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Date _MAY 1ST 1995_
ABSTRACT

Very little is understood about the liveability of mini-suite housing. 600 Drake presented an opportunity to analyze the interrelated social, economic, and physical design aspects of mini-suite housing to determine: 1) The extent and characteristics of the sub-market for mini-suite housing; 2) Whether mini-suite housing is liveable and satisfies residents' needs; and 3) What policies should be instituted to ensure mini-suite development supports civic housing objectives.

Academic research has dispelled the notion that the amount of living space is the prime concern of people living in high density residential environments. Rather, psychological aspects, such as an individual's perceptions of privacy and crowdedness, are much more influential. Another important conclusion is the realization that residential satisfaction is a measure of the degree to which a home "fits" the needs and desired lifestyle of an individual. Residents should be given the opportunity to chose the type of housing which satisfies their particular needs.

An analysis of demographic and housing market trends in the City of Vancouver indicates the existence of a niche market for mini-suite housing. Population growth, smaller households, rapid new household formation and a young age profile have all put pressure on the existing stock of housing. Changing consumer needs and lifestyle habits also affect the housing stock because traditional forms of housing do not adequately fit the particular needs of emerging niche markets.

This case-study asked residents to participate in two mail-back surveys. The Part One Survey revealed that a typical resident of 600 Drake is under 40 years of age, single and holds a post secondary degree. This resident walks or takes public transit to a service sector job located in Downtown Vancouver. Their leisure time is divided between many recreational, entertainment and social activities, most of which take place outside of their home. These people were attracted to 600 Drake because it is a new and modern building. Other features, such as the design of units and amenity areas; the building security system; apartment availability; rent increase protection; and building location motivated people to move into 600 Drake.
Affordability had a neutral effect on this housing choice "equation" and apartment size had a slightly negative effect. It is apparent that residents choose to live in 600 Drake because of its design, locational and economic attributes.

The Part Two Survey assessed how satisfied residents are with various aspects of their mini-suite, privacy and crowding issues, and the design, services and management of the building. Upon considering their mini-suite, residents reveal they are very satisfied with the design of the kitchen and bathroom areas. However, there are a few problems, such as insufficient closet, balcony and dining space, which are associated with the design of the living/sleeping area. The only significant problem regarding crowding and privacy issues has to do with the negative impacts of neighbourhood street noise. This design problem could have been minimized with more effective acoustical abatement measures such as incorporating glassed-in balconies or central air conditioning. Nonetheless, residents do not feel the building is especially crowded. In addition, residents are extremely satisfied with the amenity areas and management of 600 Drake. The amenity areas provide a valued outlet for residents to instigate casual social interaction with fellow residents.

In summary, the vast majority of respondents indicate they are satisfied with their mini-suite apartment in 600 Drake. By virtue of the close match between who these units were designed for and who actually moved in, it is evident that this form of housing fits the lifestyle of a particular niche market. Therefore, it is recommended the City of Vancouver permit the development of mini-suite housing. A controlled development approach for mini-suite housing should be adopted that utilizes specified design criteria within a discretionary approval process. Furthermore, mini-suite development should be restricted to the rental housing market and the City should negotiate binding rental agreements with developers to ensure buildings are properly managed and do not permit more than one person to live in a mini-suite apartment. Finally, the City of Vancouver should limit mini-suite housing development to central neighbourhoods to ensure residents have access to social, employment and recreational services located near the CBD.
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Vancouver, B.C. has posted a remarkable economic recovery from the deep recession which rocked the city in the early eighties. By 1989, high population growth rates, changing population demographics, a very limited supply of developable land in the region and investor speculation had all conspired to raise land values and put pressure on the existing supply of housing. The City of Vancouver began to receive proposals from developers to build smaller housing units. Several developers argued that, in order to keep them affordable, new housing developments would have to incorporate smaller and more efficiently designed units to maximize the total number of marketable units in a project. Taking this unit size reduction approach one step further, some developers began to pressure authorities for a relaxation of minimum apartment size requirements to allow for the construction of small, self-contained apartments. Labeled "mini-suites" by the mass media, these 280 to 400 sq. ft. apartments resemble an open "studio" configuration with kitchen, dining, living, and sleeping areas being contained within one room. They also include a separate and fully appointed bathroom.

1.1 Case-Study Objectives

There is a definite need to systematically assess the liveability of mini-suite housing and analyze the unique planning issues associated with this type of development. The objectives of this case-study are to look at the interrelated social, economic, and physical design characteristics of mini-suite housing to determine the following:

- Is there market demand for this form of housing?
- What are the socio-demographic characteristics of people attracted to this housing sub-market?
- Are residents satisfied with their mini-suite apartment?
- Should this form of housing be promoted as a means to provide affordable housing?
1.2 A Synopsis of Mini-Suite Development

The introduction of mini-suite apartments should only be considered an innovation in terms of market housing. Mini-suite apartments offering between 275 and 325 sq. ft. of living space have already been incorporated into the design of the following social housing developments in Vancouver:

- Nicholson Tower, 1155 Nelson Street, built 1970;
- Sunset Towers, 1655 Barclay and 1650 Haro Streets, built 1975;
- Maria Gomez Place, 590 Alexander Street, built 1981;
- Jubilee House, 508 Helmcken Street, built 1984.

Although lessons can be learned from these developments as to the livability of mini-suite apartments, because they were developed using different economic criteria and targeted towards core needy sectors of society, caution must be employed in making direct comparisons between the experiences of residents living in market and non-market housing development.

On August 20, 1990 Vancouver Land Corporation, herein referred to as VLC, initiated a proposal to build a 200-unit market rental building at 600 Drake Street. This application requested a relaxation of the minimum dwelling size from the permitted 37 sq. m. (400 sq. ft.) to 25.5 sq. m. (275 sq. ft.) (Development Permit Staff Committee Report, October 3, 1990). With low income residents being squeezed by a tight housing market and developers pressing for assistance to spur the construction of more affordable housing, politicians and planners with the City of Vancouver felt it would be prudent to reassess existing residential space requirements and determine if the City should permit the construction of mini-suite apartments.
In order to assess some of the planning implications of mini-suite housing, the Housing and Properties Department of the City of Vancouver contracted Kris Olds of U.B.C.'s Centre for Human Settlements to prepare a report entitled "Small Self-Contained Apartments: Experiences and Issues". The scope of this report included the experiences of several North American cities to demonstrate how other jurisdictions have addressed the issue of permitting mini-suite housing development. After careful consideration of this report and input from various civic departments and community interests, the City of Vancouver Development Permit Board decided to grant VLC a relaxation of the minimum unit size requirement and permit the construction of 600 Drake.

The City of Vancouver viewed the project as an excellent opportunity to experiment with this form of housing because, at the time, the city had strong financial ties with VLC. For example, in addition to holding a direct two million dollar investment in the company, the city had given VLC favourable lease options on several civic-owned properties on the condition that VLC build rental housing (Francis, June 30th, 1993). With these legal agreements in place, the City felt VLC's proposal offered an opportunity to develop rental mini-suite housing which would meet the needs of residents and the whole community.

The approval of this project, nonetheless, sparked spirited debate about the liveability of mini-suite apartments. Many politicians, community groups, developers, planners and citizens came forth with opinions on this form of housing. For example, Tom Durning of the Tenants' Rights Action Coalition (TRAC) warned that the units were too small and that the city's own report acknowledged that there was not enough information available on the effect small suites may have on liveability (Lee, January 8th, 1993; Zillich, January 13th, 1993). Referring to a social housing project called Maria Gomez, Barbara Daniel from the Downtown Eastside Residents' Association (DERA) stated, "The units are unliveable. There's a high turnover rate, more problems with violence and higher management costs" (Magee, January 10th, 1993). In protest, some housing advocates even constructed a makeshift structure on the lawn of City Hall to demonstrate the spatial dimensions of a typical mini-suite apartment. These community groups were supported by some civic politicians such as Councillor Pat Wilson who said,
"People who have low incomes deserve decent, liveable accommodation. This is not it." (Magee, January 10th, 1993) Clearly, the prospect of allowing the construction of more mini-suite apartments elicited a strong negative response from some community interests.

On the other side of the debate, many developers promoted mini-suite housing as a viable response to providing affordable accommodation in a very tight rental housing market. For instance, a local developer named Henry Chen, with a 20-unit mini-suite proposal for a site in East Vancouver said, "I see this project as a challenge and an obsession to do my bit in the community: to build something that will help alleviate the housing crunch" (Magee, January 10, 1993). Supporting this outlook, David Podmore, President of VLC Properties Ltd. said, "Developers are motivated to build small suites to meet the needs of the community because there is a great demand for low-cost apartment housing" (Lee, January 8, 1993). Maureen Enser, Executive Director of the Urban Development Institute echoed both Podmore and Cheng with the comment, "I would have thought tenant groups would support anything that would reduce rents" (Zillich, January 13, 1993).

However, throughout this discourse, it became apparent that most opinions, both positive and negative, were based upon unsubstantiated hearsay and intuition. As demonstrated by Kris Olds, few comprehensive studies have been conducted which analyze residents' satisfaction with mini-suite housing or assess the planning implications of this form of development. This heated public debate culminated on the week of January 7th, 1993 when Vancouver City Council debated a proposed amendment to the Zoning and Development By-law reducing minimum permitted apartment sizes to 25.5 sq. m. (275 sq. ft.). With a six to three vote, Vancouver City Council carried the motion:

That the concept of smaller apartments be supported and that staff be instructed to report back with specific text amendments to the Zoning and Development By-law and, if necessary, the Parking By-law (City of Vancouver Council Meeting Minutes, January 7, 1993).

This issue is still unresolved. The planning department has been grappling with various issues related to this unique form of housing and has not yet developed specific By-law amendments.
A policy initiative is expected to be introduced to Vancouver City Council sometime in 1995.

1.3 Urban Context

"600 Drake" is the first market apartment building containing mini-suites to be occupied by residents (See Photos 1 and 2). The development of this building compliments many of the planning strategies which the City has set for Downtown South. Downtown South is an urban community located on Vancouver's downtown peninsula. It comprises an area of 33.5 city blocks bounded by Robson Street to the north, Beatty and Homer Streets to the east, Pacific Boulevard to the south and Burrard Street to the west (See Maps 1 and 2). Downtown South's urban context is defined by its relationship to adjacent neighbourhoods. The West End forms the western boundary of Downtown South, the Central Business District (CBD) lies to the north, and Yaletown/False Creek flanks the eastern boundary. By virtue of its location, Downtown South is very accessible to employment opportunities, social services, and recreational activities located in the core area. This district is also criss-crossed by several major transportation corridors connecting the downtown to other parts of the city.

In July 1991, Vancouver City Council approved the up-zoning of Downtown South to a maximum 5.0 FSR for large lots and 3.0 FSR for lots generally smaller than 20,000 sq. ft. Home to some 3,000 residents, the city would like to add as many as 11,000 more people to the area (Downtown South Community Plan, 1991). The City of Vancouver contends that Downtown South is an appropriate location for the development of mini-suite housing because it will be attractive to lower and middle income people who currently work in the downtown core. VLC completed construction of 600 Drake in August, 1993. This development presented an ideal opportunity to conduct a post-occupancy evaluation of mini-suite housing.

1.4 Project Methodology

This research project has been divided into six major sections. Together, these sections will systematically assess the liveability and analyze the planning implications of mini-suite housing. To begin, Chapter Two titled "Planning Implications of High Density Residential
Photo 1: 600 Drake - South Face

Photo 2: 600 Drake - West and South Faces
Map 1: 600 Drake Site Location

Map 2: Downtown South Urban Context
Environments" will formulate a theoretical framework for this study by summarizing the main streams of academic research regarding Density, Crowding, Physical Design, and Residential Satisfaction.

Chapter Three, "Demographics and the Rental Housing Market" looks at various factors influencing Vancouver's rental housing market. The intent of this section is to demonstrate whether there is sufficient market demand to warrant the development of mini-suite apartments.

Chapter Four is titled "Development and Design Process". It describes how architects, developers and planners approached the development of 600 Drake. Much of the information in this chapter is based upon interviews with key participants who influenced the design of 600 Drake.

Chapters Five, Six and Seven cover the various parts of the post-occupancy evaluation of 600 Drake. Following a case-study approach, these chapters rely on the results of two mail-back surveys and one phone survey of residents. After an explanation of the survey methodology, an analysis of the results will describe the socio-demographic characteristics of the people who have moved into 600 Drake. These surveys will also quantify the reasons given by residents for why they moved into 600 Drake and how satisfied they are with various aspects of their mini-suite apartment. Although the results of this study are case specific, it will be possible to derive some conclusions regarding whether mini-suite housing is liveable and satisfies the needs of residents.

Chapter Eight is titled "Policy Implications for Mini-Suite Housing Development". It will attempt to synthesize and describe the policy implications of the findings of this study. A series of mini-suite design guidelines will provide practical suggestions on how to ensure mini-suite development is liveable and meets the needs of residents. This discussion should be regarded as a basic framework from which the City of Vancouver can begin to formulate a comprehensive mini-suite housing policy.

Chapter Nine concludes this study. It summarizes the results of this case-study and then it elaborates upon how these findings relate to and integrate with housing satisfaction theory. This chapter will also introduce some aspects of mini-suite housing development which require further research and inquiry.
CHAPTER TWO
PLANNING IMPLICATIONS OF HIGH DENSITY RESIDENTIAL ENVIRONMENTS

A review of academic literature reveals that very little analysis has been conducted about the planning implications associated with mini-suite housing. This fact is not surprising since so few mini-suite developments have been built. However, for any analysis to be relevant, it must be linked to a sound theoretical foundation. This chapter will summarize the predominant theoretical perspectives on Density, Crowding, Physical Design, and Residential Satisfaction. In addition to improving the understanding of the impacts of mini-suite housing, this framework will be relied upon to place the analysis of mini-suites within a proper theoretical context. Ideally, this study will complement and build upon the research base that exists pertaining to high density residential environments.

2.1 Introduction to Social Theory on High Density Residential Environments

There has been a long tradition of inquiry by planners, architects, sociologists, psychologists, and social activists into the psychological and physiological effects of crowded, high density residential environments. In 1962, John B. Calhoun wrote an article for the influential journal Scientific America which described a series of experiments conducted with overcrowded, caged rats. The conclusions Calhoun drew from this study caused a sensation. He described how overcrowding causes: (a) Poor nest building; b) High infant mortality; (c) High adult mortality; (d) Aggression; and (e) Homosexual behavior among rats (Calhoun, 1962). Similar results were reproduced in other studies of animals which revealed various pathological consequences of living under densely populated conditions (Rodgers, 1981; Tognoli, 1985).

Relying upon these early results, several researchers made direct correlations between animal and human behavior and then argued that dense, urban development was in direct conflict with innate qualities of human nature (Leung, 1993). A succession of "best seller" books [Desmond Morris', The Naked Ape (1963) and The Human Zoo (1967); Konrad Lorenz's On Aggression (1966); and Robert Audrey's The Territorial Imperative (1966)] were published
which made the simplistic parallel between human behavior and animal studies. For a short time period, many academics, social scientists, and most of the general public accepted the premise that crowded urban environments cause tension, anxiety, aggressiveness, neurosis, schizophrenia, and social dysfunction among people (Freedman, 1975).

With the hypothesis put forth linking animal crowding behavior directly to humans, researchers eventually began a more rigorous and exhaustive investigation of actual human behavior in high density residential environments. Research conducted over the past twenty years has challenged the fallibility of some conclusions in human ecology because they are based upon unproved assumptions associating innate animal behaviors to humans (Baldassare and Feller, Ethos 1975; Gillis, 1979). Mark Baldassare and Susan Feller succinctly bring this topic into perspective. They conclude:

The application of the ethnological perspective to spatial behavior is particularly inappropriate owing to its disregard of social learning models, socialization, and adaptation processes. These omissions coupled with the stress placed upon "natural tendencies" leaves one with the image of a preprogrammed man, undaunted by the environment and uninfluenced by culture (Baldassare and Feller, 1975).

Discrediting some ideas of human ecologists, it is now apparent that people are able to tolerate high density living conditions (Mitchell, 1971). Therefore, it is likely that some people will be able to adapt or they already have a lifestyle which could function within the spatial confines of living in a mini-suite apartment. No matter how adaptable they are, the question remains as to whether such development is satisfactory or liveable for residents.

2.2 The Impacts of High Density Residential Environments

The issue of high population density has been much maligned. Although some studies of people have shown what appear to be undesirable effects of high density, other studies have failed to reveal similar results or they have shown that the negative consequences associated with density are explained by other social factors. For example, when factors such as education level or economic status are kept equal, people who live under crowded conditions appear to be no
worse off than other people. Quite simply, academic research has not revealed a simple and definitive link between high density living environments and social problems (Aiello and Thompson, 1980; Freedman, 1975; Mitchell, 1974; Rodgers, 1981).

This topic is much more complicated than first perceived by some human ecologists. Evidently, most of the demographic studies of the effects of crowding which were first carried out contained a crucial flaw; they confounded social class and ethnicity with density level. In his book titled Crowding and Behavior, Jonathan Freedman explains how the links between density and aggressive social behavior have been misinterpreted. Freedman states, "There were no reliable relationships of any kind between household crowding and pathology, and density per acre was actually seen to have a reverse relationship with suicide and homicide -- the higher the density, the lower the rate of these two measures of pathology. It is clear that once again density is shown not to be a factor producing pathology in people (Freedman, 1975)."

Moving to a broader perspective, Freedman also underscores the point that cities with high densities have no more crime than those with lower densities, nor is there a positive correlation between the density of a neighbourhood within a city and the amount of crime committed by people living there (Freedman, 1975). Quite clearly, more recent research on this subject does not find a causal relationship between high density residential environments and prevalent urban social problems.

2.3 Density and Crowding

Any meaningful discussion about the liveability of high density residential environments must make the fundamental distinction between the terms "Density" and "Crowding". Density simply is a physical variable related to the limitation of space. Crowding is a psychological state related to an individual's experience or perception of limited space. As Daniel Stokols puts it, feelings of crowdedness are experienced when one's subjective demand for space exceeds the physical supply (Gillis, 1979; Holahan, 1978; Leung, 1993; Stokols, 1978).

John Aiello and Donna Thompson expand the conceptualization of crowding by introducing four interrelated issues: (1) Congestion with resource scarcity; (2) An inability to
control interpersonal interaction; (3) Extremely close proximity to others; and (4) The presence of large numbers of others (Aiello and Thompson, 1980). Essentially, although crowding is related to density measures, such as the number of persons per unit area, feelings of crowdedness are also highly dependent upon a variety of cultural norms, individual expectation levels, and various issues related to one's control over the living environment.

In his paper titled "Density, Crowding, and Satisfaction with the Residential Environment", Willard L. Rodgers suggests that only intra-household density and crowding have detrimental effects on health, whereas at the neighbourhood level no detectable effects are evident. He discusses how the density of individual households, measured by the number of persons per room, is the most important aspect of objective density. But still, he finds that this objective measure of density is not very strongly related to residential satisfaction. Comparing objective measures of density with residents' subjective perceptions of density, Rodgers' study implies that many factors, in addition to density, affect perceptions of crowdedness.

Other studies have come to similar conclusions. Dispelling the notion that the amount of living space is the prime concern of people living in crowded conditions, this research indicates that psychological aspects, such as feelings of privacy or an individual's perception of crowdedness, are influential. Moreover, the perception of crowdedness is greatly influenced by a person's background, the dwelling unit, and the built environment of the local neighbourhood. If one accepts that it is perceptions of crowding, and not simply density, which is a major determinant of residential satisfaction, it follows that a satisfaction study of mini-suites should focus on the residents' perceptions of crowding as a means to evaluate their level of satisfaction with this form of housing. (Carnahan et al, 1974; Eoyang, 1974; Ginsberg and Churchman, 1984; Mitchell, 1974; Mitchell, 1971; Rodgers, 1981).

Most of the theoretical discussion which attempts to explain the negative effects of crowding have focused on two interrelated topics: (1) Stimulus overload; and (2) The control of a social environment to attain privacy when so desired. In his paper about coping with crowding, A. R. Gillis introduces another element into this discussion. His investigation found that both household and building density interact with patterns of activity as predictors of psychological
strain. Whether people experience the stress of crowding seems to depend not only on the degree of crowding, but also, it depends on what they are doing in that space. Gillis concluded that people may cope with crowding by engaging in activities that remove them, either physically or psychologically, from their residential environments. In other words, crowding refers to a balance between the number of people in a given area of space and some optimum standard for comfortable behavior. Therefore, rather than the number of persons present, the important feature of a crowded situation may be dependent upon the nature of the activity being performed, how the space is organized and how the space is used. Together, these features determine whether a social setting will become over stimulating (Gillis, 1979; Leung, 1993). Therefore, it seems logical for a housing satisfaction study to identify the types of activities that residents enjoy within their home and neighbourhood. With this information it will be possible to evaluate whether the design of a housing unit supports or inhibits certain types of behavior.

Another dimension in this balance is related to the amount of control an individual has over social stimulus as a means to attain "privacy". Privacy is defined by Alan F. Westin as the voluntary and temporary withdrawal of a person from society through physical or psychological means, either in a state of solitude or small-group intimacy or, when among larger groups, in a condition of anonymity or reserve (Westin, 1967). In essence, privacy involves an individual's ability to choose what and to whom he or she will communicate in a given circumstance (Ittelson et al, 1974; Tognoli, 1975). A lack of privacy due to physical design elements of the dwelling unit, the building, or the surrounding neighbourhood can greatly influence an individual's ability to control how and when he or she interacts with other people, and consequently, an individual's perception of crowdedness may be accentuated (Leung, 1993).

An important aspect of this discussion is the realization that dense residential environments are not necessarily crowded. For instance, a neighbourhood consisting of high-rise luxury apartments typically provides ample living space whereas a district of three story walk-up apartments may offer much more crowded conditions for residents. A common means to quantify the level of crowding is to measure the number of persons per dwelling unit. The environmental psychologists William Ittelson, Harold Proshansky, Leanne Rivlin and Gary
Winkel assert that a crowding threshold exists for western societies somewhere between 1.01 to 1.5 persons per room. They find that, in more crowded living situations, residents tend to express dissatisfaction with their living environment (Ittelson et al, 1974).

The relationship between quality of life and household crowding was also explored by Douglas Carnahan, Walter Grove and Omer Galle. Using the objective measure of number of persons per room they found that household densities in core areas of American cities are not particularly conducive to pathological behavior. In fact, they found serious overcrowding more a problem in rural areas. These findings emphasize the point that crowded living conditions are not necessarily equated with densely built urban environments (Carnahan et al, 1974).

It should also be understood that person to space ratios represent a static measure of crowding. Therefore, the use of a crowding threshold should be employed with caution because residential crowding is a dynamic issue which must be placed in its proper social and cultural setting. The findings of one study may not be directly applicable to another culture, another city or another neighbourhood. There are even substantial differences among different social groups within a community. For instance, single adults, the aged, families, transients, and the various income classes all have different conceptions as to what is an acceptable residential density. Cause and effect relationships developed from studies analyzing population density and human behavior must be directly related to the contextual setting of the community that is being studied (Lynch, 1981; Aiello and Thompson 1980). Quite clearly, any analysis of the liveability of 600 Drake must quantify the socio-economic characteristics of the people who live in the building and the types of amenities that the community of Downtown South offers to its residents.

Similar concerns about the interpretation of crowding measures have been expressed by Walter R. Gove and Michael Hughes. They feel the topic of residential crowding has been operationalized by static measures, such as persons per room, which conceptualize crowding as the experience of an excess of social demands and a lack of privacy. Gove and Hughes stress the need to broaden this inquiry to include a number of factors other than persons per room which affect the subjective experience of crowding. These factors include culture, the power of individuals in the household, the household composition, the role of persons in the household
and the interaction of individuals within the household (Gove and Hughes, 1983). This call for a more in depth and contextual analysis of the living environment is supported by the results of a comparative study of neighbourhood crowding. They found that a pleasant neighbourhood tends to minimize the effects of household crowding, while an undesirable neighbourhood tends to exacerbate them. They attribute these findings to a feeling of confinement to one's home. If individuals consider their neighbourhood to be desirable they tend to spend some leisure time there. In contrast, if individuals view their neighbourhood negatively, they usually choose to spend less free time in the area and therefore they feel more confined to their home (Gove and Hughes, 1983).

Despite all of these concerns, a crowding threshold of 1.01 to 1.5 persons per room introduces an important issue regarding mini-suite apartments. As has been discussed, subjective perceptions of crowding seem to influence a residents' evaluation of how satisfied they are with their home. Although mini-suites represent a very dense and spatially limited form of housing, it should be recognized that these suites are normally designed to house only one person. Thus, regardless of the small size of the units, the impacts related to intra-household crowding should have a minimal impact on residential satisfaction because a resident does have control over intra-household privacy. Where density and crowding issues may be prominent is the degree of privacy mini-suite residents feel they have from neighbours.

### 2.4 Physical Design of the Built Environment

This discussion has referred to how the physical design of a built environment can influence an individual's ability to control social interaction. Due to the complex nature of the relationship between social behavior and physical design, this topic deserves special attention. One view of the relationship is put forth by Joachim F. Wohlwill. He has differentiated three types of functional relationships between behavior and the physical environment: (1) The environment limits the types of behavior that can occur; (2) Some of the qualities of a particular environment affect both the behavior and personality of individuals; and (3) The environment
motivates strong feelings, attitudes, or behavior (Wohlwill, 1970). In all of these relationships, Wohlwill emphasizes how the physical environment drives and shapes human behavior.

Hok-Lin Leung interprets this relationship somewhat differently. He feels behavioral settings are to a large extent socially and culturally defined where a set of rules direct what people do, how they do it, with whom they do it, and when they do it. Leung thinks the environment sets the conditions for a response to occur and the "appropriateness" of the response is socially determined (Leung, 1993). In other words, if the provision of shelter is the passive function of a home, then its positive purpose is the creation of an environment best suited to the way of life of different sectors of society. Although design is important, in the end, socio-cultural needs determine how an environment will be handled. A physical environment does not determine, but rather, it is congruent with the kinds of people who inhabit them (Leung, 1993).

In his influential book *Good City Form*, Kevin Lynch's theoretical approach amalgamates the two previous perspectives. Essentially, Lynch believes physical design must guarantee "fit" between space and actual or desired human behavior. He describes how spaces suggest action as well as constrain it. Mismatches appear in existing places which were once functional because expectations have changed in response to possibilities opened up by new places. Hence, there is a fluid connection between action and place; people play with spaces and find new uses for them. Human behavior can change to fit a space where people get used to it or learn to like it (adaptation). This interaction can also be reversed where space is changed to better fit a human behavior (adjustment) (Galster, 1985; Lynch, 1981; Tognoli, 1985). The symbolic significance of a place can even override the actual fit between the place and the social behavior which occurs in that space. In the end, action and place will have adapted to each other. With this adaptability in mind, Lynch concludes that, "People can accommodate to almost anything in the normal range of physical environments (Lynch, 1981)."

With regard to mini-suites, our ability to adapt to different living environments is an important issue. If sub-sectors of the housing market are attracted to mini-suites because these apartments "fit" their lifestyle, these residents should express feelings of satisfaction with their home. However, if residents are forced by prevailing housing market conditions to live in these
units, then there will mismatches between desired behaviors of residents and the living environment that mini-suites provide. In such cases, one would expect residents to express dissatisfaction with their dwelling and be searching for more appropriate housing. The main objective of this housing evaluation should be to analyze and evaluate the degree of fit between the needs of residents and the form of housing they inhabit.

There are two ways of observing the fit between a place and the activities that people perform within it. The first method is to observe people acting in the space in order to evaluate how well the actions match the location. For example, one might observe whether residents can easily move about and open cupboard doors in their kitchen while cooking a meal. The second method of analyzing fit is to ask the users themselves. Lynch contends that it is the users who have a sense of the appropriateness of a place. Thus, it makes sense to ask people how well their home works or fits with their daily activities.

### 2.5 Housing Satisfaction

It is commonly accepted that the most important aspect of a residential environment is the dwelling unit that an individual calls "home". Home is both a physical place and a cognitive concept, with only a portion of its definition based upon the physical features of the dwelling unit (Leung, 1993; Tognoli, 1985; Weidemann and Anderson, 1985). One major problem in planning theory has always been the inability to develop valid indicators of what constitutes a suitable home. Minimum property standards, building codes and other housing quality criteria have generally been employed to address issues of structural integrity and sanitation conditions. For example, Michael Pacione indicates that most efforts to evaluate housing focus on very selective characteristics of a home (Pacione, 1984). Pacione has identified five main components of standard home evaluation:

- Internal design (e.g. site and layout of rooms, number of rooms);
- Building standards (e.g. efficiency of heating systems, internal repair);
- Health and comfort (e.g. view from living room, amount of sunlight);
• Privacy (e.g. visual and audio privacy, amount of space for own use);
• External appearance.

Granted, these types of objective standards are very useful for evaluating and comparing different forms of housing. However, underlying the use of such standards was the belief that, by improving the physical environment, not only could health and safety be improved but social problems could also be alleviated. This assumption was misguided. Referring to the many failures of high density public housing projects built during the 1950's and 1960's, Weidemann and Anderson arrive at the conclusion that, "The quality of residential environments depends upon more than structural soundness and the presence of prescribed plumbing fixtures. It depends, also, upon acceptance by its residents (Weidemann and Anderson, 1979)." Penelope Gurstein and David Vanderburgh echo this sentiment. They feel it has, "become clear in recent years that a "minimal" approach to meeting basic needs does not actually provide all that residents need for life; nor, in the long run, does it meet the social policy objectives of housing for the wider society (Gurstein and Vanderburgh, 1993)." In addition to meeting physical design criteria, housing must also sustain non-physical needs of residents before they will feel satisfied.

Considering Pacione's five components of home evaluation, it is apparent that similar evaluative standards have not been developed which are derived from what residents feel are desirable and essential elements of a home. Generally, researchers are attracted to numerical data because it is seemingly so much more precise and impressive than the less quantifiable and subjective information derived from the feelings, comments and patterns of residents (Anderson et al, 1974; Lynch, 1981). It seems reasonable to demand that any evaluation of housing satisfaction should attempt to understand the preferences and immediate experiences of the very people who live in a housing development. In response to this issue, housing satisfaction research has taken more of a user's point of view since the 1970's. Residents' satisfaction is now considered to be an acceptable criteria for the evaluation of housing (Anderson et al, 1974; Anderson and Weidemann, 1979; Greenberg and Greenberg, 1977).
Research in this field has discovered that residential satisfaction is influenced by several interrelated issues that deal with the physical, social, and management aspects of the whole living environment (Fried, 1982; Galster and Hesser, 1981; Gruber and Shelton, 1986; Levy-Leboyer, 1993; Marans, 1975; and Anderson and Weidemann, 1982). However, these factors are quite irrelevant if basic services, such as sanitary and cooking facilities do not meet the needs of residents. Ultimately, residents will not feel satisfied in any living arrangement without these basic requirements because adaptation tactics employed by residents can not adequately replace their absence (Galster and Hesser, 1981). Above this consideration, the overall degree of residential satisfaction is dependent upon contextual qualities of the dwelling unit, the neighbourhood, and by the personal desires and needs of the individual.

In an attempt to understand how all these factors interplay with one another, a post-occupancy evaluation of 121 residents living on the south shore of False Creek in Vancouver was conducted in 1979. As the first phase of a major urban renewal project, Canada Mortgage and Housing Corporation (CMHC) was interested in whether this development truly met the needs of residents. Jacqueline Vischer and Andrejs Skaburskis analyzed the results of the survey. They came to some conclusions about residents' satisfaction with medium density condominium and rental apartments which are, in some respects, applicable to the evaluation of mini-suites (Vischer and Skaburskis, 1980). For instance, looking at the reasons people chose to move to False Creek, this survey found in descending importance that: 1) Access to downtown; 2) Attractive development; 3) Proximity to waterfront; 4) Reasonable rent; and 5) Proximity to work were the most attractive attributes of moving to False Creek. In contrast, the reasons given by respondents for leaving their previous residence are quite different: 1) Needed more room; 2) Rent too high; 3) Old place not suitable; 4) Needed less room; and 5) Wanted to buy. Quite simply, these results indicate that design and tenure issues were the main reasons for initiating a move from a previous home and locational attributes were responsible for attracting residents to False Creek. It will be interesting to discover whether a similar relationship exists for residents who chose to move into a mini-suite at 600 Drake.
Vischer and Skaburskis also investigated the question of how satisfied residents were with their new home. Locational attributes such as proximity to the waterfront, parks and the downtown were features that residents rated positively. Importantly, a comparison between the responses of people living in high and lower density developments within False Creek showed equal levels of satisfaction. This finding led Vischer and Skaburskis to conclude the following:

Since the locational attributes are the most valued aspects of False Creek, a tentative conclusion can be advanced: higher density in future development would give more people the opportunity to enjoy the prime location without adversely affecting their appreciation of the neighbourhood.

When evaluating satisfaction levels with mini-suites, this conclusion could prove to be influential. In order to receive permission to build mini-suites in 600 Drake, VLC argued that some people are willing to make a "trade-off" between acquiring the locational attributes (i.e. proximity to CBD, leisure and entertainment areas, and mass transit) that this site offers over attaining more living space. Theoretically, some people in the housing market value or desire these locational attributes more so than the additional living space that one would find in a traditional studio-bachelor apartment.

The Vischer-Skaburskis study seems to support this theoretical premise. Their analysis of residents' satisfaction suggests that the quality of the urban design environment is a more important factor than density. However, because a high density development was not included in this study, Vischer and Skaburskis refrain from suggesting that densities higher than those found at the Heather Neighbourhood (528 units at 54 units per acre) would be equally satisfactory to residents. The density of 600 Drake is 335 units per acre.

Looking at satisfaction ratings that residents gave for various features of their apartments, Vischer and Skaburskis arrive at some fascinating conclusions. Over all, residents are quite satisfied with their homes in False Creek. Most residents derived great satisfaction from the view, private open space and bright sunny rooms characteristic to this development. The primary sources of dissatisfaction were inter-unit soundproofing, heat loss, and small rooms. However,
residents appreciated a "compact lay-out" so dissatisfaction with size may be more a function of inefficient design than areal dimensions.

Soundproofing of the dwelling unit was a major problem. The priority residents attach to it indicates that it is a major factor in residents' perception of crowding. Related to this was the desire of several residents for more privacy. They were dissatisfied with the screening and landscaping of the development as a means to limit "visual intrusion" into their dwelling unit. Quite simply, it seems that the provision of better soundproofing and more careful visual screening of units would have done much to decrease residents' perceptions of crowding. Nonetheless, this study led Vischer and Skaburskis to conclude that residents generally accept higher densities as a feature of urban living. It remains to be discovered whether mini-suite apartments are satisfactory or if they present a living environment which is considered too crowded by residents.

Interestingly, residential satisfaction studies have found that people generally relate positive views about their homes. For instance, Yona Ginsberg's and Azra Churchman's study of 809 female residents living in various types of condominiums showed that 66% of respondents were satisfied with their buildings. However, despite the high level of satisfaction, only 14% of the respondents did not have a specific complaint about the building. Moreover, this study found that although most people were satisfied with their home, 43.6% of these respondents still intended to move in the future. Thus, although they are related issues, housing satisfaction and the desire to move should not be confounded (Ginsberg and Churchman, 1984).

Marc Fried also found that people have positive views about their home, but again, their responses rarely indicate unmitigated satisfaction. Describing three scenarios, Fried explains the positive outlook that residents commonly hold about their home. First, he thinks people eventually become desensitized to sources of dissatisfaction and stress. Second, he thinks a selective factor is involved whereby people who continue to live in a place are often demonstrating their willingness to accept the conditions of a living environment even if they are not completely happy with it. Finally, as previously mentioned, Fried discusses how people are able to moderate negative conditions within their home by selecting who they interact with, by
deciding the amount of time they spend in their home and neighbourhood, and by modifying and
renovating physical elements of the living environment (Fried, 1982). In the end, although
people may not be completely satisfied with their home environment, they normally relate
positive feelings and are quite adaptive and resourceful in minimizing negative aspects of their
home.

Due to this predisposition to view one's home positively, a residential satisfaction study
must probe into the feelings of residents and decipher whether these positive feelings are
genuine. It could be that a resident is truly unsatisfied with what their home offers but, because
of market or social conditions, they are forced to remain where they are and adapt their behavior
as best they can. Understandably, a resident may feel frustrated or embarrassed to admit their
inability to find more suitable housing and rationalize for the researcher (or for themselves) why
they continue to live in their home. With respect to rental mini-suite apartments, an evaluation
of residents' satisfaction must be cognizant of the possibility that some residents will justify their
residence in this form of housing despite holding feelings of dissatisfaction. One way to
overcome this dilemma is to look at the residents' behavior and daily activities in an attempt to
determine whether this housing form conforms with and supports the lifestyle described by the
residents.

It should also be understood that this approach to housing research does not presuppose
unanimity among residents as to what constitutes an optimum living environment. It is likely
that very few people are ever completely happy with their home. Apparently, there is no
definitive barrier at which one form of housing is deemed good or bad. Over time, as a person's
activities, aspirations, and life cycle changes, so do their housing needs. Therefore, the issue of
housing satisfaction should be viewed as a matrix within which a resident balances the positive
and negative attributes of a given dwelling unit to decide if it satisfies particular housing needs.
Naturally, because there is a continuum of housing needs, different people will have different
housing preferences. The objective of planners should be to provide diverse residential choices
and opportunities and assure freedom of access to preferred environments. Although some
housing preferences may be in conflict with the needs of others, it seems laudable to attempt to
reconcile differences and, in effect, maximize housing satisfaction for everyone (Levy-Leboyer, 1993; Rodgers, 1981).

As previously mentioned, the City of Vancouver commissioned Kris Olds to prepare a report on the relevant planning literature and experiences that other North American cities have had with mini-suite apartment housing. Olds discovered that there is a lack of data on mini-suites and only a few cities in North America, namely Seattle and San Diego, have contemplated their impact. In his report, Olds identifies four major issues that should be considered before this type of development is permitted: 1) Identify the needs of user groups; 2) Determine the unique planning and design issues associated with mini-suites; 3) Develop a proper long term project management plan; and 4) Discuss general policy, development, and assessment issues. Since this report was purely exploratory, Olds does not come to definitive conclusions as to whether mini-suites are a satisfactory form of housing. However, he does stress one point. He states, "If this form of housing is approved and regulations regarding it are developed, the regulations should be considered as "demonstration regulations" and post-occupancy evaluations of developed projects should be carried out." In using 600 Drake as a case-study, this residential satisfaction study will attempt to offer one perspective on the evaluation of mini-suite apartments.
CHAPTER THREE
DEMOGRAPHICS AND THE RENTAL HOUSING MARKET

This chapter will discuss how three demographic trends support the premise that a consumer sub-market exists for mini-suite housing. Population growth, a concentration of younger people, and shrinking household sizes are profoundly impacting the Vancouver rental market. Coupled with these demographic trends is the fact that Vancouver's rental housing market is aptly described as being "tight". In other words, the market has historically experienced low vacancy rates, limited new rental apartment construction, and high rental rates. A brief account of these interrelated demographic and market features will present the general conditions which lead VLC to initiate its proposal to build a mini-suite apartment building at 600 Drake.

3.1 Population Growth

Over the past forty years, the population of the Vancouver Metropolitan Region has risen substantially. The most recent census data, listed in Table 1, shows the region grew from 1.52 million people in 1986 to 1.78 million people in 1991. This 3.2 % annual population growth rate translates into over 50,000 new residents being added each year. The growth has been comprised of one-third from natural increase, one-third from migration from the rest of Canada, and one-third from international migration (Baxter and Wang, 1993). Understandably, rapid population growth generates demand for various forms of housing.

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Vancouver</th>
<th>Total Metro Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>347,141</td>
<td>634,602</td>
</tr>
<tr>
<td>1956</td>
<td>369,068</td>
<td>750,818</td>
</tr>
<tr>
<td>1961</td>
<td>388,058</td>
<td>890,368</td>
</tr>
<tr>
<td>1966</td>
<td>413,657</td>
<td>1,001,545</td>
</tr>
<tr>
<td>1971</td>
<td>430,199</td>
<td>1,166,095</td>
</tr>
<tr>
<td>1976</td>
<td>414,409</td>
<td>1,269,939</td>
</tr>
<tr>
<td>1981</td>
<td>419,223</td>
<td>1,396,380</td>
</tr>
<tr>
<td>1986</td>
<td>435,991</td>
<td>1,523,396</td>
</tr>
<tr>
<td>1991</td>
<td>477,748</td>
<td>1,781,119</td>
</tr>
</tbody>
</table>

Table 1: Population Growth in Vancouver

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<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Vancouver</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Total Metro Region</td>
<td>3.4</td>
<td>3.5</td>
<td>2.4</td>
<td>3.1</td>
<td>1.7</td>
<td>1.9</td>
<td>1.8</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Note: City of Vancouver population includes the University Endowment Lands
Interestingly, when one analyzes the localized break-down of population growth statistics, it is clear that the City of Vancouver has not been growing as fast as the total metro region. For instance, between 1986 and 1991, the City of Vancouver's population rose annually by only 0.9%, increasing from 436,000 to 478,000 people. In contrast, Surrey-White Rock grew annually by 5.9% from 196,000 to 262,000 people (Baxter, February 1993). This city center/suburban dichotomy is predominately a result of the fact that the vast majority of undeveloped land in the region is situated in suburban areas.

The growth that has been accommodated within the City of Vancouver has generally been accomplished through schemes which involve the conversion of existing housing stock, the rezoning of industrial areas to residential uses, or the up-zoning of existing neighbourhoods to higher density forms of housing. These types of planning responses are quite effective in absorbing population growth but, as some of these options are functionally exhausted over time, the city will have to find new ways of accommodating those people who choose to live in the City of Vancouver.

A report prepared by David Baxter for the Greater Vancouver Regional District (GVRD) Strategic Planning Department forecasts substantial population growth for the Metropolitan Vancouver Region over the next decade. With annual increases of between 45,000 and 50,000 people, the total population for Metropolitan Vancouver is expected to be 2.21 million by the year 2001. A long-term projection pegs the population at 2.97 million for the region by the year 2021 (Baxter, March 1993). To break it down to a civic level, the B.C. Central Statistics Department forecasts the City of Vancouver will add 75,000 people and climb to a total population of 553,550 residents by the year 2001 (Central Statistics Branch, June 1993).

Major infrastructure projects, such as an expanded rapid transit network or significant rezoning and densification planning initiatives, will greatly influence and direct where future residents decide to live. For example, as a result of the recent up-zoning of Downtown South, the City of Vancouver projects that the neighbourhood could accommodate 11,000 more residents if the district is built out to its maximum density over the next twenty years (Downtown
South Community Plan, 1991). In any event, it is apparent that population-based demand for new housing will continue into the near future.

### 3.2 Age Structure

The Vancouver census metropolitan area (CMA) has a predominately young, adult population. For example, residents between the ages of 20 and 39 years represent 35.0% of the total population (1991 Census of Canada, Cat. 95-388). As Chart 1 demonstrates, the age structure for the City of Vancouver is very similar. The major difference between the two distributions is that children under 19 years of age make up a smaller portion of the population in the City of Vancouver. This difference is accounted for by people in the 20 to 39 year old age bracket who form an equally larger share of the City's population. This concentration of young adults is even more pronounced in Downtown Vancouver where residents between the ages of 20 and 39 years represent 48.6% of the total population (1991 Census of Canada, Cat. 95-388).

![Chart 1: Population Age Distribution](image)

The City of Vancouver's young age profile impacts the housing market significantly. Typically, people in their twenties and early thirties are at the beginning of their career track, they have yet to attain their maximum income earning potential, and they are more likely to be leading a "singles" lifestyle. It seems logical to expect that this segment of society is less able to afford or does not even desire large amounts of living space. Instead of single family dwellings,
this sector of society is attracted to smaller forms of housing such as rental apartments, condominiums, or shared living arrangements.

This expectation is born out in two ways. In 1991, 59.2% of the households in the City of Vancouver were renters. In Downtown Vancouver, the home tenure ratio is even more imbalanced with 89.0% of the households being renters (1991 Census of Canada, Cat. 95-388). There seems to be a direct relationship between a resident's age and home tenure. For example, the data for Downtown Vancouver illustrate how younger people are attracted to the area and the vast majority of these people live in rental apartments. However, it is unclear whether this relationship is a reflection of young people’s desire to live in the downtown or if it is due to the simple fact that a great deal of Vancouver’s rental stock is located in the core area. Perhaps both of these issues are equally important.

<table>
<thead>
<tr>
<th>Year</th>
<th>$0 - $150,000</th>
<th>$151,000 - $299,000</th>
<th>Over $300,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>1,522</td>
<td>518</td>
<td>131</td>
</tr>
<tr>
<td>1990</td>
<td>948</td>
<td>476</td>
<td>154</td>
</tr>
<tr>
<td>1991</td>
<td>1,518</td>
<td>934</td>
<td>179</td>
</tr>
<tr>
<td>1992</td>
<td>1,622</td>
<td>1,381</td>
<td>217</td>
</tr>
<tr>
<td>1993</td>
<td>916</td>
<td>893</td>
<td>194</td>
</tr>
<tr>
<td>1994</td>
<td>1,334</td>
<td>1,513</td>
<td>304</td>
</tr>
</tbody>
</table>

*Source: CMHC - Vancouver Branch - Market Analysis Data Base*

A second manifestation of the impacts of a young age profile can be seen in the condo market. Sales of lower priced condominium units have flourished while sales of larger and more expensive units represent a less significant segment of the market. Table 2 illustrates how the vast majority of condominium sales in the City of Vancouver are low and moderately priced units. Since 1989, apartments priced over $300,000 have only represented from between 6.0% to 9.8% of the condominium market. This information indicates that there is strong consumer demand for less expensive condominiums. Moreover, because the condominium sales market is generally guided by price per sq. ft. comparisons, it follows that affordability is directly linked to condo unit size. In order to satisfy demand for less expensive units, developers have responded by building smaller sized condominiums. Whether one looks to the rental or
condominium housing sectors, it is evident that the City of Vancouver's young age profile is partly responsible for fueling strong consumer demand for smaller and more affordable forms of housing.

3.3 Household Size

Demographic data for the City of Vancouver indicate a clear trend towards smaller households. Table 3 illustrates this adjustment in household configuration. The average household size in 1951 was 3.3 persons per household. In 1991, this measure sat at 2.3 persons per household. In only a few decades, the average size of households in the City of Vancouver has decreased 30%. In a report titled "The State of Canada's Housing", C.M.H.C. provides an explanation for why the average size of households have declined. For example, compared to few decades ago, couples are having fewer children. Furthermore, as "baby boomers" have moved from the 15 - 24 year old age group to the 25 - 34 year old group, they have set up their own households. However, the popularity of marriage and traditional family structures has declined among this population cohort. As a result, there has been a rapid increase in the number of single-person households. Higher divorce rates among the general population and an increase in the numbers of elderly widows and widowers are also responsible for increasing the number of single person households (CMHC, 1994). Two profound consequences result from the trend towards smaller households.

Table 3: Household Size for the City of Vancouver

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Persons Per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>344,833</td>
<td>101,330</td>
<td>3.3</td>
</tr>
<tr>
<td>1956</td>
<td>365,844</td>
<td>108,953</td>
<td>3.2</td>
</tr>
<tr>
<td>1961</td>
<td>384,522</td>
<td>118,405</td>
<td>3.1</td>
</tr>
<tr>
<td>1966</td>
<td>410,375</td>
<td>138,611</td>
<td>2.8</td>
</tr>
<tr>
<td>1971</td>
<td>426,256</td>
<td>153,417</td>
<td>2.7</td>
</tr>
<tr>
<td>1976</td>
<td>410,188</td>
<td>160,226</td>
<td>2.4</td>
</tr>
<tr>
<td>1981</td>
<td>414,281</td>
<td>173,040</td>
<td>2.3</td>
</tr>
<tr>
<td>1986</td>
<td>431,147</td>
<td>185,790</td>
<td>2.3</td>
</tr>
<tr>
<td>1991</td>
<td>471,844</td>
<td>199,535</td>
<td>2.3</td>
</tr>
</tbody>
</table>


To begin, the direct impact of the formation of smaller, non-traditional household structures has resulted in an increase in the total number of new households. This consequence is
evident in Table 3 where the number of households in the City of Vancouver has increased 97.0 % over the past forty years while total population has increased by 36.9 %. This household reconfiguration generates more demand for housing and, in turn, it serves to exacerbate the pressure already placed upon the market by population growth.

The other implication of smaller households is related to the size and type of housing which people desire. For example, in the Vancouver CMA, 26.8% of the total households are one person and 31.7 % are two person households. In the City of Vancouver, the respective proportions are 38.4 % single and 29.6 % two person households. The proportions for Downtown Vancouver are 66.3 % single and 28.8 % two person households (1991 Census of Canada, Cat. 95-388). In other words, 95.1 % of the households in Downtown Vancouver consist of only one or two people. As one would expect, such households desire smaller forms of housing like apartment or townhouse dwellings. A study conducted for C.M.H.C. titled Rental Housing: A Study of Selected Markets arrives at the same conclusion. It states that non-family households have historically accounted for the lion's share of renter household growth in Vancouver. Moreover, it projects these households will account for about two-thirds of rental household growth in the next decade (Clayton Research, July 1991).

Considered together, the coincidental demographic trends of rapid population growth, a predominately young adult age profile, and rapid but smaller sized household formation support the premise that there will be strong demand for rental apartment accommodation in Vancouver. A market analysis study conducted for VLC in 1989 by Strategic Development Services considered these demographic trends and forecast demand for 31,600 new rental units in the City of Vancouver over the next decade. The report concluded that 3,200 rental units should be constructed annually to the year 1999 (Strategic Development Services, 1989). Realizing that Downtown Vancouver is attractive to younger people who are at the beginning of their career track and to workers holding lower paying service sector jobs, it became apparent to VLC that there would be strong demand for moderately priced rental accommodation in Downtown South. For instance, research on the West End housing market indicated that two-thirds of the households were single, 45 % were between the ages of 25 and 44 years of age, and with an
average income of just $24,152, West End residents earned less than the civic average of $32,390 (Strategic Development Services, 1989). Consequently, this consumer profile led VLC to target the development of 600 Drake to meet forecasted demand for affordable studio-bachelor and one bedroom apartments in Downtown Vancouver.

3.4 The Metropolitan Vancouver Rental Housing Market

In addition to demographic trends, VLC was encouraged by prevailing rental market conditions to initiate the development of mini-suite apartments at 600 Drake. Moreover, by linking demographic data to rental market information, VLC was able to identify target markets of people who theoretically would be interested in living in a mini-suite apartment.

There is strong demand for rental apartments in Metropolitan Vancouver. The key factors which affect this market are the demographic trends previously discussed and the extremely high cost of home ownership in Vancouver (CMHC Rental Market Report, October 1994). For example, in February 1995, the Real Estate Board of Greater Vancouver reported that the median price for detached homes in Vancouver's Westside was $666,000 and, for condominiums, it was $208,880. Vancouver's Eastside registered median prices of $324,000 for detached homes and $141,000 for condominiums. Prices in suburban areas are also quite expensive. The median price for detached houses in Coquitlam was $297,000 and it was $133,500 for condominiums (MLS Sales Facts, February 1995). Prices like these make it very difficult for moderate income earners to finance home ownership, and therefore, they must remain in the rental market until either housing becomes more affordable or their earnings improve. A fragile and uncertain economic climate and rising mortgage financing costs have also prompted many households to rent rather than commit to a home purchase. Reflecting this market reality, CMHC explains that "With about 80% of the demand in the 1991-2001 period to be comprised of lower income household types with relatively lower incomes on average (i.e. non-family and lone-parent households), it is apparent that there is likely to be a shift in rental requirement in the period towards "affordable" product (Clayton Research, July 1991)."
Sustained demand for rental accommodation has put pressure on rental vacancy rates in Vancouver. The rental vacancy rate in October 1994 for Vancouver CMA was only 0.8% (CMHC Rental Report, October 1994). Furthermore, by referring to Graph 1, it is apparent that the vacancy rate has remained below 3.0% for the past 10 years. In turn, such low vacancy rates has put upward pressure on rental rates. For example, depending on the unit size, rental rates have increased on average 3% to 4% per year since October 1989 (CMHC Rental Report, October 1994).

Graph 1: Rental Vacancy Rates

In 1989, VLC's rental market consultants forecasted only 1,900 new rental units would be added to the Vancouver market each year: 500 units from new construction; 600 units from condominium rental; 300 units from non-market sources; 400 units from the conversion or subdivision of existing dwellings and 100 units from detached or townhouse rental. In essence, new rental supply would not meet the forecasted demand of 3,200 units per year. It was this confirmation of a supply/demand imbalance which prompted VLC to pursue the development of a rental building at 600 Drake (Strategic Development Services, 1989).

The fundamental market conditions which existed in 1989 have changed little over the past five years. For example, despite favourable vacancy and rental rates, new rental apartment construction activity remains low. Only 1016 market rental units were completed in the Vancouver CMA in 1994 (CMHC New Housing Report, December 1994). This level of construction activity will do little to alleviate low vacancy rates. CMHC predicts the overall...
vacancy rate to remain in the 0.5 to 1.0 % range with rental rates rising by about 3.0 % over the next year (CMHC Rental Market Report, October 1994).

### 3.5 Rental Market for Mini-Suites in the City of Vancouver

The rental market within the City of Vancouver has closely followed the trends experienced by the Metropolitan region. In October 1994, the vacancy rate sat at 0.7 % and, depending on the unit size, rental rates have risen from between 3.8 % to 5.2 % over the past year (CMHC Rental Market Report, October 1994). Although there is no specific data for mini-suite apartments, Table 4 shows how studio-bachelor apartment rents marked a 4.6 % increase in the past year, moving up from $498 per month in October 1993 to $521 in October 1994. Since 1989, studio-bachelor units have risen 23.2 % from $423 per month to $521 per month.

| Table 4: Market Apartment Rental Rates for Studio-Bachelor Units |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                   | $     | $     | %      | $     | %      | $     | %      | $     | %      | $     | %      |
| West End Zone*    | 437   | 502   | 14.9   | 524   | 4.4    | 519   | -1.0   | 538   | 3.7    | 566   | 5.2    |
| City of Vancouver | 423   | 474   | 12.1   | 476   | 0.6    | 486   | 2.1    | 498   | 2.5    | 521   | 4.6    |
| Metro Vancouver   | 425   | 472   | 11.1   | 472   | 0      | 480   | 1.7    | 494   | 2.9    | 513   | 3.8    |

*Note: West End Zone refers to areas on the Downtown Peninsula West of Main Street.
Source: CMHC October 1994 Vancouver Rental Market Report, Table C2

| Table 5: Apartment Vacancy Rates by Bedroom Type |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
|                   | Bachelor | One Bedroom | Two Bedroom | Three Bedroom | Total Vacancy |
|                   | %     | %     | %     | %     | %     | %     | %     | %     |
| West End Zone*    | 1     | 0.4   | 1.2   | 0.5   | 1.4   | 0.3   | 0     | 0     | 1.2   | 0.5   |
| City of Vancouver | 0.7   | 0.7   | 1     | 0.7   | 0.7   | 0.4   | 0.7   | 0.7   | 0.9   | 0.7   |
| Metro Vancouver   | 0.7   | 0.9   | 1.1   | 0.8   | 1.2   | 0.7   | 1.7   | 1.3   | 1.1   | 0.8   |

*Note: West End Zone refers to areas on the Downtown Peninsula West of Main Street.
Source: CMHC October 1993 and 1994 Vancouver Rental Market Report, Table B1

Statistics for the "West End" zone, which includes areas of the Downtown Peninsula west of Main Street, offer a more specific view on the downtown rental market for studio-bachelor units. For example, Table 5 shows how the vacancy rate for studio-bachelor units in this zone declined from 1.0 % in October 1993 to 0.4 % in October 1994. Inversely, rental rates increased
from $538 per month to $566 over this same time period. Since 1989, the average rent for studio-bachelor units in the West End Zone increased by 29.5% moving from $437 per month to $566 per month in October 1994.

As demonstrated by Graph 1, vacancy rates over the past decade for all apartment types in the City of Vancouver have peaked at 2.7% and dipped as low as 0.3%. According to CMHC, a vacancy rate of between two and three percent is considered to represent a balanced market where rental rates keep pace with inflation. Real rental rate increases are registered when the vacancy rate slips below the two percent barrier (Toscani, 1994). This information confirms the fact that Vancouver’s rental market has not entered an over supply position within the past decade.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Condominium</th>
<th>Rental</th>
<th>Yearly Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Row</td>
<td>Market</td>
<td>Non-Market</td>
</tr>
<tr>
<td>Jan. - Dec. 1994</td>
<td>10</td>
<td>216</td>
<td>0</td>
</tr>
<tr>
<td>Jan. - Dec. 1993</td>
<td>33</td>
<td>424</td>
<td>72</td>
</tr>
<tr>
<td>Jan. - Dec. 1992</td>
<td>4</td>
<td>0</td>
<td>184</td>
</tr>
<tr>
<td>Jan. - Dec. 1991</td>
<td>0</td>
<td>0</td>
<td>184</td>
</tr>
<tr>
<td>Jan. - Dec. 1990</td>
<td>0</td>
<td>130</td>
<td>191</td>
</tr>
<tr>
<td>Jan. - Dec. 1989</td>
<td>0</td>
<td>0</td>
<td>65</td>
</tr>
</tbody>
</table>

*Note: Downtown Vancouver refers to areas on the Peninsula East of Burrard St. and West of Main St.

With historical data showing low vacancy rates and increasing rental rates, one would expect the development industry to respond to these market strengths by building more rental accommodation (Clayton Research, July 1991). As Table 6 demonstrates, this clearly has not been the case. Over the past six years, only 770 units of market rental apartments were built in Downtown Vancouver. Since vacancy rates remain very low, it is self evident that this level of new construction is not appeasing the demand for rental accommodation. In comparison, 2,770 condominium units have been constructed over the same period. The majority of developers find the condominium market to be more attractive than the rental sector because condo development generates a higher return on investment. The rental housing study sponsored by C.M.H.C. found that, "Despite the positive influence of rising rents on rental economics,
increasing costs, particularly for land, resulted in a poor investment environment for rental projects (Clayton Research, July 1991)." As demonstrated by the level of construction activity, the longer investment horizon, high management costs and lower rates of return associated with rental development has made this sector unappealing to most investors.

The 600 Drake and Pacific Point developments completed in 1993 represent 424 units of the new rental units built in the Downtown region over the past six years. With market vacancy rates of between 1.2 to 2.4 % for this given year, both of these projects were readily absorbed. For example, by the end of its first year of operation, 600 Drake was completely occupied. The 216-unit Wall Centre complex represents the only market rental development to be built in 1994. The unit breakdown for this development is 38 studio-bachelor, 56 one-bedroom, 116 two-bedroom, and 6 penthouse suites. Like its two predecessors, this project experienced strong market demand. Completed in April 1994, this building has maintained high occupancy rates over the past several months. The recent success of Wall Centre, 600 Drake and Pacific Point is indicative of the inherent strength of demand for new rental accommodation. There is little doubt in the minds of developers as to whether new rental units will find a ready market. As outlined, however, investment conditions make the condominium market much more attractive to potential investors.

Changing conditions in the housing market have influenced the rental market in another way. In response to higher development costs, new rental apartments have decreased in size. In the early 1970's the average unit size of apartments in Vancouver was 750 sq. ft. More recently, although developers have been building some much smaller apartments, most are still larger than 600 sq. ft. (Housing and Properties Department Policy Report, November 1992). Using Wall Centre as an example, only 17.6 % of the units are studio-bachelor apartments while 53.7 % of the units were two-bedroom apartments. With 425 sq. ft. of living space, these studio-bachelor apartments are still larger than required by civic by-law. Therefore, despite the demographic and market information indicating a potential niche market, VLC's proposal to build mini-suites was a bold move that underscores just how dynamic the Vancouver housing market has become.
There is one other important feature which is swaying the rental market. With 2,047 condominium units currently under construction and an inventory of 409 unsold new units in the region, the Downtown condo market has entered an over supply phase (CMHC New Housing Report, December 1994). Although there is little quantitative data available, it seems that a significant proportion of the condominium units built in Downtown South have been bought by investors who do not intend to live in the units. Subsequently, since rental income offers a means to cover the carrying costs of the capital investment, many of these units have entered the rental market.

Due to the private nature of most of these business dealings, it is very difficult for analysts to assess the magnitude of this rental activity. Estimates of this activity range from 10% to 40% of new condominium development entering the rental sector (Rental Housing Council of B.C., 1993). Whatever the case may be, this type of activity introduces an element of fluidity into the market whereby condominium units easily swing between the rental and sales market. Importantly, this type of activity could have a moderating influence on future rental rate increases because, if the condominium market continues to be over supplied, the total rental stock in the Downtown region could increase substantially.

Although the condo market introduces some potential to alleviate tight market conditions, another factor serves to counteract this benefit. Compared to its April 1994 survey, CMHC found 1,184 row and apartment rental units were converted to home ownership tenure by October, 1994. It also states that this number could be even higher because CMHC surveys only 65% of the units in its study universe (CMHC Rental Market Report, October 1994). Thus, while the rental market is gaining stock from one source, it is losing stock from another. How these two activities counteract one another is unclear. More analysis of these emerging trends is needed to formulate an accurate forecast for the Downtown Vancouver rental market.

Nonetheless, it is clear that the rental market conditions prevalent today (low vacancies, rising rental rates, and limited new rental construction) have changed little since 1990 when VLC decided to file an application to build 600 Drake. This discussion will now describe in more detail the target market that VLC envisioned for its mini-suite development at 600 Drake.
3.6 Target Market

The demographic trends for the City of Vancouver indicate a population distribution skewed towards young adults. Logically, VLC decided to design and market mini-suite development to meet the needs of people in the 20 to 35 year old age group. Presumably, the small size of mini-suite apartments makes it feasible to market the units at rental rates less than those charged for standard sized, studio-bachelor apartments. VLC expected this price feature would be attractive to entry level, service sector workers who want to be close to their job in the CBD but can not afford to rent or buy larger forms of housing in this part of Vancouver.

VLC felt there might also be an opportunity to accommodate people who simply do not need or want larger areas of living space. This market would consist of people who are used to smaller living spaces, do not spend a lot of time in their homes, or are highly mobile. Downtown South offers an urban lifestyle which is particularly attractive to such people because it is situated near the various recreational and entertainment attractions of the downtown core. Two examples of this market are people who have recently moved out of the family home or students who are enrolled in an educational program.

Finally, VLC predicted that people who conduct business in Vancouver for short periods of time could form another potential market for mini-suite apartments. It was expected that these people would maintain a primary household in another community such as on a Gulf Island or in the Interior of B.C. However, some business users could even be based in a more distant city such as Hong Kong. The reasoning behind this assumption was that, in addition to being a convenient place to stay while in Vancouver, a mini-suite apartment offers advantages in cost and maintenance while it sits empty for extended periods of time.

A post-occupancy survey of residents will identify the types of people who are actually living in the mini-suite apartments at 600 Drake and confirm whether they match the projected target markets for this development. Without this step, it would be impossible to conduct a meaningful analysis of the liveability of mini-suites. Such a study must understand the particular needs of residents and then look at the design of the units and the building to see if these needs are being satisfied.
An analysis of demographic and market conditions led VLC to propose developing a mini-suite apartment building at the 600 Drake site. This chapter will describe the design process of the project as it progressed from the initial development application stage to eventually receiving civic approval to begin construction. In addition to referencing Development Permit Board minutes, planning reports and architectural concept documents, this overview of the design process relies upon a series of interviews conducted with VLC’s Development Officer, Leslie Foss; the project architect, Dana Fleming who worked for the firm Aitken Wreglesworth Associates; and Ralph Segal, a Senior Development Planner with the City of Vancouver. In explaining why 600 Drake took its present form, this overview will provide the necessary design information on which to base a post-occupancy evaluation of the project.

4.1 Preliminary Proposal

Aitken Wreglesworth Associates made a preliminary development application for the 600 Drake site on behalf of VLC Properties on August 20, 1990. This application proposed the construction of a 12-story, mixed use, residential/office building on the irregularly shaped, 25,091 sq. ft. lot. As part of the Downtown District Official Development Plan, the zoning for this site permitted a 3 FSR residential plus 2 FSR commercial component for a maximum 5 FSR density. The site was also subject to the City of Vancouver’s "Views Policy" which, because the site is situated in a view corridor, instituted a height restriction of only 135 ft. (City of Vancouver Views Policy, 1989).

The initial development plan proposed an 88,676 sq. ft. building of which 13,412 sq. ft. would be devoted to penthouse office space and 75,264 sq. ft. of residential space divided among 200 dwelling units. The residential component also included 2,359 sq. ft. of amenity space. At a total 3.52 FSR, this proposal was well below the 5.0 FSR maximum density for the site. However, with 60% of its units with less than 320 sq. ft. of living space, the proposal was
dependent upon first receiving approval to permit unit sizes smaller than the minimum permitted under Section 10.21.2. of the Zoning and Development By-law.

The proposed 12-story slab tower had base dimensions of 58 ft. by 104 ft. In response to the irregular, narrow and elongated dimensions of the development site and the 135 ft. height restriction, the architects proposed a double-loaded corridor layout for the building floor plate. A corridor layout was chosen over a more traditional point tower design because it maximized floor plan efficiency and minimized construction costs. VLC argued these objectives were paramount considerations if they were to keep apartment rents as low as possible.

The next step in the process occurred on September 19, 1990 when the proposal was reviewed by the Urban Design Panel. The eight member Panel is comprised of the Director of Planning and the City Building Inspector and six members appointed by Council: three members of the Architectural Institute of B.C.; one member from the Association of Professional Engineers of B.C.; one landscape architect; and the Chairman of the Vancouver City Planning Commission. The Panel reviews all major development permit applications and provides urban design advice to the Development Permit Board (City of Vancouver #2, June 1987).

In its evaluation of 600 Drake, the Panel had some concerns about the massing of the building which they felt, "should be located further north on the site, closer to Drake Street, to create a stronger street wall and more open space and distance from the ramp (UDP Minutes, September 19, 1990)." The Panel was also concerned about the separation of office and residential uses. It believed two elevators would be inadequate to serve both residential and office users. Regarding the issue of small unit sizes, the Panel concluded, "This affordable market rental project may address a demand for studio units which the market place is currently not providing (UDP Minutes, September 19, 1990)." Furthermore, the Panel noted that this project also responded to several public objectives such as the aim for creating a social mix of people, incomes and types of dwelling units in Downtown South. Finally, the Panel recommended that the Engineering Department consider a relaxation of parking requirements given the tenure of the building. With its list of concerns and recommendations on record, the Urban Design Panel granted support for this preliminary proposal.
However, the Development Permit Staff Committee conducted its own evaluation of the application. The Committee comprises staff from the Planning, Engineering, Social Planning, Health, and Permits and Licenses Departments. It reviews all major development permit applications before they are dealt with by the Development Permit Board. The Committee receives draft reports from staff which, after a discussion of the relevant issues, files a recommendation to the Development Permit Board.

In this case, the Committee found four major concerns to warrant a rejection of the proposal. The first concern was the building's physical massing and the impacts it posed for the neighbourhood. The building was considered too long and would create negative shadowing impacts on adjacent lots. Greater setbacks from Seymour Street and the Granville Street Bridge off-ramp were also recommended to reduce street noise for residents in the building.

Small dwelling unit sizes proposed for this project composed the second major problem for the Committee. The Committee felt that, although some core needy housing projects containing units with less than 320 sq. ft. had been approved through application to the Board of Variance, the same rationale for reducing the unit size could not be employed for this market rental project. The Committee was concerned about the precedent that would be set for market housing if this proposal received a relaxation of the minimum unit size requirement. The Committee feared such a relaxation might, in effect, create a new and lower standard for rental housing.

The third major design concern dealt with vehicular access from the building on to Drake Street. The Committee felt this access would seriously hinder traffic flow. Related to this issue was the fact the number of parking spaces provided in the proposal did not meet civic standards.

The final concern was listed by the Committee under "Economic Considerations". In this section, the Committee said that it was uncomfortable with the Urban Design Panel's approach of compromising on urban design issues as a means to accrue the public benefit of secured rental accommodation. The Committee felt the Panel did not have the mandate to make such a linkage.

Due to these four major areas of concern, the Development Permit Staff Committee did not support the proposal as submitted, and the Development Permit Board was advised to refuse
the application. However, the Committee did state that it would be prepared to support a scheme which responded to nine specific design changes related to building massing, dwelling unit sizes, and vehicular access.

On October 15, 1990 the Development Permit Board formally considered VLC's development proposal for 600 Drake. The three member Board comprises the Director of Planning, the City Engineer, and the Director of Social Planning. Chaired by the Director of Planning, the Board makes all decisions. However, it is given advice by an Advisory Panel consisting of seven members appointed by Council. Two members represent the development industry, two from the design professions, and three general public members. As advisors to the Board, Panel members are polled for their opinions but cannot vote (City of Vancouver #3, June 1987).

All Board meetings convened to deal with Development Permit Applications are open to the public. Representatives of the applicant are present to discuss their proposal. Anyone interested in the development may also attend and make presentations to the Board. At the conclusion of the debate, the Board votes on whether to refuse or approve the application. Approvals are usually granted subject to a set of development conditions.

Presentations were made to the Board by both Ralph Segal, the Development Planner administering the application and David Podmore, President of VLC Properties. At this meeting, Victoria Garland, Director of Housing and Properties, introduced some findings from Kris Olds' report on small, self-contained apartments. Importantly, when asked if her department would support the creation of mini-suites, Ms. Garland stated her support for such a proposal. Upon considering these presentations, the Board moved and passed the motion to approve, in principle, the development application in accordance with nine items requested by the Development Permit Staff Committee. However, one key amendment was made to the conditions to read:

The applicant request that the Development Permit Board relax Section 10.21.2 under Section 3.2.4 to allow the proposed dwelling unit sizes, the Board agreeing on the basis that there was a need for smaller sized units than the By-law allowed, especially in the Downtown, and that the marketplace to date was not supplying those types of units (DPB Minutes, October 15, 1990).
Section 10 of Zoning and Development By-law covers the general regulations for development in the City of Vancouver. The minimum dwelling unit size regulation is covered in Section 10.21.2 which states:

Each dwelling unit shall have a minimum floor area of 37 sq. m. (400 sq. ft.), except that the Director of Planning may permit a lesser floor area to a minimum of 29.7 sq. m. (320 sq. ft.) if he is satisfied that the design and location of the unit provides satisfactory living accommodation, having regard to the type of occupancy proposed (City of Vancouver, Zoning and Development By-law, September 1988).

Section 3.2 of the Zoning and Development By-law defines how provisions of the By-law may be relaxed. In order to approve dwelling unit sizes less than 29.7 sq. m. (320 sq. ft.) in 600 Drake, the Development Permit Board employed its power to do so with Section 3.2.4, commonly referred to as the "hardship" clause. The By-law states:

The Development Permit Board, in the exercise of its jurisdiction, may relax the provisions of this By-law in any case where literal enforcement would result in unnecessary hardship. In granting any relaxation, the Board shall have regard to the intent of this By-law, the regulations and policies of any Official Development Plan, and such other applicable policies and guidelines adopted by Council (City of Vancouver, Zoning and Development By-law, November 1986).

This amendment by the Board provided the legal means to by-pass civic minimum unit size regulations and permit the incorporation of mini-suites into the design of 600 Drake. Granted, this was viewed by some as a fairly liberal interpretation of the hardship clause. In its assessment, the Board felt VLC's proposal offered sufficient benefits to the public to justify a further relaxation below the 320 sq. ft. size requirement. As Ralph Segal explained, "Three considerations influenced this assessment: 1) The development serves a niche market which desires this type of housing; 2) Extensive amenities provide an outlet for residents by giving them the ability to socialize outside the unit but within a secure and pleasant environment; and 3) The actual design of the units was commendable and provides residents with all basic services."
This relaxation was critical for VLC to proceed with a market rental development at 600 Drake. With the initial approval stage complete, VLC had to work in consort with the architect to determine whether it would be possible to redesign the development to address the Board's conditions for approval and remain an economically viable project.

4.2 Revised Development Proposal

The architects submitted a revised plan for 600 Drake on December 6, 1990 (See Diagrams 1 and 2). This 13-story, 79,621 sq. ft. proposal included 192 dwelling units of which 64% were less than 320 sq. ft. The plan also designated 4,242 sq. ft. of ground level and mezzanine space to amenity uses including an exercise training room, library lounge, television and entertainment centre, central laundry room, kitchen, and vending machines (See Diagram 3). The new proposal did not include commercial office space. By simply deleting the office space component, the issue concerning the separation of elevator access was nullified. The proposal also increased the number of parking spaces to 141 so this civic condition was also satisfied.

With a 3.17 FSR, the revised plan exceeded the allowable residential density of 3.00 FSR, but it did respect the 135 ft. height ceiling.

The unit break-down for the building included 144 small studio suites; 21 large studio suites; 20 "junior" one-bedroom units; 1 special needs apartment; and 6 penthouse apartments (See Diagram 4). The 144 small studio units range in size from 281 - 330 sq. ft. of living space. There are ten slightly larger studio units with 381 sq. ft. and ten units with 406 sq. ft. One large studio unit has 507 sq. ft. of space. As referred to by VLC, the "junior" one bedroom units incorporate a bed alcove area. Ten of these units are 361 sq. ft. in size and 10 more offer 406 sq. ft. of space. The special needs unit is designed for a person with a disability. This unit has 467 sq. ft. of living space. The penthouse units are typical one-bedroom units ranging in size from 533 - 616 sq. ft. (VLC, 1993).

In response to the development conditions set by the Development Permit Board, the length of the structure was reduced by 19 ft. and the entire building was shifted 9.5 ft. closer to Drake Street. These adjustments satisfied the City's desire to increase southerly open space on
Diagram 1:  DRAKE ST. LOOKING SOUTH

Diagram 2:  SEYMOUR ST. ELEVATION LOOKING WEST
Diagram 3: 600 Drake - Floor Two Unit Plan

Diagram 4: 600 Drake - Floors Three Through Eleven Unit Plan
the site and to reduce bridge noise for residents. Furthermore, the City had to balance conflicting objectives of two different civic policies: one policy encourages the provision of rental housing while another strives to minimize negative shadowing and view impacts of new development on neighbouring properties. The massing adjustment and repositioning of VLC's proposal towards Drake Street was seen by the planners as a compromise solution which adequately respected both public policies.

After a review of the revised proposal, the Development Permit Staff Committee made a recommendation to the Development Permit Board on January 9, 1991 to approve the application subject to a series of final development conditions. Among others, two key conditions were that: 1) A covenant shall be required regarding the furnishing and use of the amenity areas by all occupants of the building; and 2) Arrangements made to the satisfaction of the Director of Housing and Properties for assured rental housing for the life of the building (Development Permit Staff Committee, January 9, 1991). On this same day, the Urban Design Panel evaluated the revised proposal and despite raising some concerns about the proposal's architectural expression, dwelling unit plans, street edges and landscaping, it granted unanimous support for the project.

The Development Permit Board met on February 4, 1991 to consider VLC's development application. After some discussion about permitting the development at a density 0.17 FSR above the 3.00 FSR residential maximum for the site, it was decided by the Board to approve the application in accordance with the Staff Committee recommendations. The Board also approved a density relaxation with the "hardship" clause. Essentially, VLC had been given the go ahead to begin development of 600 Drake. With this hurdle passed, Dana Fleming began to work with VLC to refine many elements of the building design. A brief account of this process will explain how and why the mini-suite apartments were configured.

4.3 Detailed Design Process

In addition to demographic and market indicators, the physical dimensions of the development site greatly influenced VLC's decision to build mini-suites. The majority of new
high-rise residential construction in Vancouver is modeled upon an 80 X 80 ft. point tower envelop which maximizes apartment views and minimizes negative shadowing effects. However, the combined effects of an irregular and elongated site, lane easements, street setbacks, and height restrictions combined to restrict the construction of such a structure at 600 Drake.

For these reasons, Fleming's initial double loaded corridor proposal suggested a floor plate with small unit plans of only 340 sq. ft. of living space. Although VLC rejected this first design, VLC was convinced that a small unit plan was the ideal type of development for the site. A floor plate with traditional 500 to 800 sq. ft. apartments could not be incorporated into this type of structure in a cost effective manner and still maximize the permitted site density. Moreover, VLC had conducted some of its own research on successful SRO forms of housing located in San Francisco, San Diego, and Montreal. Therefore, VLC decided to propose an efficient but definitely more risky small unit design for 600 Drake. As Leslie Foss explained, "We decided to take a creative approach and proposed mini-suites as an innovative solution to the development of this difficult site."

Since he had completed his architectural thesis on small dwelling unit design and he had worked on two Vancouver social housing projects which contained small units (Four Sisters Housing Co-op and Jubilee House) Dana Fleming was deemed by VLC to be the best architect for the project. At the onset, it was quite clear to Fleming that the design of this project would be client driven. The expectation that this proposal would be controversial inspired VLC to be actively involved at every stage of the design process. They were committed to make this project a success.

With the directive from VLC to design a building with units containing between 280 and 400 sq. ft. of living space, Fleming experimented with various building forms. However, the inherent site constraints brought him back to the realization that a double-loaded, corridor structure would be the most practical building form for the site (See Diagram 4). Moreover, with a mini-suite floor lay-out, this configuration minimized the amount of space devoted to doorway accesses and hallways. This consideration was paramount. Dana Fleming underscored this point
with his comment that, "The bottom line of any design, from a developer's perspective, is in attaining the critical 85% building efficiency. By going with a double loaded corridor design and not a point tower, the development attained 84% efficiency plus extensive amenity areas."

Building economy and efficiency also influenced the dimensions of individual suites. From a structural perspective, it was realized that a basic 25.6 ft. wide module between main building supports would allow for both the width of three parking spaces in the underground parkade and the division of the residential space into two, 12 ft. 9 in. wide residential units above. With the basic module dimensions defined, there were only a few options on how to handle the interior design of the mini-suites (See Diagram 5).

Fleming relied heavily on his experiences with designing small residential units for other developments. For instance, Jubilee House was built in 1984 to provide safe, fully serviced housing for residents living in substandard SRO hotels on Granville Street. This building has 87 units, of which 82 are studio-bachelor units with roughly 280 sq. ft. These units are self-contained with a three-piece bathroom and a small-scaled kitchen unit. The experiences with this building particularly shaped Fleming's design of 600 Drake. The units in Jubilee House included a 1.3 m. wide closet to provide residents with extra storage space. However, many residents chose to adapt the space by placing their bed in the closet so that more area was available for living room furniture. In response, Fleming designed the units in 600 Drake to retain as much open and flexible space as possible by not devoting large amounts of space to closets.

It should also be noted that VLC was very active in refining the interior designs of the apartments. For instance, Fleming suggested utilizing small-scale, component kitchens in 600 Drake similar to those used in Jubilee House. The one-piece kitchen units contain a 2-burner stove, small sink, oven and a "bar" size refrigerator. VLC rejected this proposal and decided to incorporate compact 2 ft. wide kitchen appliances. In hind sight, Fleming thinks this was a good decision because standard appliances are more marketable and appealing to residents. With the same motivation, VLC decided to include a self-contained three-piece bathroom in each unit. Other options, such as placing the sink and vanity mirror outside of the bathroom were
considered, but again, VLC decided residents would appreciate a traditional bathroom layout (See Diagram 5).

These decisions determined how much space would be devoted to the kitchen and bathroom areas, and essentially, the rest of the unit layout followed. With the constraints of accommodating a self-contained bathroom and standard kitchen appliances within a 12 ft. 9 in. by 22 ft. unit shell, Fleming worked with VLC to develop a series of interior design mock-ups. They used these mock-ups to experiment with different bathroom, kitchen and living area configurations. At this time, VLC also introduced "Murphy" beds in some units as a practical space saver. This experimentation eventually led to one unit layout which was the most efficient, liveable and economic means of organizing the space. A half-inch scale model of the unit was assembled and decorated with doll furniture so that final design features could be visualized. This design process finally arrived at the unit layout illustrated by Diagrams 4 and 5.

With regard to soundproofing, the building underwent a standard acoustical analysis and building construction followed normal guidelines. One important design element was the use of glass patio doors and balcony railings. In addition to allowing for ample fresh air circulation, these doors create a bright and open environment within the apartments. The glass balcony railings serve as a partial sound barrier when the balcony door is open but they do not block outward views or natural light from entering the mini-suites.

The issues of crowding and privacy were also addressed in the design of 600 Drake. From Fleming's perspective, the building was designed with the assumption that the people attracted to 600 Drake would appreciate that they were moving into a different kind of apartment with special features such as the amenity areas. The open, two level lounge area complete with a big screen television, library, kitchen, and comfortable furniture pieces is meant to invite residents to use the facility at their leisure. One successful innovation is the laundry room window which allows residents to continue watching the television as they tend to their clothes (See Photos 3 through 6). Fleming's conceptualization of the amenity areas is very revealing.
He explained:

These areas were meant to create a gathering place so residents would not feel trapped inside their mini-suite. We took a co-housing or dormitory approach whereby, if people choose to do so, they can use the amenity areas as their living room. However, it takes a certain type of person who is willing to take advantage of these amenities. Therefore, the mini-suites were designed to be fully self-contained which, in effect, leaves residents with the choice to take advantage of the building's common facilities.

Another feature of the building which helps foster a sense of community is the 24-hour front desk/concierge service. Residents must pass by the office on their way from the front entrance to the elevators. As a result of this frequent contact, staff and residents begin to recognize and build relationships with one another quite quickly. This personal recognition greatly improves building security as strangers are easily identified. Moreover, since Downtown South continues to have a fairly active street prostitution and drug trade, it is reassuring to residents that there is someone always close at hand who can be depended upon for assistance (See Photograph 3).

As required by the City, two other design elements were incorporated into 600 Drake. VLC was required to provide a 200 cubic ft. storage locker and one secured bicycle storage space in the parkade for each unit in the building. The City felt these requirements were warranted since the apartment units would have limited storage space. Moreover, it was expected that most residents would lead an active lifestyle and perhaps even choose the bicycle over the automobile as their predominant means of travel.

With approval granted, VLC began construction of 600 Drake in March, 1992. The building was complete and ready for occupancy in August, 1993. The next task of this study is to describe and analyze how satisfied residents are with their mini-suite apartments in 600 Drake.
Photo 3: 24-Hour Front Lobby Office

Photo 4: Fitness Facility
Photo 5: Television Lounge and Central Laundry Facility

Photo 6: Lounge and Library Mezzanine
CHAPTER FIVE

PART ONE SURVEY METHODOLOGY AND RESULTS

This research project focuses on residents' satisfaction with mini-suites in the first market development built in Vancouver. The completion of 600 Drake provided a unique opportunity to conduct a post-occupancy evaluation of mini-suite apartments. This chapter will describe the research methodology employed in this case-study and, in turn, it will analyze and discuss the results of the survey.

5.1 Part One Survey Methodology

A two-part, longitudinal survey was deemed to be the most appropriate and effective means of assessing residents' satisfaction. The prospect of comparing residents' satisfaction with mini-suites in 600 Drake to satisfaction ratings of people living in one-bedroom apartments in a different building was contemplated. However, the results of such a comparison would be suspect because residential satisfaction is dependent upon many factors including the location, management, design, services, and cost of a building. As a result, it would be very problematic to isolate the direct impacts of unit size on satisfaction levels.

The main advantage of conducting a longitudinal survey is it allows for a comparison of satisfaction levels over time to see if residents' opinions change. In this study, there was a five month period between both parts of the survey. Furthermore, by ensuring that residents have lived in their mini-suite for an extended period of time, one is assured that satisfaction ratings are reflective of day to day living experiences rather than the first impressions of a person who has just moved into a new home.

VLC gave permission to conduct the study at 600 Drake with the explicit condition that the survey be unobtrusive and not disruptive to residents. A mail-back questionnaire survey was determined to be the most effective means of soliciting the viewpoints of people living in 600 Drake. Mail-back questionnaires have the ability to explain and illicit information in a detailed and thoughtful manner. Furthermore, they are less disruptive because people can choose
to complete a questionnaire when it is most convenient (Dillman, 1978; Marans, 1975; Welch and Comer, 1988).

Another major benefit of using a mail-back format is that it offers an economical and organizationally simple means of conducting a survey of a fairly large sample population. Due to the moderate budget available to conduct this research project, financial and manpower costs were important considerations in determining the sampling methodology.

The lack of personal contact is a significant limitation of a questionnaire format because there is little opportunity to prod people along with responses and explore their ideas. Consequently, questionnaires must be easy to follow, self explanatory and logically designed. If not, respondents may become confused and frustrated. Literacy levels of a study population should also be considered in the design of a survey. In this study it was felt that literacy problems would be negligible because preliminary discussions with the building management confirmed that most residents are well educated, service sector workers.

It should be stated that a telephone survey methodology was considered as an alternative to mail-back questionnaires. However, the unreliability of reaching residents at home led to the conclusion that a telephone survey would be a time consuming format. In addition, it was hypothesized that many residents would be leery of an anonymous interviewer when the survey topic involves personal information about their home environment. A mail survey offers more scope to explain to residents the intent and value of the project and, as a result, increases the credibility of the researcher.

Ultimately, focus group discussions or in-person interviews are the ideal method for gathering information about a residents' attitudes and perceptions of where they live. However, VLC's requirement to make the project as unobtrusive as possible precluded this format as a possible survey option. In the end, after considering the prime objectives of the case-study and relating these to the various options for collecting information, it became apparent that a mail-back questionnaire survey was the most effective, economical and accurate means of evaluating residents' satisfaction with mini-suite apartments.
5.2 Part One Survey

The purpose of the Part One Survey is to determine the main reasons why people chose to move into a mini-suite apartment at 600 Drake. In order to develop a socio-demographic profile of the types of people who have moved into the building, this survey also asked residents for general background information about themselves and to describe the types of work, school and leisure activities they enjoy on a weekly basis.

The research population was estimated to be 184 residents. Since VLC resists leasing mini-suites to couples, this population estimation was arrived at by assuming one person lives in each mini-suite apartment. The population estimation also discounted from the survey the six penthouse apartments, the one special needs apartment and the one large studio apartment because these units are too large to be classified as mini-suites. Since it was unclear what kind of response rate would be achieved by this survey, it seemed prudent to try to include every resident in the study. Hence, the sample population of the Part One Survey included the entire mini-suite population of 600 Drake.

The Part One Survey was designed to be exploratory and provide ample opportunity for residents to describe their own viewpoints on why they chose to live in 600 Drake. It was hoped an open-ended approach would provide useful insights and direction on how to design the follow-up segment of the study. Appendix I provides an example of the Part One Survey questionnaire. A cover letter was attached to each questionnaire which introduced residents to the research project and informed them of the intent of the endeavor. Furthermore, it stressed the value of their comments and described how their ideas may have an impact on future mini-suite development.

In order to increase the likelihood that respondents completed the questionnaire, its content was kept as simple and concise as possible. Self administered questionnaires must provide clear instructions and follow a straight forward format or else the respondent may misinterpret questions. Even worse, respondents may become confused and not complete the questionnaire.
Section A of the questionnaire is interested in the major reasons residents chose to move into 600 Drake. It was decided that a five-point, ordered categoric scale would provide a good means to measure the relative importance of certain factors in the housing decision. This format provides a quick and easy medium for respondents to answer. Furthermore, the results can readily be quantified and statistically analyzed. However, value scales such as these do not provide a complete explanation of how a particular factor may influence a person's decision to move into their home. In response to this limitation, the last question of Section A asks respondents to expand upon or discuss any other reasons that influenced their decision to move into 600 Drake.

Section B is primarily concerned with the daily work, school and leisure activities that respondents partake on a weekly basis. Open-ended in style, the questions are intended to encourage respondents to explain their activities in their own words. This information is needed to describe and interpret the lifestyles enjoyed by residents of 600 Drake.

The final section of the questionnaire consists of personal background questions. Information from Section C is necessary for building a socio-demographic profile of the residents. Generally, to ensure respondents were forthcoming, the type of information requested did not delve into exceedingly confidential matters. For example, because it is not essential to the findings of this study, personal income data is not requested. It is felt that an adequate impression of economic status can be achieved through questions related to educational attainment and employment. Moreover, the combination of data from Sections B and C generate a fairly detailed description of the types of people who are attracted to mini-suite apartments.

5.3 Administrative Framework

A study involving human subjects necessitates that researchers be cognizant of ethical issues. In designing a questionnaire, one must reflect upon whether the information asked for is essential to the study. Anonymity and privacy considerations should also be factored into the administration of a survey. Results of a survey shouldn't associate individuals to their responses because this would break the sanctity of trust between the researcher and participants. In order to
follow proper university procedure, an application was made to U.B.C.'s Behavioral Sciences Screening Committee to review the project. The Committee was satisfied the project met U.B.C.'s ethical criteria and it granted formal approval to conduct the survey.

Before embarking on administering the survey, a limited program of questionnaire pre-testing was conducted. Ten planning graduate students were asked to role play as mini-suite residents and fill out the questionnaire. The problems encountered by these students were noted and adjustments were made to the design of the questionnaire.

The management of the sampling process plays a very important role in improving the quality control of data collection. The fact that only one person was involved in the sampling process was advantageous because there was little scope for problems arising with the distribution, collection or interpretation of the questionnaires. In other words, one researcher was in total control of every aspect of the project.

The survey began on March 24, 1994. Questionnaire packages including a cover letter, questionnaire, envelope and a pen were placed under the door of every occupied mini-suite. On this date there were 14 vacant units so a total of 170 questionnaires were distributed. To make it easy for residents to return their sealed questionnaires, a locked return box was placed in the management lobby office of 600 Drake.

Frequent visits were made to pick up questionnaires from the return box and move them to a secure office at U.B.C. Two weeks after the initial drop-off, a "Thank You" card was placed in every mail box of the 170 mini-suite residents. This card served as a reminder to residents to complete and return their questionnaire. In addition, if a survey had been misplaced or residents had some questions about the survey, this card provided them with a contact name and phone number. This same information was also listed on the return box and, because it was be located in the lobby office, the box served to remind residents on a daily basis. To guarantee residents' confidentiality, the staff of 600 Drake did not have access to the questionnaires.

As the questionnaires were collected, a record was kept of those who participated in the survey. This information was crucial for conducting the Part Two Survey five months later. Fifty-six residents of 600 Drake completed and returned questionnaires. This return represents a
32.9% response rate from an initial drop-off of 170 questionnaires. Questionnaire surveys dealing with residential satisfaction commonly achieve response rates ranging from 20% to 40% (Marans, 1975). Evidently, one can conclude that this project was well administered.

5.4 Part One Survey Results

As previously outlined, the primary objectives of the Part One Survey are to determine:
1) The type of people attracted to mini-suite apartments; 2) The activities residents enjoy; and
3) The major reasons which influenced people to move into 600 Drake. In this order, results of these three sections of the questionnaire will be summarized and analyzed.

Personal background information from Section C of the questionnaire reveals that, out of a total fifty-six respondents, thirty-six (64.3%) are male and twenty (35.7%) are female. Furthermore, as illustrated by Chart 2, the age distribution of these respondents is skewed towards a young population cohort with 73.2% of the respondents under 40 years of age. When compared to Downtown Vancouver, which has 48.6% of its population between the ages of 20 and 39 years, it is clear the age profile of 600 Drake is remarkably young.

Chart 2: Age Profile of Residents

[Chart showing age distribution with 46.4% in 20-29, 26.8% in 30-39, 14.3% in 40-49, 1.8% in 50-59, 5.4% in 60-69, 5.4% in 70-79 years]

The results from this section of the questionnaire confirm another hypothesis. Residents do lead a "singles" lifestyle. Only two (3.6%) of the respondents classified themselves as being
married and no one listed themselves as being in a common-law relationship. Chart 3 illustrates the complete break-down of marital status for respondents. These findings are not surprising since mini-suite apartments at 600 Drake were designed for single people and VLC has made some effort to ensure these units are occupied by one person. In light of the earlier discussion about decreases in household size and the rapid formation of single person households, it is obvious this development does represent one housing option for the growing number of single person households living in Vancouver.

Typically, the residents are well educated. For example, forty-eight (85.7 %) of the respondents have graduated from secondary high school and twenty-four (44.6 %) hold a college diploma or university degree. When one considers that only 67.1 % of B.C. residents above 19 years of age hold a high school diploma and only 27.1 % hold a post-secondary degree, the level of educational attainment of residents in 600 Drake is exceptional (Statistics Canada, Cat. 93-328, 1993). Moreover, nineteen (33.9 %) of the respondents indicated that they are enrolled in some form of educational program on either a part or full-time basis.

The types of work and recreational activities residents enjoy was the focus of Section B of the questionnaire. The occupation descriptions provided by respondents were categorized into eight different sub-groups. As illustrated by Chart 4, there is a fairly even distribution among the different sub-groups. One clear relationship illustrated by this distribution is that the vast
majority of respondents work in "white collar", service sector occupations. Only nine (16.1\%) respondents were classified as working in "blue collar" industrial positions.

Another interesting finding of the survey was revealed by the questions dealing with where residents work and study and how they travel to these destinations. Chart 5 shows how twenty-nine (51.8\%) of the respondents indicated that they work or study in the downtown core of Vancouver. In contrast, only six (10.7\%) said they worked at suburban locations.

When queried about what modes of transportation residents use to go to work or school, the responses reflect the primacy of downtown work and school destinations. For example, as illustrated by Chart 6, thirty-eight (67.9\%) of the respondents said they walk at least once a week whereas only fifteen (26.8\%) respondents said they drive an automobile to work or school. Public transit also plays an important role. Over the course of a typical week, twenty-nine (51.8\%) of the respondents indicated they ride the bus or rapid transit.
To discover what types of recreational activities residents enjoy, an open-ended question was posed. As expected, the responses to this question indicates that residents lead a very outgoing lifestyle. Content analysis of their answers indicates that Walking, Gym/Aerobics, Cycling, Reading, Nightclubs/Restaurants, and Movies are the most cited activities enjoyed by respondents.

One can interpret Chart 7 in another way. By simple inference, it illustrates that residents enjoy a great variety of recreational activities. Out of 56 respondents, 24 activities were explicitly listed by two or more people. For simplification reasons, activities listed by only one
person were not included in this graphic. Furthermore, one would imagine that this activity list would grow even longer if every resident had responded to the survey. It can safely be concluded that the residents of 600 Drake lead diverse and active lifestyles.

A summary of the results of these two sections of the questionnaire provides a detailed description of what types of people are attracted to mini-suite apartments. A typical resident of 600 Drake is under 40 years of age, single and holds a post secondary degree. This resident walks or takes public transit to a service sector job located in Downtown Vancouver. Their leisure time is divided between many recreational, entertainment and social activities, most of
which take place outside of their home. By referring back to the section describing VLC's intended target market for 600 Drake, it is striking how well the survey results correspond with the market profile upon which VLC predicated its development plan. It is apparent that the type of people who are attracted to 600 Drake lead an active lifestyle which is dependent upon access to the diverse employment, recreational and social services located in the CBD. Thus, as prescribed by both Gillis and Leung, it seems that 600 Drake matches and supports the activities that residents typically enjoy.

However, the results of this survey do not verify the existence of a substantial business market for mini-suites. Only one respondent indicated that he maintains a primary residence outside of Vancouver and uses the mini-suite as a convenient place to live while in town on business. In this particular case, the resident is married and is raising a family in the Okanagan Valley. Evidently, the business market does not represent a significant portion of the development's resident population. VLC's Leslie Foss also confirmed this conclusion.

Determining which factors most influenced residents' decision to move into 600 Drake is the other main objective of this survey. Section A of the questionnaire asked respondents to rate eight factors on a five-point scale according to how it affected their decision. In order to expand the survey beyond these pre-determined factors, residents were also encouraged to discuss any other reasons that influenced them in choosing a home.

The respondents' ratings of these factors have been tabulated and presented as a series of graphic charts. By ordering the factors from most positive to most negative, the series indicates how different features affected the decision to move into 600 Drake. For example, residents were motivated to move into 600 Drake simply because it is a new building. As Chart 8 illustrates, forty (71.4%) of the respondents rated this factor as being positive and seven (12.5%) respondents regarded it as being somewhat positive.

Written comments indicate residents were attracted to clean carpets and walls and to the brand new appliances offered by a new building. Cockroach infestations common to older West End buildings was another reason cited for being attracted to a new building. The positive rating given to the age of the building is also linked to the low levels of new rental apartment
construction in Downtown Vancouver. An under supply of new apartments means there are few choices for people who desire to live in a modern apartment in this part of the city.

![Chart 8: Age of Building](image)

![Chart 9: Apartment Design & Facilities](image)

Although somewhat less decisively as the building age, five other factors were rated as having a positive impact on the decision to move into 600 Drake. The design of the apartments and common area facilitates received the second most positive rating. As depicted by Chart 9, forty-six (82.1%) respondents rated this factor on the positive side of the scale. Residents generally appreciate the efficient layout and brightness of the apartments. Several people also commented on the nice view they have from their windows. In addition, the amenity areas such
as the fitness room, library, and television lounge were referred to as attractive features of the building.

The building security system was another factor which attracted residents to 600 Drake. Chart 10 lists the response for this factor. Since it is located within a fairly active street prostitution and drug trading district, prospective residents were initially concerned about safety issues. VLC addressed this concern by implementing a security access system and staffing the lobby office 24 hours a day. Residents indicated that this service alleviated their fears of living in the neighbourhood.

![Chart 10: Building Safety](chart10)

![Chart 11: Building Safety](chart11)
As expected, when the ratings for this factor are analyzed according to gender, a relationship is revealed which demonstrates how safety issues are more of a concern to female residents. For example, as demonstrated by Chart 11, females rated the building’s security more positively than males as a reason for deciding to move into 600 Drake. It should also be noted that no other factors showed a gender bias.

![Chart 12: Apartment Availability](image)

The simple fact that there were units available for rent also motivated residents to move into a mini-suite at 600 Drake (Chart 12). This finding is not surprising when one considers how difficult it can be to find affordable rental housing in Downtown Vancouver. Some of the residents stated that they needed to find a place quickly and there were not that many studio-bachelor units available in this part of town.

The Rent Increase Protection plan offered by VLC seems to be an attractive marketing feature. As illustrated by Chart 13, most residents indicated this factor positively influenced their decision to move into 600 Drake. This plan guarantees annual rental increases will not exceed the percentage increase of the Consumer Price Index. Again, as previously described, tight rental conditions in Vancouver make the rent protection plan particularly appealing to residents who do not have the financial means to absorb rapid rental increases.
Overall, the location of 600 Drake was also viewed positively. As expected, residents commented on the benefits of living within walking distance to work, beaches, social services, cultural institutions, and to the city's night life. However, as displayed by Chart 14, a total of eleven people (19.6%) considered the building's location to be somewhat negative. At odds with the majority of respondents, the opinions of these residents were related to safety concerns with the immediate neighbourhood. Furthermore, because 600 Drake is pioneering gentrification in Downtown South, some residents complained about inadequate consumer services. Unlike the West End, there are no large grocery stores in Downtown South. In general, Granville Street
does not match the selection of quality shops and restaurants that one finds along Denman and Robson Streets. It is apparent that the provision of consumer services must be improved as more people move to Downtown South. Existing services do not meet all of the needs of the new residents that development like 600 Drake will bring to the neighbourhood.

Two factors had a neutral or divided impact on the decision of residents to move into 600 Drake. For instance, Chart 15 shows how twenty-seven (48.2%) respondents viewed affordability positively whereas twenty (35.8%) respondents viewed it negatively. Moreover, nine (16.1%) people rated this as not an issue in the decision. Based upon the comments of residents, this division of viewpoints seems to be explained by how residents interpreted the term "affordability". Those residents who viewed it positively were attracted to the relatively inexpensive net rental rates of the mini-suites. They were happy to be able to afford to live by themselves in a new building and still remain within a housing budget of between $500 to $700 per month.

In comparison, those residents who felt negatively about this factor seemed to be making a value judgment. They believed that, since the units are so small, the rents should be less expensive than traditional, 450 to 550 sq. ft. studio-bachelor units. Thus, although these
respondents could afford the rent, they did not feel mini-suites offer full value for their rental dollars.

On balance, with twenty (35.7%) respondents viewing apartment size as a negative and seventeen (30.4%) respondents viewing it as a positive, apartment size was the only factor to be perceived negatively by more people than not. Interestingly, Chart 16 also shows that this factor was considered to be a non-issue by nineteen (33.9%) respondents.

A review of the comments about this subject does not provide a clear understanding of how apartment size affected their decision. Some people seemed resigned to accept a small apartment because it was priced within their housing budget. Meanwhile, other residents maintained quite a different outlook. They viewed the small size of mini-suites as a positive because it forced them to reassess how they live. They now lead a more simplified, less materialistic lifestyle. Some residents admitted the simple fact that they did not own many things so they did not need much space. In the same vane, other residents described how they don't spend much time at home so there was no need for a larger and more expensive place to live. These diverse viewpoints emphasize the need to evaluate how apartment size affects residential satisfaction. Part Two of the survey will analyze this issue in much greater detail.
This questionnaire also asked residents how satisfied they are with their mini-suite apartment. Chart 17 displays the response to this question. A total of thirty-three (58.9 %) respondents indicated they were satisfied or very satisfied. In contrast, only nine (16.1 %) residents were generally dissatisfied. Another means of gauging satisfaction is to look at the responses to the question asking residents to indicate how much longer they expected to stay in their mini-suite. As illustrated by Chart 18, twenty-one (37.5 %) people expected to live in their mini-suite for one to two more years and fourteen (25.0 %) people expected to live in their unit for more than two years. If people were truly dissatisfied, one would expect residents to be planning a move in the near future. This is not the case for most residents of 600 Drake.
Together, these two questions indicate a relatively high level of satisfaction with mini-suite apartments in 600 Drake. Although rudimentary, these measures of satisfaction will be used in a longitudinal comparison to see if residents' ratings of satisfaction change after they have lived in their mini-suite for an extended period of time.

The reasons why residents chose to live in 600 Drake vary somewhat from the findings of the Vischer and Skaburskis study of False Creek. For example, location was ranked number one in the False Creek study. Although locational attributes such as proximity to work, the waterfront, and downtown were viewed positively by residents of 600 Drake, it is also clear that the location of this building did have some negative associations. For this reason, the location factor rated lower than factors associated more with the design and management of the building or general rental market conditions.

This discrepancy is probably due to the fact that the housing development studied in False Creek was part of an urban renewal scheme to create a new community in a park-like setting on Vancouver's waterfront. It is understandable that residents were attracted to living at this unique location. Likewise, 600 Drake offers residents some positive locational attributes. However, the difference between the two developments rests upon the fact that 600 Drake is located in an existing neighbourhood and can be characterized as pioneering gentrification in a somewhat "seedy" part of town. Thus, although Downtown South has only just begun a transition towards a more diverse residential community, residents of 600 Drake do harbour some negative feelings about this location. This difference spills over into the positive ratings given to safety as a factor affecting the decision to move into 600 Drake. In contrast, safety was the tenth ranked reason for selecting False Creek in the Vischer and Skaburskis study.

The results of both surveys do indicate some similarities in the reasons why residents chose their particular home. For example, the Vischer and Skaburskis study ranked "Attractive Development" as the second most important factor. Likewise, the "Age of the Building" and "Apartment Design and Facilities" factors were positively rated by the residents of 600 Drake. This co-relationship suggests the importance of appearance and architectural design in the minds of consumers as they choose where they want to live.
Market conditions also appear to play a key role in decisions about accommodation. The Vischer and Skaburskis study ranked "Rent Reasonable" fourth and "No Other Option" sixth on its reasons for housing selection. The survey of residents at 600 Drake has garnered comparable results with "Availability" and "Rent Increase Protection" showing positive ratings. However, as previously discussed, affordability generated a balanced negative/positive response. Although there was no consensus as to exactly how affordability influenced the decision, it is fair to conclude that market conditions did play a major role in the housing choice "equation".

This analysis of the housing choice "equation" illuminates another important point. As VLC argued, residents are willing to trade living space for the economic, design, and locational attributes associated with 600 Drake. This relationship is underscored by the fact that, although apartment size did receive an overall negative rating, this consideration was not enough to dissuade residents from moving into a mini-suite. Apparently, a combination of all the factors rated positively by residents justified their acceptance of less living space. In effect, this supports the premise that there are some people in the housing market whom value or desire locational and design attributes more so than the additional living space offered by a traditional studio-bachelor apartment. It also corroborates with Lynch's viewpoint that people are very adaptable and are willing to accept a different living environment if, on balance, it satisfies particular housing and lifestyle needs. As previously described, the Vischer and Skaburskis study came to a similar conclusion.

However, one caveat must be acknowledged. Noting that the factors "Availability" and "Rent Increase Protection" were rated positively by residents, one must contemplate whether market factors, to some degree, served to push rather than attract residents to live in a mini-suite. The Part Two Survey results will address this important question in more detail.
CHAPTER SIX
PART TWO SURVEY METHODOLOGY AND RESULTS

The purpose of the Part Two Survey is to assess residents' satisfaction with various aspects of living in a mini-suite apartment at 600 Drake. Similar in design to the Part One Survey, the Part Two questionnaire employed a series of five-point, categoric scales and open-ended questions dealing with the design of the mini-suite units; privacy and crowding issues; and the design, services and administration of the entire building. The results of this survey, when considered in conjunction with the findings of the Part One Survey, provide an in depth understanding of the degree to which residents are satisfied living in a mini-suite apartment. This survey will also isolate specific aspects of the development which improve or diminish the liveability of these units.

6.1 Part Two Survey Methodology

Before describing the administration of this survey, an outline of the Part Two questionnaire will explain why specific information was solicited in this housing evaluation. A copy of the questionnaire is included in Appendix II. To begin, Section A of the questionnaire asks residents to describe the type of dwelling they lived in prior to moving to 600 Drake. This information is useful because it provides some insight about their previous living experiences and their expectations as to what they desire in a home. In a sense, this information serves as a benchmark against which the residents' assessment of their mini-suite will be compared.

The assessment of the apartment units begins in Section B. On a five-point scale, residents are asked to rate a series of design elements associated with the individual mini-suite units. In order to broaden the evaluation beyond these chosen design elements, three open-ended questions ask respondents to discuss negative and positive aspects of their apartments. Essentially, the results of this section will identify practical design problems associated with living in a mini-suite apartment.
Section C of the questionnaire deals more with the psychological issues of living in a high density building. As discussed in Chapter Two, perceptions of crowding and privacy can greatly influence a resident's satisfaction with their home. Again, a combination of scaled and open-ended questions are used to explore these issues in detail.

Section D asks residents to assess various aspects of 600 Drake related to the building's design, management, and services. As has been discussed, residential satisfaction is dependent upon various and interrelated aspects of the total home environment. All of these aspects must be explored in order to discover the true sources of dissatisfaction. For example, it could be the case that although residents are dissatisfied with their mini-suite, the cause of the dissatisfaction may not be related to a lack of space. Instead, management or building service issues may be the cause of dissatisfaction. Section D involves a series of scaled questions dealing with this topic. To end the questionnaire, a series of generalized satisfaction questions are posed to residents. Their responses to these questions will be instrumental in measuring overall satisfaction with mini-suite housing.

The sample population for the Part Two Survey was reduced to 100 residents. Survey reproduction, administration and data analysis savings associated with a smaller survey was one justification for this reduction in sample size. Equally important, since it is even more demanding, it was assumed Part One "non-participants" would be even less interested in participating in the Part Two Survey. Therefore, it seemed wise and expedient to sample a smaller segment of the building's mini-suite population.

Of the fifty-six respondents who participated in the Part One Survey, twenty had moved out of 600 Drake by the time the Part Two Survey was to be distributed. It was decided that, in addition to the 36 residents who remained in the building, each of the 20 new residents who replaced the previous residents would be asked to participate in the Part Two Survey. With fifty-six residents pre-determined for the sample distribution, the remaining forty-four questionnaires were randomly distributed among the remaining pool of residents who had not participated in the Part One Survey.
It was hypothesized that this sample distribution would result in a fairly high response rate from those 36 residents who had participated in the Part One survey and a fairly low response rate from those people who had declined to participate. Combined, this sampling would generate enough response to arrive at an accurate appraisal of how satisfied residents are with their mini-suite apartments. At this stage, it was also decided that the twenty respondents who had since left 600 Drake should be tracked because their reasons for moving would be very informative in explaining whether apartment dissatisfaction was the reason most residents decided to move. The results of this phone survey will follow the discussion of the Part Two Survey.

6.2 Administrative Framework

The administration of the Part Two Survey followed the same format and procedures as outlined for the Part One Survey. This continuity facilitated participation in the survey because most residents were already familiar with the style and intent of the project. On September 1, 1994, a questionnaire package was placed under the door of each of the one hundred sample residents. At this time, 600 Drake did not have any vacant rental units, so all of the randomly selected units were occupied.

In the same fashion as before, a locked return box was placed in the staff lobby office to make it easy for residents to return their sealed questionnaires. Frequent visits were made to pick up questionnaires from the return box and move them to a secure office at U.B.C. Two weeks after the initial drop-off, a "Thank You" card was placed in each of the mail boxes of the 100 sample residents. This card served as a reminder and as a contact for residents to ask questions about the survey.

It should also be stressed that the design, distribution, collection and interpretation of this survey adhered to the same ethical criteria set for the Part One Survey. The response rate for the Part Two Survey nearly equaled that of the previous survey. Thirty-two of the one hundred sample residents returned a completed questionnaire. With a 32% response rate, this result is satisfactory. There is an even split between previous respondents and new respondents. In other
words, sixteen of the thirty-six people who had participated in the Part One Survey decided to take the time to continue with the project. This also means that sixteen new respondents decided to participate in the project.

Chart 19: Age Distribution of Respondents in Part 2 Survey

Based Upon 32 Respondents

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29</td>
<td>43.8%</td>
</tr>
<tr>
<td>30 - 39</td>
<td>28.2%</td>
</tr>
<tr>
<td>40 - 49</td>
<td>15.6%</td>
</tr>
<tr>
<td>50 - 59</td>
<td>6.2%</td>
</tr>
<tr>
<td>60 and up</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Chart 20: Marital Status of Respondents in Part 2 Survey

Based Upon 32 Respondents

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>68.8%</td>
</tr>
<tr>
<td>Divorced</td>
<td>15.6%</td>
</tr>
<tr>
<td>Separated</td>
<td>3.1%</td>
</tr>
<tr>
<td>Widowed</td>
<td>3.1%</td>
</tr>
<tr>
<td>Married</td>
<td>3.1%</td>
</tr>
<tr>
<td>Common-Law</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

It is felt this survey generated sufficient response from a cross section of the resident population. Socio-economic characteristics of the participants closely match the results generated by the Part One Survey. For example, of the thirty-two respondents, twenty-two (68.8 %) are male and ten (31.2 %) are female. Charts 19 and 20 display the age and marital status distribution of the Part Two Survey respondents. As discovered before, most respondents
are young and single. Moreover, they are also well educated. Twenty-nine (90.6%) respondents hold a secondary school diploma and fifteen (46.9%) respondents hold a university degree. This socio-demographic information corresponds to the findings of the Part One Survey. Therefore, it is reasonable to conclude that the information garnered by the Part Two Survey is based upon the opinions of a cross-section of residents and can be relied upon as a representative account of how satisfied residents are with their mini-suite.

6.3 Part Two Survey Results

The results generated by the Part Two Survey will be summarized and analyzed on a section by section basis. A critical evaluation will be presented of how satisfied residents are with their mini-suite apartment. Through this evaluative process, specific problems and issues related to the design of the building will be exposed. This information will prove invaluable for determining how the design of future mini-suite development can be improved to ensure it is more liveable.

6.3.1 Previous Residence

Section A of the Part Two Survey consists of six questions related to where respondents lived prior to moving into 600 Drake. This information is useful because it provides some understanding of the transitional period as respondents made their decision to move into a mini-suite apartment. The response to the question regarding the dwelling type of their previous home indicates the majority of people moved out of smaller forms of housing. For instance, as Chart 21 displays, twenty-two (68.8%) of the respondents moved from either apartments, basement suites, condominiums, or hotel rooms. Twenty-three (71.9%) of the respondents indicated their previous home had two or less bedrooms. Finally, ten (31.2%) of the respondents said they moved directly from another studio-bachelor unit. One can infer from these statistics that the majority of residents of 600 Drake have moved from housing situations which offered moderate amounts of living space.
The overall satisfaction rating given by respondents for their previous home is somewhat less positive than the ratings given for 600 Drake. Fifteen (46.9%) of the respondents rated their previous home positively, six (18.8%) people were indifferent, and eleven (34.4%) respondents rated their previous home negatively. These findings indicate that, although a third of the respondents were unhappy with where they lived, nearly one half of the respondents decided to move from their home for other reasons. This conclusion is supported by Ginsberg and Churchman who contend that housing satisfaction and the desire to move should not be confounded.

Regardless of how satisfied one is with a dwelling unit, there are innumerable reasons why people decide to change homes. Infighting with romantic or platonic roommates is one obvious reason. Income or employment changes may also instigate a move. One can even
imagine some people deciding to make a move simply to satisfy a need to make a lifestyle change. Although this study did not purposely explore the complex reasoning of why residents of 600 Drake moved out of their previous home, it seems fair to conclude that the majority of respondents were not fleeing substandard and unsatisfactory housing.

Having made the decision to move, half of the respondents felt they did not have enough alternatives for selecting a new place to live. On average, respondents indicated that they had three other housing options to choose from when they made their decision to move into 600 Drake. This result re-introduces the issue of whether, instead of being attracted to the qualities and attributes of mini-suite apartments, market conditions forced residents to move into 600 Drake. The evidence from this survey does not fully support this hypothesis. In considering a total of four housing options, it follows that other factors, those identified by the Part One Survey, came into play which convinced respondents to choose 600 Drake. Thus, although respondents may have felt that they would have liked a greater selection of housing alternatives from which to chose where to live, one can not simply draw the conclusion that most residents were forced by market conditions to live in a mini-suite.

Nonetheless, close scrutiny of the questionnaire responses does show that four respondents indicated they had no other choice but to move into 600 Drake. This is a disconcerting situation. As stated, this study is premised on the belief that the diverse needs of
society can only be met if individuals have the ability to choose housing that fits particular needs. Theoretically, the development of mini-suite apartments should serve the unique needs of a niche market. However, under tight market conditions, some people do not have the ability to find suitable rental accommodation and may be forced to accept unsatisfactory housing until more stable market conditions prevail or their financial situation improves. Since they had no choice, it is quite possible that these four respondents are living in a form of housing which does not meet their particular needs. The existence of four respondents in this situation should serve as a warning signal. Under tight market conditions, the development of mini-suite housing should be viewed in the context of providing one option on a housing needs and choices matrix. Imbalances in the housing market must be addressed so that people can avoid being forced into living situations that are inappropriate.

One of the main criticisms leveled at mini-suite housing is related to this very issue. Community groups such as D.E.R.A. or T.R.A.C. fear the relaxation of the minimum size requirement represents the thin edge of the wedge to allow developers to exploit tight market conditions and not build rental housing for the full continuum of housing needs. They feel the concept of mini-suites as an innovative and selective form of housing will be lost as developers realize that many people, whether they desire it or not, will be forced to accept small apartments. This is a valid concern which planners must be cognizant of as they evaluate future development.

It has also been shown that VLC did not take this exploitative approach. VLC's market analysis identified a "legitimate" consumer demand for mini-suite housing. The qualifier "legitimate" refers to people who truly desire the attributes and advantages of living in a mini-suite apartment. One relevant question which the City of Vancouver should address is to estimate the size of the legitimate market for mini-suite housing so that planners will have some idea when this demand has been satisfied.

This summary of the transition experienced by respondents as they moved from their old residence to 600 Drake is useful because it provides contextual information about their previous home and the conditions under which they contemplated moving into a mini-suite apartment. In general, residents of 600 Drake moved out of moderately sized apartment buildings. Although
satisfaction rates were not very high, most of the residents cannot be characterized as fleeing unsatisfactory housing situations. Furthermore, despite half of the respondents indicating they would have liked a greater selection of housing choices, on average, respondents had at least three other places to choose from when they decided to move into 600 Drake. Therefore, most residents were not forced by market conditions to live in a mini-suite. From this point, an in-depth analysis of residents' satisfaction with mini-suite housing can begin.

6.3.2 Mini-Suite Satisfaction

Section B of the questionnaire asked respondents to indicate their satisfaction with seventeen design elements of their mini-suite apartment. Their responses have been tabulated and presented in Table 7. This table highlights some positive aspects and it also exposes some very important concerns that residents have with the design of their apartment.

The survey results indicate that residents are satisfied with the overall appearance of their apartment. The respondents were unanimous. Not one person indicated any dissatisfaction with the appearance of their unit. Evidently, the interior finish is successful in creating an aesthetically pleasing living environment.

| Table 7 : Response Summary (32 Respondents) |  |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Satisfaction With Mini-Suite Apartments | Very Dissatisfied | Dissatisfied | Neither | Satisfied | Very Satisfied | No Response |
| B1) Apartment Appearance | 0 | 0 | 0 | 18 (56.2%) | 14 (43.8%) |  |
| B2) Size of Kitchen | 1 (3.1%) | 1 (3.1%) | 3 (9.4%) | 17 (53.1%) | 10 (31.2%) |  |
| B3) Kitchen Appliances | 1 (3.1%) | 0 | 2 (6.2%) | 18 (56.2%) | 11 (34.4%) |  |
| B4) Kitchen Cupboard Space | 2 (6.2%) | 0 | 5 (15.6%) | 14 (43.8%) | 11 (34.4%) |  |
| B5) Food Preparation Space | 0 | 5 (15.6%) | 5 (15.6%) | 14 (43.8%) | 8 (25.0%) |  |
| B6) Dining Space | 1 (3.1%) | 10 (31.2%) | 5 (15.6%) | 9 (28.1%) | 7 (21.9%) |  |
| B7) Bathroom Size | 1 (3.1%) | 1 (3.1%) | 2 (6.2%) | 16 (50.0%) | 12 (37.5%) |  |
| B8) Bathroom Cupboard Space | 1 (3.1%) | 5 (15.6%) | 4 (12.5%) | 12 (37.5%) | 10 (31.2%) |  |
| B9) Shower Size | 1 (3.1%) | 0 | 1 (3.1%) | 14 (43.8%) | 16 (50.0%) |  |
| B10) Live/Sleep Room Size | 3 (9.4%) | 5 (15.6%) | 6 (18.8%) | 14 (43.8%) | 4 (12.5%) |  |
| B11) Murphy Bed (*17 Respondents) | 2 (11.8%) | 0 | 3 (17.6%) | 6 (35.3%) | 6 (35.3%) |  |
| B12) Closet Storage Space | 5 (15.6%) | 14 (43.8%) | 2 (6.2%) | 8 (25.0%) | 3 (9.4%) |  |
| B13) Space for Furniture | 0 | 5 (15.6%) | 7 (21.9%) | 16 (50.0%) | 4 (12.5%) |  |
| B14) Space for Entertaining | 2 (6.2%) | 11 (34.4%) | 4 (12.5%) | 12 (37.5%) | 3 (9.4%) |  |
| B15) Window Space | 0 | 2 (6.2%) | 2 (6.2%) | 14 (43.8%) | 13 (40.6%) | 1 (3.1%) |
| B16) Balcony Size (*23 Respondents) | 3 (13.0%) | 8 (34.8%) | 4 (17.4%) | 5 (21.7%) | 3 (13.0%) |  |
| B17) Apartment Size | 1 (3.1%) | 8 (25.0%) | 5 (15.6%) | 14 (43.8%) | 3 (9.4%) | 1 (3.1%) |
Photo 7: Standard Kitchen Appliances

Photo 8: Typical Kitchen Area
Generally, respondents also seem to be pleased with the size and design of their kitchen and the kitchen appliances. For example, twenty-seven (84.3%) respondents were either satisfied or very satisfied with the size of the kitchen. The standard kitchen appliances received an even better response with twenty-nine (90.6%) respondents either satisfied or very satisfied. The amount of kitchen cupboard and food preparation space was also rated positively with twenty-five (78.2%) and twenty-two (68.8%) respondents relating satisfaction with these respective design elements (See Photos 7 and 8).

These results lead to the conclusion that the design and size of the kitchen area are successful and address the needs of mini-suite residents. Relying on information about how residents at Jubilee House were generally dissatisfied with the compact appliance unit in their mini-suite, it is apparent that VLC was correct in deciding to utilize standard, individual appliances in the design of the kitchen. Although this decision effectively predetermined the minimum size of the kitchen area, it is clear that residents are satisfied with this layout. As Lynch would conclude, the physical design and size of the kitchen creates a "fit" between desired human behavior and the space itself.

Although enough space is provided for food storage and preparation, it seems that some residents are not quite so satisfied with the amount of space available for dining. Eleven (34.3%) respondents indicated dissatisfaction while sixteen (50.0%) respondents indicated satisfaction with the amount of space provided for dining. Based upon the comments of residents, this difference of opinion is linked to whether or not residents frequently entertain guests. The size of the apartments makes it functionally unrealistic to decorate the space with anything larger than a kitchen nook table. Some respondents indicated some regret at not being able to comfortably seat more than two or three guests for a meal. There is a mismatch between the expectations of using the space and the functionality of using the space for this purpose.

The results of the Part Two Survey also indicate that the design of the bathroom meets the needs of residents. Table 7 demonstrates that a very high proportion of respondents were satisfied or very satisfied with the size of the bathroom, the size of the shower facility, and the
amount of cupboard space. The only hint of dissatisfaction came from six (18.7%) respondents who were dissatisfied with the amount of cupboard space.

Once again, these results seem to support VLC's decision to design the bathrooms in a traditional manner. As described, VLC did contemplate separating the sink and vanity mirror from the bathing and toilet facilities in order to minimize the amount of space dedicated to the bathroom. This design configuration was not incorporated into any of the units so there was no opportunity to compare satisfaction levels between this and the more traditional configuration. However, with such high satisfaction ratings being registered for the traditional layout and total size of the bathroom, it is probable that this configuration serves the needs of residents most effectively.

In comparison to the kitchen and bathroom layouts, respondents did not express comparable levels of satisfaction with the living/sleeping area. For example, as listed on Table 7, eight (25.0%) of the respondents indicated dissatisfaction with the size of this area. Moreover, thirteen (40.6%) respondents were dissatisfied with the amount of space available for entertaining friends. However, some design features did receive relatively high satisfaction ratings. Respondents were pleased with the amount of space available for their furniture, the amount of window space in the unit and, of those who have one in their apartment, the murphy beds were rated highly (See Photos 9 through 12).

An analysis of the questionnaire results also exposes two aspects of the mini-suites which many residents find unsatisfactory. Eleven (47.8%) of the twenty-three respondents who had balconies were dissatisfied with their size. This result is not surprising since some of the units incorporate a "European" style balcony which is essentially a sliding balcony door and a railing but with little actual balcony space. Thus, besides providing a ledge on which to place flower pots, these balconies provide little in the way of functional outdoor living space for residents. As the survey results show, residents were disappointed with this design feature.

The other major flaw of the mini-suite unit design is the lack of general purpose storage space provided within each unit. Nineteen (59.4%) respondents indicated a level of dissatisfaction with the amount of closet space. One insightful comment by a resident goes far in
Photo 9: Interior of 315 sq. ft. Apartment

Photo 10: Interior of 315 sq. ft. Apartment
Photo 11: General Purpose Closet Space

Photo 12: Living/Sleeping Area
explaining the reason for this dissatisfaction. The resident said, "Since I don't have a separate bedroom where I can dump my things and close the door, I need a large closet to put my stuff in so it is out of sight and more presentable for my guests." Although the architect's reasoning for not incorporating large closets into the design of 600 Drake was well intentioned and based upon the feedback of the residents at Jubilee House, it is evident that this design decision is not appreciated by the residents of 600 Drake (See Photo 11). Again, applying Lynch's interpretation of how physical design elements affect human behavior, there is a clear mismatch between how residents want to use the space and the capacity of the space to serve these activities. The living/sleeping area constrains residents in performing some activities, such as entertaining guests, and because of this, liveability is diminished.

Perhaps the difference in opinions on the amount of closet space that should be included in the design of mini-suites is a reflection of the different socio-economic backgrounds of residents in each building. As noted, Jubilee House is a social housing complex for people who predominately live on fixed incomes. These residents probably do not possess a great deal of clothing items or consumer goods. In response, people in this building have decided it is more efficient to maximize the living space in their mini-suites by moving the bed into the underutilized closet.

In contrast, residents of 600 Drake typically maintain busy work and social lives. As a result, these residents have more need for large closets to store clothing items and sports and entertainment equipment such as tennis racquets, video cassettes, or computer paraphernalia. It is these kinds of items which tend to clutter an apartment. Although 600 Drake does provide each unit with a parkade storage locker, residents use many of these items on a daily basis so it is inconvenient to store them in the locker. Considering the type of people who live in 600 Drake, the lack of closet space is a critical design flaw. This design element does not fit the lifestyle needs of most residents.

Table 7 discloses one other interesting finding. Seventeen (53.2 %) of the respondents were satisfied or very satisfied with the overall size of their apartment whereas only nine
(28.1 %) people were dissatisfied. It seems that, despite some size related issues such as dining or closet space, the total spatial dimension of a mini-suite is quite liveable.

Chart 24 introduces a different approach to evaluating residents' satisfaction with their mini-suite. Content analysis of negative comments made by respondents about their mini-suite reveals that storage space, noise, and apartment size were three equally important issues. As will be discussed in an ensuing section, the noise problems are associated more with the building's location and are not a consequence of the high density design of the building. The fact that storage space and apartment size represent the main negative aspects of the building only serve to confirm the findings listed in Table 7. Quite clearly, the lack of storage space is a prominent issue among residents. It follows, if more storage space had been included into the design of the apartments, the ability to put things away would make the small apartments more efficient, functional, and liveable.

Residents were also asked to describe the most positive aspect of their mini-suite. Chart 25 graphically displays the positive comments pertaining to the apartments. Generally, the response to this open-ended question mirrors and confirms the results of the Part One Survey. As expected, the fact that 600 Drake is a new building with modern appliances was deemed to be a positive feature by several respondents. The design and layout of the units was also appreciated. The large sliding door windows were particularly valued as they, in addition to
providing panoramic views of the city, create a bright and open atmosphere within the apartments. Apparently, in terms of natural lighting, the decision to utilize sliding patio doors and glass balcony railings was a successful design innovation.

![Chart 25: Content Analysis of Positive Comments About Mini-Suites](chart.png)

Perhaps the only unexpected result emanating from Chart 25 is the fact security issues were not mentioned by more respondents. In the Part One Survey, safety issues were often touted as a reason for moving into 600 Drake. A definitive explanation for this discrepancy is not possible. However, this discrepancy might be rooted in the fact that once a person feels safe in their home, this concern diminishes. Therefore, this type of attribute may not be at the forefront of a respondents mind when asked to comment about their home. Attributes which are appreciated and reinforced daily, such as the modern design of an apartment, are probably more likely to be listed in an open-ended question format. In any event, this explanation is conjecture based solely on intuition.

The two final questions dealing with the evaluation of residents' satisfaction with their mini-suite apartment present seemingly conflicting results. Chart 26 displays the comments generated by the open-ended question asking residents for suggestions on how to improve the design of their mini-suite. This chart provides an indication of what residents feel would be practical ways of making their apartment more liveable. Enlarging the amount of storage space
was the most frequent suggestion while enlarging the amount of living and balcony space came second and third. At first glance, these results seem straightforward and easy to interpret.

<table>
<thead>
<tr>
<th>Chart 26: Content Analysis of Suggestions to Improve Mini-Suite Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Soundproofing</td>
</tr>
<tr>
<td>Add Separate Bedroom</td>
</tr>
<tr>
<td>Enlarge Balcony</td>
</tr>
<tr>
<td>Enlarge Living Space</td>
</tr>
<tr>
<td>Enlarge Storage Space</td>
</tr>
</tbody>
</table>

Number of Comments

<table>
<thead>
<tr>
<th>Chart 27: Choice of Area Which Should be Made Larger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live/Sleep Area</td>
</tr>
<tr>
<td>Kitchen</td>
</tr>
<tr>
<td>Bathroom</td>
</tr>
<tr>
<td>Closets</td>
</tr>
</tbody>
</table>

However, when residents were asked in a closed-optioned question to choose one of four areas they would like to make larger, the results illustrated by Chart 27 displays a relationship which seems to contradict the previous findings. For example, if they were given only one choice, seventeen (56.7%) respondents felt enlarging the living/sleeping area would be the best way of making their mini-suites more liveable. The remainder, thirteen (43.3%) respondents, put a priority on making the closets larger. This flip-flop of opinion on whether to enlarge the living/sleeping area versus closet space makes it difficult to decipher what would be the most effective means of making the mini-suites more liveable. Nonetheless, it is clear that the
respondents are very satisfied with the amount of space devoted to both the kitchen and bathroom areas of the mini-suite apartment.

One perfectly valid and safe conclusion to draw from Chart 27 would be to recommend that both the living/sleeping area and the closets should be enlarged. There is no doubt that residents would agree with this recommendation. However, such a statement does not provide an indication of what would be the most cost-effective means of significantly improving the quality of life for residents. To do this, it would seem prudent to look at all the data presented in Table 7 and Charts 24 through 27. In consideration of these results, two key points stand out. It is apparent that the amount of storage space dissatisfied the most respondents (59.4 %), and increasing storage space was the most commonly cited suggestion for improving the design of the mini-suites. It therefore is argued that, if the amount of storage space was increased, residents would have more opportunity to remove clutter from their apartment and, in effect, they could more effectively utilize and enjoy their open living space.

To conceptualize this issue differently, consider the fact that an additional 20 sq. ft. of closet space would more than double the storage capacity within a unit but a similar increase to the living/sleeping area would only marginally increase the amount of open living space for residents. Therefore, if one had to choose which of the two areas to enlarge, consideration of all the survey results indicates an increase in the amount of storage space would be the most effective means of improving the liveability of the mini-suites. Nevertheless, since there is a strong desire for more living space as well, it is also recommended that an increase in storage space should not be at the expense of total living space.

6.3.3 Privacy and Crowding

In order to determine whether privacy and crowding issues influenced residents' satisfaction with their mini-suite, Section C of the Part Two Survey asked residents to rate several different aspects related of these two issues. Table 8 summarizes the results of seven questions dealing with privacy issues and Table 9 summarizes the results of four questions dealing with perceptions of crowding.
Table 8: Response Summary (32 Respondents)

<table>
<thead>
<tr>
<th>Privacy Issues</th>
<th>Very Satisfied</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1) Privacy Within Mini-Suite</td>
<td>14 (43.8%)</td>
<td>1 (3.1%)</td>
<td>0</td>
<td>3 (9.4%)</td>
<td>14 (43.8%)</td>
<td>14 (43.8%)</td>
</tr>
<tr>
<td>C2) Privacy From Other Residents</td>
<td>16 (50.0%)</td>
<td>0</td>
<td>2 (6.2%)</td>
<td>13 (40.6%)</td>
<td>16 (50.0%)</td>
<td></td>
</tr>
<tr>
<td>C3) Privacy From Neighbourhood</td>
<td>15 (46.9%)</td>
<td>5 (15.6%)</td>
<td>2 (6.2%)</td>
<td>11 (34.4%)</td>
<td>9 (28.1%)</td>
<td></td>
</tr>
<tr>
<td>C4) Window Blinds to Control Privacy</td>
<td>12 (37.5%)</td>
<td>2 (6.2%)</td>
<td>4 (12.5%)</td>
<td>14 (43.8%)</td>
<td>12 (37.5%)</td>
<td></td>
</tr>
<tr>
<td>C5) Noise From Neighbours</td>
<td>9 (28.1%)</td>
<td>3 (9.4%)</td>
<td>7 (21.9%)</td>
<td>6 (18.8%)</td>
<td>8 (25.0%)</td>
<td>9 (28.1%)</td>
</tr>
<tr>
<td>C6) Noise From Hallways</td>
<td>12 (37.5%)</td>
<td>0</td>
<td>0</td>
<td>5 (15.6%)</td>
<td>15 (46.9%)</td>
<td>12 (37.5%)</td>
</tr>
<tr>
<td>C7) Noise From the Street</td>
<td>1 (3.1%)</td>
<td>17 (53.1%)</td>
<td>6 (18.8%)</td>
<td>6 (18.8%)</td>
<td>2 (6.2%)</td>
<td>1 (3.1%)</td>
</tr>
</tbody>
</table>

To begin with privacy issues, two fundamental conclusions can be drawn from the questionnaire results. The residents are quite forthright in their expression of satisfaction with the amount of privacy they have within their mini-suite and from other residents in the building. For example, twenty-eight (87.6%) were satisfied or very satisfied by the amount of privacy within their apartment and twenty-nine (90.6%) respondents were likewise satisfied or very satisfied with the amount of privacy they have from other residents.

These findings are supported by the response to questions dealing with noise from neighbours or from the hallways. Again, residents are very satisfied with these aspects of their apartment. Evidently, one must conclude that the design and configuration of units addressed the privacy needs of residents. Despite introducing a density of living which is much higher than conventional apartment buildings in Vancouver, there is no indication that the inclusion of mini-suites into the design of 600 Drake has compromised privacy issues.

However, Table 8 does expose one other key relationship. With a third of the respondents indicating dissatisfaction, privacy from the surrounding neighbourhood was not so highly regarded. Although this one result is not alarming, when it is considered in conjunction with the ratings allocated for the issue of street noise, it is quite apparent that design problems exist which negatively impact on residents' ability to maintain privacy from the surrounding neighbourhood. As was explained previously, a residents' inability to control privacy or limit outside stimuli can intensify their perception of crowdedness.
Comments written by residents go far in explaining the cause of unwanted street noise. It seems that the design of the balconies, which utilize glass railings as a noise barrier, is not completely effective. Compounding this problem is the fact that 600 Drake was not designed with a central air conditioning system. As a result, during the summer months, residents must keep windows open as a means to cool their apartments with fresh air circulation.

The main source of street noise appears to be the steady flow of vehicular traffic off the Granville Street bridge. Since this off-ramp is elevated, the street noise seems to carry to all floors in the building. Noise problems are also attributed to the street activity generated by the numerous night clubs which are located in the immediate neighbourhood. During the evenings, people rev engines, slam doors, honk horns, and congregate on the streets as they wait to go inside the establishments. At closing time, between one and three o'clock in the morning, there is a rush of similar activity, often marked by loud outbursts from inebriated patrons. Obviously, this type of activity is very disruptive to residents who are trying to sleep. The degree of dissatisfaction incurred by street noise seems to contradict Fried's contention that people eventually become desensitized to sources of stress. Written comments make it clear that residents remain very frustrated by their inability to react to the disruptive effects of street noise.

This commentary is not meant to criticize the lively night scene of Downtown South. However, with the promotion of residential development as a means to rejuvenate downtown core areas, special attention should be given to the impacts of street noise. As argued by Leung, the evaluation of crowding impacts on residential satisfaction must follow a contextual or neighbourhood based analysis of the living environment. Being situated beside an off-ramp, perhaps the approval to build 600 Drake should have been contingent upon the incorporation of central air conditioning into the development plan. A central air conditioning system in 600 Drake would have minimized the impact of street noise because residents would have been given a choice as to whether they sleep with open windows. Needless to say, the associated building and operating costs of such a system were judged too expensive by VLC.

Other design changes to the building may also have mitigated the noise problem. One suggestion put forth is to ensure future buildings include larger balconies so that railings and
setbacks create a more effective noise barrier. Although more costly, glassed-in balconies are very effective noise barriers. Even a simple adjustment, such as using highly insulated, glazed windows would keep apartment units cooler during hot summer days and reduce the need for residents to keep their windows open at night. Although these solutions probably can not be retrofitted to 600 Drake, such design issues should be considered in the approval process of future development.

From a theoretical perspective, it is argued that the main source of dissatisfaction with the street noise and lack of privacy from the surrounding neighbourhood is directly linked to residents' inability to control their living environment. The comments of residents indicate their awareness of moving into a neighbourhood with lots of traffic and night life. In fact, most of the residents enjoy this type of urban environment. It is believed that residents have not, as theorized by Fried, become desensitized to street noise because they have little opportunity to react and minimize the negative impacts of this problem. Luckily for residents, Vancouver's climate is quite moderate and does not normally experience extended periods of warm weather. Therefore, during the Spring, Winter and Autumn seasons, the problems of street noise are much reduced.

<table>
<thead>
<tr>
<th>Table 9: Response Summary (32 Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceptions of Crowding</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Very Spacious</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>C10) Lobby and Hallways</td>
</tr>
<tr>
<td>C11) Library and Entertainment Areas</td>
</tr>
<tr>
<td>C12) Fitness Room</td>
</tr>
<tr>
<td>C13) Laundry Area</td>
</tr>
</tbody>
</table>

There is a direct link between a person's control over privacy and their perception of crowding. As elaborated upon in Chapter Two, researchers such as Westin, Ittelson and Tognoli made this connection. It seems that the results generated by Section C of the Part Two Survey support this theoretical proposition. Thirty-one (96.9%) of the respondents indicated that they do not feel they are living in a crowded building. Furthermore, only eight (25.0%) of the respondents felt 600 Drake was more crowded than where they lived previously. When residents were asked to consider specific areas of the building, the vast majority of respondents indicated
they felt the common areas were spacious or very spacious. As Table 9 illustrates, only the fitness room was viewed by a significant number of people, twelve (37.4\%) respondents, as being crowded. The amount of space dedicated to common area facilities was considered adequate to serve the building's population. Obviously, this makes the usage of such areas much more comfortable and enjoyable for residents.

When one takes into consideration the results regarding privacy issues, it seems that residents do not feel they are living in a crowded building because they have the ability to control when and how they interact with other people in the building. Fried's analysis of how people react to conditions in a living environment by selecting who they interact with and adjusting how much time they spend within their home confirms this interpretation. In addition to the privacy that a self-contained, mini-suite offers residents, it is apparent that the amount of space in most of the common areas affords individuals some degree of choice as to how interactive they want to be with fellow residents. For example, the common area lounge is so large that a resident can either choose to sit with neighbours and watch television together or simply sit quietly by themselves with a book in the library area (See Photos 5 and 6). The fitness room seems to be the one common area which does not present much opportunity to use this discretion. Some residents do not feel comfortable in the room when more than a few people are using the facility (See Photo 4). Nonetheless, for the most part, the design of 600 Drake presents an environment in which residents feel they can maintain privacy and not feel as though they are living in a crowded residential building.

The remaining questions of Section C attempt to decipher the sense of community that has developed in 600 Drake. The responses to these probing questions help flush out and expand upon how residents interact with one another. For instance, when asked if they know by name other residents, seventeen (53.1\%) respondents said "Yes". Another question asked residents if there was someone in the building they could ask for help. Twenty-four (75.0\%) respondents said "Yes". Although these results do not portend the existence of a tight sense of community; they also do not present an image of isolated and segregated residents.
One must remember that, at the time of this survey, the building had only been occupied for one year. It is expected more intertwined and stronger relational ties will develop over time, as a core population of residents have more opportunity to meet one another. Nonetheless, since this type of rental building will undoubtedly serve as transitory housing for a segment of the population, one should not expect it to foster the same degree of community which may exist in conventional rental buildings in other parts of the city.

The results of two open-ended questions are very illuminating. As expected, when asked where they meet other residents, most respondents listed off the elevator and hallway areas. However, it seems that other common areas play an integral role in fostering social interaction as well. The fitness room, library, and front lobby were frequently mentioned. Interestingly, the laundry room and television lounge seem to play an especially important role as an area where residents intermingle. The architect's decision to place the laundry room beside the T.V. lounge and visually link the two spaces with a window has been extremely successful in creating a locus for casual social interaction. Doing laundry is a necessary chore which is made much more enjoyable if given the opportunity to watch television or chat with neighbours as the washer runs its cycle.

Residents were also asked to describe the sense of community in 600 Drake. Responses included adjectives such as "none", "limited", "minimal", "good", "peaceful", "pleasant", "respectful", "friendly", and "decent". One particular comment seems to encapsulate the feelings of most residents, "The sense of community is O.K., but it depends on your desire." This perspective indicates that residents feel like they have a choice of whether they want to interact and feel socially connected with fellow residents. Obviously, the common area facilities provide an informal environment where residents know they can instigate this kind of socialization. As discussed by Gove and Hughes, confinement to one's home exacerbates feelings of crowdedness. In effect, the amenity areas create a safe social environment and therefore residents do not feel confined to their mini-suite. Some residents simply do not feel compelled to take advantage of this opportunity.
It should also be noted that a few residents have taken it upon themselves to organize social functions such as video movie nights or self defense classes. It often takes a few dynamic individuals to spark interest among residents to become more actively involved in social activities. Time will tell whether a more cohesive and integrated sense of community develops at 600 Drake. Nonetheless, one can infer from these survey results that, although residents do not feel there is a vibrant sense of community, it does seem to meet the expectations of residents. In rebuttal to some of the criticism leveled against it, this development can not be characterized as creating an isolating and repressive living environment. In support of both Rodgers and Freedman, the findings of this study indicate that people are able to tolerate high density living conditions and enjoy a rewarding lifestyle. Regardless of the hypothesis suggested by some human ecologists, there is no indication of social dysfunction among the residents of 600 Drake.

6.3.4 Building Satisfaction

Many researchers, in particular Anderson and Weidemann, have explained how residential satisfaction is affected by interrelated physical, social, and management aspects of the whole living environment. Section D of the Part Two Survey posed a series of questions asking residents to indicate their satisfaction with various aspects of the building's overall design, its common areas and facilities, and the building's management system. An exploration of these issues will help identify and interpret factors, other than those directly associated with the apartments, which could negatively impact upon residents' satisfaction with living in 600 Drake.

Table 10 lists the satisfaction ratings given by residents for fourteen different aspects of the building. As one can see, not one of these building issues seems to be a source of dissatisfaction. In fact, almost all of the measures relate a high degree of satisfaction. For example, twenty-eight (87.6 %) respondents were either satisfied or very satisfied with the exterior appearance of the building. Thirty-one (96.9 %) respondents felt this way about the interior appearance. As one goes down the list, it is quite clear that residents are very satisfied with the common area facilities, building maintenance, management rules, building security, and building staff.
Table 10: Response Summary (32 Respondents)

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D1) Exterior Appearance</strong></td>
<td>1 (3.1%)</td>
<td>1 (3.1%)</td>
<td>2 (6.2%)</td>
<td>14 (43.8%)</td>
<td>14 (43.8%)</td>
</tr>
<tr>
<td><strong>D2) Interior Appearance</strong></td>
<td>1 (3.1%)</td>
<td>0</td>
<td>0</td>
<td>14 (43.8%)</td>
<td>17 (53.1%)</td>
</tr>
<tr>
<td><strong>D3) Fitness Area</strong></td>
<td>1 (3.1%)</td>
<td>2 (6.2%)</td>
<td>9 (28.1%)</td>
<td>17 (53.1%)</td>
<td>3 (9.4%)</td>
</tr>
<tr>
<td><strong>D4) Library/Entertainment Area</strong></td>
<td>0</td>
<td>0</td>
<td>4 (12.5%)</td>
<td>20 (62.5%)</td>
<td>8 (25.0%)</td>
</tr>
<tr>
<td><strong>D5) Laundry Area</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>22 (68.8%)</td>
<td>10 (31.2%)</td>
</tr>
<tr>
<td><strong>D6) Basement Storage Lockers</strong></td>
<td>0</td>
<td>1 (3.1%)</td>
<td>5 (15.6%)</td>
<td>18 (56.2%)</td>
<td>5 (15.6%)</td>
</tr>
<tr>
<td><strong>D7) Building Maintenance</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16 (50.0%)</td>
<td>16 (50.0%)</td>
</tr>
<tr>
<td>*<em>D8) Repair Response Rate <em>25 Respondents</em></em></td>
<td>0</td>
<td>0</td>
<td>4 (16.0%)</td>
<td>12 (48.0%)</td>
<td>9 (36.0%)</td>
</tr>
<tr>
<td><strong>D9) Management Rules</strong></td>
<td>0</td>
<td>0</td>
<td>2 (6.2%)</td>
<td>16 (50.0%)</td>
<td>13 (40.6%)</td>
</tr>
<tr>
<td><strong>D10) Building Staff</strong></td>
<td>0</td>
<td>1 (3.1%)</td>
<td>1 (3.1%)</td>
<td>15 (46.9%)</td>
<td>15 (46.9%)</td>
</tr>
<tr>
<td><strong>D13) Building Security</strong></td>
<td>0</td>
<td>0</td>
<td>2 (6.2%)</td>
<td>11 (34.4%)</td>
<td>19 (59.4%)</td>
</tr>
<tr>
<td>*<em>D14) Parkade Security <em>26 Respondents</em></em></td>
<td>0</td>
<td>0</td>
<td>8 (30.8%)</td>
<td>9 (34.6%)</td>
<td>9 (34.6%)</td>
</tr>
</tbody>
</table>

The fitness area seems to be the only feature that is not viewed so positively. Three (9.3 %) respondents were dissatisfied and nine (28.1 %) respondents were neither dissatisfied nor satisfied with this common area. If one refers back to Table 9, it is evident that some residents feel the fitness area is too small and crowded. Thus, although they like having the facility itself, they would enjoy it more if there was adequate space to use the equipment comfortably.

The results presented in Table 10 point to another important conclusion. The management of 600 Drake is exemplary. Every management issue, such as building maintenance, repair response rate, management rules, building staff, and building security were given very high satisfaction ratings by the residents of 600 Drake. Furthermore, when asked if they feel informed about tenant issues, twenty-nine (90.6 %) respondents said "Yes".

Written comments by respondents indicate the twenty-four hour staff office located at the front lobby plays an integral role in maintaining this degree of satisfaction (See Photo 3). Residents truly appreciate being able to contact a staff member at any time when maintenance, security or rental administration problems arise. This management system truly serves the needs of residents. The property management company, Continental Reality Services Ltd., should be commended on its servicing and handling of tenant issues.

Since safety issues can have a significant impact on how comfortable people feel in their home and whether they will interact with other residents, it was felt an indicator should be
included in the questionnaire to measure how safe people feel within the building. Chart 28 displays the results of this question. Every single respondent rated the building as safe or very safe. Obviously, the security system in place at 600 Drake creates an atmosphere where residents do not hold any concern for their safety. Such a situation can only serve to promote a sense of satisfaction with one's home and perhaps encourage social interaction among residents.

![Chart 28: Building Safety](image)

Four commonly employed residential satisfaction indicators bring Section D of the questionnaire to a close. When all aspects of the building and the unit are considered together, the responses to these four questions provide an indication of how satisfied residents are with their mini-suite apartment.

Chart 29 displays the response to the question asking residents how much longer they expect to stay in 600 Drake. Most respondents expect to remain in their mini-suite from between six months and two more years. One should also be aware that, on average, residents in this sample population had already lived in their mini-suite for 9 months. This response indicates that residents generally look to mini-suites as a transitory form of housing, not the type of place where they expect to live for a prolonged period of time. However, one can also argue, irrespective of whether they live in a mini-suite or a conventional apartment, that many tenants view rental units this way. For example, census statistics for neighbourhoods in Downtown Vancouver show 44.1% of the residents lived at a different residence one year earlier (1991 Census of Canada, Cat. #95-389). Quite clearly, Downtown Vancouver can be characterized as a
highly mobile community where many residents live in their apartments for short periods of time. Therefore, it is not surprising that most residents indicated that they expect to live in their mini-suite for no longer than two more years.

![Chart 29: Expectation of Length of Stay](image)

Another point to be made relates directly to residential satisfaction. If residents were generally dissatisfied with their mini-suite, one would expect they would either be considering or in the process of moving to a new home. With only four (12.5%) respondents indicating an expected stay of less than six months, the data does not support this conclusion. Furthermore, one can not necessarily assume that these four individuals are planning to leave simply because they are unsatisfied residents. As discussed previously, maybe the individual's have other reasons for deciding to move.

A comparison of these results to the results generated by the same question in the Part One Survey shows little appreciable decline in the expectation of continued residence in the mini-suites. Although the proportion of residents indicating they expected to live for more than two years in their mini-suite declined from 25.0% to 15.6%, there was also a slight decline, from 14.3% to 12.5%, in the proportion of residents who indicated they would move out of their mini-suite in less than six months. Moreover, it must be remembered that half of the Part Two Survey participants had previously participated in the Part One Survey, so their response to this question was influenced by the five month period that elapsed between the two
surveys. Taking account of this temporal factor, this data seems to indicate that residents are satisfied with their mini-suite as a transitory form of housing.

The results displayed by Charts 30 and 31 should be considered together. When asked about the likelihood of living in another mini-suite, twelve (37.5 %) respondents said it was unlikely. Two more (6.2 %) respondents were certain they would not live in another mini-suite. At first glance, this seems to indicate a significant dissatisfaction rate. However, it could be that, since some respondents view their mini-suite as transitory housing, these residents may have expectations that their housing needs may change in the near future. If this is the case, one can not automatically assume they are dissatisfied with their mini-suite housing. The mini-suite may simply be meeting short term housing needs.

![Chart 30: Likelihood of Living in Another Mini-Suite](image)

![Chart 31: Recommend Mini-Suites to a Friend](image)
Another way to interpret Chart 30 is to combine the number of people who "definitely" and "probably" would live in another mini-suite. Eleven (34.4%) respondents are obviously indicating some degree of satisfaction with their apartment. In addition to these residents, seven (21.9%) respondents said it would not matter to them one way or the other if they live in another mini-suite.

The interpretation of how satisfied residents are with their mini-suite becomes much clearer when one then considers the relationship depicted by Chart 31. Twenty-four (75.0%) of the respondents would definitely or probably recommend a friend live in a mini-suite. It is assumed that someone would only be willing to make such a recommendation to a friend if they were generally satisfied with the experience themselves. Only three (9.4%) respondents were unlikely or definitely would not do this. In essence, the vast majority of residents are satisfied with their mini-suite.

This profound conclusion is confirmed by the two final questions of Section D. When asked if they feel they pay fair market rent for their apartment, twenty-four (75.0%) respondents replied "Yes". Considering the fact that residents pay from between $500 to $700 per month for roughly 300 sq. ft. of living space, this response is very informative. The average rental rate for a studio-bachelor unit in the West End is $566 per month. Although typical studio-bachelor units in the West End are much older and not as well serviced, they typically offer from between 450 to 550 sq. ft. of living space. Evidently, the response to this question indicates a high degree of satisfaction with living at 600 Drake.

As displayed by Chart 32, when simply asked how satisfied they are with their mini-suite, the vast majority of respondents positively rated this indicator. For example, twenty-six (81.2%) respondents indicated they were satisfied or very satisfied while only three (9.4%) respondents were dissatisfied with their mini-suite. It is very clear, when all aspects of 600 Drake are considered, the people who decided to move into a mini-suite were satisfied with this form of housing.
A comparison of these results to the results of a similar question posed in the Part One Survey suggest the degree of satisfaction with living in a mini-suite has solidified. Results from the Part One Survey show that 58.9% of the respondents were either satisfied or very satisfied with their apartment whereas now the proportion of respondents with this view stands at 81.2%. Thus, there is no indication that the degree of satisfaction with living in a mini-suite at 600 Drake has declined over the five month period between surveys.

6.4 Size-Based Comparison of Residential Satisfaction

In order to discover whether residents living in larger mini-suites are more satisfied than those people living in the smallest units, the data base was separated according to unit size and a comparison of unit satisfaction was conducted. Twenty-one of the respondents live in the smaller mini-suite units which range in size from 283 to 327 sq. ft. Eleven respondents live in larger mini-suites which offer from 330 to 406 sq. ft. of living space.

The data bases according to unit size are relatively small so any co-relationships exposed by this comparison are introduced with some trepidation. One must remember that this study was not designed as a comparative housing satisfaction study. Nonetheless, a feature by feature comparison of satisfaction levels for all aspects of the mini-suite units did not unveil differences in satisfaction levels. Respondents of both the larger and smaller mini-suite unit designs indicate
comparable satisfaction levels with their apartment's appearance, kitchen design, bathroom
design, window space and overall unit size. Respondents registered similar rates of
dissatisfaction with the amount of space for dining, the size of the living/sleeping area, balcony
size and the amount of closet space.

It is believed an explanation for this co-relationship is related to the fact residents chose
the type of unit which best fit their individual needs and which they could most afford. The
expectation levels of residents is a derivative of this needs and cost assessment. As a result,
because the people who moved into the smaller mini-suites chose to do so on their own accord,
they generally were not disappointed by the amount of space in the unit. It is likely this result
would not be replicated in a social housing development where residents usually do not have the
same opportunity to choose a unit which fits their individual housing needs.

Interestingly, the only area where there seemed to be a divergence of opinion between the
two size-based, respondent groups had to do with what area of their mini-suite they would like to
make larger. Chart 33 demonstrates this relationship. Residents of the smaller mini-suites seem
to put more of a premium on enlarging the amount of space in the living/sleeping area whereas
residents of the larger units are inclined to seek more closet space. It is hypothesized that the
residents of the larger units, especially the units which include a bed alcove area, have sufficient
living space for accommodating more pieces of furniture to support non-sleeping activities, such
as dining room tables or computer desks. With these needs satisfied, the residents desire more
closet space as a means to remove unwanted clutter in their living area. In contrast, because the residents in the smaller units find that their living/sleeping area is so limited, they have fewer functional options as to how they decorate and use their living space. These residents probably desire more space so that they can accommodate a wider range of activities in their living/sleeping area.

It should be emphasized that this hypothesis can not be substantiated by the data generated by this study. It is clear that a comparative study which systematically analyzes satisfaction levels of different mini-suite unit configurations and unit sizes would greatly improve and complement the analysis of residents' satisfaction with mini-suite housing.

In summary, this two-part survey has described the types of people who live in 600 Drake and then analyzed whether the design of the units, the building and the contextual aspects of the neighbourhood satisfies particular housing needs. Although there are a few design problems, such as the lack of closet space, neighbourhood noise, and small balconies, the residents are very satisfied with their mini-suite apartment. This conclusion corroborates with research presented in Chapter Two. Many residential satisfaction studies have found that while people may relate general satisfaction with their home, they will usually list a few specific complaints about their home environment. It is quite rare for residents to relate unmitigated satisfaction with their home.

It should also be recognized that this survey generated results which are similar to those produced by the Vischer and Skaburskis study. For example, residents of the False Creek study derived great satisfaction from the views and bright rooms provided by the development. Primary sources of dissatisfaction were soundproofing and small rooms. These viewpoints parallel those found at 600 Drake. Residents of False Creek also indicated they appreciated a "compact lay-out". The call for more closet space by the residents of 600 Drake can be interpreted as a similar desire for a more efficient unit design. In addition, the issue of soundproofing was relevant in both studies because it negatively impacted on the ability of residents to maintain privacy. The parallels between the findings of this study with those of the
Vischer and Skaburskis study lends support to the contention that this case-study provides an accurate account of how satisfied residents are with their mini-suite apartment at 600 Drake.

Despite there being a predisposition to view one's home positively, it is felt that the results of this survey reflect genuine feelings of satisfaction. It is argued that, since the resident population of 600 Drake closely matches the socio-demographic characteristics of the target market for mini-suites, the survey results are essentially a reflection of how well the mini-suites meet or fit the needs of one sub-sector of the housing market. The vast majority of residents indicated that they chose, over other options, to live in this building. Therefore, it is apparent that this form of housing conforms with and supports the desired lifestyle of most of the residents. As Weidemann and Anderson have suggested, the quality of a residential environment is dependent upon acceptance by its residents. Quite clearly, residents of 600 Drake have indicated their acceptance of living in a mini-suite apartment at this building.
CHAPTER SEVEN

PHONE SURVEY OF PREVIOUS PARTICIPANTS

One of the initial steps in conducting the Part Two Survey involved verifying which of the Part One Survey participants were still living in 600 Drake at the time of the second survey. A cross reference of VLC's tenant list revealed that 20 participants had moved out of 600 Drake. The forwarding addresses and phone numbers provided by these participants were recorded. A few respondents also provided an explanation of why they decided to move. This information presented an opportunity to discover some of the reasons why residents decided to move out of their mini-suite apartment.

Nine of the twenty previous residents indicated on their termination notice that they were moving out of the City of Vancouver. One participant moved to Spain, two moved to the U.S.A., one moved to Montreal, three moved to cities in the Interior of B.C., and two participants moved to cities in the Fraser Valley. One would expect these residents moved out of 600 Drake for reasons other than those directly associated with housing satisfaction. It is more likely that other factors, such as employment opportunities or changing personal relationships, induced these people to leave 600 Drake. Therefore, one can not assume that these people decided to move out of their mini-suite simply because they were dissatisfied with the living environment provided by these units.

It was decided that it would be very informative if the previous participants who continue to live in Vancouver were asked how satisfied they were with their mini-suite and why they decided to move. Using an adapted version of the Part Two Survey questionnaire, a phone survey was conducted in November, 1994. Several attempts were made to contact each of the eleven previous participants who indicated continued residence in the City of Vancouver. No contact was made with five of these people. However, two of these people gave reasons on their termination notice as to why they moved out. One person moved due to a change in employment. The other person wanted a larger apartment. Little else is known about why these residents decided to move out of 600 Drake.
Contact was made with six of the previous participants and all of these people agreed to participate in the phone survey. Everyone continues to live near Downtown Vancouver. Four of the participants said they live in the West End, one person lives in Mount Pleasant, and the other participant lives in the South Granville area. Further questioning revealed that one participant lives in a studio-bachelor apartment, four are in one-bedroom apartments, and one person shares a two-bedroom apartment. Everyone indicated satisfaction with their new home.

Table 11 provides a summary of how satisfied the six previous residents were with various aspects of their mini-suite apartment. Since it involves such a small survey population, it would be improper to draw conclusions from this data. Nonetheless, when one relates this data to the findings of the Part Two Survey, some broad relationships can be formulated. It seems that the residents who moved out of 600 Drake but still live in Downtown Vancouver were less satisfied than the residents who continue to live in the building.

<table>
<thead>
<tr>
<th>Table 11: Response Summary (6 Previous Residents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Mini-Suite Apartments</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>B1) Overall Appearance</td>
</tr>
<tr>
<td>Very Dissatisfied    Dissatisfied    Neither    Satisfied    Very Satisfied</td>
</tr>
<tr>
<td>0                               0              0                 4                 2</td>
</tr>
<tr>
<td>B2) Kitchen Size</td>
</tr>
<tr>
<td>1                               1              0                 4                 0</td>
</tr>
<tr>
<td>B3) Food Preparation Space</td>
</tr>
<tr>
<td>2                               0              1                 3                 0</td>
</tr>
<tr>
<td>B4) Dining Space</td>
</tr>
<tr>
<td>1                               4              0                 1                 0</td>
</tr>
<tr>
<td>B5) Bathroom Space</td>
</tr>
<tr>
<td>0                               1              0                 5                 0</td>
</tr>
<tr>
<td>B6) Live/Sleep Space</td>
</tr>
<tr>
<td>3                               3              0                 0                 0</td>
</tr>
<tr>
<td>B7) Closet Space</td>
</tr>
<tr>
<td>3                               3              0                 0                 0</td>
</tr>
<tr>
<td>B8) Space for Furniture</td>
</tr>
<tr>
<td>0                               3              1                 2                 0</td>
</tr>
<tr>
<td>B9) Space for Entertaining</td>
</tr>
<tr>
<td>3                               3              0                 0                 0</td>
</tr>
<tr>
<td>B10) Balcony Size</td>
</tr>
<tr>
<td>1                               2              2                 1                 0</td>
</tr>
<tr>
<td>B11) Apartment Size</td>
</tr>
<tr>
<td>3                               3              0                 0                 0</td>
</tr>
</tbody>
</table>

When one looks at Table 11 on a feature by feature basis, it is apparent that the previous participants were generally dissatisfied with the same aspects of the apartment as residents who continue to live in 600 Drake. For example, they were dissatisfied with the dining area, live/sleep area, closet space, space for entertaining, and the overall size of their mini-suite apartment. On the other hand, the previous participants were satisfied with the appearance of the mini-suite, and the design of the kitchen and bathroom areas. The fact that this information
corresponds with the findings of the Part Two Survey verifies the assertion that this project has produced an accurate account of what aspects residents like or dislike about their mini-suite.

Table 12 lists the results of questions dealing with privacy and noise issues. Again, these results correspond with those of the Part Two Survey. They indicate that, although being satisfied with their ability to maintain privacy from fellow residents, the previous residents were quite dissatisfied with their ability to control neighbourhood street noise. It seems this issue constituted another reason why people decided to move out of 600 Drake.

Table 12: Response Summary (6 Previous Respondents)

<table>
<thead>
<tr>
<th>Perceptions of Privacy</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1) Privacy in Apartment</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>C2) Privacy from Neighbours</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>C3) Privacy from Neighbourhood</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>C4) Noise from Neighbours</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>C5) Noise from Neighbourhood</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>C6) Noise from Neighbourhood</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Evidently, the participants were dissatisfied with their mini-suite apartment and this motivated them to find more suitable housing. Table 13 illustrates this point quite succinctly. When asked to explain why they decided to move out, three reasons were given by the six phone survey participants. The mini-suite was viewed as being too small, noisy, and a temporary place to live. Obviously, these comments correlate with the critical issues identified by the Part Two Survey. It seems the mini-suite apartments did not sufficiently fit the needs of these particular residents.

Table 13: Response Summary (6 Previous Residents)

<table>
<thead>
<tr>
<th>Satisfaction with the Building</th>
<th>Definitely</th>
<th>Probably</th>
<th>Doesn't Matter</th>
<th>Unlikely</th>
<th>Definitely Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1) Live in Another Mini-Suite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>D2) Recommend a Mini-Suite</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D3) Satisfaction with Mini-Suite</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
This leads to one final point. The six previous residents were successful in finding more suitable housing in Downtown Vancouver. Furthermore, everyone indicated satisfaction with their new home. Despite Vancouver's tight rental housing market, it is seemingly possible to procure housing which meets individual needs. If they are not satisfied with their mini-suite, perhaps the four residents who felt they had no choice other than 600 Drake will eventually be able to find more suitable housing. Whatever the case may be, the results of this limited phone survey seem to collaborate and verify the interpretation of results generated by the Part Two Survey. With this information, it is now possible to present some policy implications for mini-suite housing development.
POLICY IMPLICATIONS FOR MINI-SUITE HOUSING DEVELOPMENT

This case-study of 600 Drake has exposed some important issues related to the design and development of mini-suite housing. It is essential that the City of Vancouver learn from this experience and shape future mini-suite development so that it is liveable and satisfies the needs of residents. Based upon the findings of this study, a series of development and design implications are proposed as a means to promote the development of affordable and liveable rental housing and to support other civic housing policy objectives.

The first decision to address is whether the City of Vancouver should permit the construction of more mini-suite housing. As previously suggested, the housing market should be conceptualized as a matrix of housing needs and choices. It is incumbent upon housing planners to ensure that the full range of needs are satisfied. This study arrived at two profound conclusions. It verified that the resident population of 600 Drake generally matches the intended market for mini-suite housing. In other words, this study has confirmed the existence of a niche market for mini-suite housing. Secondly, this study has demonstrated that the residents feel their mini-suites are liveable and satisfy their specific housing needs. These two key findings lead to one resolution. The City of Vancouver should permit the construction of mini-suite housing.

Implication #1: The City of Vancouver should permit the construction of mini-suite housing.

Accepting the suggestion to permit the development of more mini-suite housing, it is critical that the City of Vancouver implement an approval process which ensures new development is liveable and supports civic housing objectives. Essentially, the City must decide between the adoption of a free market approval process or a controlled and monitored approval process.

Proponents of a free market approach profess that one of the most efficient and cost effective means of providing housing is to relieve development of undue regulations and design
criteria. It is theorized that, due to the forces of market competition and consumer choice, developers will eventually respond to changing consumer trends and build housing which satisfies the needs of different consumer sub-sectors. Developers whom fail to respond to these forces will eventually become uncompetitive and unsuccessful in marketing their product. This approach subscribes to the ideological belief that housing is generally viewed as a consumer product which is most efficiently constructed by the private sector.

However, implicit to this case-study is the opinion that housing is more than simply a consumer product. The provision of safe, liveable and affordable housing has tremendous impacts on the social, physical, economic, and cultural well-being of individuals and of whole communities (CMHC, 1994; Hulchanski, 1988; Miron, 1993). As Gurstein and Vanderburgh so eloquently state:

Shelter is a fundamental need of humans, without which they cannot begin to reach their social and personal potential; therefore, the most basic qualities of safety, convenience, and functional adequacy deserve concerted attention in assessment and planning of housing (Gurstein and Vanderburgh, 1993).

It is clear that a city has a direct interest in seeing that housing development meets the needs of its citizens.

As was outlined by Chapter Three, the City of Vancouver has historically experienced tight conditions in the rental housing market. Despite strong demand for this type of housing, the private sector has generally found it uneconomical to supply segments of the market. In under-supply situations, there is a possibility that some individuals will be forced to live in housing which is inappropriate and does not meet their particular needs. A few respondents in this case-study seem to be victims of such circumstances. However, the study also found some indication that unsatisfied residents are eventually successful in locating a more satisfactory home. Nonetheless, it should be acknowledged that, rather than building to the needs of an identifiable niche market, the conditions of the Vancouver rental market present an opportunity for some developers to exploit tight rental market conditions and build smaller housing units as a
simple means to maximize profits. With the ability to maximize rents on a per square foot basis, it is likely that the development of larger forms of rental housing will be even less likely.

It is believed that the institution of a free market approval process for mini-suite development may, in effect, exacerbate under-supply problems for other sub-sectors of the rental housing market, such as standard size, one-bedroom apartments. For example, instead of desiring to live in a mini-suite because it fits a lifestyle choice or serves immediate needs, some people may be forced to live in a mini-suite simply because mini-suite development represents the bulk of new rental construction. In such "mismatched" circumstances, it is likely that residents would be unsatisfied with their home. As described by Gurstein and Vanderburgh, an unsatisfactory home environment negatively impacts upon the well-being of residents and, as a result, the whole community suffers. Following this rationale, it is recommended that a controlled and monitored development process be implemented to regulate the construction and design of mini-suite housing.

Implication #2: A controlled and monitored development process should be implemented to guide the design and construction of mini-suite housing.

VLC has experienced strong market demand for its mini-suite apartments. After an initial six to eight months of relatively high vacancy and turnover rates, 600 Drake has virtually maintained a 100% occupancy rate. Although a few units become available each month, the apartments are quickly rented to new tenants. This turnover activity is not surprising since many residents utilize these units as transitory housing. Nonetheless, in addition to socio-demographic trends, the success of 600 Drake has confirmed the existence of a legitimate market for mini-suite housing. In order to control development, the City of Vancouver must first have some estimate of the potential "legitimate" market for mini-suite housing. Therefore, the city should conduct a rental housing market study and project demand for this form of housing. With this knowledge, the City of Vancouver will be in a better position to decide how much more mini-suite housing is needed to meet consumer demand.
Implication #3: Conduct a market survey in order to estimate the demand for mini-suite housing.

It is also suggested that the City of Vancouver regularly monitor rental market conditions in order to reassess the demand for mini-suite housing. Concurrently, the city should conduct residential satisfaction studies as new mini-suite development comes on stream. A monitoring program such as this will ensure decisions on whether to approve new mini-suite development are based upon accurate market information. This measure will empower the city to approve new development as demand warrants and, therefore, avoid potential problems associated with mini-suite housing stock dominating new rental construction.

Implication #4: Regularly monitor and reassess the mini-suite rental housing market.

Once it has been estimated how many units of mini-suite housing should be built in the City of Vancouver, the next crucial step is to devise an approval process which will guarantee that new development is liveable and fits the needs of residents. As outlined in Chapter Five, 600 Drake followed a precedent setting, discretionary approval process. Specific concessions were asked of VLC before the City used discretionary powers to grant a relaxation of the minimum unit size requirement. In the end, this approach resulted in the construction of a building which satisfies most of the needs of residents and contains very liveable mini-suite apartments. The successes and failures of 600 Drake should be appreciated and serve as a model. It is suggested that a conditional approval process which relies upon discretionary planning powers would both guarantee the development of liveable housing and provide the city with some degree of flexibility to change priorities over time. In such a process, there is no real need to make a straight reduction of the current minimum unit size requirement.

An alternative approach would be to amend the Zoning and Development By-law and reduce the minimum unit size requirement. Essentially, such an amendment would permit the construction of mini-suites anywhere in the city as long as the development satisfies civic design guidelines. The drawbacks of this approach are that the city would have less ability to control
the total amount of new mini-suite development, where in the city new development occurs, and whether it is developed as rental or condominium housing. In other words, an amendment to the Zoning and Development By-law will permit the inclusion of mini-suite housing in any development so long as it upholds By-law regulations. It is argued that, since this is a new and innovative form of housing, the development of mini-suite housing should be subjected to a specialized approval process whereby the City of Vancouver has the ability to assess each proposal on its own merits to determine whether it meets civic housing policy objectives.

Implication #5: Maintain existing minimum unit size requirements in the Zoning and Development By-law. Utilize discretionary powers to approve mini-suite development proposals which meet specified design criteria and civic housing policy objectives.

There is little doubt that the development industry would prefer a simple reduction in the minimum unit size requirement over a more cumbersome discretionary approval system. Quite rightly, the development industry desires a civic approval system which explicitly lists the conditions of development. Previous knowledge of such conditions improves the planning stage of a proposal because, at its inception, developers know what is required of them and they can incorporate these requirements into their project "performa" calculations. This is a legitimate concern which should be acknowledged.

The main reason for recommending the implementation of a discretionary approval process for mini-suites is so the City of Vancouver can maintain control over the amount and location of new mini-suite development as market conditions change. Beyond this discretion, the city should be very explicit as to the special conditions it places on the development of this form of housing. Furthermore, specific guidelines regulating the design of the mini-suite units must be instituted. The introduction of specific development conditions and guidelines will create a framework which alleviates a great deal of the uncertainty associated with a discretionary approval process.

Implication #6: Adopt a design framework which specifies the conditions for mini-suite housing development and introduces guidelines for the design of mini-suite units.
Since most residents do not expect to live in their mini-suite for more than two years, it is clear many residents of 600 Drake view this form of housing as serving a transitory function. This transitory usage does not seem appropriate for the condo market. Furthermore, this study has also described the parameters of Vancouver's tight rental housing market. There is strong demand for new rental housing in the City of Vancouver but, over the past decade, the market place has not responded accordingly. With these two points in mind, it is suggested that the City restrict the development of mini-suite apartments to the rental housing market. The introduction of mini-suites could potentially make rental development more feasible and stimulate activity in this sector. This policy would be even more effective if rental housing proposals are granted top priority and fast-tracked through the civic approval process.

**Implication #7: Mini-suite development should be restricted to the rental housing market and such development should be fast-tracked through the approval process.**

With the recommendation that mini-suite housing be restricted to the rental sector, it follows that the city should seek some guarantees as to how a mini-suite building is managed. Therefore, it is recommended that a binding management plan be entered into as a condition of receiving development approval. This agreement should guarantee the retention and continued accessibility of common areas, outline building safety services, and include policies regarding the limitation of the number of residents permitted to live in each unit. A precedent has been set by 600 Drake where the city required VLC to sign covenants protecting the rental status and amenity areas of the building.

**Implication #8: Negotiate a binding rental agreement plan as a condition of development approval.**

It has become apparent that mini-suite housing is most appropriate in high density, urban neighbourhoods because these neighbourhoods possess the necessary infrastructure to support the specialized needs of the residents. Young, service sector workers were attracted to 600 Drake because the location provided excellent access to work, entertainment, and recreational activities.
associated with the CBD. Furthermore, a central neighborhood such as Downtown South offers superior public transit connections and access to a variety of social services and educational institutions. It seems sensible to limit the development of mini-suites to central urban neighbourhoods such as the West End and Downtown South.

**Implication #9: Restrict mini-suite development to central urban neighbourhoods adjacent to the CBD.**

Another issue which the City's housing policy must address is to determine a guideline on a preferred project size for mini-suite development. The City should maintain some flexibility on this issue and assess each project on its own merits. This being said, the City should dissuade proposals which only include a few mini-suite units. Proposals with less than ten or fifteen units will probably not have the economies of scale to support the specialized services, such as common area facilities, required for this form of housing. However, it is also foreseeable that a large rental development may seek the inclusion of a few mini-suites to broaden the mix of rentable units. Such a proposal should only be considered if the aforementioned mini-suite development guidelines are respected by the development plan.

At the upper end, this study has shown that 600 Drake, with its 192 rental units, is quite liveable. Basic intuition leads one to believe that developments which are significantly larger than 600 Drake may be problematic. Unique issues may arise regarding amenity areas, security services and the concentration of residents from one socio-demographic group if very large mini-suite developments are permitted. Again, proposals should be considered on a case by case scenario, with the onus on the proponent to prove the development will be liveable and satisfy the needs of residents.

**Implication #10: Adopt a target range for the optimum size of mini-suite development and assess each proposal on its own merits as to whether it is liveable and satisfies the needs of residents.**
If residential development is going to be promoted for busy urban neighbourhoods such as Downtown South, special attention should be paid to the negative impacts of street noise. Needless to say, street noise affects the liveability of all forms of housing. This problem is accentuated in mini-suites because this form of housing requires an open interior layout. If a window is opened to generate air circulation, the open layout does not provide opportunities for interior noise control measures such as partially closing a bedroom door. Thus, as was described by the residents of 600 Drake, they are faced with a dilemma. They sometimes have to decide between sleeping in hot, stuffy conditions with the window closed or noisy conditions with the window open. This issue was greatly accentuated at 600 Drake because the building is situated adjacent to the Granville Street Bridge off-ramp.

It is suggested the City of Vancouver strictly enforce civic acoustic standards and, if a proposal is situated at a particularly noisy location, more stringent noise abatement measures should be required to ensure these standards are upheld. Again, this requirement should be assessed on a case by case basis.

Implication #11: Strictly enforce civic acoustic standards and, if needed, impose noise abatement measures to ensure these standards are upheld.

Implication #12: Design Guidelines for Mini-Suite Housing

The survey of residents at 600 Drake exposed several issues which influence the liveability of a mini-suite apartment. A series of design guidelines have been developed from the results of this case-study. These guidelines should be interpreted as specialized regulations governing the development of mini-suite housing to be applied within a discretionary approval process. They should not be interpreted as suggestions for direct amendments to the Zoning and Development By-law. Once refined and adopted as part of the City of Vancouver’s mini-suite housing policy, these design guidelines will assist proponents in the formulation of mini-suite development plans because they will be aware of what criteria the city will use to assess proposals.
The survey revealed that, although the mini-suites at 600 Drake are quite liveable, residents did indicate a strong desire for more living and closet space. As was discussed, a doubling of closet space would make the apartments more functional and remove clutter from the open living areas. It was also suggested that additional closet space should not be at the expense of open living areas. Therefore, the total size of mini-suites should be about 20 sq. ft. larger than the smallest unit (281 sq. ft.) at 600 Drake.

a) Adopt a 300 sq. ft. minimum allowable size requirement for mini-suites.

In order to receive development approval, the proponent should be required to submit a set of detailed unit plans. The onus should be placed on the proponent to prove the mini-suites will be functional and liveable. The term "functional" refers to the objective of ensuring that interior mini-suite unit dimensions allow residents to decorate their apartment with key furnishings, items such as a bed or a small table. Space saving innovations such as "Murphy" beds or built-in shelving should also be encouraged.

b) Require applicants to submit detailed unit plans as a means to prove the mini-suite are functional and liveable.

It was determined that the amount of closet space provided in the units at 600 Drake was insufficient. A typical unit in 600 Drake had less than 20 sq. ft. of general purpose closet space. It is suggested that this amount of closet space should be doubled.

c) Require mini-suites include a minimum of 35 sq. ft. of general purpose closet space (not including kitchen and bathroom cupboard space).

The survey revealed that residents were very satisfied with both the kitchen and bathroom areas of their mini-suite. One of the main reasons for this degree of satisfaction was VLC's decision to include standard, apartment-size appliances and plumbing fixtures in these two areas.

d) Utilize standard, apartment-size appliance and plumbing fixtures in the design of kitchen and bathroom areas.
Residents were dissatisfied with the size of the "European-style" balconies because they provide little functional outdoor living space. Moreover, this type of balcony is less effective in creating a barrier from street noise. Perhaps glassed-in balcony spaces should be encouraged as a more effective noise barrier. In any event, a minimum size standard for balconies should be invoked.

e) **Require balconies in the design of mini-suite apartments. Balconies should have a minimum depth of one metre.**

Residents of 600 Drake were very satisfied with the views and the amount of natural light generated by the large windows in the apartments. Large windows serve to brighten and create a more open atmosphere within these small apartments and should be encouraged as a design feature of mini-suite housing. Since street noise and air ventilation problems were encountered, it is suggested that specially glazed windows might serve as a more effective noise and heat barrier. Not to neglect privacy concerns, the orientation and design of window areas should respond to unique site conditions and maintain privacy wherever possible. In addition, interior blinds and exterior screens can be quite effective in controlling visual privacy while allowing natural light to flood into a room.

f) **Require the design of mini-suite buildings to maximize window space and respect privacy and noise barrier objectives.**

Residents of 600 Drake were generally satisfied with their basement storage lockers and secured bicycle parking facilities. The lockers at 600 Drake contained 200 cubic feet of storage space and met the needs of residents. Commensurate with an active lifestyle, most residents did utilize the bicycle lock-up. These features should be included in all new development.

(g) **Require one, 200 cubic foot, basement storage locker per mini-suite unit.**

h) **Require one secure bicycle space per mini-suite unit.**
In addition to secure parking facilities, bicycle workshop and washing facilities should be a requirement of future development. At little additional expense, such an area would greatly support regular usage of bicycles as a means of travel. A City of Vancouver report titled Clouds of Change encourages the use of alternative modes of transportation. Design guidelines should be instituted which fully support the objectives of planning for a more sustainable city.

i) **Require a bicycle workshop and washing facility.**

The survey also revealed that only one half of the respondents required an automobile parking space. Most residents walk or ride public transit to work so many do not even own a car. It is onerous to require developers to meet current civic parking requirements applicable to standard residential development. The City should develop a new parking standard for mini-suite housing which takes into consideration the unique aspects of this form of housing. 600 Drake has 141 parking spaces for a parking space to unit ratio of 73 %. It seems appropriate to reduce the ratio of parking spaces to apartment units to somewhere near 50 %. The cost savings to the developer of a reduced parking requirement will offset some of the added costs associated with special design guidelines for mini-suite housing.

j) **Reduce the automobile parking requirement for mini-suite development. The ratio of parking spaces to apartment units should be near 50 %.**

Residents also indicated satisfaction with the various amenity areas incorporated into the design of 600 Drake. The City should avoid rigid guidelines as to the amount of space and types of common areas that must accompany a mini-suite proposal. Rather, the city should remain flexible and consider proposed amenity areas on a case by case basis to determine what kinds of common facilities are deemed appropriate. However, the main objective should be to provide multi-purpose spaces that will instigate casual social interaction among residents and can also serve as an area in which residents can entertain their guests. Television lounges, fitness rooms, games rooms, and barbecue patios are all good examples of the types of facilities that could be
incorporated into a development plan. In a sense, these areas should function as the building's living room.

**k) Require common area facilities which provide opportunities for casual interaction among residents and spaces where residents can entertain their guests.**

The limited spatial dimensions of mini-suite apartments necessitates the need for central laundry facilities. At 600 Drake, the linking of the laundry room to the television lounge was highly successful in creating a locus for social interaction. Innovations such as this should be encouraged.

**l) Require a central laundry room facility.**

These mini-suite development implications and design guidelines are meant to provide a framework for developing a comprehensive mini-suite housing policy. Although other issues or specific details may arise which were not dealt with in this study, it is believed these recommendations present a balanced and comprehensive interpretation of how mini-suite development should proceed in the future. While acknowledging the private sector's desire for an explicit and unencumbered approval process, it is argued that these policy recommendations will achieve the objectives of ensuring mini-suite housing is liveable and satisfies the needs of residents. Furthermore, these recommendations support other important civic housing objectives such as promoting the development of healthy, affordable and sustainable communities. If nothing more, these recommendations can serve as a starting point from which housing planners can begin to formulate policies that address some of the unique aspects of mini-suite housing.
CHAPTER NINE
CONCLUSION

This case-study is intended to complement and expand upon the knowledge that exists about the planning implications of mini-suite housing. In order to integrate social, economic and physical design issues, this chapter will provide a summary of the main conclusions derived from this post-occupancy evaluation. In the course of conducting this study, it also became apparent that there are two important aspects of mini-suite housing which require further research. This chapter will provide some direction on where future research should be focused to gain a greater appreciation of the unique planning implications of this innovative form of housing.

Fundamental demographic and housing market trends for the City of Vancouver indicate the existence of a niche market for mini-suite housing. Population growth, smaller households, rapid new household formation and a young age profile have all put pressure on the existing stock of housing. Compared to other Canadian cities, the cost of land and housing in the City of Vancouver continues to be expensive and rental vacancy rates remain very low. Changing consumer needs and lifestyle habits place extra pressure on the housing stock because traditional forms of housing do not adequately fit the particular needs of emerging market niches. Compounded by physical site constraints, VLC was motivated by this market information to propose developing mini-suites at 600 Drake. The fundamental market factors which influenced VLC in 1989 have changed very little in the ensuing years.

The results of the Part One Survey verified that socio-demographic characteristics of residents living in 600 Drake closely match the projected characteristics of the target market for mini-suites. For example, a typical resident of 600 Drake is under 40 years of age, single and holds a post secondary degree. This resident walks or takes public transit to a service sector job located in Downtown Vancouver. Their leisure time is divided between many recreation, entertainment and social activities, most of which take place outside of their home. Evidently, VLC's market analysis accurately identified a niche market. VLC was then successful in designing a building which the niche market found attractive.
In contrast, the Part One Survey also revealed how a significant business market for mini-suite housing did not materialize. Only one respondent was identified as someone who maintains a mini-suite as a secondary residence for business purposes. Apparently, this market is better served by the hotel and apartment/hotel sectors.

The Part One Survey also exposed the main reason people chose to move into a mini-suite. People were attracted to 600 Drake because it is a new and modern building. Other features such as the design of units and amenity areas; the building security system; the availability of an apartment; rent increase protection; and building location positively influenced residents' decision to move into 600 Drake. Affordability had a balanced or neutral effect on this housing choice-equation and apartment size had a slightly negative effect. In conclusion, it is apparent that residents chose to live in 600 Drake because of its design, locational and economic attributes. They were willing to accept less living space as a means to procure these other benefits.

The Part Two Survey assessed and evaluated how satisfied residents are with various aspects of their mini-suite; privacy and crowding issues; and the design, services and management of the building. When asked to consider their mini-suite, residents revealed they are very satisfied with the design of the kitchen and bathroom areas. However, a few problems are associated with the design of the living/sleeping area, such as insufficient closet, balcony and dining space. Nonetheless, residents are generally satisfied with their mini-suite apartment.

The only significant problem regarding crowding and privacy issues had to do with the negative impacts of neighbourhood street noise. Residents are frustrated by their inability to avoid or control outside noise. This design problem could have been minimized with more effective acoustical abatement measures such as incorporating glassed-in balconies or central air conditioning. Nonetheless, residents do not feel they are living in a particularly crowded building. By designating a generous portion of building space to common area facilities, residents feel the building environment presents many opportunities to instigate casual interaction with fellow residents or to entertain friends. However, if so desired, residents can attain optimum privacy by simply returning to their self-contained apartment.
Turning to the building itself, residents are extremely satisfied with the amenity areas, services and management of 600 Drake. One minor design problem alluded to by some residents was they feel the fitness room is too small and crowded, and therefore, they do not feel comfortable using the facility. On a positive note, residents are extremely satisfied with the building management and the 24-hour staff office. The staff office is greatly responsible for creating a safe environment because residents are reassured by there always being someone at hand to serve them. Moreover, since the office is located in the front lobby, staff members have a better opportunity to forge personal relationships with residents. Needless to say, such recognition increases the level of security within the building.

Overall, the vast majority of respondents indicated they are satisfied or very satisfied with their mini-suite apartment. Essentially, while it may serve as a transitory form of housing for some, mini-suite housing meets the expectations of residents and satisfies particular housing needs. By virtue of the close match between who these units were designed for and who actually moved in, it is evident that the mini-suite apartments in 600 Drake support and fit the lifestyle of a niche market.

By coming to this conclusion, it is recommended the City of Vancouver permit the development of more mini-suite housing. Chapter Eight presented a framework of policy implications and design criteria which will help ensure future development is liveable and fits the needs of residents. However, it should be fully understood that residents whom chose to move into 600 Drake did so after contemplating advantages and disadvantages associated with different housing options. 600 Drake was chosen over other options because it meets particular needs. This form of housing may be inappropriate for other single people with different priorities and needs. Therefore, mini-suite development must not be regarded as a panacea for resolving housing affordability crises.

The mini-suite policy framework developed from the results of this study attempts to connect with and support other important housing policy objectives. Civic planning documents such as the Central Area Plan and Downtown South Community Plan aspire to creating healthy and safe neighbourhoods which offer people various housing choices according to income level,
household configuration, and density. The policy framework presented by this study adheres to the philosophy that housing planners should promote the development of various forms of housing so people have an opportunity to choose the type of housing that best suits their particular needs. Moreover, by increasing residential densities, mini-suite housing development supports the objective of creating more sustainable urban systems as outlined in the *Clouds of Change* report.

The results of this case-study should also be placed in a theoretical context. This study has followed a user point of view in evaluating mini-suite housing. By relying on the preferences, immediate experiences, feelings and patterns of the very people who live in 600 Drake, an accurate assessment of this form of housing is generated. There is no apparent discrepancy between why residents say they live in a mini-suite and how they actually live. The socio-demographic characteristics of the resident population supports this conclusion and lends proof to the assertion that this case-study is based upon genuine and honest opinions.

The degree of satisfaction accorded these mini-suites proves that spatially limited living environments can be very liveable and fit particular housing needs. There was no indication that this high density form of housing causes social dysfunction among residents. The common area facilities seem to provide a valued outlet for casual social interaction and stimulation. Feelings of confinement to one's apartment did not materialize. In fact, most residents lead extremely active and outgoing lifestyles. These revelations defend the premise that building density has a limited impact on housing satisfaction. Crowding and privacy issues are much more influential.

As has been discussed, it is essential that the linkage between crowding and privacy issues be fully recognized. At 600 Drake, because the units house only one person, problems related to intra-household privacy are nonexistent. Building privacy is more of a concern to residents. A resident's ability to maintain privacy from fellow residents and the surrounding neighbourhood directly influences perceptions of crowdedness. Comments regarding the fitness room exposed this relationship quite succinctly. Some residents are dissatisfied with the fitness room because they feel uncomfortable when more than a few people were using the facility. There is not enough room to use the equipment and still maintain acceptable degrees of personal
space and privacy. One can also relate the negative impacts of street noise to this issue. By being forced to open their window to cool their apartment, residents are put in a position where they cannot maintain privacy from the surrounding urban environment. Despite these two problems, most residents do not feel they are living in a particularly crowded building. This perception is mainly a reflection of the residents' overall ability to control social interaction with neighbours. The inclusion of common areas in the design of the building presents residents with a choice as to how sociable or private they want to be with neighbours.

From a different theoretical perspective, this case-study has also demonstrated how physical design elements can influence residential satisfaction. For instance, both the kitchen and bathroom areas are highly regarded because the design of these spaces fit desired activity. In comparison, the lack of closet, dining and balcony space create a mismatch between residents' expectations of being able to perform certain activities and the capacity of the mini-suite to support these activities.

In addition to satisfying basic needs of sleeping, washing, cooking and eating, the mini-suites at 600 Drake support lifestyle needs such as providing residents with the opportunity to live near work, school and leisure activities. Some residents indicated their mini-suite even satisfies higher level, self-actualization needs. A few residents described how they have gained a sense of independence because they can afford to live by themselves for the first time. By re-evaluating what is truly essential to themselves, a few others have discovered they are quite content living a less materialistic lifestyle. Clearly, the design of 600 Drake has created a comfortable and satisfying living environment for most residents.

Through the course of this case-study, it became apparent that more research is needed to fully understand the unique social, economic, and design issues associated with mini-suite development. For instance, this study did not attempt to analyze the economic performance of 600 Drake. A financial study should be conducted which analyzes how minimum unit size reductions affect building efficiency ratios, hard building costs, and net revenue generation. With this information, it will be much easier to assess the financial implications of conditional design criteria for mini-suite project approval.
Another area which requires further research involves the impacts of apartment size on housing satisfaction. A comprehensive comparative study needs to be conducted which analyzes the satisfaction rates of residents living in mini-suite, typical studio-bachelor, and one-bedroom apartments. Such a study should be conducted within one housing complex so that the impacts of unit size on satisfaction levels can be isolated. A study comparing units in different buildings may be greatly influenced by discrepancies in aesthetic and physical design elements, management issues, locational attributes and neighbourhood characteristics. This topic needs to be researched in order to provide an accurate account of how differences in unit size marginally impact housing satisfaction.

Although further research is encouraged, it is believed this case-study fulfilled its main objectives and resolved many of the critical questions regarding the design and development of mini-suite housing in the City of Vancouver. Furthermore, the findings of this case-study may prove informative to other cities which are contemplating the planning implications of mini-suite housing development.
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INTERVIEWS

A series of interviews regarding various aspects of mini-suite housing development in Vancouver was conducted with the following people:

Tom Durning
Housing Advocate
Tenants' Rights Action Coalition

Dana Fleming
Project Architect
Davidson Yuen Simpson Architects

Leslie Foss
Director,
Administration
VLC Properties

Phil Henderson
Building Manager
Jubilee House

Tracy McCullough
Property Manager,
600 Drake
Continental Realty Services

Gordon Price
City Councillor
City of Vancouver

Ralph Segal
Senior Development Planner
Land Use & Development Division
City of Vancouver

Gret Sutherland
Project Manager,
Facilities Development Division
Housing and Properties Department
City of Vancouver

Raymond Toscani
Market Analyst
Vancouver Branch
Canada Mortgage and Housing Corporation
APPENDIX I
PART ONE SURVEY QUESTIONNAIRE
Survey of the Residents of 600 Drake

We request your participation in this voluntary survey of the residents of 600 Drake. You have the right to refuse to participate without any consequence.

The first section asks you to indicate and comment on what the major reasons were for you choosing to live at 600 Drake. This information will be critical for finding out if there are some clear trends as to why different people chose to live at 600 Drake.

Please circle a number in the 5-point scale which best describes how the following reasons affected your decision to live at 600 Drake.

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</table>
A9) How satisfied are you with your mini-suite apartment?

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<tr>
<td>Not Satisfied</td>
<td>Neither</td>
<td>Very Satisfied</td>
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</table>

A10) How long do you expect to live in your mini-suite apartment? (Please Circle)

- Less than 6 Months
- 6 to 12 Months
- 1 to 2 Years
- More than 2 Years

The preceding series of questions was by no means meant to limit your discussion. If there are any other reasons that influenced your decision to move into 600 Drake or you would like to discuss some issues in greater detail, please explain in the space provided.
This part of the questionnaire is a series of questions related to what you do with your spare time and where you work or study.

B1) What kinds of recreational activities do you participate in when you have spare time?

B2) What is your occupation?  (If this does not apply, please skip to B4)

B3) What field or type of business do you work in?

B4) Circle the type of school that you attend?  (If this does not apply, please skip to B6)

Secondary School  Apprenticeship  Technical  College  University  Other

B5) What is your focus of study?

B6) Please indicate the location of where you work or attend school.  
(If this does not apply, please skip to C1)

B7) Over the course of a typical week, how many times a week do you use the following modes of transportation to go to work or school.

- Automobile
- Bus Transit
- Rapid Transit
- Bicycle
- Walk
- Other  (Please describe ____________________ )
APPENDIX II

PART TWO SURVEY QUESTIONNAIRE
Survey of the Residents of 600 Drake

Dear ________________________ Apt # _________

We request your participation in this voluntary survey of the residents of 600 Drake. You have the right to refuse to participate without any consequence.

This section asks you to provide some information about the home you lived in prior to moving into 600 Drake.

A1) How long have you been living in this apartment? ________ months

A2) When you moved into 600 Drake, how many other places did you have to choose from? ________ places

A3) Was that enough choice for you?  Yes  No

A4) What type of dwelling did you live in just before you moved into 600 Drake? (Please circle)

Single Family House  Duplex  Townhouse  Condominium  Apartment  Basement Suite  Other _________

A5) How many bedrooms did you have in your previous home?

Studio  1  2  3 (or more)  Bedrooms

A6) How satisfied were you with your previous dwelling?

Not Satisfied  1  2  Neither  3  4  Very Satisfied  5

Satisfaction with your mini-suite apartment:

Please mark the box which best describes how you feel about your own apartment.

<p>| B1) Overall appearance of your apartment | Very Dissatisfied | Dissatisfied | Neither | Satisfied | Very Satisfied |
| B2) Size of kitchen | | | | | |
| B3) Appliances in kitchen | | | | | |
| B4) Cupboard space in kitchen | | | | | |
| B5) Space for food preparation | | | | | |
| B6) Space for dining | | | | | |
| B7) Size of bathroom | | | | | |
| B8) Cupboard space in bathroom | | | | | |
| B9) Size of shower facility | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
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<tbody>
<tr>
<td>B10</td>
<td>Size of living/sleeping room</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>B11</td>
<td>Fold-up Murphy bed (if applicable)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>B12</td>
<td>Closet and storage space</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>B13</td>
<td>Space for furniture, T.V., stereo</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>B14</td>
<td>Space for entertaining friends</td>
<td>☐</td>
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<tr>
<td>B15</td>
<td>Number of windows</td>
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<tr>
<td>B16</td>
<td>Size of balcony area</td>
<td>☐</td>
<td>☐</td>
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<td>B17</td>
<td>Size of the entire apartment</td>
<td>☐</td>
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B18) If you had an opportunity to choose, what area of your apartment would you make larger?

(Please circle only one) Living/Sleeping Room Kitchen Bathroom Closets

B19) What is the most positive aspect of your mini-suite apartment?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

B20) What is the most negative aspect of your mini-suite apartment?

________________________________________________________________________
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B21) If you had an opportunity to improve the design of your apartment, what would you change?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Privacy:
Please mark the box which best describes how you feel about the privacy in your apartment.

<table>
<thead>
<tr>
<th>C1) Privacy within your apartment</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
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<td>C2) Privacy from other residents in the building</td>
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<td>C3) Privacy from the surrounding neighbourhood</td>
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<td>C4) Window blinds as a means to control privacy</td>
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<td>C5) Noise from neighbours</td>
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<td>C6) Noise from the hallways</td>
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<td>C7) Noise from the street and neighbourhood</td>
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C8) How do you hear your neighbours? (Circle as many as apply)

- Talking
- Music
- T.V.
- Appliances
- Other

C9) Do you feel like you are living in a crowded building?  Yes  No

How do you find the following?

<table>
<thead>
<tr>
<th>C10) Lobby and hallway areas</th>
<th>Very Spacious</th>
<th>Spacious</th>
<th>Neither</th>
<th>Crowded</th>
<th>Very Crowded</th>
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<td>C11) Library and entertainment common areas</td>
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<td>C12) Fitness area</td>
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<td>C13) Laundry areas</td>
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C14) Compared to where you lived before, do you feel like 600 Drake is more crowded?  Yes  No

C15) Do you know by name some other residents who live in 600 Drake?  Yes  No

C16) Considering all the common areas in the building, where do you usually meet other residents?

C17) If you needed assistance, are there any people in the building that you could ask for help?  Yes  No

C18) How would you describe the "sense of community" among the residents of 600 Drake?
Satisfaction with the Building:

*Please mark the box which best describes how you feel about the entire building.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1) Exterior appearance</td>
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<tr>
<td>D2) Interior appearance</td>
<td>(Lobby, common areas, hallways, etc.)</td>
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<td>D3) Fitness area</td>
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<tr>
<td>How many times a week do you use the fitness area?</td>
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<tr>
<td>D4) Library and entertainment area</td>
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<tr>
<td>How many times a week do you use the library/entertainment area?</td>
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<td>D5) Laundry areas</td>
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<tr>
<td>D6) Amount of space in basement storage lockers</td>
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<tr>
<td>D7) General building maintenance</td>
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<td>D8) Response rate to requested repairs</td>
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<td>D9) Rules of management</td>
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<td>D10) Building staff</td>
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<tr>
<td>D11) Do you feel the building management keeps you well informed of tenant issues?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>D12) Is there any problem or issue that could be improved with the management of 600 Drake?</td>
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<tr>
<td>D13) Building security system</td>
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<td>D14) Parking facility security</td>
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<tr>
<td>D15) Do you use the parking facilities in 600 Drake?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>D16) Once inside the building, how safe do you feel?</td>
<td>Very Unsafe</td>
<td>Unsafe</td>
<td>Neither</td>
<td>Safe</td>
<td>Very Safe</td>
</tr>
</tbody>
</table>