THE ROLE OF THE MUNICIPAL, PROVINCIAL AND FEDERAL GOVERNMENTS IN THE ACQUISITION, DEVELOPMENT AND DISPOSITION OF RESIDENTIAL SERVICED LOTS IN THE GREATER VANCOUVER REGIONAL DISTRICT

by

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in the Department of Commerce and Business Administration

We accept this thesis as conforming to the required standard

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Date May 14, 1974
ABSTRACT

This study is an attempt to determine if a shortage of supply of serviced building lots, for development of single family dwellings in the Lower Mainland of B. C., relative to the demand for such lots, exists and to determine the role of the public sector in the assembly, development and disposition of serviced lots in the Metropolitan Vancouver area.

To determine if a shortage of supply of serviced building lots exists, a theoretical market analysis of supply and demand provides a framework for the examination of empirical findings related to the supply and demand for housing units in Metropolitan Vancouver. Population figures in Metropolitan Vancouver are used to establish a level of demand. Supply is determined according to existing stock figures based on census data and dwelling unit starts for all categories of dwelling units in Metropolitan Vancouver between 1967 and 1973 as compiled by Central Mortgage and Housing Corporation. Given the projected population growth and housing formation and the total production of dwelling units, the analysis demonstrates that the supply is falling behind the demand.

To determine if the public sector could play a role in the increase of supply of residential building lots, relevant factors reducing the supply production process are identified.

A review of municipal powers is undertaken to determine if participation in the development process is possible. Three municipalities are selected to identify their policies with regard to the
development of their land holdings for residential purposes. A categorized inventory of their land holdings is made to determine the amount of undeveloped lands under their control in relation to the amount of undeveloped lands in the Metropolitan Vancouver. It is possible to conclude that those municipalities retain most of their holdings for future planning consideration and dispose of a marginal part for profit purposes only. If such policies do not change, the District Municipalities of Burnaby and North Vancouver will affect the housing situation as they own 63% and 64% of all undeveloped land suitable for residential development within their boundaries.

A review of the powers and the policies of the provincial and federal governments in the production process of residential building lots indicates that the provincial government does not want to compete with the private sector in such areas. The province is more interested in the production of multiple dwelling units for the people who are not reached by the private sector. However, the federal government provides financial assistance to any municipalities which want to develop its land holdings for residential purposes. Such assistance has not been used so far in Metropolitan Vancouver due to the lack of provincial co-ordination and also the strict requirements of such assistance.

Such analysis of the three levels of government demonstrates that their different policies in regard to the production process of residential serviced lots have not contributed to reducing the existing shortage of residential building lots in Metropolitan Vancouver.
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CHAPTER I

INTRODUCTION

The Problem

This study is an attempt to determine if a shortage of supply of serviced building lots, for development of single family dwellings in the lower mainland of B. C., relative to the demand for such lots exists and to determine the role of the public sector (municipal, provincial and federal governments) in the assembly, development, and disposition of such serviced lots in the lower mainland of British Columbia.

The Significance of the Problem

The significance of this problem is that as less land is made available for housing construction, relative to the increasing demand for housing, the result will be a reduction of the number of dwelling units added to the existing stock or an increase in density. Since it is the standing stock of housing that determines the price levels of housing in the market, increments to the existing stock which are inadequate, will result in an increase in the price levels of standing stock. The increased market price levels for housing will cause an increase in the price of raw and serviced land, as vendors of raw or serviced land are in a position where there is a shortage of serviced land relative to the demand for serviced land and purchasers of this land can afford to pay more money for this land as the increase in
the market price of housing will permit an increase in the price of serviced land. In effect the shortage of supply of serviced land places increasing pressure on the price of land for immediate development. A further effect may be that the builder of a home on the more expensive serviced land may build the most profitable and usually the most expensive dwelling unit possible to take full advantage of the highest market price as determined by the market of existing stock, maximizing his builder's profit. Thus the relative supply of the lower priced homes may be reduced until the supply of expensive homes satisfies the demand.

Hypotheses

The hypotheses that will be investigated, focus on the problem of a shortage of supply of residential building lots in the Greater Vancouver region with reference to the role some municipalities played by releasing some of their holdings to increase the supply. Additionally, reference is made to the role of the provincial and federal government in contributing towards the increase of such a supply.

The first hypothesis to be analysed asks the question: Is there a shortage of residential building lots relative to the demand for residential building lots in the Greater Vancouver area?

The second hypothesis proposes that the public sector, with its powers, land holdings and policies related to the development of its holdings, can play a direct role in the supply of residential building lots in the market. However, the different policies adopted by the three levels of government is one of the causes of the shortage of building lots.
Limitations of the Study

This thesis does not deal with all the powers available to the public sector for accommodating the ever increasing urban growth such as the regulation and the taxation of land. It is recognized that these are important constraints on the thesis and the research conducted here will reflect these limitations.

Concepts and definition of terms

Housing policies: this term refers to legislation or resolution passed or adopted by governmental bodies in the field of housing.

Public land holdings: this term will apply to land held by the municipal, provincial and federal governments. It will exclude all land held by Crown Corporations or other government agencies.

Development process: this term refers to the assembly, subdivision servicing and disposition of land by a public or private developer.

Procedure in Development of Thesis

Chapter II introduces a theoretical market analysis of supply and demand. This provides a framework for the examination of empirical findings related to the supply and demand for housing units in Metropolitan Vancouver.

In Chapter III the demand and supply for dwelling units in Metropolitan Vancouver are analyzed separately in terms of demand and supply of single family dwellings. Population and income figures are used to establish a level of demand. Supply is determined according to existing stock figures based on census data and dwelling unit
starts for all categories of dwelling units in Metropolitan Vancouver between 1967 and 1973 as compiled by Central Mortgage and Housing Corporation. Single family dwelling unit starts are assumed indicative of the majority of the supply of serviced residential building lots. This material is related to the historical trend of average house prices in Metropolitan Vancouver between 1967 and 1973 to determine the present market conditions of supply and demand.

Chapter IV relates the supply of housing to a static and dynamic analysis in order to determine the relevant factors that may be attributed to reducing the supply production process. Three critical areas are identified in the dynamic process of supply.

1) The assembly of raw land
2) The municipal approval process
3) The construction process with regard to the servicing of dwelling sites.

Chapter V makes an analysis of the municipal role in the assembly, subdivision, servicing and disposition of land for residential purposes in the Greater Vancouver area. Firstly, a review of municipal powers is undertaken to determine if such participation in the development process is possible. Secondly, three municipalities are selected to determine their policies with regard to the development of their land holdings for residential purposes. Thirdly, an inventory of their land holdings is made to determine the amount of undeveloped lands which is under municipal ownership. Finally, it was possible to conclude that municipalities retain most of their land holdings for planning considerations and dispose of part of it for profit purposes only.

Chapter VI relates to the provincial and federal role in the
production of services lots for residential purposes. In the first part, the powers and the policies of the provincial government are reviewed and an analysis of the Department of Housing is carried out. In the second part, the federal government involvement in housing matters is briefly reviewed and an in-depth analysis of section 40-42 of the National Housing Act is carried out. Such sections are the main involvement of the senior government in the assembly, servicing and disposition of land for residential purposes.

Chapter VII summarizes general conclusions and indicates topics for further study.
CHAPTER II

SUPPLY AND DEMAND FOR HOUSING
THEORETICAL ANALYSIS

Analysis of the supply of residential dwelling units must begin with an analysis of the supply and demand for the housing stock as a whole. In contradistinction to many other consumer goods, consumers of housing can choose between buying existing dwelling units which are up for resale, renting dwelling units, or buying a new unit.

At any given time, the whole of the existing housing stock is latently up for sale or rent as well as the totality of new additions to the housing stock. If price levels differ between the two categories of housing, sufficient holders of existing stock will be induced into the market to buy new homes and sell their old homes so as to equalize prices. If the price difference is in the other direction a sufficient number of new home buyers will be induced to pass up new homes in favour of older ones, until, once again the price levels are approaching equalization.

At any one time, the existing housing stock makes up the greatest bulk of the housing market. Increments to the housing stock normally range from two to four per cent per annum. Therefore, potential sellers of existing housing make up ninety six to ninety eight per cent of the potential market at any one time. * New housing

*It may be argued that only a small percentage of the existing stock may be up for sale at any one given time. This does not take into account that if there were major price differences, more existing housing would come onto the market.
makes up only two to four per cent. The number of actual and potential sellers is considerable. In most cases, individual families own existing housing. Each family sells its own unit at the price it can obtain without reference to any price fixing agreements between sellers. Edmund Price points out that there are approximately 650 builders in the Greater Vancouver area. Each builder acts as an independent agent in selling his product. Richard Moore interviewed sixty three developers supplying either residential building sites and/or residential dwellings to the regional market. In terms of the economists' definition of pure competition, it appears that the market for the housing stock, as a whole, approaches pure competition if residential dwellings can be considered as living space purely and simply.

The housing stock and the interactions of supply and demand for the housing stock can be diagrammed roughly as indicated below.

```
<table>
<thead>
<tr>
<th>Occupants of existing stock</th>
<th>Net immigration/emigration</th>
<th>Number of participants who can finance purchase of rental or residential dwelling units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>+ Net household formation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing housing stock 100%</td>
<td>+ Net additions to housing stock (2% to 4%)</td>
<td>= index number</td>
</tr>
</tbody>
</table>
```

If the index number is 1 - residential unit prices will stabilize (assuming no change in the propensity to consume of the participants). If

* * Pure competition is defined by the economist as a technical term: 'perfect competition' exists only in the case where no farmer, businessman or laborer is a big enough part of the total market to have any personal influence on market price."3

** The point should be made, however, that dwelling units are not normally considered as purely and simply living space. Each dwelling unit has a certain location with links to or proximity to places of employment, shopping, schools, recreation facilities and desirable neighborhoods. Such specific locations differentiate to some degree the residential dwelling unit market.
the index number is greater than 1 prices rise until either

i) net immigration/ emigration balance changes,

ii) rate of net household formation declines - usually through doubling up of households,

iii) number of participants able to finance entry into the market declines either through the escalation of the rental price index or the escalation of the prices of homes (new and existing),

iv) sufficient number of new housing units (rental or sale) enter market through increased pace of construction,

v) any combination of the above either decreases demand or increases supply.

If the index number is less than 1, then price levels will fall until such time as some combination of the above outlined factors either increases demand or reduces supply.

Filtering occurs throughout the housing stock. Owners of existing housing sell their homes and buy new or used housing or move to rental accomodation. Occupiers of rental accomodation buy new or existing homes. Filtering patterns normally, although not always, follow the relative ability of the individual participants to finance the acquisition of a dwelling unit. As total net disposable income allocated to housing of the individual participant(s) increases relative to other participant(s) the participant will normally upgrade his housing accomodation. It should be noted however that as individual incomes increase a smaller proportion of income is spent on housing. The income elasticity for demand has been measured as high as 1.5 to 2 by Reid (1958) however there is more conclusive evidence to suggest that income elasticity is closer to a range of .5 to 1.*

Oksanen (1966) has found that housing stock elasticities for income range from .3 to .5 and flow elasticities are below 1. Uhler (1968) also supports this analysis as he has found income elasticities range

*Such studies are based on normal not current incomes.
between .34 and .57. Lee (1964) supports these findings concluding that income elasticity is less than unity hence the proportion of income spent on housing falls as income rises.

The willingness and/or ability of participants to "filter" up or down through the accommodation spectrum is often influenced by aspirations and needs, such as, size of family and need for space; family and neighborhood associations and ties; psychological importance of status to the individual; expectations as to future income levels; pursuit of life styles which lead to allocating funds to other consumer goods and activities. One important determinant of the individual's willingness to participate in this filtering process is his expectations as to future housing prices. If the participant is convinced that the price of housing will continue to escalate, he will likely use any means at his disposal to purchase a residential dwelling unit "now" rather than wait. The net effect of this phenomenon is the transfer of future demand to the present.

Summary of Supply and Demand

The overview of the supply and demand for housing stock given in the previous sections, while lacking in some details and in refinement, does present a working model of the factors that are instrumental to analysis. These factors are depicted in Figure 1.

In Figure 1, current supply is depicted by $S_1S_2$ and current demand by $D_1D_1$. At one point in time, the prevailing price would be $P_1$. If there is a small increase in the supply to $S_2S_2$ that is quite small relative to the number of existing units in stock, and no change in demand, prices would fall to $P_2$, a small decrease. If, on the other hand, demand increased to $D_2D_2$ while supply increases to $S_2S_2$,
Figure 1
Interactions of Supply and Demand for Housing

prices will rise to \( P_3 \).

As there are physical limits to increases in supply as well as limits to the number of residential dwelling sites the planning process will approve, the increases in supply for Canadian urban centres has been less than the increases in demand. If this, as Dr. Hamilton points out, has been the case, it would account for a major portion of the price rises in Canadian housing in the past decade.

"The problems of supply of housing and building lots, as serious as they may be, are not as critical as the changes in demand. Growing population, rapidly rising incomes, demand for better housing, and increased concentration in a few urban areas are creating insatiable demand for housing and land. Over the past ten years, incomes and disposable incomes have risen more rapidly than housing expenditures, and the concentration of population into urban areas has continued. In addition, important new incentives, in the form of special income tax status for principal residences, has bolstered the already extensive demands for housing, especially ownership. Similarly, improved mortgage terms and provincial financing for second mortgages have all contributed to the increased demands."}

**Effect of Surplus Demand on Land Pricing**

Given that an excess of demand vis-a-vis supply for the housing stock as a whole will raise price levels for the new housing stock, coming on stream, dramatic changes will occur in the prices paid for serviced dwelling sites through the action of leverage. Even more dramatic price changes will take place for raw land due to the effect of compounded leverage.

Table 1 sets out some assumptions about the average price levels of existing housing as these price changes occur through time.

The builder will take his pricing clue from the average price of comparable houses in comparable locations to the one he is going to build. Instinctively, he knows that he cannot influence the
Table 1. Existing Dwelling Stock Price Rises Through Time.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 1 to 2</th>
<th>Year 2 to 3</th>
<th>Year 1 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Price Level of Existing Comparable Houses in Comparable Locations</td>
<td>$26,000</td>
<td>$30,000</td>
<td>$38,000</td>
<td>+15%</td>
<td>+27%</td>
</tr>
</tbody>
</table>

Overall price of housing for the aggregate increment to housing stock in any one year is only two to four per cent of the total existing stock. He knows that if his price level is too high, the buyer will prefer existing housing and his unit will not sell. He also knows that if his price level is too low, a crafty speculator will sell existing housing to buy the builder's product at an immediate 'profit' to the speculator. The builder also instinctively knows that buyers will, on average, pay a premium for new housing due to such influences as improved design, lower maintenance and repair costs, better financing terms and the increased status of owning a new home.

The effect of the builder's pricing of his house for sale on the maximum prices that he will pay for serviced residential dwelling sites is demonstrated in Table 2. Clearly, if he receives more for his house from year to year, he can afford to pay more for the lot. The actual price he pays will be the end price for his house, less the costs of construction and profit. If house prices rise more on a percentage basis than construction costs rise on a
percentage basis, then positive leverage will result. For instance, as Table 2 demonstrates, if house prices rise by 27% while building costs go up by 20%, lot prices will escalate by 41%.

Negative leverage is also a distinct possibility. Assume that house prices remained constant at $30,000 while construction costs rose by 20%, from $20,000 to $23,000, lot prices would drop from $9,200 to $7,000 - a 23% decrease.

Table 2: Effect of Leverage on Residential Dwelling Site Prices.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 1 to 2</th>
<th>Year 2 to 3</th>
<th>Year 1 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of home built by builder</td>
<td>$30,000</td>
<td>$34,500</td>
<td>$43,800</td>
<td>+ 15%</td>
<td>+ 27%</td>
<td>+ 46%</td>
</tr>
<tr>
<td>Building costs &amp; Profit</td>
<td>20,800</td>
<td>23,000</td>
<td>27,600</td>
<td>+ 10%</td>
<td>+ 20%</td>
<td>+ 33%</td>
</tr>
<tr>
<td>Maximum Residential Dwelling Site Price</td>
<td>9,200</td>
<td>11,500</td>
<td>16,200</td>
<td>+ 25%</td>
<td>+ 41%</td>
<td>+ 76%</td>
</tr>
</tbody>
</table>

The developer, public or private, is part of the pricing process. The builder takes his pricing clue from the price level for existing comparable housing. The developer takes his pricing clue from the maximum residential dwelling site price level.

The price that the developer pays for raw land is leveraged in the same way as the price that builders pay for serviced dwelling sites. If the price paid for a serviced site increases more on a
percentage basis than the servicing costs the effect will be upward leveraging on the price paid for raw land. If the servicing costs escalate more rapidly than the percentage price increase for serviced sites, the effect will be downward leveraging on the prices paid for raw land.

Table 3. Effect of Leverage on Raw Land Prices.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Percentage change Year 1 to 2</th>
<th>Percentage change Year 2 to 3</th>
<th>Percentage change year 1 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price paid by builder for serviced building site</td>
<td>$9,200</td>
<td>11,500</td>
<td>16,200</td>
<td>+25%</td>
<td>+41%</td>
<td>+76%</td>
</tr>
<tr>
<td>Servicing costs + municipal imposts + profits</td>
<td>5,200</td>
<td>6,300</td>
<td>9,100</td>
<td>+21%</td>
<td>+45%</td>
<td>+75%</td>
</tr>
<tr>
<td>Maximum raw land price per site</td>
<td>4,000</td>
<td>5,200</td>
<td>7,100</td>
<td>+30%</td>
<td>+37%</td>
<td>+78%</td>
</tr>
</tbody>
</table>

Note that Table 3 also demonstrates negative leverage in the transition in raw land prices from year 2 to year 3. Servicing costs in the hypothetical example have risen from $6,300 in year 2 to $9,100 in year 3. In the same year, the price paid by the builder for serviced building sites increased by a lesser percentage of 41% from $11,500 to $16,200. The effect on the maximum raw land price per site is negative leverage. The price paid for a raw lot increased only 37% from $5,200 to $7,100 while the price paid for a serviced
Lot increased by 41%. Consider the implications for the price paid for raw lots if the price paid by the builder had only risen by a much lower percentage. Table 4 points out negative leverage.

Table 4. Negative Leverage.

<table>
<thead>
<tr>
<th></th>
<th>Year 2</th>
<th>Year 3</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price paid by builder for serviced building site</td>
<td>$11,500</td>
<td>13,225</td>
<td>+ 15%</td>
</tr>
<tr>
<td>Servicing costs + municipal imposts + profits</td>
<td>6,300</td>
<td>9,100</td>
<td>+ 45%</td>
</tr>
<tr>
<td>Maximum raw land price per site</td>
<td>5,200</td>
<td>4,125</td>
<td>- 21%</td>
</tr>
</tbody>
</table>

Effect of Surplus Demand on the Supply of Housing Units to the Market

If the price of existing housing stock is climbing at an unusually rapid rate, the builder will develop 'expectations' as to the price that he may be able to obtain for his product if he waits. If the expected increment in price is considerably more than his holding costs for the finished house, he will tend to withhold supply from the market. He withholds supply in a very simple fashion. He simply prices the house at what he expects future price levels to be, thereby transferring present supply at present market prices into future supply at expected future market prices.

The builder will not often withhold supply for any considerable period of time. Firstly, the holding costs are too onerous. In effect, the builder has to finance the entire cost of the lot plus
the cost of construction of the house at current interest rates.

Secondly, the builder needs his capital to buy another lot and start the construction process over again. Price (1972) pointed out that builders are characteristically under capitalized. Thirdly, the builder is always concerned about temporary setbacks in the market even though the general direction is upwards. The builder knows that temporary setbacks in price add to his carrying costs in reducing the profit level that he will receive from the eventual sale of the house. Fourthly, the builder is usually aware that he will earn a higher return on his capital invested if he is to sell the house and reinvest the proceeds in purchasing more serviced lots, particularly if he perceives the leverage action on the price of serviced lots to be positive in direction.

In summary, it is not to be expected that the builder will withhold his product from the market for long periods of time but he will tend to withhold if the short term price levels are increasing dramatically. On the other hand, the builder will tend to accelerate the supplying of houses to the market if he perceives short time weakness in pricing for existing housing stock. The builder knows that his carrying costs are too heavy.

The developer will also tend to withhold supply of serviced lots from the market if he perceives that the short term price rises for existing stock are effecting positive leverage on the price structure for serviced dwelling sites. Normally, the developer will not withhold lots from the market for long as he is faced with the same problems as the builder. Carrying costs are too high and capital is required for the purchase of raw land. The developer will only tend to withhold if the short term price rises are dramatic.
The holder of raw land also has expectations as to the future price levels for raw land. These expectations will be particularly fueled when the effect of compounded leverage is working positively both on the price of serviced lots and also on raw land prices. The landholder in these periods 'knows' that his land will double in value next year. The landowner is quite reluctant to sell. Furthermore, the landholder is in an excellent position to wait for further abnormal price increases. The landowner knows that his carrying costs are very low, particularly in relationship to the amounts that he expects to receive from further windfall gains.

The landholder tends to withhold raw land from the market in periods of abnormal price increases. Such withholding makes the assembly of raw land more difficult and more time consuming. Delays in land assembly reduce the quantity of raw land which may be fed into the supply process for eventual conversion into dwelling units. Collectively, landowners are working in their own best interest by withholding land from the market.
Footnotes


10Ibid., p. 9.

11Ibid., p. 9.

Chapter II dealt with the supply and demand for housing in theoretical terms. Analysis of the GVRD housing market verifies the contention that the demand for residential dwelling units in this region exceeds the supply.

Demand for housing may be measured as a function of population and income. "Growing populations, rapidly rising incomes, demand for better housing and increased concentrations in a few large urban areas are creating insatiable demands for housing and land." In the Greater Vancouver Regional District the prices of housing, particularly single family dwellings, have been increasing rapidly (Refer to column 5, Table 1). It may be argued that the price of housing is reaching a point where the typical consumer of housing cannot purchase the same house he bought two years ago in today's market, as the increases in costs of housing have exceeded the increase in his gross income required to satisfy the conventional qualifications for mortgage financing. The following analysis supports this conclusion. However, this may not be interpreted as an indication that the demand for housing should decrease. A brief analysis of the basic economics of the housing market and the function of population growth as a cause of demand will clarify the argument that there is a strong demand in the housing market in the G.V.R.D.
The industrial workers of British Columbia composed 42% of the total labour force of 1,000,045 in July 1971. Table 5 indicates the gross monthly income of the average industrial worker between 1963 and 1973 and relates these figures to the average prices of existing and new homes in the Greater Vancouver Regional District and the dollar increase in the prices of these homes between 1963 and 1973. These figures are related to the increase in the amount of the monthly payments required to amortize a mortgage at the average annual interest rate over a period of twenty-five years with a 5% and 25% down payment. Column 9 indicates that if the average worker purchased the average priced home in the GVRD in 1973 with a 25% down payment his monthly principal and interest payments would be $56.84 higher than they would have been for a home in 1972 and this increase is $21.84 greater than the increase in his gross monthly income for the same period. Prior to 1973 the monthly increases in gross income have been greater than the increase in monthly interest and principal payments required to finance the purchase of a new home even in the case where there was a 5% down payment. If an industrial worker in B.C. purchased an average priced home in the GVRD in 1971 for $26,471 (column 5, Table 5) with a down payment of $6,617 (25%) the monthly mortgage payments at the prevailing rate of 10% in 1971 on a debt of $19,853 would be $177.59 of principal and interest amortized over 25 years. The maximum debt permitted with a 30% debt service ratio would have been $198.24 (column 4, Table 5). The debt service is below the required income.

If one considers the purchase of an average existing home in the Greater Vancouver Regional District in 1973 according to the
Table 5

The Price of Homes in Metropolitan Vancouver Relative to Average Incomes of Industrial Workers in B.C. 1963-1973

<table>
<thead>
<tr>
<th>Year</th>
<th>Monthly Gross Income in B.C.</th>
<th>Monthly Dollar % change in income</th>
<th>Maximum amount of income in single family service mortgage debt based on 30% debt service ratio</th>
<th>Average price change in monthly income to service mortgageings in Metro Vancouver</th>
<th>Average Dollar change in average income</th>
<th>The annual increase in mortgage payments of principal and interest with a 25% down payment</th>
<th>The monthly increase in mortgage payments of principal and interest with a 5% down payment</th>
<th>The annual increase in mortgage debt with a 25% down payment</th>
<th>The monthly increase in mortgage debt with a 5% down payment</th>
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</thead>
<tbody>
<tr>
<td>1963</td>
<td>$390.43</td>
<td>-</td>
<td>$117.13</td>
<td>$12,637</td>
<td>$566</td>
<td>7</td>
<td>$424</td>
<td>$2.99</td>
<td>$537</td>
</tr>
<tr>
<td>1964</td>
<td>407.81</td>
<td>$17.38</td>
<td>4.5%</td>
<td>122.34</td>
<td>13,203</td>
<td>$566</td>
<td>7</td>
<td>6.7%</td>
<td>7</td>
</tr>
<tr>
<td>1965</td>
<td>436.41</td>
<td>28.60</td>
<td>7.0</td>
<td>130.92</td>
<td>13,965</td>
<td>6</td>
<td>7/8</td>
<td>1001</td>
<td>1917</td>
</tr>
<tr>
<td>1966</td>
<td>465.49</td>
<td>30.68</td>
<td>6.7</td>
<td>139.65</td>
<td>15,200</td>
<td>7</td>
<td>3/8</td>
<td>25% down payment</td>
<td>16.81</td>
</tr>
<tr>
<td>1968</td>
<td>523.29</td>
<td>27.12</td>
<td>5.5</td>
<td>156.99</td>
<td>20,995</td>
<td>8</td>
<td>7/8</td>
<td>2508</td>
<td>21.11</td>
</tr>
<tr>
<td>1969</td>
<td>560.52</td>
<td>32.23</td>
<td>7.1</td>
<td>169.16</td>
<td>23,939</td>
<td>9</td>
<td>1/4</td>
<td>2508</td>
<td>8.28</td>
</tr>
<tr>
<td>1970</td>
<td>597.87</td>
<td>33.35</td>
<td>6.7</td>
<td>179.36</td>
<td>24,239</td>
<td>10</td>
<td>3/8</td>
<td>915</td>
<td>14.32</td>
</tr>
<tr>
<td>1971</td>
<td>660.83</td>
<td>62.96</td>
<td>10.5</td>
<td>198.24</td>
<td>26,471</td>
<td>10</td>
<td>1/4</td>
<td>915</td>
<td>20.08</td>
</tr>
<tr>
<td>1972</td>
<td>713.72</td>
<td>53.09</td>
<td>8.0</td>
<td>214.18</td>
<td>29,714</td>
<td>9</td>
<td>1/8</td>
<td>1432</td>
<td>25.93</td>
</tr>
<tr>
<td>1973</td>
<td>746.92</td>
<td>35.00</td>
<td>4.9</td>
<td>224.68</td>
<td>38,561</td>
<td>1/2</td>
<td>2508</td>
<td>6835</td>
<td>72.34</td>
</tr>
</tbody>
</table>

Source:
(5) Based on the average prices of single family dwellings in the GVRD derived from Real Estate Trends in Metropolitan Vancouver. Published by the Statistical Survey committee of the Greater Vancouver Real Estate Board Association 1953 to 1973.
(8) The annual increase in the required loan to purchase a home in Metropolitan Vancouver with a 25% down payment.
(9) The monthly increase in mortgage payments of principal and interest amortized over 25 years with a down payment of 25%.
(10) The annual increase in the required mortgage loan to purchase a home in Metropolitan Vancouver with a 5% down payment.
(11) The monthly increase in the mortgage payments of principal and interest amortized over 25 years with a down payment of 5%. 
criticarian used in Table 5 with a 25% down payment of $9,640 the monthly payments of principal and interest on the remainder of $23,920 would be approximately $241.30. Referring back to Table 5, column 4, if the average worker wished to obtain a mortgage from a conventional lender who used a 30% debt service ratio, the monthly payments greatly exceed those permitted ($224.68). This very elementary analysis excludes the monthly calculation of property tax which would be added to the principal and interest payments when calculating the minimum required 30% of gross income to satisfy the debt. However, it is obvious that the average industrial worker is not capable of purchasing the average priced home in the Greater Vancouver Regional District.

One may argue that the purchaser may turn to alternative sources of finance which do not consider the debt service ratio as a major factor in determining the amount of the mortgage that could be granted. Credit Unions will presently lend at 75% of the market value of a home charging a slightly higher interest rate permitting a slightly higher debt to service ratio. In 1973 the cost of an average priced home in the GVRD increased by $8,847. A 25% down payment requires $2,211 cash in addition to the amount required for a home in 1972. The average industrial worker would have to generate an additional $2,211 in savings or would have to save approximately 24% of his gross income for 1973. It should be noted that the preceding analysis merely gives an indication of the relationship between the incomes of a large portion of the labour force and their capacity to finance homes purchased in 1973. There are many important variables that have not been considered. A most important conclusion is that even if this argument is accepted, there is still a strong demand.
for housing which will keep prices high.

An economic analysis of the housing market requires recognition of a very important economic condition that puts the housing market in a unique analytical situation. Additions to the supply of housing account for a very small portion of the total supply. The total stock of single family dwellings in the GVRD is estimated to be 215,445 for the year of 1971. The addition to the housing stock in 1971 in the form of single family dwellings was approximately 5,674 or approximately 2% of the net stock. Approximately 6,726 units were added in 1972 and 5,525 in 1973, yielding a stock of 227,698 single family dwellings. When considering housing demand, this aspect of the market is critical.

Since there are so few housing units created in relation to the total housing stock, the amount of demand required to absorb the additions to the stock are not that great. The average industrial worker who purchased a home in the GVRD at the average price of $26,471 according to Table 5 with a mortgage of $20,000 can sell his house for $38,561 in 1973. After paying his mortgage off, he has approximately $18,000 cash which he would use as a down payment towards the purchase of another home. It is quite possible that he may have saved funds to buy a more expensive home and that he could service the debt given his increased equity position. Combining the activities of home owners who have realized a tremendous equity gain and those who are entering the market today, the process of filtering takes place and the additions to the stock of housing are quickly absorbed.
Demand for Housing as a Function of Population

Since the additions to the housing are not that great the demand for housing does not require a significant number of purchasers to give it strength. A demographic analysis will reveal that increases in population and prospective home buyers in the GVRD has created a sufficient demand in the housing market to keep prices high.

Analysis of birthrates, mortality rates and migration rates indicates a steady population growth in the GVRD between 1966 and 1971 and produces a basis for forecasting significant increases in population in the future. A brief consideration of each component of growth provides a good indication of the impact this growth will have on the housing demand.

Statistics Canada indicate that the fertility rate which is taken to be the number of children born to a female during her entire reproductive life span is levelling off. In relation to Figure 2 the following comments may be made regarding fertility rates according to Statistics Canada.

Figure 2
Fertility Rates

- There exists a marked decline in total fertility from 3.9 to approximately 2.4 in the 1960's but an achieved levelling out around 1969.

- Considering the projected ranges to 1984, the most practical rate is the medium and will be used as no evidence is available to the contrary.

- The arrival of a third child does not generally alter a family's need for family housing as does the arrival of the first and second child; therefore, the projections to 1984 have little effect; the move from an apartment to a single family or a row dwelling is usually initiated by the first or second child.

- If a high fertility rate prevails say to 2.8, then there will be significant population effects but in terms of the household these will not be affected until the late 1980's.

A review of an analysis by the Greater Vancouver Regional District on population growth confirms these conclusions by basing its forecast on the fact that the number of births in the GVRD was 10% lower than the expected number of births using the known rates for all of B.C.\(^5\) Thus, the trend of population growth in this area should be reduced.

Death rates according to Statistics Canada approximate 7.4 people per 1000 of population. The GVRD analysis has found this rate to be fairly constant.

Migration rates are the most important in an analysis of the GVRD.

Migration rates are most important in a population analysis of the GVRD. Approximately 76.5% of the population increase between 1966 and 1971 is accounted for by migration.\(^6\) 66% of the total number of
migrants (103,592) were between the ages of 20 and 29 and 28% were between the age of 30 and 39. If one assumes a migration of approximately 20,000 per year and that approximately 60% of these are in the age bracket of 20 to 28 this aspect of population growth should have an effect on demand for housing. It is not known what percentage of these people would qualify for financing of the homes in the present market, however, since this age group is one with the highest fertility rate. One could argue that these people would affect the demand for single family dwellings. It is important to note that they may purchase homes at various price levels in the housing market absorbing the homes vacated by those moving into more or less expensive homes.

The forecast for future growth in the GVRD indicates that population should increase by 141,678 from 1,028,345 in 1971 to 1,169,923 in 1976. The population increase forecast for those aged between 20 and 29 should be approximately 7,347 per annum of 25.8% of the average total population increase of 28,335. The age group between 30 and 39 will have a population increase of approximately 6,202 per annum which is 21% of the total population increase per annum.

The population statistics confirm the fact that there is a significant expected growth rate in population particularly in the age bracket most likely to enter the housing market. The entire demand analysis of this chapter has concentrated on single family dwellings in order to interpret the demand situation of this particular sector of the market. There is sufficient information available to suggest that the demand for dwelling units as a whole is very strong and will maintain its high level in the future. A review of statistics provided by Central Mortgage and Housing Corporation and the Economics and Statistics Division of Canada confirm this fact.
Table 6 relates household formation to the total number of dwelling starts between 1961 and 1976.

Table 6. Household Formation and Dwelling Unit Starts in Metropolitan Vancouver 1961 - 1976.

<table>
<thead>
<tr>
<th>Year</th>
<th>Family</th>
<th>Non Family</th>
<th>Total</th>
<th>Dwelling Unit Starts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961 - 1966</td>
<td>23,900</td>
<td>19,700</td>
<td>43,600</td>
<td>46,391</td>
</tr>
<tr>
<td>1966 - 1971</td>
<td>42,100</td>
<td>22,400</td>
<td>64,500</td>
<td>69,851</td>
</tr>
<tr>
<td>1971 - 1976</td>
<td>55,400</td>
<td>35,600</td>
<td>91,000</td>
<td>98,280</td>
</tr>
</tbody>
</table>


The Supply of Housing in Metropolitan Vancouver

Household formations averaged 8,720 annually for the first half of the 1960's. Housing starts were 9,278 annually. Between 1966 and 1971 the annual average of dwelling units was 13,970. The average number of household formations were 12,900 for the same period. The estimated household formation based on census data between 1971 and 1976 is approximately 18,200 per year. Approximately 20,000 dwelling units per year will be required to meet the estimated rate of housing formation. Since 1971 dwelling unit starts have been falling short of the projected demand. In 1971 there were 15,553 starts, in 1972 there were 14,126 and in 1973 there were 14,953 (reference to Tables 7, 8, and 9 provide a detailed breakdown of starts). This figure is 4,703 units short of the projected dwelling unit starts of 1971-1976 per annum required to satisfy housing formation. Thus given the projected population growth and housing formation and the total production of dwelling
Table 7. Residential Building Activity - Dwelling Starts in Metropolitan Vancouver 1967-1973

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single detached</td>
<td>5,980</td>
<td>5,146</td>
<td>4,763</td>
<td>4,482</td>
<td>5,283</td>
<td>25,654</td>
<td>5,625</td>
<td>7,300</td>
<td>6,726</td>
</tr>
<tr>
<td>Semi Detached and Duplex</td>
<td>348</td>
<td>512</td>
<td>402</td>
<td>350</td>
<td>391</td>
<td>2,003</td>
<td>368</td>
<td>368</td>
<td>362</td>
</tr>
<tr>
<td>Row</td>
<td>208</td>
<td>311</td>
<td>580</td>
<td>839</td>
<td>1,057</td>
<td>2,995</td>
<td>1,635</td>
<td>945</td>
<td></td>
</tr>
<tr>
<td>Apartments</td>
<td>7,085</td>
<td>9,721</td>
<td>11,945</td>
<td>7,762</td>
<td>8,622</td>
<td>45,335</td>
<td>6,896</td>
<td>6,920</td>
<td></td>
</tr>
<tr>
<td>Total Annual Starts</td>
<td>13,621</td>
<td>15,690</td>
<td>17,690</td>
<td>13,433</td>
<td>15,553</td>
<td>75,987</td>
<td>14,096</td>
<td>16,199</td>
<td>14,953</td>
</tr>
</tbody>
</table>

*Includes Langley, Maple Ridge and Pitt Meadows

Source: CMHC
### Table 8. Residential Building Activity - Single Family Dwelling Starts* in Metropolitan Vancouver 1967 - 1973

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancouver</td>
<td>595</td>
<td>528</td>
<td>393</td>
<td>405</td>
<td>595</td>
<td>2,516</td>
<td>601</td>
<td>699</td>
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<tr>
<td>Burnaby</td>
<td>523</td>
<td>558</td>
<td>498</td>
<td>330</td>
<td>596</td>
<td>2,505</td>
<td>496</td>
<td>544</td>
</tr>
<tr>
<td>New Westminster</td>
<td>42</td>
<td>15</td>
<td>6</td>
<td>8</td>
<td>22</td>
<td>93</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>North Vancouver</td>
<td>531</td>
<td>514</td>
<td>454</td>
<td>412</td>
<td>539</td>
<td>2,450</td>
<td>438</td>
<td>524</td>
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<tr>
<td>West Vancouver</td>
<td>268</td>
<td>242</td>
<td>155</td>
<td>118</td>
<td>114</td>
<td>897</td>
<td>139</td>
<td>165</td>
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1,959 1,857 1,506 1,273 1,866 8,461 1,695 2,131

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</thead>
<tbody>
<tr>
<td>Coquitlam</td>
<td>819</td>
<td>428</td>
<td>231</td>
<td>206</td>
<td>248</td>
<td>1,932</td>
<td>350</td>
<td>52</td>
</tr>
<tr>
<td>Port Coquitlam</td>
<td>599</td>
<td>341</td>
<td>413</td>
<td>310</td>
<td>305</td>
<td>1,968</td>
<td>289</td>
<td>28</td>
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<tr>
<td>Port Moody</td>
<td>168</td>
<td>113</td>
<td>63</td>
<td>42</td>
<td>46</td>
<td>432</td>
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1,586 882 707 558 599 4,332 662 83

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</thead>
<tbody>
<tr>
<td>Richmond</td>
<td>512</td>
<td>507</td>
<td>516</td>
<td>590</td>
<td>610</td>
<td>2,735</td>
<td>718</td>
<td>1,529</td>
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<tr>
<td>Surrey</td>
<td>829</td>
<td>870</td>
<td>729</td>
<td>738</td>
<td>859</td>
<td>4,025</td>
<td>1,070</td>
<td>1,158</td>
</tr>
<tr>
<td>White Rock</td>
<td>119</td>
<td>120</td>
<td>117</td>
<td>115</td>
<td>157</td>
<td>628</td>
<td>108</td>
<td>77</td>
</tr>
<tr>
<td>Delta</td>
<td>1,267</td>
<td>1,389</td>
<td>1,570</td>
<td>1,551</td>
<td>1,583</td>
<td>7,360</td>
<td>1,729</td>
<td>1,502</td>
</tr>
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</table>

2,727 2,886 2,932 2,994 3,207 14,748 3,625 7,020

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</thead>
<tbody>
<tr>
<td>Miscellaneous</td>
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<td>33</td>
<td>20</td>
<td>7</td>
<td>-</td>
<td>116</td>
<td>11</td>
<td>39</td>
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</tbody>
</table>

**Total Metro-Vancouver**: 6,328 5,658 5,165 4,832 5,674 27,657 5,993

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<td>Maple Ridge</td>
<td>36</td>
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</tr>
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</table>

*Includes duplexes

Source: CMHC
<table>
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<tr>
<th></th>
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<td>1,449</td>
<td>884</td>
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<td>943</td>
<td>675</td>
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<td><strong>West Vancouver</strong></td>
<td>217</td>
<td>133</td>
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<td>340</td>
<td>197</td>
<td>1,050</td>
<td>183</td>
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<td>6,803</td>
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<td>36,189</td>
<td>4,330</td>
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<td>482</td>
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<tr>
<td><strong>Port Coquitlam</strong></td>
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<td>140</td>
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<td>102</td>
<td>158</td>
<td>134</td>
<td>370</td>
<td>75</td>
<td>839</td>
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<td>1,424</td>
<td>845</td>
<td>3,034</td>
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<td><strong>Surrey</strong></td>
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<td>595</td>
<td>469</td>
<td>1,575</td>
<td>3,029</td>
<td>1,420</td>
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<td><strong>White Rock</strong></td>
<td>72</td>
<td>26</td>
<td>189</td>
<td>159</td>
<td>95</td>
<td>541</td>
<td>347</td>
<td>492</td>
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<tr>
<td><strong>Delta</strong></td>
<td>6</td>
<td>104</td>
<td>131</td>
<td>549</td>
<td>343</td>
<td>1,133</td>
<td>96</td>
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<td><strong>Total</strong></td>
<td>88</td>
<td>578</td>
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<td>2,601</td>
<td>2,858</td>
<td>7,737</td>
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<td>48,330</td>
<td>7,808</td>
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<td>354</td>
<td>264</td>
<td>-</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Maple Ridge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66</td>
<td>-</td>
<td>-</td>
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<tr>
<td><strong>Pitt Meadows</strong></td>
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<td>-</td>
<td>106</td>
<td>-</td>
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<tr>
<td><strong>Total</strong></td>
<td>723</td>
<td>370</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Source: CMHC
units the supply is falling behind the demand.

A brief analysis of the two major components of single family dwelling costs, the land and the cost of labour and materials, will put the case of the cause of increased costs of housing in perspective and will indicate areas of interest regarding policy to reduce housing costs. Tables 10 and 11 provide a list of prices of serviced lots and the costs of construction based on material and labour for the period of 1964-1973. These figures are assembled in Table 12 which provides a breakdown of the relationship between the cost of land and the cost of construction deriving an estimated cost of a home. Between 1964 and 1973 the percentage of total cost of a single family dwelling related to the cost of construction steadily declined from 71% in 1970 to 49% in 1973. The price of serviced land as a percent of the total cost of housing has increased from 29% in 1964 to 51% in 1973. The most significant increase in the cost of a home was between 1972 and 1973. The amount of the increase is $12,965. 71% of this increase is attributable to land while only 29% of this increase is attributable to the increased cost of labour and materials. It is most important that one note these figures have no relationship to the market value cost of a single family dwelling. These figures merely indicate an effect of the market and not a cause.

This confirms the theoretical analysis that the costs of land are a function of new house values which, in turn, are determined mainly, by the price of existing housing. Construction costs, either building costs or land costs, cannot materially affect the current general level of market prices. This logical conclusion is related to the fact that the housing stock is much larger than the increment to housing. Relating this important realization to the cost figures
determined in Table 12 the supply problem is put into a totally new perspective.
### Table 10. Cost of Construction of Single Family Dwellings in Metropolitan Vancouver 1964-1973

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost/sq. ft.</th>
<th>Material and Labor cost</th>
<th>Annual Change</th>
<th>Annual % Change</th>
<th>Cost Index</th>
</tr>
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<tbody>
<tr>
<td>1964</td>
<td>10.60</td>
<td>12,720</td>
<td>-</td>
<td>1%</td>
<td>104.3</td>
</tr>
<tr>
<td>1965</td>
<td>11.67</td>
<td>14,004</td>
<td>1,284</td>
<td>7%</td>
<td>113.2</td>
</tr>
<tr>
<td>1966</td>
<td>12.49</td>
<td>14,988</td>
<td>984</td>
<td>7%</td>
<td>116.8</td>
</tr>
<tr>
<td>1967</td>
<td>13.55</td>
<td>16,260</td>
<td>1,272</td>
<td>8%</td>
<td>128.1</td>
</tr>
<tr>
<td>1968</td>
<td>14.64</td>
<td>17,568</td>
<td>1,308</td>
<td>8%</td>
<td>141.0</td>
</tr>
<tr>
<td>1969</td>
<td>14.37</td>
<td>17,224</td>
<td>- 334</td>
<td>-2%</td>
<td>137.5</td>
</tr>
<tr>
<td>1970</td>
<td>14.45</td>
<td>17,340</td>
<td>116</td>
<td>1%</td>
<td>138.2</td>
</tr>
<tr>
<td>1971</td>
<td>16.02</td>
<td>19,224</td>
<td>1,884</td>
<td>11%</td>
<td>153.3</td>
</tr>
<tr>
<td>1972</td>
<td>19.22</td>
<td>23,064</td>
<td>3,840</td>
<td>20%</td>
<td>183.0</td>
</tr>
</tbody>
</table>

**Source:** Real Estate Trends in Metropolitan Vancouver by the Statistical Survey Committee of the Greater Vancouver Real Estate Board Association 1961 - 1973.
### Table 11. Average Cost of a Typical Serviced Lot in GVRD (1964-1973)

<table>
<thead>
<tr>
<th>Year</th>
<th>Price of Serviced Lot</th>
<th>Annual Dollar Change</th>
<th>Annual % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>5,061</td>
<td>+ 411</td>
<td>-8%</td>
</tr>
<tr>
<td>1966</td>
<td>5,810</td>
<td>749</td>
<td>14%</td>
</tr>
<tr>
<td>1967</td>
<td>7,710</td>
<td>1,900</td>
<td>32%</td>
</tr>
<tr>
<td>1968</td>
<td>9,600</td>
<td>1,890</td>
<td>24%</td>
</tr>
<tr>
<td>1969</td>
<td>11,500</td>
<td>1,900</td>
<td>19%</td>
</tr>
<tr>
<td>1970</td>
<td>11,520</td>
<td>20</td>
<td>0%</td>
</tr>
<tr>
<td>1971</td>
<td>13,200</td>
<td>1,680</td>
<td>14%</td>
</tr>
<tr>
<td>1972</td>
<td>14,708</td>
<td>1,508</td>
<td>11%</td>
</tr>
<tr>
<td>1973</td>
<td>23,833</td>
<td>9,125</td>
<td>62%</td>
</tr>
</tbody>
</table>

*Source: Determined from Table IX The Housing Issue prepared by the Planning Department of the GVRD 1973.*
Table 12. The Cost of Housing in GVRD in Terms of Building Costs and Serviced Land Prices 1964-1973

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cost serviced land + labor + materials</th>
<th>Material &amp; Labour as a % of Total Cost</th>
<th>Land as a % of Total Cost</th>
<th>Annual Percent change in total cost</th>
<th>Annual Dollar Change in Total Cost</th>
<th>Change due to mat. &amp; labor cost %</th>
<th>Dollars %</th>
<th>Change due to land cost Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>17,760</td>
<td>71%</td>
<td>29%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>19,814</td>
<td>70%</td>
<td>30%</td>
<td>11%</td>
<td>2,054</td>
<td>66%</td>
<td>1,355.64</td>
<td>34%</td>
</tr>
<tr>
<td>1967</td>
<td>22,698</td>
<td>66%</td>
<td>34%</td>
<td>14%</td>
<td>2,884</td>
<td>34%</td>
<td>980.56</td>
<td>66%</td>
</tr>
<tr>
<td>1968</td>
<td>25,860</td>
<td>62%</td>
<td>38%</td>
<td>13%</td>
<td>3,162</td>
<td>40%</td>
<td>1,264.60</td>
<td>60%</td>
</tr>
<tr>
<td>1969</td>
<td>29,068</td>
<td>60%</td>
<td>40%</td>
<td>12%</td>
<td>3,208</td>
<td>40%</td>
<td>1,283.20</td>
<td>60%</td>
</tr>
<tr>
<td>1970</td>
<td>28,744</td>
<td>59%</td>
<td>41%</td>
<td>-1%</td>
<td>-324</td>
<td>100%</td>
<td>-324</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>30,540</td>
<td>56%</td>
<td>44%</td>
<td>6%</td>
<td>1,796</td>
<td>6%</td>
<td>107.76</td>
<td>94%</td>
</tr>
<tr>
<td>1972</td>
<td>33,932</td>
<td>56%</td>
<td>44%</td>
<td>11%</td>
<td>3,392</td>
<td>55%</td>
<td>1,665.60</td>
<td>45%</td>
</tr>
<tr>
<td>1973</td>
<td>46,897</td>
<td>49%</td>
<td>51%</td>
<td>38%</td>
<td>12,965</td>
<td>29%</td>
<td>3,755.65</td>
<td>71%</td>
</tr>
</tbody>
</table>

Source: Tables 10 and 11.
Footnotes


CHAPTER IV

THE SUPPLY OF SERVICED RESIDENTIAL DWELLING SITES - AN EXAMINATION OF THE FACTORS DETERMINING QUANTITATIVE EXPECTATIONS OF INCREMENTS TO EXISTING HOUSING STOCK THROUGH THE DEVELOPMENT OF SERVICED RESIDENTIAL DWELLING SITES

Shortfalls of the supply of residential dwelling sites have been documented clearly. The increases in the size of the existing housing stock have not been sufficient to meet the demand expectations generated by net family formations and net migration into the region. It is instructive now to look at the supply side of the supply/demand equation in order to gain some insights into the ability of the suppliers (private developers and/or public agencies) to meet the demands for residential dwelling units within specified time horizons.*

Static Analysis of the Residential Dwelling Unit Supply Process

Viewed as a static program frozen at any given point in time, the potential supply of residential dwelling units in the region may be compared to mathematical sets (see Figure 3). These sets on limitations are particular to the region under consideration. Such limitations may or may not occur in other regions. Perhaps a striking

*These expectations do not take into account the limited expansion possible of the process of conversion of residential dwelling sites to actual residential dwellings. Even if an unlimited number of residential dwelling sites is available, there is a finite capacity of the construction industry to build homes due to incipient shortages of materials, labor management and capital.
FIGURE 3

Diagram of Static Analysis of Residential Dwelling Unit Supply Process

Urban Designated Land Within Region

Land Which is Economically Feasible to Sewer

Designated Development Areas

Land which can be assembled by developer and/or public agencies
example of such differences would be Houston, Texas, where the non-use of zoning by-laws precludes the creation of development areas.

The major set is the supply of urban designated land within the region, at any given time. This would be the acreage of land either zoned for urban residential usage or land which the municipal or provincial authorities will permit eventually to be rezoned into urban residential land. A specific example of the land within this major set would be the acreage designated as non agriculturally frozen land designated by the individual municipalities as sufficient for each municipality's urban needs for the five year period from 1973 to 1978. These areas, as approved by the Land Commission administering the Act on behalf of the Province of British Columbia sets the limits beyond which development cannot proceed within the five year time horizon, unless leakages occur in the conversion of "frozen" farm land into urban land.

The largest subset would be that acreage of urban land which is sufficiently close to trunk sewer so as to permit development on an economically sound basis. Someone, either the private developers and/or the municipality concerned must underwrite the costs involved in providing lateral sewer links, water lines and roads to the land under consideration. Although considered as a static supply for the sake of this analysis the number of acres varies as a direct result of the relationship between lot prices, servicing costs and raw land costs. As lot prices rise, it may become more feasible to buy less expensive land further away from the existing infrastructure and to occur this higher costs of providing services to that land. Within this set, the supply of economically feasible land will vary with the price of lots which is in turn a function of the relative shortage of supply in
the existing and incremental housing stocks in relationship to effective demand. Thus, within this set, the economic forces of the market could be at work: - the supply of serviceable land will increase in relationship to the prices paid for the product, serviced land. This analysis does not take into account the externalities which may accompany this development of land further away from this existing infrastructure. Examples of such externalities would be the provision of schools, longer arterial roads and increased community services.

The set of land which is economically feasible to service is further limited through the creation of a further subset or subsets of land within the set of land which is economically feasible. Municipalities in the region designate "development areas" in which the municipalities will permit development to take place normally. These are circumscribed areas set out by the municipal planners in consultation with the municipal council. Furthermore such development areas may be given time horizon priorities by the municipality concerned. For example, a municipality will designate an area as Development Area 1 in which a certain level of infilling and development must be achieved before applications will be considered for Development Area 2. Such Development Areas usually, but not always, coincide with the municipality's scheme for providing the necessary infrastructure to that area - particularly sewage treatment facilities. The boundaries of these development areas may or may not be finite. In certain instances, certain of the municipalities in the region may consider and approve applications for development from holders of parcels adjacent to or completely outside these development areas. It may be that developers and/or landowners may be able to convince Council that the
Advantages to this municipality of tying the non-designated parcel under consideration to the infrastructure may outweigh the disadvantages to the municipality. The incidences of such leakage are reduced in the region, however, due to the splintering of land ownership patterns which make assembly of a sufficient large parcel to justify the additional off-site costs which would be incurred by the developer in tying the parcel outside the designated area into the existing infrastructure.

It is important to point out that the number of acres included within the subset of designated urban areas is not the sole determinant of the number of residential dwelling units which may be supplied from the land in this subset. The overall density of development permitted will affect the number of residential units that could be supplied. Such overall densities are the subject of an interaction between developers proposing projects and the municipality approving developments. Some municipalities will rely solely upon existing zoning to designate overall densities; others will consider zoning changes through land use contracts. For instance, if single family density only were permitted by the municipality concerned, then the number of residential dwelling units potentially supplied would be considerably lower than if multiple family or mixed density were permitted.

<table>
<thead>
<tr>
<th>Supply of Land</th>
<th>Assumed Density Factor</th>
<th>Potential number of residential units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>1000 acres x 4/acre</td>
<td>4000 units</td>
</tr>
<tr>
<td>Mixed density</td>
<td>1000 acres x 8/acre</td>
<td>8000 units</td>
</tr>
<tr>
<td>Multiple family</td>
<td>1000 acres x 12/acre</td>
<td>12000 units</td>
</tr>
</tbody>
</table>
Given the set of acreage included within this designated
development area(s) times the average overall expected density to be
permitted in that area, consideration should be given to the limita-
tions to the potential number of residential dwelling units to be
supplied. Due to limitations to land assembly within the specified
area there is a subset of land within the set of development area(s)
which is the land which can be assembled by private developers and/or
public agencies. This subset of assembled land may be as large as
the developable areas, but in most instances it is much smaller.
Parcels within an assembly area are often interrelated to some degree.
Many parcels are "key" in that the road patterns, sanitary and storm
sewers, sanitary sewer pumping stations must be located on these
parcels to efficiently service the area.

Frictions in the assembly process arise from a number of
different factors. Instrumental amongst these factors would be: -

1. Landowners' unwillingness to sell due to misplaced expectations
that land may be eligible for a higher and better use than that design-
ated. For instance, owners often feel that their land is suitable
for multiple family use rather than single family. Such expectations
often may have been generated from observations of "leakages" from
the zoning category to another as promoted by developers and fostered
by the approving municipality.

2. Landowner reluctance to sell out to their preference to con-
tinue enjoying the use to which the land is presently put in spite of
the lure of monetary rewards. For instance, many smaller acreages are
held by older people who want to "last out their days on the land".
Many farmers wish to continue farming on the land presently under their
control.
Presently, the use of a particular parcel may be of such a high use that the developer cannot bring the surrounding properties into the same use because the demand for this high use does not exist. For instance, a chicken farm or motel, or, most commonly, an expensive or series of expensive homes may preclude assembly of an entire tract at an overall price permitting economic development. One particularly vexing problem in the Greater Vancouver and Lower Fraser Valley region is the predominance of expensive homes on one and two acre sites (especially vexing to the developer).

5. Landowners inflationary expectations have been fueled by the rapid price increases in the region. Reluctant to sell their land at all, landowners often price the land at levels which discount inflationary expectations far into the future.

5. Landowners often distrust participants in the real estate industry. These landowners adopt the attitude of "burying their head in the sand" and refuse to even discuss the possibility of sale.

The coincidence of these parcels withheld rises almost geometrically with the number of landowners whose land was to be assembled in a given area. In practical terms, the assembler knows that he will run into many times the resistance in gathering together thirty acres from ten separate landholders than in putting together a comparable thirty acre parcel held by three owners.

The value of existing structures usually rises significantly when a greater number of landholders hold a given acreage. In the previous example, it may be that there are ten or more homes placed on the thirty acre parcel held by ten landowners while only three acres may be on the comparable thirty acre parcel.

In aggregate, the combined effect of splintered landholdings and/or holdouts are considerably important when considering the
potential supply of residential dwelling units within the region. It may be possible within a limited time horizon to assemble all or even a significant portion within a designated urban development area, but, if such is not the case, the residential dwelling supply pipeline becomes constricted at the outset. The effect is most pronounced if the municipality holds the boundaries of the development area constant and do not permit significant "leakages" of potential developments from outside the development areas.

Dynamic Analysis of the Residential Unit Supply Process

Given the pool of potential residential dwelling sites as indicated by static analysis, it is now necessary to turn to a dynamic analysis of the production process over time to determine the relative efficiency or inefficiency of this production process. Foremost amongst the criteria by which to judge the process will be the time required to bring residential dwelling units to market and the attrition in numbers of dwelling unit sites which never can came to market or whose production will be delayed beyond normal expected time horizons. It is one thing for developers and/or public agencies to have raw land in inventory and quite another for these raw acreages to be transformed into serviced building sites ready for residential construction. Figure 4 sets out the dynamic process in simplified diagramatic form.

The time taken for the conversion of raw land into serviced residential sites can vary considerably from municipality to municipality in the region. The time taken to bring serviced residential building sites to market can also vary considerably within a municipality from decade to decade. Time taken can be broadly broken down into time spent on three functions:-
FIGURE 4

Pictorial Representation of Dynamic Analysis of Residential Dwelling Unit Supply Process

Dwelling unit construction

Subdivision construction and/or site servicing

Guiding the development through the municipal approval process

Assembly of raw land

Loss in number of dwelling units as development passes through stages

Time taken from inception of land assembly to finish of dwelling unit construction

Attrition in numbers

Decreasing function
1. The assembly of raw land
2. The municipal approval process
3. The construction process with regard to servicing the dwelling site.

Assembly of Raw Land

Raw land assembly is a process that may happen quite quickly or it may be drawn out over a considerable period of time. It may be that the developer and/or public agency has sufficient land in inventory when the creation of a development area is announced by the municipality. It may be that an experienced assembler can put together a parcel sufficiently large for development within a matter of weeks. In most instances, however, land assembly in the region is a slow, frustrating task which takes at least several months and even last for years.

Competition between the developers is intense. A number of developers may be working on an area simultaneously. Each may acquire crucial "key" parcels, frustrating the attempts of the others. Often, long periods of intensive negotiation between the developers will determine which developer(s) end up with the developable package. All assemblies are subject to the time consuming problem of dealing with "holdouts". It may be in the end, that their efforts come to naught.

Competition amongst the developers is not of interest for the crucial question is the number of raw sites which may be gathered together in aggregate by all the participants. The point to note is that there may be considerable delays encountered by the participants in assembling the land due to competition among themselves.

The Municipal Approval Process

The time taken to guide subdivisions and/or multi-family
building sites through the municipal approval process is the critical element in the time taken to convert raw land into serviced building sites. The number of interactions between the developer and the municipality are steadily increasing and the issues are becoming more complex as urban areas expand and encounter problems inherent with growth. The subdivision approval process of the Borough of Scarborough outlined by Andre Derkowski indicates that there are 90 agencies that may have a voice in the process of development approval. The process of approval is being constrained by the multitude of issues which arise in the cases of equating social costs with private costs. It is unfortunate that within the complexity of the process it is only the developer who represents the consumer of housing as various agencies involved are generally those concerned with the impost of additions to housing stock in the existing housing stock and the trade-off of the increased costs of development imposed upon the municipality vs the benefit of municipal population growth.

The financial position of municipalities and the role of the provincial government has an important impact upon the time required in process of approval. In cases where municipal budgets are not capable of incurring additional development the incentive of the municipality to reduce the time required for approval does not exist. In some cases the time created by a slow approval process is an asset to the municipality in the respect that it may require the additional time to determine the optimal type of development given its financial position or succeed in impressing the provincial government that a serious municipal finance situation exists.

The planner also has an important role regarding the efficiency of the dynamics of the approval process. A comprehensive plan related
to the financial position of the municipality and the optimal development situation required in order to satisfy the municipal budget provides the superstructure in which the planner may introduce his concepts regarding the services that are required in the development of a municipality. The approval process must function within the general framework outlined by the planner. If the objectives and goals of the municipality are not well established in a comprehensive plan the micro economics of the approval process cannot function properly. If the engineer or school board or other various authorities involved in the approval process are not cognizant of an overall municipal planning policy with specified objectives the approval process is burdened as various authorities attempt to relate their function of approval to the undetermined policy.

The local politician also has an important function regarding the time required for approval process. There is a very important trade-off between the technical assets or disadvantages of a development and its impact in the political environment in the community. The primary concern of the local politician is to observe that the ratepayer is not being harmed by a development in respect that public and social costs created by a development do not exceed the benefit to the community as a whole. Some of the considerations that the politician would take into account are:

1. Tax burden to existing residents;
2. Resistance of residents to growth in population;
3. Environmental costs;
4. Desire of residents to upgrade the quality of residential units by encouraging consumers of a high income scale;
5. Resistance to increased density (multi-family projects).
These are a few of the constraints that can be imposed on the supply of housing units in the dynamic process of subdivision approval. The direct results would be a decrease in the number of residential units brought on and increases in the time taken to obtain approval.

**Subdivision Construction**

The subdivision construction stage of the dynamic process is not unduly constricting in terms of time. Servicing of land can usually be accomplished in three to six months given normal conditions. Material shortages are however, a problem at certain times. No attritions in supply occur in that no dwelling sites would be lost at this stage.

**Dwelling Unit Construction**

Dwelling unit construction time lags do occur but are not unduly critical. Residential dwellings usually take from three to nine months to complete. Completion periods can be lengthened through shortages of labor and materials. No attrition in the number of residential dwelling units occurs at this stage.

The public sector role in the assembly, development and disposition of serviced residential dwelling sites will be more particularly analysed in the following chapters.
Footnotes

CHAPTER V

THE MUNICIPAL ROLE IN THE ASSEMBLY, DEVELOPMENT AND DISPOSITION OF LAND FOR RESIDENTIAL PURPOSES

Although assembly, subdivision and development have usually been carried out by private developers, certain municipalities have also become involved in the process for various reasons. Traditionally the municipalities' role has been to provide services to the new residential subdivisions, and, more particularly, to approve such subdivisions. However, this thesis will be mainly concerned with the role the municipalities played in the development process* and not the traditional role previously mentioned.

Municipal powers will be briefly reviewed, and policies regarding the development process will be studied more carefully in the municipalities of Surrey, Burnaby and North Vancouver District, as well as their land holdings. Finally, implications of such policies will be discussed in relation to the existing housing shortage.

Legal Powers

Under section 92(8) of the British North America Act, municipal governments became one of the responsibilities assigned to the provinces. The range of powers, responsibilities and revenue sources assigned to the municipal units established in each province are set out in

*The assembly, development and disposition of land for immediate and future private uses, particularly in regard to housing.
As Crawford states:

"....It is important to remember that the legal competence of a corporation to act is limited to the powers given in its charter or other source of incorporation and conversely that powers which are not so expressly granted are beyond its legal capacity."

Chapter 255 of the Provincial Statutes, the Municipal Act of British Columbia, designates the powers and duties of all municipalities of the Province, except those of the City of Vancouver. Among the powers and duties are many which, directly or indirectly, affect the field of housing, such as zoning powers (s. 702-710), land subdivision regulations (s. 711-713), assessment and taxation (s. 367-434) and finally, powers for acquisition (s. 465) and disposition of real property (s. 471, 477 and 477 a).

A. Acquisition and development of land

Section 465 confers upon Council the power to develop land under municipal ownership for residential purposes. In addition Council may, in accordance with a by-law or resolution, acquire land for such purposes, namely residential development. Finally, in accordance with a by-law and with the approval of the Lieutenant-Governor in Council, the Council may acquire land by expropriation. Consequently, the municipalities have all the necessary powers to carry out any residential development. Furthermore, under sections 214 and 215 of the B. C. Municipal Act, the municipalities are empowered to enter into a partnership agreement with any other levels of government for housing purposes. However, section 216 prohibits such partnership with any private developer.

*Power granted in 1958 by an amendment to the B. C. Municipal Act.
B. Disposition of Land

Section 471 empowers the municipalities to sell by auction or otherwise any municipal land which is not reserved or dedicated to public uses. The municipal council may also pass a by-law enabling them to lease for a term not exceeding 99 years any land suitable for residential purposes (s. 477).* Certain conditions in this latter section limit the latitude of the municipalities. However, those conditions do not apply when land is leased for the purpose of providing housing (s. 477a). The only restriction limiting the municipalities is contained in section 470 whereby the council is not allowed to dispose of its land through an option agreement; as mentioned earlier, all disposition of municipal land is done through the bidding process.

Municipalities have all the necessary powers to actively participate in the development process. To fully appreciate such powers, the policies of three selected municipalities will be analysed.

Municipal Policies (selected municipalities)

The fact that municipalities are landholders is not a highly publicized matter. However, due to accidental circumstances some municipalities own large portions of undeveloped lands within their boundaries. A major part of those landholdings was acquired during the depression years. In the early years, their main concerns were to dispose of land as fast as they could to increase their financial position. Realizing the potential worth of their holdings, munici-

*Power granted in 1964 by an amendment to the B. C. Municipal Act.
palities began to establish policies and guidelines. Such policies followed by these selected municipalities over the years in regard to their land holdings, will be examined.

A. Surrey

The District Municipality of Surrey did not consider the potential worth of its holdings until 1965. At that time, the planning department of the municipality issued a report dealing with control of urban growth. One of the policies recommended to Council was in regard to the role that the lands under municipal ownership could play in the control of growth. The report states:

"....(they should retain) large parcels of land in public ownership as a means of postponing or hastening development in given areas."

Consequently, this recommendation seems to indicate that the municipality was going to withhold land for planning considerations rather than for development. The following reasons were given: Surrey's past policy, particularly in regard to zoning and provision of services, had resulted in an extremely scattered development which was difficult and costly to service. As a result of indiscriminate subdivision in the fifteen years subsequent to World War II, much of the land in Surrey had been subdivided in a manner which left very few large parcels available for planned, co-ordinated, comprehensive development. Consequently, the retention and the acquisition (if financially possible) of large underdeveloped parcels of land would prevent such scattered development. To achieve that goal, the report states:

"....at least for a few years, a certain percentage of the budget (should be set aside), for the express purpose of land acquisition of a range and degree which will enable it to control the pace of subdivision activity in selected areas of the municipality."
It was discovered that only two large parcels of land were considered for acquisition following the report's recommendations. The first parcel was adjacent to a large municipal holding known as "Sunnyside Acres" (453 acres). It contains 153 acres (more or less) and it was owned by White Rock Waterworks Limited. However, the acquisition was not completed for undisclosed reasons. The second parcel known as "Green Timbers Site" (approximately 430 acres) was acquired in 1969. Several reasons were given for making so few acquisitions. They were virtually the only large consolidated parcels of suitable land available for a large scale comprehensive development left within the municipality. Even though there were large areas of underdeveloped and badly subdivided land under private or municipal ownership, no land consolidation was considered due to a lack of staff and expertise. However, the main constraint was the financial inability to carry out such an acquisition program.

As there is no classified inventory of small municipal land holdings in the municipality, a municipal land use map was used to ascertain the amount of undeveloped municipal land holdings. Discounting the two large parcels of land under municipal ownership mentioned above, it was discovered that 762 acres were under municipal control. However, few of those parcels, namely 200 acres (more or less), were within the designated urban growth areas established by Council. However, further land consolidation was required to get a subdivision approval.

Realizing the financial potential of such holdings, in 1973, Council hired a former developer to carry out the development of municipal holdings within the designated urban growth areas. Such development would be profit-oriented and no consideration would be
given to the existing housing situation. As there is no definite policy outlined by Council regarding the development of small holdings under municipal ownership in the near future, each development proposal would be judged on its own merit.

The lack of a classified inventory will oblige the land department to get the approbation of many municipal divisions prior to starting the development of any given parcel of land.* Furthermore, the planning department will exercise a tight control on any municipal development, namely because such municipal undertaking would influence the type of development that would be required by any private developer. Consequently, the process is going to be very cumbersome and lengthy, especially in the immediate future.

The other constraint will be the lack of money to carry out such development; as there is no revolving fund established, the authority to borrow such money will have to be obtained from the provincial government. In addition to these problems, the municipality is hampered by a lack of qualified staff to enable large scale development to take place.

However, at the end of 1973 Council approved the disposition of 40 acres of municipal land for residential purposes. Such project set the framework for a policy of land disposition. The following procedure was adopted: the municipality analysed one particular site, completed the assembly, obtained all the necessary approvals and offered through the tendering process, that parcel of land. The bidders had to come up with a value on that parcel of land coupled with a plan of development.

*As there is no land classification all the departments, such as parks and school branches, requiring land for public purposes, will have to be contacted.
As the land was undeveloped but zoned for single family
dwellings, the municipality had to approve the bidder who offered a
reasonable price for the parcel of land. The planning department
recommended to council the bidder which had, in their opinion, the
best plan of development. Such procedure enabled the municipality
to obtain immediate cash for its parcel of land and retained control
on the type of development that would take place.

By using such a policy, the municipality did not sell its
parcel of land unconditionally; it forced the buyer to proceed with
the development in a relatively short period of time. Also, there is
no municipal financing required, unless the municipal land is not
large enough to permit such development. In that project, the munici­
pality had to borrow for a short period of time an amount of $400,000
from the provincial government to acquire additional land. In that
specific project, the municipality sold the parcel of land for
$1.1 million dollars realizing a profit of six hundred thousand
dollars.*

Finally, it should be pointed out that the municipality will
benefit from that project in two ways. A portion of the profit
realized will serve to establish a land development fund. Consequently,
no provincial borrowing will be necessary to carry out similar pro­
jects. Secondly the type of development which will take place will
create additional revenues to the municipality when completed. From
the private developer's point of view, there still exist some ad­
vantages because the hassle of land assembly is avoided, and, there
is no municipal approval to obtain; such approvals were granted prior

*Approximate profit after paying back the loan and deducting the ad­
ministrative costs incurred during the land consolidation.
to the tendering of the land. Also, there is still profit to
generate through the servicing and the disposition of serviced lots.

In summary, it must be emphasized that the main points of
the land policy in the District Municipality of Surrey are:
- retention of large holdings for planning control;
- lack of comprehensive policy with regard to development
  of small holdings not required for public purposes;
- a very limited number of land holdings in the existing
designated urban growth areas to enable a large involve-
ment in land development.

B. Burnaby
1) Background

As with most of the other municipalities, the District
Municipality of Burnaby acquired its land holdings through foreclosure
on land for tax payment default, especially during the depression
years. At one point, the District had acquired close to 40% of the
land within its boundaries. Over the years the Council policy was to
dispose of most of the parcels of land which were serviced, as rapidly
as applications to purchase were received.

All the undeveloped lands under municipal ownership were kept
in a reserve until further land consolidation made it possible to
dispose of. However, during the 1960's, Council became more reluctant
to approve disposition of undeveloped lands, because private developers
were realizing too large a profit through development of such lands.*

As a result, the municipality considered it more appropriate to retain
ownership of existing land holdings as well as acquiring additional
land. In December 1968, Council passed a resolution to that effect: 5

*Other reasons being a change in the method of land disposition and new
municipal policies.
The municipality will undertake a gradual acquisition of undeveloped land adjacent to existing municipal land holdings and will, whenever it is possible, acquire the remaining strategic undeveloped holdings within its boundaries. Two reasons were given for such policy: Firstly, the source of municipal holdings, namely, land acquired through foreclosure, was drastically diminishing, but the cost of new land acquisitions was increasing very rapidly. Secondly, as the municipality wanted to obtain control of all undeveloped parcels of land as an additional planning tool to curb growth, additional funds were needed to achieve such a goal. This argument shows the weakness of the zoning power. To consolidate existing land holdings, the Council agreed to devote 2-3 mills out of the municipal budget. Furthermore, Council passed a resolution in June 1970 to reserve all the monies realized on the disposition of tax sale lands as exclusively as possible to that same objective. Consequently, the municipality was financially able to achieve its land consolidation program.

2) Municipal land holding analysis

To establish priorities in their land acquisition program, the planning department carried out a thorough analysis of each municipality owned parcel of land and determined the type of present and future uses in accordance with the overall community needs. The report was released in 1971 and included the following recommendations:7

The report indicated that 3,325 acres were under municipal ownership (approximately 14.8% of the total acreage of the municipality): that 2,214 acres should be retained pending availability of services and further subdivision: that 1,010 acres should be sold conditionally, subject to consolidation and municipal guide lines: that 12 acres should be sold conditionally subject to consolidation:
that 4 acres should be sold subject to existing land uses.

From the analysis of the report, it seems evident that the municipality's policy was to retain most of its holdings for use as a vital planning tool to realize short and long term control over municipal growth. To supplement this affirmation, it was demonstrated, by a survey carried out in January 1974, that the municipality owned 3,664 acres of undeveloped lands (of which 500 acres is reserved for public uses).

By relating that survey to the report issued in 1971, it was established that the resolution passed by Council in 1968 was followed very closely, namely the acquisition of undeveloped land to consolidate existing municipal holdings and its retention pending availability of services. Consequently, the provision of services and the retention of large tracts of undeveloped land are the two major tools of the municipality to ensure orderly development.

However, the municipality adopted a policy related to the disposition of land; such policy affects only marginal small holdings which are not required by the municipality for central development. Council passed in 1970 the following resolution which is still in force today:

- The best interests of the municipality will be served by a continuation of the sale policy for all residential lands which may be decided to be placed in a sale position;
- If, and when, any large tract of land scheduled for residential development becomes available, the Council at that time shall re-examine the situation to consider the possibility of leasing the entire site;
- Under no circumstances will council consider the lease concept for individual or small groups of residential lots. Such policy was adopted for the following reasons. The municipality is primarily assembling land for planning control. Any marginal land unnecessary for that purpose can be sold in order to increase the financial revenues of the municipality. Such revenues would serve the purpose of acquiring additional strategic parcels of land which will in fact contribute to the overall well being of the municipality. So far as the disposition of a large undeveloped tract of land is concerned, the leasing option was adopted in order to keep control on the overall type of development. The municipality also would share in the accruing values that ownership in the property would provide.

Such policy indicates clearly that the municipal involvement in the development process is limited mainly to land assembly for planning control. Any land disposition is only accepted when there is an insufficient amount of land available to exercise adequate control in the future development of the surrounding area. The other consideration is the location of such parcels of land.

In summary, the main points of the land policy of the District Municipality of Burnaby are:

- Consolidation and retention of undeveloped land holdings for planning control;
- Acquisition of strategic undeveloped parcels of land to control the type of development in the surrounding area;
- Disposition by sale of marginal parcels of land in order to increase the existing land revolving fund.
C. North Vancouver District

1) Background

Due to the rough topography of the North Shore and the difficulties faced in provision of adequate servicing, most of the land reverted to the District in the early 1930's. The District, incapable of meeting its debts, was in receivership until 1948. During that period the District was rich in land but poor in revenue. To stabilize the financial situation, the Commissioner, appointed by the provincial government to administer the District, adopted the following policy. The municipal land should be disposed of at all cost in order to increase the revenues through property taxation. To achieve that goal municipal land was sold at 50% of the assessed value (approximately one-third of market value).

After re-installment of Council, the same policy was followed until 1952, when the land was to be disposed of at the assessed value (approximately 60% of market value). However, the sale price was gradually increased to the market value, but was negotiated and approved by Council. During the 1950's, private developers were able to acquire large undeveloped parcels of land from the district and subdivide them into lots. Such lots within those new subdivisions were disposed of by developers at a large profit. To regulate the land policy, the Council hired a planner and a land agent in 1956. In October 1956 a policy of land sale by public tender was established in the District to supersede the former policy of direct negotiation.

In 1957, Council adopted the policy of disposing of municipal land by public tender, with one exception. The Council maintained the principle of direct negotiation for the disposition of substandard
lots; the reason being that only two persons, namely the adjacent owners, could obtain such municipal land. The land was unsuitable for development but could generate revenues to the District.

Council approved the first land acquisition in March 1958. The purpose of such acquisition was to consolidate existing municipal holdings. Subsequently, the land was disposed of under a municipal commitment to provide services. During the following years, the policy was to dispose of small undeveloped acreages to private developers. However, in 1962, Council agreed to service its own subdivisions and sell lots on an individual basis to contractors. Realizing the profits made on such developments, Council established (1956) a revolving land development fund to exercise the policy of selling individual serviced lots. This sale provided Council with additional sources of financing required for road construction.

Further, in 1969, Council abolished the servicing option in mass sale tenders which permitted developers the opportunity of servicing the subdivision. After 1969 the District adopted the policy of carrying out the full development of all municipal lands and disposing of serviced lots on an individual basis. In order to help the bidders, the District still maintains an up-to-date inventory of current lot sales. This inventory is available to any individual on request at the municipal office. By following such a policy of land disposition the District was able to carry out additional capital improvement programs without having to burden its local taxpayers.

However, Council was and remains reluctant to approve any new land acquisition. Preference is given to the replotting provisions available to the municipalities under the B. C. Municipal Act (s. 825-858). Those sections empower the Council to designate an area
for replotting, whereby a new land subdivision will take place and whereby each owner will be compensated financially or otherwise for the loss of their property. Where only land is involved, the same amount of land will revert to the owner under the new subdivision.

Finally, Council relied mostly on its actual land holdings to achieve its land development policy. It was assumed that there was no need to acquire additional land. For verification of this assumption, an analysis of the municipal land holdings was carried out and a survey made in 1973 was used as reference.

2) Municipal Land Holdings Analysis

For the purpose of the analysis the District will be divided into two sections; namely, the Capilano area (from the West Vancouver municipal boundaries to the Seymour River) and the Seymour area (from the Seymour River to the Indian Arm River). Reasons for the division are as follows:

a) No major development will take place in the Seymour area until the planning department confirms the location of the town center. Presently, negotiations are taking place with the National Harbours Board to determine the feasibility of using their lands in an overall redevelopment concept. Additionally, a study is presently being prepared to determine the type of development to take place in the entire Seymour area.

b) Due to the rough topography of the whole district, Council established the following guidelines restricting land development:

(1) In the Seymour area, phase I will consist of developing lands up to a maximum of 550 feet above the sea level. In phase II it will be up to 1050 feet.
(2) In the Capilano area, it will be up to a maximum of 1050 feet in phase I and up to 1250 feet in phase II. These guidelines were established due to the difficulty in providing the necessary services and the cost involved if they were provided. Such guidelines reflect the present situation.

To be consistent with the municipal guidelines above the analysis was set accordingly. In the survey used as a reference, 7,604 acres are shown under municipal ownership. However, approximately 264 acres are under the control of the City of North Vancouver. Approximately 1,640 acres is presently used or reserved for public purposes. Consequently, 5,680 acres is presently undeveloped. The breakdown of undeveloped lands is as follows:

<table>
<thead>
<tr>
<th>Area</th>
<th>Phase I (Acres)</th>
<th>Phase II (Acres)</th>
<th>Lands held but presently in accessible for development (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seymour Area</td>
<td>1,000</td>
<td>620</td>
<td>2,160</td>
</tr>
<tr>
<td>Capilano Area</td>
<td>500</td>
<td>600</td>
<td>800</td>
</tr>
</tbody>
</table>

The land development policy set by Council is to provide an amount of 2 million dollars per year toward the capital program of the municipality and there appears to be enough undeveloped lands to achieve this financial goal. Furthermore, the rapidly increasing prices for serviced lots reduces the willingness of the District to accelerate its development policy. As lot prices increase less lots are developed to meet the Council target of 2 million dollars profit per year.
3) Land Disposition Program (Appendix A)

With regard to municipal policy on land disposition, it was mentioned earlier that the municipality disposed of serviced lots on an individual basis only. Until recently, the method of disposition was by sale to the highest bidder. In June 1973, Council adopted the following policy: The possibility of offering residential lots for lease or purchase at the option of the tenderer; the lease being made on a prepaid basis. The following reasons were given for the policy.

The only difference between a sale and a prepaid lease is the right to reversion. When an individual acquires a piece of land by purchase, he has the option of keeping or selling it. A prepaid lease has the same features but for a given period time (99 years in this case).

Furthermore the municipality did not decide to use this approach to reduce the cost of housing, but did rely on the existing tight market situation in the region. All the advantages remain with the seller (the District of North Vancouver in this case).

The municipality's first experience with the prepaid lease approach was very successful. The difference between a sale and a prepaid lease for 99 years amounted to approximately $2,000 per lot. This small difference is the only reason council agreed to the prepaid lease concept. However, such approach implies that the amount lost today is less than the present value of the amount that will be received at the expiration of the lease.

The land department did not like disposing of a permanent asset (land) to invest in wasting assets such as road works and
services with lifespans of only fifteen to forty years. The main question raised was what will happen when such wasting assets will have to be replaced and there is no more land left to sell? The prepaid lease arrangement will guarantee such future. Alternatives would be taxation or the establishment of a sinking fund to replace such wasting assets.

The other favorable aspect of a prepaid lease over an ordinary ground lease is the fact that the municipality does not wish to incur any additional expenses by way of administration, renegotiation and default on ground lease payments. The municipality did get the best of both options, i.e. the right of reversion as a lessor of land and the avoidance of the administration cost of ground leases by a prepayment clause at the time of acquisition.

The main points in favor of the municipality's adoption of such policy have been described briefly. In the next section the implications of the policy will be analyzed further.

In summary, it should be restated that the district is involved in the land development process for the following reasons:

a) to fulfill its capital improvement program;

b) to maintain enough land in reserve to achieve financing required for capital improvements;

c) to dispose of serviced lots on a prepaid lease basis and retain the right of redevelopment at the expiration of the ground leases;

d) to prevent additional increase in property taxes.

Implications

The municipalities surveyed undoubtedly used their land holdings as a planning tool to curb the growth. Their land policies were to retain ownership of large undeveloped parcels of land and,
when financially possible, acquire additional lands for planning purposes. When development occurred, it was mainly a planning decision. However, the main purpose of municipal land development was, and is presently, to create additional revenues to the municipalities. The housing situation was never a key factor in decisions to develop land. Council policies regarding the amount of land that could be released for residential development was related to the amount of land under municipal ownership. Finally, municipal land holdings are still the basis of long term planning objectives. There is no indication of change in the future. Of the municipalities surveyed, the municipality of North Vancouver District is the only one which produces residential serviced lots on a continual basis. However, the purpose of such a policy is mainly to fulfill its capital improvement programs.

What are the implications of such land acquisition, holding and disposition policies? Land in designated urban areas which is withheld from the market by any given municipality has a direct impact in the housing situation. Additionally, as the municipality has the power to establish and modify those designated urban areas there is no other corporation or individual which can compete with this power.

The district municipalities of Surrey and Burnaby withheld land from the market for planning considerations and depending upon their financial ability, acquired additional land supposedly to exercise a control over growth. In reality what they are doing is simply owning as much land as possible and obtaining the profit when such land is going to be released for development. These land banks result in less land for private developers. Restraining the availability of land suitable for residential development creates a
shortage. The District of North Vancouver does not acquire land on a similar basis as existing land holdings are sufficient for their needs. The municipality however, keeps a tight control on its development program. No more serviced lots are being offered than what is necessary to fulfill the District's financial needs.

Finally, the municipalities, by retaining their land holdings within designated urban areas, contribute directly to the existing housing shortage. To emphasize the above comment, it should be mentioned that the Municipality of Burnaby owns 63% of all undeveloped lands suitable for residential development within its boundaries. As far as the Municipality of North Vancouver District is concerned, it owns 64% of such undeveloped land. Based on their land policies and their land holdings, it is concluded that they have a direct effect on the existing housing shortage. With regard to the Municipality of Surrey, such conclusion is not right. The Municipality owns only 2% of the undeveloped land within the designated urban growth areas. The lack of revenues, coupled with a lack of expertise in the development process, will not enable the municipality to play a direct role in the production of residential buildings lots (Appendix E).

As demonstrated, land disposition policies are profit or control oriented depending upon the type of disposition. The option offered by the District Municipality of North Vancouver is the perfect example of a combined profit and control orientation. The prepaid lease option approved by the District of North Vancouver on recent residential serviced lots is a direct benefit derived from the existing tight housing market.
However, in a ground lease option on serviced residential dwelling sites, there is always a threat when leases expire, that the provincial government would legislate to protect the lessees. The leases can be extended by statute and the lessees can be given the right to acquire the freehold for a nominal sum arguing that the prepaid amount was almost equal to a sale price. In fact, problems of such a policy is of concern in the future for the lessor (North Vancouver District in this case). One point worth mentioning is that the municipality did not want to subordinate the ground lease to the mortgage. The reason was that the municipality did not want to be faced with foreclosure procedures. However, to lessen the reduced mortgageability of the future buyer, a prepaid lease option for 99 years was devised. Such an approach, in fact, enables the buyer to obtain financing at the same terms and conditions as a buyer of a freehold interest. The effects are again of a long term nature (threat of enfranchisement at the expiration of the lease by the provincial government).

As far as the District Municipalities of Surrey and Burnaby are concerned, their land disposition programs are so marginal that there is no actual effect on the existing housing situation. The Municipality of Surrey does not own enough undeveloped land suitable for residential purposes while the Municipality of Burnaby is more interested in land banking than land development.

However, an analysis of the housing starts in the three municipalities surveyed, does not seem to indicate that they are restraining growth. From 1966 to 1973, those three municipalities approved between 28% and 32% of all the housing starts in the Greater
Vancouver Regional District (Appendix F). If we compare the housing starts in 1973 to the amount of land designated for residential uses in the Greater Vancouver Regional District, we can arrive at a different conclusion. A recent survey published by the Greater Vancouver Regional District indicates that there is 57,352 acres designated for residential use. Of this amount, 5013 acres (8%) are located in the District of Burnaby, 27,979 acres (48%) in the District of Surrey, and 4,215 acres (7%) in the District of North Vancouver.

In 1973, the District of Burnaby approved 7% of the housing starts in the GVRD while having 8% of the undeveloped land designated for residential use within its boundaries. The District of North Vancouver also approved 7% of the housing starts while having 7% of the undeveloped land designated for residential use within its boundaries. However, owning respectively 63% and 64% of the existing undeveloped land within their boundaries, they will affect considerably the housing market if they maintain their existing land policies.

In the case of the Municipality of Surrey, the situation is completely different. In 1973, the Municipality approved 16% of the housing starts in the GVRD while having 48% of the undeveloped land designated for residential use within its boundaries. As the Municipality owns only 2% of the undeveloped land designated for residential use, the effect of its land policies are minimal. Other inducements which are not relevant to this thesis will have to be devised by the Municipality to encourage residential development.

In conclusion, it is relevant to mention that the municipalities of Burnaby and of North Vancouver District as land owners, can directly affect the housing situation if they maintain their existing
land policies. In the case of the Municipality of Surrey, its land policies will have a minimal effect unless financial support from the senior levels of government can be obtained in the acquisition of land in the designated urban areas.
Footnotes


3. Ibid., p. 80.

4. Surrey Land Use Map, obtained from the Greater Vancouver Regional District Planning Department (updated by the author, January 1974).

5. Council Minutes, December 1968 (District of Burnaby).


8. Burnaby Land Use Map, obtained from the Greater Vancouver Regional District Planning Department (updated by the author, January 1974).


10. North Vancouver District Land Use Map, obtained from the Greater Vancouver Regional District Planning Department (updated by the author, January 1974).


12. Infill study, prepared by Thompson, Pratt and Partners for the Greater Vancouver Regional District Planning Department, April 1974.
CHAPTER VI

THE PROVINCIAL AND FEDERAL ROLE IN THE ACQUISITION,
DEVELOPMENT AND DISPOSITION OF LAND FOR
RESIDENTIAL PURPOSES

Housing matters are always a concern of the senior levels of
government. Their direct participation in the acquisition, develop­
ment and disposition of land for residential purposes will be des­
tribed in particular. In the first part, the provincial powers and
policies will be analysed. In the second part, the federal powers
and policies will be reviewed. Finally, the implications of such
policies will be briefly summarized.

The Provincial Role

Housing falls within provincial jurisdiction as specified by
the following powers granted to the Provinces under section 92 of
the British North America Act. ¹

2. Direct taxation within the province for the raising
of a revenue for provincial purposes.

8. Municipal institutions in the province.

10. Local works and undertakings...

11. The incorporation of companies with provincial objects.

13. Property and civil rights in the province.

16. Generally all matters of a mainly local or private
nature in the province.

In fact, the constitutional powers of the Provinces have no
limitations, especially when dealing with housing matters. The
provincial legislators can enact any type of statute which becomes law and enforced through Court. (As long as such statutes do not affect powers constitutionally granted to the Federal government.)

A. Legal Powers

As mentioned above, the Provincial government has the constitutional powers to enact any type of legislation with regard to housing. However, emphasis will be put on legislation dealing with the acquisition, development and disposition of land for housing purposes. Under the former Social Credit government, one piece of legislation was enacted: The Housing Act. ² It was simply a piece of legislation complementary to the National Housing Act. To emphasize this comment, Mr. Nicholson, Minister of Housing in the provincial legislature recently stated:³

The previous government's lack of interest in housing meant that the Province was forced to rely practically exclusively on the services of the Central Mortgage and Housing Corporation (CMHC).

The Act empowered the provincial government to acquire, develop and dispose of any type of land for housing purposes on a partnership basis with the Federal government.

The former government did form a regional housing department in November 1971 in the Greater Vancouver area. Its powers were limited to the acquisition of land for public purposes. Due to the lack of provincial funding, the department did not acquire much land. To supplement this paucity, the department recently requested the provincial government to amend its "Letters patent" to permit establishment of a regional non-profit housing association.⁴ If such power is granted, the new organization will be empowered to apply for federal funds under the new section 15.1 of the National Housing
Alternatively, the provincial government can buy the land and lease it back at 4% to a non-profit organization. In addition, no ground lease payments start until the project is completed and occupied. However, the regional organization will only acquire land for low income housing projects.

In 1973, the government (New Democratic Party) enacted the Housing Incentive Fund Act under the control of the Department of Municipal Affairs. This Act provided a 10 million dollar fund available to any municipality in British Columbia for land acquisition or housing development for the general public.

Until recently, the province did not have any housing agency to carry out land acquisition for general housing purposes. This was the main cause of the government's apathy towards housing. As Mr. Nicholson stated:

Incredibly, the previous government had only one civil servant responsible for its social housing programs.

To rectify the situation, legislation creating a Department of Housing, with powers of supervising, acquiring, developing, maintaining, improving and disposing of housing in the province, was introduced in the legislature. This bill received Royal Assent on November 2nd, 1973. The minister responsible has all the powers to participate actively in the housing market. Finally, the enactment of this Act, amended many other Acts dealing with housing in general (Appendix B).

* Any non-profit organization can apply for 100% financing, which covers land acquisition and construction costs. In addition, 10% of the total loan is donated.

** Bill 49, creating a Department of Housing Act, introduced in the legislature (October, 1973).

*** Department of Housing Act, chapter 110 of the British Columbia statutes (1973).
but which are not relevant to this discussion.

Until the enactment of this legislation the province had no housing policy related to the acquisition, development and disposition of land for housing purposes. The first task of the Department was to establish such policies.

B. Policies

Realizing the growing housing needs in British Columbia, one of the Department objectives was to put housing on the market. To achieve that objective, decisions were made with regard to the type of housing the government should get involved in, and the location of such housing. The second decision was related to the land acquisition program; what funds were provided, how funds would be allocated, and finally who would carry out the land acquisition.

As the government does not want to compete with the private sector in its land development programs it was decided that the government's responsibility was to provide accommodation to people not usually serviced by the private sector, namely low income people. Also, rental housing was severely reduced due to changes in the federal Income Tax Act (income shelter allowance). To alleviate this situation, the provincial land acquisition programs were oriented towards these two needs. The guidelines directed acquisition of land that could be brought rapidly onto the market. To acquire such land, the province relied on the Regional Housing Department of the Greater Vancouver area.

During 1973, the Regional Housing Department contacted all the municipalities to find out the availability of suitable land within municipal boundaries. The process of land selection was based
on three main factors: the price of land, the proximity of services, and the possibility of rapid presentation to the market. The Regional Housing Department optioned many sites but exercised the right to purchase 61.1 acres at a cost of $5.1 million. The other options were abandoned due to lack of funds. Out of the 746 acres purchased by the provincial government in 1973, only 61.1 acres were acquired in the Greater Vancouver region and over one-half (approximately 38 acres) was purchased in the District Municipality of Burnaby.

The third type of decision was related to the land development program, i.e. do we service the land and dispose of it or do we carry out the complete servicing and construction?

The provincial government adopted two sets of policy: firstly, provision of serviced land to non-profit groups and co-operative organizations, and secondly, to service land and build housing for people who cannot afford to buy from the private sector.

Under the second policy, the Minister stated:

I have determined that the needs of elderly British Columbians should be primarily met by senior citizen housing developed by non-profit sponsors such as churches, service clubs, and other citizen groups. It is preferable that local people and volunteers be involved in looking after the elderly rather than a large government agency.

The government would provide the necessary financing for the construction and would make available land which the provincial government acquired on behalf of those groups. To achieve that purpose, the government will put 10 million dollars under the Elderly Citizens Housing Act, which will be administered by the Department of Housing.

With regard to co-operative organizations, the Minister further stated:
The Department of Housing, now actively assists co-operative housing projects by leasing land at a ground rent of 4% of its value and providing bridge financing.

The Department of Housing acquired most of the shares of Dunhill Development Ltd. to carry out their housing programs. Reasons for such a move were:

The alternatives to acquiring Dunhill were either to engage in a complicated and time consuming task of establishing a large Crown house building organization from scratch, or to continue to rely completely on consulting firms. I selected the first proposition for the time being because we must move rapidly to get houses on the market; and to rely solely on consultants simply means a lot of expense with nothing left over in the way of architectural design or engineering capacity that can be applied to other projects.

However, this firm will be only one of the housing development arms of the Province. Other arrangements such as tenders and builder proposal calls will still be used.

Finally, the fourth and last type of decision was related to the land disposition program, i.e. do we well or lease the land? The Minister made it quite clear when he stated:

For the most part the government will lease rather than dispose of land on a fee simple basis, because we believe that it is proper that future further private speculation be prohibited and that any windfall profit that occurs from an increase in land values should be enjoyed by all members of the community.

However, the information related to the procedure of giving out these land leases was not made available to the author. Finally, it should be pointed out that Mr. Nicholson used the term "for the most part" in his speech to comply with a statement made by Mr. Basford.* If the provincial government disposes of land through leasing arrangements only, the Federal government may

* Mr. Basford is Minister of State for Urban Affairs in the Federal government. He is also responsible for the Central Mortgage and Housing Corporation which is administering the National Housing Act.
completely cut off its financial support because the Federal preference is for a combination of lease and sale arrangements.

In summary, the provincial policies are oriented mainly towards a specific sector of the population which is not adequately serviced by the private sector. There is no intention to compete with the private sector; on the contrary, there is a need for both sectors to work towards the same objective: the production of housing units for the population of British Columbia.

C. Establishment of a Provincial Land Inventory

Following the creation of a provincial Housing Department, the second step in solving the housing problem was the establishment of a provincial land inventory. The provincial cabinet commissioned the Department of Lands, Forests and Water Resources to carry out an inventory of all lands owned by any Department or Crown Corporation under provincial jurisdiction. One of the main purposes was to exercise a better control over the disposition of provincial lands. However, prior to any land disposition, the Department of Housing will have first refusal, namely the right to investigate its potential for housing purposes. Presently, no information is available.*

However, a survey** was carried out in 1973 which shows the amount of land owned by the provincial government in the District of Surrey, the District of Burnaby and the District of North Vancouver.

In Surrey, the Province owns 1,862 acres of land. The major

* No information will be released until the Survey is completed. Comment made by an official of the Department of Lands, Forests, and Water Resources.

**Survey done by the Greater Vancouver Regional District Planning Department in April 1973, updated by the author in January 1974.
part is under the reserve established by the Land Commission.* The remaining part is outside the designated urban growth areas established by the municipality.

In Burnaby, the province owns 1,652 acres of land. The undeveloped part (approximately 365 acres) is adjacent to Simon Fraser University. Due to the municipal council attitude, this land will undoubtedly remain undeveloped. In fact the situation is similar to the Endowment Lands where the University of British Columbia is situated.

In North Vancouver District, the province owns 707 acres of land (excluding the Blair Rifle Range site purchased under Federal-Provincial partnership). Excluding the lands dedicated to public use, the remaining lands cannot be developed for housing purposes due to the rough topography.

In summary there is no indication that the result of the survey carried out by the provincial government will affect the housing situation unless the government uses its powers to develop its land holdings adjacent to Simon Fraser University in the municipality of Burnaby.

D. Implications

As demonstrated, the provincial government did not have any policy until 1973 with regard to land acquisition for housing purposes. However, the creation of this new housing department and the establishment of a provincial land inventory will hopefully relieve the housing pressure. The Province is already committed to the purchase

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*The Land Commission was established in December 1972 to preserve the agricultural land in the Province of British Columbia.
of land that can be brought rapidly onto the market. Additionally, government programs are established to reach a class of people most affected by the housing situation, namely the low and moderate income people. What are the implications of such policies? The provincial policies will provide housing, but, in the next few years, the housing problem will still exist. As the control of land remains with the municipalities, no provincial policies aim at relieving existing pressures. If no measures are used to encourage municipalities to open up new urban areas, the government involvement will have a minimal impact on the overall market.

What is needed is a financial policy to encourage the municipalities to provide additional urban land. Additionally, the cost of servicing should be taken up by the provincial government. The profits realized in such new subdivisions should be invested in the municipality which provides such additional housing units.

What is basically lacking is some immediate policies to encourage the development of new housing units. The municipalities limit growth due to a lack of financial ability to cope with the initial and lingering cost of development placed on them. The provincial government proposes new developments without regard to municipal needs.

The idea of building multiple housing units on Crown land and leasing this land at subsidized rates will benefit a limited number of people but will in no way relieve the existing housing situation. However, the idea of providing land at subsidized rates to low income people and old age pensioners is very good indeed.

No mention was made in the provincial policies to provide residential serviced dwelling sites. This type of housing is left in the hands of the private developer and municipalities. There is
indication that, in the future, the provincial government will provide any support for this kind of development.

Furthermore, there is no indication that the development of infill land* within the existing designated urban areas will be promoted. Such under-utilized land is one of the reasons the municipalities want to retain ownership and/or acquire any future land which will be designated urban. As there is no joint municipal and provincial agreement in the development of this type of land, the housing market as a whole is affected.

To summarize, the provincial policies are aimed at relieving the housing shortage, but the approach in solving these problems is not in accordance with the municipal policies. Municipalities retain most of their land holding for future planning considerations and try to acquire strategic undeveloped parcels of land to control the pace of development within their boundaries. By restraining development of their land holdings, the municipalities contribute to the existing housing shortage. Conversely, the Provincial government acquires land which can be brought rapidly onto the market to relieve the existing housing situation.

As any other developer, the Provincial government needs to get municipal approval to proceed with any type of development. To grant such approval, municipalities claim that they need more financial assistance from the Province to cope with the additional costs created by new residential developments. If such financial assistance is not provided, municipalities have the power to refuse any new development

* Land which is already serviced but which is under-utilized.
even one requested by the Province.

In view of such different policies, it is evident that further consultations would be required by the two levels of government. Delays created by such consultations will undoubtedly affect the housing market.

In the three municipalities surveyed, there is only the Municipality of Burnaby who has undeveloped land suitable for residential development under the ownership of the Province. In 1973, the Province bought 38 acres suitable for multiple residential unit development. In addition, the Province owns approximately 365 acres adjacent to Simon Fraser University. As the intended policy of the Province is to put housing on every parcel of land under its ownership, conflicts may arise in the implementation of such provincial policy with the Municipality of Burnaby. In fact, the Municipal Council claims that no development would occur on the parcel of land adjacent to the Simon Fraser University. Such controversy actually exists in regard to the development of the Endowment Lands (U.B.C.). In the remaining 38 acres, development will occur but intensive consultations will precede such undertaking.

To summarize, the effect of the provincial government participation in the housing market will be minimal in the three municipalities surveyed. As far as the policies of the Province and municipalities are concerned, there exists a conflict that can be resolved by providing additional financial assistance to municipalities which will approve additional residential development.
The Federal Role

Housing matters are constitutionally the responsibility of the Provinces (B.N.A. Act, section 92). However, the Federal government involved itself as early as the turn of the century in such matters. To remain within its constitutional powers, the federal involvement was merely a desire to establish general social policies in the provinces. Thereafter, its role increased to the point that its financial input is now essential to the achievement of any policy dealing with housing matters. Such Federal involvement is summarized in Appendix C. In the following sections the role of the Federal government in the assembly, development and disposition of land for residential purposes, will be more particularly analysed.

A. Background

Central Mortgage and Housing Corporation is the Crown corporation charged with carrying out Canadian federal housing legislation. CMHC is responsible to the government through a designated minister and reports to Parliament through the minister. It was incorporated by an Act of Parliament in 1945. Under this Act, the National Housing Act, 1954, subsequent amendments and earlier Housing Acts, the Corporation is empowered to:

- Insure mortgage loans made by banks, trust and loan companies, and other approved lenders on new and existing housing; (NHA, section 15).

- Make mortgage loans to borrowers unable to obtain insured loans from private lenders on new and existing housing; (NHA Section 58).

- Make mortgage loans on low-rental housing projects (NHA Section 15).

- Make loans to universities, co-operative associations, charitable corporations, vocational and technical schools,
training hospitals, schools for special groups of handicapped persons, provinces or their agencies, to assist in providing accommodation for resident students and married students and their families: (NHA Section 42).

- Make loans to provinces, municipalities, or municipal sewerage corporations to assist in the construction or expansion of sewerage treatment projects for the control of water and soil pollution; (NHA Section 51).

- Provide insurance to banks on loans made for home improvements, and guarantee returns from moderate-rental housing projects built by life insurance companies and private investors; (NHA Sections 13, 14, 28, 29, 34).

- Buy and sell insured mortgage loans, make loans to mortgage lenders, on the security of mortgages and purchase of the debentures of lending institutions; (NHA Section 10) (CMHC Act, Section 28).

- Assist provinces and municipalities to redevelop and rehabilitate urban renewal areas in accordance with an official plan; (NHA Act, Section 22).

- Make long-term loans to provinces, municipalities or their agencies for the construction or acquisition of housing projects; arrange under a Federal-Provincial partnership agreement to build and operate public housing projects; make loans to assemble land for residential purposes; and provide grants to aid in meeting losses; (NHA Sections 40, 42, 43, 44).

- Construct, own and manage housing projects on its own account and on behalf of the federal government departments and agencies; (NHA Section 55) (CMHC Act, Section 29).

- Encourage the development of better housing and sound community planning and, in carrying out this responsibility, to undertake or arrange for studies and research on technical, economic and social aspects of housing; (NHA Sections 35, 36, 37).

- Encourage creation of new communities to relieve the pressure on the existing urban centers; (NHA Section 45).

However, this analysis will concentrate on the extent of the Federal government in public land assembly, development and disposition comprised in sections 40 and 42 (National Housing Act).
B. Evolution of Federal Participation

From 1949 to 1969, the main federal assistance to provinces and municipalities for the assembly of land was carried out under the cost-planning arrangements of section 40 of the National Housing Act. Under this section, CMHC had the option to enter into a partnership with the provinces on a 75%-25% basis. The federal government would provide 75% of the land acquisition cost and the provinces 25%. However, the 25% of the acquisition cost would be shared by the province and the municipality (percentage subject to negotiation).

The basic procedure to obtain such financial assistance was as follows: the request of financial assistance for a project and its proof of need was coming from the municipality, through the province to the CMHC. In British Columbia, the municipality was responsible for the acquisition of the land and the necessary trunk services extension to the site while the CMHC held the responsibility for planning, development and disposal. However, the extension of such trunk services were totally the expense of the municipality. In addition, the percentage of profit to the municipality was only equal to its participation in the partnership.

Even if CMHC recognised the use of section 40 as a land banking purpose in April 1968, the term of 15 years limited such utilization by the Provinces. Under this section, however, some 32,000 acres in all the provinces were acquired but only the Blair Rifle Range (640 acres) in North Vancouver District was purchased in the Greater Vancouver Region. Three basic reasons were given for this situation; firstly, the change in procedure, planning, development and disposal being a provincial responsibility. Secondly, the lack of a provincial
housing agency in British Columbia to carry out such work. Thirdly, the hidden costs of the municipalities which were not covered by the partnership agreement, such as off-site servicing.

In 1964, section 42 was added to the National Housing Act. This section allowed CMHC to provide loans of up to 90% of the cost at preferred interest rate to provinces for the acquisition and servicing of land, but specifically for public housing purposes. In 1965, section 42 was broadened to include the acquisition and development of land for general purposes. However, the period of time was specified (until March 31, 1972). The loan term was up to 15 years; only interests were paid annually until the land was disposed of. Principle was paid on a pro-rata basis if the land was gradually disposed of. Approximately 10,000 acres were developed in Canada under this section, but none in the Greater Vancouver area. The main reason mentioned is the lack of a provincial agency to promote such financial assistance. Another reason is that only raw land could be acquired under section 42.

Section 42 was reinstated in 1973 amendments to the National Housing Act with even broader terms. The new loan policy will cover uses incidental to general housing purposes, namely a complete range of urban uses normally seen in a large scale development. In addition, the term will be extended to 25 years or 50 years if the land is to be disposed of under a leasehold arrangement; the interest payment on the loan will be deferred until the land is disposed of. However, in order to obtain such a loan, debentures will have to be issued in the name of CMHC by the borrowing agency or municipality as a security towards the loan.

The basic elements of the Federal land policy have been clearly
enunciated by the Ministry of State for Urban Affairs: 14

- Land assembly has been criticised for making a profit for the governments involved. For this reason, even where land is sold or leased at or near market price, the governments participating should not retain profits but would put them back into the market - at no cost to the municipality - and other amenities. Any remaining profit after these lands are assigned, could be applied to the capital cost of community service buildings.

- First priority in the allocation of Federal funds will be given to lands that can be brought quickly onto the market.

- Land would be made available free of charge within the project for a reasonable proportion of public housing.

- We are prepared to assist provinces which undertake land assembly, and also to assist municipalities who wish to do so and have provincial approval.

- We are prepared to finance as part of the land assembly cost the installation of off-site connecting trunk services.

C. Analysis of the Federal Land Holdings

Federal land ownership in British Columbia amounts to approximately 1,276,800 acres (Appendix D). Land is held by various departments and Federal Crown agencies, for the fulfillment of their functions. However, to relate such land holdings to the purpose of the analysis, a specific study of three municipalities was carried out to determine the potentiality of such land holding for residential purposes.

In the District Municipality of Surrey, a recent survey* indicated that the Federal government** owns approximately 429 acres. Of this amount, twelve (12) acres are used by the Post Office, and

* Survey carried out by the Greater Vancouver Regional District Planning Department, updated by the author January 1974.

** It should be pointed out that all lands or water lots owned by the National Harbours Board are not included in the survey.
the Customs Department. Two hundred sixty-eight (268) acres are used by the Department of Communications, while the remaining 149 acres are located directly across from the Annacis Island industrial estate; the potential use is industrial. There is no land which is available for residential uses.

In the District Municipality of Burnaby, the same survey indicated a federal land ownership of 337 acres. Of this amount, approximately 200 acres are presently being disposed of. The provincial government is acquiring the "George Derby Hospital" site (37 acres) and the municipality is negotiating the purchase of the remaining acreage for park purposes. All the other parcels of land (137 acres) are presently used by various federal departments.

In the District Municipality of North Vancouver, the same survey indicated an amount of 1,252 acres under federal ownership. Excluding the land inaccessible for development, and the land administered by the Department of Indian Affairs and Northern Development on behalf of the Indian people, there is only 640 acres known as the "Blair Rifle Range", which is acceptable for residential development. Due to municipal policy limiting development, approximately one-third of the site would eventually be used for residential purposes.

The site was acquired by the joint partnership of the provincial government and Central Mortgage and Housing Corporation at the request of the municipality when it becomes surplus to the needs of the Department of National Defence. Division of opinion between the partners and the municipality have stalled development so far.

It is evident from the above analysis that the existing Federal land holdings will not have a direct effect in terms of their development potential. Those lands would eventually become obsolete in their
present uses and the municipalities would acquire them. However, none of these sites have a potential for housing purposes; their only potential is that of park areas.

To summarize, it is evident that the Federal land holdings suitable for residential development cannot affect substantially, the housing situation. In the three surveyed municipalities, the only parcel of land suitable for residential development is the "Blair Rifle Range" site. Due to the topography of the North Shore, the District Municipality of North Vancouver estimates that 214 acres can be economically developed at the present time. As the site was acquired by the joint partnership of the senior levels of government, existing policies for the development are under provincial jurisdiction.

If we consider the total public ownership of land suitable for residential development in the District Municipality of North Vancouver, the impact for the future provision of housing is tremendous. The combined levels of government own 69% of all the undeveloped land suitable for residential development.

D. Implications

Federal policies related to housing matters are essentially a financial support to the provincial governments, and for municipalities. There is no intention whatsoever from the Federal government to make a profit on any type of residential development. As pointed out earlier, the Federal government will facilitate the appropriation of federal funds to accommodate municipalities in their requirements.

The purpose of the financial assistance is to increase the availability of serviced lots within any given urban center. However, it is up to a provincial agency or more likely municipalities to
apply for such assistance. As provincial approval is required on any request for federal funds, there is an increasing burden put on the provinces to co-ordinate and process those applications.

The intention of the Federal government is to bring their policies affecting land into closer alignment with provincial priorities and policies. This approach, however, implies that provincial governments have such definite policies. It was demonstrated that municipal and provincial policies are quite different. If the federal assistance is to be of any value, it is up to the provincial government and the municipalities to work more closely. The only requirement mentioned by the Minister of State for Urban Affairs is related to the disposition of serviced land; there should be a combination of sale and leasing arrangements to encourage people of all levels of income to acquire such lands. To achieve such a goal, there should be definite policies established by the provincial government.
Footnotes


4. Greater Vancouver Regional District Housing Department, Memorandum to the Board of Directors from the Housing Committee, January 23, 1974.


7. Ibid., p. 4.

8. Ibid., p. 5.


10. Ibid., p. 3.


CHAPTER VII

SUMMARY AND CONCLUSIONS

A primary review of the thesis and the limitations and weaknesses of such a study are given below. This is followed by a brief enunciation of policies and recommendations that are evident to such research. Finally, indication is given to further areas of study, based on the conclusions achieved and limitations outlined in this study.

Summary of the Thesis

Perhaps this thesis can best be summarized by an expanded reiteration of the chapter summaries.

In Chapter II, the theoretical analysis of the demand and supply of residential serviced lots demonstrates that the standing stock of housing in the market determines the price levels of housing. If the increase in supply is not adequate to meet the demand in any given period of time, this will result in a direct increase in the price of the standing stock of housing.

This conclusion refutes the argument put forward by many real estate organizations which states that the additions to the housing stock determines the price of existing housing. Whatever the price of undeveloped land is, it will have no direct effect on the final housing unit. If a developer cannot purchase and develop undeveloped land for housing purposes to comply with the price set by
the existing standing stock, he will not build. Such builder developer can, however, withhold serviced land from the market if such price is increasing very rapidly. As the holding costs are very expensive, such action is of very short term.

In Chapter III, the analysis of supply and demand for housing in Metropolitan Vancouver demonstrates that a considerable number of people cannot afford to purchase a single family dwelling due to the excessive price of such type of accommodation. However, it was demonstrated that the demand for that type of housing was very strong and will maintain its level in the future despite the high cost.

In Chapter IV, the analysis of the static and dynamic development process demonstrated the main factors responsible for the shortage of supply of residential serviced lots. In brief, it should be pointed out that the expectation of the owners of undeveloped land in designated urban areas are so high that assembly for development is very difficult to achieve. Secondly, the municipal approval procedure for land subdivision is so consuming that projects encounter delays which reduce supply of serviced land for the market. Finally, the type of requirements demanded by municipalities reduces the quantity of residential lots for a given area.

In summary, it should be pointed out that the supply of residential serviced lots cannot meet the existing demand. Such conclusion proves the first hypothesis which was: there is a shortage of residential serviced lots in Metropolitan Vancouver.

In Chapter V, the analysis shows that municipalities have the powers and the land holdings to play an active role in the provision of residential serviced lots. However, in the three municipalities
studied it was demonstrated that their policies are not intended to reduce such a shortage. The three municipalities do use their land holdings for future planning considerations. However, when they supply such serviced lots, it is in a very limited fashion based on their financial needs.

In Chapter VI, the analysis indicates that until recently the Provincial government did not have any housing policies. The new policies indicate that different types of accommodation such as multiple family dwellings, will receive special government subsidies. There is no indication that residential serviced lots will be provided by the provincial government. As far as the Federal government is concerned, it is hoped that the financial aid provided for the municipalities will be used. However, the Provincial government, as the coordinator of such federal funds, will need an agency willing to redistribute such funds. As it stands now, no indication of such redistribution to municipalities is evident.

In summary, it should be emphasized that the role of the public sector in the development process of residential serviced lots is evident. However, the different policies of the three levels of government indicated that they contributed to the existing shortage of serviced land for residential purposes. This conclusion indicates that the hypothesis which referred to the different policies of the three levels of government as a cause of the existing shortage of residential serviced lots, is verified.

**Limitations and Weaknesses**

The basic limitation of the thesis is that it is restricted to the analysis of one role of the public sector in reducing the existing shortage of residential serviced lots. No consideration is
given to the other powers that the municipalities can exercise; primarily those of regulating the subdivision of land and of taxation. Those powers have a great influence on the form and the shape of urban growth.

The first hypothesis deals with one type of accommodation: single dwellings. However, there are other types of accommodation that can reduce the shortage of housing units which are more efficient in any growing urban center. The analysis of only one type of housing unit does not reflect the overall need of any growing population. In a metropolitan area such as Vancouver, this type of shelter is becoming less desirable due to the amount of land and servicing required. To arrive at a much more accurate relationship between the needs of the population (demand) and the different types of shelter offered in the market (supply), a more detailed analysis should be undertaken to reflect such a choice and reasons for such a choice.

The second hypothesis dealing with the role of the public sector in the development process of housing units should be extended to all forms of financial aid available to private and public developers to fulfill the goal of providing housing accommodation to all types of income levels. Such analysis would more accurately reflect the role played by the senior levels of government.

As it was earlier concluded, policies related to the assembly, development and disposition of public lands for housing purposes, do not reflect the same objectives; the main reason being that they do not want to provide the same type of housing to solve the existing shortage. To complete such a study, an analysis of all those objectives should be undertaken.
Finally, it should be pointed out that this study clearly indicates the complexity of such a problem: the provision of serviced land to accommodate all types of urban structures.

Policy Recommendations

The underlying purpose of this project was of a twofold nature. First, there was a desire to demonstrate the shortage of supply of residential serviced lots and to indicate the reasons for such shortage. This study demonstrates clearly such facts. Secondly, was a desire to indicate the different policies of the three levels of government as one cause of such shortage. Conclusions arrived at would support such findings. Based on the reasons for the different policies, a brief enunciation of policies that can be devised will hopefully consolidate such differences.

The Greater Vancouver Regional District should establish a "share of growth" concept related to the growing demand for residential serviced lots. Such concept should receive full acceptance by all the municipalities. If such acceptance is not reached, reasons should be given by the municipality concerned. However, it is left entirely to the District, after having first consulted with the municipalities, to finalise such a concept. To induce the municipalities to develop their land holdings, the financial assistance of the senior levels of government could be based on such concept. If any given municipality has to provide a certain percentage of the growth in one year, the senior levels of government could provide financial aid to equal the cost of providing land and servicing. Furthermore all the administration costs incurred during the project can be claimed by the municipality.
However, such approach does not cover the additional costs of providing utilities such as parks and schools for the municipality. To provide for those additional costs, the senior levels of government should be prepared to reinvest all the profits realized in such a venture in the municipality where the housing project is undertaken. Such approach implies that all the residential serviced lots will be sold at market value. If the senior levels of government intend to dispose of the lots in any other way, they should buy such lots at market value from the municipalities. This approach indicates clearly that any intention of the senior levels of government to subsidize future buyers will not be made at the expense of the municipalities.

Finally, this often clearly indicates that the leasing of residential serviced lots is not favored. If the annual ground lease payment is not subsidized in one way or another, there is no immediate or future benefit for the purchaser. Additionally, such an option creates administrative and future legal problems to the lessor (one level of government) that will outweigh possible future advantages.

Implications for Further Study

There are two obvious areas for further research and study. Both are suggested by the section in this chapter discussing "limitations and weaknesses." First, the role of the municipalities in the development process should be related to their power of regulating land subdivision and land taxation.

In Chapter IV, the analysis of the constraints of the supply of residential serviced lots indicates that the discretionary powers of the municipalities to designate any given area as urban use directly
affect the process of the supply of land for housing purposes. The availability of municipal lands within those designated urban areas is only an additional control in the hands of the municipalities. Additionally, the role of the senior levels of government is limited to its direct participation in the residential development process. Other government programs which indirectly affect such process exist but they are not discussed in this study. However, it should be pointed out that any study pertaining to housing matters in an urban center is an extremely complex matter.

Finally, it should be emphasized that a direct participation of the public sector is becoming an ever increasing factor that should not be overlooked. In that respect, this thesis is only a beginning in the study of the public sector involvement in the residential development process.
BIBLIOGRAPHY

A. Books


B. Periodicals


C. Unpublished Material


D. Government Publications

Federal


Canadian Housing Statistics. CMHC. 1971-72=73.


Provincial


Regional District


Municipal


E. Statutes


Revised Statutes of British Columbia:
1960 c.255 Municipal Act
1960 c.183 Housing Act
1973 c.41 Housing Incentive Fund Act
1973 c.110 Department of Housing Act

F. Personal Interviews

Corporation of the District of Surrey. Personal interviews with Mr. R. Jefferson and Mr. G. Halsey-Brandt.

Corporation of the District of Burnaby. Personal interviews with Mr. Jack Belhouse and Mr. E. Grist.

Corporation of the District of North Vancouver. Personal interview with Mr. G. A. Williams.

Central Mortgage and Housing Corporation. Personal interviews with Mr. R. Burns and Mr. L. Tye.

Greater Vancouver Regional District. Personal interview with Mr. F.A. Wyles.
APPENDIX A

Residential Lots Sold by the Municipality of North Vancouver District

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard</th>
<th>Substandard</th>
<th>Private</th>
<th>Multi-family</th>
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<tr>
<td>1967</td>
<td>40</td>
<td>3</td>
<td>46</td>
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<tr>
<td>1968</td>
<td>114</td>
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<td>1969</td>
<td>91</td>
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<td>-</td>
</tr>
<tr>
<td>1970</td>
<td>123</td>
<td>3</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>1971</td>
<td>128</td>
<td>2</td>
<td>113</td>
<td>1</td>
</tr>
<tr>
<td>1972</td>
<td>146</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>1973</td>
<td>184 (sold)</td>
<td>-</td>
<td>49 (leased)</td>
<td>-</td>
</tr>
</tbody>
</table>

N.B.  Standard lots have 60 or 70 foot frontage
Substandard lots have 33 foot frontage
Private lots have - the on-site servicing carried out by developer
- the off-site servicing paid by developer but carried out by municipality.

Source: The District Municipality of North Vancouver (Land Department)
APPENDIX B

The Department of Housing Act Effects

The Department of Housing Act, when introduced, had the following effects:


2. Amended - Housing Act, R.S.B.C. 1960, c. 183
   - Elderly Citizen Renters Grant Act, c.18 of the Statutes of British Columbia, 1973
   - Elderly Citizens' Housing Aid Act, R.S.B.C. 1960, c. 125
   - Provincial Home Acquisition Act, c. 39 of the Statutes of British Columbia, 1967.
   - Provincial Home-Owner Grant Act, R.S.B.C. 1960, c.308
   - University Endowment Lands Administration Act, R.S.B.C. 1960, c. 396.

APPENDIX C
APPENDIX C

Canadian Housing Policy - A Chronology

1867  B.N.A. Act (Sect. 92) establishes provincial jurisdiction for housing

1912  Commission of Conservation established, relates disease and poor health to bad housing

1918  War Veterans Housing Act

1930  Provincial Acts permit moratorium on mortgage payments

1935  Dominion Housing Act (part of economic stabilization policies) funds for second mortgages

1938  National Housing Act - funds for mortgages

1939  Wartime Housing Limited

1941  Rent Controls

1942  Veterans Land Act

1944  Farm Improvement Loan Act

1944  Curtis Report

1945  National Housing Act and Central Mortgage and Housing Corporation

- joint loans

1948  Rental Insurance

1949  Land assembly on federal/provincial partnership basis

1953  Insured loans

1956  Urban renewal studies finances; 75%-25% sharing for public housing

1960  Student housing, sewage plants, trunk sewer lines

1964  Public housing 90%-10% basis; urban renewal 75%-25% basis

1966  Loans on existing housing

1967  C.M.H.C. interest rate floats
1969  Hellyer Task Force
1970  Ministry of Urban Affairs; Litwick Report and events preceding
1971  Innovative housing
1972  Neighbourhood Improvement Programs; Land banks
1973  New communities program

Source:  School of Community and Regional Planning, University of British Columbia, 1973.
### Federal Land Holdings in B. C.

Province of British Columbia

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<tr>
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<td><strong>Total</strong></td>
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<td><strong>13,455.9</strong></td>
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APPENDIX E
## Undeveloped Lands Available for Residential Uses

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Source: Infill study prepared by Thompson, Berwick, Pratt and Partners for the Greater Vancouver Regional District, April 1974. (Municipal, Provincial and Federal land ownership prepared by the author)
### APPENDIX F

**Dwelling Starts in Metropolitan Vancouver 1966 - 1973**

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*Dwelling starts mean Single detached, semi-detached and duplex*