HOMEBUILDERS AND THE SUBURBS IN THE 1970'S

by

JOANNA SELTZER HIRST
B.A., Radcliffe College (1969)

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF CITY PLANNING AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June, 1971

Department of Urban Studies and Planning
May 1, 1971

Certified by

Professor John Howard, Thesis Supervisor

Accepted by

Chairman, Departmental Committee on Graduate Students
Rotch

JUL 30 1971
HOMEBUILDERS AND THE SUBURBS IN THE 1970'S
by Joanna Seltzer Hirst
Submitted to the Department of Urban Studies
and Planning on May 1, 1971, in partial ful-
fillment of the requirements for the degree
of Master in City Planning.

The homebuilding industry plays a significant role
in molding the American suburbs. An analysis of the business
factors to which this industry is most responsive provides a
background from which to predict the likely shape of the sub-
urbs over the next decade. Based on a case study of the major
homebuilders in the Washington metropolitan area, this thesis
seeks to determine to what extent the emerging shape of the
suburbs is consistent with our country's conception of an ideal
urban growth pattern.

The case study reveals that, while the sixties were
characterized by the production of exclusive housing enclaves
with most units priced above $40,000, the seventies will see
a shift to larger-scale subdivisions of 'basic' units, priced
under $35,000 and aimed at younger families. This shift is
primarily a result of two factors: the appearance of young
families aged twenty-two to thirty-five as the numerically
dominant homebuyers, and the growth in market share of the
major, professionally-managed homebuilding firms.

The new housing of the seventies will be produced in
significantly greater volume than that of the sixties, but it
will continue to be grouped into projects which have no em-
ployment centers nearby, which are responsive to only a narrow
spectrum of consumer desires, and which are virtually closed
to minority and lower-income families. Hence, the builders
will be serving the national goal of vastly expanding the sup-
ply of housing, but they will do little to make this housing
conform to national desires for high-quality community develop-
ment.

There are many business factors which make 'quantity'
more readily attainable than 'quality': mass-production is
easier when concentrating on one house type than many, mar-
keting is less risky and production easier when offerings are
kept within a narrow price range, a sixteen-hundred unit pro-
ject built over four years is more flexible to shifts in de-
mand and less burdened with holding costs than a five-thousand
unit project built over ten years, and a project composed
solely of residential construction is easier to coordinate
than a program of residential as well as non-residential land
uses.

These burdensome constraints on the achievement of
quality development can be lightened significantly through
both private and public efforts. For instance, the builder
will be able to offer a wider variety of house types and a
broader mixture of land uses if he can expand his volume and
develop the managerial capability to handle a more diversified
business.
Public efforts might include the improvement of local and national market data gathering, the revision of building and subdivision codes, and the more accurate matching of zoning policies with market realities.

Thesis Supervisor: John T. Howard, Professor of Urban Studies and Planning
# Table of Contents

## Introduction and Summary

- INTRODUCTION AND SUMMARY ........................................... i

## Chapter One: Signs of Change

- CHAPTER ONE: SIGNS OF CHANGE ..................................... 1
  - Classification of Housing Projects .............................. 1
  - Changes of the Typical Product in 1970 ....................... 5
    - Tight Credit ........................................... 5
    - Demographic Shifts ...................................... 5
    - Response of Builders to Shifting Demand.................. 7
  - Magnitude of the Under-$35,000 Housing Market ............. 8
  - Change in the Nature of Housing Producer..................... 9
    - Increasing Market Share for Large Builders ................ 10
    - Classification of Builders ............................... 12
    - Small and Medium-Sized Builders ......................... 12
    - New Town Developers ..................................... 15
    - Large Builders .......................................... 16
    - Giant Builders ........................................... 18
    - Number of Locations Worked by Small and Large Firms .... 20
    - Differences in Typical Product of Small and Large Firms . 20
  - Future Suburban Projects of the Builders ..................... 21
    - Within the Beltway: Small and Medium Builders ............. 21
    - Within the Beltway: Large Builders ........................ 23
    - Beyond the Beltway ....................................... 23

## Chapter Two: Washington Homebuilders: What They Plan to Build and Why

- CHAPTER TWO: WASHINGTON HOMEBUILDERS: WHAT THEY PLAN TO BUILD AND WHY ........................................... 24
  - Production Constraints and Market Analysis .................. 24
    - Duration of Demand ....................................... 25
    - Demand at a Given Site .................................... 25
  - Project Scale ............................................... 27
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision-Making Model</td>
<td>28</td>
</tr>
<tr>
<td>Choosing a Metropolitan Area</td>
<td>30</td>
</tr>
<tr>
<td>Production Economies</td>
<td>32</td>
</tr>
<tr>
<td>Cash Flow Analysis</td>
<td>33</td>
</tr>
<tr>
<td>Raw Land Financing</td>
<td>34</td>
</tr>
<tr>
<td>Builder's View of Ideal Project Size</td>
<td>41</td>
</tr>
<tr>
<td>Location and Product Package</td>
<td>42</td>
</tr>
<tr>
<td>Price Spread, Mixture of Age Groups, Classes, and Races</td>
<td>44</td>
</tr>
<tr>
<td>Strategies on Price Spread</td>
<td>44</td>
</tr>
<tr>
<td>Buyer Profiles, by Income and Age</td>
<td>49</td>
</tr>
<tr>
<td>Impact of Housing Price Spiral on Buyer Profile</td>
<td>53</td>
</tr>
<tr>
<td>Buyer Profile, by Occupational Class and Age</td>
<td>56</td>
</tr>
<tr>
<td>Buyer Profile, by Race</td>
<td>57</td>
</tr>
<tr>
<td>Mix of Non-Residential and Residential Land Uses</td>
<td>58</td>
</tr>
<tr>
<td>Commercial Center</td>
<td>58</td>
</tr>
<tr>
<td>Open Space</td>
<td>58</td>
</tr>
<tr>
<td>Recreational Facilities</td>
<td>59</td>
</tr>
<tr>
<td>Employment Centers</td>
<td>59</td>
</tr>
<tr>
<td>Summary</td>
<td>61</td>
</tr>
<tr>
<td>CHAPTER THREE: POSSIBILITIES FOR ACHIEVING BOTH QUALITY AND QUANTITY</td>
<td>63</td>
</tr>
<tr>
<td>United States Urban Growth Goals</td>
<td>63</td>
</tr>
<tr>
<td>Two Research Strategies</td>
<td>64</td>
</tr>
<tr>
<td>Increasing the Responsiveness of Builders to Consumer Demands and Needs</td>
<td>65</td>
</tr>
<tr>
<td>Local Centralization of Market Information</td>
<td>66</td>
</tr>
<tr>
<td>National Information-Gathering System</td>
<td>67</td>
</tr>
<tr>
<td>Studying the Demand for Alternative Packages</td>
<td>68</td>
</tr>
<tr>
<td>Achieving a Fuller Range of Housing, By Age, Income, Class, and Race, Within Individual Communities</td>
<td>70</td>
</tr>
<tr>
<td>Matching Zoning Policies with Market Demand</td>
<td>73</td>
</tr>
<tr>
<td>Steps in the Zoning Process</td>
<td>75</td>
</tr>
<tr>
<td>Outline of Proposed Zoning Process</td>
<td>76</td>
</tr>
</tbody>
</table>
INTRODUCTION AND SUMMARY

There is growing concern in the United States over the emerging shape of the suburbs. When predictions are made that the present housing stock will probably double over the next twenty-five years, we cannot help but be apprehensive about where all this new growth will take place and what it will look like. We are apprehensive because so many of today's suburbs are displeasing when judged by such criteria as efficiency of land use planning, openness of housing opportunities, and responsiveness of house and community to consumer desires.

In order to work toward correcting the ills of suburbs as we know them today, it is important that we achieve a fuller understanding of the homebuilding process. Homebuilders are key actors in the process of creating the suburbs. They play a major role in determining whether a parcel of land will contain low-, medium-, or high-priced units; whether it will contain all single-family homes or will have a mixture of housing types; whether residents will have commercial, recreational, and employment facilities nearby or whether these non-residential land uses will be at great distances; and whether homes will be grouped into isolated 50-unit sub-divisions or into 1000-family communities.

How builders decide all these issues is the analytical focus of this paper. The objective of the study is
to predict, based on the decision-making process of builders, the likely nature of suburbs as they will emerge over the next decade, and to discover strategies that might alter the emerging shape so as to conform more closely to this country's conception of an ideal urban growth pattern.

The analysis in this paper follows a case study approach. The focus is on suburban growth in the Washington, D. C. metropolitan area, where, in 1970, there were 27,588 housing starts. With this volume of production, Washington accounts for about 1.5% of all U. S. housing starts and is the seventh largest housing market in the country. Washington is therefore an instructive case study for two reasons: one, its mammoth annual volume of housing starts is making a major long-term impact on the suburban landscape, and two, it foreshadows what may happen in other, currently smaller, housing markets in five to ten years when these 'younger' areas achieve the magnitude of expansion that Washington has today.

The case study of Washington begins, in Chapter One, with an analysis of how two simultaneous occurrences in the late 1960's combined to create conditions for major changes in the pattern of suburban homebuilding in the 1970's. One occurrence was the emergence of the 'young marrieds' group - new families aged 22 to 35 - as the numerically dominant housing consumer. The other occurrence

was the emergence of a significant number of large, professionally-managed homebuilding firms. The significance of the young marrieds group is that they create a high-volume demand for three and four-bedroom homes priced under $32,000. The significance of the new large-scale homebuilding firms is that they are the first builders with the capacity to provide both high volume and lower-priced units. Therefore, in the 1970's, there will be a shift in type of housing unit offered, away from the over-$40,000 'luxury' models and into the under-$32,000 'basic' models. There will also be a dramatic increase in the scale of housing projects. In the 1960's, the typical house was built in subdivisions of about 75 acres and 300 homes. To build more rapidly and at increased volume in the 1970's, the average housing project will likely grow to 400 acres and 1000 homes. And because of the increase in scale and decrease in price, the typical subdivision will be located on the fringes of the existing metropolitan area.

Chapter Two examines in greater detail the process by which the large homebuilding firms decide what kind of housing projects to build in the coming decade. The policy of focusing on the under-$32,000 price range is based on demographic analysis and production constraints. The preference for projects of 300 to 600 acres results from a trade-off of production economies versus holding costs and timing risks. And the location of projects on fringe sites is a response to land costs and land assembly considerations.
Chapter Two further refines the prediction for Washington's new housing with an analysis of the range of people and land uses that will be included in the typical projects. Based on consumer research and past marketing experience, builders have decided to offer a narrow range of house prices within any one community. This policy is likely to create a series of fairly homogeneous communities in terms of income, which will in turn create homogeneity in terms of age, class, and race. Turning to land use, the level of managerial know-how, combined with production feasibility studies and market analysis, has led builders to plan communities with primarily residential-oriented facilities. The builders almost uniformly plan to ignore any possibility of their developing employment centers in concert with residences.

Chapter Three compares the predicted pattern of suburban development with the country's goals for urban growth as expressed in the 1970 Housing and Urban Development Act: in the coming decade builders will contribute significantly toward the goal of rapidly enlarging the stock of housing, but they will do little to fulfill the ideals of quality community development. In order to guide builders toward greater sensitivity to consumer tastes, toward the provision of a fuller variety of housing opportunities, and toward the development of a dynamic and well-planned mix of land uses, Chapter Three makes several proposals.
To become more responsive to consumer desires, builders require a more ready availability of market data. Local governments could help by centralizing their market information in one office and in one publication. And the Federal Government could help by establishing a national information-gathering network. In addition, to augment the privately conducted consumer analysis, government agencies might also consider direct investigation into the vicissitudes of homebuyer preferences.

Turning to the problem of widening the range of suburban housing opportunities, there follows a discussion of several key barriers: lack of real Federal commitment to this goal other than in new towns, middle class preferences for homogeneous communities, and high housing costs. Chapter Three suggests that the implicit policies of the Federal Government and the merchant builders are accurate reflections of the housing preferences of the majority of suburban homebuyers today, and that these policies will not change substantially until consumer desires change.

Tackling the problem of high housing costs, the Federal Government has shown relatively greater vigor in attempting to close the gap between market-rate prices and the ability of low- and moderate-income families to meet these costs. Some local governments have been active on this front as well. Chapter Three describes promising local government efforts to lower construction costs through revision of regulatory codes, but observes that these
actions must be accompanied by more massive public subsidies and revised Federal housing programs.

Chapter Three also explores means by which market-oriented zoning policies could enhance the quality and lower the cost of new suburban development. A proposal for imposing realistic financial constraints on land use and population targets is outlined.

And finally, Chapter Three suggests ways of improving the mix of land uses in suburban communities: local governments could zone land for employment centers on their own motion if homebuilders do not seek such zoning within or near their projects; builders might widen their administrative and production capabilities to include simultaneous development of residential and industrial land; and builders and public officials could be offered improved training programs in the areas of construction and land development management.
CHAPTER ONE

SIGNS OF CHANGE

New housing in the Washington area over the past five years has offered great variety in terms of price, architecture, location, and mix of land uses. Yet for all this variety, there is an unmistakable homogeniety within any one housing project. If housing projects are classified according to acreage, population, and housing mix, a pattern emerges which helps describe the suburbs of today and which helps predict what shape the suburbs will take in the next decade.

CLASSIFICATION OF HOUSING PROJECTS:

Housing projects, when classified by size and mix of housing, fall into five categories: ¹

¹This analysis is based on location maps of housing projects as presented in The Washington Post and Evening Star real estate sections throughout the month of September, 1970; and on Homeseekers' Guide to Fairfax County, Virginia, by Joel C. Miller, Washington Center for Metropolitan Studies. These sources record location of housing projects and the price range of housing offered. Information on acreage and population at the various projects was gathered directly from the builders, from sales brochures, from planning studies, and from newspaper accounts.
<table>
<thead>
<tr>
<th>Category</th>
<th>Total Acreage</th>
<th>Total # of Hsg Units</th>
<th>Housing Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Small single-product project</td>
<td>10 to 100</td>
<td>10 to 300</td>
<td>all one type, could be townhouse single family, or apartment</td>
</tr>
<tr>
<td>II. Medium-sized single-product project</td>
<td>100 to 350</td>
<td>250 to 1500</td>
<td>&quot;</td>
</tr>
<tr>
<td>III. Large-sized multi-product project</td>
<td>350 - 1000</td>
<td>1000 to 2500</td>
<td>Mix of townhouses, single-families, and often garden apartments</td>
</tr>
<tr>
<td>IV. Giant multi-product project</td>
<td>800 and up</td>
<td>1500 and up</td>
<td>&quot;</td>
</tr>
<tr>
<td>V. New Town</td>
<td>2000 and up</td>
<td>8000 and up</td>
<td>townhouses, singles, garden apartments, high rise apartments</td>
</tr>
</tbody>
</table>

The small single-product projects (I) tend to be in close-in locations, priced at $40,000 and up, and aimed at middle-aged couples -- aged 35 to 55 -- moving to their second home.

The medium-sized single-product projects (II) are slightly further out, but are also high-priced and aimed at the middle-aged market. Recreational facilities are generally included.
Map of Washington Metropolitan Area, Showing Typical Locations of Housing Projects

I Small single-product project
II Medium-sized single-product
III Large-Sized multi-product
IV Giant multi-product
V New Town
The large multi-product project (III) is typically in a 'middle ring' location (beyond the Beltway, 40-60 minute rush hour drive to Washington) or on the fringe, and offers single family units, townhouses, and some garden apartments, mostly priced around $40,000. Such projects include neighborhood shopping facilities and recreational amenities.

The giant multi-product project (IV) is consistently in a fringe location - an hour's drive in rush hour from downtown - and aims at the under $35,000 market. Commercial and recreational facilities are included.

The new town (V) is much like the giant multi-product project, but offers a full range of housing types and prices, plus an employment center.

In sum, the bigger the project, the further out of town it is, the lower the price unit offered, and the broader the offering of ancillary land uses within the project. These trends are easily explained. Small sites only are available close to the city - these sites are expensive and support only higher-priced housing, so long as high density is not allowed.

Larger tracts with a sizeable number of housing units must aim at a broad market in order to sell quickly, and today the 'mass' market is in the under $35,000 unit. And the larger the project, the lower the per house cost for amenities.
Between 1965 and 1969, the majority of new housing was built within small and medium-sized single product projects. During that time, there were only two new towns and three giant projects,¹ and these large-scale developments accounted for under five percent of all housing starts.

CHANGES OF THE TYPICAL PRODUCT IN 1970:

1970 marked a turning point, however, with the readily-apparent success of two large-scale multi-product developments² aimed at the lower-priced market and the equally apparent lack of success of medium-sized higher-priced housing projects.

Tight Credit:

At first, the explanation of these successes and failures was based on high interest rates and inflation: the decision to buy a higher-priced unit is discretionary, and can be postponed until more favorable credit returns, while young expanding families have a hard time finding adequate room in cramped apartments in a literally no-vacancy market.

Demographic Shifts:

In fact, though, credit conditions merely accentuated

¹New towns: Reston, Montgomery Village; giants: Bel Aire, Sterling Park, Dale City.
²Greenbriar, Sugarland Run.
basic demographic facts: in 1970, one-quarter of all Washington households were headed by persons under age 35; by 1980 this fraction will jump to one-third. The 1970's housing market will therefore be dominated by the 'young marrieds.'

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 34</td>
<td>26%</td>
<td>29%</td>
<td>34%</td>
</tr>
<tr>
<td>35-44</td>
<td>19</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>45-64</td>
<td>37</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>65 and up</td>
<td>18</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Age Distribution of Heads of Households, Washington Metropolitan Area

---

Response of Builders to Shifting Demand:

Builders were slow to respond to shifting demographic trends; they were most comfortable producing what they always had produced. But 1970 forced a re-assessment of marketing strategy: higher-priced houses just were not selling, and builders were left either with a substantial inventory of unsold houses or of unbuilt debt-incurring land.

The higher-priced builders had only to look at the unparalleled sales success of Levitt's Greenbriar - selling 450 lower-priced units in the midst of the 1970 credit squeeze - to realize that their own policies were amiss. With the catalysts of debt service cost on land and the need to regain and exceed pre-1970 volume in order to sustain overhead, the builders went through a swift re-evaluation of the housing market. They finally recognized the full meaning of the population and income trends which had been emerging for the past five years.

---

1 William Wheaton observed this inertia, writing, "...most residential building is undertaken on the basis of hunch, intuitive feel of the market, and experience with last year's product in last year's location. These tend to make producer responses to changes in taste very slow and incremental." In Melvin Webber (editor). Explorations into Urban Structure. Philadelphia, Pa.: U. of Penn. Press. 1964. p. 169.
MAGNITUDE OF THE UNDER -$35,000 HOUSING MARKET:

It is not surprising, then, that many builders decided to shift to the under -$35,000 market. Over the next ten years, there is likely to be a demand for 125,000 units in this price range. Out of a total demand this coming decade for 350,000 housing units (single- and multi-family combined), this represents 35% of the total market, and about 60% of the single-family market.¹ There will be roughly 90,000 additional families over the next ten years seeking the lower-priced homes, and there is a pent-up demand among existing households for the lower-priced homes, of about 35,000.² The pent-up demand is so high because

¹A 1970 FHA Housing Market Analysis for Washington predicted the 350,000 figure, based on a projected population increase of 1,400,000 between 1970 and 1980.

The proportion of single versus multi-family homes is harder to predict than total demand; today 50% of housing starts are single-family units, but the average over the decade is likely to be 60% single-family, because the garden apartment construction boom is quickly catching up with past pent-up demand. Washington Post, February 20, 1971. "Building Permits Issued, Washington Metropolitan Area," p, D3. Study by Homer Hoyt Institute.

²These figures are based on Census data showing the existing and projected number of households of given ages and incomes, for the Washington area. Assumptions regarding incomes required to purchase homes in the $22,000 to $32,000 price range are explored further in Chapter Two.
this market was largely unserved until 1970. Based on natural increase alone, there is a demand for 9000 homes a year. If pent-up demand were met over three years, there would be an additional demand of 11,700 a year between 1971 and 1973. In the early years of this decade, then, there is a potential demand of 21,700 per year, and after 1974, for 9000 per year. It is unlikely that builders will gear up quickly enough to meet the full existing demand year by year. By 1973, builders may be able to provide 12,000 to 15,000 lower-priced units a year, so the actual supply will continue to lag significantly behind the demand, at least until 1976, and probably for the rest of the decade as well.

CHANGE IN THE NATURE OF THE HOUSING PRODUCER:

In part because of this awakening to demographic trends, the kinds and relative numbers of various housing projects will differ substantially, by 1975, from what existed prior to 1970. Another significant factor in the impending change in suburban housing projects is the nature of the housing producer. As late as the mid-sixties, housing was considered the industry that modern American business had left behind. Nationally, more than 90% of all building firms were relatively small operations, each producing fewer than one hundred houses a year but together accounting for about 60% of all single-family houses and 50% of all apartments built. Today the small firm still
builds the majority of single family housing, but has shrunk back to a 20% share of the multi-family field.¹

Increasing Market Share for Large Builders:

It is clear, especially in rapidly growing metropolitan areas such as Washington, that the market dominance of the small firms is quickly fading. In 1970, Washington's six largest builders (Boise Cascade, Levitt, Freeman, Hylton, Yeonas, Kettler) together built 5,250 housing units, out of a total for the Washington area of 27,588; their collective market share was thus 19%. In 1971, these six firms project a minimum of 7,500 housing starts. With Washington's total market predicted to be 30,000, the six firms will be increasing their market share to 25%.

In addition to the growth of the existing giant builders, there are at least five Washington firms which anticipate growing to giant status over the next three years. These companies built 1,650 units in 1970, and anticipate building 2,400 in 1971, thereby increasing their market share from 6.4% to 8.0% in one year.²


²The five growing firms and their 1969 gross dollar volumes, are Brisker-Campitelli ($12 million), Cary ($11 million), Sterling Park ($10 million), Berlage-Bernstein ($7 million), and Miller and Smith ($7 million). The dollar volumes are from the "Annual Report of Housing Giants," in Professional Builder, July, 1970. Pp. 60-75.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td># of Housing Starts</td>
<td>5250</td>
<td>7500</td>
<td>43%</td>
</tr>
<tr>
<td>by Washington's Six</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest Firms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Housing Starts</td>
<td>1650</td>
<td>2400</td>
<td>44%</td>
</tr>
<tr>
<td>by Five Big Growing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of Housing</td>
<td>6900</td>
<td>9900</td>
<td>43%</td>
</tr>
<tr>
<td>Starts by the eleven</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>firms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of Housing</td>
<td>27,588</td>
<td>30,000</td>
<td>10%</td>
</tr>
<tr>
<td>Starts in Washington</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Market by</td>
<td>25%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>the Eleven Firms</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Increasing Market Dominance by Large Homebuilding Firms**

This changing balance of market power has a significant bearing on the shape of the suburbs, because the large and small firms differ substantially in terms of their production capability and business philosophy.

---

1 Data on total Washington housing starts in 1970 is from current building permit data; 1971 projection is made by Michael Sumichrast, chief economist of the National Association of Homebuilders.

Data on 1970 and projected 1971 housing starts by the eleven builders is based on conversations with builders, plus published information in the Washington Post, Evening Star, and Professional Builder magazine.
In order to assess the impact of the changing nature of the housing producer on the shape of the suburbs, let us briefly examine the different types of builders: small, medium, large, and giant.

Classification of Builders:

<table>
<thead>
<tr>
<th>Type of Builder</th>
<th>Volume Per Year</th>
<th>Type of Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>under 25</td>
<td>custom homes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>small single-product project (I)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>new town (V)</td>
</tr>
<tr>
<td>Medium</td>
<td>25-100</td>
<td>small single-product project (I)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>medium-single-product project (II)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>new town (V)</td>
</tr>
<tr>
<td>Large</td>
<td>100-500</td>
<td>medium single-product project (II)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>large multi-product (III)</td>
</tr>
<tr>
<td>Giant</td>
<td>500 and up</td>
<td>large multi-product (III)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>giant multi-product (IV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>new town (V)</td>
</tr>
</tbody>
</table>

Small and Medium Builders:

Small builders usually have only one or two executives, often former carpenters who do some on-site work themselves. Critics point out that small firms generally have difficulties with estimating, budgeting, and accounting, since the principals of the firm rose to their positions from technical, not business, backgrounds.¹

Owners of medium-sized firms tend to be more businessmen than craftsmen. They have often come from related fields of business, such as real estate brokerage, building materials, or banking. Despite past experience, though, their ability to cope with financial and planning aspects of the firm is still rudimentary, both because the owners are not familiar with better techniques and because the volume of business cannot absorb the overhead of trained specialists.\(^1\)

The small builder's firm is typically composed of an owner-builder, a bookkeeper, and possibly one full-time laborer and one full-time carpenter. The medium builder usually has, in addition, a sales manager and a construction superintendent. The remaining functions required to build and market houses are performed outside the firm. (See organization chart)\(^2\)

---

\(^1\)Meyerson, pp. 111-112. Sumichrast, p. 163.

The small and medium firms engage in little or no market research. Only 8% of the small firms and 18% of the medium-sized firms report that they formally engage in market analysis.¹ More commonly, the product offered by these firms is based on intuition and past experience. Hence these firms rarely innovate or respond 'on time' to shifts in demand.

Also cutting down on the stability and responsiveness of the small and medium firms are their tenuous credit

¹Sumichrast, p. 163.
arrangements. Advance mortgage commitments are rarely sought or received, so in periods of tight money, these firms are the first to go out of business for lack of money.\footnote{Gene Saminski. HUD study of Montgomery County, Maryland, builders between 1965 and 1970 (unpublished to date). John Herzog. The Dynamics of Large-Scale Homebuilding, University of Cal: Real Estate Research Program, 1963, p. 23.}

**New Town Developers:**

Because the small and medium firms are so completely specialized in production, they have found that new towns offer them significant advantages over striking out on their own. The new towns are typically coordinated by a developer, who obtains zoning, assembles and finances land, analyzes the market, master plans the mix of housing units and other land uses, establishes a timetable of development, and arranges construction and permanent financing. The developer then sells or otherwise contracts with the small and medium builders to produce an approved design and price housing unit in a given location in a given time period.

New town developers at Columbia, Reston, and Irvine, agree that the managerial coordination, land planning, market research, and financing offered by new towns fits in perfectly with the firm structure of the small and medium builders. Attempts by the new town developers to work with larger builders have been a failure, however, because the large builders resent the degree of control over the final product that the developer seeks and they find that there is too much overlap.
in functions that the developer and the builder both can provide. The price at which new town land is made available to builders must cover the overhead costs of the developer, so were the large builder to work in a new town, he would be forced to pay for services for which he had no need.

Large Builders:

The large builder's firm is not as fully specialized as the staff of a new town developer, but is adequate to provide internally some market feedback, sales strategy, and financial planning, in addition to production. (See organization chart)²

---

¹ From conversations with James Rouse (President, Rouse Co., Columbia), Glenn Saunders (Executive Vice President, Gulf-Reston), Robert Watson (Executive Vice President of Irvine).
² Buckley, p. 17.
Organization Chart of Large Builder

President

Legal counsel

secretary

financing

chief accountant

budget and cost analysis
(2 clerks)

bookkeeping
(2 clerks)

land dev.
(1 engineer)
(1 draftsman)

estimating
ever

(1 estimator)

Project mgr.

Project mgr.

Project mgr.

(same organization)

project sales
(2 salesmen)

material
(1 clerk)
(1 laborer)

direct-hire crews

subcontractors

suppliers

permanent staff

temporary staff
With this staff, the large builder has the capability of acquiring and planning substantial acreage.

In Washington, there is a wide variation in the degree of management sophistication among the large firms. Many large firms are still craftsman-oriented. They rely on intuitive hunches about the market and fail to coordinate their land inventory with financing availability and feasible production scheduling. Such firms are relatively untouched by modern management practices and appear to have risen to high-volume status because they were fortunate enough to do business in a booming market.

Other large firms are just the opposite and it is these firms which are making plans to expand into giant status over the next three to five years. Such firms are headed by management-oriented men who recognize the full range of functions that must be performed to produce a house and who have a good grasp of how to coordinate these many activities.

Giant Builders:

The giant firms are the most specialized of all the builders. They have the largest, most sophisticated staffs, and the most management-oriented approach. They include in some form, all the specialties required to produce housing. (See organization chart)\(^1\)

---

\(^1\)Organization chart of Levitt and Sons, 1969. This is a highly abbreviated chart. Each vice president has an extensive staff in the central office, and each regional manager has a local staff, oriented toward construction, sales, and servicing.
Organization Chart of Giant Builder

President

Executive Vice President

Marketing Vice President

Legal Vice President

Operations Vice President

Technical Vice President

Fiscal Vice President

Field Managers

Regional Managers

Puerto Rico

France

Maryland

New Jersey

Long Island

Florida

Design Department

Community Planner
They are thus capable of producing many large projects, a few giant projects, or a new town. Additionally, since giants are often national companies, they frequently operate in more than one metropolitan area.

Number of Locations Worked by Small and Large Firms:

Comparing firms producing over one hundred units to those producing under one hundred units annually, the National Association of Homebuilders recently found that forty percent of the big firms work at four or more sites at once, compared with only twelve percent for small and medium firms.¹

<table>
<thead>
<tr>
<th># of Locations</th>
<th>Large and Giant Builders</th>
<th>Small and Medium Builders</th>
</tr>
</thead>
<tbody>
<tr>
<td>scattered lots</td>
<td>3%</td>
<td>20%</td>
</tr>
<tr>
<td>1</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>2-3</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>4 and up</td>
<td>40</td>
<td>12</td>
</tr>
</tbody>
</table>

Differences in Typical Product of Small and Large Firms:

There are some significant differences between the product of the firms producing over 100 units and those producing under 100 units. As volume increases, house price and lot size drop, in the single-family sector; among apartment builders, as volume increases, rent levels and the provision of amenities rises.

¹Sumichrast, p. 160.
-21-

<table>
<thead>
<tr>
<th></th>
<th>Large and Giant Builders</th>
<th>Small and Medium Builders</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE-FAMILY UNITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price (median)</td>
<td>$24,200</td>
<td>$26,100</td>
</tr>
<tr>
<td>Lot Size (median)</td>
<td>7700 sq. ft.</td>
<td>11,400 sq. ft.</td>
</tr>
<tr>
<td>MULTI-FAMILY UNITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td>$141</td>
<td>$131</td>
</tr>
<tr>
<td>% of Units Including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming Pool</td>
<td>42.6%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Tennis courts</td>
<td>12.9%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Recreation Center</td>
<td>29.7%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

Comparison of Product of Smaller and Larger Builders in 1969

FUTURE SUBURBAN PROJECTS OF THE BUILDERS:

Given this breakdown of types of builders, we can move closer to an explanation of the shape of the suburbs that will emerge over the next decade.

Within the Beltway, Small and Medium Builders:

Remaining land within the Beltway that is zoned for fewer than six units per acre will continue to support only higher-priced housing. And because these parcels are small,

---

1Sumichrast, p. 110-136.
they will be the sole domain of the small and medium builders. Typical of such projects will be Greenway Heights, a forty-seven acre upper-income community, located eighteen minutes from the city, in McLean, Virginia. Greenway Heights plans a total of 93 single-family homes, selling for $60,000 to $90,000. The project has been underway for three years, and has sold fifty homes so far. The builders, Groover and Cooley, are a typical small firm; the principals are actively involved in the carpentry, and they hire additional workmen and other specialists as needed.

Also typical of close-in housing projects are the 'contemporary communities' called Timberwood, built by Matthews-Schwartz. This firm specializes in steep slopes, and since rough terrain is one of the main types of land that tends to be left over after the major thrust of subdivision development has taken place, these builders should have ample opportunity to ply their trade over the next decade. They currently offer homes in three different locations, one each in Virginia, Maryland, and Washington, none more than a fifteen minute drive from downtown. Each site has a different basic model, but all are single-family units, contemporary in architectural design, and dramatically sited to take advantage of the hilly terrain. The Virginia homes sell for $45,000, the Maryland units for $60,000, and the Washington units for $63,000. Each community contains ten to twenty-five homes.
Within the Beltway: Large Builders:

The larger builders will operate in close-in locations only if the small scattered sites are zoned adequately to sustain a high-volume operation. Such projects are likely to be garden or high-rise apartments, and could be aimed at any income range. Levitt Multi-Housing Corporation is actively seeking close-in land to launch its apartment operations; Westinghouse, already active in cities, is also seeking suitable suburban apartment land. Levitt would aim at the unsubsidized market, while Westinghouse specializes in government-sponsored housing. At the upper-income level, Magazine Brothers, a major Washington multi-family builder, plans to build a 500-unit luxury apartment project on the Alexandria shoreline. Other luxury units are planned along the Potomac shoreline in Maryland.

Beyond the Beltway:

It is in the area beyond the Beltway, however, that most new development will take place, so it is here that our inquiry focuses. This new growth is likely to differ in many aspects from the suburban development of the past five years, because builders themselves have changed and because their perception of the housing market has shifted in strategy and improved in accuracy. Chapter Two, therefore, will be an exploration of the decision-making process of the builders and a projection of the kinds of developments they are likely to produce.
PRODUCTION CONSTRAINTS AND MARKET ANALYSIS:

Builders, like all businessmen, perform a delicate balancing act. At any given time their firms are structurally geared in terms of manpower and physical facilities for some optimal volume of output of a given mix of products. A firm geared up to produce 500 units, but able to sell only 350, will have trouble covering overhead expenses and will run a deficit. So the builder is eager to discover the design and price-range house that allows him to attain his optimal volume without undue risk. To do this, he first looks at the nature of the housing consumer and the activities of his competitors. Suppose the builder discovers that there is demand in 1971 for 3,000 homes priced between $50,000 and $60,000, but that other builders plan to provide only 2400 such units in the coming year. He would be confident that he could sell his 500 units if he provided this kind of product. But he would have to ask two further questions to determine whether this production strategy were suited to his firm: first, how long is this high volume of demand likely to last, and second, how many houses of this type can be built at any one site.
Duration of Demand:

The builder is concerned about the duration of demand for a given product because his men and his facilities will work most efficiently if they can concentrate on one product over a period of time. This is particularly true of the larger builders, because they would have more to re-gear if change were called for by shifting demand.

Demand at a Given Site:

The volume of homes that can be sold at any one site is critical because, the fewer the sites required, the easier it is to oversee production.

On both counts, duration of demand, and volume of demand at a single site, the higher-priced homes represent danger to the builder. As discussed in Chapter One, the population in Washington is growing younger, and the middle-aged, middle-income couples are a shrinking market. Additionally, these older homebuyers are traditionally scattered throughout the metropolitan area: they typically seek homes reasonably close to town (40 minutes at most at rush hour) and in communities that give some sense of exclusiveness. Builders serving this market hence have generally not been able to exceed a volume of sixty sales per year at any one location.¹

¹Otis Costin, president of Miller and Smith. Miller and Smith until this year, has concentrated in luxury homes, but their desire to increase volume has led them to abandon the high-priced units and aim for the under -$40,000 price range.
The nature of the higher-priced housing market is thus unsuited to the builder producing 250 units or more a year. A builder under that volume could viably operate in three or four locations, if he felt he could overcome the problem of the shrinking market. In fact, this is just what is happening. The big builders are deserting this market en masse. The smaller builders, because of their minimal staffs, are most able to fluctuate from year to year in volume as demand shifts, and the low sales rate at any one site is quite adequate for their needs.

The big builder, then, is still looking for a product to offer. He has two kinds of alternatives: he can seek one product that allows him to achieve substantial volume at each of a number of sites, or he can try a mix of products that multiplies his volume and allows him to concentrate on a single site. Each alternative has its trade-offs: it is easier to build just single-family houses than to build singles plus townhouses, but it is harder to oversee operations at five or six sites than at one or two. Another problem of operating at multiple sites is that the different projects done by a single builder become competitive with each other.¹

The giant Washington builders take these factors into account in a variety of ways, but most firms share

¹Fred Kober, regional director, Boise Cascade.
similar ideas as to project scale, price range, and price spread.

PROJECT SCALE:

Project scale is determined primarily by considerations of holding costs and production economies. Since all the builders work in the same business environment, the choice of project scale is made in roughly the same way at each firm.

From the standpoint of production, the builders all seem to set the following minimums: they want to be able to produce at least one hundred units a year at any one site, and they want to be able to continue working at that one site for at least three years.

Looking at holding costs of raw and improved land, the builders all feel that five years is the maximum they can profitably spend at any one site.

Given these parameters, the actual amount of acreage and number of units at one site is a function of allowable density, price of the raw land, and size of the various submarkets.
To see how these factors come into play in the firm's decision-making process, we shall examine in detail the thinking of Boise Cascade and the Yeonas Organization, two of the giant Washington builders. These particular firms are of interest because they illustrate how two builders with substantially different past histories have come to almost identical conclusions as to what makes sense in the 1970's market.

Boise Cascade is the nation's largest homebuilding firm; its 1970 dollar volume was just over a quarter billion. The firm is active in recreation communities, mobile home
production, industrialized housing research and development, and conventional single- and multi-family homebuilding. As a national firm, it operates in at least a dozen different metropolitan and rural locations. Boise entered the Washington housing market in 1969, and since then has built about 300 homes. Now fully staffed, the firm anticipates a 1971 volume of 1000 units. The Washington homebuilding operation is part of the parent company's "shelter group," which is just one among several of the conglomerate's business activities.¹

The Yeonas Organization is a local family firm which has built five thousand homes in thirty Washington area subdivisions over the past twenty-three years. The firm expanded gradually for many years, but began growing in earnest in 1969 when it was acquired by the Olin Corporation. Its 1969 volume was 500 units; in 1970, volume rose 50%, to 750; in 1971, the firm hopes to exceed 1100 sales. Yeonas traditionally has offered higher-priced homes in communities ranging from seventy to two hundred acres, but began to change in 1970 with the opening of the 400-acre Lake Braddock, a lower-priced community in Fairfax County, Virginia.

Boise, unlike Yeonas, began its Washington activities with the lower-priced communities. Boise is basing its future policies on experience gained in three early projects: Brandywine, Sugarland, and Pheasant Run. Brandywine is a

1700 acre residential community in Prince George's County, Maryland. Boise plans to house 6000 families in 2000 single-family units, 2500 townhouses, and 1500 apartments. Approximately 150 single-family units, plus a golf course, have been built so far, plus a townhouse model area.

Sugarland is a 500 acre project for 2000 families in Loudoun County, Virginia. Again, the project started with single-family units, but will offer townhouses and possibly garden units as well. Pheasant Run, now completed, is a 20 acre, 170-unit townhouse project in Laurel, Maryland. All three projects offer homes for $22,000 to $32,000, and are located fifty to seventy minutes from downtown at rush hour.

After experimenting with projects at three substantially different scales, Boise has decided that, when fully entered in the Washington market, they plan to have two or three planned communities of about five hundred to one thousand acres, and three or four smaller jobs, of two hundred to three hundred acres, for a total of five to six projects.

Choosing a Metropolitan Area: In choosing to enter the Washington market initially, Boise considered its production and marketing constraints. Boise will not begin operations in any area that cannot absorb a minimum of one thousand Boise units annually for at least ten years. Any shorter time period or lower number of sales would be insufficient to justify the start-up and overhead costs associated with the local office.
From the standpoint of competitive risks, Boise is unwilling to aim for more than five percent of any one local market. Experience has shown that in periods of market downturn, small builders absorb the majority of the cut in demand, while the large builders are able to maintain close to their normal sales rate. Growing beyond the five percent market share, however, would probably subject the large firms to reduced sales as well. ¹

The 1000 unit minimum and five percent maximum combine to establish the criterion that a metropolitan area must have a total housing demand for at least 20,000 units annually. Washington clearly meets these criteria, since the predicted demand for the seventies is 350,000 housing starts, based on household formations and in-migration.² If Boise aimed for 5% of this market, they could achieve a volume of 17,500 for the decade, or an average of 1750 per year.

¹Study of the small versus the large firms in slow market situations has been done between 1965 and 1970 in Montgomery County, Maryland, by Gene Saminski, in an as yet unpublished study for HUD, and between 1950 and 1960 by John Herzog, in The Dynamics of the Large-Scale Homebuilding Firm, a study of the northern California market. (Berkeley: Real Estate Research Program, University of California.) Both studies found that the small firms have considerable trouble obtaining construction and permanent financing, and they are frequently unable to compete price-wise, in a slow market with the giant firms.

²Census data indicate the following growth for 1971-80:

<table>
<thead>
<tr>
<th>Year</th>
<th>Population Growth</th>
<th>Housing Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971-75</td>
<td>686,000</td>
<td>151,600</td>
</tr>
<tr>
<td>1976-80</td>
<td>720,000</td>
<td>200,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>351,600 Total</td>
</tr>
</tbody>
</table>

The FHA predicts that 95% of this growth will occur in the suburbs, that the city's share of metropolitan area population will shrink from 27% in 1970 to 20% in 1980.

Given this rationale for operating in the Washington area, Boise next decided what kind of housing to build, how much of each kind, and at what locations. A key component of these decisions is the belief that the 200 to 300 acre projects should sell at least 100 units per year and that the 500 to 1000 acre projects should sell at least 250 units a year.

Production Economies:

These sales targets are based partly on considerations of overhead and production economies of scale. Each site must fully amortize the fixed costs of working at that site. And the fixed costs are related to the number of different products offered at the individual site: the smaller the sales volume at a given site, the greater the likelihood that it will be a single-product project, as was the case at Pheasant Run.

The sales targets for individual sites are also related to the holding costs of raw and improved land. Boise hopes to build out each of its projects within three to five years; beyond that time, the debt service costs on the remaining unbuilt land mount so high that the homes built on the land - if sold at the price offered in the early years - would cut severely into profit margins.
Cash Flow Analysis:

Because the issue of holding costs and their bearing on overall cash flow is such a critical determinant of project scale, it is worth examining further, with a numerical model, how a builder works with the financial data. The numbers used below are drawn from a townhouse project in Fairfax County, now under construction.

A builder evaluates the feasibility of a project by determining whether its predicted return is at least equal to some minimum rate he has set (called the 'hurdle rate'). Washington builders indicate that they typically earn somewhere between 12% and 22% on projects, but screen potential work based on a 15% hurdle rate. In other words, projects do not always turn out as well as predicted.

When a tract of land is brought to the builder's attention, he calculates the total number of homes it will support, how many units can be sold each year at the site, and the per unit raw land and improvement costs. These calculations show him whether a 15% yield is possible.

For instance, suppose a broker approaches the builder with a 350-acre tract zoned for five units per gross acre, that is, 1750 houses total. The price of the tract is $3,130,000, or $8950 per acre. The per lot raw land price would then be $1790. The builder negotiates a purchase contract requiring a 20% downpayment, interest only for two years at 7%, and then a five year payout period. On a per
lot basis, the land financing is as follows:

Raw Land Financing:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25% downpayment</td>
<td>358</td>
<td></td>
</tr>
<tr>
<td>remaining balance</td>
<td>1432</td>
<td></td>
</tr>
<tr>
<td>total cost per lot</td>
<td>1790</td>
<td></td>
</tr>
</tbody>
</table>

principal plus interest annually, based on 7% rate and five year terms, is $338.

In the first five years, the payments would be:

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest</th>
<th>Principal</th>
<th>Remaining Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>358</td>
<td>0</td>
<td>1432</td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>100</td>
<td>1432</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>100</td>
<td>1432</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>238</td>
<td>1194</td>
</tr>
<tr>
<td>4</td>
<td>84</td>
<td>254</td>
<td>940</td>
</tr>
<tr>
<td>5</td>
<td>66</td>
<td>272</td>
<td>668</td>
</tr>
</tbody>
</table>

Land purchase agreements typically require that as the land is built upon and sold, the full balance remaining on the lot must be paid off. So a lot built upon and sold at the end of year three, for instance, would have paid the $358 downpayment, the $100 interest in each of years one, two, and three, the $238 principal due in year 3, and the $1194 remaining balance.

Having calculated land financing charges, the builder next considers improvement costs. In this case, his engineering studies indicate that each lot will cost $3750 to improve. He intends to borrow this money, and the going interest rate is 14%. He will improve the lots
section by section as needed. He anticipates that the improvement loan will be outstanding for an average of seven months, hence incurring a debt service charge of $315 per house:

\[ \$3750 \times 14\% \times \frac{7}{12} = \$315 \]

The builder plans to construct a 1500 square foot house, and he estimates construction costs will be $10.51 per square foot, giving a total cost of $15,800. Again, he plans to borrow this amount, paying 14\% interest. He anticipates that the loan will be outstanding for an average of 5 months, incurring a debt service charge of $915:

\[ \$15,800 \times 14\% \times \frac{5}{12} = \$915 \]

Other development costs that the builder anticipates are sales and promotion, mortgage processing, and overhead, which total $4750; recreational facilities, $63; and general administrative costs of the firm, $100 during the planning phase and $1092 in the year of construction.

In summary, expenses incurred in Year 0 are:

- downpayment for land $358
- first year general adm. expenses 100

\[ \$458 \]

---

1Loans are taken in 'draws' as the money is needed, so not until the completion of lot improvement activities is the full loan outstanding. Lot improvement begins four to six months ahead of construction, and the loan is paid off when the house is sold.
Expenses exclusive of raw land costs, occurring in the year of actual construction, are:

- land development
  - principal $3750
  - interest $315

- construction
  - principal $15800
  - interest $915

- sales, overhead, mtg. processing $4750
- recreation $63
- general adm. $1092

Total Expenses $26,685

If the house sells for $29,340, and is sold in the same year as construction occurs, then the net revenue in that year of sale, exclusive of raw land costs, is:

Sales Revenue $29,340

- Expenses in year of construction $26,685

Net Revenue in Year of Sale, exclusive of raw land costs $2,655

To calculate net cash flow overall the builder then determines the impact of raw land costs. For instance, a house built and sold in Year 2, would have the following cash flow:
<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>downpayment</td>
<td>(358)</td>
<td>(100)</td>
<td>(100)</td>
</tr>
<tr>
<td>interest</td>
<td></td>
<td>(100)</td>
<td>(100)</td>
</tr>
<tr>
<td>principal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>balance</td>
<td></td>
<td>(1432)</td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>(100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>gen. adm. exp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>net revenue in year of sale</td>
<td>2655</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NET CASH FLOW</td>
<td>(458)</td>
<td>(100)</td>
<td>1123</td>
</tr>
</tbody>
</table>

Similarly, a house built and sold in Year 5, would have the following cash flow:

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land (raw)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>downpayment</td>
<td>(358)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(84)</td>
<td>(66)</td>
</tr>
<tr>
<td>interest</td>
<td></td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(254)</td>
<td>(272)</td>
</tr>
<tr>
<td>principal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(238)</td>
<td>(272)</td>
</tr>
<tr>
<td>balance</td>
<td></td>
<td>(238)</td>
<td>(254)</td>
<td>(254)</td>
<td>(272)</td>
<td>(668)</td>
</tr>
<tr>
<td>1st year</td>
<td>(100)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gen. adm. exp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>net revenue in year of sale</td>
<td>2655</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NET CASH FLOW</td>
<td>(458)</td>
<td>(100)</td>
<td>(100)</td>
<td>(338)</td>
<td>(338)</td>
<td>1649</td>
</tr>
</tbody>
</table>

The builder does similar calculations for homes built and sold in years three and four, and combines all these calculations into one table:
<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1832</td>
<td>400</td>
<td>823</td>
<td>437</td>
<td>1029</td>
<td>1649</td>
</tr>
<tr>
<td>Net Cash Flow of Houses Sold in Year:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(458)</td>
<td>(100)</td>
<td>1123</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(458)</td>
<td>(100)</td>
<td>(100)</td>
<td>1123</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(458)</td>
<td>(100)</td>
<td>(100)</td>
<td>(338)</td>
<td>1367</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>(458)</td>
<td>(100)</td>
<td>(100)</td>
<td>(338)</td>
<td>(338)</td>
<td>1649</td>
</tr>
<tr>
<td>TOTAL</td>
<td>(1832)</td>
<td>(400)</td>
<td>823</td>
<td>437</td>
<td>1029</td>
<td>1649</td>
</tr>
</tbody>
</table>

Present value, discounted at 17%: (1832) (343) 600 272 550 752

Assuming that one-quarter of the homes are sold in each of years two, three, four, and five, the internal rate of return of the project is 17%, which exceeds the 15% hurdle rate.¹

---

¹The internal rate of return is calculated by finding the discount rate that equates the present value of future cash flows to the cost of the investment. It is the return earned by the equity invested. In this case, the builder's equity investment consisted of the following:

downpayment on land
interest payments on land
interest payments on construction loan
interest payments on land development loan
sales, overhead, and mortgage processing costs
recreation development costs
general administrative costs
Now the builder can review his initial assumptions. For instance, he perhaps conservatively estimated that he could sell 437 houses a year. If instead he could sell 582 a year, then his yield would jump to about 19%, because he could build out the project a year early.\(^1\) Were the project to drag out longer than five years, the holding costs would become overly burdensome and the hurdle rate would not be met.

As can be seen from this model, if land cost, annual demand, interest rates, allowable density, and desired profit rate are fixed, then the size of the project, in terms of acres, is a residual. If the fixed factors are altered, however, then the residual also changes. Today, one of the givens that builders are experimenting with is demand from different submarkets. If, for instance, a builder has the production capability to construct five hundred units annually at a given site but feels that he can sell only 350 single-family units at that site in a year, then he will consider what other product he might add to his line to fully utilize his production capability. For instance, he might decide that a mix of 300 single-family and 200 townhouses units would be marketable each year at one site. With such a combination

\(^{1}\)To arrive at this figure, re-calculate 'total net cash flow' by eliminating the numbers associated with homes built in year five; discounting this new total cash flow at 19% adds approximately to zero, for a return to equity therefore of 19%. 
he then creates two possible alternatives. He can con-
tinue to work on smaller tracts and reap the higher yield
resulting from faster absorption, or he can work with larger
tracts and continue to enjoy the acceptable but slightly
lower yield associated with slower absorption. At first
glance, the first alternative seems the most logical from a
profit-maximization standpoint, but this is not necessarily
so. Once he builds up production momentum, it is easier
and involves less uncertainty to stay at one site for five
years than to move to a new site after two-and-a-half years.
The model above really did not take into account the fact
that the later houses coast along on the early cash outlays
for planning studies and for legal services associated with
a rezoning; that is, doing two projects instead of one, in
five years, requires double the number of rezonings, site
plans, etc. Another argument favoring the larger projects
is the possibility of spinning off some of the land for
higher-intensity use, typically a shopping center or an
employment center; such uses would yield a bonus speculative
gain on the original land purchase. This latter benefit was
recently illustrated by Levitt, which purchased, on generous
terms, a 663-acre tract in Fairfax County, Virginia, for
$7600 per acre, and then sold fifteen acres for cash at
$40,000 per acre to a shopping center developer.
Builder's View of Ideal Project Size:

As mentioned earlier, Boise Cascade intends to experiment in the next few years with both approaches. They hope to work simultaneously on two or three 500 to 1000 acre projects, and three or four 200 to 300 acre projects, but anticipate that both kinds will be multi-product. The larger communities will include single-families, townhouses, and garden apartments, while the smaller projects may or may not have the apartments.

The Yeonas Organization has a nearly identical conception of ideal project size. If the firm were to pick one ideal, it would be 400 acres in size, and would include about one thousand families. The housing mix would cover single-family, townhouse, and garden units. Like Boise, Yeonas anticipates that some of its projects will be as small as 200 acres, and others will be a good bit larger, perhaps as much as 750 acres. But Yeonas is definitely more restrained about the larger projects than Boise. Yeonas is extremely concerned with the need for flexibility in planning its communities; the firm feels that the larger the project, the more locked in the firm is to the early product mix offered and the greater the chance that a shifting market will make the later years of a large project unsuccessful. Yeonas is perhaps overly sensitive to the need for flexibility because of the inventory of unsold higher-priced homes it had on hand at the end of 1970; that experience emphasized the point that demand can shift faster than production and planning can be
re-geared. In effect, Yeonas' concern with flexibility is a reflection of the firm's fear that it will be unable to read changes in submarkets early enough to avoid over-building. Right now, Yeonas feels that it cannot accurately foretell the market more than three years in advance. Boise puts the outer limit on market readings at about five years, but most of the other Washington builders agree with Yeonas. This disparity may be because Boise has a more sophisticated market research operation, coordinated at the central and regional offices, and supplemented by local consultants.

In general, though, market research is a weak area, even among the big builders, and this weakness, coupled with other factors, limits the willingness of the builders to work on projects with too long a time horizon.

LOCATION AND PRODUCT PACKAGE:

Projects of less than 500 acres can be built in two types of locations, either on the extreme fringe with a fifty to seventy minute drive to Washington, or on more expensive closer-in land forty to fifty minutes from downtown. In other words, there is still land available forty to fifty minutes from town that is both assemblable and priced low enough to support homes under $38,000 in price.

For the big builders who have already decided on a price range under $38,000, the choice of location - and hence land cost per unit - is a key determinant of the final product package of house plus amenities, that is offered. The builder can produce the identical unit on the
fringe and closer in, and let the house price reflect the difference in location. The builder must surmise how large a market there will be for the two different packages.

Alternatively, the builder can offer an identically-priced unit at both locations, but include swimming pool privileges and heavier landscaping in the package on the fringe. Again, he must determine what the demand will be for these two different offerings.

This issue was raised in a slightly different way in a market analysis done for Reston in 1967. Homes at Reston were compared with those at Levitt's Greenbriar. Both communities are about a forty minute drive from the city. The study showed that $25,200 at Greenbriar would buy a detached house containing 2000 square feet, while at Reston the same money would buy only a 1400 square foot townhouse. Put another way, a $25,200 detached house at Greenbriar would cost $36,000 at Reston.\(^1\) The Reston home, to make up for the loss in house size, offered a full range of recreational activities as soon as the homebuyer moved in,\(^2\) walking proximity to a community and commercial center, extensive landscaping, and extremely sensitive site planning and architecture.

Indications are that Reston sold 125 townhouses in the $22,000 to $30,000 range in the same year that Levitt sold four hundred single-family units in the identical price

---


\(^2\) The more common occurrence is for recreational facilities to be built only after thirty to fifty percent of the housing units have been built.
range. That is, the demand for the 'stripped down' Levitt package was about three times as high as for the Reston 'house plus amenities' package.

So far, builders have not studied formally these questions of demand for different, but still low-priced, packages. But the variety is being offered and is susceptible of study. For instance, two projects which should be compared are Dale City and Lake Ridge. Both are on the extreme fringe, about an hour's drive from Washington. Dale City offers townhouses and single-family units priced from $22,000 to $38,000; emphasis is completely on the house itself, with attention focused on interior living space and lot size. Lake Ridge, like Reston, offers a package approach; scenic beauty and recreational amenities are emphasized. The price range is the same as that at Dale City, so comparably priced homes are smaller.

In 1970, Dale City sold just over one thousand homes, while Lake Ridge's volume was about 450.

These two comparisons, Lake Ridge and Dale City, and Greenbriar and Reston, must be carried much further before builders can respond with more accuracy to the consumer desire for a mixture of location and product package.

PRICE SPREAD, MIXTURE OF AGE GROUPS, CLASSES, AND RACES

Strategies on Price Spread:

Most of the giant builders have decided to focus their production on homes costing somewhere between $22,000 and
$32,000. They choose to work within this relatively narrow price spread for reasons of production simplicity and greater marketability.

The big builders are almost unanimous in the feeling that "It's just so tough to get up a single house successfully, how could we possibly offer models in two or three price ranges?" Fred Kober, Washington regional director for Boise Cascade, reports that he must constantly discipline himself to maintain a relatively limited product line, because if he let himself follow his inclinations for more variety, he could not adequately coordinate his high-volume operation.

In terms of sales acceptance, most of the builders agree that any one project should have a price spread between highest and lowest cost unit of no more than $10,000. Any wider spread, to their thinking, would result in slow sales acceptance. A narrow price spread is a means of establishing a relatively homogeneous community in terms of income, class, and race, a feature which seems to be preferred by most suburbanites. As one in-depth study of subdivision-dwellers suggests, this consumer preference may be more a reflection of a desire for minimization of potential neighborhood conflict over daily living and childcare practices than of antidemocratic hostility to people of different backgrounds.1

1Herbert Gans. The Levittowners. New York: Pantheon Books. Gans observes that the Levittowners sought neighbors of similar age and income because "they wanted neighbors and friends with common interests and sufficient consensus of values to make for informal and uninhibited relations... Their reasons were motivated neither by antidemocratic feelings nor by an
Additionally, the builders' offering of a narrow price spread is based on the consumers' feeling that the resale value of a house is lessened if the house is in a neighborhood with too many homes of visibly lower value.²

Of course, both these reasons for narrow price spread are used by some suburbanites to mask their less acceptable feelings of outright racial and class bigotry.

Despite the attitudes of the majority of homebuilders and homebuyers, the new towns do not follow a policy of narrow price spread. In Washington's two new towns, Reston and Montgomery Village, prices now range from $24,000 to $80,000. There are several explanations for this extreme difference in marketing strategy.

First, the new towns are substantially bigger and

interest in conformity. Children need playmates of the same age, and because child-rearing problems vary with age, mothers like to be near women who have children of similar age. And because these problems also fluctuate with class, they want some similarity of that factor—not homogeneity of occupation so much as agreement on the ends and means of caring for child, husband, and home." p. 167.


Eichler and Kaplan report that builders and the planners they hire are often in conflict over the issue of what kind of lifestyle to provide for in the new housing projects. The planners, according to Eichler and Kaplan, in aspiring to aristocratic values for aesthetics and to democratic ideals of social mixing, harbor a deep antipathy for the American middle class, "...but businessmen are forced to remind themselves and their planners that this very middle class is the market to which their project must appeal." p. 10.
must attempt to reach more submarkets if they are to sell enough units a year to meet holding costs.

Second, because the new towns are bigger, the upper-income housing can be segregated into the prestigious enclaves that the builders assume are desired by this group. This is in fact what is done with many of the higher-priced units at both Reston and Montgomery Village.

Third, the buyers at the new towns may be less concerned with having a homogeneous community than other suburbanites. Buyers at the new towns have proven to be a self-selected group with substantially different priorities contributing to their purchase decision. This attitudinal difference is suggested in a 1970 survey which revealed a greater willingness among new town residents to live in a community of mixed income and race, than residents in less formally-planned communities.¹

Fourth, at Reston, many different builders are at work so the problems of one firm producing a wide variety of house types is not encountered. Montgomery Village, however, is being built and developed by one firm, Kettler Brothers. Over the past five years, Kettler's experience has covered houses ranging from $38,000 to $90,000 and has

included some commercial construction as well. This variety of building expertise will no doubt make the task of reaching for the lower-priced market this coming year an easier one. Montgomery Village is the firm's primary building site, and Kettler may feel that, having worked at the site for four years now, it is easier to expand the product line to attain higher volume, than to move to several other locations simultaneously. Additionally, the holding costs of the raw land and improvements are pressuring Kettler to seek broader markets for higher volumes. And finally, Kettler has felt the extreme shrinkage in the higher-priced market. Other builders, watching the new Kettler effort, are skeptical that Kettler will be able to continue marketing its higher-priced homes successfully once they start to push the lower-priced homes actively. They reason that the advertising for the $22,000 to $28,000 houses will scare away the $55,000 and up buyers. Reston avoids this problem by having its different builders advertise their individual products; Kettler tries to simulate this by advertising differently-named communities within Montgomery Village, but no one is sure whether this ploy will work in the coming year when the price spread will be wider than ever before.

Since the new towns account for only 4% of Washington's housing starts, the vast majority of homebuyers will live in communities with a $10,000 or less price spread. Focusing on the $22,000 to $32,000 range, let us examine the mixture
of people by income, age, occupational class, and race, that are likely to occur within the communities offering this price spread.

**Buyer Profiles, by Income and Age:**

Housing purchasing power correlates closely with income and with equity build-up, and these factors in turn correlate with both age and class. For instance, a family buying its first home would have to earn about $12,000 before it could afford to purchase a $30,000 house; if this were a second home and the family were prepared to transfer equity from the old house to the new one, then a $10,000 income might be adequate to sustain the costs of a $30,000 purchase.1

Families aged 34 and under are most likely making a first purchase, while older homebuying couples have a high probability of being second-round purchasers.

---

1Robert Zalakar, first vice president of First Virginia Bank, Virginia's largest bank, reports that his mortgage loan department requires that the monthly mortgage payment on a home loan not exceed 20% of a family's gross monthly income.
The effect of equity-transfer on house purchasing power is indicated by the following table, which shows, for different age groups, the income needed to purchase a house of a given price.¹

<table>
<thead>
<tr>
<th>House Price</th>
<th>Income Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age 34 and Under</td>
</tr>
<tr>
<td>$20,000</td>
<td>$7,000</td>
</tr>
<tr>
<td>30,000</td>
<td>12,000</td>
</tr>
<tr>
<td>40,000</td>
<td>16,000</td>
</tr>
<tr>
<td>50,000</td>
<td>20,000</td>
</tr>
<tr>
<td>60,000</td>
<td>24,000</td>
</tr>
<tr>
<td>70,000</td>
<td>30,000</td>
</tr>
<tr>
<td>80,000</td>
<td>32,000</td>
</tr>
</tbody>
</table>

In purchasing power, older couples have an advantage not only due to equity build-up, but also because they tend to earn more. For instance, in 1969, 31% of Washington couples aged 45 to 64 earned $15,000 and up, compared to 23% of those aged 35 to 44, and 8.5% of those 34 and younger.²

Translating income distributions for the different age groups into house purchasing power, the following buyer profiles emerge:

¹This information is gathered from mortgage lenders and brokers in Northern Virginia.

PURCHASING POWER OF COUPLES AGED 25 to 34

Percent of Families

$20 30 40 50 60 70 80
House Price ($000's omitted)

0

20

40

60

80

100

PURCHASING POWER OF COUPLES AGED 35 to 44

Percent of Families

$20 30 40 50 60 70 80
House Price ($000's omitted)

0

20

40

60

80

100

PURCHASING POWER OF COUPLES AGED 45 to 64

Percent of Families

$20 30 40 50 60 70 80
House Price ($000's omitted)

0

20

40

60

80

100

1 Shaded area shows percent of families interested in the $22,000 to $32,000 price range.
Focusing on the price range $22,000 to $32,000, the buyer profiles indicate that 40% of the under 34 age group fall in this submarket, 25% of the 35 to 44 group, and 20% of the 45 to 64 group.

Coupling this data with the percentage distribution by age group in the Washington area, we can ascertain the following:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Age Group as % of Total Wash. Population, 1970</th>
<th>% of Age Group Able to Buy $22,000 - $32,000 Homes</th>
<th>% of Total Pop. by Group, Able to Buy $22-32,000 Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 34</td>
<td>26.4%</td>
<td>40%</td>
<td>10.6%</td>
</tr>
<tr>
<td>35-44</td>
<td>19.2%</td>
<td>25%</td>
<td>4.8%</td>
</tr>
<tr>
<td>45-64</td>
<td>37.4%</td>
<td>20%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

If families of different ages were all equally likely to be in the market for home purchasing, the above table indicates that roughly 23% of all Washington families would be looking for homes priced $22,000 to $32,000, and of these families, just under half (10.6%/22.9%) would be in the under 34 age group, one-fifth would be aged 35-44, and one third would be 45 to 64.

But families of different ages are not equally likely to be in the market for homes. The older the family, the greater the likelihood that it already owns a house, and even though family size may have increased and income risen since that initial purchase, there are factors which
militate against the older family's being interested in moving. Most important is the impact of rising labor, land, and material costs in the construction industry.

**Impact of Housing Price Spiral on Buyer Profile:**

For example, the Kings Park subdivision in Fairfax County, Virginia opened in 1962. It is a thirty minute drive from the city. Most of the initial purchasers were young couples, aged 34 and under, with incomes between $8,000 and $10,000. They bought homes priced $21,000 to $25,000, with 1500 to 1800 square feet. Now, eight years later, these couples are about 30 to 40 years old and earning $12,000 to $16,000. Their families have expanded and they feel the need for more spacious homes. But they cannot find, in a comparable commuting radius, homes that meet their new needs and that are also within their purchasing power. They can afford homes that are about $33,000 to $43,000. Ironically, that is almost exactly what their current homes are selling for on the resale market. To find a four bedroom 2100 square foot home, they would have to pay at least $50,000 to stay within 30 minutes of town, or they would have to move ten to twenty miles further out from the city to find the right size home in their price range.

This example illustrates that the price spiral in the homebuilding industry has far out-paced the inflationary and 'earned' rise in income of the general homebuying
This phenomenon effectively forces most homeowners to remain in their current dwellings or move further away from the city. (In Washington, most purchasers in the over 35 age group are families who have just changed jobs; this is a larger than usual group in Washington due to the high proportion of military and government workers.)

<table>
<thead>
<tr>
<th></th>
<th>1965</th>
<th>1970</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Home Price</td>
<td>$22,700</td>
<td>$33,700</td>
<td>50%</td>
</tr>
<tr>
<td>Cost of Living</td>
<td>110</td>
<td>138</td>
<td>25%</td>
</tr>
<tr>
<td>Average Weekly Pay</td>
<td>95</td>
<td>122</td>
<td>28%</td>
</tr>
</tbody>
</table>

---

1 The Association of General Contractors of America predicts that recent labor settlements, coupled with rising material costs, will result in a 7% increase in direct construction costs in 1971. "Construction Costs Still Rising." Washington Post, Jan. 9, 1971.

2 Wall Street Journal. "The Outlook" Jan. 11, 1971, p. 1, New Home Price is the median selling price of new homes covered by conventional mortgages. Cost of living index is the official one (1957-59 = 100). Average weekly wage figures are compiled by the Department of Labor.
Therefore, the age distribution of persons looking for homes is highly skewed toward the young side. Although no formal studies have been conducted, builders report the following assumptions regarding age and likelihood of house purchase: in the under 34 group, 80% of those able to buy such homes will in fact be looking for homes. In the 35-44 group, 40% will be looking; this number may seem high at first, but recall that couples in this age group who are looking for the low-priced homes may have just recently acquired the financial means to buy a home; in other words, many in this category will be first-home purchasers. In the 45-64 group, about 10% of those able to buy the lower-priced homes will be interested in doing so.

Applying these percentages to earlier findings:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% of Total Pop., by Age Group, Likely to Buy a $22-32,000 Home</th>
<th>% by Age Group, Likely to be Seeking Home of $22-32,000</th>
<th>% of Total Pop. by Age, Likely to be Seeking $22-32,000 Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 34</td>
<td>10.6%</td>
<td>80%</td>
<td>8.4%</td>
</tr>
<tr>
<td>34-44</td>
<td>4.8%</td>
<td>40%</td>
<td>1.9%</td>
</tr>
<tr>
<td>45-64</td>
<td>7.5%</td>
<td>10%</td>
<td>.8%</td>
</tr>
</tbody>
</table>

Focusing on the last column, we can derive the age distribution of families likely to be purchasing $22,000 to $32,000 homes:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% of Lower-Priced Buyers</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 34</td>
<td>75%</td>
</tr>
<tr>
<td>35-44</td>
<td>17%</td>
</tr>
<tr>
<td>45-64</td>
<td>3%</td>
</tr>
</tbody>
</table>
Buyer Profile, by Occupational Class and Age:

Income rises with age, and the wage differential between white and blue collar workers also increases with age. Therefore, the older age groups interested in purchasing $22,000 to $32,000 homes are likely to have a much higher proportion of blue collar workers than are the under-34 couples. These facts are borne out by recent sales experience; builders find that the youngest buyers of lower-priced homes are predominantly white collar workers, while the older buyers are mostly blue collar workers. So in this price range, age is a close surrogate for occupational class.

The mixture of different ages and classes that occurs in any given community has not been studied extensively by the builders yet, but certain trends are emerging. At Sudley, a townhouse project selling for $25,000 to $30,000, the average age of the buyers was twenty-two; virtually 100% of the couples were 'young marrieds.' At Lake Braddock, townhouses priced $28,000 to $32,000 attracted young marrieds and older couples in almost equal numbers. The difference in the appeal of the two projects, both done by the Yeonas Organization, was in the product package. Sudley is located in Manassas, Virginia, at least an hour's drive from the city, while Lake Braddock is a thirty-five minute commute. Sudley emphasized the house itself, while Lake Braddock focused on a variety of community amenities. Most significantly, Yeonas found that the Lake Braddock homes on
the 'premium' lots overlooking lakes and stream valleys were consistently purchased by the older couples, and that the older couples tended to buy the smaller three bedroom model homes.

Comparing families of equal income, the older the family, the greater the likelihood that it will be willing to live in a smaller home in return for better location, better view, or more community facilities. So the exact product package offered by the builders will be a key determinant of the extent to which the lower-priced communities will have a diversity of age and class groups. Given that roughly three-quarters of buyers in the $22,000 to $32,000 price range are likely to be under age 34, most communities are bound to aim for this age group: the predominant package will likely be the "stripped down" house in the fringe location; competing for second place will be the stripped down house closer in to the city and the "house plus amenities" package on the fringe. The Lake Braddock kind of offering - superior location, and "house plus amenities" - will be the least frequent offering in the lower price range.

Buyer Profile, by Race:

The price range of the new suburban housing, starting generally at a minimum of $22,000, restricts buyers by income, and by corollary, by race as well. The large suburban homebuilders, when queried as to the racial composition of their communities, replied that their homes were open to blacks
and whites, so long as the families could afford the down-
payment and could qualify for the mortgage. In the
Washington area, few Negro families can meet these financial
qualifications, though, and the new subdivisions are vir-
tually all white.

MIX OF NON-RESIDENTIAL AND RESIDENTIAL LAND USES:

Turning from the issue of 'people' to 'land use'
mix, one finds the giant builders in Washington planning to
orient their land development operations primarily toward
residential construction and its direct ancillary facilities.

Commercial Center:
The giant builders intend to concentrate on projects
of at least two hundred acres and/or six hundred homes. This
size subdivision provides an adequate market to support a
convenience goods shopping center. Since homebuyers like
such facilities nearby, and since profits from the develop-
ment of the commercial center are high, the builders will
uniformly include them in their projects.

Open Space:
Open space for recreation is likely to be another
standard feature. All the Washington suburban jurisdictions
permit a bonus of extra units if the builder designs his
project on a cluster basis and creates more open space.
For instance, in Fairfax County, a builder who buys land
zoned for 2.5 units per acre will actually be permitted to
build 3.3 units per acre if he uses an acceptable cluster
plan. The bonus units, plus the lower lot improvement costs
associated with cluster, are strong incentives favoring
the conservation of open space.

**Recreational Facilities:**

A third standard feature will be at least one swimming pool in each project. Virtually all communities with more than one hundred homes built in the Washington area over the past five years have included swimming pools. Consumers of even the most 'stripped down' package have come to expect the pool as part of that package. Any builder failing to include a pool would be at a severe competitive disadvantage. The inclusion of additional recreational facilities, such as tennis courts, boating and swimming lakes, and stables, will depend on the size of the project and the perceived demand for such products. The larger projects - over 500 acres and 1000 units - have a big advantage in that they can spread the cost of the additional facilities over more units; buyers will be attracted to the fact that the large communities have a lake and a stable, and will not necessarily notice that these amenities will be crowded when the project is fully built out.

**Employment Centers:**

None of the big Washington builders, with the exception of the new towns, has any intention of including employment centers along with their residential communities. They feel that, at present, it would be much too difficult to coordinate the planning, construction, financing, and leasing of industrial or office space, along with their primary task of homebuilding. They recognize that commercial
construction is a completely different business, and do not feel that success in homebuilding necessarily carries over to another field. While they have no plans to internalize a commercial construction operation, a few of the builders would consider selling off land suited for an employment center or would joint venture with an experienced commercial developer. The builders are extremely eager to maintain complete control within their own projects, however, so the prospect of working with another firm is not warmly regarded. The enticement of a speculative gain on a land sale will likely be the deciding factor on whether residential communities of the big builders have employment centers. The argument that an employment base would generate extra housing demand is not persuasive with the builders; they feel that the difficulties of overseeing a commercial operation outweigh any additional demand generated. Even if the builders were able to put up 100,000 square feet of industrial or office space a year, the 400 employees working in that amount of space would likely generate a demand for well under 100 houses.1

The builders do not particularly regret being unable,  

---

1100,000 square feet a year in the fringe locations would in fact be quite unusual; such a volume is today attained only at prime close-in suburban sites. The assumption that fewer than one in four employees would be potential homebuyers would be grossly incorrect only if the newly located firm has moved from a far distant location, probably from another metropolitan area.
production-wise, to include an employment center. They feel that other developers are facilitating the decentralization of office and industrial space quickly enough already, so that while fringe locations today are an hour's drive from downtown, they will be thirty minutes or less from a substantial portion of the metropolitan area's employment centers, within ten years.

SUMMARY:

The housing project that builders feel is most responsive to consumer demand and to their own business constraints, over the next five to ten years, is a three hundred to six hundred acre community, housing nine hundred to two thousand families. The project will be in a fringe location, fifty to sixty minutes from downtown. It will include single-family homes, townhouses, and possibly garden apartments, priced between $22,000 and $32,000. Emphasis will be on the number of square feet of interior space that one is buying. The community will have a neighborhood commercial center and several swimming pools; other recreational facilities could be offered if the initial land purchase is on unusually favorable terms or if the project is unusually large. The predominant consumers will be young married couples under the age of 34, earning about $8500 to $13,000.

The chief variation on this typical project will be a closer-in community, and/or one with more amenities, and with a broader age range of consumers.
These project types contrast sharply to the typical project that has been built over the past five years: the ten to three-hundred fifty acre subdivision, with ten to one thousand units all of one type (either all townhouse or all single-family), and selling for $40,000 and up to middle-aged second-round purchasers and a few extremely well-to-do younger couples.
UNITED STATES URBAN GROWTH GOALS:

The goals for new urban development in the United States, as conceived in the 1970 Housing and Urban Development Act, embody two distinct principles: quantity and quality. One goal is the provision of adequate housing to the current population and to the seventy-five million additional persons expected to swell our census between now and 2000; Secretary Romney has expressed the hope that the housing industry can produce at least two million new units in 1971 and at least thirty million by 1980. A second stated goal in the 1970 legislation is the development of well-planned communities, such that they provide a full range of housing for people of all incomes, ages, classes, and races, that they be responsive to the variety of present and future needs of consumers, and that they provide a full range of land uses within easy access of one another.

Comparing these urban growth goals to the likely pattern of development projected for the Washington metropolitan area over the next decade - as described in Chapter Two - it is clear that the goals of "quality" will not be
met. For at least the next five years builders will not be providing a full range of land uses within single communities, they will not try to appeal to the full scope of the potential submarkets, and they are not likely to build housing for lower income and minority groups. However, the giant builders will contribute enormously to the goal of rapidly expanding the nation's housing stock, and it would be unfair to upbraid the giant builders for lacking aesthetic sensitivity, planning logic, and a fealty to open housing opportunity, without acknowledging their tremendous accomplishments in providing sheer volume.

If, in the long-run, the United States is committed to the achievement of quantity and quality simultaneously, then it must be prepared to undertake a great deal of research and to make a significant number of government policy changes.

TWO RESEARCH STRATEGIES:

In search of these goals, two basic research strategies starting from opposite poles, may be in order. One, we can continue to subsidize the currently unprofitable new town ventures, which embody the ideals of "quality" community planning, and concentrate on methods of making the new towns capable of providing significant volumes of housing. Two, we can analyze the high-volume housing producers, and seek
ways to make them capable of providing higher quality communities.

Hopefully, both these research strategies would evolve solutions that make the combination of quantity and quality feasible within a private market, profit-making framework. Or the research should indicate just how much the country must be willing to pay, in terms, for instance, of underwriting large land purchases or of accepting a slower than possible pace of housing production, in order to achieve the dual objective.

Since the focus of this paper has been primarily on the giant homebuilders, let us continue this focus here, asking, "how can the high-volume producers contribute more to the achievement of 'quality' urban growth?"

INCREASING THE RESPONSIVENESS OF BUILDERS TO CONSUMER DEMANDS AND NEEDS:

Before the giant builders can launch themselves into a well-articulated urban growth program, they require a great deal more information about the variety of housing needs and desires of the different consumer submarkets.

At present, only 12 percent of all builders engage in formal market analysis.¹ The remainder rely on intuition and past experience. One reason for the informality of

¹Sumichrast, p. 163.
market research is that most builders today are small local firms who feel they can keep abreast of consumer demand and competitors' plans just by remaining generally alert. The propensity of these firms to go out of business or suffer heavily in the face of bigger competitors, when demand shifts or credit tightens, does not seem to have altered their method of market analysis.¹

There is another reason, however, in addition to mere reluctance, for the generally intuitive approach to market analysis: the state of the art of market analysis is quite primitive today. At present, only the crudest of questions, based on basic demographic data, are being answered. Interested builders are barely able to gather information on the size of submarkets by age, income, and family size, for local areas, let alone determine the tastes of these submarkets for alternative 'packages' of house and community which the builder might offer.

Local Centralization of Market Information:

Local governments and metropolitan agencies could make a significant contribution to the improvement of market information if they would centralize the data needed by builders. Most communities have no centralized data

collection for real estate activity: the Chamber of Commerce keeps tabs on income and spending habits, the assessor watches rents and land volumes, the building inspector has information on building permit issues, and the planning department keeps data on proposed population increases. For a large-scale builder operating in more than one jurisdiction, the task of collecting information from each agency of each community is onerous.

**National Information-Gathering System:**

This lack of central real estate market information is true on a national scale as well. As described in Chapter Two, the national firms must analyze many metropolitan areas to determine which ones have fast enough growth rates over a long enough period of time to merit the firm's establishing a regional operation. Currently the giant national builders are clustered in a very few metropolitan areas; if their high-volume production capability is desired elsewhere, perhaps an improved set of market information would show them that there are opportunities in many additional locations which have not yet been recognized.

The Federal Government should therefore consider the establishment of a national information-gathering system. Such a system would necessarily have to be based upon an improved local system. It appears that many communities do have the raw data needed for an information network, and all that is needed is a guidebook on how to present this
information so that it is all in one place and so that it is roughly consistent from community to community.

**Studying the Demand for Alternative Packages:**

In addition to basic information on the size of submarkets by age, income, and family size, builders and consumers would be better off if more were known about the relative attractiveness of the various 'packages' that could be offered. Each builder's product includes trade-offs among price, number of interior square feet, lot size, location, recreational amenities, landscaping, site planning, building materials, etc. So far, the choice as to which combination of characteristics to offer where and in what numbers has been highly intuitive. Such questions as the following are in great need of answers:

---What percentage of consumers in each submarket value a short journey to work more than a full range of community facilities, given the same size and price house in both alternatives?

---What percentage of consumers in each submarket value a full range of community facilities more than a large house, given the same price house and same journey-to-work?

Local governments, or more likely, metropolitan or regional planning bodies, are in a better position than the builders to study such questions. While the builders have ready access to the consumers in their own communities,
they have much more difficulty getting a high response rate from buyers in competitors' communities. The giant builders in Washington almost uniformly have their purchasers fill out a questionnaire once the buying decision is firmly made, but even these surveys provide only minimal information that can be used to revise community design plans. Typically, the information collected yields a profile of consumers that outlines age, income, family size, occupation, location of workplace, location and price of previous home, and major reasons for buying the present home.

Such information is useful in two ways. If the project under study is selling well, the builder has a clear picture of his most likely buyers and can refine his advertising to aim directly at these consumers. If the project is not selling quickly enough, the builder can analyze his buyer profile to determine whether the particular submarket he is attracting is demographically too small to meet his target sales rate; he can then draw up an alternative profile of a hopefully larger submarket, and alter his package to attract this new buyer.

A metropolitan planning agency's survey of consumer preferences could be much more far-reaching in its ability to compare and contrast features of different communities. And the information gathered would be available publically. Smaller building firms, who now work almost totally on intuition, would then be on a par, at least information-wise, with the larger builders. And each builder could
examine the collected data and more effectively choose a market strategy that is consistent with his ideal project scale, time horizon, and overall sales volume.

Another advantage of publically-sponsored consumer research would be a clearer picture of current 'holes' in the market: groups of consumers and types of packages that builders currently neglect. No doubt some of these missed submarkets exist because of cost constraints. But others exist simply because builders have failed to recognize them. This latter case is especially true among middle-aged and elderly middle-income and upper-income persons. These groups are shrinking as a proportion of housing consumers, and so, as seen in the Washington area, their housing needs are being left increasingly to the small and medium-sized builders. Yet it is these builders who are the least innovative, the least research-oriented firms in the industry. Their consumers have the greatest chance of being poorly served in terms of accurate response to real needs.

ACHIEVING A FULLER RANGE OF HOUSING, BY AGE, INCOME, CLASS, AND RACE, WITHIN INDIVIDUAL COMMUNITIES:

In the Washington area during the 1970's, the emerging sociological composition of the newly-built suburbs is homogenous groupings of white middle class young families, occasionally joined by white middle-aged blue collar families. In contrast, the new towns will continue to provide a significantly diversified mixture of age, income, class,
and racial groups.

Since the 1970 Federal housing legislation espouses a goal of "increasing, for all persons, particularly members of minority groups, the available choices of location for living and working...", it appears, at least on the surface, that the projects of the merchant builders will be inconsistent with U. S. urban growth objectives. Yet while advocating that a "full range" of housing opportunities be available in the suburbs in general, the legislation seeks to implement this goal specifically only in the new towns. In the new towns, a pre-requisite for federal funding is the "substantial provision (of) housing within the means of persons of low and moderate income." In the more conventional suburbs, the 1970 legislation and the current administrative practices of the Federal Government imply a laissez-faire attitude regarding minority and low-income housing: the legislation provides no explicit guidelines to encourage merchant builders to diversify their offerings and the Departments of Justice and Housing and Urban Development have made apparent their unwillingness to take action in such matters.¹

¹President Nixon and Attorney General Mitchell have both given speeches expressing their opposition to any Federal policy of forced integration. And the Civil Rights Commission recently conducted a study which found HUD had "abdicated its responsibility to low-income buyers and the law" by allowing housing built for Negroes under the Section 235 program to be consistently channelled into existing black areas or into already integrated "changing" neighborhoods. (As reported by Peter Braestrup in The Washington Post: "HUD Perpetuates Bias, Rights Report Charges." April 18, 1971, pA 1.)
Therefore, the emerging Washington suburbs will likely be an accurate reflection of implicit U. S. housing policy with regard to the range of people mixed into any single community. It is unlikely that Federal housing policies will shift dramatically on this issue until a much broader segment of middle class Americans demonstrates a willingness to open their communities voluntarily to lower-income and non-white families. And, similarly, it is unlikely that merchant builders will provide for these groups in their suburban projects until it is clear that a majority of homebuyers will purchase homes in mixed communities.

In addition to middle-class resistance, another barrier to suburban housing for lower-income families is cost. The Federal government has recognized the need for public subsidy to bridge the gap between purchasing power and actual cost, and has adopted legislation to accomplish this task. Actual implementation of the '235' and '236' programs has been hampered by insufficient funding, by administrative and regulatory tangles, and by difficulty in finding housing sites.

On the local level, governments genuinely interested in facilitating lower-cost housing have turned their attention to building and subdivision codes. Fairfax and Montgomery Counties have set up study groups to revise their codes so as to lower lot improvement and construction costs. Research teams composed of county officials, citizens, and
private builders and engineers, have drawn up proposals over the past year which are now being studied by elected officials; these proposals are meeting with popular favor in the press and among citizens' associations and are likely to be adopted within six months. Anticipated cost savings, if the proposals are implemented, would be "in excess of $5000 on a single-family house designed to sell for $28,000."\(^1\)

In Fairfax, the Yeonas Organization has taken the lead in conducting research into cost-cutting measures. Yeonas had its own engineering consultants draw up a proposal which was in large part absorbed into the County's official task force report; the Yeonas proposals are being implemented on a trial basis at Lake Braddock, where Yeonas is building 361 moderate-income units.

These promising local efforts can, unfortunately, contribute in only a small way to solving the low-income housing problem. Further refinement of federal housing legislation, a much greater commitment of federal funds to housing subsidies, and a lessening of middle class resistance, are all required before any significant progress can be made.

MATCHING ZONING POLICIES WITH MARKET DEMAND:

An area in which local governments could take the lead in improving the ultimate product of the big builders

is in the sound application of market data to zoning policies. Currently, local governments zone their unbuilt land based on an idealized concept of land use. This ideal is often out of phase with the needs of the current homebuying public.

Many local governments recognize this mismatch, but persist in such policies as large-lot zonings as an exclusionary policy and as one which holds down the costs of the public infra-structure. There are other suburbs, however, which are extremely eager to attract new development at a fast pace, often to amortize the cost of already-built facilities, or, as with Fairfax and Montgomery Counties, to provide low-enough-cost housing to be affordable by school-teachers, policemen, and others who serve the counties. It is these latter suburbs which would benefit from a revised zoning process which takes more account of consumer needs and builder cost constraints.

For instance, in Fairfax County, the planning process begins when public officials and planners agree upon an overall target population for a given region. This population is then parcelled out into X one-acre lots, Y half-acre lots, etc., and a public improvements building program is scheduled to handle the overall population. The principles on which the relative percentages of each lot size are based are quite unclear. The planners readily admit that lot development costs, raw land costs, and resultant demand for each density category are not considered.
Steps in the Zoning Process:

For a start, local governments should institute a regular review of existing zoning categories of unbuilt land. Along with the list of numbers of acres in each zoning category should be an estimate of the raw land costs per unit and lot improvement costs. With these figures, the local government should then project the price of homes that can be built on the vacant land. These calculations will yield an estimate of the county's potential supply of land for housing, by price range.

Next, the county should assess the demand for housing, by submarkets, to ascertain what proportion of the population falls into each price category home.

The County should then set two targets: one, the mix of persons of each submarket desired within a single region, and two, the length of time over which it is financially feasible to have a district in the development stage.

Then the County must reconcile these two targets: for instance, if it wants a district to develop over ten years, then it cannot also ask that half the district be inhabited by upper-income families on two-acre lots, since that submarket is too small to meet the ten-year build-out target.

This process of constraining the ideal mix of submarkets by taking into account the size of the individual
Outline of Proposed Zoning Process:

SUPPLY:

- # of acres available for:
  - raw land cost per unit
  - improvement cost per unit
  - two acre lots
  - one-acre lots
  - half-acre lots
  - garden apartments

# of potential units for sale at:

- $22,000
- ...
- $35,000
- ...
- $60,000

DEMAND

- Age
- Income
- Family Size
- Equity in present home

# of houses demanded at:

- $22,000
- ...
- $35,000
- ...
- $60,000

COUNTY TARGETS:

- Mix of Submarkets (as reflected in SUPPLY)
- # of years over which it is financially feasible to have a region in development (as reflected in DEMAND)

Reconciled Targets
submarkets and the costs of the infra-structure over time, is a critical discipline which is currently missing from the planning process, yet it is a discipline which has significant benefits to the County, to builders, and to homebuyers.

Benefits of Revised Zoning Policy:

In developing new regions, Counties typically lay out major roads, trunk sewers, and water mains, at the start of the development period. They sell bonds to pay the capital costs, and gradually pay off the principal and interest with property tax revenues.

If land in the new region is developed by builders more slowly than the County anticipates, then the infrastructure is under-utilized and property tax revenues generated are less than expected. Such a situation creates an unduly heavy financial burden for existing County residents. The market-oriented zoning policy proposed above would relieve this excess burden.

Builders and purchasers of lower-priced housing would benefit from the proposal because the accurate matching of supply with demand would bring land costs down. Currently, there is limited supply of land zoned for small lots and a huge demand, which together create high price for the land. Likewise, there is a huge supply of land zoned for large lots, and a small demand, so prices on this land are depressed. Realigning zoning along lines of supply and demand in each price range and submarket would yield a greater
supply of higher-density, reasonably-priced land that could support homes in the $22,000 to $32,000 category.

**INCREASING THE RANGE OF LAND USES WITHIN COMMUNITIES:**

Based on the present production capabilities of homebuilders and based on their perception of demand for various land uses, two possible strategies might lead to the provision of a fuller range of land uses within easy and logical access of one another. One, local governments could take a much more active role in coordinating the mix of land uses, and two, the builders could gradually acquire the capability of coordinating a broader range of construction activities.

**Local Government Efforts:**

At present, most builders are not taking responsibility for creating employment centers along with residential concentrations. They assert that diversification beyond residential construction is too complicated at present. They further assert that the time horizon for the absorption of industrial land on the fringe locations is much longer than the time horizon for the lower-priced homes they are building, so debt service costs would hang heavy on the industrial land and there would be few benefits of construction economies of scale and of interlocking demand for the two land uses.

If local governments are committed to the objective of increasing the mix of land uses, then they will have to
zone some land for employment uses on their own motion. If the builders are correct about the timing of demand, local governments pursuing this goal must not be impatient with the time lag that will be involved in achieving a full scale of land uses.

Builder Learning Experience:

Where time lag in demand is not a relevant factor, that is, where builders can expect to sell out industrial and residential land simultaneously, then the only obstacle is managerial and production capability. The builders' rejection of more than just homebuilding activities today is largely a reflection of prudent business philosophy that a firm should learn to do one thing well before branching out. One indication of how the builders regard this learning process is given by Levitt's handling of its new apartment construction operation.

Levitt has traditionally been a single-family builder. In 1969, the firm decided to branch into apartment building. How to integrate this new activity into the existing firm was a key management question. One obvious method was to review the single-family projects then in the planning stage and determine which ones could include apartments, and to consider, in all future land purchases, whether the tracts could support both single- and multi-family units.

Levitt chose a completely different method, however. Rather than trying to integrate multi-family construction into existing single-family building operations across the
country, Levitt decided to establish a completely separate subsidiary, Levitt Multi-Housing.¹ This subsidiary has set up operations in a few key metropolitan areas, seeking its own land, and supervising its own construction and marketing. Levitt reasons that this method of initiating its apartment operation will be the least disruptive to the rest of the business and will provide a good learning environment for the new activities. Once a successful apartment construction operation is established, Levitt anticipates a merger of the single- and multi-family operations.²

This Levitt example, along with Boise Cascade's reluctance to branch out beyond homebuilding, is a significant warning indicator to government officials and others concerned with achieving a finer integration of land uses. Levitt and Boise Cascade are the acknowledged homebuilding industry leaders in volume and management sophistication, and if they are cautious and slow about starting new endeavors,

¹"Levitt Will Build Apartments." Engineering Record. Sept. 11, 1969. New York: McGraw Hill, p. 15. Levitt Multi-Housing will start with conventional construction in two to four-story buildings, in two Washington locations. Later, the subsidiary will branch out to New York City, Philadelphia, Chicago, and Baltimore metropolitan areas. Levitt hopes that within a few years, apartments will represent half the firm's total volume. (1969 volume was 7600 single-family units.)

²Comments on management strategy are from John Canning, head of single-family land acquisition in the Washington area for Levitt.
the layman must assume that there are extremely good business reasons backing up their strategy. Officials at Levitt, Boise Cascade, and several other of the big firms consistently assert that it is much easier to conceptualize the ideal of mixing land uses than it is to implement that ideal.

**Research and training in construction and land development management:**

This gap between the ability to conceptualize and the ability to implement points up another area for remedial attention. There is very little current research on the management of homebuilding, commercial construction, and land development. Many books were written on these subjects in the 1950's, and early 1960's, but the literature has not kept pace with the era of high-volume operations. This neglect is all the more glaring when we recall that government officials and urban planners have been vociferously calling for over two million housing starts a year and for dozens of new towns. Yet the government and the urban planners have left it up to others to work out ways of achieving these ideals. Unfortunately, those "others" have turned out to be one of the most backward industries in America.

The time is therefore over-ripe for universities and governments to conduct research and promote training in all phases of construction and land development management. Presently there are twenty-three colleges which have specific degree programs in construction, and these programs turn out
only three hundred fifty graduates a year. These programs should be expanded. And existing business schools, which are a key source of homebuilding management talent, should be encouraged to expand their real estate programs.

To reap the full benefits of improved training of homebuilders, an educational program should simultaneously be established for the public officials with whom the builders regularly interact. To help public servants formulate master plans and regulatory codes that are more responsive to market realities, the training of these officials should include a rigorous analysis of the business constraints that builders face.
CONCLUSION

Based on an exploration of homebuilders and how they make their business decisions, it appears that great progress will be made over the next decade toward the provision of enough housing units to keep pace with the demand for new shelter. Left on their own, however, builders are likely to fall far short of this country's goals for quality communities.

While producing homes in ever-increasing volumes, the nation's homebuilders will group these homes into projects which lack an exciting and efficient mix of land uses, which are unresponsive to the variety of consumer tastes that are latent but apparent today, and which will be closed to all but a narrow range of homebuyers.

There are many good business reasons why 'quantity' will be more readily achieved than 'quality': mass-production is easier to attain by concentrating on one housing type than many, marketing is less risky and production easier when offerings are kept within a narrow price range, a sixteen-hundred unit project built over four years is more flexible to shifts in demand and less burdened with holding costs than a five-thousand unit project built over ten years, and a project composed solely of residential construction is easier to coordinate than a diversified program of residential as well as non-residential land uses.
In order to move closer to the attainment of both quantity and quality in the suburbs, many of the business constraints that builders face will have to be diminished. Some of the constraints can be lifted by the builder himself; the lifting of others will require efforts by local, state, and federal government agencies, and by educational institutions.

On the builder's part, as he grows in experience, he will achieve adequate production scale and managerial sophistication to expand his product line; this will enable him to offer a variety of house types and a broader mixture of land uses. Before such expansion makes good business policy, however, others must take steps as well.

Public agencies must help create a more inclusive and centralized market information network. Raw data currently available from local agencies must be more efficiently assembled both locally and nationally. Inquiry into a much broader range of housing consumer issues must be launched. For instance, it must be shown that, demographically, there is adequate demand simultaneously from a variety of consumers to support a heterogeneity of price ranges; and besides sheer numbers, it must be proved that persons of different incomes and classes will in fact want to buy homes in mixed communities.

Research and training in the area of land development and construction must be widened and up-dated. The literature must catch up with a new era of homebuilding, and
the information must be disseminated not only to future building professionals but to public planners and others who interact daily with builders.

Local building and subdivision codes must be revised downward to make lower-income housing more widely feasible, and additional legislation and funding must be sought in order to close the gap between low incomes and housing costs.

And local zoning policies must be much more accurately attuned to market realities so that capital improvements are more efficiently and economically utilized and so that land costs more correctly reflect supply-demand relations.
BIBLIOGRAPHY

BOOKS


President's Committee on Urban Housing. *A Decent Home.* Washington, D. C. 1969.


PERIODICALS


. Real Estate Sections. All issues between January, 1969, and April, 1971.


"Big Builders Form Council of Housing Producers."  
April, 1968.  P. 8.

"Levitt and Sons Has a Reply for its Wall Street Critics."  

"Kettler Brothers."  

"Small Builders Reap Benefits of Big Operation."  


NAHB Journal of Homebuilding.  "Selling Against Odds - Kettler Brothers."  


"Forty Years in Housing - Levitt."  

"Housing's First Conglomerate?"  

Sales Management.  "Survey of Purchasing Power."  
June, 1969.

Sumichrast, Michael.  "Housing Outlook Shows Upturn."  


Virginia Sentinel.  "Computer to Plan County Land Use."  

P. 1.


Real Estate Sections. All Issues Between January, 1969, and April, 1971.


"We're Tops in Income...and Outgo Too". June 7, 1970. P. Al.

INTERVIEWS


