FEASIBILITY STUDY
on the
COMMERCIAL VIABILITY
of
LAND-ONLY MORTGAGE

LOAN INSURANCE

FEASIBILITY STUDY

ON THE COMMERCIAL VIABILITY OF LAND ONLY MORTGAGE LOAN INSURANCE

Final Report

SEPTEMBER, 1998

FEASIBILITY STUDY

on the

COMMERCIAL VIABILITY

of

LAND-ONLY MORTGAGE

LOAN INSURANCE

SEPTEMBER 14, 1998

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

LIST OF FIGURES (CONTINUED)

LIST OF TABLES

EXECUTIVE SUMMARY

Canada Mortgage and Housing Corporation (CMHC) is interested in assessing the commercial viability of land-only mortgage loan insurance, which is generally not available in the marketplace today. Land-only mortgage loan insurance is defined as insurance protection to obtain financing to acquire and/or service land for housing-related purposes.

STUDY PURPOSE AND APPROACH

The purpose of this study is to enable CMHC to better assess the potential demand for land-only mortgage loan insurance, the risk to CMHC in offering land-only mortgage insurance and what means are available to CMHC to mitigate associated risks.

Through questionnaires and face-to-face interviews, data was collected to permit the analysis of the critical success and failure factors and to identify financing gaps in the land development process. This information set the framework within which the insurance parameters were subsequently developed.

STUDY MARKETS

Consistent with the Terms of Reference, specific areas within two provinces were selected for analysis; one where there is a high degree of housing market activity and where land prices can be volatile (the Greater Toronto Area of Ontario) and one with a relatively stable housing market activity (the Winnipeg Region of Manitoba).

The area around the new City of Toronto provides numerous examples of municipalities where intensive 'greenfields' residential development is occurring. Over the last twenty years, the Winnipeg Region's growth rate has been steady at about one percent per year.

DEVELOPMENT INDUSTRY PROFILE

The development industry in the GTA is characterized by many development firms, both large and small. Most firms carry land from the raw land[1] purchase stage to the serviced residential lot stage.

The development industry in the Winnipeg Region is characterized by two scenarios. In Winnipeg the vast majority of housing developments have been undertaken by five very large land development companies. Outside of Winnipeg, the land development industry is characterized by a greater number of participants who are involved in the land development process.

Access to bank financing is similar in the GTA and the Winnipeg Region. Generally, the financial institutions approach to funding of land development projects in a similar manner (not until draft plan approval is obtained), using the same threshold levels, such as a 50% to 60% loan to value ratio and loan periods in the range of 18 to 24 months.

DEVELOPMENT PROCESS

The land development processes in Ontario and Manitoba are quite similar in that there are a series of comparable stages that must be completed.

The processes to bring land from an agricultural stage to serviced residential lots are long and complicated with numerous opportunities for factors outside the control of the development proponent to influence the speed of the processes. In fact, these factors may stop the land development process for months or even years.

The first stage of the process is to apply for and obtain an amendment to the Official Plan that changes the land use designation of the land from 'Agricultural' or 'Rural' to 'Residential'. The second stage is to obtain approval of a draft plan of subdivision. When draft plan approval has been obtained, some key risks to the developer and financial institutions have been resolved. The issue at this point in the process is not whether the land will develop, but rather when the land will develop. Financial

---

1 Raw land is defined as land without an approved draft plan of subdivision.

institutions are now prepared to consider funding the subsequent stages of the land development process.

When approval of a draft plan of subdivision is granted, the approval is subject to certain conditions being satisfied or cleared. Some of these conditions take several months or longer to satisfy. Clearing these conditions occurs in Stage 3.

FINANCIAL INSTITUTIONS

Interviews were conducted with representatives of various financial institutions actively involved in the land development process. The institutions included both Schedule A lenders (the major banks) and Schedule B lenders (trust companies, pension funds). All financial institutions have a similar range of loan rates. The following factors that dictate the interest rate for specific loans have been identified as follows:

- the strength of the applicant;
- the location of the property;
- the loan to value ratio;
- the loan amount;
- the length of time to development;
- whether there are lot sales to an end user; and
- competition amongst the financial institutions.

The conditions under which the Schedule B institutions are prepared to lend money are virtually the same as those of the Schedule A institutions.

DEVELOPMENT COMPANIES

As part of this study, formal and informal interviews were held with representatives of a number of development companies, including both publicly traded and privately held. The information provided by the development companies, both large and small, is quite consistent with that provided by the financial institutions. Raw land acquisition most frequently involves the purchaser and vendor but not a financial institution. In the rare cases where a financial institution is involved, the amount of the loan and the interest and fee rates indicated by the financial institutions were confirmed by the development companies.

ACTUARIAL MODELLING

Actuarial models of the probability of default, probability of a claim and the size of claims were developed using simulation techniques, which is a generally accepted practice in modelling for cases where there is an absence of sufficient historical data. The simulation approach generates large numbers of portfolios of loans with characteristics randomly selected from ranges/distributions specified as the underlying assumptions and therefore simulates potential default and claim patterns. This approach was used because the study was not able to identify sufficient land-only mortgages which would have resulted in claims for empirical modelling purposes.

Data collection for the project was largely by survey.

The survey data collected indicated that in the current operating environment, the probability of default on land-only mortgages is minimal to zero as a result of the strict underwriting criteria being employed by lenders. This observation was used to verify the modelling approach we developed to replicate current market conditions, and to quantify the probability of default and establish premium rates for the proposed land-only mortgage insurance.

The model criteria reflecting current market conditions yielded a probability of a claim of 0.065%. The results are substantiated by the survey observations and support the reasonableness of the approach. The corresponding risk premium rate estimated for the current market conditions is 0.015% or $1.50 per $10,000 loan amount. This is an up-front single payment not an annual addition to the loan rate of interest.

Assuming that the introduction of CMHC's proposed land-only mortgage insurance product results in changes in lender behaviour which facilitates greater access to financing and increases the probability of default, two separate models were developed to represent potential new market conditions for loans on land without an approved sub-division plan and for land with an approved sub-division plan. For each model, a risky and a low risk scenario were established by the land development and actuarial consultants in conjunction with CMHC, in order to estimate the extreme boundaries of risk premium for each of the two insurance products. The actual risk premium would fall within the range, depending on the ultimate underwriting criteria adopted by CMHC. This approach was followed because a detailed product development and

definition exercise is required before the specific parameters for the product can be input to the models.

The commercial viability of land-only mortgage insurance is contingent upon CMHC being able to offer insurance at a price that results in total financing costs, including insurance, that are less than that available in the absence of insurance. The risk premium ranges established through the actuarial modelling are only part of the price at which CMHC can offer insurance. The other elements of the price reflect CMHC's cost structure and profit requirements and are outside the scope of this report. If CMHC can offer insurance at a price which is less than the incremental risk premium charged by lenders within the interest rate on the loan, on a present value basis, then the product will be commercially viable from a pricing point of view.

In the actuarial models the mean probability of a claim ranged from 0% to 30.217% for loans on land without approvals and from 0% to 44.606% on loans for land with sub-division plan approval in place. The corresponding risk premium rates are estimated to range from 0% to 5.236% or $0 to $523.60 per $10,000 loan amount for pre-approval stage loans and from 0% to 8.402% or from $0 to $840.20 per $10,000 loan amount for post-approval stage loans.[2]

By way of illustration, and ignoring the fact that CMHC's cost and profit elements of the premium have yet to be quantified, the potential viability of the proposed insurance products can be evaluated using the risk premium estimates from the actuarial models (ie. assuming an otherwise similar cost structure to that of lenders). The portfolios of risky post-approval loans yielded a mean risk premium rate of 8.4% of the loan value. In order to generate the same up front risk premium over a five year loan approximately 1.6% per annum would be charged (ignoring discounting for the time value of money). Therefore, for a five year post-approval loan and 8.4% up front insurance premium, if lenders charged an annual incremental risk premium within the interest rate of more than 1.6% per annum, then the insurance product could be viewed as viable.

---

2 The results from the simulation models, whilst representing a generally accepted approach to modelling in situations with insufficient data for empirical analysis, are inherently dependent on the quality and accuracy of the distribution assumptions upon which the simulations are based. The assumptions used in the models, while developed based on the expertise of the land development and actuarial consultants in conjunction with CMHC as well as academic research and the survey responses, remain assumptions which may, or may not, be realized in practice. The results from the simulation models are therefore also subject to uncertainty.

Further work is required in a number of areas before conclusions on the viability of the proposed products can be drawn. For example, an assessment of CMHC's cost structure and profit requirements need to be included in the analysis, the products characteristics and underwriting criteria need to be more specifically defined, and lender reaction in terms of risk premium charges needs to be considered. The models developed for this report may be used to model the more specifically defined insurance once the product development analysis has been completed.

RÉSUMÉ

Étude de faisabilité sur la viabilité commerciale de l'assurance prêt hypothécaire pour les terrains seulement

La Société canadienne d'hypothèques et de logement (SCHL) désire évaluer la viabilité commerciale de l'assurance prêt hypothécaire pour les terrains seulement, qui n'est pas actuellement offerte sur le marché. Cette assurance est destinée à obtenir du financement visant l'acquisition ou la viabilisation de terrains à construire.

Objet et méthode de l'étude

Cette étude doit permettre à la SCHL de mieux évaluer la demande éventuelle d'assurance prêt hypothécaire pour les terrains seulement, le risque que court la SCHL en offrant ce type d'assurance et les moyens dont elle dispose pour gérer les risques connexes.

À l'aide de données recueillies au moyen de questionnaires et d'entrevues, la SCHL a entrepris l'analyse des facteurs essentiels de succès et d'échec et relevé les écarts de financement au cours du processus d'aménagement des terrains. Cette information constitue le cadre dans lequel les paramètres de l'assurance ont ensuite été mis au point.

Étude des marchés

Conformément au cadre de référence, on a choisi pour l'analyse des secteurs particuliers dans deux provinces; dans l'une, on constate une forte activité sur le marché du logement et une fluctutation du prix des terrains (la région du Grand Toronto en Ontario), dans l'autre, on remarque une activité relativement stable sur le marché du logement (la région de Winnipeg au Manitoba).

Dans le secteur aux abords de la nouvelle Ville de Toronto, nombreux sont les exemples de municipalités où l'on aménage de façon intensive de nouveaux sites. Depuis vingt ans, le taux de croissance de la région de Winnipeg est demeuré stable à environ un pour cent par année.

Profil de l'industrie de l'aménagement

Dans la région du Grand Toronto, l'industrie de l'aménagement se caractérise par le nombre élevé de sociétés d'aménagement de petite et de grande envergure. La plupart possèdent les terrains, de l'étape de l'achat de terrains en friche à celle de terrains viabilisés à usage résidentiel.

On distingue deux types de scénarios d'aménagement dans la région de Winnipeg. Dans la ville même, cinq importantes sociétés d'aménagement des terres ont entrepris la construction de la grande majorité des habitations. Par contre, en dehors de la ville, un plus grand nombre de sociétés participent au processus d'aménagement des terrains.

L'accès à du financement bancaire est identique dans la région du Grand Toronto et celle de Winnipeg. En général, tous les établissements financiers offrent la même méthode de financement des projets d'aménagement des terrains (à partir du moment où les premiers plans sont approuvés), avec les mêmes plafonds, notamment un taux de rapport prêt-valeur de 50 % à 60 % et des termes de prêts oscillant entre 18 et 24 mois.

Processus d'aménagement

Les processus d'aménagement des terrains en Ontario et au Manitoba sont semblables puisqu'ils comportent une série d'étapes comparables à accomplir.

Le processus de transformation d'un terrain agricole en parcelles viabilisées à construire est long et complexe car nombreux sont les facteurs échappant au contrôle du proposant et qui entravent la rapidité des processus. Ces facteurs peuvent en fait freiner totalement le processus d'aménagement pendant des mois, voire des années.

Dans la première étape du processus, on demande un amendement du Plan officiel visant la modification de l'affectation du sol de « agricole » ou « rural » à « résidentiel ». Dans la deuxième étape, on demande l'approbation d'un plan de lotissement préliminaire. Cette dernière obtenue, le promoteur et les établissements financiers ne courent plus certains des principaux risques. À cette étape-ci du processus, il importe de savoir, non pas si l'on pourra aménager le terrain, mais plutôt quand on sera en mesure de le faire. Les établissements financiers sont ensuite prêts à envisager le financement des étapes suivantes du processus d'aménagement.

Lorsque le plan de lotissement préliminaire est approuvé, l'approbation est assujettie à l'obtention ou à l'autorisation de certaines conditions, ce qui peut prendre plusieurs mois et plus pour certaines. Ces conditions se présentent à l'étape 3.

Établissements financiers

Des entrevues ont été menées auprès de représentants de divers établissements financiers participant activement au processus d'aménagement des terrains. Ces établissements comprennent les prêteurs de l'annexe A (les principales banques) et les prêteurs de l'annexe B (les compagnies de fiducie et les caisses de retraite). Tous les établissements financiers ont des fourchettes de taux de prêt identiques. Voici quels sont les facteurs décidant du taux d'intérêt pour des prêts spécifiques :

la solidité du demandeur;
l'emplacement de la propriété;
le rapport prêt-valeur;
le montant du prêt;
la durée de l'aménagement;
si des parcelles sont à vendre aux particuliers;
la concurrence entre les établissements financiers

Les conditions auxquelles les établissements de l'annexe B sont disposés à prêter de l'argent sont pour ainsi dire les mêmes que celles des établissements de l'annexe B.

Sociétés d'aménagement

Dans le cadre de cette étude, des entrevues ont été menées officiellement et informellement auprès de représentants d'un certain nombre de sociétés d'aménagement, notamment celles librement négociables et affermées à des particuliers. L'information recueillie auprès de sociétés d'aménagement de petite et grande importance est compatible avec celle obtenue d'établissements financiers. La plupart du temps, l'acquisition de terrains en friche met en jeu un acheteur et un vendeur, mais pas d'établissement financier. Dans les rares cas où intervient un établissement financier, le montant du prêt, le taux d'intérêt et le barème des droits qu'annoncaient les établissements financiers avaient été confirmés par les sociétés d'aménagement.

Modélisation actuarielle

Les modèles actuariels de la probabilité de cas de défaut, de la probabilité d'une demande de règlement et de l'envergure de celle-ci ont été mis au point à l'aide de techniques de simulation, une pratique de modélisation généralement acceptée dans les cas où l'on manque de données historiques suffisantes. La méthode de simulation produit un grand nombre de portefeuilles de prêts dont les caractéristiques sont choisies au hasard dans les échelles/répartitions spécifiées comme étant des hypothèses sous-jacentes. Cette méthode permet donc de simuler des schèmes éventuels de cas de défaut et de demandes de règlement. Elle a été utilisée parce que l'étude n'a pu relever suffisament de prêts hypothécaires pour des terrains seulement, ce qui aurait entraîné des demandes de règlement à des fins de modélisation empirique.

Les données pour ce projet ont été recueillies largement au moyen de sondages.

À l'examen des données recueillies, on constate que dans le milieu de fonctionnement actuel, la probabilité de cas de défaut sur des prêts hypothécaires pour des terrains seulement est minime ou nulle puisque les prêteurs appliquent rigoureusement les critères de souscription. On a pu ainsi vérifier l'approche de modélistion pour répliquer les conditions actuelles du marché, établir le nombre probable de cas de défaut et déterminer les taux de primes pour l'assurance hypothécaire du terrain proposé.

Les critères utilisés dans le modèle qui traduisent les conditions actuelles du marché ont donné une probabilité de demande de règlement de 0,065 %. Les observations recueillies dans le sondage corroborent ces résultats et renforcent le caractère raisonnable de cette approche. Le taux de prime par rapport au risque établi pour les conditions actuelles du marché est de 0,015 % ou de 1,50 $ par tranche de 10 000 $ du prêt. Il s'agit d'un montant unique payable d'avance et il ne s'ajoute pas annuellement au taux d'intérêt du prêt.

On a supposé que le lancement du produit d'assurance prêt hypothécaire pour les terrains seulement que propose la SCHL entraînera une modification du comportement du prêteur, ce qui facilitera un accès accru au financement et augmentra la probabilité du cas de défaut. On a ensuite mis au point deux modèles séparés qui représentent les nouvelles conditions éventuelles du marché pour les prêts de terrains avec et sans plan de lotissement approuvé. Les consultants d'aménagement des terrains et actuariels ont ensuite élaboré pour chaque modèle un scénario à risque élevé et un autre à faible risque en collaboration avec la SCHL, afin d'évaluer les limites extrêmes des primes de garantie pour chacun des deux produits d'assurance . La prime actuellement demandée se situerait dans cette fourchette, selon les derniers critères

de souscription adoptés par la SCHL. On a adopté cette méthode parce qu'il faut procéder à un exercice d'élaboration et de définition détaillées d'un produit avant l'introduction des paramètres spécifiques du produit dans le modèle.

La viabilité commerciale de l'assurance prêt hypothécaire pour les terrains seulement dépend de la capacité de la SCHL à offrir de l'assurance à un prix qui entraîne des coûts globaux de financement, comprenant l'assurance, inférieurs aux coûts sans assurance. Les fourchettes des primes de garantie qui ont été établies au moyen de la modélistion actuarielle ne forment qu'une partie du prix auxquel la SCHL peut offrir de l'assurance. Les autres éléments du prix dénotent la structure des coûts et les exigences de profit de la SCHL et se situent en dehors de la portée de ce rapport. Le produit sera commercialement viable du point de l'établissement des prix, si la SCHL est en mesure d'offrir de l'assurance à un prix qui est inférieur à la prime de garantie différentielle demandée par les prêteurs pour le taux d'intérêt du prêt, selon la valeur actuelle.

Dans les modèles actuariels la probabilité moyenne d'une demande de règlement s'échelonne entre 0 % et 30,217 % pour les prêts relatifs à des terrains sans les approbations et entre 0 % et 44,606 % pour les prêts relatifs à des terrains sans plan de lotissement approuvé. Les taux de primes de garantie sont évalués entre 0 % et 5,236 % ou entre 0 $ et 523,60 $ par tranche de 10 000 $ du prêt, pour les prêts à l'étape préalable à l'approbation et entre 0 % et 8,402 % ou entre 0 $ et 840,20 $ par tranche de 10 000 $ du prêt, pour les prêts à l'étape postérieure à l'évaluation.2

À titre d'illustration, et sans tenir compte du fait que les éléments de coût et de profit des primes de la SCHL n'ont pas encore été quantifiés, il est possible d'évaluer la viabilité éventuelle des produits d'assurance proposés à l'aide des estimations de primes de garantie dans les modèles actuariels (c.-à-d. en supposant une structure des coûts semblable à celle des prêteurs). Les portefeuilles de prêts à risque postérieurs à l'approbation ont produit un taux moyen de primes de garantie de 8,4 % de la valeur de prêt. Afin de produire la même prime de garantie pour un prêt de cinq ans, il faudrait imputer une prime de 1,6 % par an (en ignorant l'actualisation de la valeur-temps des fonds). Par conséquent, on pourrait estimer que le produit d'assurance est viable si, pour un prêt de cinq ans après l'approbation et une prime d'assurance de 8, 4 % versée d'avance, les prêteurs demandent une prime de garantie différentielle annuelle dont le taux d'intérêt serait supérieur à 1,6 % par an.

L'étude doit être poursuivie dans un certain nombre de domaines avant de pouvoir tirer des conclusions sur la viabilité des produits proposés. Par exemple, il faut ajouter à l'analyse une évaluation de la structure des coûts de la SCHL et les exigences de profit, détailler davantage les caractéristiques des produits et les critères de souscription et étudier la réaction du prêteur en fonction des primes de garantie

imputées. Les modèles élaborés pour ce rapport pourront servir à modéliser l'assurance définie plus précisément, une fois terminée l'analyse de développement du produit.

1 On entend par terrain en friche un terrain sans plan de lotissement approuvé.

2 Même si la méthode de modélisation est généralement acceptée dans des situations où l'on ne peut réaliser l'analyse empirique par manque de données, les résultats des modèles de simulation dépendent essentiellement de la qualité et de l'exactitude des hypothèses de répartition sur lesquelles s'appuient les simulations. Bien que les hypothèses utilisées dans les modèles aient été mises au point en ayant recours à l'expertise des consultants actuariels et en aménagement de terrain, avec la collaboration avec la SCHL, ainsi qu'en utilisant le fruit de la recherche et les réponses aux sondages, il n'en demeure pas moins que ces hypothèses pourraient ne pas se concrétiser dans la pratique. Les résultats des modèles de simulation sont donc également donnés sous toute réserve.

CMHC SCHL

Helping to house Canadians

Question habitation, comptez sur nous

National Office

700 Montreal Road
Ottawa, Ontario
K1A 0P7

Bureau national

700 chemin de Montréal
Ottawa (Ontario)
K1A 0P7

Puisqu'on prévoit une demande restreinte pour ce document de recherche, seul le sommaire a été traduit.

La SCHL fera traduire le document si la demande le justifie.

Pour nous aider à déterminer si la demande justifie que ce rapport soit traduit en français, veuillez remplir la partie ci-dessous et la retourner à l'adresse suivante :

Le Centre canadien de documentation sur l'habitation
La Société canadienne d'hypothèques et de logement
700, chemin de Montréal, bureau C1-200
Ottawa (Ontario)
K1A 0P7

TITRE DU RAPPORT : _____

_____

Je préférerais que ce rapport soit disponible en français.

NOM _____

ADRESSE _____
rue app.

_____
ville province code postal

No de télephone ( ) _____

SECTION 1: INTRODUCTION

1.1 ISSUE

CanadaMortgage and Housing Corporation is interested in assessing the commercial viability of **land-only mortgage insurance** under the National Housing Act (NHA).

1.2 CONTEXT

Some housing market participants have said that land markets are more complex than housing markets and that it can be difficult to obtain credit for such transactions. For example, raw land (undeveloped land with or without land use planning approvals) or vacant land must be purchased several years in advance of development in order to allow for the lengthy planning approval process and for the design and installation of services (water and sewer lines, electricity, telephone, cable television, etc). As a result, financial institutions are generally unwilling to lend money for land purchase prior to draft plan of subdivision approval because of the level of uncertainty associated with the ultimate development of the land. Because of this unwillingness to lend money and to minimize the purchaser's risk, an option agreement or conditional sale agreement not involving a financial institution usually establishes the purchase price and links the timing of payments and ultimate sale, to various development approvals. These agreements commit the purchaser to an investment and it may be difficult to obtain credit for such a transaction from financial institutions.

1.3 BACKGROUND

Land-only mortgage loan insurance is generally not available in the market-place today. Under the NHA, CMHC currently insures residential mortgage loans protecting approved lenders from borrower default. Borrowers, in general, must be purchasing an existing house, having a home constructed on land they already own, or be a builder intending to sell a home to a qualified purchaser.

CMHC insurance to obtain financing to acquire or service land for housing and related purposes is available under limited circumstances to provinces, municipalities and public housing agencies. However, this practice of public agency land assembly and servicing is no longer being actively pursued.

Whether CMHC mortgage loan insurance for those purposes should be made available to other types of borrowers, including home builders and land developers would depend upon the provisions of the NHA, the complexity of the land development process and the costs and risks associated with it.

1.4 PURPOSE

The purpose of the study is to enable CMHC to better assess the commercial viability of **land-only mortgage insurance**, the risk to CMHC in offering **land-only mortgage insurance** and what means are available to CMHC to mitigate any associated risks. More specifically the study is intended to help CMHC assess the potential risk premium levels for default insurance in the land development process, as well as the underwriting criteria and other risk factors.

The Terms of Reference for this study is found in Appendix 1

SECTION 2:
STUDY APPROACH

In order to provide a framework within which to address the objectives of the study, as set out in Section 1.4, a profile of the residential land development industry, the level of activity and how land is bought and sold was prepared. Specific areas within two provinces were selected for analysis; one where there is a high degree of housing market activity (the Greater Toronto Area of Ontario) and one with a relatively stable housing market activity - the Winnipeg Region of Manitoba. How provincial planning legislation and the municipal planning approval process impacts the land development industry were also assessed.

Through questionnaires and face-to-face interviews data was collected to permit the analysis of the critical success and failure factors and to identify financing issues in the land development process. This information, along with actuarial literature set the framework within which the insurance parameters for the purpose of actuarial modeling were developed.

SECTION 3:
STUDY MARKETS

3.1 MARKETS

3.1.1 Ontario

The area around the new City of Toronto, provides numerous examples of municipalities where intensive residential development (moving land from agriculture to serviced lots) is occurring. For the purposes of illustrating a high level of development activity, as part of this study, Mississauga to the west, Markham to the northeast and Vaughan to the north of Toronto were selected. These municipalities have experienced significant residential growth over the last ten years. In fact, these municipalities are some of the fastest growing in Canada over that period. While activity was less intensive during the economic downturn in the early 1990's, it remained high relative to other municipalities in southern Ontario. It is generally recognized that the major factors leading to this sustained growth vary from municipality to municipality and include lifestyle choices, ethnic migration, the provision of a housing product that responded to market conditions, employment opportunities and the availability of municipal water and sewer services. The diversity in the reasons for growth was seen as important when obtaining a representative cross-section of municipalities.

Section 3.2.1 provides statistical data illustrating the relatively 'high growth characteristics' of the Greater Toronto Area compared to the rest of Canada.

3.1.2 Manitoba

The Winnipeg Region was selected as the "stable market". The selection of The Winnipeg Region facilitated a review of the land development industry in Manitoba for both urban and exurban markets. As with the Ontario market, the land development industry profile was selected on the basis of three criteria, namely; that a land purchase was required, that the development be serviced to an urban standard and that the development be of a greenfield nature. The Winnipeg Region is comprised of the City of Winnipeg as well as surrounding Rural Municipalities and incorporated urban centres. For the purposes of establishing a development industry profile for the "stable market" scenario the municipalities of Winnipeg, Macdonald, Springfield, East St. Paul, and West St. Paul were selected. These municipalities provide a representative cross section of the principal growth areas, both urban and exurban, within the region.

For comparative purposes, demographics and dwelling unit profiles were also included for the municipalities of Tache and Ritchot. Section 3.2.2 provides statistical data illustrating the relative stability or 'lower growth characteristics' of the Winnipeg Region, compared to the rest of Canada.

3.2 LEVEL OF DEVELOPMENT ACTIVITY

3.2.1 Ontario

Between 1986 and 1996, Ontario had a population growth rate exceeding the national average (Table 3.1 summarizes level of development activity). Ontario's population increased by more than fifteen percent between 1986 and 1996, whereas the national population increased by approximately twelve percent.

More importantly in the context of this study, the Greater Toronto Area (GTA), comprised of Metropolitan Toronto and the surrounding regional municipalities (Figure 3.1), has experienced an even higher growth rate (19.5%), and consequently a higher level of development activity, than the rest of Canada (12.26%). The Toronto Census Metropolitan Area (Toronto CMA) is the census unit used by Statistics Canada to measure Greater Toronto (Figures 3.1 and 3.2). The population of the Toronto CMA grew by nearly twenty percent between 1986 and 1996, an absolute increase of 831,776 persons. A commensurate increase in dwellings units occurred (19.72% increase in the Toronto CMA vs. 17.5% in Canada as a whole). Stated in different terms, between 1986 and 1996, 23.5% of the national and 50% of the Ontario population increase occurred in the Toronto CMA while 15.4% of the national and 46% of the Ontario dwelling units increase occurred in the Toronto CMA. These increases in population and dwelling units reflect a high level of development activity. In 1996, the population of the Toronto CMA was 4,263,757 and the number of dwellings was 1,494,498, making Toronto Canada's largest metropolitan area.

The three municipalities in the GTA used for the purposes of this study (Markham, Mississauga and Vaughan) were selected based on their high growth rates and high levels of development activity. Of Canada's twenty-five largest municipalities, the Town of Markham has the second highest population growth rate (Figure 3.3). With a 34.2% population increase, the Town of Markham was second only to Surrey, British Columbia in terms of its population growth rate between 1986 and 1991. Due to the economic downturn of the early 1990's, Markham experienced a population growth rate of 17.1% between 1991 and 1996, which is lower than the previous period but still remarkable high given the economic conditions. This rate is substantially higher than the average growth rate in Ontario for that period.

Table 3.1

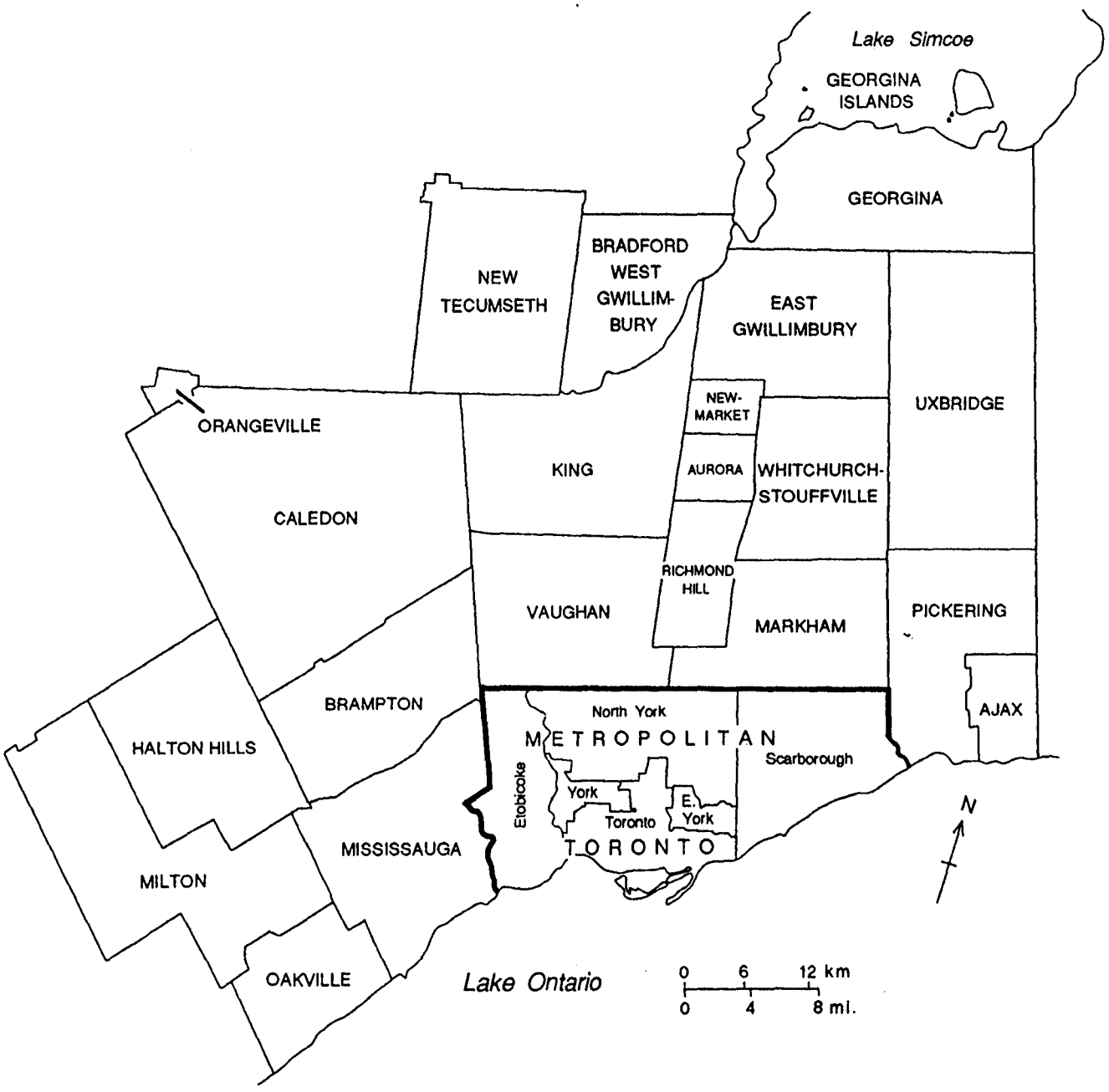
TORONTO AREA CENSUS SUBDIVISIONS
POPULATION AND DWELLING STOCK (1986 - 1996)

Census Division/ Subdivision	Population			% increase	Dwelling Stock			% increase
	1986	1991	1996	(1986 - 1996)	1986	1991	1996	(1986 - 1996)
Markham, T	114,597	153,811	173,383	51.30%	35,024	43,772	48,659	**38.93%**
Vaughan, C	65,058	111,359	132,549	103.74%	20,212	29,931	35,918	**77.71%**
Mississauga, C	374,005	463,388	544,382	45.55%	118,831	148,718	167,463	**40.93%**
Toronto, CMA	3,431,981	3,898,933	4,263,757	19.51%	1,199,800	1,373,056	1,494,498	**19.72%**
ONTARIO	**9,101,694**	**10,084,885**	**10,753,573**	**15.36%**	**3,247,754**	**3,661,671**	**3,888,108**	**16.47%**
CANADA	**25,309,331**	**27,296,859**	**28,846,761**	**12.26%**	**8,991,670**	**10,018,265**	**10,899,427**	**17.50%**

Source: Statistics Canada Cat. No. 95-358 and 97-301

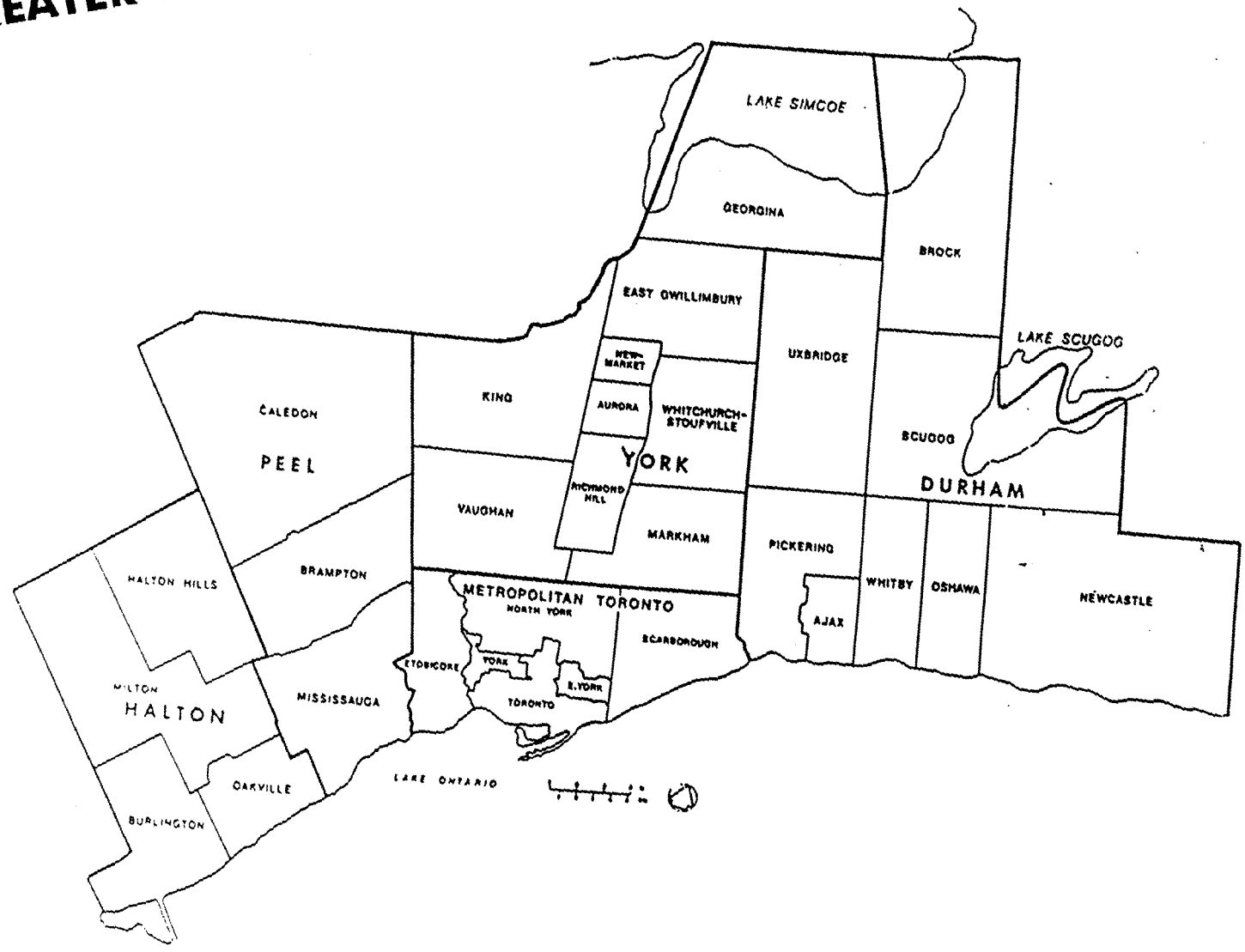
FIGURE 3.2

TORONTO CENSUS METROPOLITAN AREA



Source: CMHC

GURE 3.1
REATER TORONTO AREA



Source: CMHC

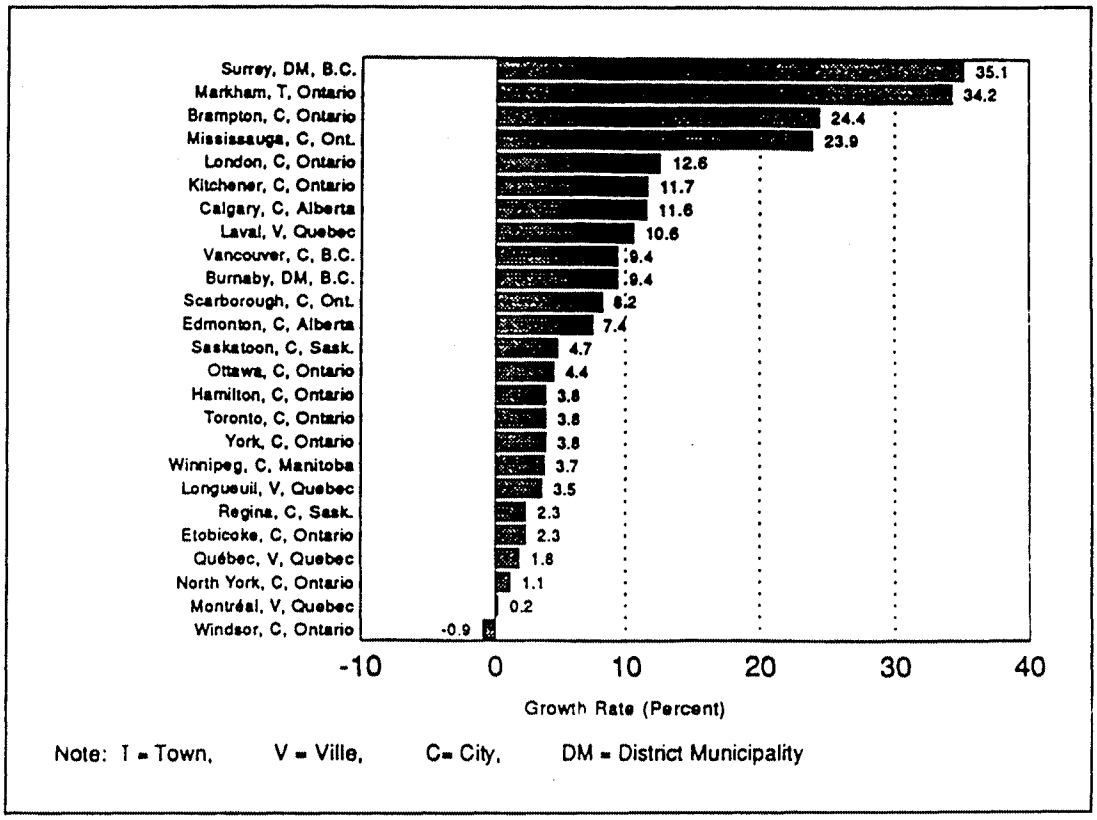


Figure 3.3: Population Growth Rates of Canada's 25 Largest Municipalities (1986 - 1991)

Between 1986 and 1996, the number of dwellings in Markham increased by almost forty percent (see Table 3.1), nearly double the Provincial growth rate in dwellings. Consequently, the level of development activity, as indicated by the growth in population and dwelling units, is high in the Town of Markham.

Similar to Markham, the City of Mississauga is among the fastest growing municipalities in Canada. Between 1986 and 1991, Mississauga had a population growth rate of 23.9% (see Fig. 3.3), the fourth highest growth rate among the twenty-five largest municipalities. In the same period, Mississauga had the highest absolute growth of the 25 largest municipalities in Canada with a population increase of 89,383. Mississauga's population growth rate slowed only slightly due to the economic downturn of the early 1990's. Between 1991 and 1996, the population of Mississauga grew by 17.47%, an absolute increase of a further 80,994 (Table 3.1).

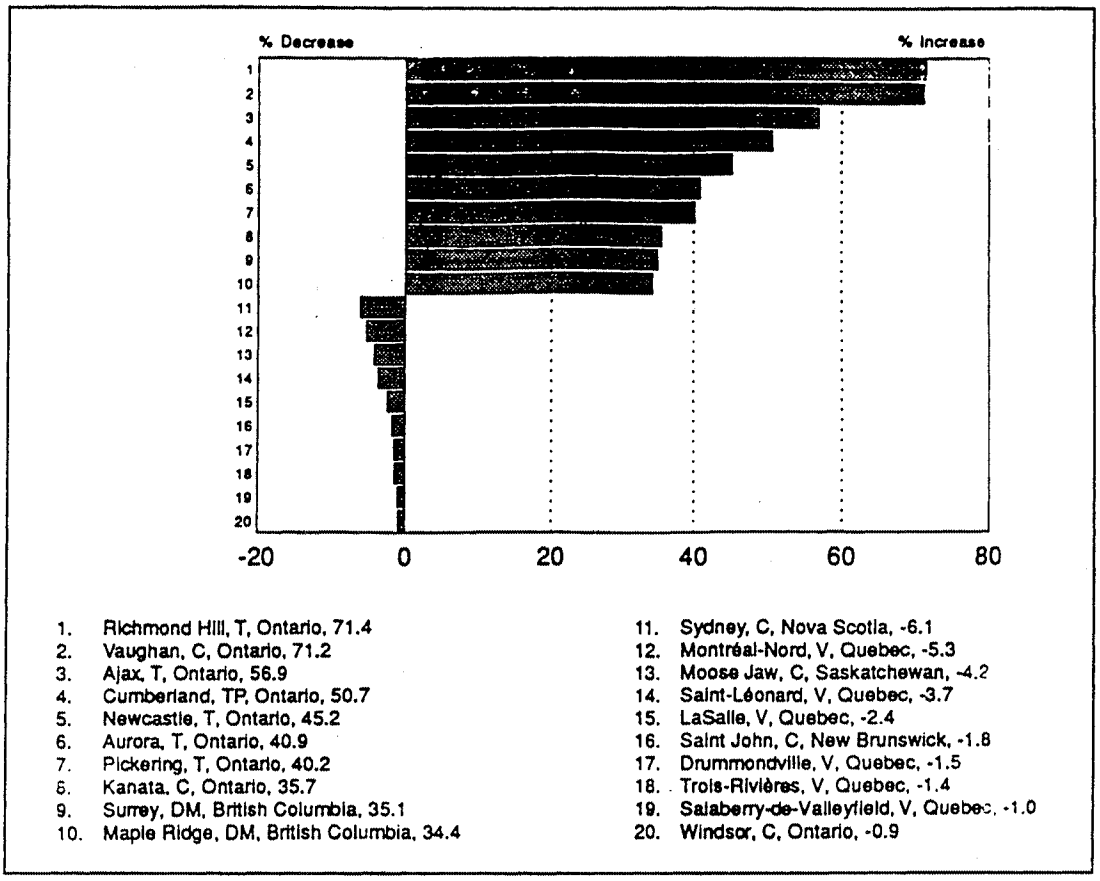


Figure 3.4: Ten Fastest Growing and Ten Fastest Declining Municipalities with Population over 25,000

Between 1986 and 1996, approximately 48,000 dwelling units were added in Mississauga. This represents an increase of nearly forty-one percent, which is more than double the Ontario Provincial growth rate in dwellings.

The City of Vaughan has the second highest growth rate among municipality with a population over 25,000 in Canada (Figure 3.4). In fact, the three fastest growing municipalities in Canada are all within the Greater Toronto Area (Richmond Hill, Vaughan and Ajax). Between 1986 and 1996, Vaughan grew by nearly 104 percent, an absolute increase of 67,491. The number of dwellings increased by nearly seventy-eight percent between 1986 and 1996. Between 1986 and 1996, about 15,700 dwellings were added in the City of Vaughan, indicating a high level of development activity.

To accommodate this growth in population and dwelling units, literally tens of thousands of hectares of land were urbanized, through the development of thousands of residential projects. Attempts were made, as part of this study, to quantify the amount of land urbanized through residential development in each of the three municipalities over the last 10 years. It was found that this type of information is not recorded by the municipalities which rely more on housing starts as the measure of growth. No raw data exists that would permit an independent estimate of the amount of land urbanized.

The number of residential lots and blocks (for higher density development) available, either draft approved or registered, in each municipality varies from month to month as new plans are approved and building permits are drawn. Some lots and blocks are added then quickly taken up, in response to market demands. Others may remain available for months or years either because they do not respond to the current market or there are simply too many of one type to be absorbed by the markets place in a short period of time.

The municipalities selected for analysis (Mississauga, Vaughan and Markham) are clearly representative of strong, dynamic municipalities experiencing massive growth over the last 10 years. Both the financial institutions and development companies interviewed in the Toronto context are heavily involved in these and other high growth municipalities in the GTA such as Richmond Hill, Aurora, Newmarket, Brampton, Ajax and Pickering.

3.2.2 Manitoba

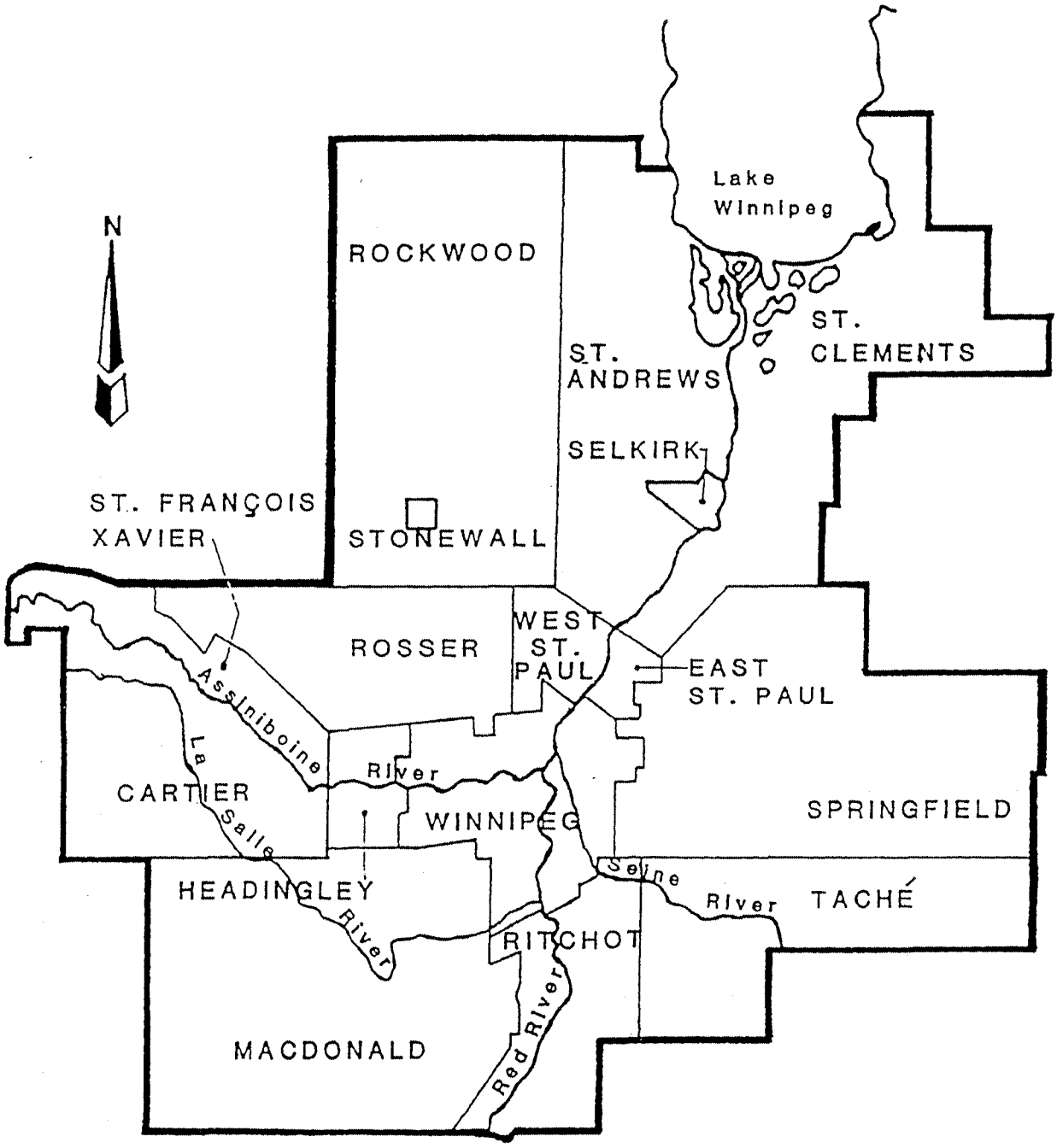
As illustrated in Figure 3.5, the Winnipeg Region is comprised of the City of Winnipeg as well as surrounding rural municipalities and incorporated urban centres.

Between 1986 and 1996, Manitoba had a population growth rate of approximately four and one half percent. During this same period the national average exceeded twelve percent. As derived from Table 3.2, Manitoba dwelling units increased at approximately half the rate (four percent) of the national average (eight percent) during the 1991 to 1996 period.

However, exurban growth in the rural municipalities surrounding the City of Winnipeg experienced population increases and dwelling unit increases in excess of the national average in percentage terms. While the percentage increases for these indicators are higher than the national average the absolute increases are low. For example, total

FIGURE 3.5

WINNIPEG REGION



Source: City of Winnipeg

Table 3.2

WINNIPEG AREA CENSUS SUBDIVISIONS
POPULATION AND DWELLING STOCK (1986 - 1996)

Census Division/ Subdivision	Population			% increase (1986 - 1996)	Dwelling Stock			% increase (1986 - 1996)
	1986	1991	1996		1986	1991	1996	
Springfield, RM	9,836	11,102	12,162	**19.13%**	3,055	3,570	3,977	**23.18%**
Tache, RM	6,679	7,576	8,273	**19.27%**	1,835	2,197	2,464	**25.53%**
East St. Paul, RM	4,385	5,820	6,437	**31.88%**	1,345	1,819	2,046	**34.26%**
Ritchot, RM	4,588	5,146	5,364	**14.47%**	1,375	1,575	1,690	**18.64%**
MacDonald, RM	3,583	3,999	4,900	**26.88%**	1,075	1,248	1,515	**29.04%**
West St. Paul, RM	3,138	3,658	3,720	**15.65%**	895	1,105	1,172	**23.63%**
Winnipeg, CMA	625,304	652,354	667,209	**6.28%**	236,325	252,155	262,673	**10.03%**
MANITOBA	**1,063,016**	**1,091,942**	**1,113,898**	**4.57%**	**382,345**	**405,120**	**421,096**	**9.20%**
CANADA	**25,309,331**	**27,296,859**	**28,846,761**	**12.26%**	**8,991,670**	**10,018,265**	**10,899,427**	**17.50%**

Source: Statistics Canada Cat. No. 95-358 and 97-301 & City of Winnipeg

population increases for the rural municipalities identified in Table 3.2 between 1986 and 1996 is 7,950.

Comparatively Winnipeg's population increase was 41,905 during the same period. For outlying rural municipalities dwelling units increased in absolute terms by 3,282 units between 1986 and 1996. For Winnipeg, dwelling units increased by 10,482 between 1991 and 1996. As with the selected municipalities in Ontario, information on the amount of land urbanized over the last ten years was not available from the municipalities nor was there sufficient raw data to independently generate the amount.

Figure 3.3 illustrates that Winnipeg's growth rate ranks eighteenth among the top twenty five municipalities in Canada. Because of the relatively low growth rate, Winnipeg is not identified on Figure 3.4 as one of Canada's 10 fastest growing municipalities. Over the last twenty years the Winnipeg Region's growth rate has been steady at about one percent per year based on analysis contained in the Province of Manitoba's Capital Region Strategy. General economic growth rates for the Province of Manitoba as well as demographic and dwelling unit data support the selection of the Winnipeg Region as a stable market scenario as compared to the high growth rate in the GTA.

3.3 DEVELOPMENT INDUSTRY PROFILE

3.3.1 Ontario

The development industry in the GTA is characterized by many development firms, both large and small. Most firms (both large and small) carry land through the full development process from the raw land purchase stage to the serviced residential lot stage. Many land development firms also have a division that builds houses while others have strong affiliations with specific builders, to whom they sell serviced lots. Some of the well known firms that have been operating in the GTA for many years include:

- H&R Developments (large)
- Mattamy Homes (large)
- Great Gulf Homes (medium)
- Sandbury Homes (medium)
- Greenpark Homes (large)
- Brookfield Homes (large)

- Daniels Corp. (large)
- Criterion Development Corp. (medium)
- Fernbrook Homes (medium)
- Oxford Homes (small)

On larger projects, a land development company with a house building division may also chose to sell serviced lots to other builders, as a method of realizing an earlier lump sum return on its investment, rather than waiting for the sale of individual houses. The pre-sale of these lots to other builders can also be used as a form of security when negotiating with the financial institutions for the large servicing loans that are required later in the land development process. When investing in a project, the development companies usually view the land as 'one year land', 'two year land', or 'five year land', etc. This means that the land is one year, two years or five years from disposal - either the sale of serviced lots or the sale of houses. Few firms actually speculate in land values - purchase raw land and sell it before or part way through the planning approval process. Typically they retain the land until the last stages of the land development process. On the other hand, a number of firms (usually the smaller firms) only deal with one or two year land, in order to reduce their financial risk. This type of land typically is close to final development. It usually has a residential designation in an approved official plan and secondary plan, can be easily serviced with trunk water and sewage lines and adequate capacity in the treatment plants is available to be allocated to the development. Required planning approvals are limited to a draft plan of subdivision and a rezoning.

Several of the larger developers/builders have significant inventories of land and individual parcels are gradually brought on stream over a long period of time. Purchasing 'ten or fifteen year land' means that the purchase price is quite low (farmland value) and, subject to being able to sustain the carrying costs, provides a continuous supply of cheap land for development. Having an ongoing inventory of land means that land need not be purchased in speculative times when land prices may be inflated, in order to maintain a supply of lots for the house building division. On the other hand, times of economic downturn, such as the early 1980's and 1990's presents the opportunity to add land to the inventory at 'bargain basement prices'.

There are still some parcels with development potential that remain in the ownership of the original farmer or his family. In order to maximize the value of the land, the family may submit and obtain approval of a draft plan of subdivision. Assuming that the official plan and secondary plan are in place, this can be done for a relatively modest cost, relative to the increased value of the land. The increased value of the land

stems from the fact that, with an approved draft plan of subdivision in place, the uncertainty of receiving draft plan of subdivision approval is removed and the land is much closer to actual development. The process of obtaining draft plan approval can be a lengthy one (12 to 24 months, or more) but with no carrying costs, the family can afford to wait. Upon obtaining draft plan approval, the family normally sells the land to a developer as 'one' or 'two year land'.

3.3.2 Manitoba

The development industry in the Winnipeg Region is characterized by two different scenarios. In Winnipeg the vast majority of all bare land housing developments have been undertaken by five very large land development companies. In many instances these companies acquired extensive land banks during the 1950's. Certain developers will acquire small parcels to augment a particular development or phase of development but for the majority of projects adequate land inventories have been held for many years. These large land development companies account for approximately 85 percent of all greenfield residential development within the City of Winnipeg.

Outside of Winnipeg the land development industry is characterized by a greater number of participants who are involved in the land development process. These participants range from one-time small acreage developments to those who have undertaken a variety of developments over time and of varying scope. Appendix 2 lists the land development companies contacted within the Winnipeg Region, including the City of Winnipeg.

The vast majority of smaller firms acquire the land with a view to obtain the necessary planning approvals and sell fully serviced residential lots. As with the GTA, the large Winnipeg land development companies also have a home building division or work with specific builders to whom they sell fully serviced lots. The major Winnipeg development companies have purchased large tracts of land which have mitigated the need to enter into speculative land purchases, particularly in view of the rather stable and predictable growth rates for the region. As previously stated much of these lands were acquired during the 1950's.

For smaller developers both within Winnipeg and the Winnipeg Region a land investment decision is not made with the intention to land bank large tracts for extended time frames (ie: twenty years). Rather, the smaller firms acquire parcels which can be disposed of within a two to five year period, either through the sale of serviced lots or the sale of houses. As such, smaller firms working within shorter

marketing horizons are generally looking to acquire smaller parcels which can be fully disposed of within five years.

3.3.3 Conclusions

Both the GTA and the Winnipeg Region are characterized by two types of land development companies: large firms that have been land banking and developing/building for may years and smaller firms that acquire and develop/build one or two projects over a two to three year time frame, on an ongoing basis. The actual number of each type is greater in the GTA than in the Winnipeg Region, reflective of the larger and more robust market.

Further details are provided in Section 5, but in summary, access to bank financing for both large and small firms is similar in the GTA and the Winnipeg Region. Generally the financial institutions approach the funding of land development projects in a similar manner (normally not until draft plan approval is obtained), using the same threshold levels, such as a 50% to 60% loan to value ratio and loan periods in the range of 18 to 24 months.

SECTION 4:
DEVELOPMENT PROCESS

The land development processes in Ontario and Manitoba are quite similar in that there are a series of five comparable stages that must be completed with one of the key stages being the granting of approval of a draft plan of subdivision.

The commencement of each stage is contingent upon the successful completion of the previous stage. The processes to bring land from an agricultural or rural state to serviced residential lots are long and complicated with numerous opportunities for factors outside the control of the development proponent to influence the speed of the processes. In fact, these factors may stop the land development process for months or years.

Following is a simplified description of the planning approval process with illustrating charts (see figures 4.1 through 4.6) that summarize some of the key financing issues and risk factors at each stage of the process. These various stages are used later in the report for discussion of financing and actuarial modelling.

A detailed description of the land development processes in Ontario and Manitoba is contained in Appendix C. In summary (see Fig. 4.1), the process consists of five stages as follows:

Stage I: Moving the land from an Agricultural or Rural designation in an official plan to a Residential designation.

Stage II: Obtaining the approval of a draft plan of subdivision on the land

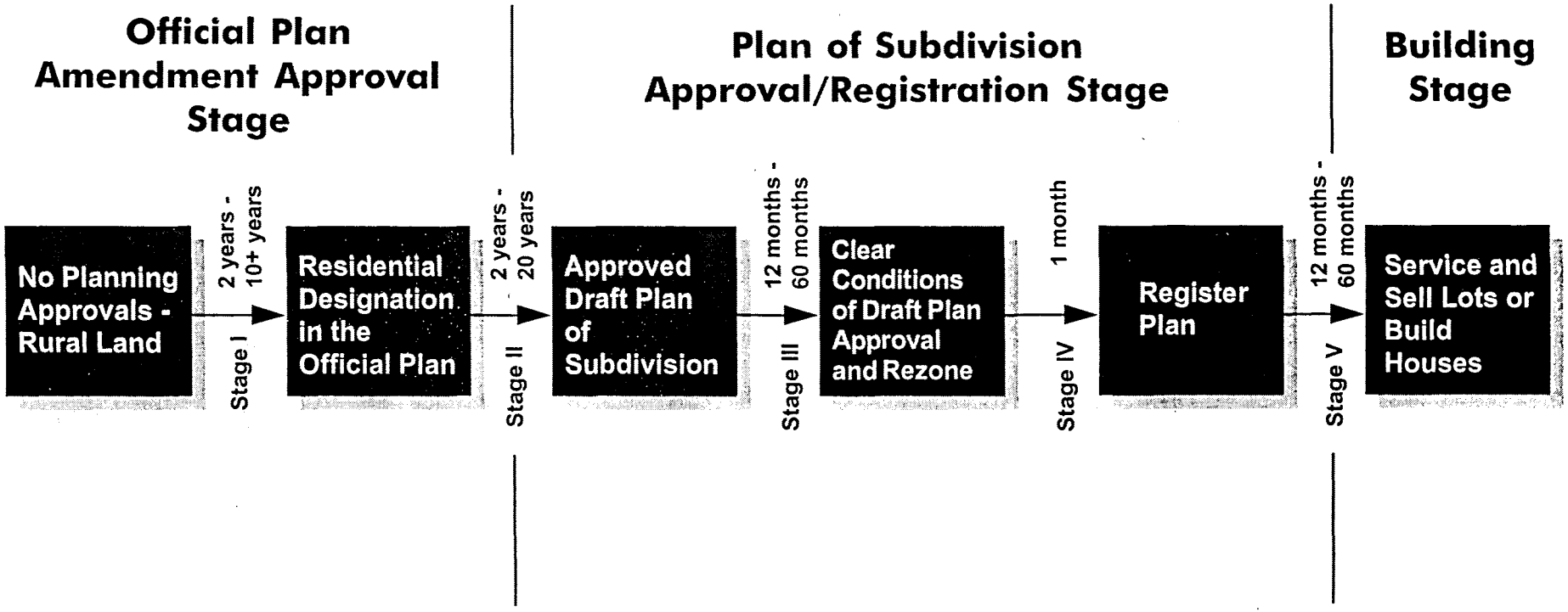
Stage III: Clearing the conditions of draft plan approval and obtaining the necessary amendment to the comprehensive zoning by-law

Stage IV: Registering the plan of subdivision

Stage V: Servicing the land, constructing and selling houses

Figure 4.1

Simplified Planning Approval Process



STAGE I: OBTAINING OFFICIAL PLAN LAND USE DESIGNATION

The first stage (see Fig. 4.2 and 4.3) in the land development process is to apply for and obtain an amendment to the Official Plan that changes the land use designation of the land from 'Agricultural' or 'Rural' to 'Residential'. At the outset of this stage, the land is usually owned by a farmer. The farmer is approached by a land developer who secures an option from the farmer to purchase the property. A modest down payment (the developer's own money) of no more than 10% of the selling price is made and interest is paid on a monthly or quarterly basis. Normally the agreement is structured so that the option to purchase the property is exercised when approval of a draft plan of subdivision is obtained - at the end of Stage II in the developmental process.

In Stage I, there is a high degree of uncertainty regarding the timing of the ultimate development of the land. In fact, before the necessary official plan land use designation (residential) is obtained there is a question whether or not the land will develop within a 20+ year time frame. For this reason, land developers do not want to purchase the land outright at this stage but rather delay the purchase to a later stage in the land development process when there is significantly less uncertainty. At the same time, financial institutions are unwilling to underwrite the cost of purchasing the land, due to the same uncertainties.

Factors that would preclude obtaining a residential designation in the Official Plan include:

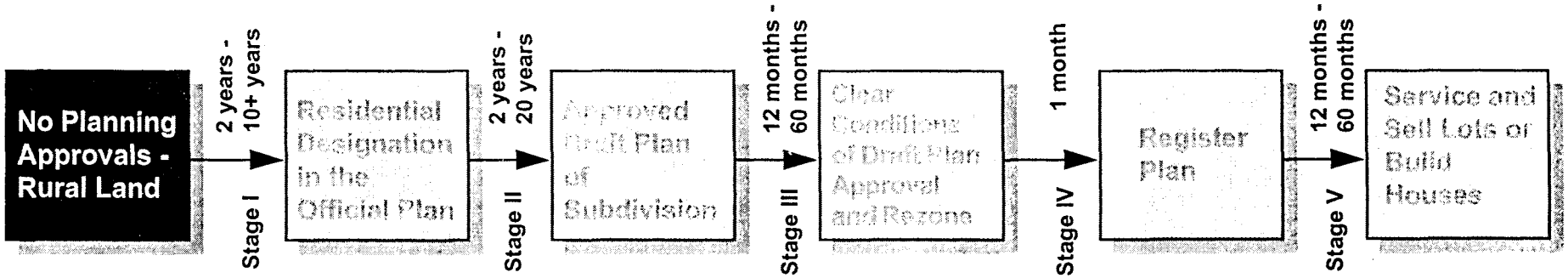
- need for additional residential land to meet the 20 year demand cannot be proven;
- municipality makes a strategic decision to grow in a different geographic direction.

Factors that would significantly delay (potentially for years) obtaining the residential designation in the Official Plan include:

- the municipality undertaking a Growth Management Study to determine the future direction of growth;
- the municipality deeming the application to be premature because of the need for a land use study that considers a much broader area, including the site;
- the municipality does not have the staff or financial resources to carry out the broader land use study.

Figure 4.2

Simplified Planning Approval Process (Stage I: Obtain Official Plan Designation)



Value of Rural Land = A

Financing of Land Purchase with no Planning Approvals

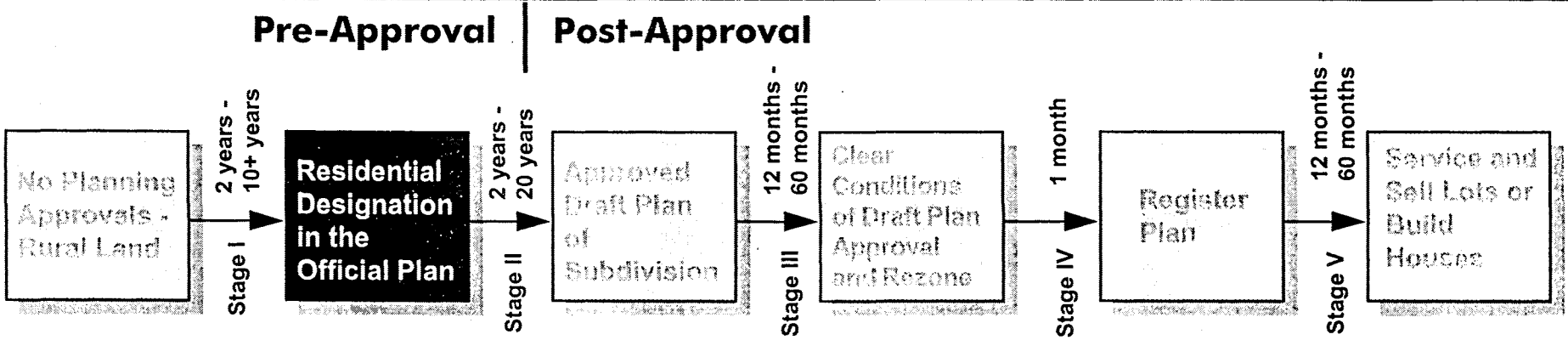
- financial institution generally not involved
- landowner and purchaser enter into an agreement
- small down payment with modest interest to hold land

Risk

- land not designated for development because:
  - additional land is not needed
  - the municipality grows in another geographic direction
- designation of land for development is significantly delayed because:
  - the municipality undertakes comprehensive growth management study
  - the municipality undertakes broad land use planning studies
  - the municipality has insufficient staff or financial resources to deal with land development

Figure 4.3

Simplified Planning Approval Process (Stage II: Obtain Draft Plan Approval)



Land Value with Official Plan Designation = B
B = 1.5A to 5A±

Financing of Land Purchase with Official Plan Designation

- financial institution generally not involved
- landowner and purchaser enter into an agreement
- small down payment with modest interest rate to hold land

Financing of Stage II - Obtaining Draft Plan of Subdivision Approval

- financial institution not involved
- landowner funded

Risk

- timing of development is unknown or delayed because
  - the land is in the later stages of the 20 year planning horizon
  - major servicing infrastructure is required and funds are unavailable
  - of the need to prepare a Secondary Plan
  - detailed technical studies need to be prepared and approved
  - of a referral of the proposal to the Municipal Board

The length of time required to obtain approval of the amendment to redesignate the site to Residential in the Official Plan could range from 2 to 10+ years, depending on the above factors and the efforts of the land purchaser. Obtaining the Residential designation in the Official Plan will increase the property. The percentage increase varies widely and depends, to a significant degree, where the land lies in the sequence/staging of development set by the municipality. A range of 50% to 500% would include the percentage increase of most parcels of land.

STAGE II: OBTAINING DRAFT PLAN APPROVAL

Once a parcel of land has the appropriate land use designation in the Official Plan, the developer can then consider submitting an application to obtain approval of a draft plan of subdivision (see Fig. 4.4). The application is not normally made until there is a reasonable expectation that once draft plan approval is obtained, the conditions of approval can be satisfied, the plan registered and lots sold.

There are a number of factors that can delay the submission of an application for a draft plan of subdivision including:

- official plans designate development land for up to a 20 year time frame, therefore the site could be as long as 20 years from development;
- major servicing infrastructure (water and sewage treatment plants etc.), costing many millions of dollars, may be required but are, as yet, unbudgeted;
- the requirement of the municipality to complete other broad technical studies dealing with such issues as servicing, transportation/traffic and the natural environment.

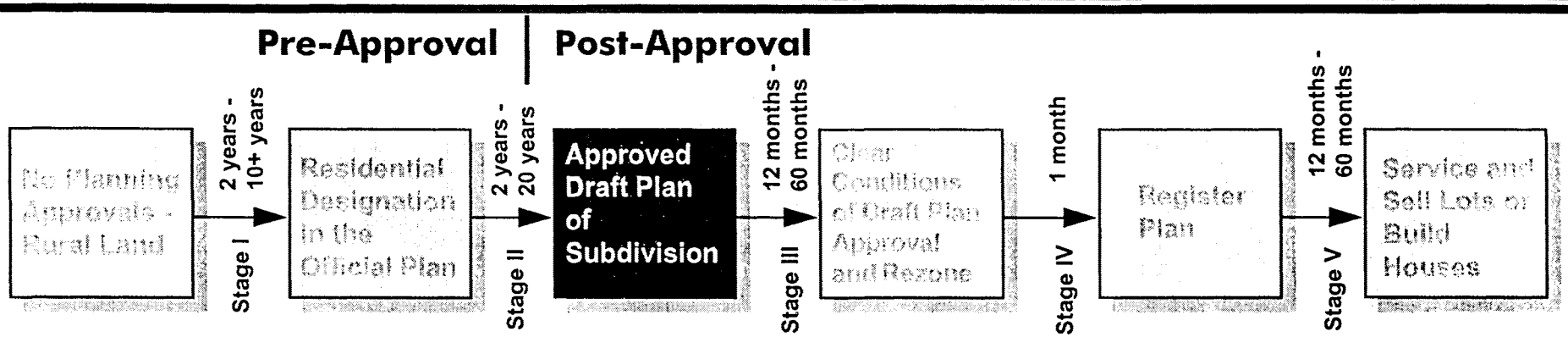
Once the application is made, it is circulated to a number of municipal departments, agencies and ministries for comments. Considerable time (months) is taken obtaining comments, consolidating them, amending the plan of subdivision accordingly and recirculating. In addition, this plan of subdivision is subject to a public review process where groups such as environmental groups and ratepayer organizations, along with individual residents have an opportunity to comment on the plan and request changes.

After the application for approval of a draft plan of subdivision has been made there are several factors that could significantly delay the approval including:

- site specific issues arise that require further detailed studies;

Figure 4.4

Simplified Planning Approval Process (Stage III: Clearing Conditions of Approval)



Land Value with Approved Subdivision = C
C = 2B to 5B±

Financing of Land Purchase with Approved Subdivision or Financing of Stage III - Clearing Conditions

- financial institutions consider involvement
- maximum value to loan ratio typically 50%, but can be up to 60%
- interest rate - prime plus 3/4% to 2 ½%
- flat fee - ¼% to 1½% loan value
- loan terms typically limited to 2 years

Risk

- timing of development uncertain because
  - environmental and other technical studies are needed
  - construction of external servicing system is required
  - the plan of subdivision is referred to the Municipal Board

- municipality delays processing the application pending the submission of plans of subdivision on adjacent lands to ensure all lands will develop in an efficient manner;
- ratepayers raise issues that make Council reluctant to approve the plan;
- approaching municipal election delays Council approval for at least 5 months;
- the plan of subdivision is referred to the Ontario Municipal Board for a hearing.

Obtaining draft plan approval alleviates a significant risk to the developer and financial institution. The question at this point in the land development process becomes 'when will the land develop', not 'will the land develop'. As a result, financial institutions become more willing to consider funding the subsequent stages of the land development process. However, it should be noted that the conditions of draft plan approval (see below) for an individual parcel of land and other more general factors, including market conditions, may be such that the financial institutions are still not prepared to give loans.

STAGE III: CLEAR CONDITIONS OF DRAFT PLAN APPROVAL AND REZONING

When approval of a draft plan of subdivision is granted, the approval is subject to certain conditions being satisfied (see Fig. 4.5). Some of these conditions will take several months or longer to satisfy, including:

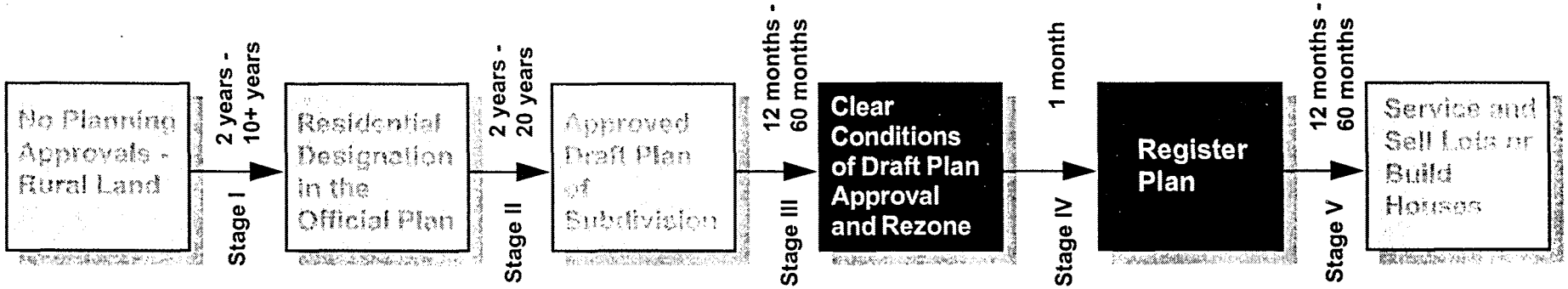
- preparation and approval of detailed, four season environmental assessments;
- preparation and approval of noise/vibration studies;
- negotiation of a subdivision agreement;
- extension of trunk services to the site;
- completion of required expansions to water and/or sewage treatment plants.

Frequently, landowners do not automatically begin the process of clearing the conditions but rather wait until they believe that the timing is optimal. Issues that factor into this decision include: avoiding construction of services during the winter months, bring housing units on the market at the optimal time of year and wait for anticipated shifts in the market that will make the product more saleable.

Rezoning the property to permit the development of the subdivision is also a condition of draft plan approval.

Figure 4.5

Simplified Planning Approval Process (Stage IV: Register Plan)



Land Value When Most Conditions Cleared = D
D = 2C to 5C±

Financing of Land Purchase Prior to Registration or Financing of Stage IV

- financial institution involved
- value of loan ratio typically 50% but can be up to 70%+ depending on security
- interest rate - prime plus 3/4% to 2½%
- flat fee - ¼% to 1½% loan value

Risk

- timing of development uncertain because
  - market conditions change
  - zoning is referred to the Municipal Board

Note: Stage IV is not normally treated as a separate point at which land is purchased/sold. When Stage III is commenced the intention is usually that the land will be taken directly through to registration

The rezoning process is also a public process involving the proponent, municipal staff and politicians and the public. Anyone can refer the rezoning application to the Ontario Municipal Board for a hearing, resulting in further delays of 12 months or more.

Financial institutions are normally prepared to fund land acquisition at this stage of the process and/or to fund the cost of the next stages of the development process but, because of continued uncertainty related to the timing of development and potential market charges, a maximum value to loan ratio of 50% is typical but could be as high as 70%.

STAGE IV: PLAN REGISTRATION

Stages III and IV are tied closely together (see Fig. 4.5) and are virtually always competed concurrently, as one stage. Once all the conditions of draft plan approval have been satisfied and final approval has been given, the proponent has 30 days to register the plan of subdivision (see Fig. 4.5). If it is not registered within 30 days, the approval authority can withdraw the draft plan approval and the land moves back to Stages I/II.

Registering the plan also triggers certain significant financial obligations for the proponent, including bonds, letters of credit, etc that cover the cost of developing the land. As a result, Stage IV is also closely tied to Stage V, - Service and Sell Lots or Build Houses. This is done so that the proponent can begin to realize positive cash flow to offset servicing and other costs.

Stages III and IV are so closely tied together that it is unusual for a parcel of land to be sold after Stage III, but before Stage IV. Because of the cost of servicing the residential lots, servicing does not normally proceed until the landowner has presold a significant portion (40%) for the building lots. If the landowner is also a builder, servicing does not commence unless there is a high degree of certainty that the houses can be built and sold in an expeditious manner.

Because of market conditions, or for other reasons, the proponent may only clear the draft plan approval conditions and register a portion of the plan of subdivision. This reduces risk and financial exposure.

STAGE V: SERVICE AND SELL LOTS OR BUILD HOUSES

Stage V is the final stage in the land development process (see Fig. 4.6). If a proponent also builds houses, the proponent will not normally register the plan or a portion of the plan and construct services unless there is a clear market for housing product (see Fig. 4.6). If the proponent intends to sell serviced lots, the proponent will not normally register the plan or a portion of the plan and construct services unless a significant percentage of the lots have been 'pre-sold' to a builder. At this stage, financial institutions set value to loan ratios, interest rates and flat fees (if any) on an individual basis.

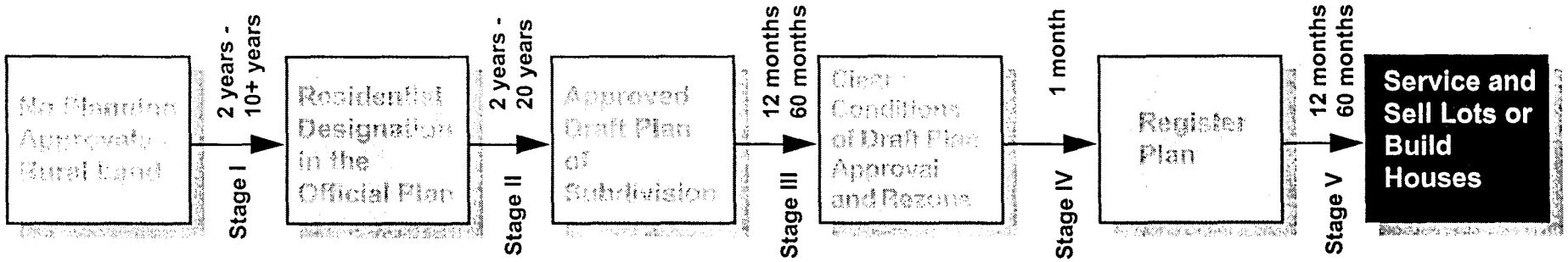
CONCLUSION

For the purposes of this study and actuarial modelling of insurance premiums, the stages can be grouped into two categories. The first category is the 'raw land' category, as understood by the industry and includes Stages I and II (obtaining the Official Plan designation and draft plan of subdivision approvals). The second category is the 'post approval' category, as understood by the industry and includes Stages III and IV. The analysis is divided on this basis because approval of a draft plan of subdivision is a major hurdle in the development process and one which lenders normally require before becoming involved.

This study looks at these two categories to develop insurance parameters for the purpose of actuarial modelling. Stage V is beyond the scope of this study.

Figure 4.6

Simplified Planning Approval Process (Stage V: Service & Sell Lots or Build Houses)



Land Value - Normally Stated in Terms of Dollars per Linear Metre of Saleable Frontage

Financing of Stage V

- financing institution participate
- value to loan ratio - variable depending on the site specific situation
- interest rate - variable depending on the site specific situation
- flat fee, if any - variable depending on the site specific situation

Risk

- change in market conditions

Note: Cost of Stage V (construction of municipal services) is significantly higher than the cost of any of the previous stages.

SECTION 5:
SURVEYS

5.1 FINANCIAL INSTITUTIONS

As part of the study, interviews were conducted with representatives of various financial institutions actively involved in the provision of loans for the purposes of land development. The institutions included both Schedule A lenders (the major banks) and Schedule B lenders (trust companies). For reasons of confidentiality, these institutions have not been named. The intent of the interviews was to obtain information on how the institutions manage land development loans with particular emphasis on the raw land stage and to assess the potential role of the CMHC in the provision of insurance for raw land acquisition stage of the development process. At the outset of the study, 'raw land' was broadly defined as land without any planning approvals in place - agricultural or rural land. This is the definition commonly used by the development industry. However, as the study progressed, the definition of 'raw land' was expanded to include vacant land, regardless of the planning approvals that might be in place, in order to make a distinction between land in the development approval process and land that has been developed (construction of houses or sale of serviced lots). As previously discussed, for actuarial modeling, raw land was then divided into pre-approval (pre draft plan of subdivision approval) and post-approval (post draft plan of subdivision approval).

5.1.1 Schedule A Institutions

The Schedule A institutions have always participated in the land development process in varying degrees relative to one another. This variation results from differing corporate strategies and focus. Currently, in Ontario, two of the Schedule A institutions are, by far, the most active and represent the vast majority of land development loans issued. Interviews were conducted with representatives of these two banks.

In the period leading up to 1989/1990 when the real estate market suffered a significant downturn, only some of the financial institutions were prepared to lend money for the acquisition of raw land. Strictly defined, raw land is defined as pre-approval land - land without an approved draft plan of subdivision. For the purposes of this study, land with an approved draft plan of subdivision is referred to as post-approval land and is included as a component of raw land. The land might have a development designation

such as 'residential' in the local official plan or it might still be designated 'agriculture' or 'rural'.

Based on the survey information gathered, the overall proportion of the land development money lent by the institutions for land without an approved draft plan of subdivision was quite low, in the range of 10% to 15%. This low percentage is due, in part, to the fact that the land cost is only a fraction of the overall development cost, when elements such as obtaining development approvals and servicing the land are taken into consideration. On the other hand, the number of pre-approval land loans was an equally small number, compared to the number of post-approval loans. These low proportions are due to three factors. First, pre-approval land is frequently acquired by a land developer using his own financial resources, as described in detail in the following paragraphs, without the involvement of a financial institution. Second, an individual parcel of land frequently will have a series of loans applied to it during the post-approval development process, due to the relatively short-term nature of the loans, *vis-a-vis*, the development period. Third, the institutions, even in the 'boom times' of the mid to late 1980's were cautious when lending money for pre-approval land acquisition, since obtaining Draft Plan Approval is seen as a key risk factor.

After the economic downturn of the late 1980's, the Schedule A institutions became even more cautious when considering loans for raw land acquisition in the pre-Draft Approval stage. In fact, at least one bank which is otherwise actively involved in funding land development projects and did lend money for pre-approval land acquisition prior to 1990, will now not consider this type of loan and does not see this position changing in the future. Our survey results indicate that a much higher percentage of pre-approval land is now acquired by a land developer in the following way.

A potential purchaser approaches the existing owner, usually a farmer, and negotiates a price for the land. The ultimate decision to purchase is conditional on a certain land development threshold being achieved ie. obtaining approval of a draft plan of subdivision, which will likely take several years. Normally the purchaser will set a threshold (draft plan approval) that, when achieved, will satisfy the Schedule A lenders' loan criteria for issuing a loan to continue the land development process. Prior to this, a modest down payment (the purchaser's own money) is made along with monthly interest payments, based on an agreed interest rate. This approach is attractive to the farmer. He gets a non-refundable deposit and a monthly or quarterly interest payment. If the purchaser terminates the agreement or chooses not to exercise the purchase option, the farmer gets his land back and waits to be approached by the next potential purchaser.

In the limited number of cases where the land developer approaches a Schedule A institution for a pre-approval land loan and where the institution is prepared to consider the loan, the borrower must be a repeat client with a good track record and 'deep pockets' with other assets that may be used to secure the loan. It should be noted that many of the developers interviewed prefer not to own the raw land outright (with a loan from a financial institution) but prefer the arrangement described above whereby the property is secured through a small investment (the down payment) with the farmer assuming most of the risk.

Again, in those instances where Schedule A institutions are prepared to lend money for pre-approval land acquisition, the amount of the loan is typically limited to 50% of the value of the land. The actual loan rate varies, but usually ranges around bank prime plus ¾ to 2½%. There is also a flat loan fee of ¼ to 1½% of the value of the loan, payable up front. This fee is meant to cover the financial institutions' direct costs related to assessing the loan application, issuing the loan, managing the loan and discharging the loan.

Based on the survey findings, all financial institutions (including Schedule B institutions, as noted below) have a similar range of loan rates they charge. When queried, they identified the following factors that influence the rate for a specific loan:

- the financial strength of the applicant;
- the location of the property;
- the loan to value ratio;
- the loan amount;
- the length of time to development;
- whether there are lot sales to an end user; and
- the level of competition amongst the financial institutions.

The current lending practices of the banks are quite restrictive such that they are only prepared to issue loans if they believe that the project will be successful in a reasonable period of time. As one lender put it 'Why would we become involved in a project that we believe might fail? If we believe the project is sound, we are prepared to lend the

money'. This input is somewhat anecdotal in that all financial institutions were not interviewed, only those actively involved in funding land development projects.

Caution should be used when interpreting the term 'fail', as used by the financial institutions. To the financial institutions, the term 'fail' does not necessarily mean loan default. In fact, 'fail' rarely means loan default. The term more accurately reflects a failure to meet various expectations associated with developing the land including the time to development and having a marketable housing product.

During the course of the interviews, it was indicated that even at the post-approval stage, loans are often still limited to about 50% of the land value unless additional security is provided. Loans issued at this stage of the land development process are also subject to the same range of interest rates and fees as loans issued at the pre-approval land stage. Loans at this stage, and subsequent stages of the development process, are often significantly larger than at the pre-approval land stage because they include money for servicing. As a result, the banks want further security, often in the form of 'up front' sales of lots to builders prior to issuing loans. While there is a greater level of certainty that land with draft plan approval will develop than pre-approval land, the financial risks can often be greater because the loan amounts involved are much greater. As a result, the institutions remain very cautions when issuing loans.

5.1.2 Schedule B Institutions

Schedule B institutions and other financial institutions including pension funds, etc. are also involved in financing the land development industry. As with the Schedule A institutions, our survey revealed that not all trust companies are actively involved. In fact, in the GTA, only one (interviewed as part of this study) can be characterized as competing on an equal basis with the Schedule A institutions. In recognition of the need to maintain confidentiality, the information obtained through the interview can be characterized as consistent with that obtained from the Schedule A institutions. This includes willingness to become involved in raw land acquisitions, assessment and mitigation of risk and loan rates and fees. Based on input received, the Schedule B institution is not prepared to assume any greater risk than the Schedule A institutions.

5.2 DEVELOPMENT COMPANIES

As part of this study, formal interviews were also held with representatives of a number of large and small development companies, including both public and private. In addition, informal, interviews were held with representatives of land development companies, who were ongoing clients of the consultants carrying out this study. The

private development firms formally interviewed included both large and small with their comments generally being consistent, regardless of size. All of the development firms interviewed, except for one, also build houses. The one firm that does not build houses has an ongoing relationship with several builders and therefore conducts its business to ensure that it has a saleable product. The two different types of development companies (public and private) operate somewhat differently with respect to loan default situations. These differences are explained in some detail in the following paragraphs.

Not surprisingly, the information provided by the development companies, both large and small, is quite consistent with that provided by the financial institutions. Pre-approval land acquisition most frequently involves the purchaser and vendor but not a financial institution. In the cases where a financial institution is involved (primarily the post-approval stage), the amount of the loan (up to 50% of the land value) and the interest and fee rates indicated by the financial institutions were confirmed by the development companies (bank prime plus ¾ to 2½% and ¼ to 1½% of the loan value respectively).

When asked about the advantages of having land-only mortgage insurance, *most* development companies in both Ontario and Manitoba indicated that such insurance might, in fact, have a negative impact on development. They speculate that mortgage insurance might have the effect of drawing too many so-called land speculators into a given market. Specifically, too many small-scale, inexperienced developers may flood a certain market area. This would increase competition to the point where all developers suffer and potentially precipitate more defaults. The public companies also appear to be prepared to take slightly less risk than private companies when considering land acquisition. Through some of the informal discussions with developer clients, both large and small, it was indicated that there might be a role for CMHC in providing insurance, if it meant that financial institutions would be more willing to give loans for land that had yet to receive draft plan of subdivision approval. In some, but not all, cases these clients had had difficulty in obtaining loans for pre-draft approved land.

Before 1990, some companies purchased raw land through a line of credit funded by one or more banks and other lending institutions, with little accountability on a project by project basis. This practice was discontinued after 1990 because of the general economic uncertainty. Now, under current practice, money is lent on a project by project basis, regardless of the stage of the development process, only after the appropriate assessment by the financial institution.

Public companies do not have the same flexibility as private companies in dealing with 'bad' development projects. Private companies can arbitrarily decide to abandon a project if it makes good business sense. A public company, on the other hand, is accountable to its shareholders and cannot simply abandon a project in which it has a sizeable investment. These companies tend to retain their assets on their balance sheets and are prepared to wait longer for the project to come to fruition. The public development company based in Toronto that was interviewed for this study operates in this manner and has secured literally hundreds of loans over the last 10 years without any defaults.

The private companies interviewed also indicated that they had not experienced any defaults in the recent past. In addition, any defaults that they were aware of were in the 'farmer/developer' situation, not involving financial institutions.

5.3 FINANCING

The availability of adequate financing throughout the land development process is critical to a successful project. Typically, the greatest difficulty in obtaining financing occurs in the pre-approval stage. However, during the course of the interviews with the financial institutions and the development companies, it became apparent that financing is normally available in the post-approval stage, with some exceptions, as noted in Section 5.2, for parcels of land that can be expected to develop in a reasonable period of time. This financing is almost exclusively by the landowner in the pre-approval stage of development and by the financial institutions in the subsequent post-approval stage. No specific situations were documented as part of this study where land could not be purchased and moved through the development process because financing was not available. There was no evidence of loan applications that were turned down or rejected - only loans that were granted are covered by this survey. However, the experience of the consultants carrying out this study is that these situations do occur from time to time, but on a very infrequent basis. As a result, the lack of financing was not identified as a significant constraint to the land development process. One must keep in mind, however, that this result is expected due to the fact that the surveys were conducted with existing firms and not those who failed or could not otherwise establish in the first place due to the lack of access to financing. However, during the course of the interviews, representatives of the existing firms were not aware of any firms that had gone out of business because of a lack of financing nor were they aware of any individuals who would have otherwise entered the land development business but could not due to a lack of financing.

The cost of financing the land development process, like all other costs is passed onto the consumer (ultimately the house purchaser). However, the land portion of the selling price that can be attributed to carrying costs is very small when compared to the square foot cost of house construction or the linear meter cost of road construction. As a result, reasonable variations in loan rates for different development companies, do not have a significant impact on the selling price of a unit and therefore do not give one company a competitive advantage over another.

5.4 LOAN DEFAULTS

There are multiple **opportunities** for loan default on any particular project. The normal practice is **not** to take out one loan at the beginning of the post-approval stage for the whole project or even for a single phase. Typically, loans are secured and discharged throughout the project and are tied to certain thresholds such as obtaining draft plan approval, zoning, commencing detailed engineering design, construction of services, etc. On larger projects where construction is phased, multiple loans are secured within each phase. As a result, a large project, developed over two to ten years may have 25 or more loans advanced during the process.

Based on the investigations carried out, loan defaults are quite rare both in absolute numbers and as a percentage of the loans issued. The Schedule A institutions have structured their business practices to reduce their risk to virtually zero. When preparing business plans, they assume that there will not be any defaults. In other words, no allowance is made on the balance sheet for 'bad loans'. Representatives of two Schedule A institutions indicated that they have jointly lent well over $1,000,000,000 in one year in the GTA with no defaults. This is not to say that defaults never occur, this study simply did not identify any.

While the percentage and number of loans that default are minimal, the majority of loan defaults that do default occur at the pre-approval stage where risks are greater and where typically only the purchaser and the vendor are involved and the Schedule A institutions are generally not involved (see Section 5.1.1, Para. 3). In these cases, the purchaser forfeits the small deposit and the farmer gets his land back. These defaults are not precipitated by the purchaser being unable to meet the monthly interest payments but by other factors. The most common factor is a change in market conditions, either broad changes such as occurred in 1989/1990 or more local changes such as an over supply of land slated for residential development or a municipal change in the direction of development, all of which can lead the developer to abandon the land.

The same holds true in the later stages of the development process when the Schedule A institutions are more involved. Defaults are market driven, not carrying cost driven. Defaults are precipitated by a lack of payment to the bank but this is only one action of a developer's broader strategy to extricate himself from the business opportunity. Other actions include withdrawing development applications and terminating contracts with consultants.

5.5 ACTUARIAL MODELING

This section of the report addresses parameters for land-only mortgage insurance and deals specifically with data collection, program parameter definition, actuarial modelling of defaults and premium rating development. The actuarial modelling of default and premium rating sections are based on a simulation approach, which generates large numbers of portfolios of loans with characteristics randomly selected from ranges/distributions specified as the underlying assumptions and therefore simulates potential default and claim patterns. This approach was used because the study was not able to identify sufficient land-only mortgages which have defaulted (i.e. would have resulted in claims) for empirical modelling purposes.

The provision of this analysis to CMHC is based on sound theoretical and practical observations, it should not be construed in any way to be an endorsement by the actuarial consultant of the viability of land-only mortgage insurance products.

The results from the simulation models, whilst representing a generally accepted approach to modelling in situations with insufficient data for empirical analysis, are inherently dependent on the quality and accuracy of the distribution assumptions upon which the simulations are based. The assumptions used in the models presented have been established by the land development and actuarial consultants in conjunction with CMHC based on professional expertise and judgement as well as academic theory. However, they remain assumptions which may or may not be realised in practice. The results from the simulation models are therefore also subject to the same uncertainty.

5.5.1 Data Collection

Data collection for the project was largely by survey as described in detail in the preceding sections. Whilst, by their very nature, surveys do not provide complete, or universal data, we are confident that the lending institutions surveyed account for the majority of lending institution activity in the land-only mortgage markets that were studied. Similarly, the developers surveyed cover a broad spectrum of possibilities in the land developer market.

The surveys of land developers and financial institutions undertaken, yield the following key pieces of information from an actuarial modelling standpoint:

- lending institutions structure loans to minimise anticipated defaults (i.e. they do not anticipate making provisions for bad debt amounts);
- defaults to lending institutions are minimal to zero;
- "defaults" to vendors (there are none recorded to lending institutions) are strategic decisions, not involuntarily missing payments;
- lending is generally up to a maximum of 50% of the land value;
- loans tend to be for terms of two years;
- approximately 15% of loans are for land which does not have an approved subdivision plan (i.e. falls into the "pre-approval" category); and
- loans for land with approved draft plan of sub-division tend to be larger since the loans include the amounts for servicing the land and are reflective of the increased value of the land when approvals are in place.

With no examples of defaults in the surveys, and all indications from the lending institutions being that there are minimal to zero defaults in the system as a whole, we were unable to collect sufficient information for empirical modelling purposes about the specific circumstances, terms, or economic conditions pertaining to loans that result in defaults. However, the lending institutions did identify specific lending criteria that are used to set interest rates for land-only mortgages.

5.5.2 Program Parameter Definition

We evaluate land-only mortgage insurance and propose default insurance program options under two scenarios. The scenarios were established based on the fact that the lending institutions regard loans for land without approvals differently than those for land with approvals and this distinction in the actuarial models allows separate premium rates to be established for the two market segments. It is assumed that the introduction of land-only mortgage insurance impacts the market conditions in which mortgages are issued and hence the probability of default. In the scenarios proposed, land-only mortgage insurance operates in a similar fashion to the residential mortgage insurance currently available. The two scenarios relate to:

- Pre-approval stage where land-only mortgages are offered on land which has not yet reached the stage of having an approved draft plan of sub-division in place.

- Post-approval stage where the mortgaged land has progressed through the development process to the point of having a draft plan of sub-division in place.

5.5.3 Actuarial Modelling of Default

The information gathered in both the Ontario and Manitoba surveys has yielded no instances of land-only mortgage default. It is deduced that this situation arises as a result of two key factors:

- most purchases of raw land, which is in the pre-approval stage, are transacted between the developer and the land-owner without the intervention of a lending institution; or

- when a lending institution is involved, primarily in the post-approval stage, strict lending criteria are used, such that the risk of default is minimal to zero.

Based on the survey data, it is therefore concluded that current lending criteria are such that the probability of default on land-only mortgages is minimal to zero. A simulation model of the probability of default under current market conditions has been developed and is discussed in Section 5.5.3.1.

If it is assumed that the introduction of a CMHC land-only mortgage product were to:

- expand the universe of lending institutions involved in the land-only mortgage market; and/or

- alter the stringency of the loan criteria applied by lending institutions in the land-only mortgage market; and/or

- alter the creditworthiness range of developers involved in the market; and/or

- introduce adverse selection which would lead to financially weaker borrowers

then the risk of default would likely increase. For modelling purposes, we have assumed that one or more of these conditions would apply either independently or as

a group, and have developed simulation models of the new market conditions based on the approach applied to current market conditions. The models and their assumptions are discussed in Section 5.5.3.2.

5.5.3.1 Actuarial Model of Default For Current Market Conditions

We have developed a simulation model of the probability of default on land-only mortgages. The approach is based on a paper published in ASTIN BULLETIN, Vol. 24, No. 1, 1994 by Greg Taylor entitled "Modelling Mortgage Insurance Claims Experience: A Case Study". Since we are concerned with just land-only mortgages and have insufficient default data from the survey for empirical modelling, the model is not a replication of Mr. Taylor's work. However, a number of useful principles and concepts were drawn from the paper, which substantiate the approach.

Factors which contribute to the possibility of default on a land-only mortgage have been identified through the survey comments of financial institutions regarding their pricing decisions for land-only mortgages and the work of Mr. Taylor. These variables, which are used as input to the actuarial model of the probability of default, are:

- the loan to value ratio (LVR);
- the purchase price of the land;
- the size of the loan (derived from the LVR and purchase price);
- the term of the loan;
- whether the land has an approved sub-division plan in place (in the new market conditions models this variable was used to separate the pre-approval and post-approval categories of insurance product);
- the financial strength of the borrower measured by the net worth to loan amount ratio;
- the change in the price of the land over the loan term; and
- the percentage of lots pre-sold.

Each of the factors is modelled using a distribution from which loan characteristics are simulated. The Latin Hypercube technique (a particular method for randomly selecting values within the specified distributions for each variable which ensures that the full range of the distributions is represented in the simulation) has been applied to generate 10,000 simulations of portfolios of 1,000 loans. To reflect the current market conditions a single model has been developed which incorporates the current proportions of pre-approval and post-approval loans extended. The modelling of new market conditions in Section 5.5.3.2 reflects two distinct sets of insurance parameters, one for pre-approval land-only mortgages the other for post-approval land-only mortgages. The distribution assumptions used for the current market conditions are set out below:

Current Market Conditions

Variable	Distribution	Parameters	Values
1. Loan To Value Ratio	Triangular*	Minimum Most likely Maximum	10% 50% 95%
2. Purchase Price of the Land	PERT**	Minimum Most likely Maximum	$0.5m $5m $30m
3. Term of Loan	Discrete	1 year 2 years 3 years 4 years 5 years	0.23 0.26 0.23 0.18 0.10
4. Stage of Development	Discrete	Pre-approval Post-approval	0.2 0.8
5. Financial Strength of Borrower (Net Worth to loan ratio)	PERT	Minimum Most likely Maximum	0.25 2.5 10
6. Change in Land Prices	Triangular	Minimum Most likely Maximum	-50% 10% 100%

7. Pre-Sold Lots	Triangular	Minimum Most likely Maximum	0% 75% 100%

* Triangular distribution has values in the range defined by the minimum and maximum with the most likely value as specified. The shape of the distribution is triangular with the peak of the triangle at the most likely value.

** PERT distribution also has values in the range defined by the minimum and maximum with the most likely value as specified. The shape of the distribution is rounded (like a normal curve for symmetric parameters) with the highest point on the distribution at the most likely value.

5.5.3.1.1 Scoring Approach To Determine Default

A scoring methodology was applied in order to combine the impacts of all these factors on the probability of default in simulated loan scenarios. Each of the six factors for the simulated loan is scored. Note that the LVR and purchase price variables are combined to give the single amount of loan factor which is scored.

Based on the survey findings, the empirical work of Mr. Taylor and the experience of the consultants in both the land development and actuarial fields, scores have been allocated to each risk factor. The scores range from 1 to 5 for each factor. The scores allocated to the particular variables reflect the direction and magnitude of the impact of the variables on the risk of default.

A low score indicates low risk of default and a high score represents a high risk of default. If the total score exceeds the mid-point score of 18 (mid-point score of 3, times the number of parameters,6) then the simulated loan is assumed to default. A simulated default does not necessarily imply that a claim on the insurance policy would take place. For a claim to occur, there has to be a default and the sales proceeds from the land (net of expenses) must be less than the outstanding loan.

Current Market Conditions

Score	1	2	3	4	5
Loan Amount	<=$1m	>$1m,<=$5m	>$5m,<=$10m	>$10m,<=$20m	>$20m
Term	5	4	3	2	1
Approvals	Yes	N/A	N/A	N/A	No
Net Worth to Loan	>4	>1,<=4	>0.75,<=1	>0.5,<=0.75	<=0.5
Land Price Change	>2%	N/A	>-2%,<=2%	N/A	<=-2%
Lots Pre-sold	>75%	>60%,<=75%	>40%,<=60%	>20%,<=40%	<=20%

Explanation of Parameters

Loan Amount: As the loan amount increases the risk score also increases since, amongst other reasons, the payments for a given term are higher.

Term of Loan: As the term of the loan increases the risk score decreases. There are two opposing forces at work in the case of the term of the loan. Firstly, when the term is shorter payments are higher for the same loan amount which suggests that the risk should increase as the term decreases. On the other hand the shorter the loan term the less uncertainty there is regarding the outcome of the project and therefore as the term increases the risk score increases. The results of Mr. Taylor's study have been used to determine that the first impact is dominant over the second and therefore score the loan term with decreasing risk as the term increases.

Stage of Approval: Holding other variables constant, loans with draft plan of sub-division approvals in place have a lower risk of default relative to pre-approval stage loans.

Financial Strength of Borrower: As the Net Worth to loan amount ratio increases the risk of default decreases since the borrower has more financial resources which may be called upon to provide liquidity to cover mortgage payments if necessary.

Land Price Change: The change in land prices over the period has been classified into just three risk score categories, a low risk, medium risk and high risk band. The higher the land price change the lower the risk score.

Percentage of Lots Pre-Sold: The risk score increases as the percentage of lots pre-sold decreases since there is more uncertainty about outcome and less up front cash from the project in the borrower's hands as the proportion decreases.

Simulation Results

The resulting simulated mean (average) probability of default (missed payment, not write off for loan loss) based on distribution assumptions reflecting current market conditions is 7.657%. This translates to an average of 77 simulated loans, which exceeded the threshold for a missed payment, per portfolio of 1,000 loans given 10,000 simulations.

The simulation results for the probability of default are summarised below in terms of the minimum simulation, the maximum simulation, the mean of 7.657%, the standard deviation and the percentiles.

	Probability of Default
Minimum	5.200%
Maximum	10.000%
Mean	7.657%
Standard Deviation	0.675%
5th %ile	6.500%
10th %ile	6.800%
15th %ile	7.000%
20th %ile	7.100%
25th %ile	7.200%
30th %ile	7.300%
35th %ile	7.400%
40th %ile	7.500%
45th %ile	7.600%
50th %ile	7.700%
55th %ile	7.700%
60th %ile	7.800%
65th %ile	7.900%
70th %ile	8.000%
75th %ile	8.100%
80th %ile	8.200%
85th %ile	8.400%
90th %ile	8.500%
95th %ile	8.800%

We have noted that these instances of default do not necessarily lead to a loan loss for the lending institution and therefore a mortgage insurance claim. Rather, only those

situations, where the proceeds from the sale of the land after default are insufficient to repay the outstanding debt, result in a loan loss and therefore a claim.

Therefore, to model the frequency of mortgage insurance claims we also have to model the sales proceeds relative to the outstanding loan amount. The sales proceeds have been calculated by adjusting the purchase price of the land by the change in the land value over the period as simulated above. The outstanding loan amount is calculated by simulating one more variable - the percentage of the loan remaining - and multiplying that by the loan amount, which in turn is calculated from the purchase price and LVR simulated above. The claim amount is grossed up by 60% to include the transaction costs incurred by CMHC in the sale of the land.

The distribution assumed for the percentage of loan outstanding is:

Variable	Distribution	Parameters	Values
% of Loan Outstanding	Triangular*	Minimum	1%
		Most likely	85%
		Maximum	100%

Of the 10,000 simulations of portfolios of 1,000 loans, for which the mean probability of default was 7.657%, the mean probability of a claim occurring is 0.065%. This confirms that, based on the input assumptions, the model replicates the survey results that the probability of a loan loss is minimal to zero in current market conditions (i.e. the financial institutions surveyed exhibited little evidence of land-only mortgage losses).

The simulation results for the probability of claim are summarised below in terms of the minimum simulation, the maximum simulation, the mean of 0.065%, the standard deviation and the percentiles.

	Probability of Claim
Minimum	0.000%
Maximum	0.500%
Mean	0.065%
Standard Deviation	0.079%
5th %ile	0.000%
10th %ile	0.000%
15th %ile	0.000%

	Probability of Claim
20th %ile	0.000%
25th %ile	0.000%
30th %ile	0.000%
35th %ile	0.000%
40th %ile	0.000%
45th %ile	0.000%
50th %ile	0.000%
55th %ile	0.100%
60th %ile	0.100%
65th %ile	0.100%
70th %ile	0.100%
75th %ile	0.100%
80th %ile	0.100%
85th %ile	0.100%
90th %ile	0.200%
95th %ile	0.200%

5.5.3.2 Actuarial Model of Default in New Market Conditions

The introduction of a CMHC land-only mortgage insurance product is assumed to change the parameters under which lenders are willing to advance land-only mortgages. This in turn requires changes to the parameters upon which the simulation model assumptions are based. A second set of distribution assumptions has therefore been developed to reflect new market conditions and estimate the probability of default if the insurance product is offered. Separate models, hence distribution assumptions, were developed for pre-approval and post-approval stage loans since the survey revealed that draft plan of sub-division approval is a key variable in the determination of the willingness of financial institutions to advance loans and hence the likelihood of default. The distribution assumptions have been modified to reflect higher LVR's, longer loan terms and higher percentage of loan outstanding. The parameters of the distributions for the new market condition models have been developed in conjunction with CMHC to reflect a range of potential underwriting criteria that might apply to land-only mortgage insurance.

Four sets of distribution assumptions were specified: a risky and a low risk scenario for the pre-approval stage model and for the post-approval stage model. The purpose of this approach was to simulate a range of outcomes in loan portfolios that CMHC can use to define potential risk premium boundaries. Definition of more targeted

scenario simulations are conjectural at this time and would first require in depth product development which is beyond the scope of this report.

The new market conditions distribution assumptions are:

Pre-Approval Stage Land-Only Mortgages

Variable Distribution	**Parameters**	**Risky**	**Low Risk**
Loan to Value Ratio			
Triangular	Minimum	60%	50%
	Most Likely	75%	75%
	Maximum	85%	80%
Purchase Price of Land			
PERT	Minimum	$0.5m	$0.25m
	Most Likely	$2.0m	$1.0m
	Maximum	$4.0m	$2.0m
Term of Loan			
Discrete	1 year	0.5	0.2
	2 years	0.5	0.2
	3 years		0.2
	4 years		0.2
	5 years		0.2
Borrower Financial Strength (Net Worth to loan ratio)			
PERT	Minimum	0.10	0.25
	Most Likely	0.25	0.50
	Maximum	0.50	1.00
Change in Land Prices			
Triangular	Minimum	-50%	0%
	Most Likely	-25%	5%
	Maximum	0%	10%

Pre-sold Lots			
Triangular	Minimum	0%	0%
	Most Likely	0%	0%
	Maximum	0%	0%

Post-Approval Stage Land-Only Mortgages

Variable Distribution	**Parameters**	**Risky**	**Low Risk**
Loan to Value Ratio			
Triangular	Minimum	60%	50%
	Most Likely	75%	75%
	Maximum	85%	80%
Purchase Price of Land			
PERT	Minimum	$0.5m	$0.25m
	Most Likely	$5.0m	$2.5m
	Maximum	$30.0m	$15.0m
Term of Loan			
Discrete	1 year	0.5	0.2
	2 years	0.5	0.2
	3 years		0.2
	4 years		0.2
	5 years		0.2
Borrower Financial Strength (Net Worth to loan ratio)			
PERT	Minimum	0.10	0.25
	Most Likely	0.25	0.50
	Maximum	0.50	1.00
Change in Land Prices			
Triangular	Minimum	-50%	0%
	Most Likely	-25%	5%
	Maximum	0%	10%

Pre-sold Lots			
Triangular	Minimum	0%	0%
	Most Likely	0%	50%
	Maximum	0%	75%

The same scoring approach was applied to the new market condition simulations in order to determine loans which result in missed payments. However, amendments to the scoring for pre- and post-approval loans were made to reflect the difference in the orders of magnitude of some of the variables, notably the size of the loan. The scoring for the new market condition models is as follows:

Pre-approval Stage Loan Scores

Score	1	2	3	4	5
Loan Amount	<=$0.5 m	>$0.5m,<=$1m	>$1m,<=$1.5m	>$1.5m,<=$2.5m	>$2.5m
Term	5	4	3	2	1
Net Worth to Loan	>4	>1,<=4	>0.75,<=1	>0.5,<=0.75	<=0.5
Land Price Change	>2%	N/A	>-2%,<=2%	N/A	<=-2%
Lots Pre-sold	>75%	>60%,<=75%	>40%,<=60%	>20%,<=40%	<=20%

Post-approval Stage Loan Scores

Score	1	2	3	4	5
Loan Amount	<=$1m	>$1m,<=$5m	>$5m,<=$10m	>$10m,<=$20m	>$20m
Term	5	4	3	2	1
Net Worth to Loan	>4	>1,<=4	>0.75,<=1	>0.5,<=0.75	<=0.5
Land Price Change	>2%	N/A	>-2%,<=2%	N/A	<=-2%
Lots Pre-sold	>75%	>60%,<=75%	>40%,<=60%	>20%,<=40%	<=20%

The score threshold for a default was also amended to reflect the fact that one of the variables scored (whether the land has approvals or not) has been removed when the two separate models for pre- and post-approvals were developed. The threshold for a default is therefore 15 in the new market models.

In the new market conditions represented by the 10,000 simulations of portfolios of 1,000 loans (risky and low risk portfolios) for pre-approval stage land-only mortgage

insurance, we saw a mean probability of default (missed payment) ranging from 48.241% (low risk) to 99.999% (risky). For post-approval stage loans the mean probability of default is in the range of 20.983% (low risk) to 100% (risky). The simulation results for the probability of default are shown below:

Probability of Default

	Pre-Approval Risky	Pre-Approval Low Risk	Post-Approval Risky	Post-Approval Low Risk
Minimum	99.8%	44.9%	100.0%	17.7%
Maximum	100.0%	51.2%	100.0%	24.0%
Mean	99.999%	48.241%	100.0%	20.983%
Std. Dev.	0.011%	0.829%	0.0%	0.844%
5th %ile	100.0%	46.9%	100.0%	19.6%
10th %ile	100.0%	47.2%	100.0%	19.9%
15th %ile	100.0%	47.4%	100.0%	20.1%
20th %ile	100.0%	47.5%	100.0%	20.3%
25th %ile	100.0%	47.7%	100.0%	20.4%
30th %ile	100.0%	47.8%	100.0%	20.5%
35th %ile	100.0%	47.9%	100.0%	20.7%
40th %ile	100.0%	48.0%	100.0%	20.8%
45th %ile	100.0%	48.1%	100.0%	20.9%
50th %ile	100.0%	48.2%	100.0%	21.0%
55th %ile	100.0%	48.3%	100.0%	21.1%
60th %ile	100.0%	48.5%	100.0%	21.2%
65th %ile	100.0%	48.6%	100.0%	21.3%
70th %ile	100.0%	48.7%	100.0%	21.4%
75th %ile	100.0%	48.8%	100.0%	21.6%
80th %ile	100.0%	48.9%	100.0%	21.7%
85th %ile	100.0%	49.1%	100.0%	21.9%
90th %ile	100.0%	49.3%	100.0%	22.1%
95th %ile	100.0%	49.6%	100.0%	22.4%

To calculate the probability of a claim, the distribution assumed for the percentage of loan outstanding is:

Variable	Stage of Development	Risky	Low Risk
% of Loan Outstanding	Pre-approval	100%	50%
	Post-approval	100%	50%

When the conditions for a claim were met as opposed to a missed payment, the simulated probability of a claim is:

Probability of Claim

	Pre-Approval Risky	Pre-Approval Low Risk	Post-Approval Risky	Post-Approval Low Risk
Minimum	26.8%	0.0%	41.7%	0.0%
Maximum	33.2%	0.0%	47.5%	0.0%
Mean	30.217%	0.0%	44.606%	0.0%
Std. Dev.	0.844%	0.0%	0.837%	0.0%
5th %ile	28.8%	0.0%	43.2%	0.0%
10th %ile	29.1%	0.0%	43.5%	0.0%
15th %ile	29.3%	0.0%	43.7%	0.0%
20th %ile	29.5%	0.0%	43.9%	0.0%
25th %ile	29.6%	0.0%	44.0%	0.0%
30th %ile	29.8%	0.0%	44.2%	0.0%
35th %ile	29.9%	0.0%	44.3%	0.0%
40th %ile	30.0%	0.0%	44.4%	0.0%
45th %ile	30.1%	0.0%	44.5%	0.0%
50th %ile	30.2%	0.0%	44.6%	0.0%
55th %ile	30.3%	0.0%	44.7%	0.0%
60th %ile	30.4%	0.0%	44.8%	0.0%
65th %ile	30.5%	0.0%	44.9%	0.0%
70th %ile	30.6%	0.0%	45.1%	0.0%
75th %ile	30.8%	0.0%	45.2%	0.0%
80th %ile	30.9%	0.0%	45.3%	0.0%
85th %ile	31.1%	0.0%	45.5%	0.0%
90th %ile	31.3%	0.0%	45.7%	0.0%
95th %ile	31.6%	0.0%	46.0%	0.0%

5.5.4 Premium Rating Development

If CMHC is to provide land-only mortgage insurance, it requires a methodology for pricing the insurance policies that it issues. Factors that will effect the commercial viability of the product include the demand for the product on the part of the financial institutions and product pricing.

For illustrative purposes, we assume that the introduction of the product will allow the pooling of risks and allow lenders to make riskier loans. We are therefore assuming that the introduction of the product will increase the probability of default on land-only mortgages overall.

Our surveys indicate that land-only mortgages are usually priced in the range of prime plus 0.75% to prime plus 2.5%. We will assume (based on our surveys) an average loan cost of prime plus 1.5% for illustration. This is therefore the assumed price of a zero default risk land-only mortgage.

Applying the assumption that the introduction of land-only mortgage insurance will result in riskier loans being made, we can assume that the cost of land-only mortgages will increase to reflect this increase in the probability of default. Let us assume that the average pricing of loans, in the absence of insurance, would increase to prime plus 5% from prime plus 1.5%. The incremental risk premium inherent in this pricing is therefore 3.5% of the loan value. From the surveys it was noted that, in addition to the annual interest rate, the lending institutions also charge an up-front one time fee of between 0.25% and 1.5%. However, it is not anticipated that the introduction of land-only mortgage insurance, and hence the provision of riskier loans, would impact the amount charged by the lenders as an up-front fee. Furthermore, it is assumed that both insured and uninsured loans will be subject to the same charge. Therefore the up-front fee is not a relevant factor in the evaluation of the viability of CMHC's risk premium requirements, since only the incremental cost of riskier loans is relevant to the comparison.

The provision of land-only mortgage insurance would reduce the risk of financial loss to the lender in the case of default back to zero. We deduce that if the pricing of a zero default probability loan is currently prime plus 1.5%, then the lending institution would be content to receive prime plus 1.5% on an insured loan since its risk profile is equalised by the insurance.

In this assumed scenario then, where the riskier loans are priced at prime plus 5%, the pricing of the CMHC insurance product must not exceed the total of the incremental risk premium of 3.5% per annum of the loan value charged over the term of the loan.

The following approach to premium rating is suggested:

Premium = Fixed Cost + Variable Cost + Risk + Profit

This study is only intended to address the Risk element. The Risk element is to cover the direct cost of potential claims on the insurance provided. In the current lending climate this risk is estimated to be zero. The actuarial models developed for the probability of default have been extended to provide a quantification of the projected cost of claims under the various assumptions. The elements of Fixed and Variable Costs and Profit are critical to providing a comprehensive and realistic picture of possible premium rate structure and, being beyond the scope of this report, should be considered by CMHC as part of its own analysis, based on their internal costs and profit targets. These elements are also critical to establishing the commercial viability of land-only mortgage loan insurance.

In the example of pricing parameters at the beginning of this section, it was assumed that risk premium rating for the insurance product may need to be less than or equal to 3.5% per annum of the loan amount (on a present value basis) over the term of the loan. When CMHC analyses its cost base for the provision of land-only mortgage insurance, the cost, including the Risk element, can be compared with the premium constraint.

The results from the actuarial models of current and new market conditions have been used to determine a rate for the Risk element of the insurance pricing. In each of the 10,000 simulations, the total amount of the claims generated in the portfolio of 1,000 loans is expressed as a percentage of the total loans advanced in the portfolio. An alternative way of expressing the rate is in the cost per $10,000 loaned. The pricing estimates, which are single payments up front on the loan, are summarised below:

Premium Rate (% of Loan)

	Current	Pre-Approval	Pre-Approval	Post-Approval	Post-Approval
	Market	Risky	Low Risk	Risky	Low Risk
Minimum	0.000%	4.529%	0.000%	7.475%	0.000%
Maximum	0.253%	6.128%	0.000%	9.720%	0.000%
Mean	0.015%	5.236%	0.000%	8.402%	0.000%
Std. Dev.	0.028%	0.196%	0.000%	0.283%	0.000%
5th %ile	0.000%	4.915%	0.000%	7.931%	0.000%
10th %ile	0.000%	4.986%	0.000%	8.035%	0.000%
15th %ile	0.000%	5.034%	0.000%	8.111%	0.000%
20th %ile	0.000%	5.070%	0.000%	8.166%	0.000%
25th %ile	0.000%	5.103%	0.000%	8.212%	0.000%
30th %ile	0.000%	5.132%	0.000%	8.254%	0.000%
35th %ile	0.000%	5.158%	0.000%	8.293%	0.000%
40th %ile	0.000%	5.184%	0.000%	8.332%	0.000%
45th %ile	0.000%	5.209%	0.000%	8.368%	0.000%
50th %ile	0.000%	5.233%	0.000%	8.403%	0.000%
55th %ile	0.002%	5.259%	0.000%	8.436%	0.000%
60th %ile	0.005%	5.285%	0.000%	8.473%	0.000%
65th %ile	0.009%	5.313%	0.000%	8.512%	0.000%
70th %ile	0.014%	5.341%	0.000%	8.551%	0.000%
75th %ile	0.020%	5.370%	0.000%	8.589%	0.000%
80th %ile	0.027%	5.402%	0.000%	8.637%	0.000%
85th %ile	0.038%	5.440%	0.000%	8.696%	0.000%
90th %ile	0.052%	5.488%	0.000%	8.767%	0.000%
95th %ile	0.075%	5.561%	0.000%	8.867%	0.000%

As would be expected, given the survey results, the model of current market conditions yields a very low price for the risk portion of the land-only mortgage insurance premium; namely 0.015% or $1.50 per $10,000 loaned.

The new market conditions models show increased rates compared to the current market conditions, both for the loans with approvals and those without approvals. The mean risk premium rate for loans without approvals in new market conditions given the CMHC underwriting conditions is estimated to range from 0% for the portfolios of low risk loans to 5.236% for the portfolios of risky loans. The mean rate for loans

with approvals in new market conditions is estimated to range from 0% for the portfolios of low risk loans to 8.402% for the portfolios of risky loans.

Since we have structured the pricing in the form of an up front premium payment when the loan is issued, there is an opportunity to discount the premium estimate somewhat for investment income over the period of the loan. However, since the terms of these loans are relatively short, investment rates are currently relatively low and there is considerable uncertainty surrounding the estimates due to a lack of empirical data, it is more prudent to ignore the potential for discounting at this stage. Also, when comparing the two alternatives, adjustments must be made to account for any differences in the term of the insured loan (for which there is a one-time up-front charge) and that of the uninsured loan (for which the premium is paid annually).

5.5.5 Conclusions

The survey data collected indicated that in the current operating environment, the probability of default on land-only mortgages is minimal to zero as a result of the strict underwriting criteria being employed by lenders. This observation was used to verify the modelling approach we developed to replicate current market conditions, and to quantify the probability of default and establish premium rates for the proposed land-only mortgage insurance.

An actuarial model of the probability of default was developed using simulation techniques. This is a generally accepted practice in modelling for cases where there is an absence of historical data. The model criteria reflecting current market conditions yielded a probability of a claim of 0.065%. The results are substantiated by the survey observation that the probability of default is minimal to zero and support the reasonableness of the approach. The corresponding risk premium rate estimated for the current market conditions is 0.015% or $1.50 per $10,000 loan amount. This is an up front single payment not an annual addition to the loan rate of interest.

Assuming that the introduction of CMHC's proposed land-only mortgage insurance product results in changes in lender behaviour which increases the probability of default, two separate models were developed to represent potential new market conditions for loans on land without approvals and for land with approvals. A risky and low risk scenario were established for each model in order to estimate the potential range of risk premium for each of the two insurance products. The mean probability of a claim ranged from 0% to 30.217% for loans on land without approvals and from 0% to 44.606% on loans for land with sub-division plan approval in place. The corresponding risk premium rates are estimated to range from 0% to 5.236% or

$0 to $523.60 per $10,000 loan amount for pre-approval stage loans and from 0% to 8.402% or from $0 to $840.20 per $10,000 loan amount for post-approval stage loans. Subject to the validity of the assumptions, the actual risk premium would fall within those respective ranges, depending on the ultimate underwriting criteria adopted by CMHC.

The results from the simulation models, whilst representing a generally accepted approach to modelling in situations with insufficient data for empirical analysis, are inherently dependent on the quality and accuracy of the distribution assumptions upon which the simulations are based. Whilst the assumptions used in the models presented have been established by the land development and actuarial consultants in conjunction with CMHC, they remain assumptions which may or may not be realised in practice. The results from the simulation models are subject to the same uncertainty.

The commercial viability of land-only mortgage insurance is contingent upon CMHC being able to offer insurance at a price that results in total financing costs, including insurance, that are less than that available in the absence of insurance. The risk premium ranges established through the actuarial modelling are part of the price at which CMHC can offer insurance. The other elements of the price reflect CMHC's cost structure and profit requirements and are outside the scope of this report. Assuming an otherwise similar cost structure to that of the lenders, if CMHC can offer insurance at a price which is less than the risk premium charged by lenders within the interest rate on the loan, on a present value basis, then the product will be commercially viable from a pricing point of view.

When CMHC analyses the cost structure and profit elements of its pricing to add to the risk element estimated in the actuarial models, it will be able to evaluate the viability of the insurance products in the context of prevailing financing costs.

To illustrate the evaluation of the potential viability of the proposed insurance products, we can use the risk premium estimated in the actuarial models, recognising that this ignores CMHC's cost and profit elements of the pricing. The portfolios of risky post-approval loans yielded a mean premium rate of 8.4% of the loan value. The annual interest rate that a lender would charge for a five year loan to generate the same up front risk premium is approximately 1.6% (ignoring discounting for the time value of money for the arguments raised earlier). Therefore, for a five year post-approval loan, if lenders charged an annual risk premium within the interest rate of more than 1.6% then the insurance product would be viable, ignoring CMHC's cost and profit elements. The surveys indicate that in the current market conditions, i.e. essentially

loans that have zero risk of default, lenders do, in some situations, charge risk premium of more than 1.6%, assuming that it is reasonable to equate the margin over the prime rate to the risk premium. Note that in addition to the annual interest rate, the lenders charge an up front fee in the range of 0.25% to 1.5% of the loan. However, it is not anticipated that this will change as a result of riskier loans being made (and with apply to both insured and uninsured loans equally) when the insurance product is introduced and therefore this cost factor is irrelevant in comparing the insurance pricing with lenders incremental risk costs. As the term of the loan declines the break-even point increases. For example, for a two year loan the annual risk premium charged by the lender would be 3.9% rather than 1.6%.

Further work is required in a number of areas before clear conclusions on the viability of the proposed products can be drawn. For example, CMHC's cost structure and profit requirements need to be addressed, the products need to be more specifically defined in terms of underwriting criteria/target markets and lender reaction needs to be considered in terms of risk premium charges for the riskier loans. Also the start up costs and timing need to be evaluated since it would take some time to build up the portfolio of insured mortgages to a steady state reflective of the assumed parameters.

Of course, the commercial viability of the product will also depend upon how closely the actual performance of the product reflects the assumptions used in the models. However, the model has the flexibility to adjust these parameters based on observable experience over time and specifically defined product parameters.

APPENDICES

APPENDIX A:

TERMS OF REFERENCE

REQUEST FOR PROPOSALS

FEASIBILITY STUDY ON THE COMMERCIAL VIABILITY OF LAND-ONLY MORTGAGE LOAN INSURANCE

INTRODUCTION

Canada Mortgage and Housing Corporation requires the services of a consultant to conduct a feasibility study on the commercial viability of land-only mortgage loan insurance under the National Housing Act.

This request for proposals provides details on the overall context, the study objective and approach, and other instructions to potential bidders.

OVERALL CONTEXT

Under the National Housing Act (N.H.A.), Canada Mortgage and Housing Corporation insures mortgage loans protecting Approved Lenders from borrower default. Borrowers, in general, must be purchasing an existing home, having a home constructed on land they already own, or be a builder intending to sell a home to a qualified purchaser.

Currently, only provinces, municipalities, and public housing agencies under Section 10(2) of the N.H.A., may use CMHC insurance to obtain financing to acquire or service land for housing and related purposes. This practice known as "land assembly" is no longer actively pursued by CMHC and most provinces.

Whether or not other types of borrowers, including home builders and land developers, could use CMHC mortgage loan insurance for these purposes would depend upon the complexity of the land development process and the costs and risks associated with it.

As McKellar writes in *The Canadian Housing System in the 1990s:*

"Land markets are more complex than housing markets and are subject to the many regulatory influences imposed by local jurisdictions. Land development also requires different skills from those of home building. There are four distinct stages in the land development process:

1. The land must be purchased from five to ten years in advance of the building of the houses in order to allow for the lengthy process of planning and securing approvals for development plans. To minimize risk, an option agreement or conditional sales agreement usually ties the purchase price and the timing of payments to various approvals yet to be negotiated. These agreements commit the purchase to a considerable investment, and it may be difficult to obtain credit for such a transaction.

2. Once the land is acquired, various municipal approvals that involve the transfer of new "rights" to the property must be obtained. The approvals may start with an amendment to a master plan for the community and proceed to a change in zoning or land use and approval of a plan of subdivision. The planning approvals confer specific building rights on a site-by-site basis. ... The approval process takes a minimum of three years, depending upon the complexity of the proposal; some projects cover a 20-year period.

3. Once approvals are obtain, the land developer is entitled to proceed with grading the site, installing the infrastructure, surveying the building lots, and preparing all of the legal documentation required to sell the individual parcels. This is a costly operation, which can proceed only if the developer can demonstrate a viable plan for selling the serviced sites. If the developer cannot secure the funds for installing the infrastructure, or does not have the capacity to hold the land until current market conditions are favourable, one option is to sell the land, with the hope of realizing a profit as a result of the fact that the land has received the municipal approvals.

4. Finally, the land developer places the serviced sites on the market. At this stage, there is an expectation of price that will cover the accumulated costs and provide a return commensurate with the risks involved. This is the point where expectations meet the reality of the marketplace. Price is a function of eventual purchase price of the houses, and it must also recognize what the competition is offering. When demand for lots is strong, prices rise, but when demand diminishes, prices can fall below the costs incurred by the landowner."

STUDY OBJECTIVE

The objective of the study will be to enable CMHC to better assess the potential demand for land-only mortgage insurance, the risks associated with offering land-only mortgage loan insurance, and what means would be available to CMHC to mitigate those risks. If land-only mortgage loan insurance is deemed compatible with CMHC's public policy objectives, and commercially viable, terms and conditions would be established by CMHC as a matter of administrative policy. This study will help the Corporation to determine appropriate premium levels for default insurance provided at various stages in the land development process, eligibility and underwriting criteria, and other risk management tools.

STUDY APPROACH:

The study should cover the following elements:

1. A profile of the residential land development industry, the level of activity, and how land is bought, sold, and developed in at least two provinces; one where there is a high degree of housing market activity and land prices can be volatile, and one with a relatively stable level of housing market activity where sellers of

raw land for development are generally price takers.

Reference to how provincial planning acts or other authorities, i.e., municipalities, etc., impact the land development industry should be made, as well as, a description of the nature of the transactions, the agents involved and ranges in the length of time required for acquisition of raw land, zoning, public consultations, servicing, subdividing and selling, and eventual use for home building.

2. An analysis of the critical success factors as well as the risk considerations for land development, including issues such as holding period, carrying costs, development charges and levies, and taxation *(see Levies, Fees, Charges, Taxes and Transaction Costs on New Housing)*.

3. An identification of the nature and extent of financing gaps, if any, in land development today and the reasons.

   Factual evidence of financing gaps faced by the land development industry should be obtained through contact with financial institutions, developers and builders to determine lending practices, costs, and concerns regarding financing will need to be undertaken. The study should assess whether inability to access financing prevents new entrants from entering the market and the reasons for the inability to access financing, i.e., lack of equity, difficulty in servicing the debt, etc.

4. Building on the information gathered, the consultant should propose broad parameters for land-only mortgage loan insurance under different market conditions, including the premium level that would apply for loan insurance issued at key points in the development process, the loan-to-value ratio, and other underwriting terms and conditions. Commercial viability would be an underlying principle of these terms and conditions.

STUDY OUTPUT

The output of this study will be a report, which could be made available to the public through the Canadian Housing Information Centre (CHIC) at CMHC.

CONFIDENTIALITY

The consultant is expected to conduct the study in a discreet manner, and to maintain the confidentiality of any information collected during the course of the work.

EXPECTED LEVEL OF EFFORT

CMHC estimates that the level of effort required to complete this project is approximately 30-40 professional days.

PROJECT SCHEDULE

The contract is expected to be awarded by July 11, 1997. A start-up meeting may be held upon signing the contract. Study is expected to be completed December 9, 1997.

The schedule of payments will be determined when contract being awarded.

INSTRUCTIONS TO PROPONENTS

Proposals to undertake this work must including the following:

- **Background Information on Firm and Team**

Information must be included on the experience of the firm and of all individuals who will be working on this project. This information will include qualifications of the firm and team members to conduct the study, including previous experience in relevant areas. Collaboration between firms to ensure the right mix of expertise is acceptable.

- **Project Understanding**

Proponents should demonstrate an understanding of the subject matter and the task at hand.

- **Workplan**

A detailed plan for completing the project is required. This includes a description of each step required to complete the project, per the requirements set out in this proposal call. Time lines for completion, as well as the team members who will undertake the work must be detailed in each step.

- **Budget/Bid**

The budget should be broken down on the basis of labour, materials and expenses. Labour should be itemized by individual project team members, indicating total time they will devote to the project and their rate of compensation (hourly or daily). Provincial and federal taxes should be listed separately.

- **Deadline for Proposals**

The deadline for proposals is **June 27, 1997** Ottawa time. **Five copies** of the proposal are required to facilitate review by an internal advisory committee at CMHC. Proposals shall be directed to:

Shirley Tom
Strategic Planning, Policy and Marketing Division
CMHC
Room C8-301
700 Montreal Road
Ottawa, Ontario.
K1A 0P7

COMPETITIVE PROCESS

- **Advisory Committee**

An advisory committee has been established at CMHC to oversee this project. The advisory committee will be involved in consultant selection, reviewing reports and in determining directions to be provided to the consultant. The consultant will have a single contact at CMHC, but may be required to meet with the committee to answer questions and/or to discuss the report.

- **Selection Criteria**

Proposals will be analyzed and ranked on a scale of 100, based on the following factors and weighting. Proponents without appropriate qualifications or experience to do the work, an evident lack of understanding of the project requirements or without an adequate workplan could be disqualified, as could overly-expensive proposals.

- **Qualifications and Experience of Team (35 per cent)**

- direct work on similar projects, particularly actuarial studies
- academic qualifications and competencies relative to project requirements
- other relevant experience or qualifications
- useful contacts and resources

- **Project Comprehension (20 per cent)**

- demonstrated understanding of subject area
- demonstrated understanding of CMHC's requirements
- additional insights on project and requirements

- **Workplan (30 per cent)**

- logical organization and completeness of work steps
- allocation of time and resources
- creativity and insights
- clarity and simplicity of presentation
- adherence to deadlines

- **Value for Money (15 per cent)**

- cost relative to amount of work to be undertaken
- useful add-ons beyond basic project requirements
- allocation of tasks and time amongst team members based on qualifications

- **Invitations**

A select number of firms have been invited to submit proposals for this project. The list of invitees is attached as Annex A.

FURTHER INFORMATION

Proponents may contact Shirley Tom at (613) 748-2341 if they have any questions or require additional information. Information provided on any matters of substance to any one proponent will be conveyed to all other proponents.

APPENDIX B:

WINNIPEG REGION LAND DEVELOPMENT COMPANIES

WINNIPEG

Ladco
Qualico
Genstar
Nova Met
Cairns

St. Boniface Dev. Corp.
Solarch Design Ltd.
Settlers Homes
Riverside Realty
2405407 MB. Ltd.
Cecil Hopko
Frank Dixon
HWP Dev. Corp.
Joy Ventures
Akman Assoc.
Royal Mint Properties

REGION

H. Ratzer Holdings
Pine Hill Developments
Cameraco Developments
Kingsford Developments
Kildonan Ventures
Pioneer Properties
Bellview Homes
Betron Holdings
Grand Pines Developments
Kingscrest Developments
Terro Enterprises
Terracon Developments
Fairweather Properties
Kingswood Dev. Ltd.
Oakbluff Estates
River Ridge
Oakbank Ventures
Suburban Homes
Jenden Investments
Bald Enterprises
Westside Developments
Thunderhill Holdings
Procure Investments
Rockwall Holdings

APPENDIX C:
DEVELOPMENT PROCESS

1.1 ONTARIO

1.1.1 Land Use Controls in Ontario

Land development in Ontario is controlled by several processes and devices broadly referred to as the land use planning system. Land use planning legislation in Ontario (the *Planning Act*) establishes the framework for several planning documents which are the tools that control land development. The *Planning Act* also sets out the formal processes to prepare, amend and approve these documents and establishes the levels of government with the responsibility for their approval. Although the development approval processes remain largely the same, the legislation has changed several times in the last ten years. The implications of the recent legislative changes have been to reduce the legislative approval time frames (theoretically reducing actual approval time frames) and to make the natural environment a more important consideration in the overall development process. Responsibility for decision making and policy interpretation has also been transferred to lower levels of government.

The legislative requirements of the *Planning Act* related to process and timing contribute to uncertainties in the land development process, particularly related to the timing of development approvals. This uncertainty, in turn, has an impact on the ability of land development companies to obtain financing for development projects, at least in the early development stages.

A. Primary Planning Documents

There are two primary planning documents that control the use of land in Ontario: the municipal official plan and the municipal zoning by-law.

i. The Official Plan

Most upper-tier municipalities (Counties and Regions) and lower-tier municipalities (local municipalities) in Ontario have prepared an official plan to direct development in the planning area over a 20 to 30 year time frame. The official plan is a broad-based policy document that sets out the municipal vision for the future. It is the document used by municipalities when making long range planning decisions and when integrating their land use development objectives with their social, economic and natural environmental objectives. Municipalities may also link their official plan to other municipal initiatives such as sewer and water

servicing plans, community economic development and watershed plans, strategic and corporate planning initiatives and other inter-municipal undertakings.

Typically, an official plan contains a statement of the municipality's goals and objectives which are established primarily to manage and direct physical change and the effects on the social, economic and natural environments of the municipality. Broad policies dealing with municipal-wide planning issues and specific policies with respect to land use categories such as residential, commercial, employment and open space are also contained in an official plan. There are also policies related to the interpretation of the official plan and implementation procedures. It may also contain a description of the measures and procedures proposed to attain the objectives of the plan and for informing and obtaining the views of the public in relation to development applications and proposed revisions to the plan. The text of the official plan is accompanied by a series of maps or schedules dealing with the land use categories set out in the text, transportation, servicing and phasing and other related matters.

In the past, municipalities have attempted to designate as much land as possible for development. This was done to theoretically increase the value of the land owned by farmers around an urban area, to ensure that a lack of raw land designated for development did not drive up hose prices and to ensure choices in the market place. Typically, when the amount of land to accommodate growth over the planning period (20 years), based on population projections (often very optimistic), as much as 40% extra land was added as a buffer.

Over the years this approach created problems. It falsely inflated land prices, gave farmers and land purchasers false expectations when land might be expected to be developed and resulted to disputes, that often lead to Ontario Municipal Board hearings, on where the limited amount of development should go.

As a result, the province and other upper level approval authorities have required that local municipalities, when preparing official plans, be much more realistic in population projections and in the amount of land designated for development. Because municipalities are required, under the provisions of the Planning Act, to update their official plans every five years, there is adequate opportunity to amend the plan if growth is occurring faster than anticipated. This ensures that land supply does not become a problem.

However, when the practice of 'over-designating' land was stopped, municipalities which updated their official plans were not required to remove land development designations because of a lack of need. The principle of removing land development rights previously conferred on a parcel of land was not accepted by the approval authority or the Ontario Municipal Board. As a result, there are municipalities, particularly in low growth areas that continue to have land

designated for development well in excess of the 20 year needs, notwithstanding that one or two five year updates have occurred.

An official plan is approved by the Ministry of Municipal Affairs and Housing or its designate, which in the case of many lower-tier municipalities is the associated upper-tier municipality.

Based in the data collected as part of this study and on the land development experience of the consultants carrying out this study, having an official plan land use designation that would permit a particular development proposal is virtually a prerequisite for financing from a financial institution. But, having an approved official plan or secondary plan (see below) is insufficient to precipitate a loan from a financial institution. While the official plan or secondary plan establishes the principle of development of a particular parcel of land, there remains sufficient uncertainty in obtaining the other required planning approvals that the financial institutions are, at best, reluctant to lend money. The uncertainties related to the zoning and plan of subdivision processes (see below) are in terms of 'when' development will occur, not 'if' it will occur.

ii. The Zoning By-law

The comprehensive zoning by-law is the primary tool used by municipalities on a day-to-day basis to implement the policies of the official plan. The zoning by-law must conform to the policies and land use designations of the official plan, with some minor exceptions. Municipal councils initially enact a zoning by-law to set standards for development and to reflect existing land uses. Broadly stated, the standards deal with such matters as the maximum size of a structure relative to the lot upon which it is located, the relationship of the structure to the boundaries of the lot and the relationship between structures. The standards in the by-law are precise and are not open to interpretation. Zoning by-laws contain text, including a comprehensive set of definitions, general standards for such things as parking and specific standards for each zone category, including the range of uses permitted. The by-law text is accompanied by a series of maps illustrating the various zoning categories used in the municipality.

Zoning by-laws are typically amended on a site specific basis to permit new development, just prior to that development occurring.

Having the required zoning for a development application is not as critical, from a financing perspective, as an official plan designation (and draft plan of subdivision - see Section 1.1.1.B ii) because amending the Zoning By-law to permit the development is one of the last approvals granted by the municipality, long after much of the uncertainty has been eliminated. In many respects, rezoning of the property is used by the municipality as 'leverage' to ensure that other municipal

requirements are satisfied. In most cases, the actual content of the Zoning By-law amendment is not at issue. In fact, many applications for rezoning simple as for a zoning that would permit the proposed development - specific zonings and zone standards are not specified. The municipality itself often crafts the amendment.

B. Secondary Planning Documents

There are several secondary planning documents that, combined with the official plan and comprehensive zoning by-law, form the comprehensive set of tools used to develop land on Ontario.

i. Secondary Plans

Many official plans are amended by adding one or more secondary plans. These secondary plans apply to a specific geographic area within the municipality, are consistent with the overall official plan policies and land use designations but provide a much greater level of detail. Secondary plans have the same structure, format and approval process as the official plan and are prepared to comprehensively address a wide range of development issues unique to the area.

When secondary plans are required, they are as important as official plans, in terms of obtaining financing for a development project, according to the financial institutions interviewed. Financing generally cannot be obtained unless the secondary plan is in place.

ii. Plans of Subdivision

In Ontario, the most common tool to used create residential lots, is the plan of subdivision. The plan can be submitted for approval in conjunction with any other necessary development application, including an amendment to the official plan and can be processed concurrently. However, in the case of concurrent official plan/plan of subdivision applications, the plan of subdivision is not approved until after the official plan amendment is approved.

The plan of subdivision shows proposed public roads, residential lots and blocks (medium and high density) and other blocks for non-residential uses such as parks, schools and open space, the approximate dimensions of the proposed lots and blocks, and the proposed use of the lots and blocks. Approval of the draft plan of subdivision is granted, subject to a number of conditions imposed by the local municipality and various review agencies. Once these conditions have been satisfied, the plan can be registered and the lots are legally created.

The approval of a plan of subdivision (or plan of condominium - see below) is a critical milestone in the land development process. When approval of a plan of

subdivision is obtained, financial institutions are prepared to consider land development loans. There may be other factors or circumstances that preclude a developer obtaining a loan, even with an approved plan of subdivision, but without it, the chances are slim.

iii. Plans of Condominium

A plan of condominium is similar to a plan of subdivision in that blocks of land are legally created. However, the blocks of land created are not ultimately owned by an individual but rather by a condominium corporation. Each block will contain a number of dwelling units, typically in the form of townhouse or apartment units. The approval process for a plan of condominium and a plan of subdivision are virtually the same.

iv. Site Plan

Municipalities usually require that the development of all multiple residential units be subject to an approved site plan. Site Plan approval provides the municipality the opportunity to review the detailed aspects of development undertaken on individual properties and is a key component of the implementation of the Official Plan, Secondary Plans and Plans of Subdivision. Site Plans are usually prepared just prior to development.

Site Plans are negotiated between the landowner and the municipality; they are not subject to third-party review. Most municipalities have detailed requirements for a Site Plan submission. The site plan deals with specific design details, as set out in the *Planning Act*, including resident and visitor parking, driveways and surfacing of such areas, walkways, landscaping, entrance ways, lighting, walls, fences, storage of garbage, easements, watercourses and stormwater management, grading, etc.

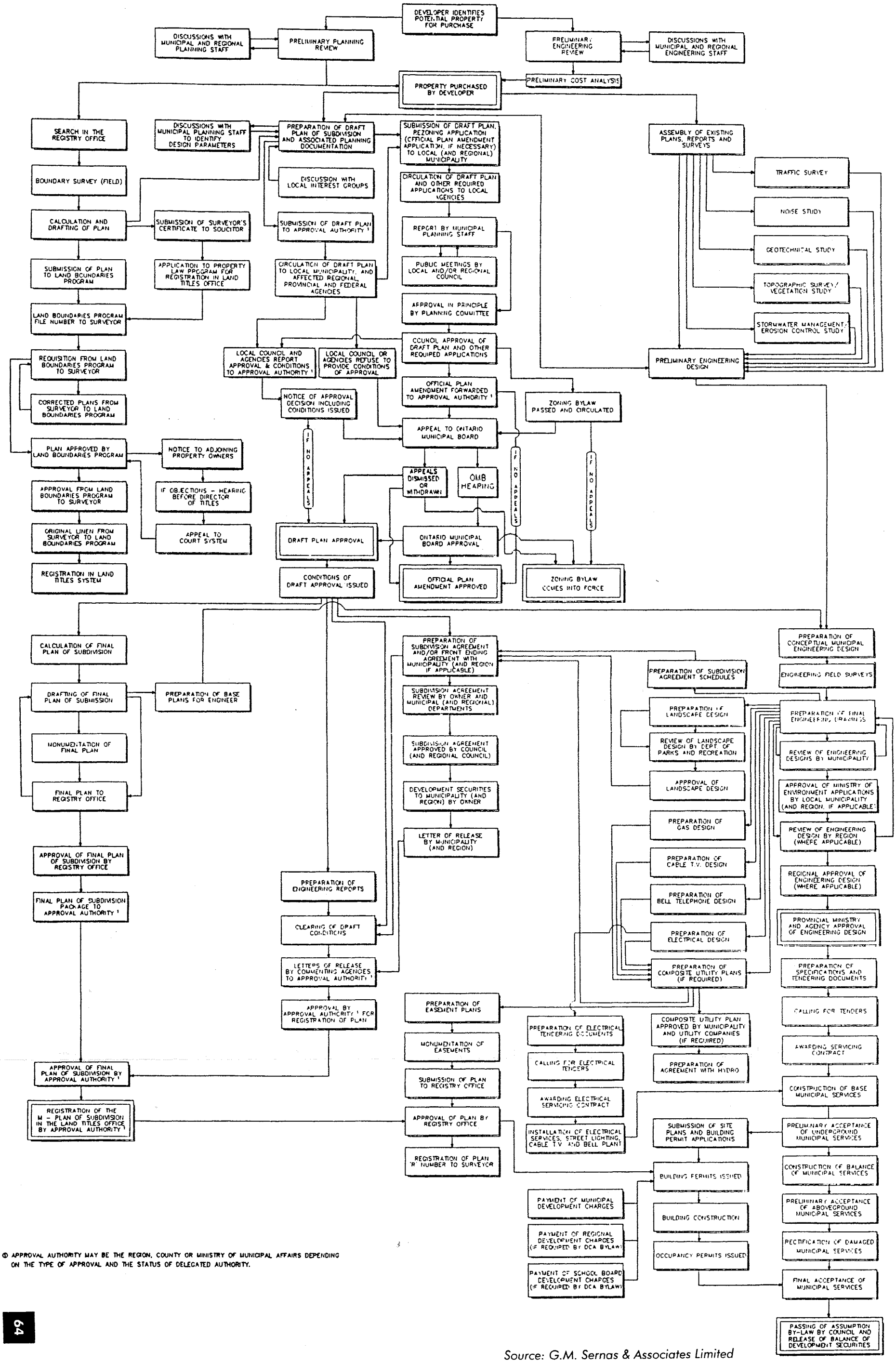
Obtaining approval of a site plan occurs very late in the land development process, in some cases after site servicing has commenced. As a result, an approved site plan is not a key milestone from a financing perspective. However, there may be isolated situations were site plan approval is important to the financial institutions.

1.1.2 Land Development Process in Ontario

For the purposes of illustrating the land development process in Ontario (Figure A1.1), the example of advancing a vacant parcel of land from a rural or agricultural state to an urban residential state is described below. The process involves three applications: an official plan amendment, a draft plan of subdivision, and a zoning by-law amendment. These three application processes usually proceed concurrently but in some circumstances proceed separately.

FIGURE A1.1

LAND DEVELOPMENT PROCESS



① APPROVAL AUTHORITY MAY BE THE REGION, COUNTY OR MINISTRY OF MUNICIPAL AFFAIRS DEPENDING ON THE TYPE OF APPROVAL AND THE STATUS OF DELEGATED AUTHORITY.

Source: G.M. Sernas & Associates Limited

i. Official Plan Amendment

The first phase in the land development process is to ensure compliance with the relevant official plan. If upon analysis of the official plan, it is determined that the lands are not currently designated for the appropriate form of development (urban residential development, in this case), an official plan amendment will be required to designate the lands for development.

The official plan amendment process is initiated by submitting an application to the local municipality and to the authority that has the legislative power to approve amendments to the official plan. Within 45 days of the submission of the application, the local municipality must give public notice of public meeting. The purpose of the meeting is to provide the public with information related to the application and to obtain public input. Within 90 days of the submission of the application, the municipal council must make a decision on the proposed official plan amendment application, either adopting the application and recommending its approval to the approval authority or refusing the application. If the municipal council refuses to adopt the application, the applicant has 20 days to appeal the decision to the Ontario Municipal Board (OMB), a impartial quasi-judicial administrative tribunal that hears and resolves disputes on land use planning and related matters.

Should the municipal council choose to adopt the proposed official plan amendment, it is forwarded to the approval authority within 15 days. The approval authority, either the Ministry of Municipal Affairs and Housing or an upper-tier municipal council, consults with other ministries and agencies, such as the local Conservation Authority, the Ministry of Natural Resources, the Ministry of Environment and Energy, the Ministry of Transportation and the Ministry of Citizenship, Culture and Recreation before making the final decision regarding the approval of the official plan amendment. The decision of the approval authority can also be appealed to the OMB. If no appeal is filed, the decision is final after 20 days. The official plan amendment process is shown schematically on Figure A1.2.

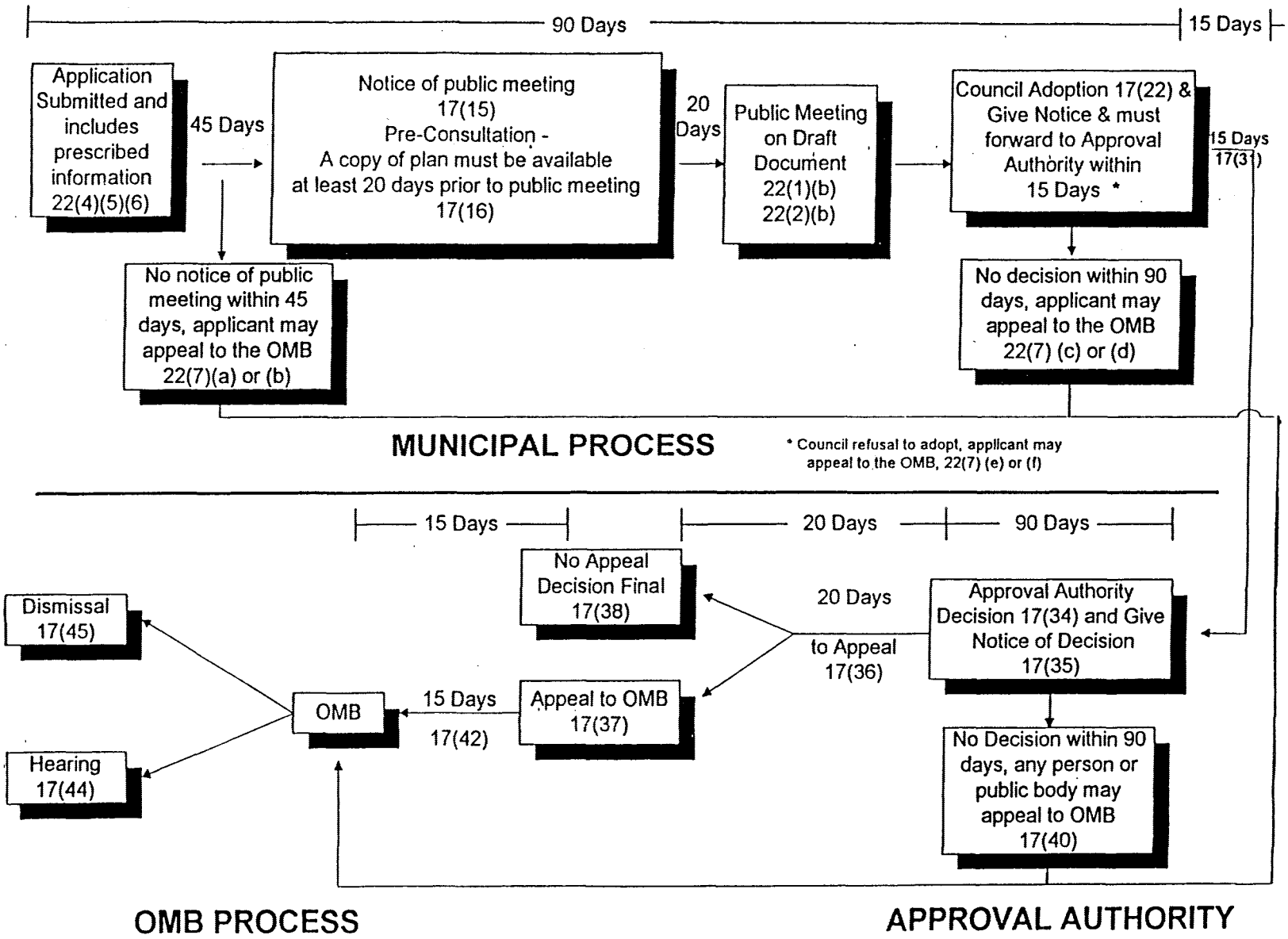
Once the official plan amendment is approved and there is an appropriate official plan designation on the subject property, the approval of a draft plan of subdivision and a rezoning can be considered.

ii. Draft Plan of Subdivision Process

The second aspect of the land development process is the submission to the approval authority of an application for approval of a plan of subdivision. This application (and an a application to amend the zoning by-law) are usually submitted to the local municipality concurrently with the application to amend the official plan (if required). This ensures that the local municipality and the approval

FIGURE A1.2

OFFICIAL PLAN AMENDMENT PROCESS



Source: Ontario Ministry of Municipal Affairs and Housing

authority have sufficient information to consider the development proposal in a comprehensive manner. The plan of subdivision is normally accompanied by supporting information and reports dealing with specific development issues such as municipal servicing, natural environmental considerations, stormwater management, traffic, archaeological investigations, etc. During the course of the approval process, modifications will normally be made to the plan of subdivision in response to issues raised and resolved.

The approval authority, either a local municipal council, an upper-tier municipal council or the Ministry of Municipal Affairs and Housing, is required to give notice of a public meeting, hold the public meeting and make a decision regarding the application within 90 days. If the approval authority does not make a decision, approves or does not approve the application, it may be appealed to the OMB, within 20 days of the decision, by the proponent, a member of the public or a commenting agency.

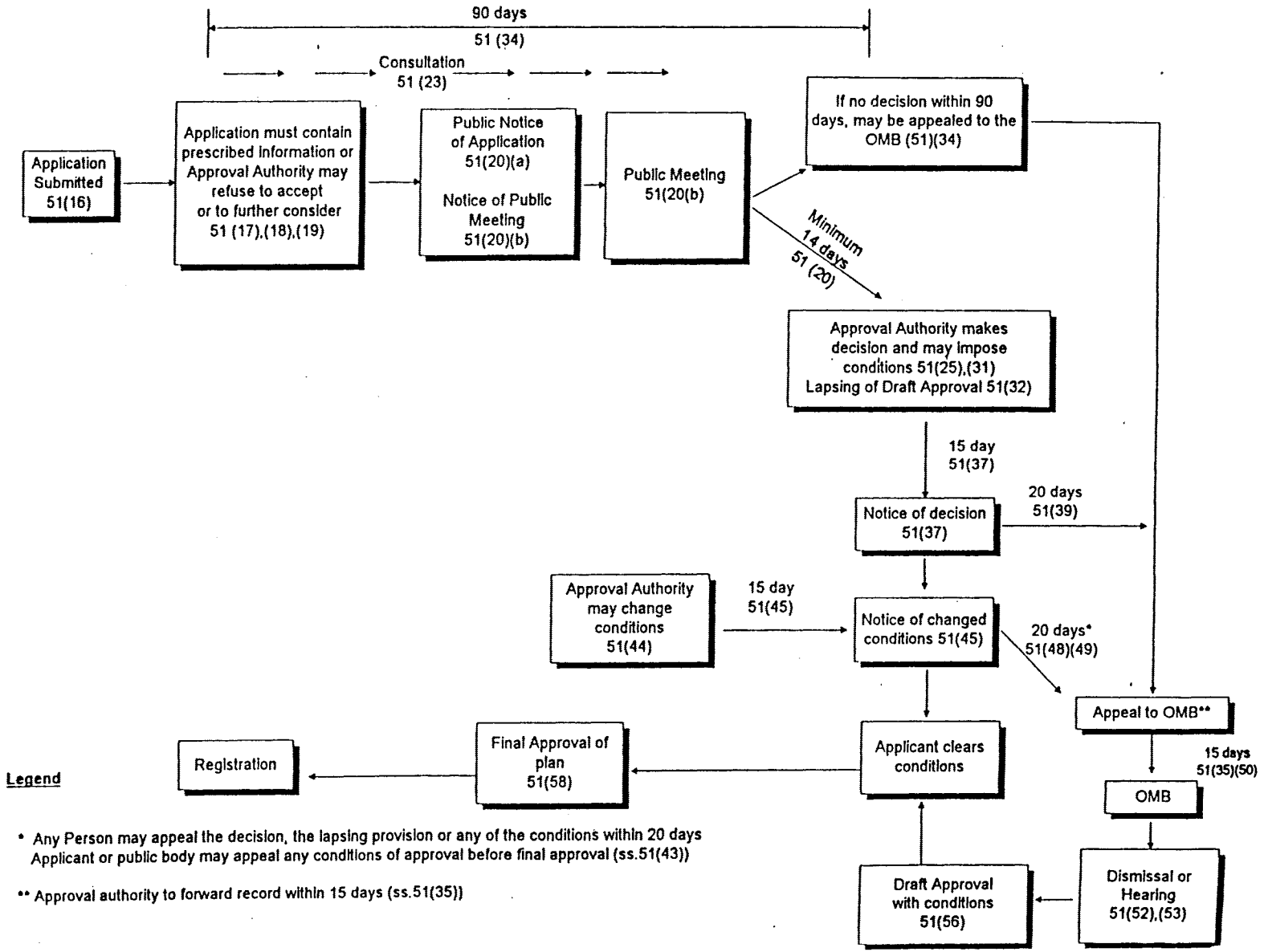
When the approval authority issues draft plan approval (the first stage of subdivision approval), it imposes conditions that need to be satisfied by the applicant before the draft plan of subdivision can be released for final approval and registration. Draft plan approval is granted for 3 years. If, at the end of 3 years the plan has not been registered, the proponent can apply to the municipality and approval authority for a 1 year extension. Subsequent applications for extension can be submitted on a yearly basis. When granting approval extensions, or at any other time prior to plan registration, the approval authority can impose new conditions of draft plan approval.

With draft plan of subdivision approval in hand, land developers often delay further activity on the project until the development of the site is 'more appropriate'. Factors that often dictate when the developer will move towards plan registration include:

- market conditions;
- sequence of development or phasing;
- availability of financing;
- the need to keep a construction arm of the development company busy;
- other projects taking higher priority; and
- entering into an agreement with a house builder.

The major conditions of draft plan approval usually include rezoning the property, entering into a subdivision agreement with the local municipality, completing further supporting studies and completing the detailed engineering design. The subdivision agreement sets out the detailed requirements for the development of the subdivision. A flowchart illustrating the plan of subdivision approval process is shown schematically on Figure A1.3. Once all of the conditions of draft plan

FIGURE A1.3
PLAN OF SUBDIVISION PROCESS



Source: Ontario Ministry of Municipal Affairs and Housing

approval have been satisfied, the approval authority issues final draft plan approval. Within 30 days, the plan of subdivision must be registered or the approval authority may withdraw draft plan approval.

During the course of clearing the conditions of draft plan approval, a draft M-Plan is prepared. The M-Plan is the document that establishes the legal description for all of the lots, blocks and roads within the plan of subdivision and, when registered, legally creates the lots, blocks and roads thus permitting the transfer of title.

iii. Zoning By-law Amendment/Rezoning

The application to rezone of the lands can be processed concurrently with the plan of subdivision process. However, because many municipalities define the boundaries between zones through legal surveys, zoning by-law amendments are often not finally approved until the plan of subdivision is approved and the subsequent registered plan prepared.

The application to amend the zoning by-law is made to the local municipality - upper tier approval of zoning by-law amendments is not required. The municipality will give public notice and hold a public meeting, often in conjunction with the public meetings for the official plan amendment and the plan of subdivision. If council does not make a decision within 90 days, the applicant may appeal to the OMB. The municipal council makes a decision, either to pass the zoning by-law, modify it or reject it. This decision can be appealed to the OMB by the applicant or a member of the general public within 20 days of the decision. The Zoning By-law process is shown schematically on Figure A1.4.

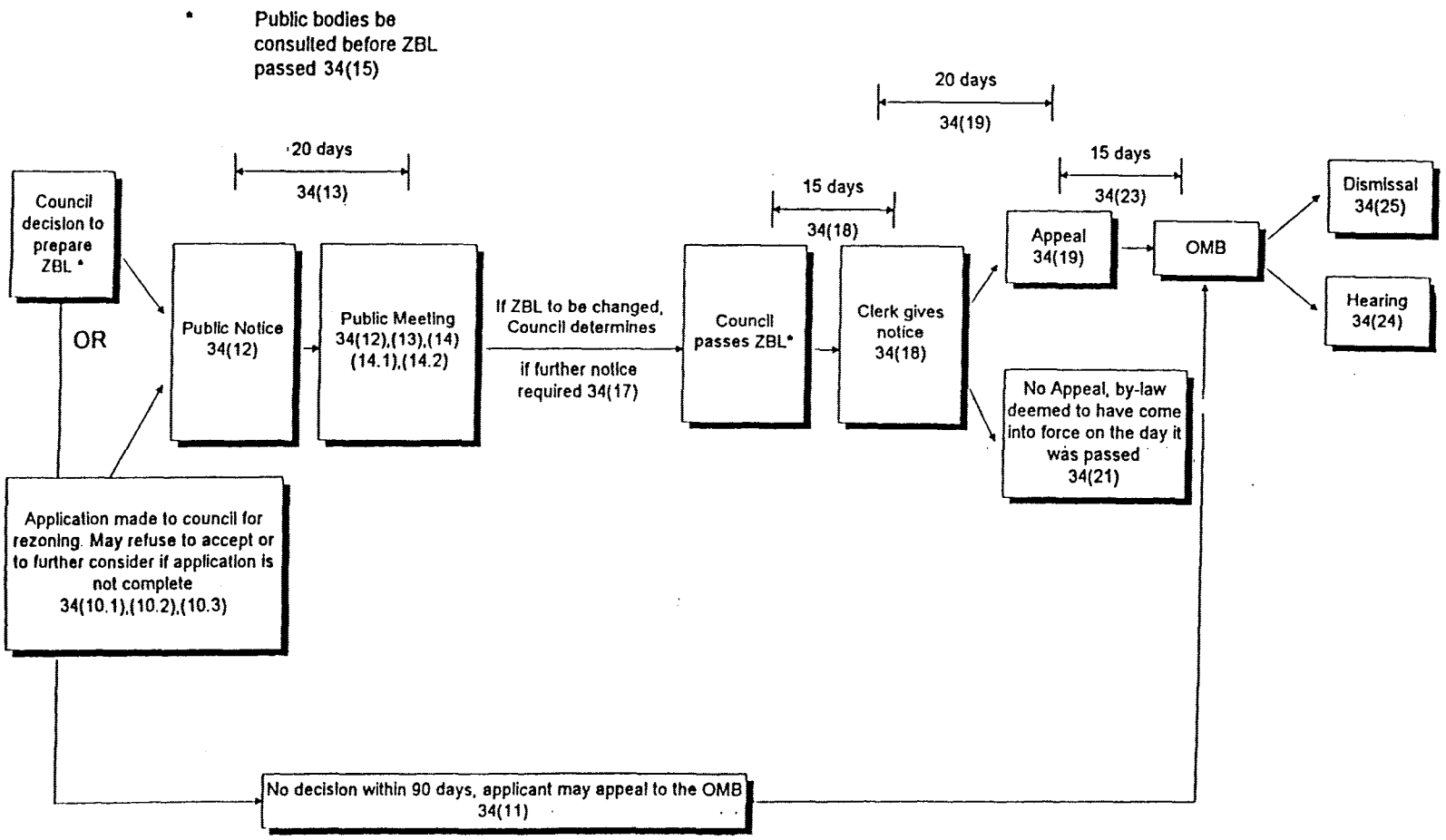
Once the plan of subdivision is registered and the zoning by-law is deemed to have come into force and effect, no further planning approvals are normally required for low density residential dwelling units.

iv. Site Plan Approval Process

Most municipalities impose, as a condition of draft plan approval, the requirement for an approved site plan prior to the development of medium and high density residential blocks. The negotiation and approval of the site plan involves the municipality and the landowner; there is no third-party review of the site plan. The public is not involved in the process and cannot appeal the approval of a site plan to the OMB. Figure A1.5 illustrates a *typical* site plan approval process.

FIGURE A1.4

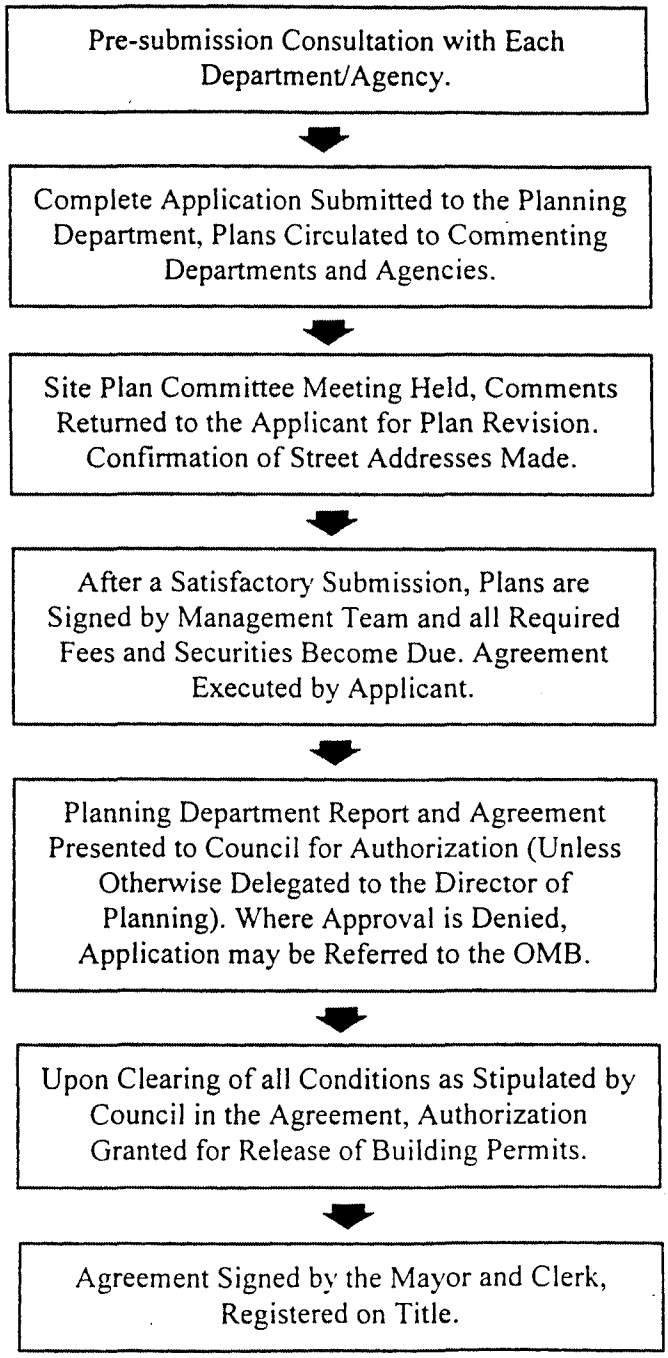
ZONING BY-LAW AMENDMENT PROCESS



Source: Ontario Ministry of Municipal Affairs and Housing

FIGURE A1.5

SITE PLAN APPROVAL PROCESS



As each successive planning approval is obtained, there is an incremental increase in the value of the land. However, there is no standard land value that can be assumed for raw (agricultural) land or for land at any specific point in the land development process. Further, a standard proportional or percentage increase in land value cannot be quantified for each stage - there are too many variables beyond obtaining the planning approvals. The following information is intended to assist the reading in understanding the complexities of this issue.

Situation 1 - No Planning Approvals in Place

With no planning approvals in place ie. the land is designated and zoned agriculture or rural, one would assume that a relatively uniform value per hectare (for farmland) could be established by a company wanting to purchase land as part of a long term land banking initiative. This is not the case. Some land is inherently better for farming than other land (better soil condition, better drained etc.) and therefore demands a higher price, even as farmland. In addition, while designated and zoned for agricultural uses, land will be more valuable to a land developer if it is adjacent to land already designated for urbanization or is in the path of development. From another perspective, a development company that is under pressure to add to its land bank will pay more than one which is not.

All of these factors, and others, contribute to a wide price range which a farmer might expect to receive for the land. It is the initial price that forms the basis for subsequent incremental increases in value as the land proceeds through the development process.

Situation 2 - Official Plan Designation in Place

Within a municipality, land designated for residential development in the official plan can have wide ranging values. Factors influencing values include:

- proximity to developed land;
- phasing or stage of development of the land;
- existence of an approved secondary plan, when one is required prior to development;
- availability of water and sewage and other municipal services; and
- the pace at which development is occurring.

Situation 3 - Official Plan, Zoning and Plan of Subdivision in Place

The value of land with all the planning approvals in place is influenced by all the factors listed in situation 2, above (except the need for a secondary plan). Price is also influenced by how well the housing product responds to current market conditions and the size of the project, along with specific conditions of draft plan approval that need to be satisfied prior to development proceeding.

The above noted variables illustrate that the significant incremental value additions in successive stages of the approval process cannot be quantified, except on a parcel by parcel basis.

1.1.3 Planning Approval Time Frame

Assuming that all development applications are submitted and processed concurrently, the shortest period of time within which approvals could be granted, based on the time frames set out in the Planning Act is 215 days or about 7 months (for the official plan amendment). However, during the course of reviewing the development proposal and the supporting documentation, issues arise that need to be addressed through further study. Significant changes to the proposal may necessitate additional public meetings. In addition, considerable time is required to prepare the material contained in the subdivision agreement and to obtain the approval of the local municipality. An appeal to the OMB can further delay a proposal for many months (12 to 18+). As a result, the approval of each development proposal follows its own time frame. However, 20 to 30 months from submission to final approval is not uncommon.

The following chart illustrates the simplified planning approvals process (Figure A1.6).

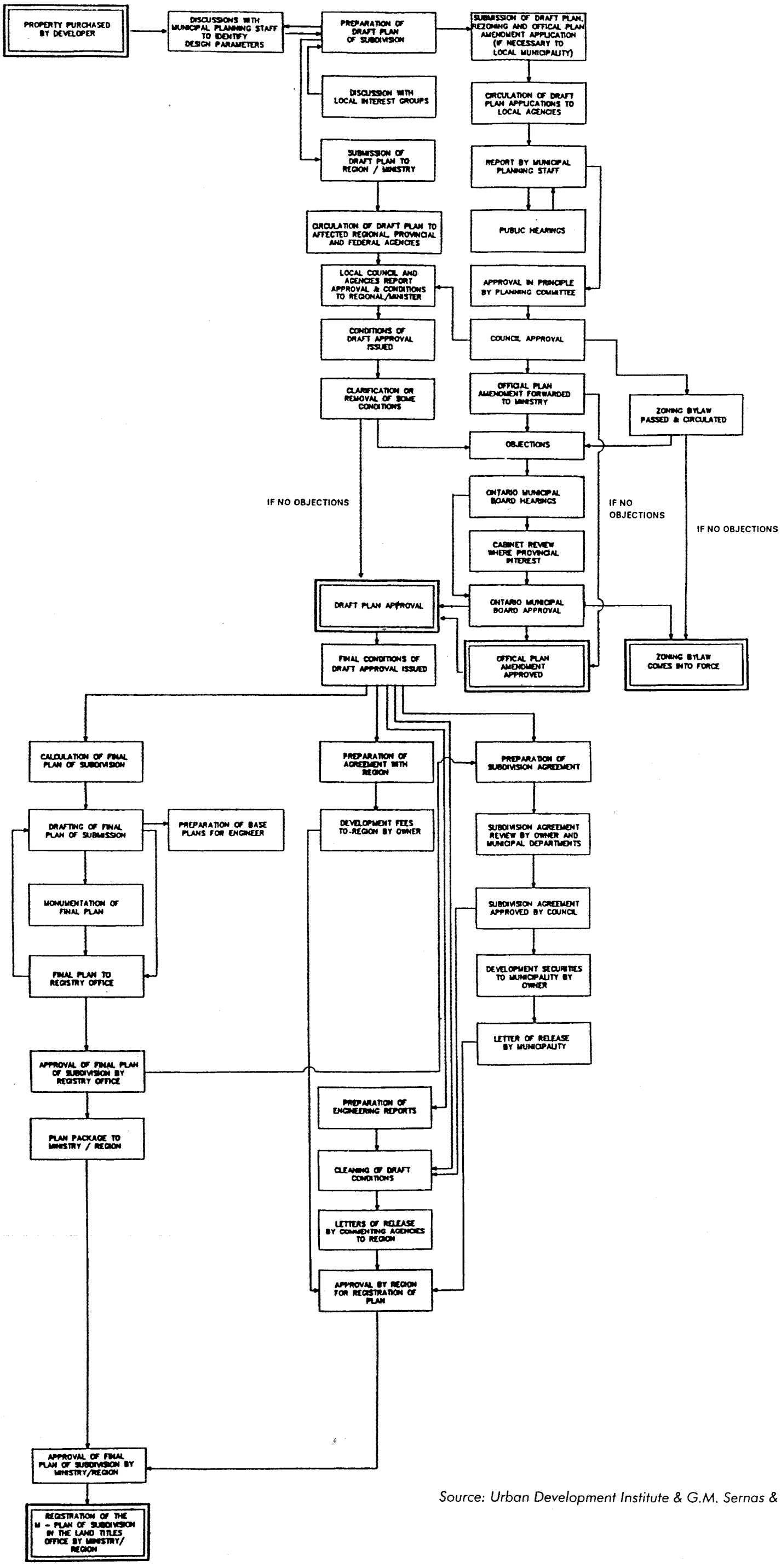
1.1.4 Planning Legislation and Approvals Impacts

In the last ten years, the planning approval process in Ontario has been viewed by all sectors involved in the land development process as long and unduly complicated. In that time there have been several attempts, both legislative and procedural to rectify the situation. To date, these attempts have resulted in minimal reductions in approval time frames. However, the full impact of the most recent initiatives may yet to be realized. As a result of this lack of change, participants in the land development business (development companies and financial institutions), can estimate reasonably accurately the anticipated approval time frame for individual parcels of land, based on their experience, the status of the land and other variables. From time to time, these estimates may be somewhat understated but this is to be expected in a process with many uncertainties. Because there has been so little change in the actual approval times, the land development industry continues to make decisions based on past experience. Concerted efforts are made by the development companies to speed up the approval process on a project by project basis. Some marginal success may be achieved which may, in turn, result in slightly higher returns on investment. Reducing time frames reduces overall carrying costs although the development companies interviewed indicated that carrying costs represent a small proportion of the overall development cost.

In order to reduce some of the uncertainty, many of the development companies and financial institutions are not prepared to become involved until the major planning approvals are in place (the appropriate official plan/secondary plan designation and an approved draft plan of subdivision), as previously described.

FIGURE A1.6

SIMPLIFIED PLANNING APPROVALS PROCESS



Source: Urban Development Institute & G.M. Sernas & Associates Limited

In any event, the development industry simply recognizes the realities of the land development process and incorporates those realities into its business decisions.

1.1.5 Real-Time Development Approvals

Based in interviews with selected representatives of a number of land development firms and the experience of planning consultants, the length of time required to obtain the necessary municipal planning approvals in the GTA does not vary significantly or consistently from municipality to municipality. Approval times are more contingent on whether or not a site specific amendment to the official plan is required and the complexity of site specific issues that may arise.

In the simplest of cases where only a plan of subdivision is required in a location that could be characterized as infilling and where no significant issues arise, approvals have been obtained in as little as 4 months. These circumstances are rare. A more common time frame for obtaining draft plan of subdivision approval is in the 12 to 18 month range.

Approvals involving amendments to the official plan and zoning by-law, along with draft plan of subdivision approval take considerably longer on average. A minimum of 18 months should be assumed but a number of non-technical variables including the scheduling of public meetings and municipal elections can delay the process many months.

Throughout this report, there are numerous references to delays in the development approval process. The characteristics of the land development approval process do not 'create delays' in the process which result in difficulties in obtaining financing - it simply takes a long time to go through the process, whether or not significant site specific issues arise. As a result, these references to delays should not be interpreted as implying that there are solutions readily available that, if implemented, would significantly speed up the approval process and therefore resolve financing problems. Longer approval time frames often reflect the need to reassess fundamental planning policies (in the case of an official plan amendment) or complex technical issues that might involve sensitive natural areas, traffic impacts or availability of municipal services. In most cases, these two types of issues are known at the outset of the development approval process and don't arise unexpectedly part way through. As a result, it is generally understood by the developer, the municipality and the approval authority that the approval of a particular development application is going to take longer than another. This reality is simply built into developer's business plan.

This is not to say that there are never situations where major issues arise unexpectantly that delay the anticipated approval time frame. However, these situations are the exception, not the rule.

How the land development process relates to financing and makes loans more risky or lenders reluctant to make loans is particularly important to this study. As outlined in Section 5, lenders are reluctant to make loans until the major planning approvals (official plan

amendment, rezoning and plan of subdivision) are in place. It is the lenders position that only at that stage is the timing of the development known with sufficient certainty to warrant the consideration of a land development loan. A loan at this stage is by no means guaranteed, particularly if the lending institution is of the opinion that the proposed housing product does not respond to current market conditions.

In the majority of 'greenfields' residential development situations, the question is not 'If development will occur..' but 'When development will occur..". This uncertainty, particularly in the early stages of land development, is problematic for the lending institutions who appear to want a clearly defined, relatively short period of time within which their loan will be discharged. This leads to their reluctance to provide loans in the early development stages. In addition, in Ontario, the housing market is sufficiently volatile that it cannot be predicted with any level of certainty two or three years in advance of a particular product being brought on stream. This situation also makes lending institutions reluctant to provide early stage loans.

As noted in Section 1.1.4, there have been attempts in Ontario to streamline the land development process in order to reduce uncertainty and costs. The very limited success has been insufficient to materially alter the lending practices of the financial institutions.

1.2 MANITOBA

1.2.1 Land Use Controls in Manitoba

Land development in Manitoba is regulated by three principal processes namely; development plans, zoning by-laws, and subdivision procedures. Throughout many Canadian jurisdictions the processes and procedures are characterized by similar steps and variations occur as a result of a particular administrative process. The key elements of each principal process is outlined in the following subsections. Within Manitoba two separate Acts of legislation govern land use planning. The City of Winnipeg Act regulates the land development process in Winnipeg. Outside of Winnipeg, The Planning Act of Manitoba is applicable. Both Acts are very similar with respect to the basic processes governing development plans and zoning by-laws. Significant differences in process and procedure are more evident regarding the subdivision process.

1.2.1.1 The Development Plan

The development plan is a broad policy document which provides long term direction with respect to the nature of land use and associated land use decisions. It is generally intended to deal with a realistic planning horizon of 10 to 20 years. Development Plan reviews take place as required or within 5 years. The two key components of a development plan are a land use policy map which designates land use policy areas for specific use (ie: Residential, Commercial, Industrial) and a series of policy objectives and goals. The policy statements and policy maps are used in conjunction with each other to determine if specific development

proposals are consistent with the provisions of this governing document. Should a proposal contravene the provisions of a development plan in a fundamental fashion it is generally rejected. Where a proposal does not conform with the specific provisions of a development plan, but does not contravene the spirit and intent of the document, a development plan amendment can be considered. Development Plans generally illustrate the relationships between various land uses and the most desirable long term use of the lands. Approval of Development Plans and amendments under The City of Winnipeg Act is designated to the Minister of Urban Affairs. For Development Plans and Amendments under The Planning Act of Manitoba, the designated approving authority is the Minister for Rural Development. Figures A1.7 and A1.8 illustrate the Development Plan Approval and Amendment Process for both The City of Winnipeg Act and The Planning Act of Manitoba.

1.2.1.2 The Zoning By-law

As with the Ontario context, zoning by-laws established under the provisions of The City of Winnipeg Act or The Planning Act of Manitoba must conform to the provisions contained within a development plan. Where the development plan is long term in nature, the zoning by-law deals with existing conditions. The zoning by-law establishes zoning districts based on actual property lines. For each zoning district or category a series of permitted, conditional or prohibited uses are established with a corresponding set of development standards and criteria.

Zoning by-laws, unlike development plans, are adopted and amended by local governments and do not require Ministerial approval. Figures A1.9 and A1.10 illustrate the zoning by-law process for both The City of Winnipeg Act and The Planning Act of Manitoba.

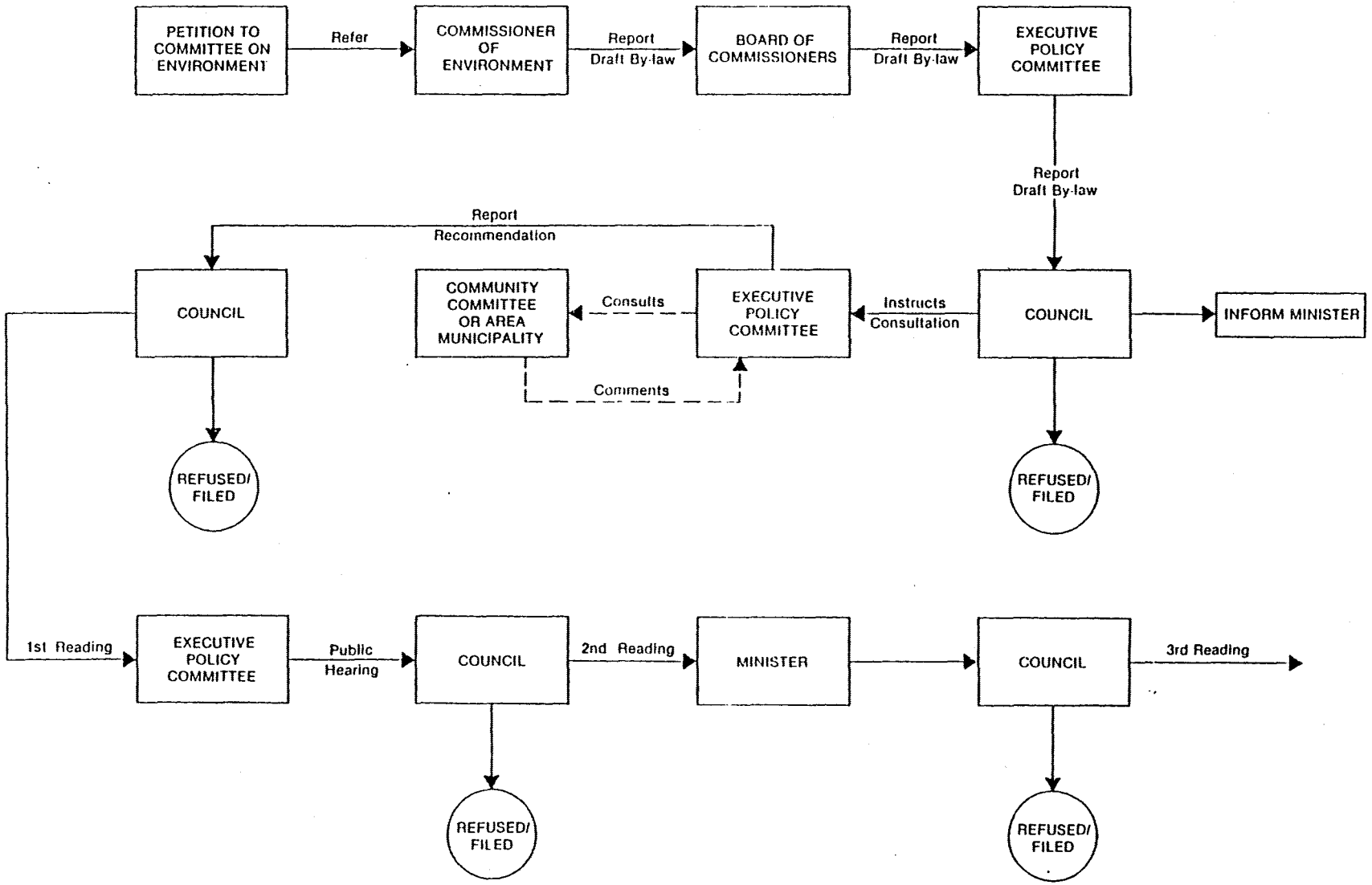
1.2.1.3 The Subdivision Process

The subdivision process, while governed by legislation, is to a greater degree an internal administrative process than either the development plan or zoning by-law. The processes under The City of Winnipeg Act and The Planning Act are varied and distinct.

Two forms of subdivision review are possible under the City of Winnipeg Act. If a proposal does not involve creating any new public streets and no change in existing zoning is required it can be dealt with as a "short form" subdivision. A short form subdivision does not require a public hearing for approval. If a proposed plan of subdivision results in the creation of a new street and/or a zoning change a "long-form" subdivision process is initiated which also requires a public hearing. Figures A1.11 and A1.12 illustrate both short and long form subdivision processes. For The Planning Act of Manitoba one subdivision review and approval process is utilized. Figure A1.13 illustrates this process as outlined in The Planning Act of Manitoba.

FIGURE A1.7

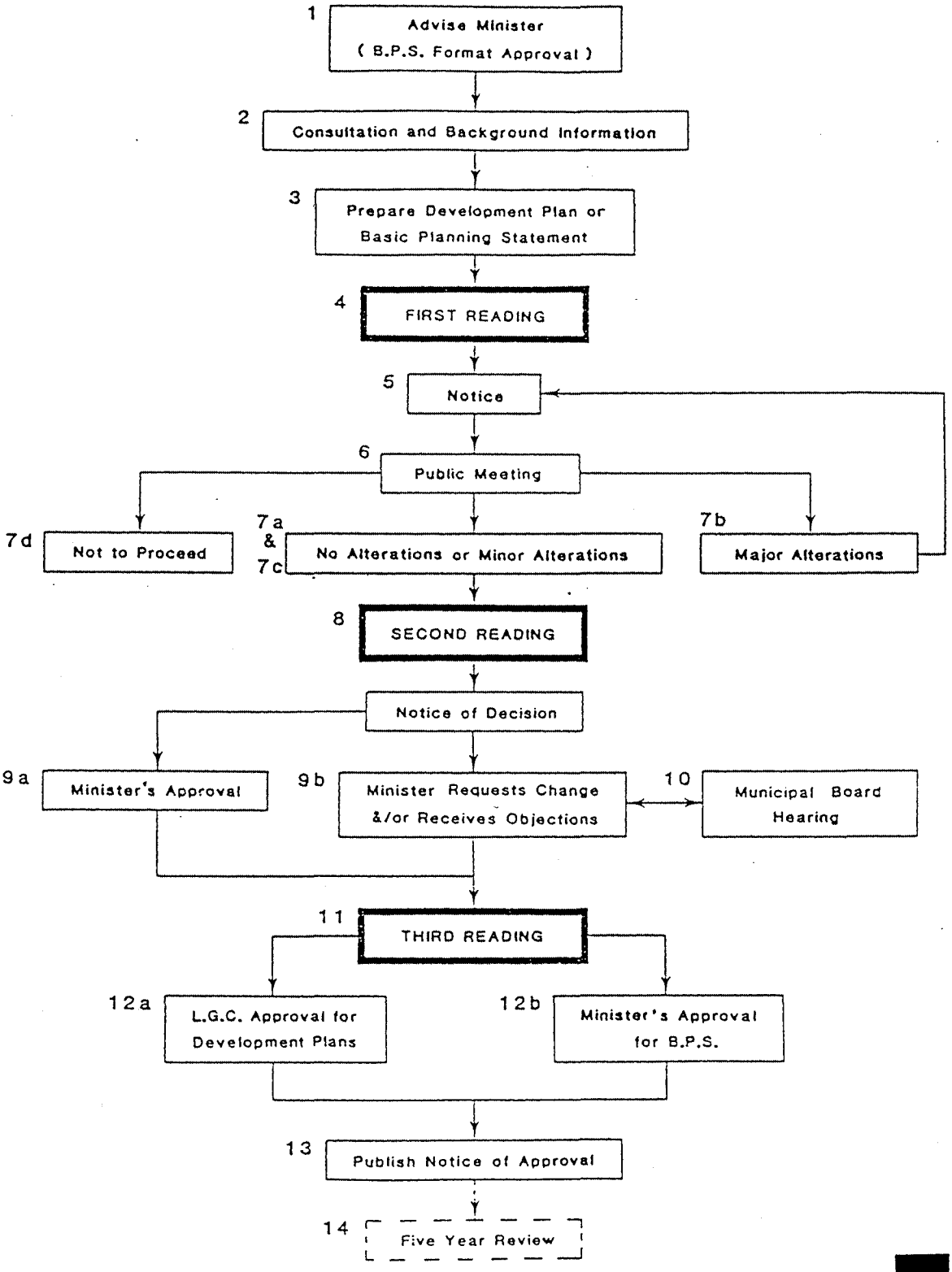
DEVELOPMENT PLAN PROCESS (CITY OF WINNIPEG)



Source: City of Winnipeg

FIGURE A1.8

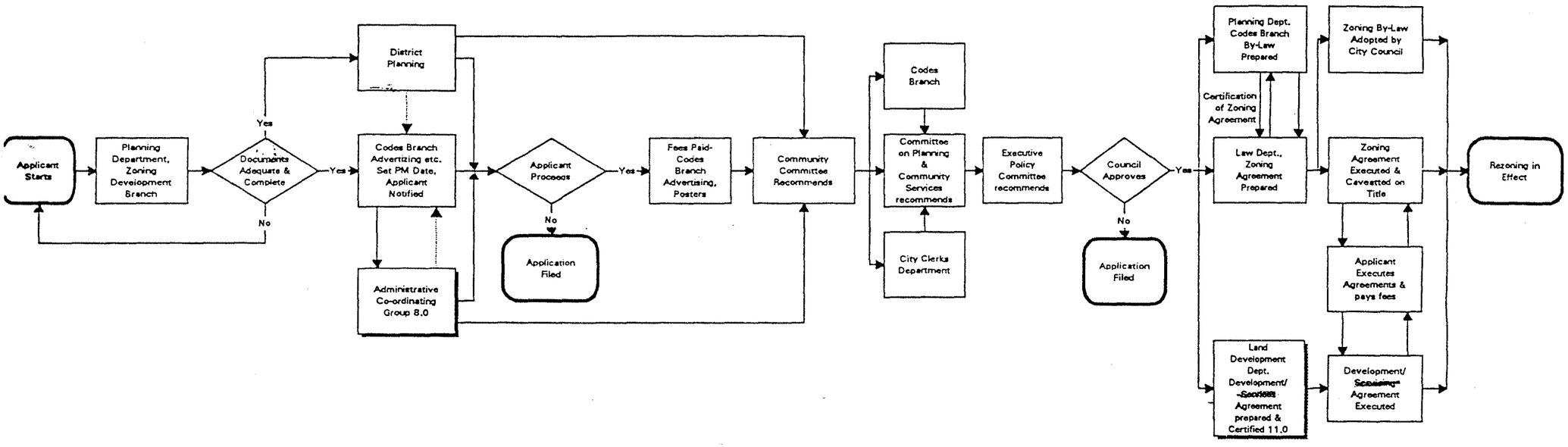
DEVELOPMENT PLAN PROCESS (PROVINCE OF MANITOBA/THE PLANNING ACT)



Source: Province of Manitoba

FIGURE A1.9

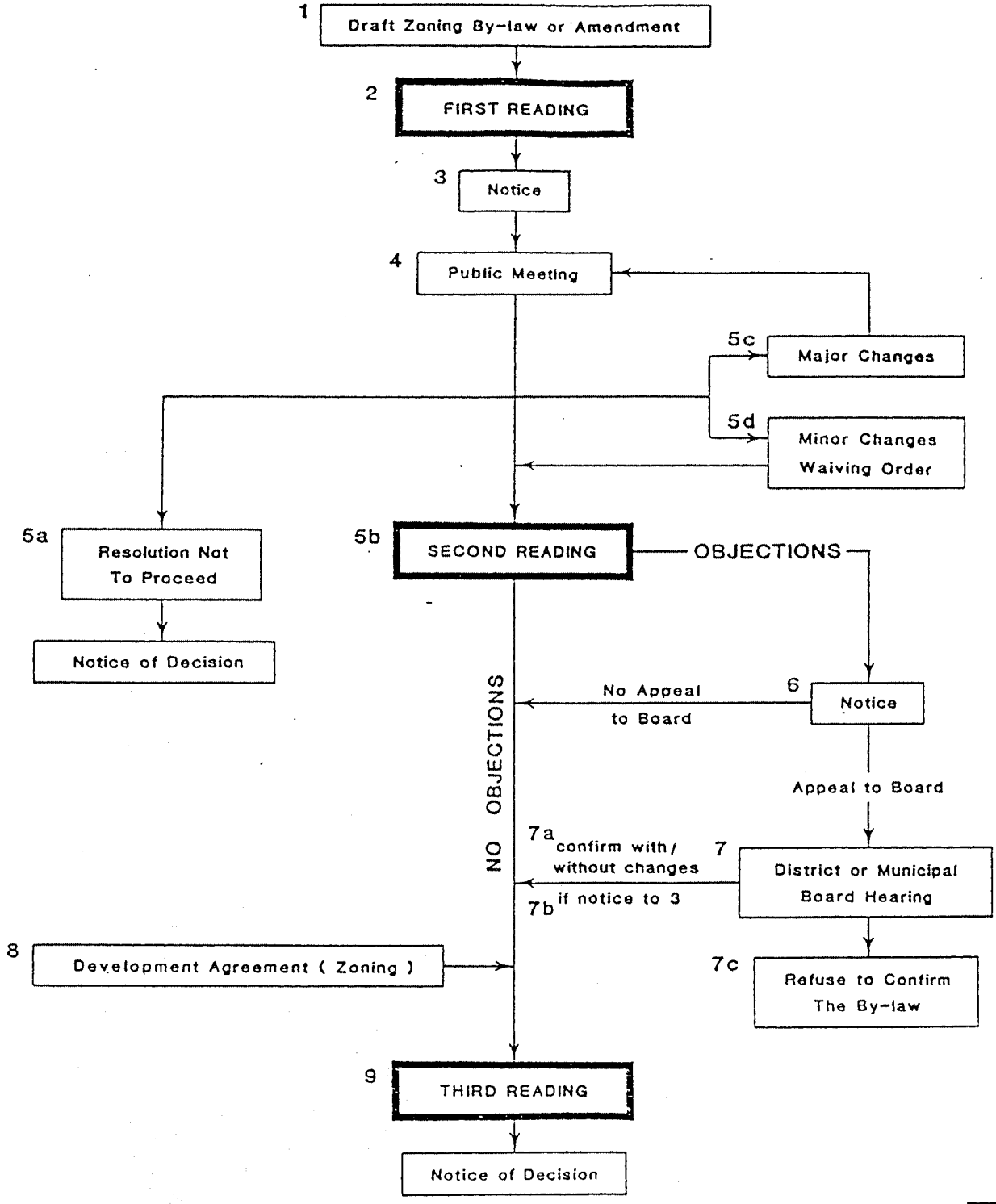
ZONING PROCESS (CITY OF WINNIPEG)



Source: City of Winnipeg

FIGURE A1.10

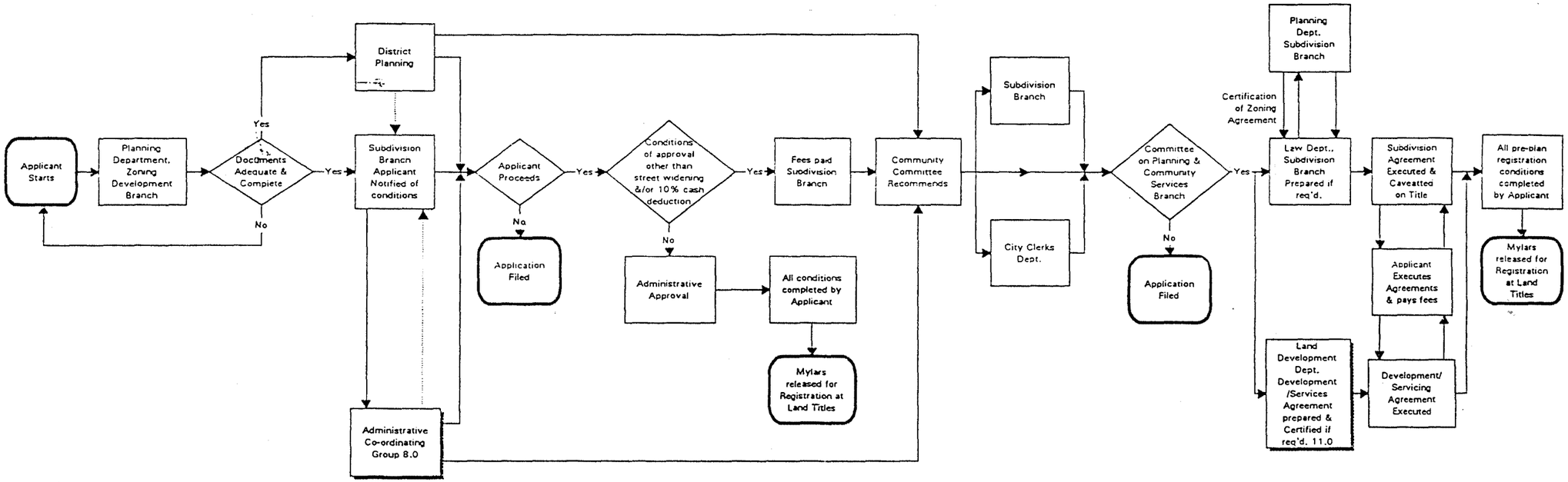
ZONING PROCESS (PROVINCE OF MANITOBA/ THE PLANNING ACT)



Source: Province of Manitoba

FIGURE A1.11

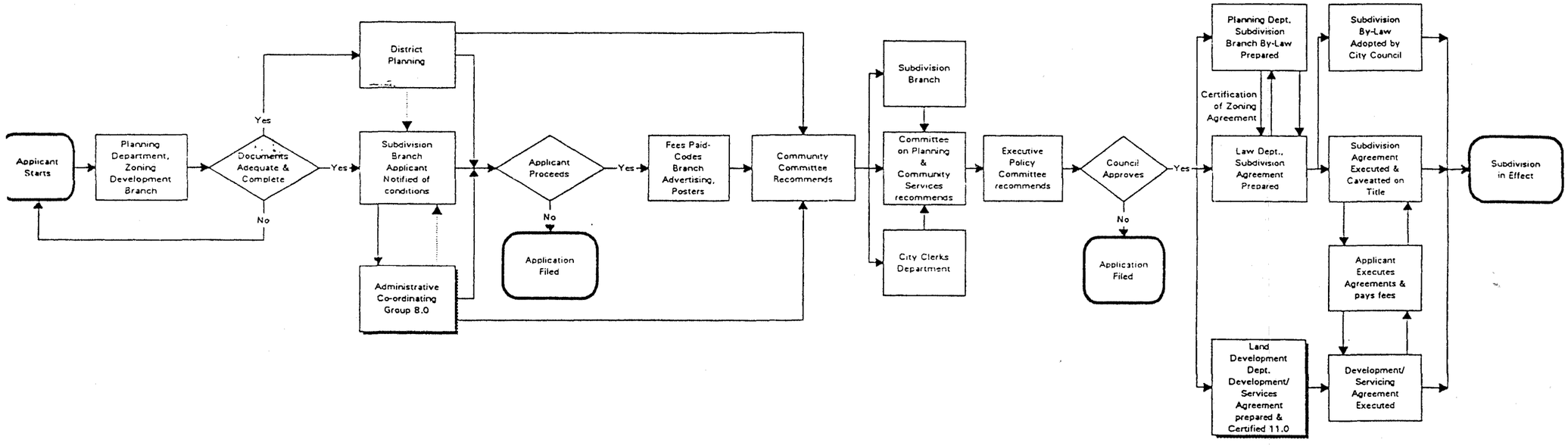
SHORT-FORM SUBDIVISION PROCESS (CITY OF WINNIPEG)



Source: City of Winnipeg

FIGURE A1.12

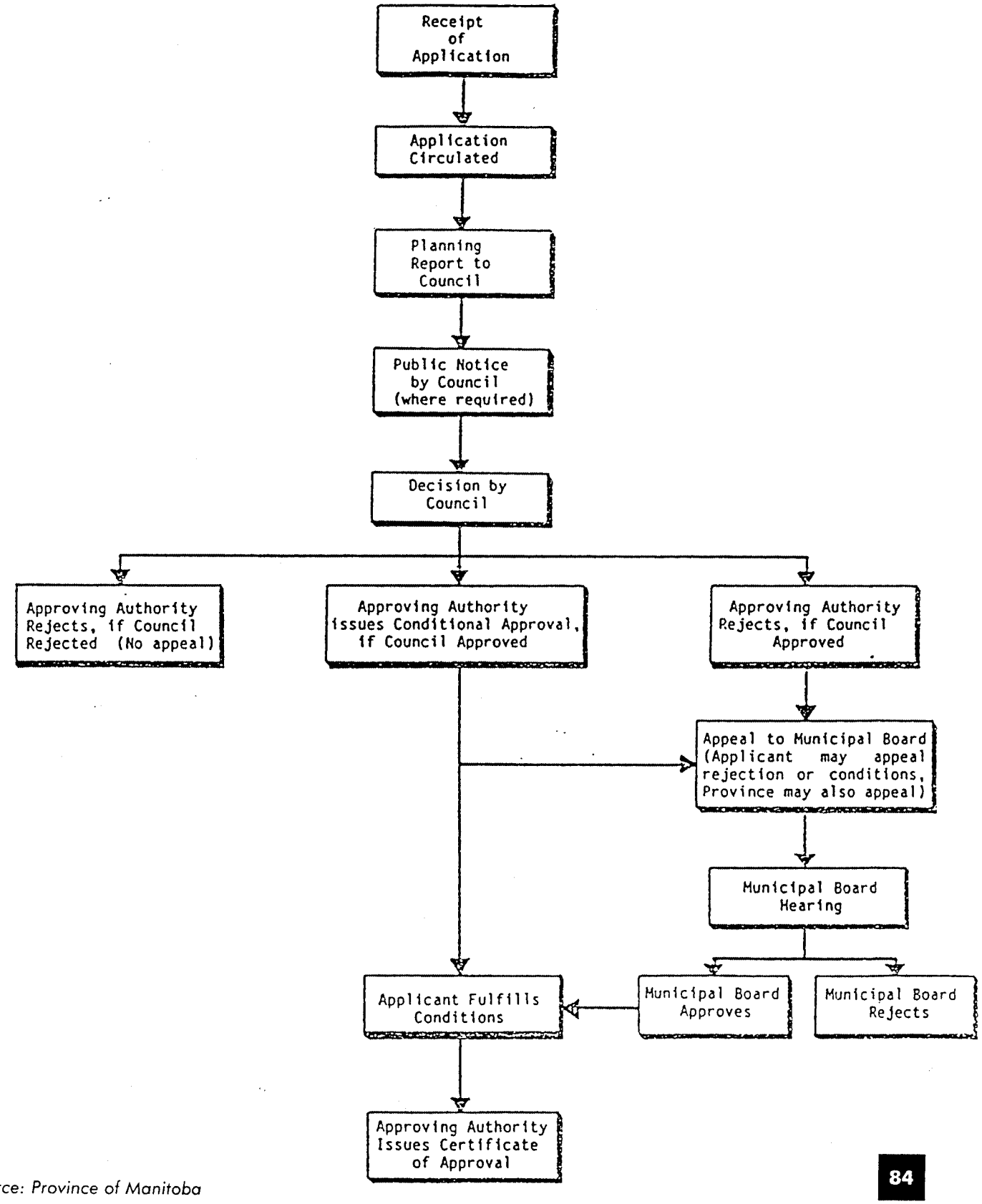
LONG-FORM SUBDIVISION PROCESS (CITY OF WINNIPEG)



Source: City of Winnipeg

FIGURE A1.13

SUBDIVISION PROCESS (PROVINCE OF MANITOBA/THE PLANNING ACT)



Source: Province of Manitoba

1.2.2 Planning Approvals Time Frame

Typically a Development Plan amendment, if required, can take between three to six months under either The City of Winnipeg Act or The Planning Act of Manitoba. Longer time frames can be anticipated if amendments are particularly controversial or require the resolution of other key issues. Of significance is that the adoption and amendment of a development plan requires that after first reading a public hearing be held prior to second reading. Once second reading has been held a ministerial review and approval is required before third reading can be held and the by-law is enacted.

A zoning by-law amendment can be implemented more expediently than a development plan amendment in so far as it does not require ministerial approval. However zoning by-laws still require a public hearing after first reading. Zoning by-law amendments are typically processed in 4 to 6 weeks if there are no controversial issues that require resolution.

Subdivision review and approval is more variable and requires site specific attention to details normally examined in planning and engineering studies. Plans of subdivision, including the necessary execution of associated development agreements can often take between 6 to 12 months.

In order to purchase bare land which requires a development plan amendment, zoning amendment and the registering of a plan of subdivision it is not unreasonable to anticipate a 12 to 18 month time frame from inception to completion.

Should a number of complex issues arise as part of the review and approval process, including appeals, the process can take an indeterminant period of time to conclude.

1.2.3 Planning Legislation and Approvals Impact

During the past 10 years, the City of Winnipeg Act has been amended on a number of occasions with respect to the planning process. However, these amendments have not significantly affected time frames for development approvals. They have merely changed the process to reflect changing structures of municipal governance. In some instances, amendments have been introduced which allow certain land use issues to be dealt with through zoning variances rather than a rezoning. However, the process of rezoning a parcel of land versus obtaining a zoning variation is not substantially different in terms of the time frames, particularly when viewed within the overall context of the development approval process.

Amendments to the City of Winnipeg Act regarding the planning approvals process occurred in 1990 with the abolition of the 'Additional Zone' which was intended to serve as a green belt outside the City of Winnipeg. In 1991, a independent Board of Adjustment was created to hear variance and additional use applications. In 1994, the City of Winnipeg Act was amended to include special provisions for Airport Vicinity protection areas.

The Planning Act of Manitoba has not been amended during the past 10 years that resulted in any significant differences in the time lines or development approvals process.

1.3 CONCLUSIONS

The unique characteristics of the legislative framework in Ontario(the *Planning Act*) and Manitoba (the *City of Winnipeg Act* or the *Planning Act*) dictate that the land development process will be different in each province. However, there are many similarities:

- both have two basic documents controlling land development within each municipality - official plans or development plans and zoning by-laws;
- both have a broad policy document (official plan or development plan) that provides the long term direction for growth;
- amending this document can take a considerable length of time and there is some risk in successfully obtaining the amendment;
- both have zoning by-laws that implement the policies of the official plan or development plan;
- amending this document can generally be achieved more quickly than an amendment to the official plan or development plan and there is much less risk in successfully obtaining the amendment;
- both have a three stage development process - official plan/development plan, zoning and subdivision approvals;
- the three stages can run concurrently thus reducing the overall development approval time frame;
- the subdivision approval process deals with the design features of a specific development proposal and has a low risk of failure, assuming that the principle of development on the site has already been established through the official plan/development plan and the zoning by-law;
- any development proposal may be referred to a District or Municipal Board Hearing for adjudication, thus lengthening the approval process;
- the comprehensive approval of a development application can take a minimum of 12 to 18 months but can be significantly longer if complex issues arise;

- financial institutions generally view the risk associated with obtaining planning approvals to be significant enough that they are reluctant to provide financing until the draft plan of subdivision has been approved.