RETROFITTING SUBURBS:

case studies of the evolution of the urban fringe

by

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Abstract

As the first post-war suburbs turn fifty, there will be a window of opportunity to retrofit these places to meet contemporary housing and community needs. Field studies conducted in five postwar-era subdivisions in Richmond BC reveal that a cycle of housing demolition and redevelopment began in the late 1980s. Unfortunately, dated zoning bylaws continue to exclude forms of development that depart from the single-family template of the 1950s. There are, however, examples of better redevelopment practices within the older urban fabric. Case studies in Vancouver's first-ring of streetcar suburbs reveal that a wide range of housing redevelopment has been enabled by a participatory process of discretionary rezoning over the past twenty-five years. The concrete examples of urban form, land-use policies and planning processes offered by the Vancouver experience can be applied in the redevelopment of postwar suburbs. Recent planning in Delta BC suggests that this approach can be used with success.
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Introduction

After the Second World War, Canadians participated in a suburban building spree that transformed the pattern and process of urban growth across North America. Rising incomes and the availability of cheap land, energy and credit stimulated demand for new housing. As people rushed to form families at war’s end, government and business worked in tandem to help millions realize the ‘North American dream’ of ownership of a house set upon its own lot. Unprecedented levels of public investment in new highway systems, roads and schools allowed developers and urban planners to create entirely new communities on the urban fringe. The mixed-use, compact pattern of pre-war urban settlements was widely rejected in favour of a low-density monoculture of single-detached dwellings in subdivisions zoned exclusively for residential use. The first postwar subdivisions are now fifty years old, and the questions and opportunities raised by their obsolescence form the point of departure for this research thesis.

Approximately 1.5 million new suburban houses were added to the stock of dwellings in Canada between 1946 and 1961. While such growth was successful in meeting immediate needs, there has emerged over the last thirty-five years a growing consensus that suburban sprawl is exhausting our social, economic and ecological capital. Low-density patterns of suburban development increase the cost of housing, make poor use of land, require an inordinate amount of infrastructure and foster a near complete dependence on automobiles. In the rush to build the suburban ‘cradle’ of the

---

2 Jacobs (1961); Mumford (1961); Hayden (1984); Calthorpe (1988); Bourne (1991); Kunstler (1993); Bank of America (1995); Greater Toronto Area task Force (1996)
3 Cervaro (1989); Newman & Kennedy (1989); Shaffer (1990); MacNeill et al (1991)
baby-boom generation, little thought was given to the housing needs of people in later stages of their life cycle, or to the housing requirements of families with other structures (Bumsted 1992: 30).

The fit of the postwar model of development is now questionable in light of the profound social and demographic trends have reshaped Canadian society in the last fifty years (Table 1). The most significant trend is one of shrinking average household and family sizes. Between 1941 and 1991, the percentage of lone-parent families almost doubled; the percentage of people living in one-person households tripled; and the overall proportion of people living in non-family households increased by a factor of four. The nuclear family, around which much of the postwar landscape was fashioned, today represents only one-quarter of all Canadian households (Sewell 1995: 62).

Table 1: Canadian Household and Family Trends

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<td>Average Household Size</td>
<td>4.3</td>
<td>4.0</td>
<td>3.9</td>
<td>3.5</td>
<td>2.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Average Family Size</td>
<td>3.9</td>
<td>3.7</td>
<td>3.9</td>
<td>3.7</td>
<td>3.3</td>
<td>3.1</td>
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<tr>
<td>% Lone-Parent Families</td>
<td>6.7</td>
<td>6.6</td>
<td>6.7</td>
<td>9.5</td>
<td>11.1</td>
<td>13</td>
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<tr>
<td>% One-Person Households</td>
<td>7.1</td>
<td>7.4</td>
<td>9.3</td>
<td>13.0</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>% Non-Family Households</td>
<td>7.0</td>
<td>11.1</td>
<td>13.0</td>
<td>18.0</td>
<td>24</td>
<td>28</td>
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In Redesigning the American Dream, Hayden (1984: 175) asserts that the built suburban environment should be redesigned for contemporary social and economic realities:

the built environment now represents the wrong configuration for the society. Inflexible house designs and rigid zoning in R-1 (residential, one-family) neighbourhoods were made acceptable between the 1940s and 1960s by low interest rates and a fluid market enabling households to move over the life cycle. Now Americans need more adaptable and sophisticated spatial designs, with fewer inducements to achieve greater residential satisfaction by moving.

Data from Statistics Canada Census 1941-1991.
The enormity of the investment that North Americans have made individually and collectively in suburban housing and infrastructure precludes the neglect or abandonment of these settlements (Jackson 1985; Hardwick 1994). The challenge of the 1990s and beyond will be to 'redevelop, redesign, and reuse' these settlements (Bourne 1991: 186).

“Retrofitting” is the act of modernizing something for present and future use, and in this context, *Retrofitting Suburbs* is a geographical study of suburban morphogenesis, an examination of how people are reshaping suburbs to meet emerging social, economic, and ecological realities (Sharpe 1986: 54). An understanding of these places and the forces that are shaping them is necessary if these places are to be adapted.

To date there has been little empirical research on the contemporary evolution of postwar suburbs. There is however a large literature on the development of postwar suburbs and the evolution of the streetcar suburbs that preceded them (Mumford 1961; Warner 1971; Vance 1990). Suburbs built in the era of the streetcar (a period spanning roughly from the 1890s to the late 1920s) were adapted and recycled by successive waves of immigrants and absorbed by urban growth to the point they are no longer recognized as suburbs but rather an integral part of a distinctly urban fabric. Will the postwar suburbs follow a similar path of evolution?

Two key differences between the streetcar suburb and the postwar subdivision make easy predictions difficult. The first relates to form. Streetcar suburbs grew in increments along the expanding streetcar lines and new neighbourhoods were therefore integrated within the existing urban fabric. Postwar subdivisions, in contrast, were mass-produced in a sprawling pattern fit largely around the automobile. New
settlements could be built anywhere there was a road connection. The pattern of postwar development is characterized as inflexible with closed street systems, and limited amounts of undeveloped land to accommodate new uses (Southworth & Owen 1993: 284). Land-use zoning presents the second barrier. While streetcar suburbs evolved organically with social and economic change, the postwar landscape was developed with land-use zoning bylaws that established and continue to enforce an end-state vision of the physical shape of the community. Given the strong place of the suburban single-detached home in the North American psyche, reaching consensus for a new vision of the form and function of aging postwar subdivisions could present a significant political challenge (Kunstler 1993).

In this thesis I compare the evolution of postwar subdivisions in the City of Richmond with the evolution of older streetcar suburbs in the City of Vancouver to examine patterns of adjustment to changing societal conditions. Figure 1 indicates their relative locations within the province and the metropolitan region of Greater Vancouver. Initially, the two landscapes might seem very different in their history, use and form. Vancouver’s streetcar-era neighbourhoods have been eclipsed by the growing city; they are characterized by a diverse mix of housing, and they have been densely settled. However, a closer reading of Vancouver’s suburban history reveals important points of convergence. Streetcar neighbourhoods were the de facto suburban fringe of turn-of-the-century Vancouver and their rapid development presented a similar set of challenges. In both places, an expert planning bureaucracy was given regulatory control of land use as a way to bring a simple order to a complex and often chaotic development process. Finally, the two landscapes have been focal points for reinvestment and redevelopment in periods marked by social, economic and
environmental change.

Figure 1: Greater Vancouver, British Columbia

a) British Columbia

b) The Lower Fraser Valley

c) Greater Vancouver*

Map Source: UBC Department of Geography
1 / Rethinking the North American Dream

In the postwar period, the development of single-family housing in new subdivisions serviced with modern infrastructure was planned as a fresh start, a solution to immediate housing needs. The Great Depression and WWII took a heavy toll on Canadian cities. At war’s end, 382,000 families had doubled up in dwelling units and nearly one-third of the housing stock required major repairs (Miron 1993: 8). The postwar baby-boom exacerbated these housing deficiencies and compelled systemic changes in the way housing was produced. A “new paradigm” in residential development emerged as, “government and property developers expanded their role in the housing field to achieve market efficiency in residential construction and to broaden access to new housing (Doucet & Weaver 1991: 130).” In the process, the way in which new communities grew and evolved was altered. Rethinking the North American Dream will require a reevaluation of the set of beliefs and regulations that led to the development of the postwar landscape.

The seeds for the new paradigm had been sown in the early 1900s by advocates of the nascent city planning profession. The Hon. Clifford Sifton, addressing a 1914 conference on City Planning in Canada, remarked that rapid population growth had led to over-crowding, poor health conditions, and a “dubious moral climate” in some of Canada’s larger cities (Sifton 1914: 216). He proposed the establishment of town planning offices in city governments to enable, “a rational system of supervising the conditions in which the people of our great cities shall live (Ibid.: 219)”. A key plank in his suburban agenda was a program for the expansion of new transportation systems that would allow the development of well planned residential communities.
beyond the clutter of existing urban centres that had evolved before the initiation of formal urban plans (Ibid.).

In their attempt to decentralize growing urban populations into new planned communities, early Canadian planners drew heavily from the British "Garden City" movement founded in the late 1800s by Ebenezer Howard. Letchworth, Howard's first experimental Garden City, was an experiment in both physical and social planning. The village was built well beyond the limits of the city and serviced by a rail line. It was to be a complete community with a mix of residents. Specific areas were set aside for industrial, residential, and commercial land uses and mixed throughout were buffers of gardens and parks. As a populist, egalitarian town planning movement, Howard's Garden City extended suburban ideals to a wide range of people beyond those who could afford country estates.

Rail-based transit was indeed the key to the first significant wave of suburbanization in North America. However, the growth of new suburban community was self-organized and organic, with little if any of the centralized planning advocated by Howard. New suburbs proliferated between 1886 and the late 1920s in conjunction with the introduction and expansion of streetcar systems. The radial growth of streetcar lines increased mobility to such an extent that people with modest incomes could afford to live beyond the pedestrian limits of crowded city centres (Warner 1972: 39; Kunstler 1993: 86). Contiguous belts of settlement developed as real estate agents and streetcar companies took an active role in development by purchasing and subdividing land on the urban fringe into regular lots adjacent to ribbon streets that flanked the future path of the streetcar lines (Vance 1990).

Cities that experienced growth in this period typically developed a first ring of
‘streetcar suburbs’ within five to ten kilometres of their downtown cores.
Neighbourhoods reflected the dual logic of pedestrian mobility and mass transit (Mumford 1961: 504). In an era before ownership of a private automobile had become normative, people had to live close to the streetcar lines. Formal land-use plans were the exception rather than the rule and streetcar suburbs took shape as builders developed small tracts of homes; most constructed under fifty houses per year, and they minimized their risk by matching levels of production to market demand (Doucet & Weaver 1991: 84). The size of lots and the level of land improvements and neighbourhood infrastructure were significant factors that differentiated the initial physical form and social composition of streetcar suburbs. There is evidence that all classes of people were able to participate in the suburban process. Harris (1990) documents, for example, the significant role of owner-builders in the development of blue-collar suburbs in Toronto.

The Rise of Modern Planning

Change was normative in neighbourhoods that had developed without the prescriptive limitations of modern land-use zoning. On one hand, this was a positive feature of older neighbourhoods; through the early 1900s, streetcar suburbs absorbed new population growth and the housing stock was reshaped by successive waves of immigrants. On the other hand, industrial land uses often encroached on older neighbourhoods. In the early 1900s there emerged a call for a rational form of land use planning. The argument was made that trained professionals could better control the shape and pace of urban development that was once dictated by a delicate balance of market conditions and political direction (Rutherford 1974: xix). Frank Beer, president of the Toronto Housing Company in 1914 observed it was a “misfortune that the
administration of cities in Canada is largely in the hands of those who have no professional training or qualification to deal with the problems that are taxing the mature experience and best talent of older cities" (Ibid.: 228). Reformers gained public support by opposing the partisan politicians, streetcar companies, and special interest groups who, in pursuit of corporate or personal gain, had dictated the shape of urban growth since the 1880s.

Almost simultaneously, the automobile emerged as a viable mobility option and it raised new possibilities for suburban growth beyond existing urban areas. In 1911, there were 21,800 registered motor vehicles in Canada; on average, only 2 per cent of households had access to one (Figure 2). However, automobile ownership became more widespread as the price of vehicles fell with mass production. The price of Ford’s Model T dropped from US$825 in 1911 to US$345 by 1916 (Kunstler 1993: 88). By the 1920s, twenty percent of households had access to an automobile.
A new cadre of expert city planners and civic bureaucrats began to assume regulatory control of the shape of future urban development. Planning consultants, like Harland Bartholomew, were hired to draft City Plans for scores of municipalities and cities across the U.S. and Canada. Reflecting a widespread desire to leave behind the flaws of the 'unplanned' growth of earlier decades, their plans shared a twofold theme of transportation development and the construction of new residential suburbs under tighter regulation. In undeveloped areas, planners were free to establish land use zones and set standards for urban design, infrastructure and community facilities, mirroring in part the tradition of elite neighbourhood planning that had been established in the 1860s.

The great depression and WWII interrupted the implementation of expert planning. However, once the Depression of the 1930s and the Second World War were over, the expert planning approach "flowered with very visible results" (Sewell 1994:

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All tiers of Canadian government responded to the housing shortage. The federal government offered mortgage guarantees for first time home-buyers and provincial and municipal governments spent large sums of tax revenue on new road systems and on the infrastructure and services needed to support new suburban communities.

Provincial governments across Canada allocated public funds towards the construction of new provincial highway systems and bridges which effectively opened up vast tracts of agricultural land for suburban development. Municipal governments for the most part were overwhelmed by the burden of providing new communities with roads, sewers, schools and basic neighbourhood services.

The intervention of the federal government in the housing market had been established as early as 1918\(^6\), but its entry into home financing and building after WWII was unprecedented. The 1938 *National Housing Act* (NHA) was created to overcome the “persistent reticence” of mortgage lenders who suffered great losses in the Depression (Doucet & Weaver 1991: 294). This program was followed shortly after by the *Veterans Land Act* (VLA) which guaranteed mortgages for returning veterans. The Act shaped low-density patterns of early suburban development by specifying a minimum farm size of 2 acres if the property was valued at more than $500 per acre, and a minimum of 3 acres if the land was valued at less than $500 per acre (*Veterans Land Act R.S., c.280, s. 24:1*).

In 1946, the federal government incorporated the Central Mortgage and Housing...
Corporation in 1946 to administer the mortgage program. By 1953, the federal government widened the CMHC mortgage guarantee program to enable young households to purchase new homes with a minimal down-payment and low monthly payments spread over a long repayment schedule (Doucet & Weaver 1991: 277). Canadians used such credit freely: between 1951 and 1961, the value of outstanding mortgages quintupled (Figure 3). Accordingly, demand for new homes skyrocketed. CMHC mortgage requirements also shaped the demand for new single-detached houses by establishing new standards for housing construction, home design and site planning (Doucet & Weaver 1991: 130). The house construction industry, long dominated by small builders was transformed by the entrance of vertically integrated development companies who controlled all aspects of the development of new communities from land assembly to design, construction and marketing the finished product (Doucet and Weaver 1991: 84).

Figure 3: Outstanding Mortgage Loans, Canada: 1926-1991

(In 1986 Dollars)

In Canada, the definitive suburb of the postwar era was Don Mills, a 2,062 acre

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7 Renamed the Canada Mortgage and Housing Corporation in the 1970s (Sewell 1995: 9).
8 Source: CMHC Mortgage Statistics
housing development designed and built in North York, Ontario by one company between 1953 and 1962 (Doucet and Weaver 1991: 140). In retrospect, Don Mills was a significant evolution from the simple tract home model of development pioneered by William Levitt, the now famous developer who in the spring of 1947 began to transform a potato farm in Long Island NY into Levittown, a residential subdivision of 2,000 houses. Levitt mastered the mass-production of a limited number of models of single-detached wood-frame houses to keep up with the housing demand of a generation who had endured the Great Depression and WWII.

Don Mills was a much more extensive project, including subdivisions, schools, and shopping centres. ‘Like Levitt’s project, neighbourhoods were developed with a limited number of model of single-detached dwellings. However, Don Mills was organized into discrete neighbourhoods clustered in quadrants. Each neighbourhood has at its centre an elementary school and collectively the quadrants are focused on a shopping mall and a high school. In general, the overriding theme in the layout of the communities was a rigid separation of land uses and the provision of ample green space. The developer retained the right to control all design elements that would be executed by associated construction companies (Ibid.).

The ‘corporate suburb’ of Don Mills illustrates the new power of real estate interests and professionals from the growing field of city planning to dictate the physical form of new communities. In greenfield development, there was no community to shape new development. Bumsted (1992: 29) notes that the typical suburbanites were first-time home-buyers with young families; they were attracted to the suburb by a ‘love of green grass, but mostly by cost and few buyers researched the amenities of the communities they were joining. Accordingly, developers and professional planners were
charged with the tasks of determine what constituted adequate housing, complete communities and mobility options (Sewell 1993).

For planners, the development of entire communities in greenfield sites was an opportunity to practice their profession with few constraints. Government regulation meshed nicely with the industrial scale of mass production that were then being employed in the construction of houses. They pushed for the adoption of subdivision, zoning, and engineering standards for streets and infrastructure (Southworth & Owen 1993: 272). Zoning controls and uniform codes ensured the stability of the investment for the lender by precluding changes in land use that could compromise the value of the home.

In contrast, developers were driven by profit and they kept costs down by leveraging the economy of mass production of a standardized product. For a short time after the war, many developers built subdivisions without providing infrastructure, especially expensive sewers, in advance. Bumsted (1991: 30) writes:

The ubiquitous septic tank (and the exceptionally green grass that grew above it) became the symbol of the true suburban bungalow. Drawing up for any new subdivision only a handful of floor plans - with roughly an identical number of bedrooms, floor area and maximum mortgageable value - also saved money and made marketing easier. The number of amenities depended on price, and most builders were interested in the mass market at the lower end of the scale. The result was segregation based not on race or ethnicity, but on number of children and the ability to make mortgage payments. No developer regarded the creation of suburban infrastructure - schools, hospitals, shopping centres, connecting roads - as [their] responsibility. The trick was to sell houses to recent parents or the newly affluent - often the same people.

In terms of the number of dwellings built in new subdivisions, the efforts of politicians, planners and developers could have been judged a great success. Mass production enabled the development of affordable houses. The rate of home-ownership jumped by a full 10% between 1941 and 1951 and the average number of people per
dwelling began to fall (Figure 4).

Figure 4: Housing Growth in Canada 1931-1991

Questioning Modern Planning

After fifteen years of sprawling suburban development, many urban critics began to publicize the disastrous ecological, social and economic consequences of suburban development predicated upon a limitless supply of raw land, the unlimited mobility of the personal automobile and a bottomless public purse for new infrastructure and services. In *The Death and Life of Great American Cities* (1961), Jane Jacobs argued that post-war families had settled for a crude version of the suburban ideal. In their mass-migration to these bland places, they ‘killed the very thing they thought they came to find’ (Ibid.: 445). In *The City in History*, published in the same year, Lewis Mumford arrived at a similar conclusion. He maintained that postwar development had produced a “formless urban exudation built around the demands of the automobile, a place devoid of any interest or human scale (1961: 505).”
Though unanimous in their criticism of post-war suburbs, the two leading urban writers of the day diverged on the appropriate solutions. Mumford remained a decentrist committed to the utopian vision of suburban planners like Olmstead and Howard who were in vogue in the early 1900s. He insisted that North Americans could have preserved the suburban ideal “by introducing appropriate zoning and land-use legislation, and providing for the large-scale acquisition of public land for settlement with every fresh highway development (Ibid.).” In contrast, Jacobs admired the resilience and ‘fine-grained diversity of older urban neighbourhoods that had developed at the turn of the century. She argued that post-war suburbs could be reorganized on a more efficient urban pattern if future growth could be contained within the limits of existing development (Ibid.: 218). Without such adaptation, she predicted that post-war suburbs would be despised by their own inhabitants within one generation because of their, “lack of innate vitality, staying power, or inherent usefulness as settlements (Ibid.: 445)”.

Sociological research confirmed Mumford’s and Jacobs’ assessment of the new suburbs. In The Levittowners, Herbert Gans observed that most new residents moved because of the house and not community (Gans 1967: 370). He found that adolescents were denied social space in the new suburbs; they identified poor mobility and inadequate facilities as major problems (Gans 1967: 207-8). Researching the impact that the move to the suburbs had on Canadian families, Clark (1966: 144) concluded that families endured substantial economic, social, and cultural sacrifices. She notes, “The suburban was a debtor society, its very character determined its state of economic impoverishment (Clark 1966: 111).” Most homeowners turned to credit to finance the downpayment on a house and to purchase furnishings and appliances. In addition, the cost of commuting by automobile constituted another financial drain for residents (Ibid.:}
The return on such sacrifices was often less than expected. Clark notes that many families found the quality of their dwellings and the character of their communities disappointing (Ibid.: 120).

Despite the realization that suburban sprawl was unsustainable, the drive to develop new suburbs continued unabated. The baby-boom generation of the 1940s and 1950s began to start their own families in the 1970s and like their parents they continued to trade longer commutes to work in return for the largest family domain at the lowest price (Bischoff 1991: 174; Sewell 1994: 104). The profits associated with building housing on the expanding margins of North American cities remained lucrative and home builders continued to develop new subdivisions on the margins of developed areas to minimize costs and regulation (Bourne 1992: 510). The expansion of new suburbs continued as long as large tracts of inexpensive land beyond the urban fringe remained accessible and undeveloped.

Unchecked suburban growth was exacerbated by the policy and investment decisions of provincial and federal governments. The construction of new highways and bridges to serve a growing number of automobiles and expanding municipalities seemed worthy and politically expedient goals. Politicians of all stripes could curry favour by dispensing infrastructure funds, financed with deficit spending, to all who would support them. Policy makers in central government were detached from the local and long-term consequences of their decisions.

There was little public opposition. Although the counterculture movement gained momentum in the late 1960s, environmentalists bent on preserving wilderness failed to address the problem of human ecology in the very places where North Americans lived and worked (Kunstler 1993: 249). Greenpeace, for example, was founded in Vancouver
BC, but the focus of much of the organization's energy was on places thousands of kilometres away. Through the 1960s, the counterculture was more concerned with 'low rents and psychedelic house colors' than on community quality (Hardwick 1994). By the 1970s, however, the counterculture generation had aged and began to assume more significant roles in urban culture and economy. The group that redefined the experience of youth began to redefine urban lifestyles as they matured into adulthood. Their values were a challenge to the orthodoxy of the generations that preceded them.

In many Canadian cities, urban renewal programs and freeway construction were the sparks for a new political resistance to expert planners and the impact of suburban growth. Central cities and the zones of transition that surrounded them were the focus of federally-funded urban renewal projects in the 1950s. City planners began in decaying neighbourhoods which were settled at the turn of the century, places deemed to be in deterioration physically and socially. Typically the prescription was slum clearance. Under the direction of expert planners and city bureaucrats, urban renewal was done with little community consultation. In some of Canada's poorest neighbourhoods entire tracts of houses were bulldozed in order to make room for new public housing projects.

Such efforts were met with mixed success. Bumsted (1992: 28) notes:

Many of the slum tenements of older cities were dreadful eyesores of deterioration, inhabited by recent immigrants and the poor; brand-new blocks of apartments or bungalows, seemed a considerable improvement. Not until the early 1960s - perhaps beginning with the publication of Jane Jacobs' influential The Death and Life of Great American Cities (1961) was the case made publicly that any urban renewal that destroyed existing organic neighbourhoods and communities in the process was retrogressive.

The planned construction of new expressways to service outlying suburbs sparked the most protest and a growing disenchantment with the role expert planners took in
directing change. For 50 years, expert professional planners had carved out a niche in urban development for themselves in an area that was previously the domain of citizens and corporations. In Toronto and Vancouver, new highway proposals galvanized inner city neighbourhoods in political fights for community consultation. It was a learning process, especially for a technocratic planning profession which was forced by mounting protests from neighbourhood associations and citizen coalitions to recognize the need for participation in the process of city building.

In Discovering Common Ground (1992), Marvin Weisboard traces the growing discontent with expert planning and the evolution of participatory alternatives (Figure 5).

![Figure 5: The Rise of Citizen Participation](image)

Weisboard maintains that simple solutions offered by expert planners through the 1950s had indeed solved some simple problems, but these solutions also created a new set of complex problems. In the context of postwar suburbanization, the rapid expansion of new automobile-oriented suburbs advocated by the nascent planning
profession solved immediate housing needs and stimulated the postwar economy but it created a larger, more costly and more complex set of social, economic, and ecological problems that we are only now coming to terms with. By the 1960s, the myth of the professional planner who made autonomous, unbiased decisions for the public good dissolved and the phrase 'citizen participation' entered the planning lexicon. Public groups lobbied and won the right for more participatory forms of planning.

**Waking up from the North American Dream**

We can no longer ignore the systemic ecological, economic and social consequences of sprawling suburban growth. Through the 1970s, metropolitan regions grew rapidly in Canada and planners focused on regional planning issues, particularly on the land, transportation and infrastructure systems that would be needed to service existing and future suburban growth. Attention must now turn to the sprawling landscape that was created in the decades after the Second World War. The strategy of expanding highway systems to provide access to new land for new suburban settlement appears to have reached its elastic limit in the 1980s (Southworth & Owen 1993: 285-6). In an age of fiscal restraint, governments are not prepared to fund new highways, nor will they subsidize the provision of infrastructure and services for new communities outside of existing urban areas. The finite supply of land increases the pressure to intensify the use of existing land.

The gap between the type of housing supplied and the type of housing needed has widened. Although the average household size has fallen from 4.3 people in 1941 to 2.7 in 1991, the average size of dwellings has increased as developers target move-up buyers who seek larger homes with more in-home amenities. The large scale of
development and the rigid separation of land uses has fostered a near complete dependence on automobiles for all mobility needs (Cervaro 1989; Newman & Kenworthy 1989). The implications of this are manifold. The costs of purchasing and maintaining one car is estimated to be $6,000 per year - a burden to financially strapped suburbanites. Once a refuge from congested urban centres, many suburban communities now host urban-scale traffic jams. Unfortunately, these now congested and polluted road systems also make up the majority of the public space in post-war suburbs.

The consequences of sprawl finally gained a wider critical hearing in political circles in the 1980s and 1990s. The 1987 Brundtland Report raised the issue of anthropogenic causes of global changes in climate, ecology, water quality, and biodiversity. Cities in the developed world, and North American cities in particular, have been singled out as centres of energy and material consumption and waste production (Dyke 1988; Rees & Wackernagel 1996). Now in the 1990s, the debate has transcended concern for the environment as North Americans are beginning to recognize that suburban sprawl is also economically inefficient (Adler 1995: 43). In a study of the costs of sprawling development in California, the Bank of America concluded that such development has created “significant social, environmental and economic costs, which until now have been hidden, ignored, or quietly borne by society (Bank of America 1995: 1). A more quantitative study by the Task Force on the Future of the Greater Toronto Area (GTA) revealed that the GTA would save $12.2 billion in hard infrastructure costs alone over the next twenty-five years if a more compact form of development was adopted (Greater Toronto Area Task Force 1996). The report authors concluded that sprawling suburban growth is sinking rather than propelling the
economy and quality of life in the city-region of greater Toronto which is expected to have a population of six million people by 2025.

Against the traditional argument that increased densities will drive people into high-rise ghettos, the report suggests that suburban densities can be doubled with efficient layouts and building forms. Globe and Mail columnist James Barber notes, “The traditional city had no high-rises yet it achieved greater densities than postwar suburbs and offered a greater variety of housing. No government subsidized it and it remains a fine place to live (Barber 1995: A2).”

These economic, social and ecological realities have already stimulated a renaissance of planning and urban design ideas that encourage the compact mixed-use form evident in neighbourhoods built before the Second World War. On the east coast, the design team of Andres Duany and Elizabeth Plater-Zyberk sparked the birth of the “New Urbanism” movement with the development of the new town of Seaside, Florida. Together with the developer Robert Davis, the trio travelled the United States to document the design and architecture of the turn-of-the-century neighbourhoods that remain fixed in the hearts of North Americans. The ‘Neo-Traditional’ or ‘New Urbanist’ model of urban development that emerged from their studies illustrates a return to a pedestrian scale urban grid of streets with mixed forms of housing in neighbourhoods well served with local shops, services and civic space.

In the decade that has passed since the rise of New Urbanism, the movement has taken root in urban communities across North America. In Canada, the pair has consulted in the design of a number of New Towns including Seaton in Toronto, 9th Line in Markham, Ontario, and McKenzie in Calgary.
On the west coast, Peter Calthorpe and Douglas Kelbaugh have promoted Transit-Oriented Development (TOD). They have applied their ideas in cities such as San Diego, Portland, and suburban Washington DC. TOD lacks the rigid adherence to the architectural vernacular of Duany and Plater Zyberk's Neo Traditional Developments but it adheres to the same basic principles: walkable, human-scale communities designed to conserve the use of urban land, create affordable housing, reduce energy use and pollution. Calthorpe states:

The alternative to sprawl is simple and timely: neighbourhoods of housing, parks, and schools placed within walking distance of shops, civic services, jobs and transit - a modern version of the traditional town. The convenience of the car and the opportunity to walk or use transit can be blended in an environment with local access for all of the daily needs of a diverse community. It is a strategy which could preserve open space, support transit, reduce auto traffic, and create affordable neighbourhoods (Calthorpe 1993: 16)."

The scale of Calthorpe's work transcends the more limited house-block-neighbourhood focus of New Urbanist designers. Calthorpe states, "Applied at a regional scale, a network of such mixed-use neighbourhoods could create order in our balkanized metropolis. It could balance inner-city development with suburban investment by organizing growth around an expanding transit system and setting defensible urban limit lines and greenbelts (Ibid.)."

The work of TOD advocates and New Urbanists converge in two powerful ways. First, the inception of their communities has been grounded upon a clear acknowledgment that post-war patterns of growth are no longer acceptable, viable, or desirable. Second, the ideas of these 'visionary' designers are firmly rooted in the past; their projects use earlier models of urban development to guide contemporary development practices. They are replicating at the scale of the neighbourhood the type of incremental urban growth that took place in the five to six decades before the
Second World War. Neighbourhoods built in North America at the turn of the century were functional, with a healthy mix of housing at densities that could support mass-transit while integrating local businesses and services.

The conscious replication of these forms in new development is a challenge to a fifty-year-old suburban planning orthodoxy that compact mixed-use communities are undesirable. Yet there remain enormous institutional and regulatory barriers to implementing sensible neighbourhood design. Transportation engineers and utility companies fight proposals for narrow streets; planning departments balk at mixed use development and shallow building setbacks; and the spectre of “Higher Densities” frequently draws ‘Not-in-my-backyard’ opposition from neighbouring communities. However, the New Urbanist projects that do get approved and built receive positive reviews, command higher prices relative to sprawling suburban development and draw imitation. The movement is growing in influence and there is hope that the ‘old-fashioned, densely built, small scale, mixed-use, pro-pedestrian approach to neighbourhood development will become the next North American planning paradigm’ (Mohoney & Easterling 1991: 47).

Unfortunately, most of the focus of this design renaissance has been greenfield development. New Urbanism has been criticized by some as “New Suburbanism”, a more attractive form of automobile-oriented suburban sprawl. To date, “neither designers nor planners have taken advantage of this opportunity to rethink suburbs as more humane and engaging places (Southworth & Owen 1993: 285-6)”. Pessimists such as Jack Lessinger, a land economist at the University of Washington, predict that there will be significant divestment in the postwar suburbs. In Penturbia: where real
estate will boom after the crash of suburbia (1991), Lessinger asserts that mainstream North Americans will move to exurban areas in great numbers, triggering a significant cycle of divestment and decay in the postwar suburbs. Other researchers point to new advances in telecommunications as enabling technology that will allow many more people to live great distances from urban economic centres (Nelson 1992).

Given the scale of private and public investment made in suburban housing, Canadians cannot afford to let this stock of housing decay. Population growth, demographic and social change and the deterioration of air and water quality will compel not only the maintenance of older suburban housing and infrastructure but a far wider retrofit of the existing built environment (Southworth & Owens 1993: 284). The urban agenda for the 1990s and beyond will be to 'redesign, reuse, and redevelop the physical fabric of existing cities and suburbs' (Bourne 1993: 186). The retrofit of older suburbs needs to be incremental because the 'built legacy of one generation cannot be replaced by the next - it can only be adapted' (Jackson 1985: 304).

How to do this is the challenge of suburban politicians, planners, and developers. We must begin to consider areas of existing development for ways to incorporate redevelopment and infill that meets contemporary housing and community needs. Housing redevelopment in older suburban neighbourhoods presents opportunities to alter the function and mix of the housing stock in older suburbs - a chance to diversify land use, to accommodate more people with more diverse housing needs within existing urban areas, and to draw closer together the locations of home, work and shopping (Bourne 1991; Sewell 1994).

A new cultural agreement on what constitutes livable urban places needs to be

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9 i.e. sites with no previous development, typically on the fringe of existing communities.
reached. Dated zoning codes enforce old standards and left unchanged, the bylaws have become negative and restrictive, "at best able to prevent the worst things from happening" (Oberlander 1997: C8). In *The Geography of Nowhere* (1993), James Kunstler sees new opportunities in the redevelopment of the sprawling postwar suburbs. He asserts that North Americans must intelligently redesign the urban landscape in order to have any kind of advanced economy at all:

> This enterprise may turn out to be the engine that powers our economy for years to come, much the same way that the suburban build out did ... To accomplish it we will have to reacquire the lost art of town planning and radically revise the rules of building, especially the zoning codes that impoverish our present townscapes (Kunstler 1993: 248).

It is likely that opportunities for such redevelopment will appear as the stock of housing ages and as residents adjust their housing to meet the shifting demands of changing stages in family life-cycles (Gellen 1985; Hare & Ostler 1987). Smart (1985: 121) suggests that mature suburbs that were developed in the first wave of suburbanization after WWII are most likely to be redeveloped first; underused sites in these areas will come under increasing pressure for redevelopment that is more urban in character with significantly higher population densities and more mixed use (Ibid.). These opportunities underpin my decision to examine contemporary redevelopment forms and patterns in postwar subdivisions.
2 / Case Studies in Post-war Suburbs

Richmond is a suburban island-city that grew rapidly in the postwar period with the mass-production of housing in single-family subdivisions. With the exception of the small cannery town of Steveston, there was little vision for an urban pattern of development in the agricultural municipality before the postwar period. The construction of entire subdivisions of suburban homes in the mid-1950s quickly transformed the agricultural landscape and efforts to contain sprawling growth were often frustrated by 'growth-at-all-costs' decisions of successive municipal councils. Early planning was piecemeal, initiated only after sprawling subdivisions began to fill with families whose infrastructure and service demands exceeded the agricultural standards of the day. Through the 1970s, the only two significant growth management strategies to emerge were macro-scale initiatives of provincial and regional levels of government which established growth boundaries and encouraged the consolidation of suburban development\(^{10}\). To date, little thought has been given to alternative futures for Richmond's aging postwar landscape. My thesis is that postwar suburbs can be adapted by leveraging the market-driven, incremental redevelopment that is likely to begin as postwar housing enters a cycle of obsolescence.

If the postwar suburbs are to be retrofitted to meet contemporary housing and community needs, there must be a departure from the tradition of macro-scale, expert-driven, end-state planning that has been dominant since the 1950s. An understanding of the process and the pattern of contemporary redevelopment at the scale of the

\(^{10}\) The provincial Agricultural Land Reserve Act (1974) and the GVRD's Town Centres Policy will be discussed further in this chapter.
house, block and subdivision is required. Detailed field studies are conducted in five postwar subdivisions to document the patterns and scale of change in the postwar suburbs. Of specific interest is the form that housing redevelopment takes, the socioeconomic engines of change, and the planning processes used to manage change.

2.1 Farms to Subdivisions

Before the Second World War, Richmond was an agricultural municipality. Surveyors from the Royal Engineers plotted a grid of rural roads at half mile intervals to define a checker-board pattern of 160-acre parcels of land on Lulu Island and Sea Island in 1863 (North & Teversham 1983). Soon after European homesteaders settled the land and built an extensive system of dikes to thwart the annual floods of the Fraser River and the variable seas of the Strait of Georgia (Ibid.). Thus transformed, Richmond’s fertile alluvial soil supported intensive farming as well as dairy and poultry operations. By 1879, Lulu I. and Sea I. were officially incorporated as the municipality of Richmond.\footnote{Along with two smaller islands, Mitchell I. and Twigg I.}

Twenty-five years later, the opening of an electric interurban rail system across Lulu Island attracted new economic activity and new residents. The BC Electric Company leased the Lulu Island Railway from the Canadian Pacific Railway in 1905 and modified the cargo line for passenger service between the City of Vancouver, the cannery town of Steveston, and the City of New Westminster (Ewert 1986: 600). Interurban cars shuttled workers, goods and farm produce at one hour intervals to fifteen stations across Lulu Island (Figure 6).

Richmond’s elected officials promoted the interurban and the opportunities...
available to all who would invest in the municipality. In the 1913 *Point Grey Gazette Edition of Progress*, they boasted:

A ride of 45 minutes on any electric car is sufficient to bring a citizen from the extreme southerly part of the municipality to either of the cities of New Westminster or Vancouver, the latter which is today the great Pacific port of our proud Empire, and Richmond rests peacefully at her very door (Ibid.: 17).

Figure 6: Interurban Transit, Richmond c.1920

The impact of the interurban was far-reaching. In the early 1900s, hundreds of weekend day-trippers from Vancouver and New Westminster were drawn to the Minoru Park racetrack adjacent to the Brighouse interurban station (Ross 1979: 100). The low cost of land in Richmond eventually attracted new residents, many of whom held
weekday jobs in Vancouver and New Westminster (Hardwick 1974: 130). Second and third generation farm owners participated in the real estate market by subdividing and selling parcels of land along the rural section roads that bordered their property. New residential development was organized around the needs of pedestrian mobility and interurban transit. By the 1920s, small nodes of residential settlement developed within walking distance of interurban stations, particularly those clustered on the northern portion of Lulu Island (Ibid.).

Little public investment or intervention from the municipal government was necessary because the residential land was serviced according to the rural standards of the day. Residents traveled on agricultural roads, managed their own waste disposal and sent their children to rural schools. Drainage ditches along roads kept low-lying land free of surface water and most dwellings were connected to on-site septic systems rather than more costly sewer lines. There was little need for formal land use planning, and since landowners paid minimal taxes for minimal services, there was little room in the municipal budget for a full-time planner much less a planning department.

“Municipal planning”, according to ex-council member Bob McMath, “was a luxury enjoyed by large cities like Vancouver12.”

Successive municipal councils followed a pattern of opening up large tracts of land for residential settlement without clear plans for providing municipal services and new infrastructure. Between 1931 and 1941, the municipal population increased by almost 27%; the number of people living on farms decreased by 18.5%; and 2,418 acres of agricultural land were taken out of production13. Of the approximately 35,000

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12 Ibid.
13 1931 Census of Canada (Vol. 8) Table 37; 1941 Census of Canada, (Vol. 2) Table 10
acres of land on Lulu I. and Sea I., 52% was still in agricultural use in 1941\textsuperscript{14}. In retrospect, Richmond was a municipality ill-prepared for the scale of suburban development that followed the Second World War.

The first significant phase of housing development was stimulated by the Veteran’s Land Act (1946) which provided low-interest mortgages to returning soldiers. The terms of early VLA financing agreements encouraged a sprawling form of suburban development. Houses in rural areas had to be set on lots no smaller than two acres because, in the shadow of the Great Depression, federal policy makers wanted to ensure that veterans had some opportunity to be self-sufficient or engage in agricultural work\textsuperscript{15}. The development process was similar to earlier suburban growth: large lots adjacent to section roads were sold to people who constructed their own modest homes or contracted the work out to small builders. However, the nodal organization of earlier settlement encouraged by the interurban gave way to a more extended linear pattern as automobiles replaced the interurban as the main mode of mobility (Wynn 1992: 73).

The municipality established the Richmond Town Planning Council (TPC) in 1949 to bring some order to this phase of suburban growth. The TCP drafted a municipal plan which outlined conservative limits on new suburban growth. They recommended that council zone 4,800 acres of land for residential use; 2,200 for industrial use; and 2,000 for small buildings. Instead, Richmond Municipal Council doubled the area set aside for industry, increased the land available for residential development by 35%, and cut the amount of land set aside for small residential buildings by 12% (Ardies 1956b). Ultimately, the watered-down zoning bylaw allowed

\textsuperscript{14} Ibid.
\textsuperscript{15} Bob McMath, personal communication.
developers to build almost anywhere in the municipality because it set areas where industrial and commercial land uses were permissible but did not prohibit the development of residential housing in these same areas (Ibid.).

Two air-photographs, one from 1946 and the other from 1954 illustrate the spreading pattern of new residential housing that took shape in the early 1950s (Figure 7). The traced sketches which accompany each photo show roads and identify major buildings. The 1946 photo reveals a patchwork of cultivated fields delineated by a grid of section roads evenly spaced at ½ mile (800m) intervals. Small homes and farm-buildings are found only along the section roads and much of the land appears to be under cultivation. By 1954, there has been a significant growth in the number of dwellings along the periphery of the quarter-sections where it is easiest to service the properties with road access and water hook ups.
By the early 1950s, the Lower Mainland Regional Planning Board (LMRPB), a regional planning authority, recommended that Richmond municipal council hold off developers and take measures to retain the municipality’s valuable agricultural land. LMRPB officials reasoned that new suburban growth would be better accommodated in areas with less valuable agricultural land and better connections to Vancouver. However, the municipal government clearly wanted to attract more growth. T.
Youngberg, the municipal clerk for Richmond stated in 1956 that, "The people who live here - not the planning board or anyone else - are going to decide what happens (Ardies 1956b)."

In reality, a number of factors were well outside of the control of the municipality. In 1954, the CMHC widened the scope of its mortgage guarantee program, flooding the housing market with thousands of households who otherwise would have not been able to immediately purchase a new home. Affordable suburban houses were in high demand and the construction of the Oak Street bridge (completed in 1957) promised new orders of accessibility to residential land on Lulu Island\(^\text{16}\) (Hardwick 1974: 130). The agricultural quarter sections on the western half of Lulu Island became the checker-board template for suburban tract housing in the mid 1950s. In 1955 alone, the municipal council approved 35 suburban housing projects ranging in size from 14 to 1,400 units (Ardies 1956b).

Richmond gained 1,670 new families between 1951 and 1955, and another 4,000 between 1956 and 1961\(^\text{17}\). While low housing prices were the chief attraction of the new subdivisions, those marketing new suburban homes also promised a better lifestyle. An advertisement from the 1956 Vancouver Sun plays all of the explicit advantages of the new subdivisions off of the inferred disadvantages of older, urban neighbourhoods: "A safe home for children. No traffic problems. Clean fresh air from the Gulf of Georgia. A complete new area. No old homes on the west side of [Lulu] Island. New schools."\(^\text{18}\) The new houses were typically modest split level or ranch

\(^{16}\) Sea Island to the west of Lulu Island was less settled since it was selected as the site for Vancouver’s International Airport.

\(^{17}\) Census of Canada (1961) Households 2(1): Table 43.

models, 1,000 to 1,600 square-feet in size, built on individual lots measuring 20m (50') by 40m (120') (Figure 8).

Figure 8: Typical Postwar Dwelling, 9940 Greenlees Rd

As a place to live, the postwar suburbs offered new families affordable home ownership and a safe place to raise children. However, the postwar suburbs were the first rough iteration of urban growth in a predominantly agricultural landscape and they offered only a fraction of the amenities commonly found in older urban neighbourhoods. Developers spent little on housing design and perhaps even less on infrastructure as basic as sidewalks. Most houses were serviced by septic fields rather than more costly sewer lines. A study of resident satisfaction conducted by the LMRPB documents the myriad of problems faced by families in the new suburbs:

The dusty gravel roads have no sidewalks or street lights. Small water mains run dry in the summer sprinkling season. Septic tanks cause health problems when yards and ditches flood with unabsorbed effluent. The distant fire brigade and the unreliable water supply give rise to high fire insurance rates. Parks are few, distant and inadequately developed. The small schools are unable to provide a full range of educational opportunities. Shops are far and few between, and offer only limited variety. The bus service which could carry housewives, children and old folks to better facilities is poor, frustrated by the sparse population that cannot be served economically. In short, the suburbanites find themselves isolated, forced to travel excessive distances each day to city jobs, major shops, and other facilities they cannot find locally. They are faced with an
inadequate environment, and hold little hope for change (Pearson 1967: 4).

Richmond’s civic officials sought professional planning advice once it became clear that the municipality was paying a high price for the new development. A 1956 *Vancouver Sun* report charged that the burden of servicing suburban sprawl was costing Richmond taxpayers an additional $50,000 per year (Ardies 1956). Brian Justice, a landscape architect and planner was hired to develop a more comprehensive approach to managing suburban growth. He completed Richmond’s first Official Community Plan in 1956. The most pressing task was to make developers more accountable for the wider costs of servicing new subdivisions. The CMHC had already initiated some change on this front by requiring that all new homes with guaranteed mortgages be hooked up to a sanitary sewer system (Kluckner 1991: 140). Subsequent council amendments in 1958 made developers financially responsible for the costs of installing road systems and street lighting.

However, the die had already been cast by the sprawling pattern of early development. The subdivisions developed after the mid-1950s, during the most intense period of postwar growth, reflect a new scale of development as larger, more capitalized companies entered Richmond’s housing development industry. Increased servicing requirements presented a barrier to the participation of smaller builders who could have filled in smaller plots of land within existing areas. Instead, larger more vertically integrated developers passed over suburban areas that had been subject to small-scale subdivision because it was more cost-effective to install new infrastructure.

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19 Bob McMath, personal communication.
in unsettled quarter-sections\textsuperscript{20}.

Another pair of air photos for the same four quarter-sections show the differences between the incremental pattern of early suburban development with the mass-production that began in the mid 1950s (Figure 9). The 1963 photo clearly illustrates the new scale of development. Entire tracts of single-family dwellings been built within quarter-sections serviced by internal street systems. The photo also shows how significant the automobile was in shaping new development: in the south-east quartersection, there are only four points of entry (marked by \(•\)) on the \(\frac{1}{2}\) mile by \(\frac{1}{2}\) mile grid. The Internal street patterns limit through-traffic but necessitate the use of cars for almost all external mobility. Also evident is the roughed-in road system for a new subdivision (a), and a shopping centre with a large parking lot (b).

\textsuperscript{20} Bob McMath, personal communication.
Figure 9: Rapid Suburban Growth 1954-1963
2.2 Macro-scale Growth Management

Richmond was not alone in its struggle to manage such suburban growth. Through the 1960s and early 1970s, other municipalities across Greater Vancouver were having at best marginal success in controlling suburban sprawl. It became evident that the costs of such growth were unsustainable and that much of the region's valuable agricultural land would disappear without government intervention (Kluckner 1991: 138). Provincial and regional governments stepped in with macro-scale growth management policies to contain new growth. Two strategies are relevant to the contemporary examination of Richmond's postwar landscape: the *BC Agricultural Land Reserve Act* (1974) and GVRD's Regional Town Centre plan (1975).

In the winter of 1974, the minister of agriculture for the governing New Democratic Party surprised the provincial legislature by tabling and successfully passing a bill to create the *Agricultural Land Reserve* and the *B.C. Land Commission* that would administer it (Petter 1985). The act was significant because it established an urban growth boundary and it energized suburban residents who wished to resist further growth. The Act made it impossible for Municipal councils to unilaterally withdraw land from the reserve. Landowners who wanted to develop land in the ALR were required to bring their case to the provincial Land Commission and demonstrate that their property was no longer of productive value. Much of Richmond's undeveloped land base was classified as productive agricultural land under the provisions of the act (Figure 10). Most of the ALR lands are in the sparsely settled eastern half of Lulu Island. In the western half of the Island that was the focus of sprawling suburbanization, the only areas deemed agricultural were the Terra Nova lands on the north-west corner and the
area south of the Steveston Highway.

Figure 10: Agricultural Land Reserve c. 1974

The second significant growth management strategy was a coordinated plan to develop Town Centres throughout the Greater Vancouver region. The provincial government revised regional planning in 1966 and dismantled LMRPB, creating in its place the Greater Vancouver Regional District (GVRD). The older organization was responsible for delivering regional infrastructure and services and it became evident that regional expenditure decisions could be used more effectively to shape the pattern
of new urban growth. Accordingly, the mandate of the GVRD was expanded to include a more proactive role in urban growth management research and planning.

GVRD researchers began an extensive public consultation process to set new priorities for regional planning. The *Urban Futures Survey* (1972) was conducted to gauge public concerns across the region. Researchers found that a recurrent theme in the public consultation feedback was a widely shared concern with the livability of the region in light of the rapid pace of suburban growth throughout the Lower Fraser Valley (Hardwick et al 1972). Based on this public consultation process, GVRD representatives reached a consensus that future urban growth should be focused in a more urban pattern within regional town centres. In 1975 the Town Centres policy was formally adopted and incorporated in the GVRD's (1974) *Livable Region Strategy*.

The policy was especially significant because it organized funding priorities for new regional infrastructure such as highways, transit, water and sewer trunks. Richmond sought regional designation as a Town Centre but was refused on the grounds that the low lying island-municipality was vulnerable to earthquake and flood. Areas in Coquitlam, Burnaby, Surrey, and New Westminster received Regional Town Centre designations because they offered better transportation connections and a land base more suitable for urban development. However, Richmond was granted designation as a 'sub-regional' Town Centre as a political concession.

Figure 6 shows the location of Richmond's town centre in the mid-1970s in relation to the ALR and postwar suburban development. The Brighouse area formed a natural centre with the municipal hall and a node of residential development that surrounded the adjacent Brighouse interurban station (Ross 1979: 110). In the 1950s, the city decided to build a new city hall at the intersection of Westminster Highway and
No. 3 Road. The subsequent conversion of the nearby Minoru race track permitted the construction of two department stores, many specialty stores, school board offices, an arena, major recreational facilities, and the General Hospital (Hardwick 1974: 130). In its original conception, the City's planned Town Centre was "[during the 1970s] probably the best planned centre in the whole region (Hardwick 1974: 130)."

Figure 11: Growth Management Strategies in Richmond, B.C.

Through the 1980s Richmond's municipal government approved two departures from the provincial and regional growth management initiatives. In 1987, Richmond council approved developer Milan Illich's request to develop 90 acres of land from
“Terra Nova” portion of the ALR on the north-west corner of Lulu Island. Illich took his case to the Agricultural Land Commission with the support of Social Credit Municipal Affairs minister Bill Vander Zalm. Once the land was released, the council rezoned it for the development of single-detached homes even though 97 per cent of local residents opposed the development proposal (Ramsay 1989: 21). Other landowners were also successful in removing smaller assemblies of land around Highway 99 and Westminster Highway (Figure 12).

The second departure from the vision of the 1970s was a 100% expansion of the area zoned as the town centre (Ibid.). In 1989 the suburban municipality designated itself as the “City of Richmond”. In the same year the city council voted 4-3 in favour of expanding the Town Centre boundaries - despite the objections of the city’s senior planning staff - to include a proposed mall on the site of the old Lansdowne race track at Alderbridge Road and No. 3 Road. The City’s *Official Community Plan* calls for the accommodation of 80 per cent of its population growth (to the year 2020) in multiple unit housing within the expanded Town Centre (City of Richmond 1986). In the years that have followed the Town Centre decision, Richmond Council approved a series of smaller specialty malls along No. Three Road near Cambie Rd. Consequently, the ‘centre’ has become an automobile-oriented ribbon of commercial development instead of the mixed-use pedestrian-oriented focal point once envisioned for the small suburban city.
To put the expansion of Richmond’s Town Centre into perspective, it now encompasses 12 quarter-sections totaling 1,920 acres, serving the needs of a suburban
city of 146,000\textsuperscript{21} people. In contrast, Vancouver with a population of 521,000\textsuperscript{22} residents is served by a central business district and the adjacent West End neighbourhood which combined occupy an area that is one-third smaller (Figure 13).

Figure 13: Vancouver City Centre and Richmond's Town Centre

\textsuperscript{21} 1996 estimate
\textsuperscript{22} 1995 Estimate
2.3 Opportunities to Retrofit the Suburbs

Between the Town Centre and the ALR boundary there are 46 residential quarter-sections many of which have significant tracts of houses built between 1946 and 1962. If the predictions of urban researchers hold true, the redevelopment of the old stock of housing will offer new opportunities to bring change to the postwar suburbs. Two scales of change seem immediately possible: redevelopment on the scale of single-family building lots, and infill or redevelopment within larger land assemblies (Figure 14 and Figure 15). At the scale of the individual lot, there is a wide range of housing that could be redeveloped including single-detached houses, duplexes or even small adaptable townhomes. The availability of larger sites could attract developers with the capital necessary to build quality multiple-unit housing.\(^{23}\)

Figure 14: Redevelopment Opportunities in Postwar Suburbs

Individual Lot Redevelopment, Richmond BC

Shown is the new foundation for a house in the Broadmoor neighbourhood in Richmond BC. The postwar dwelling that was on this site was demolished.

\(^{23}\) John O'Donell, VP, Polygon Development
On a wider scale, architect Ray Pradnuick (1991) predicts that even larger scale changes could be possible. He has proposed a theoretical retrofit scenario where the insular street system typical of postwar development could be adapted by encouraging higher density redevelopment in return for right-of-ways at key points in the street system (Figure 16).

Whatever the scale of change, new development priorities must reflect physical
limits to urban growth, the appropriateness of the housing stock, and housing affordability. Between 1961 and 1991, Richmond's population almost tripled and the number of households quadrupled (Table 2). Families and households have become smaller due largely to an aging population profile, a doubling of lone-parent families and a four-fold increase in the number of one-person households. If the city is to continue growing, new development must accommodate more people and a wider range of household types within less physical space.

Housing affordability is now an important issue since the suburban ideal of ownership of a single-detached house on its own lot has slipped beyond the economic means of many families. Between 1961 and 1991, the cost of an average single-detached house tripled relative to average family incomes (Ibid.). However, the cost of housing, in real family income, has risen by significantly more than a factor of three because the statistics do not even begin take into account the dramatically higher participation of women in the labour force. Put in another way, a suburban house in the 1960s cost somewhere on the order of 2.6 times the average income of a family with one wage-earning head; in the 1990s, 70% of families have two working heads and the average house cost more than six times the average family income. The 14% drop in owned dwellings and the significant increase in rental tenure since 1961 is explained in part by these economic realities. One-in-five home owners in Richmond (and one-in-three renters) spent more than 30% of their gross household income on housing in 1991.
Table 2: Social and Housing Trends, 1961 - 1991, Richmond BC

<table>
<thead>
<tr>
<th></th>
<th>1961</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>43,323</td>
<td>126,490</td>
</tr>
<tr>
<td>Population over 55</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Families</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average people / family</td>
<td>3.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Average children / family</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Lone-parent families</td>
<td>5.4%²⁴</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Households</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average people / household</td>
<td>3.8</td>
<td>2.8</td>
</tr>
<tr>
<td>1 person households</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>2 person households</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>3 person households</td>
<td>18.5%</td>
<td>18%</td>
</tr>
<tr>
<td>4-5 person households</td>
<td>42.5%</td>
<td>27%</td>
</tr>
<tr>
<td>6+ person households</td>
<td>14.7%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Housing Affordability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average value of a single-detached non-farm house / average Household Income</td>
<td>2.62²⁵</td>
<td>6.55²⁶</td>
</tr>
<tr>
<td>Owned Housing</td>
<td>80.3%</td>
<td>66%</td>
</tr>
<tr>
<td>Rented Housing</td>
<td>19.7%</td>
<td>34%</td>
</tr>
</tbody>
</table>

In light of these social and economic trends, Richmond's population will require a more diverse range of housing and mobility options. Seniors need forms of housing that allow people to age in place; young families require affordable ground-oriented housing; and all citizens need local shops and services that are integrated into the residential fabric of the subdivisions with street connections that serve pedestrians, cyclists and those with other mobility options in addition to the private automobile.

²⁴ Statistics Canada did not calculate figures for "Lone Parent" in 1961 so this figure was arrived at by adding divorced, widowed and separated family heads.
²⁵ The median price of a 1961 single-detached house was used since the average was unavailable.
²⁶ Average value figure from Canada Mortgage and Housing Corporation data.
Zoning in the Postwar Suburbs

Contemporary Zoning dictates what form new development will take. In broad terms, Richmond’s *Official Community Plan* (1986) sets out the future evolution of the island-city for a 15 to 20 year planning horizon. The plan establishes broad goals to balance economic growth and the quality of the living environment of the municipality (Ibid.: 6). Within these goals was an explicit commitment to encourage a “fair and equitable distribution of housing types and forms throughout the neighbourhoods of the Municipality (City of Richmond 1986: 30).” Given the finite amount of land for new development, the Plan called for the accommodation of all residential, industrial, and commercial growth needs ‘within the present urban sector’ (Ibid.: 15). Dwelling targets were set for each quarter section in the Municipality, ‘encouraging multiple unit dwellings near parks shopping centres and along transit routes (Ibid.).

While the Richmond Town Centre has been the focus of a comprehensive planning process, the postwar landscape remains locked in existing land-use patterns by dated zoning bylaws. Through the 1980s, there was market pressure to incrementally redevelop some of the stock of single-detached postwar housing. Much of the new redevelopment fit the prescriptions of the original zoning code but there was also some market demand for smaller lot subdivisions, duplexes and townhomes.27

Richmond City Council was unprepared for the number of redevelopment applications that began in the 1980s. They were unwilling to handle the subsequent land-use conflicts on a case-by-case basis in regular hearings. Thus, from the outset there is a regulatory barrier to change.

27 Personal Communication: Mr. David McLelland - Manager of Urban Development, City of Richmond.
Underlying their discomfort was some uncertainty about the civic response to development applications that deviated from the single-detached template of the postwar subdivisions. Many residents were hostile to the idea of anything other than single-family homes in their suburban neighbourhoods. City Council claimed that the administrative nature of these decisions, together with the lack of public involvement, created the impression that, "change in the municipality was developer driven and not subject to an overall Municipal vision in which the community itself had input (City of Richmond 1995: 2)." To remedy this situation, Council amended the Zoning and Development Bylaw No. 5300 in 1989 to include Section 702: "Standard Single-Family Lot Size Policy Study Process". This component of the municipal bylaw dealt with the subdivision of properties zoned for single-family use into smaller lots for single-family or duplex development (Ibid.).

On the surface, the "702 Process" is framed as a mechanism to manage redevelopment and neighbourhood change. However, the explicit goal of the redevelopment policy is to "foster stability" in neighbourhoods experiencing significant redevelopment pressure (City of Richmond 1995a: 2). The process presents a bureaucratic wall for people who want to build new housing that departs from the single family template of the 1950s. Residential intensification victories have been few.

Field Studies
In January 1992, one subdivision in Richmond BC was surveyed to document the redevelopment of post-war housing\textsuperscript{28}. Initial walking surveys revealed that much of the housing stock was showing signs of aging. Small-scale builders were demolishing post-war-era homes and constructing in their place large single-family dwellings commonly referred to as 'megahomes' which differing greatly in size and appearance from the stock of older post-war homes\textsuperscript{29}. Megahomes exceed 4,000 square feet in size. They have more parking surface than older homes, and three-car garages are not uncommon (Figure 17).

Figure 17: Megahome at 7860 Afton Crescent (Broadmoor Subdivision), Richmond BC

\textit{The price for this house, now painted over, once read: $1.1 million, no G.S.T.}

Casual conversation with a real estate agent revealed that many of the long-term residents were cashing out by selling their old houses for upwards of $300,000 and

\textsuperscript{28} This field survey evolved from a graduate geography course on urbanisation in developed countries, taught by Dr. W. Hardwick; the original survey was designed by the author in collaboration with Tilo Van Driessen, a graduate student in the UBC School of Landscape Architecture.

\textsuperscript{29} Another term that has gained currency has been 'Monster Homes.' I argue that the term 'Megahome' is more descriptive and far less pejorative. Majury (1991) and Ley (1994) both note that the term 'Monsterhome' reveals a not-so-subtle form of racism since affluent Asian immigrants are highly represented as consumers of this form of housing. Both authors ask, 'what sort of monsters live in a monster home?'}
moving to exurban locations such as White Rock, the Sunshine Coast and the interior of the province. Older houses are bought and sold on the assumption that they will be 'knock-downs'. Speculative builders then demolish the original houses and replace them with megahomes. A newspaper advertisement lists: "BROADMOOR HOUSE AND LOT. 81x120 feet, rear lane. Try your offer. Ask. $389,000 (Vancouver Sun 15 April 1995: G4)." A comparison of print advertisements from the 1950s and the 1990s reveal some of the distinguishing characteristics between the post-war stock of housing and the redeveloped megahomes (Table 3).

Table 3: Advertisements for Suburban Homes, 1956 & 1994

<table>
<thead>
<tr>
<th>1956 Vancouver Sun Advertisement</th>
<th>1994 MLS. Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>874 Cooper Road</td>
<td>8751 Cooper Rd.</td>
</tr>
<tr>
<td>(Now 8740 Cooper Rd.)</td>
<td></td>
</tr>
<tr>
<td>2 Bedroom Bungalow - 11/2 years old</td>
<td>6 Bedroom Megahome - 1 Year Old</td>
</tr>
<tr>
<td>Features:</td>
<td>Features:</td>
</tr>
<tr>
<td>• 20' living room.</td>
<td>• 4,465 Square Feet of Living Space</td>
</tr>
<tr>
<td>• Fireplace</td>
<td>• 6 Bedrooms. 4 Ensuite Bathrooms</td>
</tr>
<tr>
<td>• Oil Heating</td>
<td>• 1 Steam Room. 2 Kitchens</td>
</tr>
<tr>
<td>List Price: $10,400</td>
<td>• 3 Gas Fireplaces. Radiant Heating</td>
</tr>
<tr>
<td>Terms: $2,500 down. Payment $63/mo incl. Taxes</td>
<td>• 3-Car Garage &amp; Additional Surface Parking</td>
</tr>
<tr>
<td></td>
<td>List Price: $1,280,000.</td>
</tr>
</tbody>
</table>


In 1994, five neighbourhoods containing approximately 2,000 homes were selected for a more comprehensive study. As 6,300 single-detached homes were built in Richmond between 1946 and 1961, this sample represents almost a third of the total stock of post-war housing in Richmond. All of the post-war neighbourhoods under study fall outside of the boundaries of two important growth management strategies: the
Agricultural Land Reserve (A.L.R.) and the Richmond Town Centre Plan (Figure 18).

The single-family residential land use zoning for these neighbourhoods is described in Section 202.1 of the zoning bylaw. Permissible land uses under R1 zoning include, "residential, limited to One-Family Dwelling; boarding & lodging, limited to two persons per dwelling unit; home occupation; agriculture; accessory uses, but excluding secondary suites (City of Richmond 1995: 35)." New development is limited to a maximum site coverage of 45% for buildings and 80% for buildings and any non-porous structures. As suburban lots are generally 50' by 120' (20m x 40m), the zoning permits single family homes as large as 5,000 square feet.
Figure 18: Field Study Sites, Richmond B.C.

Map Source: Surveys and Mapping, Dept. of Mines and Technical Surveys (1962) Vancouver South, B.C.

Field Study Sites
1 Broadmoor
2 Broadmoor North
3 Errington
4 Seafair
5 Shellmont

Urban Growth Management Strategies
- Agricultural Land Reserve (c. late 1980s)
- Expanded Town 'Centre' (late 1980s)
The field research demonstrates a significant level of redevelopment in three subdivisions. In three of the five neighbourhoods studied, approximately one-fifth of the post-war housing stock has been replaced in less than one decade. Table 4 summarizes the results of five field studies.

Table 4: Housing Redevelopment in Richmond’s Post-war Suburbs, 1994

<table>
<thead>
<tr>
<th>Properties Studied</th>
<th>Broadmoor North</th>
<th>Broadmoor</th>
<th>Errington</th>
<th>Seafair</th>
<th>Shellmont</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># for sale</td>
<td>403</td>
<td>478</td>
<td>382</td>
<td>622</td>
<td>425</td>
<td>2,310</td>
</tr>
<tr>
<td></td>
<td>15 (3.7%)</td>
<td>13 (2.7%)</td>
<td>11 (2.9%)</td>
<td>15 (2.4%)</td>
<td>5 (1.2%)</td>
<td>59 (2.6%)</td>
</tr>
<tr>
<td># Vacant Lots</td>
<td>3 (0.7%)</td>
<td>2 (0.4%)</td>
<td>3 (0.8%)</td>
<td>2 (0.3%)</td>
<td>0</td>
<td>10 (0.4%)</td>
</tr>
<tr>
<td># Redeveloped</td>
<td>70 (17.37%)</td>
<td>108 (22.6%)</td>
<td>78 (20.4%)</td>
<td>28 (4.5%)</td>
<td>32 (7.5%)</td>
<td>316 (13.7%)</td>
</tr>
</tbody>
</table>
Of 478 postwar dwellings studied, 108 (23%) had been demolished and rebuilt as megahomes; three (0.6%) were redeveloped with duplex dwellings; and two lots remain vacant after demolition. The neighbourhood is notable for its comprehensive system of alleys, a design feature dropped from most subdivision plans after the 1950s. The alleys provide alternate access to the properties and, as evident in the following chapter, they enable many different types of housing.
Figure 20: Suburban Redevelopment, Broadmoor North Subdivision

Map Source: City of Richmond Engineering Dept. SEC. 21-4-6

- **Areas of development not present in 1963 air photos**
- **Single-Detached Mega-Home Redevelopment**
- **Duplex Redevelopment (c. 1980s & 1990s)**
- **Empty Lot/Demolition**
- **Postwar Duplexes**
- **Local Shops/Services**
Figure 21: Suburban Redevelopment - Errington

Granville Ave.

Map Source: City of Richmond Engineering Dept. SEC 18-4-6

- Areas of development not present in 1963 air photos
- Single-Detached Mega-Home Redevelopment
- Duplex Redevelopment (c.1980s & 1990s)
- Empty Lot/Demolition
- Postwar Duplexes
- Local Shops/Services
Figure 22: Suburban Redevelopment, Shellmont Subdivision

Map Source: City of Richmond Engineering Dept., Sec 35-4-6

- Areas of development not present in 1963 air photos
- Single-Detached Mega-Home Redevelopment
- Duplex Redevelopment (c. 1980s & 1990s)
- Empty Lot/Demolition
- Postwar Duplexes
- Local Shops/Services
Land Values

Online municipal assessment data provides a glimpse at the timing and value of resale transactions for individual properties. Two streets were selected in each of the five subdivisions (Figure 23). The year and value of the "most recent sale" was recorded for each house on the street. In cases where no sales data were available, the property was excluded from the study. A sample of 354 transactions were collected. The nominal value of each transaction was converted to $1991 by applying the Consumer Price Index and the data was plotted on an x-y graph (Figure 24). It should be noted that computerized municipal assessment records do not track sales back to the original purchases. The sales transactions available are 'most recent sale' only and therefore do not reflect the number of times a specific house has been resold.
The housing sales plotted in Figure 24 document a wave of sales that began in the mid-1970s due in all likelihood to the entrance of the front end of the baby-boom cohort into the starter-home market. Older residents would have acquired the equity needed to move out of the subdivision and 'buy up' in more affluent neighbourhoods. There is an increase in housing sales after 1985. Of the 354 transactions examined, 281 (79%) took place after 1985. The frequency of the sales in the mid-1980s suggests a high turnover of residents. Through the early 1990s, the frequency of sales continues to be high but there is also a remarkable rise in the value of transactions. In 1992, sixty houses were sold at an average of $244K; a year later, seventy-five homes were sold at an average of $345K, an increase of 70%.

This pattern of sales correlates with the cycle of housing redevelopment documented in the five field studies. In the first phase of this cycle, speculative builders acquire 'tear-down' dwellings at low prices; Figure 24 shows a cluster of these
transactions in the late 1980s (a). The redevelopment cycle is completed after the dwellings are demolished and expensive megahomes are built in their place. The increasing frequency of high value sales are reflected in the cluster of transactions in the early 1990s (b).

Table 5 shows a breakdown of sales by year. In 1992 and 1993, there are enough transactions to infer some statistically significant comparisons. Between 1992 and 1993, the average and median selling price of a single detached house in the study areas increased by $100,000. The average purchase price for a home was approximately $400,000 in 1993. In 1991, the median household income for families in Richmond was $55,271 and at that level of income, a median family could negotiate a mortgage of approximately $150,000\textsuperscript{31}. This represents a significant change in the role of the subdivision as the original postwar-era houses were affordable, marketed primarily to young families.

Table 5: Housing Sales Analysis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>13</td>
<td>$133,034</td>
<td>$128,370</td>
<td>$1,596,407</td>
</tr>
<tr>
<td>1986</td>
<td>4</td>
<td>$120,949</td>
<td>$56,110</td>
<td>$241,897</td>
</tr>
<tr>
<td>1987</td>
<td>18</td>
<td>$140,408</td>
<td>$138,489</td>
<td>$2,527,338</td>
</tr>
<tr>
<td>1988</td>
<td>32</td>
<td>$161,243</td>
<td>$164,753</td>
<td>$4,837,287</td>
</tr>
<tr>
<td>1989</td>
<td>28</td>
<td>$260,870</td>
<td>$247,546</td>
<td>$7,304,355</td>
</tr>
<tr>
<td>1990</td>
<td>23</td>
<td>$211,195</td>
<td>$217,119</td>
<td>$4,223,905</td>
</tr>
<tr>
<td>1991</td>
<td>28</td>
<td>$233,543</td>
<td>$220,000</td>
<td>$6,539,196</td>
</tr>
<tr>
<td>1992</td>
<td>60</td>
<td>$288,096</td>
<td>$244,447</td>
<td>$16,997,654</td>
</tr>
<tr>
<td>1993</td>
<td>75</td>
<td>$398,949</td>
<td>$346,394</td>
<td>$29,522,227</td>
</tr>
</tbody>
</table>

\textsuperscript{31} Assuming that banks will lend up to three times a family's annual income.
Census Data

Census data are useful for identifying the socio-economic variables that could be at play in the redevelopment of postwar housing. The limitation of the data is that it is aggregate in nature and can therefore be used only to infer causality. The selection of a relevant geographic scale of analysis and a meaningful time period if the inference is to be strong. The appropriate geographic scale of analysis is the Census Enumeration Area which contains somewhere on the order of one-thousand people. Census Tracts, at one scale larger, would overlap considerably with areas outside of the boundaries of the field studies. 1981 data would be appropriate since the municipal housing assessment data presented earlier suggest that the redevelopment process began in the mid-1980s. Figure 25 shows the 1981 EA boundaries that best fit the field study neighbourhoods.
Table 6 shows that high levels of redevelopment are associated with neighbourhoods characterized by an older age and family cycle profile. In 1981, there were almost twice as many people over 55 in the subdivisions with high redevelopment than in those with low development. There was also a higher percentage of people over 55 relative to the demographics for the municipality as a whole. High-redevelopment subdivisions were also characterized by fewer families with children still living at home; there were proportionately more families with children at home in low redevelopment subdivisions and within the municipality. Two of the three high-redevelopment subdivisions contained more single-person households than the Low Redevelopment Suburbs.
Table 6: Population, Household and Family Characteristics, 1981 Census

<table>
<thead>
<tr>
<th>Enumeration Area</th>
<th>Richmond District Municipality</th>
<th>High Redevelopment</th>
<th>Low Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>--</td>
<td>208</td>
<td>103/104</td>
</tr>
<tr>
<td>% Redeveloped Houses in 1994</td>
<td>--</td>
<td>20.4</td>
<td>22.6</td>
</tr>
<tr>
<td>Population</td>
<td>96,154</td>
<td>1,051</td>
<td>1,766</td>
</tr>
<tr>
<td>% population over 55</td>
<td>16</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Households</td>
<td>32,330</td>
<td>340</td>
<td>615</td>
</tr>
<tr>
<td>% one-person households</td>
<td>15</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Average Persons / Household</td>
<td>2.95</td>
<td>3.07</td>
<td>2.85</td>
</tr>
<tr>
<td>Census Families</td>
<td>26,775</td>
<td>310</td>
<td>515</td>
</tr>
<tr>
<td>% husband and wife families with children at home</td>
<td>66</td>
<td>61</td>
<td>62</td>
</tr>
<tr>
<td>Lone Parent Families</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

Houses in high redevelopment subdivisions are older. The percentage of houses built before 1946 and between 1946-1960 is higher in HR subdivisions relative to LR subdivisions; conversely, there are fewer dwellings built in the period 1961-1970 (Figure 26). In addition, significantly more dwellings are in rental tenure in the HR subdivisions.

Figure 26: Selected Dwelling Characteristics, 1981
1991 data are available but the shifting boundaries of Enumeration Areas make any sort of longitudinal study of socio-economic change impossible. For the purposes of this study, the data are aggregated for subdivisions with High Redevelopment and those with “Low Redevelopment”. More than one-fifth of the dwellings in subdivisions identified as “High Redevelopment” (HR) have been built in the period 1981 to 1991 (Table 7). Subdivisions identified as “Low Redevelopment” (LR) have a much higher percentage of housing built in the period 1961-1970. This suggests that the HR subdivisions were comprised of a slightly older stock of housing with less infill from later decades.

Table 7: Housing by Period of Construction, 1991 Census Data

<table>
<thead>
<tr>
<th>Total Occupied Dwellings</th>
<th>High Redevelopment</th>
<th>Low Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1946</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>1946 - 1960</td>
<td>40%</td>
<td>45%</td>
</tr>
<tr>
<td>1961 - 1970</td>
<td>26%</td>
<td>45%</td>
</tr>
<tr>
<td>1971 - 1980</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>1981 - 1985</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>1986 - 1991</td>
<td>12%</td>
<td>0%</td>
</tr>
</tbody>
</table>

As expected, there has been a significant turnover in the population of HR subdivisions relative to LR neighbourhoods: 60% of the population of subdivisions with high levels of redevelopment have moved there within the last five years (Table 8).

Table 8: Mobility Status

<table>
<thead>
<tr>
<th>Total population 5 years and over</th>
<th>High Redevelopment</th>
<th>Low Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-movers, five year mobility status</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Movers, five year mobility status</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>
The field studies, housing sales data and the census data allow some conclusions on the process. On one hand, there is a large movement of people out of the subdivisions. Older families and households are leaving. Market demand for new megahomes appears to be driven by housing and community demands of recent immigrants to Canada, particularly those from Hong Kong and Taiwan. Popular imagery paints suburbanization as a phenomenon driven by the housing and community demands of a predominantly Anglo-Saxon, middle-class population. However, a closer examination of the process in turn-of-the-century Canada suggests that many groups have participated in the development of suburbs ever since new transportation technology enabled workers to live away from their urban jobs (Harris 1990, 1992; Holdsworth 1991).

That immigrants are implicated in the adaptation of suburbs should come as no surprise to geographers. Immigrants have adapted the neighbourhoods they adopt. Take for example Strathcona, an urbanized suburb in Vancouver which has been reshaped by a succession of Slavic, Italian, and Chinese immigrants. The landscape that remains reveals the successive layers of change. An orthodox church here, a Buddhist temple there, and in between, hundreds of turn-of-the-century gingerbread houses built by the first British immigrants to Vancouver. The role of immigrants as a shaping force in the city occupied a central place in the work of Chicago School social theorists in the 1920s.

The significant difference is the level of their affluence - many have come from Hong Kong and Taiwan, places where expanding economies and low taxes have allowed many to accumulate wealth. In the case of Richmond, ethnic Chinese from Hong Kong and Taiwan are redeveloping postwar houses that have not yet reached
obsolescence. In doing so, they are reinterpreting the North American Dream, enlarging it to new proportions. Ley (1995) and Majury (1994) both find that new immigrants from Hong Kong and Taiwan have been key purchasers of megahomes in Kerrisdale, an affluent suburb within the City of Vancouver. The housing and landscape tastes of these new immigrants has been the source of friction with existing residents who value the old aesthetic of the leafy suburbs.

It appears that while the same redevelopment process has taken place in Richmond, it has transpired without the same amount of media attention and controversy. Ray et al (1997: 83) assert that megahome redevelopment has been accompanied by racial tensions: “What is being debated in Richmond is the question of cultural diversity, although it is most frequently articulated in terms of material conditions such as housing, landscaping and streetscape”. However, while residents are certainly affected by magnitude of redevelopment the study authors do not have sufficient evidence to support the charge of racism.

Richmond has been a popular location for Hong Kong and Taiwanese immigrants and investors because of existing family connections, access to Chinese stores and services and a favourable investment climate. International migration to Richmond more than doubled, in the mid 1990s, growing from just over 1,000 people per year in 1991 to 2,355 per year in 1994 (Farrow 1995). During this period, Hong Kong was consistently the largest source country for new immigrants. In 1994 Hong Kong accounted for 46% of all immigrants to Richmond. Other major source countries included the Philippines, Taiwan and China. 61% of immigrants have entered Canada under the family class designation and 13% have entered as entrepreneurs, investors or self employed residents (Ibid.).
As a result of the increases in immigrants from the Asia Pacific region, the municipality of Richmond has seen positive economic benefits. Richmond businesses have created strong economic ties, trade relationships and investment opportunities with established and emerging Asia Pacific nations. Recent immigrants tend to be well educated and relatively young.

2 CONCLUSION

Since 1986, Richmond has 'protected' single family neighbourhoods from change by maintaining forty year old zoning by-laws that freeze them in their current use. However, this research demonstrates that these landscapes are anything but static. Within the past decade, forces internal and external, and arguably international, have driven enormous social and physical changes in Richmond's postwar subdivisions. The field studies document the demolition of 326 of 2310 postwar dwellings within the last decade. This is almost the equivalent of an entire quartersection of residential land - fully-serviced with hydro, sewer and water trunks, roads, schools, local shops and services - that has been added to the overall supply of developable land in the Municipality. If the city had chosen some form of mixed use, residential redevelopment could have incorporated some purpose-built multiple unit dwellings. Three purpose-designed, 1200 square-foot dwellings could easily be built within the envelope of space occupied by one 4,000 square foot megahome. These units would be approximately the same size as the first generation of suburban ranch
houses.

Yet few people have questioned the 'fit' of the new development relative to current and future housing and community needs. Aside from the explicit commitment not to allow change in single family neighbourhoods, has the housing redevelopment met the broader goals listed in the 1986 Official Community Plan? The development does not maximize the use of developable land within areas of existing development. There are a variety of higher density housing options including duplexes, townhomes, and accessory suites that would make better use of this land. Aesthetically, there would be little difference between megahomes and these higher density forms of housing. A duplex or triplex could be contained within the same building envelope that a megahome occupies.

Further, the research in the Errington neighbourhood demonstrates the feasibility of Pradunck's theoretical retrofit of the street system. An overlay of the upzoned properties and the redeveloped lots reveals many opportunities to create new connections that could make walking or cycling more attractive mobility options in the postwar suburbs. Much of the southern portion of the subdivision is newer infill development dating to the 1970s; this area has fewer redeveloped houses and therefore less potential for street retrofitting until the next cycle of redevelopment. Ultimately, this proposal is a viable solution in search of a process, citizen consensus, and political will.
The redevelopment documented does little to improve neighbourhood livability. The insular structure of the subdivision inhibits all mobility options other than the private automobile. The development does nothing to create affordable housing. Is the development of megahomes costing between $500,000 to $1,000,000 appropriate in a municipality where the median family income is $55,271? The development does little to conserve the natural environment. While the reinvestment in aging landscapes keeps them viable in the short term, megahomes will likely become the white elephants of the next two decades. Had other forms of housing been possible, the neighbourhood could have a larger tax base to bear the costs of local improvements and amenities.
3 / Adapting Suburbs: lessons from Vancouver’s streetcar suburbs

The evolution of Vancouver’s century-old streetcar suburbs can inform the retrofit of Richmond’s postwar landscape. An early period of housing conversion and infill began before the introduction of modern land use planning in the late 1920s. A second cycle, shaped by the land-use decisions of an expert planning bureaucracy through the 1950s and 1960s, resulted in the demolition of houses and their replacement with low-rise apartments. The values of citizens took a distinctly second place to formulaic zoning bylaws that prescribed technical standards such as building height limits, setbacks, and site coverage. The most recent phase of change was sparked in the 1970s by new housing and community demands; by new civic leadership; and, significantly, by a departure from prescriptive zoning to a discretionary form of land-use regulation.

The last period of neighbourhood housing adaptation and redevelopment is of particular relevance to the retrofit of Richmond’s postwar suburbs. Examples of the ‘best practice’ in the redevelopment of Vancouver’s streetcar suburbs can be used to advantage in Richmond as well as in other suburban municipalities facing similar redevelopment prospects. In this chapter, I present the development of Vancouver’s streetcar suburbs and their evolution to the contemporary period. Field studies conducted in Kitsilano and Mount Pleasant in 1994 document the form and pattern of redevelopment that took place after the city implemented a discretionary zoning policy in the early 1970s. Finally, the wider impact of this housing redevelopment is examined in light of the growth pressures that will soon affect other single-family neighbourhoods within Vancouver and its region.
3.1 Suburban Development in Vancouver, c.1890-1927

Vancouver is a remarkably suburban city because its development coincided with the introduction of streetcar technology in the late 1880s. Four years after the city's 1886 incorporation, the Vancouver Electric Street Railway Co. opened two streetcar lines to service the emerging downtown core (*The Buzzer* 1955). The extension of new lines south of False Creek opened up large areas of land for development and eventually resulted in a "first ring" of streetcar suburbs within five kilometres of the city's core (Figure 28). Market forces, corporate strategy and municipal investment decisions defined the character of each neighbourhood. Development began first on the Burrard peninsula where the Canadian Pacific Railway (CPR) invested heavily to position its property as Vancouver's well-ordered commercial and residential centre. From there, a more varied pattern of development proceeded in a clockwise fashion around False Creek.

Figure 28: First Ring Suburbs, c. 1909

Streetcar Construction by Period: 1889 - 1899 25.8 Km of new streetcar lines
1900 - 1909 59.5 Km of new streetcar lines

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32 Adapted from Hardwick (1974: 104).
The CPR was granted substantial acreage in Vancouver in return for extending its rail line from Port Moody, and the heavily capitalized company was able to bring its landholdings to market in a carefully controlled succession. CPR management anchored the company's waterfront property with an elegant rail station around which many business and government offices were built. To the west, on higher ground, residential property was methodically brought to market after CPR engineers constructed a grid of paved streets and installed electrical lines, sewers and concrete sidewalks (Gibson 1971: 78). The high price of the “West End” property generally limited the purchase of lots to the business owners, managers, and professionals who could afford to build substantial houses.

In contrast, local landowners brought their property to market rapidly with significantly less investment. In Strathcona, located to the east of the CPR’s townsite and south of the docks and warehouses on Burrard Inlet, speculators subdivided land into 25’ and 33’ lots serviced by little more than rudimentary roads and wood-plank sidewalks (Hardwick 1974: 5). Much of the property was purchased by British labourers who were especially loathe to replicate the crowded urban landscapes of industrial Britain (Holdsworth 1981). Craftsmen drew on the supply of inexpensive lumber from nearby mills to build tracts of modest wood-frame detached houses; less-skilled owner-builders had the option of purchasing prefabricated cottage kits (Ibid.).

The first extension of streetcar lines south of False Creek in 1891 enabled residential settlement in the Mount Pleasant district. Early settlers built spacious wood-frame houses on lots 50’ and 60’ wide by 120’ deep. The area held some early promise as a fashionable uptown, however the encroachment of industrial land uses and a recession in the mid-1890s slowed the growth of the Mount Pleasant neighbourhood.
Many undeveloped lots were subdivided into smaller properties to allow families of more modest means to build-out the remaining land (MacDonald 1977: 29). The outcome of such development was a neighbourhood with “block after block of closely packed houses on small lots, a mix of residential and industrial uses, and a large proportion of new Canadians” (Ibid.).

The city was increasingly called upon to extend urban infrastructure and services to new neighbourhoods (Bottomley 1971: 21). In Fairview, landowners petitioned City Council for the funds required to build roads, sewers, sidewalks and local parks after the streetcar made settlement there possible (Gibson 1971: 82). The westward expansion of the streetcar lines reached Kitsilano by 1904, and residential property was literally logged out of the area’s dense second-growth forest. Following the pattern established by the CPR, land developers preinstalled neighbourhood infrastructure before land was subdivided into 50’, 60’ and 66’ building lots.

Fire insurance maps for a sample block in Kitsilano and Mount Pleasant provide an overview of the timing and pattern of early suburban development (Figure 29). In 1912, many lots remained unsettled in both neighbourhoods. The houses indicated on the maps show some variation in size and placement, particularly in Mount Pleasant. By 1927, all of the Kitsilano properties were built out with single-detached houses. In contrast, more than a third of the Mount Pleasant lots remained empty. The 1927 illustration of the Mount Pleasant block is also interesting because it shows that there was demand for a wider range of housing. For example, a two-and-half storey house was converted into a duplex between 1912 and 1927 (see a). A corner lot in the same block has also been developed with two separate one-storey dwellings, one with street access and the other with access from the lane (see b). These adaptations are
significant because, as will be shown later, they established precedents that were echoed in contemporary forms of redevelopment.

Some basic conclusions can be drawn from this review of the early development of Vancouver's streetcar suburbs. In the absence of formal land-use planning, the streetcar lines and the regular grid of streets that flanked them provided the basic organizing logic for the new suburbs. Single-detached dwellings were the most common type of housing, and the rapid expansion of residential neighbourhoods was attended by financial and administrative strains for the city. By the 1920s, a number of adaptations were evident as people adjusted their housing to meet changing social and economic conditions. Some homeowners converted single-detached houses to duplex use, while others simply added another dwelling to their lot. Around this framework of residential dwellings and the streetcar lines, a rather complex landscape began to evolve. Nodes of commercial land uses developed around the intersection of streetcar lines as people started small businesses from their homes. Typically the ground floor would be given over to business uses while the proprietors would live in or rent the second floor.
Figure 29: Development Patterns in Kitsilano and Mount Pleasant

Kitsilano

1912

1927

1955

Legend

Housing stock by period of construction:

- Pre 1912
- 1912-1927
- 1927-1955

Number of floors

Dwelling 'Footprint'

Garage

3.2 Zoning c.1927

After twenty-five years of suburban expansion, there emerged calls for more control in urban development, focused particularly on the control of noxious land uses and the efficient use of the City's tax dollars. Thomas Adams, the first president of the Town Planning Institute of Great Britain, suggested in 1914 that Vancouver required a comprehensive plan and recommended that the City begin mapping and survey exercises to,

suggest a comprehensive scheme showing the best lines for main arterial roads, desirable railway and harbour improvements, suitable industrial areas and general provisions for convenience, amenity and proper sanitation (Wynn 1992: 122).

By 1916, Vancouver businessmen formed a Civic Improvement League and a civic bureau at the Board of Trade to lobby for planning legislation (Ibid.). The provincial government granted municipal councils the power to limit land uses and regulate noxious industrial land use in the early 1920s, and the Town Planning Act passed final reading in the provincial legislature in 1925 (ibid.).

By August, 1926, the City Council formed a city planning commission and hired Harland Bartholomew and Associates, a leading planning firm from St. Louis Missouri, to develop Vancouver's first comprehensive city plan. Unlike the organic development of older neighbourhoods, new development in the suburban fringe would be controlled by zoning bylaws that prescribed acceptable uses of land and set technical standards for new housing, roads, and community infrastructure (Bottomley 1971: ii). Under the rubric of rational management, 'expert' planners and civic bureaucrats assumed regulatory control of new urban development, where such direction was once the product of self-organization and public debate (Hardwick 1974: 33).
Harland Bartholomew was clearly an advocate of the 'North American Dream'. In the 1928 City Plan, he remarks, "the consensus of all authorities was that the one family home was the best form of housing for all Vancouverites" (Bartholomew 1928: 26). He perceived multiple unit dwellings as a distinctly second class option, and he maintained that lower income families could share in the dream by building single detached houses "differing only in size" from those in wealthier neighbourhoods (Ibid.).

Bartholomew devised a master plan for the city founded upon a core-focused concentric ring model of the city (Figure 30). Within this model, the first ring of streetcar suburbs was envisioned as an area of transition, a buffer between the urban core and its associated ring of industrial land around False Creek, and the new suburban fringe beyond the older streetcar suburbs. Bartholomew reasoned that the land south of 16th Avenue could accommodate future demand for single-detached housing provided it was serviced with an extensive traffic circulation system. He recommended that Point Grey and South Vancouver be amalgamated with the City of Vancouver so that the growing city would have enough room to accommodate a million residents (Bartholomew 1928: 234). City Council accepted all of Bartholomew's recommendations before the City Plan was officially adopted in 1932.
Figure 30: Bartholomew’s Rough Land Use Plan, c. 1927


Figure 31 shows in finer detail the zoning Bartholomew recommended for the first ring of suburbs. Immediately south of the industrial False Creek lands are areas zoned for three-storey multiple dwellings (RM-3) and south of these areas are two-family dwelling districts (RT-2), a designation which encompassed single-detached and duplex dwellings as well as those converted into apartments and rooming houses.
3.3 Conversion

The housing stock in the first-ring suburbs was significantly adapted during the Great Depression, which struck less than two years after the ink had dried on Bartholomew’s City Plan recommendations. Many families doubled up, took in boarders or converted dwellings to rental apartments. The exigencies of the Second World War also created a situation where zoning was superseded by federal legislation. The Wartime Bill 200 (1941) give property owners the right to create accessory suites to meet the pressing housing shortages (McKee 1963: 5). Between 1931 and 1941, there was a 71 per cent increase in the number of multiple-unit dwellings in the City of
Vancouver while the number of single detached homes grew by only 6 per cent (Table 9).

| Table 9: Housing Growth by Type, Vancouver 1931 - 1941 |
|-----------------------------------------------|--------------|--------------|--------------|
| Number of dwellings                          | 1931         | 1941         | % Increase   |
| Single detached                              | 60 530       | 71 116       | 17.5%        |
| Multiple-Unit Dwellings                      | 50 230       | 53 479       | 6%           |
| Semi Detached                                | 10 300       | 17 637       | 71%          |
| Apartments, Flats & Row Housing              | 867          | 1 706        | 97%          |
|                                               | 9 433         | 15 361       | 63%          |

3.4 Urban Renewal and Rezoning, c.1955

The implementation of Bartholomew’s plan resumed after the conclusion of World War II. By this time, the first ring of streetcar suburbs was more than fifty years old and in many areas there was a large stock of converted housing that required repairs. The planning department treated such decay like an urban pathology. Following a prescription that had become common in cities across North America, city planners advocated a policy of slum clearance and urban renewal. The process began in 1954 with little public consultation. The first area to be razed was a tract of land in Kitsilano around Burrard St. and 4th Avenue, an area that was zoned for light industry in Bartholomew’s 1928 plan (Hardwick 1974). The area was home to many Sikh mill-workers and their families, but because they lacked a political voice at the civic level, the demolition proceeded and the entire community was dislocated.

Strathcona was the next focal point for urban redevelopment schemes. City Council confiscated McLean Park for the first phase of public housing and expropriated

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34 Source: Census of Canada (1931) Volume 5, Table 64; Census of Canada (1941) Vol. 1, Table 101.
an entire tract of older homes to create its replacement. Some of the low-rent apartment houses were replaced with social housing in modernist low-rises and towers in the Raymuir public housing complex on the east side of the Strathcona neighbourhood. However, the form and location of the housing units reflected more the vision and values of the bureaucracy than the desires of the community. In contrast to the quiet dislocation of the Sikh community, the Chinese community organized a stronger form of resistance. Residents formed The Strathcona Property Owners and Tenants Association (SPOTA) to resist ad hoc decisions of the planning department and council of the day. 

In other parts of the first-ring suburbs, City Council employed rezoning to stimulate a market-driven form of urban renewal. The incremental redevelopment of Vancouver’s West End, a process that began as early as 1910, was invariably a guiding factor in the 1955 decision to expand RM-3 zoning into RT-2 areas of Kitsilano, Fairview and Mount Pleasant. The ‘as-of-right’ floor to space ratio (FSR) was set at one, meaning that a developer could build one square foot of livable space for every square foot of the building lot. The FSR rose to a maximum of 1.8 if the building design incorporated increased setbacks and amenities such as balconies and underground parking. On a large site, the result of the technical guidelines could be a six to twelve-storey apartment tower. The new buildings dwarfed the 2 ½ storey houses that characterized much of the housing stock in Kitsilano and Mount Pleasant.

While these building standards worked well for the West End neighbourhood surrounded by beaches, shops and commercial districts, in the first-ring suburbs, they

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35 Darlene Marzari, a social worker and community activist (who became the Provincial Minister of Municipal Affairs in the 1990s), took lessons from inner-city activism in the United States to organise an
formed the recipe for a monotonous landscape of boxy apartments. Homeowner and tenant associations protested the encroachment of high-rises however the City Council and the City planning bureaucracy remained unresponsive. Their consultative model of urban planning addressed basic standards for development established in Harland Bartholomew’s 1928 City Plan. Planners were more concerned with administering the city to maintain continuity of standards that were largely technical and quantitative in nature. The problem was that no one had questioned the definition of success for 35 years. The public had moved to another set of benchmarks that reflected new concerns for the livability of a rapidly growing city. The rapid transformation that was taking place in Vancouver called for more participatory models of directing and planning urban growth.

The heavy-handed nature of city planning together with the weak leadership of the City Council created a political crisis for the civic NPA government. The last straw was perhaps was the council’s decision to use urban redevelopment funds to implement the next phase of Bartholomew’s transportation plan: a freeway through the city. With the backing of technical planning staff, the NPA council approved plans for a freeway route that would have destroyed much of the ethnic Chinese neighbourhood of Strathcona (Ley 1980: 247). Their decision to proceed with the freeway put “plans before people, efficiency before equity, and economic costs before social costs” (Ley 1980: 147). Opposition against the freeway and its impact on inner-city neighbourhoods galvanized community opposition to the corporatist city council.

In 1968, only months after the freeway plans were made public, the Electors’ Action Movement (TEAM) was founded as a politically based resistance to the flawed articulate indigenous civic leadership in Strathcona.
vision of the council of the day (Ley 1980: 147). TEAM, according to one of its founders, was a civic reform party that was committed to political leadership; specifically they promised to “wrest direction of civic affairs away from the bureaucracy” and put in place a ‘representative council that was prepared to draw advice from both the professionals and the public, and to transform it into plans and policies’ (Hardwick & Hardwick 1974: 93).

3.5 New Planning

The next phase of adaptation that reshaped Vancouver's first-ring can only be explained within the broader context of the political, socio-economic and environmental change that transformed the City of Vancouver in the 1970s. Civic activism, new political leadership, and new planning processes, together with market forces sparked a chain reaction of urban redevelopment in Vancouver’s urban core and its first-ring suburbs. Two of the eleven councillors elected to civic office in the 1968 election were members of TEAM. The freeway plans were canceled and the City Council began an iterative public process to identify citizens’ most pressing concerns. Gerald Davis the principal of The Environment Analysis Group (TEAG) was hired to complete in-depth interviews with citizens and with experts within the urban bureaucracy.

One of the first decisions of Art Phillips, the new mayor was to seek out a new director of planning to lead new initiatives in the management of the city’s growth. In 1974 they hired Ray Spaxman from the planning department at the City of Toronto. Spaxman’s talent was in brokering the interests of citizens, planners and the political leadership. This completed the last component of a functional triumvirate between the civic electorate, politicians and the planning bureaucracy. In Planning in a Human Way,
Harry Lash (1976) describes the planning zeitgeist that was developing in Vancouver in the early 1970s. He asserts that a fundamental shift had taken place, that citizens were becoming wary of the decisions of politicians and expert planners who had been left for decades to protect the public good. Citizens demanded change and a place at the planning table. Lash describes the six-sided triangle that is formed by a participatory planning system (Figure 32).

![Diagram of Participatory Planning](image)

Figure 32: Participatory Planning

A study conducted by the Vancouver Planning Department shortly after the 1968 civic election identified Kitsilano, Mount Pleasant and South Granville as areas under development pressure. The study authors concluded that the 1955 RM-3 rezoning had stimulated a significant divestment in the stock of older conversion dwellings that had provided much of the affordable housing in Vancouver. Conversion suites located in neighbourhoods that were rezoned for apartments were not being repaired; owners were simply waiting for offers on their land (City of Vancouver: 1969: 4). The study authors concluded that neighbourhoods with converted dwellings should be preserved and enhanced since there remained a "considerable potential for further conversion of suitable, large, old-style single-family dwellings" (City of Vancouver 1969: 15).
One of Spaxman's first tasks was to implement two federal housing programs that were significant catalysts in the maintenance of the housing stock and subsequent redevelopment of housing in Vancouver's First Ring suburbs. In the early 1970s, the federal government stopped funding urban renewal schemes and instead shifted its focus and planning into rehabilitation projects in order to maintain a proactive role in urban development. The first program administered by the CMHC was the Residential Rehabilitation Assistance Program (RRAP). It offered grants to landlords and homeowners who would have not been able to afford structural repairs that would extend the life of the older housing stock. RRAP funding for Vancouver for the years 1974 to 1982 exceeded $8 million (City of Vancouver 1985: 11).

The success of RRAP led to the creation of the Neighbourhood Improvement Program (NIP) which provided matching funds for the upgrading of community infrastructure and city owned housing. Administered under CMHC, the City shared 25% of the program costs. Vancouver received in total $18,182,700 in NIP funds (CMHC 1979: 2). The selection of recipient communities was based on a comprehensive review and analysis of neighbourhood opportunities and deficiencies (City of Vancouver 1985: 2). In June 1974 the council appointed a Citizens’ NIP / Local Area Plan panel and one month later the group and the planning department produced an information handbook detailing the physical components of the neighbourhood, the people who lived and worked there including statistical information on trends and patterns (City of Vancouver 1985: 10). By August 1974, the "Kitsilano Goals" program was initiated to “determine the type of community wanted by the residents (Ibid.)." Public meetings were held to gather ideas and prioritize the use of funds. In November 1974, Vancouver City Council together with the CMHC and the Province released $2.7 million in neighbourhood
improvement funds for Kitsilano and Mount Pleasant (*Province* 8 Nov. 1974: 8).

A review of the program indicated that the impact on the first ring of suburbs was significant on two levels: first, the injection of government money extended the useful life of many buildings and made it economically feasible to retain a significant portion of the rental housing stock.; second, the programs gave a new focus to planning issues in the communities (CMHC 1979). Public investment required some consensus on neighbourhood issues. Political representatives sought professional and public input on where to allocate the funds and they created a participatory planning process within a short timeframe. There was closure in the process and the result was a more livable built environment (CMHC 1979).

**Granville Island & Fairview Slopes**

In the early 1970s, the City Council also turned its attention to the retrofit of Granville Island and the South Shore of False Creek. A series of studies conducted by students in the UBC Department of Geography and the UBC School of Architecture indicated that the land was underused given its central place in the city (Hardwick 1994: 346). The process for the redevelopment of these adjacent sites was built on the same principles of open, participatory planning that characterized the NIP process. The approach was distinctly experimental. The City, as the main developer, experimented with new forms of housing, new forms of tenure, and a new pattern of development that was based on principles of mixed-use, compact, iterative, integrated growth - all things that were later incorporated in the redevelopment of Vancouver's first-ring suburbs.

In the spirit of participatory planning, Vancouver City Council sought public input on the future of the site and hired architect-consultant Stanley King to initiate a co-design process which permitted people to take an active role in reshaping their
environments. In *Co-Design: A Process of Design Participation* (1991), King explains that architects normally confer with the client to discuss their needs, dreams and means. "The dialogue" states King, "sets out design criteria against which the qualities and limitations of the site can be examined, cost priorities measured, and then the completed design judged (King 1991: 5)." King’s great talent was to use trained artists to facilitate small group design meetings with ordinary citizens. The drawings are used to focus discussion on the place and experience people seek. Participants consider light, space, movement, mood, and perception through all of the senses. The group spends time spent on the site, experiencing it in order to note its qualities. The designs that emerged from the Codesign workshops shaped the evolution of the private and public space for the entire project.

Another design innovation used in the retrofit of Granville Island was the use of Pattern Language, a method of urban design which was developed by Christopher Alexander at the Berkeley School of Architecture in the 1960s (Alexander 1968, 1977, 1987). Ron Walkey, a student of Alexander’s led the Granville Island design team. The focus of Pattern Language design was an iterative, incremental style of urban design that focused on the human scale and experience. It allowed the design of reasonably high-density settlement with amenities, defensible space and places with which people could establish a strong sense of affiliation.

In contrast to the standards used to develop neighbourhoods tabula rasa, the retrofit of older sites required a flexible approach and new standards to knit new development with the older landscape. Alexander’s Pattern Language worked well for the project because it was iterative and focused on the organic development of the built environment with regard to the specific context of the site. The successful application of
Pattern Language suggests that principles of design can be applied to encourage incremental redevelopment at greater densities in a form that respects the local context. The redevelopment of Granville Island and South False Creek triggered new investment in the adjoining neighbourhood of Fairview. Ray Spaxman's mandate was to shape redevelopment and housing infill in the Fairview Slopes neighbourhood. Specifically, his department developed design-based guidelines which promoted the best use of the unique features of each building site to maximize amenities and views. Much of the Fairview area like Strathcona had been zoned for tenement housing, warehouses and light manufacturing. There was little market demand for any sort of housing there in the late 1970s. However, the redevelopment of Granville Island and False Creek changed the local land economy and created new possibilities for settlement in Fairview Slopes. The simultaneous introduction of strata-title legislation in 1974 enabled the creation of condominium apartments. Much of the Fairview Slopes area was rezoned for comprehensive redevelopment.

3.5 Discretionary Zoning, c.1978

The market success of Pattern Language, participatory design, and strata-title ownership worked their way into a new type of zoning for Kitsilano and Mount Pleasant. Ray Spaxman asserts that Vancouverites were "following a theme prevalent throughout North America" when they called for reforms in the City's planning process (Spaxman & Whiting 1981: 385). He states, "a new awareness was emerging which led to the refusal to accept freeways in the City, the development of care for our heritage, a growing awareness of the frailty of the environment, the rejection of wholesale urban renewal (Ibid.)."
In *Eight Years After: case studies in discretionary zoning*, French (1981: 1) notes that, "Architects complained that rigid zoning bylaws which used mathematical formulae to set building envelopes hampered creativity, and made it impossible for them to respond to the special features of the site or neighbourhood." Vancouver City Council approved a Discretionary Zoning code which replaced traditional ‘rigid’ zoning codes “with a mixture of fixed controls and flexible guidelines” (French 1981: 2). Discretionary zoning was developed for the Downtown Peninsula and False Creek, Central Broadway, Kitsilano, Fairview Slopes, and Granview-Woodlands.

The primary objective of the new Discretionary Planning was to maintain housing while also allowing redevelopment that fit the complex character of the neighbourhoods. The approach was to negotiate design guidelines that helped to preserve site-specific amenities such as sunlight, views, privacy, topography, and trees. An open consultative process was developed to ‘ensure fairness and balance’ in the development application process. Previously, the only way most citizens discovered new building plans was when the hoardings were constructed. Spaxman introduced changes such as mandatory 4’ by 8’ billboards that were placed on sites whenever a building permit application was made. Development proposals were then vetted in a public meeting of the Development Permit Board. There, the Director of Planning, the Director of Social Planning, and the City Engineer made their decisions after they considered the opinions of a non-voting advisory panel comprised of members of the public, design professionals, and developers.

**Kitsilano and Mount Pleasant**

Discretionary zoning guidelines for Vancouver’s first-ring suburbs are described
in *Kitsilano RT-7 and RT-8 Guidelines* (City of Vancouver 1994). The intent of the guidelines is to:

(a) encourage the retention and renovation of existing buildings, ensuring they maintain an architectural style and form consistent with their original character; (b) ensure that new development is compatible with the traditional character of the surrounding street and area; (c) ensure neighbourliness; (d) maintain high quality design; and (e) maintain a range of choice of housing (Ibid.: 1).

New development was encouraged to follow the aesthetics of the original community. The guidelines describe traditional siting, building massing, porches, windows, and entrances, materials, and detailing but they were designed to be flexible: "While key aspects of the historical Kitsilano building character should be reflected, historical reproduction is not the objective (City of Vancouver 1994: 35).

A number of people pioneered the redevelopment of houses in decaying areas of Kitsilano and Mount Pleasant. The Davis family bought and restored a heritage home at 166 W. 10th Ave. for $30,000 in 1973 when the area was “full of bikers, drug addicts, and total undesirables” (*Province* 23 June 1990: 16). By 1977, they had purchased homes at 140, 144, 148 and 150 W. 10th Ave. when all of the homes went up for sale as a complete land assembly (Ibid.). By 1988, the city implemented RT-6 zoning in the area bounded by Cambie and Ontario Streets and between 10th and 15th Avenues (Ibid.).

The most common type of adaptation has been the conversion of houses into duplexes, triplexes, and ‘quads’. The City allowed landowners to subdivide large lots to enable the development a second dwelling in the rear of the property in return for the preservation of older homes. Figure 33 shows the strata title division of a typical Kitsilano building lot. Each unit is allocated a plot of related property and a shared strip
of limited common property.

**Figure 33: Strata Title Subdivision and Coach House Infill**

<table>
<thead>
<tr>
<th>Original Property: 1955 West 14th</th>
</tr>
</thead>
<tbody>
<tr>
<td>38,079 M</td>
</tr>
<tr>
<td>House</td>
</tr>
<tr>
<td>15.240 M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 Units Created by Division: 1951, 1955, and 1959 West 14th</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955 W14th Ave</td>
</tr>
<tr>
<td>1951 W14th Ave</td>
</tr>
<tr>
<td>1959 W14th Ave</td>
</tr>
</tbody>
</table>

- **SL 1 Main Floor**
- **SL 2 Second Floor**
- **SL 3 Coach House**

Source: G.V.R.D. Land Titles: *Strata Plan LMS 972*

The billboard advertizing suites for sale at a converted property at 1825 West 11th Avenue illustrate the size and amenities of the new units. The original dwelling functioned as a single-family owner-occupied house from 1951 to 1991 but the redevelopment of this one-family dwelling resulted in the creation of four strata-title 'townhomes'. In total, the new development offers 4,652 square feet of living space, all contained within the building envelope of one large house. Each unit features ground access (important for families with children) and each is over 1,000 square feet in size with two bedrooms and two bathrooms. The style of the dwellings remains consistent with the architectural vernacular of the surrounding homes. The selling price of the new townhomes ranged from $300,000 to $365,000, reflecting the exceptional design and
location, the high cost of land, and the increased expense of constructing a new dwelling under strict design guidelines\(^\text{36}\). Though competitive with high quality condominium units within the city, the new townhomes are by no means cheap.

Figure 34 through Figure 36 show a house that has been strata titled for multiple use; the property has also been developed with an infill coach house. Evident in the picture, the entire structure is undergoing extensive renovation. The basement has been raised to create more living space. The overall finish of the completed project reflects the architectural context of the Kitsilano neighbourhood.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure34.png}
\caption{Retrofitting Housing, 1956 West 14th (Front)}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure35.png}
\caption{Mid-Block Infill Cottage (from the rear alley), 1956 West 14th}
\end{figure}

\(^{36}\) Personal Communication with Junn del Rosario, property agent for Ross Developments/GH Streets Ltd.
Some types of lots offer better opportunities for infill. Corner lots with rear lane access enable the development of substantial infill coach houses without intruding on neighbouring properties. Figure 37 shows a Kitsilano infill coach house was featured in the December 1990 issue of *Western Living* (Rule & Godley 1990). The Roggemans family’s decision to subdivide their 50-foot corner lot at Cypress St. and 13th Ave. was economic. They wanted to build and sell a coach house on half of their property. Paul Merrick, a noted Vancouver architect, designed the cottage so that it did not compete with the 1930s-era main house, and he finished it with ‘craftsman touches’ so it blended in with the existing neighbourhood vernacular (Figure 37). When the 1600 square-foot coach house was finished, the Roggemans decided that they preferred it to the 2700 square-foot main house and they moved in with their three teenage children. Seven years later, the Roggemans are still living in the cottage and their children are all in
college; the family that moved into the original house now has three children\textsuperscript{37}.

Figure 37: Infill Cottage on Cypress St., Kitsilano

Redevelopment in the first-ring suburbs has not been accomplished without some debate and controversy. Infill development and housing adaptation raises issues for neighbouring properties including of view obstruction, shadow effects, and the loss of privacy (Appelbe 1997). Some people respond to the idea of density with an apprehension that it is universally disliked. Some asserted that discretionary zoning would create a "privileged ghetto" for upper middle-class professionals who can afford to purchase and redevelop heritage houses (\textit{Sun} 12 April 1985: A5).

\textsuperscript{37} Laurie Roggeman, Personal Communication.
3.6 Case Studies

Studies were undertaken in 1994 in areas of Kitsilano and Mount Pleasant that had been subject to discretionary zoning (Figure 38). Of interest was the form and patterns of housing adaptation and redevelopment stimulated by discretionary zoning.

Vancouver City Directories list residential units and they are a useful source of information for compiling a historical record of housing change. Directories dated 1961, 1971, 1981, and 1991 were reviewed to document, street by street, changes in the number of living units over the three decades for each study area. The number of apartments and duplexes has increased for all of the streets since the 1960s. Between 1971 and 1991, there was a 63% increase in the number of dwelling units in Kitsilano (Table 10) and a 54% increase in Mount Pleasant (Table 11).

Table 10: Number of Dwelling Units per Street, Kitsilano, 1961 to 1991

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11th Ave. (Cypress to Maple)</td>
<td>17</td>
<td>19</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>12th Ave. (Burrard to Maple)</td>
<td>52</td>
<td>44</td>
<td>51</td>
<td>102</td>
</tr>
<tr>
<td>13th Ave. (Burrard to Maple)</td>
<td>80</td>
<td>86</td>
<td>103</td>
<td>112</td>
</tr>
<tr>
<td>14th Ave. (Burrard to Maple)</td>
<td>30</td>
<td>29</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Total Dwelling Units</td>
<td>179</td>
<td>178</td>
<td>211</td>
<td>290</td>
</tr>
<tr>
<td>(% Increase by decade)</td>
<td>(n.a.)</td>
<td>(-0.6%)</td>
<td>(+18.6%)</td>
<td>(+37.4%)</td>
</tr>
</tbody>
</table>

Table 11: Number of Dwelling Units per Street, Mount Pleasant 1961-91

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11th Ave. (Columbia to Manitoba)</td>
<td>2</td>
<td>32</td>
<td>24</td>
<td>41</td>
</tr>
<tr>
<td>12th Ave. (Columbia to Manitoba)</td>
<td>47</td>
<td>43</td>
<td>55</td>
<td>59</td>
</tr>
<tr>
<td>12th Ave. (Yukon to Manitoba)</td>
<td>11</td>
<td>12</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td>13th Ave. (Yukon to Manitoba)</td>
<td>70</td>
<td>90</td>
<td>82</td>
<td>132</td>
</tr>
<tr>
<td>14th Ave. (Columbia to Yukon)</td>
<td>18</td>
<td>20</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>Total Dwelling Units</td>
<td>148</td>
<td>197</td>
<td>208</td>
<td>303</td>
</tr>
<tr>
<td>(% Increase by decade)</td>
<td>(n.a.)</td>
<td>(33.1%)</td>
<td>(5.6%)</td>
<td>(45.7%)</td>
</tr>
</tbody>
</table>
Field studies were undertaken to map the type of redevelopment in the neighbourhoods with discretionary zoning. 1:2,000 scale lot maps of selected parts of Kitsilano and Mount Pleasant were obtained from the City of Vancouver Engineering Department. The maps clearly identify areas in which land use is regulated by RT-6, RT-7, and RT-8 zoning bylaws and they identify individual lots which constitute the basic unit of analysis for all of the studies. The surveys were conducted by walking through each neighbourhood and documenting infill, strata and apartment conversions on a lot-by-lot basis. The data were collected and represented cartographically on zoning maps (Figure 39 and Figure 40).
Figure 38: Field Study Sites in Kitsilano and Mount Pleasant

Source: City of Vancouver (1994) Zoning Map, City of Vancouver
Figure 39: Residential Intensification, Kitsilano

Legend

- Home-based Office Infill
- Older Development
- Rear Yard Infill
- Vacant Lot or Renovation
- Recent Conversion/Redevelopment

Number of Residential Lots: 137
Number of Dwelling Units: 423
Average # Units/lot: 3.1
Area: 41.7 acres
Dwellings/acre: 10.14

Breakdown of Dwellings by Density
1 Unit/lot - 28 properties (20%)
2 Units/lot - 42 properties (31%)
3 Units/lot - 14 properties (10%)
4 Units/lot - 34 properties (25%)
5 Units/lot - 6 properties (4%)
6/more/lot - 12 properties (9%)
Figure 40: Residential Intensification, Mount Pleasant

Legend

- Rear Yard Infill
- Home-based Office Infill
- Older Development
- Vacant Lot or Renovation
- Recent Conversion/Redevelopment

Number of Residential Lots: 124
Number of Units: 311
Average # Units/lot: 2.5
Acres: 31
Units/Acre: 10

Breakdown:
- 1 Unit/lot - 44 properties (35%)
- 2 Units/lot - 28 properties (23%)
- 3 Units/lot - 17 properties (14%)
- 4 Units/lot - 16 properties (13%)
- 5 Units/lot - 11 properties (9%)
- 6/more/lot - 8 properties (6%)
In the Kitsilano RT-8 study area 10 percent of the 200 lots contain infill suites (Figure 39). The highest concentration of such dwellings is found on the blocks between Maple St. and Cypress St., and Thirteenth Ave. and Fourteenth Ave. Clustered on this block are 7 of the 20 infill dwellings located within the study area. In contrast, the Mount Pleasant RT-6 study area encompassed 412 separate lots and of these, 24 properties (6 per cent) had infill dwellings (Figure 40). The studies show that infill and dense forms of redevelopment is difficult to achieve on smaller lots. The overall density for both Kitsilano and Mount Pleasant was approximately 10 units per acre, which is at least twice the density of postwar subdivisions.

While not all of the Vancouver landscape is appropriate as a model of development for the postwar suburbs in Richmond. The critical thing is to select from the urban fabric of Vancouver’s streetcar suburbs the best examples of the ‘best practices’ of redevelopment and adaptation that are the most likely to meet housing and community demands in the postwar landscape. The question of how to redevelop aging suburbs can only grow in importance under the pressures of population growth, an expanding range of housing demands, and environmental limits. The first-ring streetcar suburbs were once single-family neighbourhoods and while they have long since ceased to function as such there are portions that offer a good model of a middle landscape, one that accommodates smaller households in multiple unit dwellings that mimic the form and aesthetic of the suburbs. After a century of change and adaptation, Kitsilano and Mount Pleasant are useful models of redevelopment for more suburban areas south of 16th Avenue, particularly in conjunction with the type of mixed-use main street redevelopment along Broadway and 4th Avenue.
Similar forms of redevelopment can bring a new urban logic to the rest of Vancouver's suburban neighbourhoods. It is expected that the City of Vancouver will gain 160,000 people by 2020. City Planning staff, however, anticipate that only 100,000 of these people will be accommodated under existing land-use zoning. As there are no significant undeveloped land assemblies remaining within the city, the development of new housing will inevitably occur within obsolescent commercial/industrial areas and within existing neighbourhoods. The question of where and how redevelopment could be applied to accommodate an extra 60,000 people is one that is politically charged with considerable resistance from organized homeowners associations within single-family neighbourhoods.

Figure 41 shows the place of streetcar suburbs in relation to the downtown core to the north and the single-family suburbs that remain to the south. Vancouver's urban core is projected to double in population with the comprehensive redevelopment of the north shore of False Creek and Coal Harbour, and with the considerable amount of high-rise infill that is taking shape in the rest of the downtown. After more than fifty years of redevelopment, the core which accounts for less than 5 per cent of the city's area accommodates nearly 10% of the population. Like the core, the first ring suburbs have also been urbanized; over 15% of the city's population resides in this area which accounts for slightly more than 11% of the total land base. The peripheral suburbs will likely be the focus of adaptation in the decades to come because they accommodate proportionately fewer people per Km$^2$: 75% of the city's population reside in an area that accounts for almost 84% of the land base.
Figure 41: First-Ring Streetcar Suburbs in Vancouver, 1991

City Core
Area: 4.8%
Population: 8.9%
Dwellings/Acre: 21.5

First Ring Suburbs
Area: 11.3%
Population: 15.6%
Dwellings/Acre: 13.3

Peripheral Suburbs
Area: 83.9%
Population: 75.5%
Dwellings/Acre: 5.49
4 / Processes for Retrofitting Postwar Suburbs

"It is a bad plan that admits of no modifications."
Publius Syrus, 42 BC

The task of retrofitting suburbs is one of directing change rather than maintaining stability. The field studies in Richmond support the thesis that there is a window of opportunity to retrofit postwar suburbs; in less than ten years, one-fifth to one-third of the stock of postwar homes was demolished and replaced. However, the outcome has been a replacement landscape rather than an adaptive one. The evolution of streetcar-era suburbs provide alternative forms and processes of adaptation. In particular, the Vancouver experience demonstrates that incremental, market-driven housing adaptation, infill, and redevelopment can significantly reshape older neighbourhoods if a new consensus can be reached. The process was successful because it simultaneously mobilized citizens, politicians and the planning bureaucracy to decide on the types of incremental, small-scale redevelopment that will meet housing and community needs. While Richmond's civic leadership has ignored the opportunity to retrofit the postwar suburbs, the recent attempts of other municipalities like the Corporation of Delta are informative.

Neighbourhood Centres Created by Residents: Delta, B.C.

In the early 1990s, community planners in the Corporation of Delta examined alternative forms of housing redevelopment and new processes for planning adaptive change in the municipality's aging suburbs. They recognized that Delta's aging, automobile-oriented, single-family subdivisions would have to be reshaped to accommodate a growing and changing population, to encourage transit use, and to
increase the quality of life for all citizens (LeMaistre 1995: 4).

Delta planners were also conscious of the New Urbanism movement that was beginning to emerge in the United States (Ibid.: 8). New Urbanist designers like Andres Duany and Elizabeth Plater-Zyberk used streetcar suburbs and the pedestrian-oriented cities that grew around them as models for urban development in greenfield sites. However, Delta planners used older suburban landscapes as a guide for the retrofit of the municipality's postwar suburbs. They toured Vancouver's streetcar suburbs and explored the redeveloped south shore of False Creek in search of housing forms that would accommodate new housing and community needs in postwar subdivisions.

Beyond form, the planners were also interested in processes that would guide change. In Delta, there was significant political leadership and commitment to a participatory planning process. Delta Municipal Council appointed twelve residents to work with planners to conduct a series of public workshops which would provide the planners with the information needed to prepare a local area plan that considered an alternative future. After receiving training in strategic planning techniques, the group conducted two-day public workshops that attracted approximately 100 participants. Citizens worked in small groups and at least one community planner was on hand to assist each two tables of workshop participants. In small groups, residents brainstormed ideas and recorded them on 3" x 5" post-it notes. The participants then organized the ideas into logical categories for further discussion. Much discussion was generated because people were intimately familiar with the places under discussion. Their own words formed the written record and their organization led the discussion of solutions and appropriate action plans.

A number of shared concerns were identified in the workshops. Many residents
felt that their neighbourhoods lacked identity or coherent centres; they wanted access to small passive parks and a facility for local gatherings; they wanted convenient local shops to reduce the need to drive everywhere; and they recognized that seniors and young adults would require forms of multiple-unit housing that were not currently available within their community (LeMaistre 1995: 7). Finally, if their neighbourhoods were to change, residents demanded input and they wanted the changes to fit within the existing character of their communities (Ibid.).

Delta planners drew on these ideas to create a “Neighbourhood Centre” scenario for the evolution of an older subdivision (Figure 42). While the neighbourhood school was the focal point for families in the typical postwar subdivision, workshop participants expressed a new set of needs and created a new form of suburban neighbourhood centre. They demanded a centre with some commercial land uses, a neighbourhood house and an adjacent park, all surrounded by redeveloped strata-title houses and townhomes. Residents supported the idea of duplex, triplex, and quad strata-title houses provided these new dwellings used the building envelope set out in existing bylaws and fit the character of the existing neighbourhood (Figure 43). Housing development would be market-driven and the expense of the new neighbourhood centre and park would be covered by development cost charges levied on the multi-unit redevelopment of single-detached dwellings. Overall densities for the neighbourhood would rise from 16-18 units per hectare to 36-40.
The decision to place multiple unit housing and commercial land uses within the subdivision represents a significant reversal from the rigid segregation of land uses typical of postwar development. Multiple unit dwellings have long been relegated to the arterial roads to buffer the single-family zones within the subdivision. Remarkably, in the
Delta Neighbourhood Centre plan, these dwellings have been included in the mix of housing in the centre of the neighbourhood. Further, the centre includes a mixed-use commercial centre in the neighbourhood with residential units above the shops (Figure 44).

Figure 44: Neighbourhood Centre Plan

The Neighbourhood Centres plan is a proactive document and while it is too early to see its impact, the process demonstrated that residents are prepared to accept change and they were able to reach some consensus on desired futures.

Retrofitting Suburbs in Richmond

The participatory planning done in Vancouver and Delta could be put to use in Richmond. Figure 45 shows an example of a creative visualization technique adapted from Stanley King's Co-Design methodology. Instead of artists' sketches, computer graphics software could allow people to get a feel for the fit of alternate forms of redevelopment. A Kitsilano triplex has been superimposed on a postwar dwelling to give the effect on the street and to gauge the relationship between the new form and the
neighbouring housing. The first photograph shows the street as it is in July, 1997. Two megahomes flank an older postwar duplex. In the second photo, a triplex house from Vancouver’s Kitsilano neighbourhood is superimposed in the place of the postwar dwelling. Although the architectural treatment of the triplex is notably different, the scale of the multiple unit dwelling is in line with that of the surrounding megahomes.

Figure 45: Visioning Alternative Types of Redevelopment

Retrofit Conclusions and Action

The field studies in Richmond demonstrate that postwar subdivisions are being redeveloped on a lot by lot basis. It follows that planning processes designed to manage the mass-production of housing for a mass market need to be adapted. Dated suburban land-use plans need to be changed to accommodate new housing and
community demands. Rather than rubber stamping development that meets the uniform housing standards set fifty years ago, municipal planners need to take initiatives. Specifically, they need to meet with communities to reach a new consensus on forms of housing adaptation and redevelopment that meet contemporary social needs and market realities. The process must not allow an either/or scenario. It must enable the creation of housing forms that depart from the single-family template of the 1950s. There has to be an incremental mix of other forms of housing into the SR-1 landscape.

It is hard to draw simple comparisons between the postwar and streetcar case studies. The shape of city and suburb is considerably different. There are perhaps more constraints in the suburbs. Beyond form, the legal context for planning is very different: the City of Vancouver has its own City Charter that gives it more extensive planning powers outside of the British Columbia Municipal Act. Further, much of the redevelopment in Vancouver's First Ring suburbs took place on the heels of significant public investment (through RRAP and NIP). In the current age of fiscal restraint many levels of government have withdrawn from financing urban redevelopment.

Perhaps for this reason it is important to understand how incremental redevelopment by individual homeowners can enable the adaptation of suburbs to new patterns of use. Low density development is costly and new growth has to be accommodated within existing urban areas rather than sprawling. The high mobility, demolition and redevelopment documented in Richmond reveals that many people are not aging in place. They are cashing in and moving out. Realtors report that many are moving to exurbs like White Rock. Second: a new wave of migrants has created a new interpretation of the “North American Dream”. They are building upon the modest aspiration of families of the postwar period and constructing large and elaborate houses
that dwarf the modest split level ranchers built in the 1950s.

The case studies suggest a new focus for planning is needed which will not enforce stability but rather help to negotiate and shape change. The Kitsilano case studies show us how planning processes were changed to meet new demands in the late 1960s. Residents opposed the advance of high-rises and they demanded greater participation in the planning process. Developers wanted more flexibility in the types of dwellings that could be constructed. The compromise reached in the 1970s and worked through to the 1990s has been a special type of urban suburb. The basic unit of development is the single lot upon which a variety of housing types are constructed: single-family dwellings, duplexes, triplexes; rental and owner-occupied; fee simple ownership and strata title. After three decades of evolution, the end result has been a successful blend of urban and suburban. People are willing to settle for a smaller slice of the North American Dream in return for the amenities and efficiency of inner-city locations.

The decision of Richmond’s civic leadership and planning department to accommodate almost all of the City’s growth in the Town Centre is an abdication of their responsibility in the outer suburbs. Transit-led development and New Urbanism have provided a strong model of alternative development patterns that are being adopted in several Canadian cities. With concrete references to an older pattern of development common in places shaped by the pedestrian and the streetcar, these movements in urban design celebrate a mixture of land uses, pedestrian-oriented developments a modern version of a traditional town. Even though New Urbanism has shaped development in Surrey, Langley and Abbotsford, its influence has largely by-passed Richmond.
While Richmond still clings to an older paradigm of suburban planning, municipalities like the Corporation of Delta have consciously built upon the Vancouver model of change to set the course for the evolution of their aging neighbourhoods. Participatory methods of planning similar to those implemented in Vancouver 20 years ago have enabled residents to collaborate with planners to create new guidelines for redevelopment that will allow people to age in place, shop locally, and walk or ‘roll’ (bicycles, wheelchairs, scooters) rather than drive everywhere.

Should Richmond follow their leadership? If a goal is to harness cycles of market-driven redevelopment to provide neighbourhoods with affordable housing, local shops and services, the answer should be yes. In this age of fiscal restraint, the retrofit of aging postwar suburbs will not be financed by any level of government, so market forces need to be harnessed to reconfigure streets and housing mix within existing subdivisions.
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