and developers might arrive at workable
administrative arrangements which might more closely
approximate standards of equity now emerging. This study
will seek to establish whether the transportation
consequences of development projects are allocated in a
manner that could sustain a claim to inequity in their
administration. Any such claim entails differential
treatment.
Scope:

The elements of the study are set out in Figure 1. The first task is to identify the study set, namely, to establish what commercial development should be taken to mean, and this will be based on received authority (Figure 2). The idea is to isolate a set of projects that leading authorities could agree as commercial, and hence are likely to be part of most municipalities. That least ambiguous set will constitute the study projects. Next, transportation consequences arising from such projects will be detailed such that the location, function and scale of each development can be established. The collection of transportation data will be from site plan agreements stemming from the development approvals procedure common in municipal administration (Figure 3). These agreements are public documents. A comparison of project types will determine whether there is differential treatment in the handling of transportation consequences of commercial developments.

The Study City:

The study city must have enacted a universal site plan control by-law (i.e. with authority over the entire city). Such a by-law will ensure that the data source is complete and represents all commercial developments within the time frame selected. The required documentation would
Figure 1

Study Design

How are Transportation Consequences of Commercial Projects Handled?

Operational Abstraction of Commercial Developments

Identify Transport Consequences & Allocate Burdens

Sale Plan Agreements

Data Collection

Analytical Instrument

Analysis - Differential Treatment of Transport Consequences in Commercial Projects?

- by Transport Consequence
  - by Function
  - by Location
  - by Scale

Resolution - Equity?

Yes

Refute Claim of Inequity

No

Nature of Inequity
Figure 2

Abstracting the Study Set
be available at the local Land Division/Registry Office, since Site Plan Agreements are public documents. Kingston, Ontario, has been chosen as the study city (Figure 3). Kingston is a mid-sized city with a population of 60,912 at March, 1991, making it of manageable size.

Several cities considered were not selected due to size or confined site plan control areas. For example, Whitby, Ontario, is so small that the transportation infrastructure was already established. Most of the community's future development is planned incorporating the existing transportation network. Established policies at the very least influence the manner in which new development projects are handled.

Selection of Halifax, Nova Scotia or Windsor, Ontario was prevented as site plan control by-laws were limited to specific areas of the city, such as the CBD or waterfront. It was desired that all possible locations be considered to get a complete picture of commercial projects in a city.

The duration of a site plan control by-law was also important. Oshawa, Ontario, for example, had universal site plan control enacted in 1989, giving a limited number of completed projects for investigation. Kingston has been under a universal site plan control by-law since 1976 which allows for a stream of completed projects.
Pinch (1985) argued that case studies of particular cities are limited as a basis for broad generalisations about resources and allocation. However, the approach taken here can be used in other municipalities under universal site-plan control, as the set of projects examined are chosen to represent the most widely accepted types of commercial developments based on inherent characteristics, not on locally determined factors.

Time Frame:

The universal site plan control by-law in Kingston was passed March 5, 1976. The time frame for this study extends from March 1976 with the first commercial development application on file at the City of Kingston's planning department. Development applications and agreements vary slightly over the years with differences occurring more in standard clauses within agreements than the administrative processing. The majority of projects undertaken in Kingston (67%), match the project types identified by the process outlined in Figure 6. The remaining projects are considered miscellaneous functions according to location. All commercial development projects in Kingston between March 1976 and April 1991 are considered for this study.
CHAPTER 2

COMMERCIAL DEVELOPMENTS - ABSTRACTING THE STUDY SET

Commercial Land Use:

G. Hodge (1984) refers to the urban physical environment as 'complex'. He states we must be able to penetrate [the] complexity in order...to assess the impact of changes that may result from new development (p.145).

Classifying land use in urban planning is one attempt to simplify our physical surroundings.

The importance of land use categories in planning is recognized by several authors (Bartholomew, 1955; Detroit Metropolitan Regional Planning Commission, 1962; Northam, 1979). However, most classifications originated to suit individual cities and display a degree of subjectivity. Of the common land use classifications - commercial, residential, industrial, recreational and open space - commercial land use is selected for examination because it generates a substantial portion of a municipality's tax revenue (Bartholomew, 1955; Silverberg, 1976). New commercial developments can have significant impact on transportation networks due to the high volume of traffic generated (Bartholomew, 1955; Shuldiner, 1965; Northam, 1979; Deakin & Skabardonis, 1985; Chadda & Carter, 1986). Increased traffic might create transportation considerations whose costs would require allocation. The fiscal importance of commercial land use suggests that its efficient
management is in the best interest of the municipality. Equity and an image of equity are part of that interest.

There is no widely accepted definition of what "commercial development" means. Similarly, there are no uniform guidelines or rules relating specifically to commercial land use. References to commercial land use and commercial development exist; however, definitions vary according to the user. Land use theories refer to commercial use, but never define it (eg. Von Thunen, Alonso). Sources presuppose their reference to commercial use is understood. In the planning field, different classifications of land uses exist, but descriptions lack uniformity. Municipalities seem to define commercial development to suit the trade areas found within their districts. Finally, from a legal perspective, the American law publication Corpus Juris Secundum offers:

...[in] the absence of a definition of a particular word in a zoning ordinance, the word will be given its common and accepted meaning (Vol.101A,p.419).

Reference in law to definitions of land use (commercial, shop, and development) provide little to elucidate some common ground with respect to commercial development. Planning legislation in Britain, the U.S.A., New Zealand and Canada will exemplify just how difficult it is to attain a clear definition.
Preliminary research revealed inconsistency in definitions of 'commercial land use', although legal sources provided sufficient agreement with respect to what constitutes 'development'. 'Development' requires an alteration to the physical characteristics of the land (Town & Country Planning Act, (U.K.), 1971, s.22, Volume 41 Halsbury's Statutes (3rd ed.) 1605; Vancouver Charter, S.B.C. 1953, c.55, s.559; City of Winnipeg Act, S.M. 1971, c.105; Planning and Development Act, R.S.S. 1978, c.P-13; Planning Act, 1983 S.O.). There is an exclusion within the Planning Act, 1983 of Ontario, that 'development' and 'redevelopment' do not relate to minor construction or additions to existing structures or buildings, but rather to the full development or redevelopment of lands in the broader sense. Ontario's exclusion holds in development definitions across Britain, the U.S.A., New Zealand, and other provinces in Canada. Similarly, Kingston's Site Plan Control By-law defines "development" as

the construction, erection or placing of one or more buildings or structures on land or the making of an addition or alteration to a building or structure that substantially increases the size or useability thereof (Site Plan Control Guide, 1989, p.18).

Kingston excludes from developments projects which contain less than 140 square meters of floor area (By-law No.86-83). All heritage buildings (i.e. under the Ontario Heritage Act R.S.O. 1980) are considered "developments" regardless of the size of project.
Defining Commercial Developments:

Classification of "commercial development" was explored in land use theory, in legal instruments, and in practical planning literature. Various definitions and descriptions of "commercial land use" were assessed in an attempt to derive the most consistent meaning ascribed to 'commercial land use'. Locational and functional characteristics appear most frequently as criteria for classification and were adopted.

Discussion of functions within a commercial land use classification most often note the "sale of goods" concept (Vancouver Charter, S.B.C. 1953, c.55; Black, 1979; Municipal Act R.S.O. 1980; Planning Act R.S.A. 1980 c.P-9; Town & Country Planning Act 1971, England; Corpus Juris Secundum Volume 101A; Planning Act, 1983 S.O.; City of Kingston, 1990). Commercial areas provide the meeting place for suppliers of goods and consumers desiring such goods (Northam, 1979). All towns and cities provide these centres of exchange to varying degrees, as observed by Christaller.

Christaller's Central Place Theory (1966) uses economic interpretations to explain the size, spacing and functional activities found in central places. Activities in central places respond to the needs of the hinterland market, providing for example, retail goods and professional services. Certain activities are located in towns of differing sizes due to available market size and trade area.
According to the functions available, Christaller determined the 'order of centre'. Lower-order centres (i.e. hamlets and villages) generally offer basic convenience goods, whereas higher-order centres provide more specialized shopper's goods (See Appendix A for examples.) (Hartshorn & Alexander, 1988).

Legal reference to commercial land incorporates the 'sale of goods' concept in definitions of 'shop', 'store' and 'shopping centre'. The Ontario Planning Act, 1983 and the Municipal Act R.S.O. 1980, define "shop". The Municipal Act, defines a 'shop' in s.355(1)(b) to include "goods exposed or offered for sale". The Planning Act, 1983, refers to the "selling of wares for retail". Both Acts fall along the same lines of commerce as outlined in Black's Law Dictionary (1979). Black's defines 'commercial' as a generic term for most all aspects of buying and selling, and refers to 'commercial property' as property which produces income. The economic reference advanced agrees with the theoretical economic characteristic of 'commercial land use' assembled above.

Canada's western provinces define a "store" to include the sale of both wholesale or retail merchandise, excluding restaurants (27 C.E.D. (West.3rd) para.50, p.112-114). The recurring aspect of commercial land use - retailing - is supported in planning practice as one of the major sub-divisions or frequently noted sub-headings of
projects considered to be commercial land uses (Bartholomew, 1955; Hartshorn & Alexander, 1988; Schwilgin, 1974; Ministry of Municipal Affairs, 1986; Lal, 1987; ...).

Definition of a "shop" or "store" implies a single unit perhaps different from a shopping centre where many shops and/or stores are present. Legal cases refer to permitted use by-laws for retail stores, service shops and department stores as being held to cover a shopping centre.² In Oshawa Wholesale Ltd. v. Canadian Niagara Falls Ltd., [1972] 1 O.R. 481 (C.A.), however, a shopping centre is noted as being

   an overall, interrelated and interdependent project, [making it] is a use distinct from the use of its individual component stores.³

This distinction of shopping centres is important for it suggests transportation consequences of shopping centre projects not be based on the individual component stores, but rather the entire shopping establishment.

Additional noteworthy commercial land use category functions include: wholesaling (Schwilgin, 1974; Bryant, Russwurm & McLellan, 1982; Lal, 1987; ...); personal, business & professional services (Bartholomew, 1955; Hartshorn & Alexander, 1988; Schwilgin, 1974; Ministry of Municipal Affairs, 1986; Lal, 1987; ...; and recreation &

³ Ibid.
entertainment functions (Bartholomew, 1955; Ministry of Municipal Affairs, 1986; Lal, 1987; ...). The above sub-divisions will aid in defining commercial land use.

Some sub-divisions of commercial use functions found in Canada differ from England where many categories are given a separate use class. Eighteen use classes are specified in the *Town and Country Planning (Use Classes) Order 1972*, S.I. 1972 No.1385 (amended by S.I. 1983 No.1614) in England. Similar to land use zones/districts in Canadian planning, each class groups together a number of similar uses. For purposes of this discussion, only relevant classes are mentioned.

**CLASS I** is the closest to the researched 'commercial' land use category, referring to use as a 'shop' precisely defined by Telling (1986):

1. It **means** a building used for the purpose of carrying on of any retail trade or retail business wherein the primary purpose is the selling of goods.

2. It **includes** a building used for the purpose of:
   - a hairdresser; undertaker; travel agency; ticket agency; post office; receiving office for goods to be washed, cleaned or repaired; a building used for other purposes appropriate to a shopping area.
(3) It does not include a building used as:
a funfair; garage; launderette*; petrol filling
station*; office*; hotel*, restaurant*, snackbar
or cafe or premises licensed for the sale of
intoxicating liquors for consumption on the
premises*; betting shop.4

Several of the Canadian 'commercial' functions which receive
separate categorization in the English Use Classes include:
Class X: use as a wholesale warehouse; Class XI: use as a
hotel providing sleeping accommodation; and Class XVII: use
as a theatre, cinema, music hall or concert hall (Vol.46

Adding to the Canadian and British legal
definitions of 'shop', the closest American equivalents
found are 'business' and 'sale'. Where not defined within
an ordinance 'business' will be construed to mean the
barter, sale or exchange of things or value. 'Sale'
included property used for the sale or storage of goods
including sales at wholesale as well as at retail.5 The
American inclusion of both wholesale and retail in the
definition of sale differs from England where wholesale and
retail sales are distinguished.

4 Telling, A.E. Planning Law & Procedure; 1986; p.88-89.

5 Separate use class in England (CLASS II) Office use for any
purpose including use for a bank.

*These functions/uses were excluded in England's 'shop' definition,
however appeared frequently in Canadian research of commercial
uses.

5 Corpus Juris Secundum, Vol.101A-Zoning and Land Planning,
(p.426, para. 'Commercial Districts').
In summary, retailing is the least contentious function throughout Canada, England and the United States of America. The popularity found with the service function in Canada suggests its inclusion as a major commercial land use category subdivision. Although 'services' are not specifically noted in the sale of goods concept, the legal reference to 'shop' includes a barber shop and shoe repair shop wherein services are performed, implying inclusion of 'services' as a commercial use. The absence of an alternate land use category appropriate to include services further leads to the frequent inclusion of the services function in planning (i.e. zoning by-laws and official plans).

The noted functional categories of 'commercial land use' lack the precision necessary for this study. Specific commercial projects may fall into more than one sub-division forcing a subjective interpretation in classifying each project. Greater precision is obtained by only considering projects which consistently fall within the same commercial sub-division category. As authorities consistently agree to particular projects within a functional sub-division, the precision of the resultant project set as representative of 'commercial land use' is increased.

---

6 English law includes hairdresser.
Bartholomew (1932) conducted field surveys on 22 typical American cities of less than 300,000, making lists of possible projects for each land use category. Although Bartholomew never defined what 'commercial' land use means, his commercial categorization provided a starting point for identifying specific commercial projects for consideration as commercial use functions. A sample of the initial project listing extracted randomly from Bartholomew's larger list (1955, pp.147-157) is located in Appendix B.

Scace (1981) provided a review of existing land use classification systems for numerous cities and regions across Canada, the U.S.A., and abroad in a working paper published by the Lands Directorate, Environment Canada. The overview was comprehensive and convenient, listing projects included in commercial land use categories. Victoria, B.C. for example, included shops, offices, motels and service stations in its commercial land use designation. Data from several cities included in the working paper helped shape the final project set to be examined in Kingston, Ontario.

Individual projects were cross-classified by location as well as function. Location and access were found to be important attributes of commercial land in the literature. Historically, as noted by Silverberg (1975) and Chaurasia (1987), accessibility advantages led to the central business district (CBD) of towns as home to the most intense commercial activity. Stamp (1980) also comments on
the convenience requirement of these exchange centres. Social and cultural functions were also performed by the CBD. As cities grew, commercial functions located along major arterials leading from the city core (i.e. ribbon developments). Well supported as possible commercial locations, the CBD (Northam, 1979; Hartshorn & Alexander, 1988; Ministry of Municipal Affairs, 1986) and ribbons/major arterials (Chaurasia, 1987; Hartshorn & Alexander, 1988; Northam, 1979) were considered to elucidate the definition of commercial land use.

Another well-supported location aspect of commercial functions is shopping centres ranging in size from neighbourhood to regional (Ministry of Municipal Affairs, 1986; Hartshorn & Alexander, 1988; Northam, 1979; Chaurasia, 1987). Bryant, Russwurm and McLellan (1982) note shopping developments are changing the pattern of retail activity in North America. These "planned developments" benefit individual shops with external economies of scale (i.e. shared parking facilities and physical infra-structure in terms of heating and lighting). Accessibility advantages for the potential customer include ample parking, a pleasant environment regardless of weather, and a good access route (Silverberg, 1976).
Dawson and Lord (1985) distinguish a 'shopping centre' from a shopping district to mean:

a group of commercial establishments which have been designed, planned, developed, owned, marketed and managed as a unit. It is a coherent and controlled group distinguishable from the "shopping district" [similar to a ribbon development], which is a concentration of shops and other commercial establishments each in individual ownership and on individual sites (pp.2-3).

The distinction rests on management and control of competition. Competition is prevalent in shopping districts. In shopping centres however, competition for retailing is from the CBD which has greatly suffered from new shopping developments. Borchert (1990) attributes the decline of the CBD to decentralization of retail trade to greater accessible shopping centres. He refers to the shift in retail patterns as shopping centres cannibalizing trade from downtown (p.47).

According to The Practice of Local Government Planning (1979) municipal planners welcomed and preferred the planned shopping centre over typical strip development as planned centres improve traffic control, eliminate parking problems, and reduce conflicts with residential uses. Northam (1979) concurs that ribbon developments are "unplanned" developments usually occurring as a result of the popularity of a specific route. The autonomous nature of businesses in such districts is also noted, as adjacent
establishments each perform a different function, unaffected by neighbour businesses.

In addition to the above location categories, Northam (1979) and the Ministry of Municipal Affairs Commercial Parking Study (1986) identify freestanding/stand-alone type commercial locations for uses such as banks, restaurants and hotels. Stand alone locations often persist independent of other land use activities (Northam, 1979; Scace, 1981; Chaurasia, 1987).

In Kingston's Official Plan7, "commercial" means land use "primarily for the buying and selling of goods and services and the provision of office accommodation". Three 'kinds' of commercial activities are distinguished which closely resemble location categories found in the literature: urban, transient and residential nucleus. Urban commerce activities primarily serve local and regional needs and are concentrated in the CBD and in commercial complexes abutting easy access arterials. Transient activities serve visitors and tourists, usually locating at main entrances to the city. Here the "basic needs of the traveller and his or her vehicle" are found, namely access to food, shelter and services. Residential commercial and service establishments fulfil common needs of residents such as drug stores, grocery and variety stores.

7 Reference is to the current office consolidation (December, 1990) and is used throughout this paper.
Feasibility studies demonstrating need for such projects is required according to Official Plan policy.

Kingston's distribution of commercial land use (Figure 4) closely resembles the model of high order metropolitan commercial corridors and clusters examined by Hartshorn and Alexander (1988). These authors studied commercial distribution in several large cities (e.g. Houston, Minneapolis, Atlanta, Boston, Washington). Specialized retail, office and hotel activity were represented in the following locations: the CBD, regional mall centres, retail strip centres, and freeway corridors. Also noted was "disproportionate clustering" on one side of the region and orientation to the arterial highway and freeway systems. Although American cities were used by Hartshorn and Alexander, the location findings can be applied in Kingston as most commercial activity in Kingston is similarly situated.

A final category considered for potential commercial location is Wholesale and Specialized Market areas (Chaurasia, 1987; Hartshorn & Alexander, 1988). This category consisted of projects such as open fruit stands and meat and vegetable markets. Open and specialized market locations were eliminated as possible commercial locations as they did not comply with the legal definition of development.
Figure 4 - Commercial Land Use Distribution & Major Streets - Kingston, Ontario

LEGEND
- Residential
- Commercial
- Industrial
- Fuel Storage
- Special Education & Medical
- Holding Zone
- Waterfront Industrial
- Transportation
- Recreation, Parks & Open Spaces
- Environmental Protection Area
- Rideau Trail

Existing Proposed

- - - - - Expressway
- - - - - Arterial
- - - - - Collector

Consolidated to include approvals
by the Minister as of
1990 12 31

Source: City of Kingston Planning Dept.
The notions of function and location provided the foundation for examining commercial land use. A cross-classification of commercial projects by function and location (Figure 5) was undertaken to ensure that those projects under consideration were the most complete set as represented by authority. The rationale for narrowing the best possible project set to represent commercial land use began with an initial elimination of any cross-classification categories with minimal authority.

All wholesale functions, and most entertainment functions receive minimal support in the literature, with English sources excluding wholesale from retail trade. The entertainment function is supported at shopping centre locations where all component stores/projects within a centre will be examined as a complete unit.

The retail function at most locations is well supported. Retail activities constitute the most frequently identified type of commercial activity (Bryant, Russwurm, and McLellan, 1982). Retail functions at the CBD, however, may be excluded as possible projects due to the decline of retailing in the core noted by several authors (Bartholomew, 1955; Bryant, Russwurm and McLellan, 1982; Borchert, 1990). Overall, the CBD location receives minimal support in the research for specific commercial projects. Any commercial developments which are located in the core area of Kingston
FIGURE 5: SAMPLE INITIAL CROSS-CLASSIFICATION *

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>C.B.D.</th>
<th>Ribbons</th>
<th>...</th>
<th>Shopping Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale</td>
<td></td>
<td></td>
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<tr>
<td>Entertainment</td>
<td>X</td>
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<td></td>
<td>X</td>
</tr>
</tbody>
</table>

* For complete project cross-classification chart, see Appendix C.
are considered for comparison provided they are projects which are also included in the stand alone location category to ensure sufficient authority.

A caveat must be placed on strip commercial uses as they are usually blended with industrial or residential uses along a major street. Of the "unplanned" projects in ribbon locations those receiving sufficient support for inclusion are hotels and gas stations, both as retail functions. In contrast, neighbourhood and larger shopping centres (i.e. "planned" developments) increase influence of planners as entry of planned projects can be more easily regulated. Shopping centres of various sizes will be examined. In the city of Kingston, residential commercial uses are considered as a separate location category.⁸ For this study, decisions regarding the inclusion of specific projects will be on an individual basis provided the 'best possible project set' criteria are present.

Such an elimination process was continued until the remaining categories were those best-supported by authorities and could justifiably be included as projects representative of commercial development. The ideal project set, illustrated in Figure 6, includes all shopping centres;

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⁸ Mandelker (1982) and Leung (1989) note that residential commercial uses are often classed with residential uses by planners as they are difficult to map.
stand alone restaurants\textsuperscript{9}, hotels/motels\textsuperscript{10}, offices\textsuperscript{11}, medical and dental clinics, and banks; and ribbon hotels/motels and gas stations. These commercial uses will be matched with projects that fall within the legal definition of development in order to identify the 'commercial developments' to be examined. Specific transportation improvements associated with such commercial developments will be the target set of this study.

\textsuperscript{9} Western provinces exclude restaurants from their definition of 'store', and English sources give restaurants a separate use category.

\textsuperscript{10} Ontario excludes licensed hotels or taverns from their 'shop' definition, but there appears no other suitable land use category for such uses. Further Kingston, Ontario specifically includes hotels within their 'transient commercial location' category. English sources have a separate use class for hotels.

\textsuperscript{11} The Official Plan for the City of Kingston permits business and professional offices within the urban and transient commerce areas. Offices are a separate use class in England.
**FIGURE 6: PROJECTS TYPES BEST SUPPORTED BY AUTHORITIES**

<table>
<thead>
<tr>
<th>RIBBONS</th>
<th>SHOPPING CENTRE</th>
<th>ISOLATED</th>
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<tbody>
<tr>
<td></td>
<td>Neighbourhood</td>
<td>Regional</td>
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<tr>
<td>RETAIL</td>
<td></td>
<td>SUPERMARKET (North Pickering Project, 1975; Northam, 1979)</td>
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<tr>
<td>FUNCTIONS</td>
<td>RESTAURANT</td>
<td>GROCERY</td>
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<td>SERVICES</td>
<td>BAKERY, FURNITURE, JEWELERY, SHOE STORE (Northam, 1979)</td>
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<td></td>
<td>SHOE REPAIR (Northam, 1979; Planning Act, 1983 R.S.O.)</td>
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<tr>
<td></td>
<td>CLINIC, POST OFFICE (North Pickering Project, 1975)</td>
<td>MEDICAL / DENTAL CLINIC (Schwilgin, 1974; Windsor's current official plan; Ministry of Municipal Affairs, 1986)</td>
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<tr>
<td></td>
<td>OPTOMETRIST, BANK DRYCLEANERS (Northam, 1979)</td>
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<tr>
<td></td>
<td>GOVERNMENT FUNCTIONS (Michigan Land Use in Scece, 1981; Leung, 1989)</td>
<td>BANKS (Schwilgin, 1974; Ministry of Municipal Affairs, 1986)</td>
</tr>
</tbody>
</table>
CHAPTER 3
MUNICIPAL AUTHORITY

Introduction:

Land use varies according to the user and desired use. Commercial land users want to maximize profits, whereas residential users may wish to maximize benefits. Mather (1986) notes individual and societal utility for land does not always coincide. Each user derives a special value for their land, or economic rent, as a by-product of what they want to do with the land (Gallion, 1980). Landowners seeking protection of the 'value' they hold in their land look to the government and the law (i.e. zoning and by-laws) to protect land interests (Pinch, 1985; Mather, 1986). The municipality's role includes protector of both land use and value.

Certain land uses may be in conflict when adjacent. Noxious uses such as a high traffic generating mall can cause conflicts between property owners. In attempts to decrease incompatibility within zones, planning and zoning laws are established to logically plan future development in cities.

Planning for desirable development while preventing undesirable development involves two areas in law. Rogers (1973) distinguishes planning and zoning law where
planning legislation contemplates overall planning for the entire territory of the municipality whereas zoning by-laws, ... generally ... restrict the uses to which specific areas of the municipality can be put (p. 6).

This study incorporates both types of law: planning to understand the framework in which commercial developments are handled, and zoning for specific categories of projects and restrictions on development.

The legal structure of several countries (Canada, U.S.A., U.K., New Zealand) was examined. All countries appeared to have a similar legal structure: a higher authority gives power to a smaller governing body. For example, in Canada, under section 91 of the Constitution Act S.C. 1867, jurisdiction over property falls to individual provinces. The provinces in turn give the authority to individual municipalities, in varying degrees. Similarly in the U.S.A., municipal authority is a function delegated by the state government (Leung, 1989).

Within the lowest order of government, use and development schemes/plans are devised. As in Canadian planning law, new developments in England must be in accordance with the provisions outlined in established development plans (Halsbury's Laws of England (4th ed) 1605, para. 98). In New Zealand (Planning Act S.N.Z. 1977, s.36(3)), use and development of land is coded on district schemes. Areas or zones define use depending on community needs and district scheme objectives (Palmer, 1984). Every
community could define their categories with different functions depending on the community's needs. Every community could be different.

In Ontario, section 14 of the Planning Act, 1983 gives the local planning board the duty of preparing an official plan. The official plan is a statement of planning and development principles, covering broad areas of the municipality in question. Under s.24, zoning by-laws may be passed, as long as they are in compliance with the official plan. The municipality is thus divided into specific areas and uses (Donaghue and Quinn, 1990).

Kingston's Official Plan includes special policy for the treatment of commercial lands. Figure 7 illustrates those eight areas of interest to this study given the high concentrations of study projects found, namely areas numbered 1, 2, 3, 5, 13, 15, 16 and B. Study projects in these areas constituted 95% of all projects undertaken in the study period. The areas which exhibited the highest concentrations of activity were 1, with 25% and 3 with 20% of all projects. A temporal examination of these areas found that most commercial developments between 1976 and 1984 occurred in areas 1, 2 and 3, the CBD and major arterial leading from the CBD. Over time, these same areas held the majority of commercial developments.

Specific Area No. 1 is the central business district. In addition to containing the largest number of
commercial developments examined, the Official Plan declares that this area shall contain the "main concentrations of financial and related business and general urban and transient commerce" (s.25). Consideration of commercial developments between March 1976 and April 1991 revealed all exclusively bank developments were found in the CBD. A concentration of stand alone location projects was found in the CBD (43%). Shopping centres were well distributed among specific areas, with the exception of the CBD where only one project was found.

Specific Area No.2 incorporates Princess Street from Division to Circle and allows urban and transient commercial activities. According to the Official Plan, "no frontage on side streets or streets parallel to Princess Street shall be zoned for commercial use for the purpose of permitting vehicular access" (s.39). Most of the projects in this area were in compliance, restricting access to Princess Street. Policy for this area also notes that buffers are required for those developments abutting residential uses. Projects which abutted residential property had clauses pertaining to masonry walls to act as buffers (standard agreement clauses) within their respective site plan agreements. Five amendments to this policy were made between August 1980 and August 1986 to allow specific projects or minor variances. None alter policy regarding general access for this area.
Princess Street West is Specific Area No. 3, allowing all types of commercial uses. "Parking facilities are to be provided either through the local Parking Authority or by owners of commercial premises" (s.48). Residential buffers via masonry walls were noted in a large number of site plan agreements for developments which abutted residential properties.

Although Specific Area No. 5 is mostly residential land use, commercial and service establishments from Specific Area No. 2, with adequate buffers, have been permitted to expand into Area 5. Amendments to allow commercial developments further into Area No. 5 were noted in 3 cases between August 1980 to June 1986. Two amendments dealt with the provision of parking while the third involved a commercial/residential development.

Specific Area No. 13 engulfs lands east of Division Street. Allowed in this area is a "combination of industrial and storage facilities and establishments servicing industry and commercial operations" (s.96). This area predominantly attracted retail and miscellaneous projects.

In Kingston's Official Plan as amended in October, 1981, Specific Area No. 15 (Division Street North) is intended to allow for those commercial establishments of a retail and service nature which are necessary to serve the needs of the [surrounding] residential communities...One 16,800m² shopping centre shall be permitted (s.104).
Transient commercial uses such as hotels, restaurants, and auto services are also permitted in this area subsequent to Amendment 13 (October, 1981). The predominant activity observed for the area was retail. Commercial developments were constructed equally in both the early (1976–1984) and late time frames (1985–1991). Specific project occurrences were as follows: hotels (17%); restaurants (58%); gas stations (8%); and shopping centres and miscellaneous (17%).

Planning and zoning law equivalents in Manitoba and Alberta\(^{12}\) allow municipalities to prepare and adopt development plans and outline guidelines for future use and development (Planning Act R.S.M. 1980, s.26(1); Planning Act R.S.A. 1980, c.P-9, s.63). Use control is also provided through regional, and area structure plans similar to those outlined in Kingston, Ontario (Planning Act R.S.M. 1980, s.27(4); Planning Act R.S.A. 1980, c.P-9, s.47). British Columbia, Saskatchewan and Manitoba have similar legal structures of authority\(^{13}\), yet specific plans differ from city to city, region to region, as do their categories of land use (Bartholomew, 1955; Detroit Planning Commission, 1962; Northam, 1979).

Zoning (i.e. controlling land use) introduces the concept of 'public interest'. Section 716(2) of the

\(^{12}\) Alberta legislation does not use the word 'zoning'.

\(^{13}\) 27 C.E.D. (West.3rd) Title 112-Planning and Zoning, para.108, p.112-166.
Municipal Act of British Columbia S.B.C., refers to making regulations with due regard to

the promotion of health, safety, convenience and welfare of the public,...the value of the land, the character of each zone, and the conservation of property values.

Section 716(2) refers to what planning generally terms the "public interest". This concept is quite complex. People have their own ideas of what is in their best interest. Conflicting motives and desires of what direction a citizen believes a city should take also result in the state of flux in defining 'public interest'.

Regarding commercial development, Palmer (1984) states economic well-being is a proper concern of planning as affecting the public interest. He includes concern over provision of adequate services; protection of zoning patterns; stability of property values; and the particular needs of a neighbourhood, all within the realm of 'public interest' (p.421). Although he generally does not see zoning to be used to protect businesses from competition, in Pokeno Motors 1977 Ltd. v. Franklin County Council (1980) & N.Z.T.P.A. 105 at 107, the Tribunal stated:

the public interest may require that the interests of individual occupiers should be considered; the protection of the interests of individual occupiers can be an aspect, and an important aspect, of the public interest as a whole.

In New Zealand planning law, as in North America and the U.K., preserving property owner rights is a high priority. Legal conflicts within commercial land uses in America are
resolved so that uses permitted find in favour of the land owner's full use of his/her premises.\textsuperscript{14}

Given different law regulating municipal administration, including the development approvals process, investigation will be limited to commercial developments within a selected municipality. This allows the highlighting of apportionment between municipality and developer under constant jurisdiction. It makes possible clarification of the claim of inequity such that it could not be attributed to differences between jurisdictions. Holding the jurisdiction constant but selecting types of commercial development most likely to occur in municipalities expands the platform from which the study is launched.

Development Approvals Process:

Figure 8 highlights key areas in the development approvals process of a municipality in Ontario when under site plan control by-law and illustrates the process in Kingston. The first step in developing a parcel of land entails the developer making an application (including a site plan) to the city administration. The application is circulated for comment by various local and regional departments. In Kingston, comments are required within not more than 10 working days. These comments are considered by

Figure 6
Data Source
Development Approvals Process

Application to Municipality for Proposed Development

Municipal Administration including Development Approvals Process with Site Plan Approval

Circulation to Various Depots & Final Report to Council

Revised Proposal

Site Plan Control Committee (SPC)

At Request of SPC or 3 Council Members

Council Decision

Denial

Approval

Applicant has the Option to Make an Appeal to Council O.M.B.

Site Plan Agreement Between Applicant and Municipality (Main Data Source)

Agreement Registered on Title

City of Kingston
the municipal planning department and reported to Council. Council has the final decision to approve or deny the application. Any approvals, including approvals with modification or provision of additional services, must be outlined within the Site Plan Agreement. This Agreement is between the developer and the municipality, is legally binding, and is registered on title at the Land Registry Office of the municipality. In Kingston, Site Plan Control is exercised on all new development in excess of 140.0m² of floor area, all expansions to existing developments, and where the use of land is to be changed. The process also applies to all buildings designated under the provisions of the *Ontario Heritage Act* S.O..

As illustrated in Figure 8, Kingston's Development Approvals process incorporates a political element. There, the Site Plan Control Committee is composed of 5 voting members from City Council, and 3 non-voting members: an architect, the Director of Planning and the Chief Building Official. By-laws 79-265 and 85-32 state normal practice for the Site Plan Control Committee to determine necessity for, and the nature of agreements between the applicant and City of Kingston. However, at the request of

3 Council members or by referral from the Site Plan Control Committee, an application shall be directed to Council. In that event, the Site Plan Control Committee will consider the application first and make a recommendation to Council (Site Plan Control Guide, p.4).
Council shall then approve or refuse the application. Planning department files in Kingston did not clearly distinguish the manner in which applications were approved, so no findings can be offered in this regard. One noteworthy case (Study Project No. 38) involved building an A&P grocery store in Special Area No. 1. The developer threatened to take the project to a location outside city limits if the City insisted on enforcing their by-law prohibiting parking on the front of a lot. In an "expedient but legal manoeuvre" the developer deeded back to the City a 0.33 meter strip of land, 6 meters long, 'moving' the 'frontage' to adhere to the parking restriction (Wright, 1983). This political element (noted by several planning department staff) creates problems of consistency in the handling of projects.

The Source of Transportation Improvement Data:

Site Plan Agreements will be the primary source of data for this project since they (1) represent the legal incarnation of development; (2) embody the nature and physical form of the project; and (3) carry the activities required of developer and city (see sample, Appendix D). All site plan agreements must be registered when the municipality is under a universal site plan control by-law. The agreement obligates the owner to build in accordance
with the approved plans and also obligates future purchasers of the property to the terms of the agreement (Site Plan Control Guide, p.4).

The Development Approvals stage which best reports the transportation consequences of developments is the Site Plan Agreement. Although preliminary information pertaining to transportation can be found in the reports from the Traffic Department or, in the alternative, the Department of Public Works, the final report to council from the Planning Department or Site Plan Committee will cover any necessary transportation considerations. Mr. Linseman at Kingston's Public Works Department stated that 95% of the recommendations from his department are accepted by the Site Plan Committee without alteration. Examination of specific departmental reports revealed that in 89% of applications, Public Works recommendations were incorporated into the Site Plan Agreement. The Site Plan may have additions or deletions to the original Planning Department's report after being passed by Council, rendering the Site Plan Agreement on title as clearly the most reliable document. Only background information was provided from the local planning report.

Investigation was limited to 'completed' projects. "Completed" for the purpose of this study means projects which have gone from start to finish through the Development Approvals process, from application to completed and
registered Site Plan Agreement. Of the available project files, 90% of the projects were completed. The completed project restriction enables the use of Site Plan Agreements to provide the most accurate and up-to-date source for transportation considerations at particular sites. Some transportation considerations have a specific dollar value, while for others, only inclusion or exclusion can be established.

The Development Charges Act, 1989 S.O., c.58, will change the development approvals process. The lot levy collection, including development improvements formerly set out in a subdivision agreement, will have to be set out in a by-law as of November 23, 1991 (Davies, 1990). Since data collection for this project is limited to completed projects assembled prior to the November 1991 deadline, the Act's coming into force in Ontario municipalities should not affect the data source, nor the group of projects used in this analysis.

An application for Development Approval requires payment of an application fee (e.g. Kingston $500 plus $100 per 500m² or portion of gross floor area with the first 500m² exempt) and submission of a site plan. In earlier planning department files (1976-1984) more than half of the applicants did not submit site plans with applications. New commercial developments, additions (in excess of 140m²) and
amendments\textsuperscript{15} to existing site plan agreements all require an application and processing fee. Additions to existing developments were included for analysis as they tolerate the identical approvals process of new developments, and were considered separate projects in Kingston. Additions comprised 29\% of the total number of completed projects examined.

All additions are considered new commercial projects at the City of Kingston, each given a separate development file. Twenty-nine percent of 'addition' projects had more than one site plan agreement, having gone through the approvals process a number of times, and paid a number of application processing fees. Four percent of the projects had greater than 3 site plan agreements for one project location. An amendment to an existing site plan could involve minor changes such as the approval of signage if obliged in the site plan agreement, or more substantial changes such as on-site building locations. Multitudes of applications consume large amounts of time creating financial strain on both public resources and applicants.

\textsuperscript{15} Minor modification to approved plans requires a reduction in processing fee ($150) and are not included as additional site plan agreements in the count which follows.
CHAPTER 4
TRANSPORTATION CONSIDERATIONS

Transportation Improvements:

Transportation improvements consisted of any noted or clearly identifiable transportation consequence arising from a project. Access, traffic congestion, and insufficient parking are some of the transport problems connected to commercial land uses noted in the literature (Northam, 1979; Deakin and Skabardonis, 1985; Leung, 1989). Although commercial developments constitute a single land use category, inherent characteristics within the category (i.e. function, location and scale) may give rise to different transportation consequences (Northam, 1979). For each project, the number, nature, cost and allocation of transport burden (i.e. to municipality and/or developer) was recorded. In all, 17 transportation burden types were noted in Kingston (See Figure 9).

Donaghue and Quinn (1990) summarize section 40 of the Planning Act, 1983 S.O., specifying site plan control by-laws allow municipalities to deal with a number of transportation matters within the development approvals process. The following considerations noted by Donaghue and Quinn (1990) were identified in Kingston projects: widening of roadways; access ramps; curbings; off-street vehicular parking and loading areas; driveways; walkways; grading; floodlighting; landscaping; and conveyances to the
<table>
<thead>
<tr>
<th>TYPE OF TRANSPORT BURDEN:</th>
<th>INCL yes/no</th>
<th>FREQ. (#) 0/low/many</th>
<th>ON-SITE or OFF</th>
<th>TYPE OF PROJECT Retail/Service</th>
<th>LOCATION OF PROJ. S. Center or Std. A</th>
<th>SCALE (low/high)</th>
<th>VALUE (low/high)</th>
<th>ASSIGNMENT Developer or City</th>
<th>ASSUMED BY CITY yes/no</th>
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<td>Modifications for handicapped persons</td>
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<tr>
<td>Deeding land to municipality</td>
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municipality for public works. Given these and non-transportation matters for consideration, the entire approvals process can be lengthy.

The City of Kingston Site Plan Control Guide (p.2) estimates a length of 4 to 6 weeks for application processing. Projects were examined to see if processing time fell within estimated time. The variable (PROCTIM$) listed projects according to processing time, with yes (Y) indicating applications were processed within estimated time. Of the completed commercial developments examined, 43% took more than 6 weeks to complete.

Transport consequences are often divided into on-site and off-site improvements. Although collection of data regarding transportation consequences was left mostly open-ended, the analytical instrument (AI) in Appendix E was geared to accommodate both types of consequence. On-site, for example, the number and breakdown of parking stalls required for employees and customer/clients are included in AI, question #7. Traffic on-site, for example—pedestrians, will require sidewalks for safety (Leung, 1989). Sidewalks may be paid for by the developer and subsequently turned over to the municipality (AI #4). Any loading and delivery requirements were included in on-site transportation considerations (AI #6).

Off-site improvements are related to traffic generation and mode. Traffic increases may require off-site
infrastructure such as road widening, turn lanes, or traffic lights. Such improvements are often assumed by the municipality upon completion (See Table 18, Appendix G). Off-site access data entail questions regarding the number of entrances, adjacent roads (i.e. classification), and neighbouring land uses (AI #8 and #9). Considering land use and infrastructure adjacent to a project site may shed light on the kind of improvements necessary at specific project locations.

Street Classification:

Major commercial developments in Kingston are only permitted where direct access is provided by a 'major' street, namely an expressway, arterial or collector route (Site Plan Control Guide, p.33). Kingston's street classification system (See Figure 4) closely follows the National Committee on Urban Transportation (1958) recommended categories. The function of an expressway, as stated in Kingston's Official Plan, is to serve long trip traffic moving between major residential, industrial and commercial areas. These high volumes of traffic travel at relatively high speeds (55-70 kmph) linking the provincial highway and the city's arterial street system. Traffic control at arterials and collector streets is to be signalized. Expressways in Kingston are Bath Road (west of Princess) and Sir John A. Macdonald Boulevard. Of the 9
projects located on an expressway, 6 abutted arterials or collectors. The most frequent function type of project on expressways was retail at 33%.

The Practice of Local Government Planning (1979) expresses agreement with the view that a direct relationship exists between traffic volumes and commercial development (p.225). Commercial development is "almost assured" to follow in areas where high volume streets converge (p.240). Table 6 illustrates the 69 projects in Kingston which were located at converging streets. The street classification variable (STCLASS$) indicates whether the project is located on an arterial (A), collector (C), expressway (E) or local (L) street. Adjacent streets are identified by the (STCLASS$) variable where private (P), service (S) and proposed collector (pC) streets appeared. Findings in Kingston supported the above statement as the 70% of projects on high volume streets (i.e. expressways and arterials) constituted the majority of commercial developments between 1976 and 1991.

Arterial streets are next down the street hierarchy, serving major traffic flows to and from principal urban traffic generators, generally for long distances. Service to abutting properties is deemed a secondary function for arterials in the Official Plan. Operating speeds are medium to high (40-65 kmph), linking urban
expressways or provincial highways to collector streets. Most projects (61%) were located on arterial streets.

The most frequent function on this type of roadway was retail, which occurred in 42% of projects on arterial streets. Table 7 summarizes function groups and the streets according to their classification. Function categories (FUNC$) include: miscellaneous (M), retail (R), retail and service (R&S) and service (S) functions. As on expressways, stopping, parking and unloading of goods are prohibited on arterials. Examples of arterial streets in Kingston are Brock, Concession (westbound), Division, King West, Montreal, Dalton and Queen Mary Road.

Collector streets provide two equally significant functions, according to Kingston's Official Plan: carrying traffic at low speeds (30-50 kmph), and providing land service. Collectors link arterials or expressways and the local street system. Examples in Kingston are Dalton Avenue, Palace Road, Portsmouth Avenue, and Union Street. Most frequent functions found on collectors were miscellaneous and retail in 70% of the projects on collectors.

Although the majority of commercial developments were located on major streets, according to function, 9% were located on local streets. Local streets are not specifically noted in Kingston's Official Plan as 'major' streets; however they are a category noted by the National Committee on Urban Transportation (1958). The function of
most projects on local streets was miscellaneous and retail, 89% of the time. Noting the Site Plan Control Guide (1989) required all 'major' commercial projects to have access on a 'major' roadway, those projects situated on local streets were classified using the (SCALE$) variable designed for this study. Scale categories include projects ranging in size from small (SM) less than 279 square metres, and medium (MED) between 280 and 3000 square metres, to large (LG) size with projects greater than 3001 square metres. Ten percent of large scale projects were found on local streets (Table 3). The findings were not in accordance with the Guide's restrictions.
CHAPTER 5
ANALYSIS OF DIFFERENTIAL TREATMENT

Data:

Data were collected from site plan agreements on the nature, location, and scale of projects; and the type, number, cost and allocation between municipality and developer of all transportation consequences. An analytical instrument was used for this purpose, a sample of which is in Appendix E. Any transportation-related reference found in the planning department files was also recorded, noting the source.

Both developer and municipality's responsibilities are outlined within the Site Plan Agreement. Out of all noted transportation consequences for all projects, only 8% of the projects pertained to the municipality's duties. Municipal duties in all cases dealt with providing monies for land acquisitions required for public works or transportation improvements related to the proposed project. Other types of consequences were allocated to the developer within the agreement; however, if unallocated, the approach used in this study assumed on-site burdens of transportation costs were borne by the developer.

In addition to the Site Plan Agreement, use of the Site Plan (submitted at the time of application) also aided in identifying transportation consequences surrounding a project. According to the Site Plan Control Guide (1989),
site plans for a proposed development must include parking areas and type (open, underground, garage, etc.); total spaces with dimensions; access routes; loading bays; driveways and ramps; circulation routes, and curbs (p.10). Of the projects examined, 65% had submitted site plans with their application. Earlier applications did not require hard copies of site plans to be submitted. From 1976 to 1984 only 45% of applications were accompanied by site plans. Where site plans are provided, they can elucidate some otherwise unidentified transport considerations.

The Project Set:

In the selected time frame, March 1976 to April 1991, the Planning Department at the City of Kingston received 111 commercial development applications. Of these applications, 11 were incomplete, in that they did not result in a Site Plan Agreement, and 3 files were unavailable for data collection. The total number of completed projects was 97. Sixty-seven percent of the projects fall into those function and location categories best supported by authority (Figure 6). A listing of the number of projects each year is found in Appendix F.

To compare the progression in the handling of projects over time, the project set was divided into two groups: early and late. Comparing early projects with projects with sufficient adjustment time (i.e. time for the
municipality to develop systematic approach to handling development applications) should show if the handling of projects has changed over time. Three options to divide the project set into two periods existed: (1) divide all projects in half; (2) divide only completed projects in half; or (3) divide projects according to year (between 1976 and 1991). The chosen approach is a compromise satisfying all three options. Projects were divided between 1976-1984 and 1985-1991, forming the 'early' and 'late' subcategories in the (TIMES) variable. Although the early category includes 2 additional years, early projects total 51, while late projects total 57.

Incomplete projects decreased in number from the early to late period (7 to 4), suggesting refinement in the approvals process. Most incomplete projects overall were new projects rather than additions to existing buildings (82%). The most frequent incomplete projects were shopping centre developments proposed by large development company applicants. A project value scale was developed for this study based on all project transportation consequences requiring financial security and/or land transfer (PROJVAL$). Three categories were adopted: low (LO) for amounts up to $100; medium (MED) for amounts between $101-$3000; and high (HI) for amounts greater than $3000. Surprisingly, most incomplete projects were low and medium values (7 projects), each totalling 44% of the total. It
was thought that high value projects would be more numerous as the high transport burdens would deter the applicant. As no clear pattern is found and site plan agreements were not made, reasons why projects were not completed are left to speculation.

Applicants and Projects:

Applicants were divided by type (APPTYPE$) into developers (51%), owners (44%) and tenants (5%); and by size (APPSIZE$) where 73% of the applicants were development corporations or primarily land developers, considered large, and 27% were small (where the applicant was a private owner occupying a building). All developers and 80% of tenant applicant types were large scale. Table 9 (Appendix G) illustrates differences between applicant sizes and types which were found to be statistically significant. The high value projects undertaken by developers was 70%. These applicants encountered the greatest financial security burden, exceeding $3001. Most small developers were owner types, most frequently involved with low valued projects (60%). Tenants also frequently undertook low valued projects (80%). Table 5 illustrates the relationship between applicant type and project value which suggests that applicant size and project size are consistent.

Applications for retail and shopping centre projects were mostly made by large developers (78% and 100%,
respectively). Small applicants dominated miscellaneous function projects (52%) and captured 22% of retail functions. The most favoured location by both small and large applicants were stand alone locations comprising 58% of the project set. Most ribbon developments were executed by large developers, 74% of the time.

Applicant size appeared to influence building location (Figure 10). The majority of high value projects were concentrated in Specific Areas 13 and 15 (along Division Street) where many of the applicants were large. Concentrations of small applicants were found in Specific Areas 2 and 3, where Princess Street extends beyond the CBD. However, these areas were also noted as common development areas capturing the majority of projects overall for both large and small scale applicants.

Looking at applications over time for various types of developers, all tenant applications have been successful from 1976-1991. During the early period only 5% of the small, owner type applicants were unsuccessful. More recently (1985-1991) the number of small, owner applicants with incomplete projects increased; however, large developers maintained majority in incomplete applications. Examining the processing time according to the Site Plan Control Guide (1989), processing time for various applicants was not found to be statistically different (Table 11).
Kingston's Special Areas and Policies:

Kingston's Official Plan contains specific transportation-related policies of interest to this study. For example, parking for all projects must be off-street (i.e. on-site) as part of the commercial complex or building, except for the CBD (s.45). In the CBD, parking will be provided in the main by means of parking structures and lots. Only 32% of the projects in the CBD in Kingston (8 out of 25) were recorded as using parking structures. Outside the CBD only one project provided a parking structure, although it was not required according to Official Plan policy.

Policies governing the design of commercial establishments as noted in Kingston's Official Plan closely resemble the standard clauses found in all site plan agreements, where the burden fell upon the developer. These include design aspects, such as paving parking areas and vehicular access ways; illumination of outdoor areas; and signage (Schedule C-2). In projects examined which mentioned these standard clauses, the developer was responsible for such considerations 100% of the time. In 20% of the projects examined, these clauses were not included. For other on-site burdens, assignment to developer accepts inequality in the absence of contrary evidence.
Examination of Kingston's Special Areas revealed an abundance of projects with high value transportation considerations (Figure 11), large in scale (>1000 square metres), located along Division Street in areas 13 and 15. The highest concentration of low valued projects (39%) was along Princess Street leading from the CBD (Areas 2 and 3). Table 12 gives a breakdown of project values by specific area. The above noted areas contain most of the retail developments in the project set (61%), and most of the ribbon location developments (83%). Over time, the high distribution of new commercial developments was maintained in the above areas (57% in the early period and 58% in the late period).

Financial Security:

Financial security for transportation improvements was required in 44% of the projects examined. Project types of retail and miscellaneous functions (57%) and stand alone locations (61%) most frequently required financial security (Tables 14 and 15). Under the Local Improvements Act R.S.O. 1980, s.20, the entire cost of a work (e.g. the construction of sidewalks, curbs and roads) undertaken by a municipality can be specially assessed upon the lots directly abutting the work. Three types of financial security were present in Kingston: deposits, bonds, and letters of credit. A deposit is a cash sum paid by the developer to the city, usually
required when the city performs works/improvements related to the new development. An adjustment is made following completion of the work according to actual costs. Financial security via a bond, trust indenture or letter of credit ties up a developer's money such that the city may draw upon allotted funds guaranteed by the developer's bank, should the required works of the development not be completed, or meet with city standards (See sample letter of credit in Appendix H).

Tables 1, 2, 16 and 17 show comparisons of on- and off-site works, project values, and applicant types involved by types of financial security. On-site works in Kingston included curbing, entry/exits, sidewalks, parking and paving. Off-site burdens included turning lanes, deeding land to the municipality, new road construction and widening, and the installation of traffic lights. Deposits were most frequently used for on-site transportation considerations (81%), for high valued projects (60%), and more frequently involved large developers (60%). Bonds were used for on-site (57%) and off-site (43%) works. Letters of credit were primarily required from large developers (86%), and for high valued projects (93%). (See Tables 2 and 16.) Bonds and letters of credit were rarely below $10,000, whereas deposits seldom exceeded $10,000.

Prior to Resolution No.111, dated November 6, 1990, the City of Kingston policy for financial security was
limited to 100% of on-site work and 'satisfactory' financial security for off-site work generated by a project. Subsequent to the resolution, all off-site work directly associated with the project also required 100% financial security. In addition, increases on city services were to be charged to the project on a proportionate cost basis as calculated by a financial impact analysis [emphasis added]. Traffic impact analyses on the project set were conducted only in 2 projects. These projects were both large scale and high in value. The analyses in each case were conducted (privately) at the developer's cost.

Further examination of the financial security of commercial developments over the years showed no mention of specific amounts until 1979. Financial securities were required of the developer in 45% of the projects, whereas security by the municipality to the developer occurred in only 3 projects all relating to public works. The progression of financial security saw the use of deposits (78%) most frequently in the earlier years (1976-1984). More recently use of bonds and letters of credit have increased to 31% (Table 13).

Other Notable Transportation Consequences:

Shuldiner (1965) suggests the nature of a traffic generator may be a type of establishment, rather than simply a general land use category. Most studies, he claims, have
dealt with land use becoming the trip generator (p.46). The modes of traffic generated by various commercial developments were examined. Findings showed that all major functions and location categories generated auto and pedestrian modes of traffic. Those projects which did not accommodate delivery vehicle traffic were service functions (in 7% of the project set).

An overall appreciation of the specific transportation considerations found in site plan agreements was desired. The approach used was to consider all transport burdens in terms of frequency, location (i.e. on/off site), and whether transfer to municipality was required. As a general rule in Kingston, the following transportation considerations were always transferred to the municipality: turning lanes, new roads and road widening, sidewalks and traffic lights. The most frequently noted burden was sidewalks, found in 35% of project agreements. Sidewalks were always on-site, and upon completion, turned over to the municipality. The next most frequent burdens found were entry/exits and curbing, on- and off-site (14% each), with curbing usually built on rights-of-way, essentially transferred to the municipality. Specifically deeding land to the municipality occurred in 9% of the projects. Turning lanes (5%) and road construction and widening (3%), both off-site considerations, also appeared frequently. The remainder of transport burdens noted in
site plan agreements (20%) consisted of on- and off-site considerations with the majority being transferred upon completion.

Differential Treatment: nature and extent:

The analysis of differential treatment will be reported in three sections. Section 1, Level 1 uses the types of transport burdens listed in Figure 9 to compare major categories: retail, service and miscellaneous functions; and ribbon, shopping centre and stand alone locations. Level 2 uses the types of transport burdens to compare within group retail functions: hotels and gas stations at ribbon locations, and restaurants and hotels at stand alone locations. Shopping centre developments are not included at Level 2, as obtaining individual store data was not practical for the nature of this study. At Level 3, individual project types, shopping centres, are compared by scale (SCALE$). A comparison matrix is used to compare projects for differential handling in all sections using a chi squared statistic. All analysis tables are located in Appendix G. Where the number of small cells was greater than recommended for analysis, a chi squared statistic was not generated. Given the derivation of the classes used in the analysis, it was considered unsound to recombine the groups.
At Level 1 projects were compared using several variables. Fewer than three specific transportation burdens were listed in site plan agreements for most function and location categories (e.g. locations with 2 or fewer consequences: ribbons at 82%, and stand alones at 71%). Using the variable (TCCATEG$), the specific number of transport burdens listed in the site plan agreement are added to the number of standard agreement clause considerations (including paving, signage, lighted walkways/parking areas, and appropriate modifications for handicapped persons), traffic studies undertaken, and on/off site access islands. The total number of considerations were grouped by project into 3 categories: no considerations - none (N); fewer than 5 considerations - few (F); and six or more - many (M). Tables 19 and 22 illustrate results by function and location categories respectively. Although all function and location categories ranked 51% of their projects in the 'many' category, there was no significant tendency for transport burdens to be allocated in the same manner for location types or function types.

The variable (PROJVAL$) was based on the amount financial security and land transferred by the developer for transport burdens of each project. Using specific dollar amounts, the categories adopted were: low value (L) with amounts up to $100; medium value (M) with amounts between $100 and $3000; and high value with amounts greater than
$3000. Tables 3 and 23 show comparisons by project value categories and function and location, respectively. The majority of all projects were low in value (53%) in both function and location groups. These results could be influenced by the large number of early projects without transportation costs.

The various modes of traffic generated by projects were examined. Pedestrian, automobile and other (i.e. transit and delivery) traffic were examined by function and location groups. Although a few project types did not generate all modes, differences were not statistically noteworthy.

The street classification for the main access to the project site was listed in the (STCLASS) variable. It was thought that a relationship might exist between streets at various levels in the hierarchy and project functions and locations. Tables 7 and 21 illustrate results by function and location categories respectively. Statistically significant relationships were not found in either major category.

To complete the Level 1 analysis, the applicant size variable (APPSIZE$), in which applicants were separated into large (LG), for development companies and small (SM), for private businesses and owner occupied developments, was used for comparison. It was found that small developers did not build shopping centres, but favoured miscellaneous and retail
function projects (Table 20a). Both large and small developers frequently built projects at stand alone locations (Table 24). Differences between function and location groups were not found to be statistically significant using above variables. An additional matrix (Table 18b) was constructed omitting shopping centre functions (R&S), to compare applicant size. The difference among the new groupings was statistically significant, which suggested difference exists between the function types large and small developers choose to build. Small developers built more miscellaneous projects while large developers built more retail projects.

Level 2 incorporated the variables transport consequence category (TCCATEG$), project value (PROJVAL$), modes of traffic generated (PEDTRAF$, AUTO$, OTHERS$), and street classification (STCLAS$), to compare specific retail projects at ribbon and stand alone locations (FUNCSP$). A new variable was added to this analysis - number of entrances to site (ENTRYNUM) - to find out if specific projects have different access requirements. Tables 25-32 identify hotels and restaurants at stand alone locations, and hotels and gas stations at ribbon locations comparing projects using the above variables.

The transportation considerations between projects at stand alone locations did not exhibit statistically significant differences although 58% of restaurants and 80%
of gas stations had 'many' considerations, while 'few or no' considerations were found for hotels at 86% of ribbon and 100% of stand alone locations. Similarly, project values (which appeared predominantly 'low' for all projects), modes of traffic generated (all mode categories were generated for all projects), and number of entrances for each type of project (all stand alone hotels and 50% stand alone restaurants had one entrance, while 100% of ribbon gas stations and 57% of ribbon hotels had more than 2), did not yield matrices with significant difference among project types compared.

Street classification comparisons for projects at stand alone locations showed 68% of restaurants were located on arterials with only 25% of hotels. At ribbon locations, 60% of the gas stations and 100% of the hotels were located on arterials. The small number of cases in some categories suggests caution in the interpretation of these results.

Shopping centres were compared at Level 3 by scale. The scale classification adopted for this study grouped projects according to gross floor area. Variables used to compare shopping centres at medium and large scales were: total number of transportation consequences (TOTALTCS), applicant type (APPTYPE$), applicant size (APPSIZES), new development or addition to existing building (NEWADD$), application processing time (PROCTIM$), and specific area location (AREA$). The above variable were
thought to cover sufficient ground to elucidate any differences between project scales.

Of all 18 shopping centre projects, 6 were medium and 12 large scale. Table 33 illustrates that 58% of large scale centres had greater than 7 transportation considerations, while all medium scale centres had fewer than 7. All shopping centres were new projects with large-sized, developer type applicants. Fifty percent of the shopping centres were located on major arterials leading out of the CBD. Seventy-eight percent of the centres fell into the specific areas noted in Figure 7 as having abundant commercial activity. Differential distribution among centres in the specific areas was not statistically supported (Table 34). Table 35 illustrates the application processing time for shopping centre developments. Both medium and large scale centres more often than not require longer than the 4-6 week suggested application processing time. No statistical difference between medium and large scale shopping centre projects is evident from Level 3 analysis.

Section 2 involved an examination of projects requiring Ontario Municipal Board approval. Appeals were infrequent, and the nature of OMB involvement usually related directly to zoning changes (6 of 7 projects). The majority of projects requiring OMB attention were new projects (86%), low in value (57%), with owner applicant
type (57%), and large applicant size (71%). Specific function and location categories were examined to discern a possible pattern in projects types; however, projects appeared to be equally distributed among all. Findings were restricted by the low numbers of project applicants interacting with the OMB.

Section 3 of the analysis incorporates indirect costs a municipality may suffer. Projects will be explored to see if a spatial distortion in the value and mix of project types (AREA$) exists, or if difference in project types exists from early to late time periods (TIME$). Areas in Kingston were grouped into 5 categories according to location and specific area (S.A.) designation (Figure 7): group 1 (CBD-S.A. 1); group 2 (Princess Street beyond the CBD limits-S.A.'s 2 and 3); group 3 (Division Street-S.A.'s 13 and 15); group 4 (S.A. 'B'); and group 5 (commercial area northwest of Princess and Division-S.A.5). The above groups incorporated 82 of 97 projects. Comparisons using the variables applicant size (APPSIZE$), project value (PROJVAL$), function (FUNC$), location (LOCATNS), time (TIME$) and scale (SCALE$) were used to determine whether project distribution favoured specific areas.

The distribution of projects according to size of applicant, value of transportation considerations (Figure 11), scale of project, and time (early/late) yielded no statistically significant results at a probability of 0.05.
Figure 11 - Project Distribution According to Value of Transportation Consequences

Value of transportation consequences based on financial security required and land transferred to municipality. Adapted from City of Kingston Planning Department
Tables 12, 13 and 36-39 illustrate chi squared values for the area comparisons by the above variables. Figures 12 and 13 illustrate project distributions according to function and location, respectively. Statistically significant relationships were found between project areas and function and location types (Tables 37 and 38). Probable clustering of projects in certain locations of the city (e.g. ribbons) was noted by Hartshorn and Alexander (1988). In a number of cases, small counts within cell categories raise caution in interpreting and applying results.

It was desired to see whether a change in the mix of projects came with time, early (1975-1984) and late (1985-1991). The (TIME$) variable was used to compare project functions (FUNC$), scale (SCALE$), whether site plans were included (SPINCL$), application processing time (PROCTIM$), transportation category (TCCATEG$), applicant type (APPTYPE$), project value (PROJVAL$), location (LOCATN$), and finally project areas using groups from above spatial analysis (AREA$). (See comparison results in tables 4, 5, and 40-45.)

Most comparison categories did not reveal significant differences over time. Although large scale projects increased by 50% from the early to late time periods, the differences in scale categories represented a probability of 0.70. The frequent inclusion of site plans in site plan application files more recently was statistically
significant. Difference between early and late time periods suggests that the municipal approvals process likely required time to systematize application processing.

Transportation consideration categories (none, few, and many) exhibited differences over time. In line with increases in project values (medium and high projects tripled in the later time category, while low valued projects decreased by 50%), the differences shown by both \( \text{TCCATEG}\) and \( \text{PROJVAL}\) can together be taken to represent a change in the mix and value of projects over time. Finally, the majority of development in both early and late time periods persisted in groups 1 and 2, the CBD and along Princess Street leading from the CBD. The continuation of an abundance of projects in the said areas, along with consistent numbers of developments in all other areas, leads to the conclusion that the spatial distribution based on specific areas in Kingston was not distorted; rather it has been consistently clustered over time.

Differential Treatment: a summary:

Many variables were used to assess whether differential treatment existed between compared projects types within each section of analysis. For each comparison matrix, a 'yes' was recorded when the test statistic showed difference in the project types examined. The results from all comparison matrices were tabulated (i.e. the number of
Figure 14 - Differential Treatment Summary of Matrices

'YES' Tables Total=13

1 Type of Financial Security by Burden Site
2 Dollar Value of Burdens by Financial Security
3 Dollar Value of Burdens by Project Function
4 No. of Burdens by Time of Project
5 Dollar Value of Burdens by Time of Project
6 Adjacent St. Classification by Project Street
9 Applicant Size by Applicant Type
20a&b Applicant Size by Project Function
21 Project Street Location by Location Category
24 Applicant Size by Location Category
37 Project Function by Commercial Area
38 Project Location by Commercial Area
42 Site Plan Included by Time of Project

'NO' Tables Total=22

7 Project Function by Project Street Location
8 Scale of Project by Project Street Location
10 Dollar Value of Burdens by Applicant Type
11 Application Processing Time by Applicant Type
12 Dollar Value of Burdens by Commercial Area
13 Time of Project by Commercial Area
14 Project Function by Type Financial Security
15 Project Location by Type Financial Security
16 Applicant Size by Type of Financial Security
17 Time of Project by Type of Financial Security
18 Burden Transferred to Munic. by Fin. Security
19 No. of Project Burdens by Project Function
22 No. of Project Burdens by Location Category
23 Dollar Value of Burdens by Location Category
35 Scale of Project by Appl. Processing Time
36 Applicant Size by Commercial Area
39 Scale of Project by Commercial Area
40 Project Function by Time of Project
41 Scale of Project by Time of Project
43 Appl. Processing Time by Time of Project
44 Applicant Type by Time of Project
45 Location Category by Time of Project
'yes' responses to the question of differential treatment within each comparison matrix) and appears in Figure 14. Whether the case for inequity was statistically supported or refuted can be answered by the results of a binomial test to determine whether the number of cases of differential treatment represents nothing more than the balance of probabilities. If a test statistic was not generated in a comparison matrix due to small cell sizes, the matrix was not included in the binomial test.

The comparisons from the analyses yielded 35 matrices of differential treatment: 13 were 'yes' responses and 22 'no' responses. Results from two 'no' matrices came close to representing differential treatment, with probabilities of 0.85. The case for inequity was statistically refuted by the results of a binomial test which determined the number of cases of differential treatment ('yes' responses) represented nothing more than the balance of probabilities.

Although the overall claim of inequity was not supported, several comparisons yielded statistically significant results illustrating the nature of differential treatment. Table 1 below, outlines the types of financial security required vary between on and off-site transportation burdens, as does the actual dollar value allocated to transport burdens, given the type of financial security required (Table 2). Together these tables clarify
the nature of difference in financial security required for commercial projects.

Table 1

| Type of Financial Security Required (Rows) by On/Off Site Transport Burden (Columns) |
|-------------------------------------|--------|--------|--------|
| D                                    | B/Lt   | Total  |
| On*                                 | 39     | 11     | 50     |
| Off**                               | 9      | 8      | 17     |
| Total                                | 48     | 19     | 67     |

D=Deposit  
B/Lt=Bond/Letter of Credit  

(* Includes: curbing/entry/exits; sidewalks; parking; paving)  
(** Includes: turn lanes; deeding land; access; new roads; road widening; traffic lights)

Critical Chi-Square Value=3.841; df=1; observed=3.97

Table 2

Dollar Value of Transportation Burdens (PROJVALS) (Rows) by Type of Financial Security Required (Columns)

<table>
<thead>
<tr>
<th>HI=burdens exceeding S3001</th>
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<td>MED=burdens less than S3000</td>
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<tr>
<td>Type of Financial Security Required (Columns)</td>
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<tr>
<td>D</td>
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<td>HI</td>
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<tr>
<td>MED</td>
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<tr>
<td>Total</td>
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Warning: More than 1/5th of fitted cells are sparse  
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square Value=3.841; df=1; observed=7.66

For example, there is a statistically significant difference between on and off-site transport burdens according to the type of financial security required. For example, deposits tend to be required for on-site burdens whereas bonds and letters of credit are used for both on and
off-site burdens. Also, high ($3001+) value projects tend to require bonds or letters of credit more often than lower value projects. It can be suggested that the financial requirements surrounding transport burdens can be identified by the locale (on or off-site) and by the total project transport burden assessment. In light of these relationships, a structure could be established to make clear the type of financial security required for commercial developments. By understanding the financing differences between on and off-site burdens, actors in the development process, both municipal and private, can proceed with greater certainty.

Project function categories (e.g. retail, service, etc.), displayed difference between project transport burden values.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>R</th>
<th>R&amp;S</th>
<th>S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>LO</td>
<td>14</td>
<td>24</td>
<td>8</td>
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<td>51</td>
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<td>MED</td>
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<tr>
<td>Total</td>
<td>30</td>
<td>35</td>
<td>17</td>
<td>13</td>
<td>96</td>
</tr>
</tbody>
</table>

HI=burdens exceeding $3001
LO=burdens under $100
MED=burdens less than $3000

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi Value=12.59; df=6; Observed=13.08

In Table 3, note the difference between low (<$100), medium ($101-$3000), and high ($3001+) value projects (i.e. based
on transportation burdens) between the project function categories. At \( p=0.05 \), there is a statistically significant difference between value categories. For example, service function projects exhibit low, medium and high value projects without bias, whereas retail and shopping centre projects are abundant in lower valued projects. Hence, this difference in dollar values required for certain commercial development functions is clear. Perhaps function categories could aid developers and municipalities in understanding differences between project applications. The development approvals process may be under less scrutiny if it was clear just how project functions were incorporated into municipal handling of projects.

Tables 4 and 5 below, consider how the number and dollar value of transport burdens considered for each commercial development changed over time. In the early period (1976-1984), 36 out of 44 projects carried transport considerations, but by the late period (1985-1991), only 1 of 52 projects was without any transport consideration. The trend over time shows project applications bearing a greater number of transport burdens. Similarly, the dollar value required of each commercial project over time (Table 5) increased, with far fewer low value projects (i.e. under $100) in the 'late' time category.
Table 4

Number of Project Transportation Burdens (tb’s*) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
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<tr>
<td>Few</td>
<td>19</td>
<td>19</td>
<td>38</td>
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<tr>
<td>Many</td>
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<td>32</td>
<td>49</td>
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<tr>
<td>None</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>52</td>
<td>96</td>
</tr>
</tbody>
</table>

* For complete list of tb’s, see Table 19

Pearson Chi-Square=9.435; df=2; prob.=0.009

Table 5

Dollar Value of Project Burdens (PROJVALS) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>6</td>
<td>21</td>
<td>27</td>
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<tr>
<td>LO</td>
<td>34</td>
<td>17</td>
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</tr>
<tr>
<td>MED</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>52</td>
<td>96</td>
</tr>
</tbody>
</table>

HI=Transport burdens exceeding $3001
LO=Transport burdens $101-$3000
MED=Transport burdens below $100

Pearson Chi-Square=19.021; df=2; prob.=0.00

Although some of the difference between the early and late time periods could be attributed to inflation, a more plausible explanation is offered. Municipal experience with the development approvals process enabled them to refine the approvals process over the years by incorporating lessons learned in handling project applications. In Kingston, the burden on the public purse created by insufficient or inadequate transport infrastructure was
mitigated by transferring more of the costs to the private sector. The manner in which the allocation of transport burdens has been performed over time suggests the transfer of such costs to the private sector was gradual, and in line with the municipality's learning curve.

In summary, analysis of projects by major categories (function and location), between groups (retail ribbon and retail stand alone) and individual project types (shopping centres) by scale, did not produce statistical support for the claim of differential treatment (Section 1). Temporal and spatial analyses in Section 3 produced some cases of positive support for the differential treatment claim; but these were not sufficient to refute the case for equity. Based on statistical analysis, the claim of differential treatment in municipal handling of commercial development projects in Kingston, Ontario is not supported.
CHAPTER 6
THE CASE FOR INEQUITY

The Evidence from Transportation Improvements:

The claim of inequity in municipal administration gave rise to this study of municipal commercial developments. Examining those types of commercial developments best supported by authority allowed the identification of a representative group of projects. Data collection geared to the municipal handling of the transportation consequences of such projects provided the basis for a determination whether or not differential treatment by municipal administration exists. This, then, should clarify current practice in those projects most clearly representative of commercial developments. These are the projects most likely to come before a municipal administration in Ontario.

Examining the municipality's treatment of transportation consequences over the years 1976-1991 uncovered a number of changes in application processing. Perhaps most noteworthy is the more frequent inclusion in site plan agreements of transport consequences requiring financial security by applicants. As noted by Chadda and Carter (1986) and D. Hodge (1990), the public sector's responsibility to provide adequate transportation facilities appears to be shifting to developers. Support for this trend was found in comparing the number of transport consequences (TCCATEG$), and the project values (PROJVAL$) over time.
Both comparisons yielded results where differences over time were statistically significant. With municipalities using the development approvals' process to increase the private sector's responsibility for improved transport facilities, the evidence of Kingston points to a greater application of the principle with time.

Findings of this study can allay fears of developers and the private sector in Kingston, Ontario, where the current development approvals process for commercial applicants appears equitable. Even though projects of different function types and location categories appeared to favour areas in the CBD and arterials leading from the core, types of financial security required for these groups remained consistent over time especially with scale of project and type of security required. In addition, other than large developers building shopping centre projects, the scale and type of developer did not appear to affect the handling of their respective applications (i.e. processing time) nor the areas in which they chose to build. In general, applicants and project types did not appear to be discriminated against in Kingston.

This study sought to identify and examine possible opportunity costs to a municipality if differential treatment was found to exist. Lesser value projects and a distorted mix of uses were expected, should differential
treatment continue. The distribution of projects according to value and scale were not spatially distorted in Kingston, Ontario. Although clustering by major function and location major categories existed, the distribution did not change significantly with time, and was consistent with the accepted opinion of authorities that commercial development typically is arranged in a discernable pattern (See Defining Commercial Developments).

In conclusion, the evidence from the City of Kingston did not support the claim of inequity in municipal handling of transportation burdens associated with commercial developments. The project study arrived at a working definition of commercial land use applicable to future studies, other cities and jurisdictions. The study design can be adapted for other land use categories to examine different aspects of the municipal approvals process. To the extent that differential treatment constitutes inequity, it has been refuted by these findings. The road to future studies has been opened in the quest for equitable administration. Comparison of two or more cities is suggested for future research.
APPENDICES
## Appendix A -

### Examples of Functions in Central Places of Varying Sizes

<table>
<thead>
<tr>
<th>Hamlet-level functions</th>
<th>Town-level functions (cont.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline service station</td>
<td>Dentist</td>
</tr>
<tr>
<td>Grocery store</td>
<td>Insurance office</td>
</tr>
<tr>
<td>Church</td>
<td>Veterinarian</td>
</tr>
<tr>
<td>Grain elevator/feed store</td>
<td>Auto-parts store</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Village-level functions</th>
<th>City-level functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barber shop</td>
<td>Shoe store</td>
</tr>
<tr>
<td>Beauty shop</td>
<td>Jewelry store</td>
</tr>
<tr>
<td>Restaurant</td>
<td>Florist</td>
</tr>
<tr>
<td>Bar</td>
<td>Hospital</td>
</tr>
<tr>
<td>Hardware store</td>
<td>Medical specialist</td>
</tr>
<tr>
<td>Farm equipment dealer</td>
<td>Hotel/motel</td>
</tr>
<tr>
<td>Bank</td>
<td>Newspaper</td>
</tr>
</tbody>
</table>
<pre><code>                                                             | Specialty restaurant                    |
                                                             | Sporting goods store                    |
                                                             | Department store                        |
                                                             | Certified public accountant             |
                                                             | Travel agency                           |
                                                             | Fast-food restaurants                   |
                                                             | Plumbing supply                         |
                                                             | County government                       |
</code></pre>

**Source:** Bartshorn & Alexander, 1988, p. 280
Appendix B -

Sample of Bartholomew's (1932) Commercial Land Use Projects

Antique Store
Automobile accessories
Bakery, retail
Bank
Barber/Beauty Shop
Book Shop
Bowling Alley
Candy Store
Cigar Store
Clinic, private
Clothing Store
Dairy, retail
Dance hall/school
Delicatessen
Dry Cleaning
Electrical Equipment, Appliances
Florist
Food Products, retail
Furniture & House furnishing store
Gasoline Filling Station
Grocery Store
Hardware Store
Hotel
Jewelry Store
Launderette
Markets-meat & fish
Milk depot, retail
Moving Picture house/Cinemas
Newsstand
Office building
Opera House
Optical Goods Store
Paint Store
Pharmacy
Plumbing & Heating fixture supplies
Restaurant
Saloon/Drinking Establishment
Shoe Repair
Shoe store, retail
Stationery & supply store
Theatre
Tobacco Shop
Variety Store
APPENDIX C -

Complete Cross Classification of Projects
by Function and Location
## CROSS-TABULATION BY FUNCTION & LOCATION

<table>
<thead>
<tr>
<th>Cross-Table Summary</th>
<th>LOCATIONS</th>
<th>ISOLATED STAND ALONE</th>
<th>WHOLESALE &amp; SPECIALIZED MARKETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale Group</td>
<td>C.B.D.</td>
<td>RIBBONS</td>
<td>SHOPPING CENTRE</td>
</tr>
<tr>
<td></td>
<td>Neighbourhood</td>
<td>Regional</td>
<td></td>
</tr>
<tr>
<td>Wholesale Group</td>
<td>department store (1) supermarket (1)</td>
<td>gas station (2) hotel/motel (2) restaurant (1) liquor store (1) general (5)</td>
<td>supermarket (2) major drug store (1) convenience goods (2) Jr. department store (1) general (6)</td>
</tr>
<tr>
<td>Wholesale Group</td>
<td><em>business centre</em> (1)</td>
<td>offices (1)</td>
<td>barber/beauty (1)</td>
</tr>
<tr>
<td>Wholesale Group</td>
<td>general services (1)</td>
<td>general services (1)</td>
<td>General Shopping Center: Government Functions (1) General Services (2)</td>
</tr>
<tr>
<td>Wholesale Group</td>
<td>government functions (1)</td>
<td>government functions (1)</td>
<td></td>
</tr>
<tr>
<td>Wholesale Group</td>
<td>entertainment (1)</td>
<td>social entertainment (1)</td>
<td></td>
</tr>
<tr>
<td>Wholesale Group</td>
<td><em>social</em> eg: fire--hall to library (1)</td>
<td>recreation (1)</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D -
Sample Site Plan Agreement with Standard Approval Clauses
THIS AGREEMENT made in duplicate the th day of 1989

B E T W E E N:

Hereinafter referred to as the "OWNER"

- and -

THE CORPORATION OF THE CITY OF KINGSTON

Hereinafter referred to as the "CITY",

- and -

THE PUBLIC UTILITIES COMMISSION OF

THE CITY OF KINGSTON,

Hereinafter referred to as the "COMMISSION"

OF THE THIRD PART.

WHEREAS the Owner has made an application to the City
for permission for the construction of

in the City of Kingston, which

property is more particularly described as

AND WHEREAS pursuant to By-Law No. 79-265, as amended,
and By-Law No. 85-32, the Council of The Corporation of the
City of Kingston has established a Site Plan Control
Committee to approve of site plans pursuant to Section 40
of the Planning Act, R.S.O. 1980, Chapter 379;

AND WHEREAS the Site Plan Control Committee of the
City of Kingston has given approval of the plans to contain
the proposed installation submitted by the Owner, subject
to the Owner entering into an Agreement with the City and
the Public Utilities Commission.
NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the approval of the plans for the development on the Owner's lands by the City and any implementation of the conditions of the Site Plan Control By-Law and the sum of ONE ($1.00) DOLLAR, (receipt of which is hereby acknowledged), the Owner for itself and for all successors in title, hereby agrees with the City and the Commission as follows:

1. The Owner, for himself and on behalf of his successors in title, agrees to provide, maintain and use the facilities and matters specified in this Agreement, at his sole risk and expense and to the reasonable satisfaction of the City and within any time prescribed and endorsed on the plans and drawings or in this Agreement, and such work, service and material hereinafter described is to be done, provided, maintained and used in a continuous process and in good and workmanlike manner.

2. The development shall be in conformity with the provisions of this Agreement and with the following plans which are held at the Office of the Chief Building Official at 19 Queen Street, Kingston, Ontario:

Plans:

It is hereby understood and agreed that if construction has not commenced within TWO (2) years of the date of this Agreement, that the City, at its option, may declare the plans and this Agreement null and void and require the submission of new plans.
3. The Owner shall provide the following:

4. The City's Commissioner of Works is to act reasonably and in accordance with reasonable engineering standards in all matters in relation to this Agreement.

5. In the event that the Owner or any successor in title is directed or required by the Site Plan Control By-Law or by this Agreement to do or maintain work, and defaults therein, then upon THIRTY (30) DAYS notice by the City to the Owner, or any successor in title in default, requiring the Owner, or successor in title, to remedy the default, in accordance with the terms of the Site Plan Control By-Law and this Agreement, then such matter or thing may be done by the City at its expense and the City may recover the expense incurred in doing it by action or the same may be recovered in like manner as municipal taxes in accordance with the provisions of Section 125 of the Municipal Act, R.S.O., 1980, Chapter 302.

6. Time shall be of the essence of this Agreement and of any extension of time for compliance agreed upon.

7. It is understood and agreed that the City will make an effort with the available City personnel to do inspections to strive for completion of the work in accordance with the
approved plans, but the Owner and its successors and assigns hereby release the City, its servants, agents and contractors from any responsibility or liability arising directly or indirectly out of any failure to complete the works not the fault of the City, or to perform the works in accordance with the plans not the fault of the City, and for all effects in material or workmanship not the fault of the City.

8. The Owner hereby grants to the City, its servants and contractors, a licence to enter the Owner's lands for the purpose of inspection of the works and facilities and to perform such work as may be required as a result of a default by the Owner. The City shall be liable for any loss, injury or damage arising from any negligence by its servants and/or contractors while on the property.

9. Wherever this Agreement states "the Owner shall...", this shall mean at the Owner's expense.

10. The Owner covenants and agrees that it is aware of the requirements of City of Kingston By-Law No. 5057 and shall pay to the City of Kingston the required sewer surcharge rate in accordance with the provisions of By-Law No. 5057 in effect at the time of the issuance of the Building Permit.

11. The Owner shall pay the City the cost of registration of this Agreement as well as the cost of registration of any grants of easement relative thereto.

12. The Owner hereby acknowledges that it has understood the provisions of this Agreement and is familiar with the plans referred to in this Agreement. The Owner agrees that the requirements of this Agreement and the plans shall be brought to the attention of its agents and contractors who are constructing this development. The Owner acknowledges that it is aware of the requirements of the Site Plan
Control By-Laws of the City of Kingston and that a penalty for breach of the Site Plan Control By-Laws, in the event the plans are not complied with, may result in a charge under Section 66 of the Planning Act, 1983.

13. It is agreed between the parties hereto that every covenant, proviso and Agreement herein shall ensure to the benefit of and be binding upon the parties hereto, and their heirs, executors, administrators, successors and assigns, that all covenants herein shall be construed as being joint and several and that, when the context so requires or permits, the singular number shall be read as if the plural were expressed, and the masculine gender as if the feminine or neuter gender, as the case may be, were expressed.

IN WITNESS WHEREOF the parties hereto have hereunto affixed their Corporate Seals, under the hands of their proper signing officers, duly authorized in that behalf.

Signed, Sealed & Delivered)

in the presence of

THE CORPORATION OF THE
CITY OF KINGSTON
Per:
Mayor

Clerk

THE PUBLIC UTILITIES COMMISSION
OF THE CITY OF KINGSTON
Per:


(a) that development shall take place in accordance with the following plans:

(List Plans - Plan Number, Title, Scale - Date, Revision Date)
E.G. Dwg. No. A-1 - Site Plan - Scale 1:200 - Dated November 1, 1989
Revised November 15, 1989

(b) that all parking areas and access routes shall be paved WITHIN ONE (1) YEAR from the date of the issuance of the building permit;

(c) that the design and location of all exterior lighting and signs shall be subject to City approval;

(d) that all parking areas and vehicle/pedestrian access routes shall be provided with lighting in a manner satisfactory to the City. Plans showing the design and location of the exterior lighting shall be submitted for City approval. Where lighting is provided, it shall be directed away from adjacent uses or streets and shall be directed downward towards the surface of the parking area;

(e) that all exterior air conditioning or mechanical units shall be screened in a manner which is satisfactory to the City;

(f) that PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, plans showing the design, location and construction details of any exterior garbage storage areas shall be submitted for City approval and any exterior garbage storage areas shall be constructed in accordance with the approved plans;

(g) that interior floor layouts and structural details as shown on the above listed plans shall not be subject to the regulations of Site Plan Control. These matters will, however, be subject to the Ontario Building Code Act and regulations;

(h) that all construction work covered by this Agreement shall be carried forward as expeditiously as may be, in a good and workmanlike manner in accordance with good trade practices, so as to cause a minimum of nuisance to neighbours;

(i) that the Owner shall complete the facilities and matters not otherwise provided for in this agreement, as required PRIOR TO THE OCCUPANCY OF THE BUILDING, but the City may, in writing, extend the time for completion in cases of undue hardship;

(j) that during construction, all reasonable precautions to avoid dust, noise and other nuisances and to provide for public safety will, so far as reasonably possible, be taken. The entire excavation site shall be fenced to the satisfaction of the Chief Building Official to provide for the security of the site and public safety during construction of the building;

(k) that the Owner shall design and construct facilities to provide for the unobstructed use of the public areas of the building by the physically handicapped in conformity with the Site Plan Control Guidelines for the handicapped, adopted by the Council of the City of Kingston on 1982 08 16;

(l) that the approved landscaping, as shown on Plan No. shall be in place WITHIN ONE (1) YEAR from the date on which the building permit is issued;

(m) that a masonry wall of 1.4m minimum height shall be constructed along the boundary/ies of the site, subject to approval of design, location and construction details by the City:

NB: Items b.c.d.k. and a refer to transport barriers-paving, signage, lighting, handicapped access and masonry wall, respectively, as noted in Figure 9.

Source: City of Kingston Planning Dept.
APPENDIX E - Analytical Instrument (Condensed form)
ANALYTICAL INSTRUMENT:
(Condensed form)

1. (a) What is the development function: RETAIL or SERVICE
    (b) Specifically: eg. bakery

2. (a) What is the location of the development:
    STAND ALONE or SHOPPING CENTRE
    (c) What is the municipal address? eg. 101 Princess St.

3. (i)(a) Are there transportation consequences/improvements
    associated with the project that are listed within
    the site plan agreement: YES or NO
    (b) How many consequences: eg. #, NONE or FEW or MANY
    (c) What are they: eg.List consequences
    (d) Is each improvement: On-site or Off-site
    (e) Value breakdown for (d) On-site $ and Off-site $
    (e) Is there a cost breakdown: YES or NO
    (f) What is the associated cost: eg. $
(ii)(a) Who is responsible for the cost:
    Developer or Municipality or Both
    (give details)

(iii)(a) Are there transportation consequences/improvements
    not specifically listed/accounted for in the agreement
    but are evident from examining the site plan:
    YES or NO
    (b) What are the consequences:
        eg. site may show parking stalls or widening, etc.
    (c) What is the cost (approximate) for the improvements
        in 3.iii.b.):
        eg. may have to be estimated after
        data collection is complete
    (d) Who is responsible for these improvements in
        3.iii.b.:
        Developer or Municipality or Both

4. (a) Are any improvements paid for by the developer
    and then turned over to the municipality after the
    project is completed: YES or NO
    (b) Which facilities/improvements: eg. provide list
    (c) Approximate or actual cost to developer:
        eg. $ or if not available, give
        details of improvement to estimate cost later
5. (a) Does the project generate traffic (i.e. more than just employees; and if employees only, 'yes' if number exceeds 5 employees): YES or NO
(b) If traffic generation figures given, state: or in the alternative how much:
   eg. 20+ people or <20 people
(c) Modes of traffic generated:
   eg. Pedestrian YES or NO
   Automobile YES or NO
   Other (including Public transit) YES or NO

6. (a) Are regular deliveries associated with the project: YES or NO
(b) Nature of deliveries:
   LARGE TRUCK/TRANSPORT or AUTOMOBILE
   eg. aggregate truck vs. pizza delivery
(c) Are loading spaces/commercial vehicle stalls required:
   eg. grocery delivery trucks at large scale
   groceries vs. small scale

7. (a)(i) Are parking facilities required: YES or NO
   (ii) If facilities are required:
      Reg'd ON SITE or Sufficiently provided OFF SITE
(b) Breakdown for required stalls for Employees and customers:
   Employees - YES or NO
   Customers - YES or NO
(c) Specific numbers if available. (check by-law requirements)

8. Access to site--
(a) Number of entrances/exits to site: 1 only or >1
(b) Type of adjacent streets to development:
   LOCAL or ARTERIAL or MAJOR HIGHWAY
   (eg. definitions of city street classification available from planning department)

9. What are the adjacent land uses:
   RESIDENTIAL or COMMERCIAL or OTHER
   Note if land has Designated use but is undeveloped (open space)
10. **Stand Alone Projects:**
   (a) Area of site: \(\text{ft}^2/\text{m}^2\) square
   (b) Area of building: \(\text{ft}^2/\text{m}^2\) square
   (c) Number of floors/storeys: \(<2\) or \(3+\) storeys
   (d) Total leasable area: Total floor area

**Shopping Centres:**
(a) (i) Area of site:
   (ii) Area of Building:
(b) Total leasable area of shopping centre: Total floor area
(c) Scale of centre: LARGE or SMALL
(d) Number of stores (include specific functions):

11. Who is the Developer:
    LARGE (development company) or SMALL (private landowner not in the development business as primary employment).

12. (a) Did the application require an O.M.B. hearing?
    APPROVAL BY COUNCIL or APPROVAL BY O.M.B.
(b) Nature of appeal (if available): eg. give details
(c) Transportation related: YES or NO
APPENDIX F -

Kingston Project Breakdown by Year
Annual Breakdown of Completed Projects

<table>
<thead>
<tr>
<th>Year</th>
<th># of Proj.</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>1991*</td>
<td>3</td>
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* not complete years
List of Tables

<table>
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<th>Table Number</th>
<th>Table Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Adjacent St. Classification by Project Street</td>
<td>106</td>
</tr>
<tr>
<td>7</td>
<td>Project Function by Project Street Location</td>
<td>106</td>
</tr>
<tr>
<td>8</td>
<td>Scale of Project by Project Street Location</td>
<td>107</td>
</tr>
<tr>
<td>9</td>
<td>Applicant Size by Applicant Type</td>
<td>107</td>
</tr>
<tr>
<td>10</td>
<td>Dollar Value of Burdens by Applicant Type</td>
<td>107</td>
</tr>
<tr>
<td>11</td>
<td>Application Processing Time by Applicant Type</td>
<td>108</td>
</tr>
<tr>
<td>12</td>
<td>Dollar Value of Burdens by Commercial Area</td>
<td>108</td>
</tr>
<tr>
<td>13</td>
<td>Time of Project by Commercial Area</td>
<td>109</td>
</tr>
<tr>
<td>14</td>
<td>Project Function by Type Financial Security</td>
<td>109</td>
</tr>
<tr>
<td>15</td>
<td>Project Location by Type Financial Security</td>
<td>109</td>
</tr>
<tr>
<td>16</td>
<td>Applicant Size by Type of Financial Security</td>
<td>110</td>
</tr>
<tr>
<td>17</td>
<td>Time of Project by Type of Financial Security</td>
<td>110</td>
</tr>
<tr>
<td>18</td>
<td>Burden Transferred to Munic. by Fin. Security</td>
<td>110</td>
</tr>
<tr>
<td>19</td>
<td>No. of Project Burdens by Project Function</td>
<td>111</td>
</tr>
<tr>
<td>20a</td>
<td>Applicant Size by Project Function</td>
<td>111</td>
</tr>
<tr>
<td>20b</td>
<td>Applicant Size by Project Function</td>
<td>112</td>
</tr>
<tr>
<td>21</td>
<td>Project Street Location by Location Category</td>
<td>112</td>
</tr>
<tr>
<td>22</td>
<td>No. of Project Burdens by Location Category</td>
<td>112</td>
</tr>
<tr>
<td>23</td>
<td>Dollar Value of Burdens by Location Category</td>
<td>113</td>
</tr>
<tr>
<td>24</td>
<td>Applicant Size by Location Category</td>
<td>113</td>
</tr>
<tr>
<td>25</td>
<td>Specific Function by No. of Project Burdens</td>
<td>113</td>
</tr>
<tr>
<td>26</td>
<td>Specific Function by No. of Project Burdens</td>
<td>113</td>
</tr>
<tr>
<td>27</td>
<td>Specific Function by Dollar Value of Burdens</td>
<td>114</td>
</tr>
<tr>
<td>28</td>
<td>Specific Function by Dollar Value of Burdens</td>
<td>115</td>
</tr>
<tr>
<td>29</td>
<td>Specific Function by Project St. Location</td>
<td>115</td>
</tr>
<tr>
<td>30</td>
<td>Specific Function by Project St. Location</td>
<td>115</td>
</tr>
<tr>
<td>31</td>
<td>Specific Function by Number of Entry/Exits</td>
<td>116</td>
</tr>
<tr>
<td>32</td>
<td>Specific Function by Number of Entry/Exits</td>
<td>116</td>
</tr>
<tr>
<td>33</td>
<td>Scale of Project by No. of Project Burdens</td>
<td>116</td>
</tr>
<tr>
<td>34</td>
<td>Scale of Project by Commercial Area</td>
<td>117</td>
</tr>
<tr>
<td>35</td>
<td>Scale of Project by Applic. Processing Time</td>
<td>117</td>
</tr>
<tr>
<td>36</td>
<td>Applicant Size by Commercial Area</td>
<td>117</td>
</tr>
<tr>
<td>37</td>
<td>Project Function by Commercial Area</td>
<td>118</td>
</tr>
<tr>
<td>38</td>
<td>Project Location by Commercial Area</td>
<td>118</td>
</tr>
<tr>
<td>39</td>
<td>Scale of Project by Commercial Area</td>
<td>118</td>
</tr>
<tr>
<td>40</td>
<td>Project Function by Time of Project</td>
<td>119</td>
</tr>
<tr>
<td>41</td>
<td>Scale of Project by Time of Project</td>
<td>119</td>
</tr>
<tr>
<td>42</td>
<td>Site Plan Included by Time of Project</td>
<td>119</td>
</tr>
<tr>
<td>43</td>
<td>Applicant by Time of Project</td>
<td>120</td>
</tr>
<tr>
<td>44</td>
<td>Applicant Type by Time of Project</td>
<td>120</td>
</tr>
<tr>
<td>45</td>
<td>Location Category by Time of Project</td>
<td>120</td>
</tr>
</tbody>
</table>
Table 6

Adjacent St. Classification (STCLASS5) (Rows) by Project St. Location (STCLASS5) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>L</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>C</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>16</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>P</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>S</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PC</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>17</td>
<td>7</td>
<td>6</td>
<td>69</td>
</tr>
</tbody>
</table>

A=Arterial  
C=Collector  
E=Expressway  
L=Local  
P=Private  
S=Service  
PC=proposed Collector

Warning: More than 1/5th of fitted cells are sparse  
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=38.885; df=18; prob.=0.003

Table 7

Project Function (FUNCS) (Rows) by Project St. Location (STCLASS5)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>L</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>14</td>
<td>9</td>
<td>3</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>R</td>
<td>25</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>R&amp;S</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>S</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>20</td>
<td>9</td>
<td>9</td>
<td>97</td>
</tr>
</tbody>
</table>

M=Miscellaneous  
R=Retail  
R&S=Retail & Service  
S=Service

Warning: More than 1/5th of fitted cells are sparse  
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=7.327; df=9; prob.=0.603
Table 8

Scale of Project (SCALES) (Rows) by
Project St. Location (STCLASS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>L</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>24</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>MED</td>
<td>20</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>SM</td>
<td>15</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>20</td>
<td>9</td>
<td>9</td>
<td>97</td>
</tr>
</tbody>
</table>

LG=Large (>1000sq.m)
MED=Medium (280-1000sq.m)
SM=Small (<279sq.m)

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=1.381; df=6; prob.=0.967

Table 9

Applicant Size (APPSIZE5) (Rows) by
Applicant Type (APPTYPES5) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>O</th>
<th>T</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>49</td>
<td>18</td>
<td>4</td>
<td>71</td>
</tr>
<tr>
<td>SM</td>
<td>0</td>
<td>25</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>43</td>
<td>5</td>
<td>97</td>
</tr>
</tbody>
</table>

D=Developer; O=Owner; T=Tenant;
LG=Large (Land Development Company)
SM=Small (Private Business Owner)

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=39.582; df=2; prob.=0.000

Table 10

Dollar Value of Project Transport Burdens (PROJVAL5) (Rows) by
Applicant Type (APPTYPES5) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>O</th>
<th>T</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>19</td>
<td>7</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>LO</td>
<td>21</td>
<td>27</td>
<td>4</td>
<td>52</td>
</tr>
<tr>
<td>MED</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>43</td>
<td>5</td>
<td>97</td>
</tr>
</tbody>
</table>

HI=Transport burdens exceeding $3001
MED=Transport burdens $101-$3000
LO=Transport Burdens below $100

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=8.679; df=4; prob.=0.075
Table 11

Application Processing Time (PROCTIMS) (Rows) by Applicant Type (APPTYPES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>O</th>
<th>T</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>23</td>
<td>15</td>
<td>3</td>
<td>41</td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>27</td>
<td>2</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>43</td>
<td>5</td>
<td>96</td>
</tr>
</tbody>
</table>

No=6 week turnaround not met
Yes=Processed within 6 weeks

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=3.077; df=2; prob.=0.17

Table 12

Dollar Value of Project Burdens (PROJVALS) (Rows) by Concentrated Commercial Development Areas* (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>LO</td>
<td>13</td>
<td>20</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>MED</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>30</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>89</td>
</tr>
</tbody>
</table>

(* Refers to Specific Policy Areas as outlined in Figure 7)

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=15.51; df=8;
Observed=9.51
Table 13

Time of Project (TIMES) (Rows) by
Concentrated Commercial Activity Area* (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early</td>
<td>12</td>
<td>13</td>
<td>9</td>
<td>2</td>
<td>3</td>
<td>39</td>
</tr>
<tr>
<td>Late</td>
<td>13</td>
<td>18</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>31</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>90</td>
</tr>
</tbody>
</table>

* Refers to Specific Policy Areas as outlined in Figure 7

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=1.778; df=4;
Observed=0.776

Table 14

Project Function (FUNCS) (Rows) by
Type of Financial Security Required (Columns)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>B/Lt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>S</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>R&amp;S</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>M</td>
<td>11</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>14</td>
<td>44</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=7.815; df=3; observed=2.40

Table 15

Project Location (LOCATNS) (Rows) by
Type of Financial Security Required (Columns)

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>B/Lt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>7</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>S.A.</td>
<td>18</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>S.C.</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>14</td>
<td>44</td>
</tr>
</tbody>
</table>

R=Ribbon
S.A.=Stand Alone
S.C.=Shopping Centre

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=5.991; df=2; observed=2.02
Table 16

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>B/Lt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>22</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>SM</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>14</td>
<td>44</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=3.841; df=1; observed=0.81

Table 17

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>7</td>
<td>24</td>
<td>31</td>
</tr>
<tr>
<td>B/Lt</td>
<td>2</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>35</td>
<td>44</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square Value=3.84; df=1; observed=0.296

Table 18

<table>
<thead>
<tr>
<th></th>
<th>On</th>
<th>Off</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>86</td>
<td>48</td>
<td>134</td>
</tr>
<tr>
<td>No</td>
<td>93</td>
<td>67</td>
<td>160</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
<td>115</td>
<td>294</td>
</tr>
</tbody>
</table>

Yes=transferred to municipality
No=Not transferred

Critical Chi-Square Value=3.841; df=1; observed=1.113
### Table 19

Number of Project Transportation Considerations (TCCATEGs) (Rows) by Project Function (FUNCS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>R</th>
<th>R&amp;S</th>
<th>S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few</td>
<td>14</td>
<td>15</td>
<td>6</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Many</td>
<td>13</td>
<td>17</td>
<td>11</td>
<td>2</td>
<td>49</td>
</tr>
<tr>
<td>None</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>36</td>
<td>17</td>
<td>13</td>
<td>96</td>
</tr>
</tbody>
</table>

*Transport Burdens Include: Standard site plan agreement clauses—paving, signing, lighted walkways/parking areas, appropriate modifications for handicapped persons; plus access islands—on-site=1, off-site=1; plus traffic study; plus any burden not included in the site plan agreement; plus any detailed burden from the site plan agreement.*

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi Value = 12.59; df = 6; Observed = 4.98

### Table 20a

Applicant Size (APPSIZES) (Rows) by Project Function (FUNCS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>R</th>
<th>R&amp;S</th>
<th>S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>15</td>
<td>28</td>
<td>17</td>
<td>11</td>
<td>71</td>
</tr>
<tr>
<td>SM</td>
<td>16</td>
<td>8</td>
<td>0</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>36</td>
<td>17</td>
<td>13</td>
<td>97</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi Value = 7.82; df = 3; Observed = 11.0
Table 20

Applicant Size (APPSIZES) (Rows) by Project Function (FUNC5) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>R</th>
<th>S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>15</td>
<td>28</td>
<td>11</td>
<td>54</td>
</tr>
<tr>
<td>SM</td>
<td>16</td>
<td>8</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>36</td>
<td>13</td>
<td>80</td>
</tr>
</tbody>
</table>

Critical Chi Value = 5.991; df = 2; Observed = 8.82

Table 21

Project St. Location (STCLASS) (Rows) by Location Category (LOCATNS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>SA</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;E</td>
<td>21</td>
<td>32</td>
<td>15</td>
<td>68</td>
</tr>
<tr>
<td>C&amp;L</td>
<td>2</td>
<td>24</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>56</td>
<td>18</td>
<td>97</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse (Frequency <5) Significance Tests are Suspect

Critical Chi Value = 5.59; df = 2; Observed = 10.94

Table 22

Number of Project Transportation Burdens (tb's*) (TCCATEG5) (Rows) by Location Category (LOCATNS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>SA</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-Few</td>
<td>12</td>
<td>29</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td>Many</td>
<td>10</td>
<td>27</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>56</td>
<td>18</td>
<td>96</td>
</tr>
</tbody>
</table>

(* For list of tb's, see Table 16)

Warning: More than 1/5th of fitted cells are sparse (Frequency <5) Significance Tests are Suspect

Critical Chi Value = 5.99; df = 2; Observed = 2.42
Table 23

Dollar Value of Project Burdens (PROJVALS) (Rows) by Location Category (LOCATNS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>SA</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED/Hi</td>
<td>7</td>
<td>29</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>LO</td>
<td>15</td>
<td>27</td>
<td>9</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>56</td>
<td>18</td>
<td>96</td>
</tr>
</tbody>
</table>

HI = values over $100
LO = values under $100

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi Value=5.99; df=2; Observed=2.63

Table 24

Applicant Size (APPSIZES) (Rows) by Location Category (LOCATNS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>SA</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>17</td>
<td>36</td>
<td>18</td>
<td>71</td>
</tr>
<tr>
<td>SM</td>
<td>6</td>
<td>20</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>56</td>
<td>18</td>
<td>97</td>
</tr>
</tbody>
</table>

Critical Chi Value=5.39; df=2; Observed=15.8

Table 25

Specific Function (FUNCSPS) (Rows) by Number of Project Transportation Considerations (TCCATEGS) (Columns)

For Retail Functions at Stand Alone Locations

<table>
<thead>
<tr>
<th></th>
<th>Few</th>
<th>Many</th>
<th>None</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hotel</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>5</td>
<td>11</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>11</td>
<td>4</td>
<td>23</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.
Table 26

Specific Function (FUNCSPS) (Rows) by
Transportation Considerations (TCCATEGs) (Columns)

For Retail Functions at Ribbon Locations

<table>
<thead>
<tr>
<th></th>
<th>Few</th>
<th>Many</th>
<th>None</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Hotel</td>
<td>6</td>
<td>:</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 27

Specific Function (FUNCSPS) (Rows) by
Dollar Value of Project Burdens (PROJVALS) (Columns)

For Retail Functions at Ribbon Locations

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>LOW</th>
<th>MED</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Hotel</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.
Table 28

Specific Function (FUNCSPS) (Rows) by
Dollar Value of Project Burdens (PROJVALS) (Rows)

For Retail Functions at Stand Alone Locations

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>LOW</th>
<th>MANY</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hotel</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>5</td>
<td>22</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>23</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 29

Specific Function (FUNCSPS) (Rows) by
Project St. Location (STCLASS) (Columns)

For Retail Functions at Stand Alone Locations

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>L</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hotel</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>13</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>23</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 30

Specific Function (FUNCSPS) (Rows) by
Project St. Location (STCLASS) (Columns)

For Retail Functions at Ribbon Locations

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>E</th>
<th>L</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Hotel</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.
Table 31

Specific Function (FUNCSPS) (Rows) by
Number of Entry/Exits to Project Site (ENTRYNUM) (Columns)

For Retail Functions at Ribbon Locations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Hotel</td>
<td>3</td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 32

Specific Function (FUNCSPS) (Rows) by
Number of Entry/Exits to Project Site (ENTRYNUM) (Columns)

For Retail Functions at Stand Alone Locations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Station</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hotel</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Plaza</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restaurant</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>8</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 33

Scale of Project (SCALE5) and Total Number of Transport Burdens

Medium Scale: 2 @ 2 tb's; 1 each @ 4, 5, 6, and 7.
Large Scale: 2 @ 2 tb's and 7 tb's; 1 each @ 3, 5, 6, 9-17.
Table 34

Scale of Project (SCALES) (Rows) by Concentrated Commercial Development Areas* (AREAS) (Columns)

For Shopping Centres

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>MED</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

No Chi-Square test performed.

Table 35

Scale of Project (SCALES) (Rows) by Application Processing Time (PROCTIMS) (Columns)

For Shopping Centres

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>MED</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>8</td>
<td>18</td>
</tr>
</tbody>
</table>

Mantel-Haenszel Chi-Square= 0.425; Prob.=0.514

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Table 36

Applicant Size (APPSIZES) by Concentrated Commercial Development Area (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>19</td>
<td>22</td>
<td>14</td>
<td>6</td>
<td>3</td>
<td>71</td>
</tr>
<tr>
<td>SM</td>
<td>6</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>31</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>90</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=8.144; df=5; prob.=0.149
Table 37

Project Function (FUNC5) by
Concentrated Commercial Development Area (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>1</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td>7</td>
<td>12</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>R&amp;S</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>S</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>25</td>
<td>31</td>
<td>18</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=29.870; df=15; prob.=0.012

Table 38

Project Location (LOCATNS) by
Concentrated Commercial Development Area (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>1</td>
<td>0</td>
<td>16</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SA</td>
<td>2</td>
<td>24</td>
<td>10</td>
<td>11</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>SC</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>25</td>
<td>31</td>
<td>18</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Pearson Chi-Square=40.214; df=10; prob.=0.000

Table 39

Scale of Project (Scales) (Rows) by
Concentrated Commercial Development Area (AREAS) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>MED</td>
<td>8</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>SMAL</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>31</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>97</td>
</tr>
</tbody>
</table>

Warning: More than 1/5th of fitted cells are sparse
(Frequency <5) Significance Tests are Suspect

Critical Chi-Square=15.51; df=8; prob.=5.68
Table 40

Project Function (FUNCS) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>13</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>R</td>
<td>18</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>R&amp;S</td>
<td>8</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>S</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>53</td>
<td>97</td>
</tr>
</tbody>
</table>

Pearson Chi-Square=0.729; df=3; prob.=0.866

Table 41

Scale of Project (SCALES) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG</td>
<td>16</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>MED</td>
<td>17</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>SMAL</td>
<td>11</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>53</td>
<td>97</td>
</tr>
</tbody>
</table>

Pearson Chi-Square=2.244; df=2; prob.=0.326

Table 42

Site Plan Included with Application (SPINCLS) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>24</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>Yes</td>
<td>20</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>53</td>
<td>97</td>
</tr>
</tbody>
</table>

Pearson Chi-Square=10.485; df=1; prob.=.001
### Table 43

Application Processing Time (PROCTIMS) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>20</td>
<td>21</td>
<td>41</td>
</tr>
<tr>
<td>Yes</td>
<td>24</td>
<td>31</td>
<td>55</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td><strong>52</strong></td>
<td><strong>96</strong></td>
</tr>
</tbody>
</table>

No = not processed in 6 weeks  
Yes = processed within 6 weeks

Pearson Chi-Square = 0.25; df = 1; prob. = 0.617

### Table 44

Applicant Type (APPTYPES) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>21</td>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>O</td>
<td>20</td>
<td>23</td>
<td>43</td>
</tr>
<tr>
<td>T</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td><strong>53</strong></td>
<td><strong>96</strong></td>
</tr>
</tbody>
</table>

D = developer  
O = Owner  
T = tenant

Pearson Chi-Square = 0.579; df = 2; prob. = 0.749

### Table 45

Location Category (LOCATNS) (Rows) by Time of Project (TIMES) (Columns)

<table>
<thead>
<tr>
<th></th>
<th>Early</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>10</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>SA</td>
<td>25</td>
<td>31</td>
<td>56</td>
</tr>
<tr>
<td>SC</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td><strong>53</strong></td>
<td><strong>97</strong></td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 0.201; df = 2; prob. = 0.904
APPENDIX H -

Sample Letter of Credit
LETTER OF CREDIT NO. ____________________________ 122

TOTAL AMOUNT: ____________________________

DATE: ____________________________

BRANCH: ____________________________

CUSTOMER: ____________________________

TO: THE CORPORATION OF THE CITY OF KINGSTON
216 ONTARIO STREET
KINGSTON, ONTARIO
N7L 2Z3

UNCONDITIONAL IRREVOCABLE LETTER OF CREDIT

We hereby authorize you to draw on ____________________________ (Name of Bank and Address) for account of our Customer, ____________________________ (Name of Developer) up to an aggregate amount of ____________________________ (Amount of Letter of Credit) $ ______/100 Dollars available by drafts at sight as follows:

Pursuant to the request of our Customer, the said ____________________________ (Name of Developer) We, ____________________________ (Name of Bank) do hereby establish and give to you this Unconditional Irrevocable Letter of Credit in your favour in the total amount of ____________________________ (Amount of Letter of Credit) $ ______/100 Dollars which may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you which demand we shall honour without enquiring whether you have or have not presented documents drawn pursuant to this Letter of Credit are to be used in connection with the obligations as provided for in the Site Plan Control Agreement between ____________________________ (Name of Developer) ____________________________ and THE CORPORATION OF THE CITY OF KINGSTON.

It is understood and agreed that the obligation of the undersigned under this Letter of Credit is an obligation to pay money only and that in no circumstances shall the undersigned be obliged to perform or cause to perform any of our Customer’s actual obligations to you.

The amount of this Letter of Credit may be reduced from time to time as advised by notice in writing given to us from time to time by you. Each reduction should be in proportion to the work satisfactorily done and must be certified as satisfactory by the Corporation of the City of Kingston.

This Letter of Credit will continue up to ____________________________ (Date) subject to the automatic renewal clause, and will expire at our counters at ____________________________ (Place) at that date and you may call for payment of the full amount outstanding under this Letter of Credit at any time prior to the close of business on that date.

This credit is automatically renewable from year to year after the present expiry date unless ____________________________ (Bank Name) give notice in writing 10 days prior to the expiry date of ____________________________ (Date) stating that we elect not to renew.

The drafts drawn under this credit are to state on their face that they are drawn under ____________________________ (Bank Name) (Bank Address), dated ____________________________ Letter of Credit No. ____________________________

______________________________ ____________________________
COUNTERSIGNED AUTHORIZED

Source: City of Kingston Planning Dept.
BIBLIOGRAPHY


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ROGERS, -. Canadian Law of Planning and Zoning. Carswell; Toronto: [1973- ].


SHULDINER, Paul W. Non-Residential Trip Generation Analysis. The Transportation Centre, Northwestern University; Evanston: November, 1965.


Vancouver Charter, S.B.C. 1953, c.55.
VITA AUCTORIS

Jordan Marijana Alexander was born on June 7, 1967, in Oshawa, Ontario. She graduated an Ontario Scholar from G.L. Roberts C.& V.I., Oshawa, in 1985. She studied geography at Queen's University in Kingston, Ontario obtaining a Bachelor of Arts degree in 1988. After brief study at the University of Windsor Law School, she began a Master's program in geography in 1990. During her graduate study she held transportation planning positions in Ontario (Whitby and Windsor) and Halifax, Nova Scotia. In the fall of 1991, the author completed a Master of Arts degree in Geography from the University of Windsor. She is currently employed as a Policy Analyst with the Ministry of Transportation and Highways in British Columbia.