

I. POTENTIAL FOR RESIDENTIAL DEVELOPMENT

The following factors favor the growth of a major residential development at Reston over the next 15 years:

1. The property is located in the most rapidly growing portion of a metropolitan area whose population is slated to increase by at least 60% between 1960 and 1980.
2. The opening of Dulles International Airport creates a new job center for which housing will be required almost immediately. By 1970, the basic employment volume at the airport is expected to reach 6000; the 1980 volume is estimated at 10,000 persons.
3. The master plan for Reston sets aside approximately 20% of the land area for use by industry, research facilities, and government office or laboratory complexes. The concept of a balanced community, which underlies all of the developer's plans, provides for the construction of residential neighborhoods to meet the specific needs of families and unrelated individuals employed in local industries. Thus the development of industrial and residential areas can proceed hand in hand and avoid the danger of overbuilding.
4. Construction of the circumferential and radial highway system gives Reston the advantage of being within easy commuter distance from downtown Washington as well as from federal employment centers in the ring of suburban communities. The possibility of rapid transit serving the "growth corridor" into which the National Capital Planning Commission hopes to channel future development would further enhance Reston's residential opportunities.

Reston's Future Population

A graphic illustration of recent and projected population growth in Fairfax County is presented in Figure 1. During the 1960's, Fairfax County is expected to exceed the rate of population growth of the other suburban counties of the Washington Metropolitan Area. This is a reflection of the fact that between 1950 and 1960 Fairfax County accounted for one-third of the metropolitan area's entire population increase and for almost three-quarters of Northern Virginia's expansion. It also takes into consideration the suction which the completion of Dulles Airport and the circumferential highway will exert upon persons now residing in other parts of the metropolitan area.

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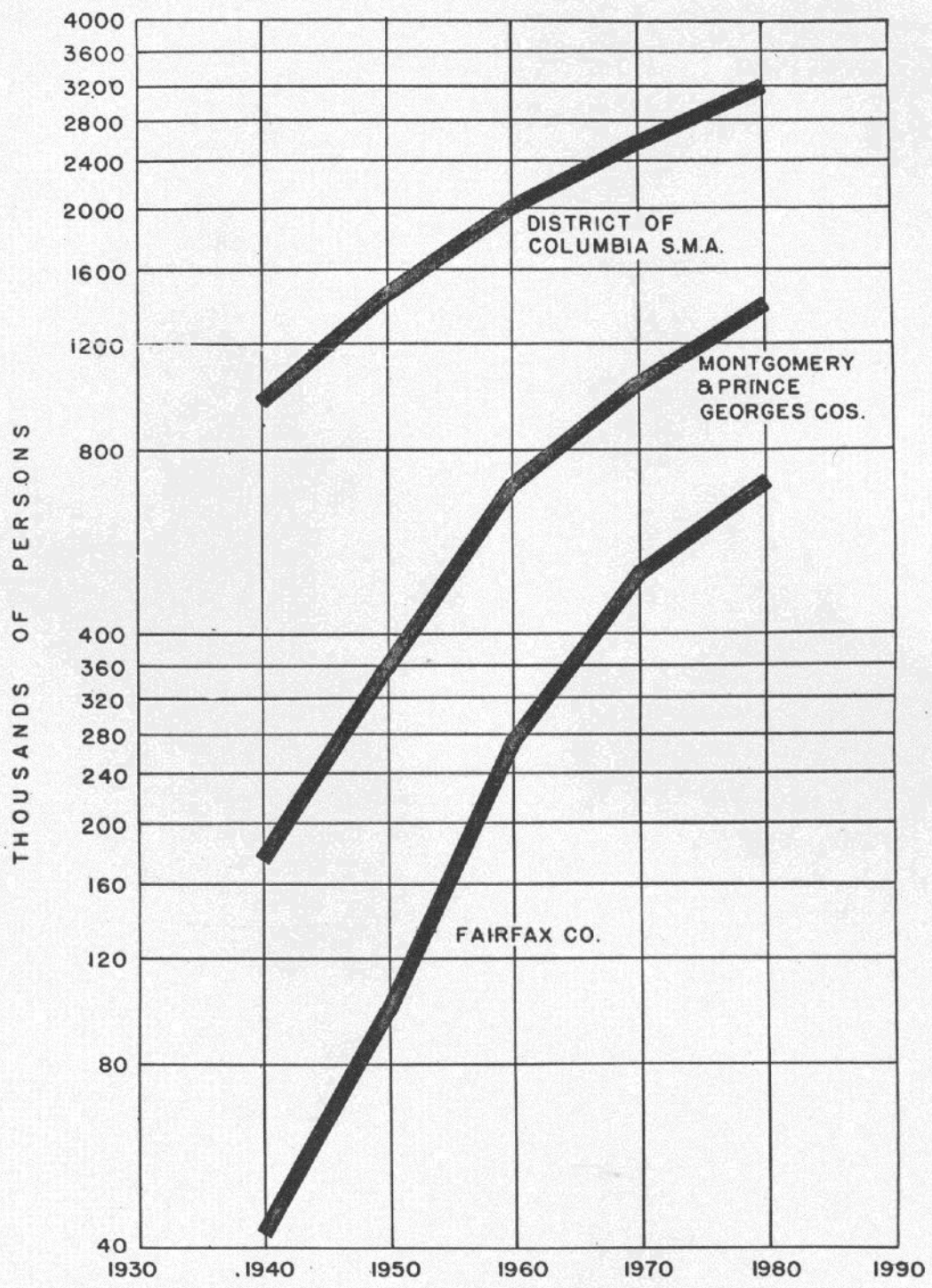


FIGURE I

POPULATION
WITH ESTIMATES TO 1980

By 1980, Fairfax County may be expected to have a population of about 700,000, which represents an increase of 425,000 over 1960. Only 6% of this growth is likely to be non-white, barring major institutional changes in the area.

It has been estimated that about 20% of the projected Fairfax County population increase could be claimed by Reston by the end of its development period, because:

- (a) It lies in one of the principal expansion corridors of the metropolitan area and will benefit from the pull of Dulles Airport.
- (b) It is in a position to attract industrial and institutional centers of employment.
- (c) The more inlying parts of Fairfax County are approaching full development; hence the wave of residential construction is moving in the direction of Reston, regardless of the housing needs of Dulles Airport employees or Reston's own industrial and institutional workers.

It should be noted (Table 1) that the ratio of labor force to population, though still low because of the recent migration of families from the city to the suburbs, is projected to rise significantly in Fairfax County over the next 20 years. This implies a shift from the pure "bedroom" community to a more balanced distribution of land between housing and employment-generating activities.

The Market for Housing

In 1960, the County's population of 275,000 was housed in 67,000 dwelling units, of which about 65,000 were occupied by the white population. Our population projections point to a need for 111,000 additional dwelling units by 1980, 105,000 of which will be required to accommodate the white population at a density of just under four persons per unit (Table 2). Owner-occupied housing units account for about 75% of all housing units in the County, a ratio which is likely to remain constant throughout the development period.

In order to make an estimate of Reston's logical share of this housing market, it was necessary to break down the projected population increase by family size. Adjusting U. S. Census data to population characteristics in Northern Virginia, it was determined that about 80,000 of the 400,000 white additions to the County's population between 1960 and 1980 would be individuals not living in family groups. The balance of 320,000 persons would consist of about 85,000 families, given an average of 3.8 persons per family. Approximately 54% of these 85,000 families would be composed of two- or three-person households.

The effective market for one-bedroom or two-bedroom housing units would probably be found among the unrelated individuals and the small families of two or three members whose income exceeds \$4000. This market, for all of Fairfax County, is estimated in Table 3.

It is believed that Reston will be in a position to attract a substantial share, perhaps as much as one-quarter (15,000 units) of the Fairfax County market for small dwelling units. The following reasons are offered in support of this claim:

1. At the present time the movement to the suburbs involves primarily families with children whose breadwinner is prepared to commute to work. This trend will undoubtedly continue, but as centers of employment are established in the outlying parts of the metropolitan area a reverse commuting pattern is certain to develop. This will result in a demand for housing for unrelated individuals and small households who would prefer to retain the amenities of an urban environment while living closer to work. On the basis of present suburban growth patterns, there will not be many opportunities for maintaining urbanity in a suburban setting unless an urban type of environment is deliberately created by the developer. This is the plan for Reston, and we believe it will create a market for small-family units which does not exist in a suburban area at the present time.
2. By setting aside land for light industry and government or institutional use, Reston is creating its own market for this type of housing. Federal government establishments, in particular, give employment to a high proportion of unrelated individuals.
3. The plan for a balanced community envisages the attraction of a cross section of the metropolitan area's population in terms of age groups, family status, and income characteristics. Thus housing will be provided for families whose children have left home and whose requirements revert to the small dwelling-unit pattern. With a trend to earlier marriages and earlier "completed" families, this demand will increase sharply during the next two decades, as will the demand for housing for senior citizens whose needs, so far, have not been satisfactorily met outside of central cities.

If 60,000 small-family type dwelling units are provided in Fairfax County, they would be expected to accommodate approximately 100,000 persons (see last column in Table 3). This leaves an increment of 300,000 persons (the balance of the projected population growth between 1960 and 1980) to be housed in standard-sized dwelling

units. Assuming a population/housing unit ratio of at least 4-- this is the average size of family for the 1960's--Fairfax County will have to provide up to 75,000 standard-sized housing units in order to shelter its 1980 population.

Reston's ability to attract slightly in excess of 15% of this residential market will depend on the quality of the housing and the environment. Fairfax County's family income characteristics are presented in Table 4, which gives an estimate for 1960 and projections to 1970 and 1980. The table reveals that only 43.6% of all families (not including unrelated individuals) had incomes of less than \$7500 in 1960. Assuming a constant dollar, the share of lower-income families is expected to drop sharply in the next two decades, so that by 1980 only one in four families will remain in the "below \$7500" category. We believe, therefore, that Reston should aim to attract the "above \$7500" market for which so-called medium-priced houses beginning at \$20,000 are now being built in the metropolitan area. It should be noted that the lower-income groups have not been excluded from Reston as a result of this recommendation, for it has been envisaged that a substantial share of the smaller dwelling units will be occupied by households with incomes in the \$4000-\$7500 range.

If, then, it is assumed that Reston will aim to provide up to 12,000 standard-sized dwelling units in price ranges commensurate with the income of the prospective market, the following breakdown is obtained:

<u>Income Group</u>	<u>Percentage of "Over \$7500" Families in 1960</u>	<u>Number of Housing Units</u>
\$7500-\$9999	41	4900
\$10,000-\$14,999	39	4700
\$15,000-\$19,999	12	1500
Over \$20,000	8	900

On the basis of interviews with developers and the FHA, it can be suggested that housing units for the lowest of the above income groups be offered at \$20,000. The next income group is likely to be in the market for housing in the \$20,000-\$30,000 range, with the majority buying in the lower twenties. The two highest income groups, accounting for about 20% of the "above \$7500" families, will not be primarily motivated by price in their residential choice. Considerations of environment, design, recreation and cultural facilities, and accessibility to work will determine Reston's ability to draw this share of the market.

Market Conditions

Our interviews with real-estate men, builders, and other local observers revealed the confidence with which they view the next 20-year period in the development of Fairfax County. In the short run, the number of vacancies (a rate of 5.8% was reported by the 1960 Census--the highest in the metropolitan area), especially in low-priced subdivisions, is a matter of some concern. The probability of gaining access to the Dulles Airport highway influences the respondents' view of the longer-run market prospects. It is generally believed that without such access development generally will be slowed.

Recommended Timing of Construction

Given the current market pattern in Fairfax County, with its emphasis on large houses for families with relatively high incomes, the initial building program at Reston would logically strive to meet this demand.

Although smaller dwelling units, especially of the apartment type, are beginning to be built in Fairfax County, construction of such accommodations will necessarily have to await the creation of employment opportunities for unrelated individuals and lower-income families at Reston and in near-by employment centers.

In order to maintain the concept of a balanced community as the development of Reston accelerates, we believe that a supply of lower-priced housing should always be available in order to enhance the availability of a labor pool for prospective Reston industries.

The following tables and figures indicate statistics and projections on which the residential conclusions are based:

Table 1 - Population and Employment in Washington Standard Metropolitan Statistical Area (S.M.S.A.) and Sub-Areas, 1950-1980

Table 2 - White Population and Housing Units in Fairfax County

Table 3 - Fairfax County--Number of Individuals and Small Families in the Effective Market, 1960-1980

Table 4 - Family Income, Fairfax County

Table 1

POPULATION AND EMPLOYMENT IN WASHINGTON STANDARD
METROPOLITAN STATISTICAL AREA (S.M.S.A.) AND SUB-AREAS, 1950-1980

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>
S.M.S.A.				
Population (000's)	1464	2002	2580	3185
Employment (000's)	626	900	1130	1400
Ratio of Employment to Population	.428	.450	.438	.431
DISTRICT OF COLUMBIA				
Population (000's)	802	764	750	740
Employment (000's)	373	517	525	530
Ratio of Employment to Population	.465	.677	.700	.716
NORTHERN VIRGINIA				
Population (000's)	303	540	790	1085
Employment (000's)	113	190	285	410
Ratio of Employment to Population	.373	.352	.361	.378
FAIRFAX COUNTY				
Population (000's)	99	275	500	700
Employment (000's)	33	50	120	210
Ratio of Employment to Population	.333	.182	.240	.300

Source: U. S. Census and Arthur D. Little, Inc. projections.

Table 2

WHITE POPULATION AND HOUSING UNITS IN FAIRFAX COUNTY

(thousands)

	<u>1950</u>	<u>Increase</u>	<u>1960</u>	<u>Increase</u>	<u>1970</u>	<u>Increase</u>	<u>1980</u>
White Population	<u>89</u>	<u>171</u>	<u>260</u>	<u>215</u>	<u>475</u>	<u>185</u>	<u>660</u>
Owner-Occupied Housing Units	15	34	49	43	92	38	130
Renter-Occupied Housing Units	<u>8</u>	<u>8</u>	<u>16</u>	<u>13</u>	<u>29</u>	<u>11</u>	<u>40</u>
Total Housing Units	23	42	65	56	121	49	170
Average Population/ Housing Unit	3.9	4.1*	4.0	3.8*	4.0	3.8*	3.9
Owner-Occupied Housing Units as Percentage of Total	65		75		76		76

Source: U. S. Bureau of Census and Arthur D. Little, Inc. estimates.

* Computed by dividing increase in population by increase in housing units.

Note: The 1960 non-white population of Fairfax County was just under 15,000; the projected total for 1980 is 40,000. In 1960, there were 6.35 people per non-white occupied housing unit--a ratio more than 50% above that of the white population. Assuming an occupancy ratio of 5 people per housing unit in 1980, the non-white housing requirement will be 8000 housing units--an increase of 5660 over 1960. This will represent less than 5% of the total number of housing units anticipated for Fairfax County in 1980.

Table 3

FAIRFAX COUNTY

NUMBER OF INDIVIDUALS AND SMALL FAMILIES IN THE EFFECTIVE MARKET, 1960-1980

<u>Type of Household</u>	<u>As Percentage of All Families (85,000)</u>	<u>Number of Household Units</u>	<u>Rough Percentage of Households with Income Above \$4000</u>	<u>Apparent Market (No. Units)</u>	<u>Market in Terms of Population</u>
Unrelated Individual	--	80,000	40%	32,000	(32,000)
Two-person Family	32%	27,000	55%	15,000	(30,000)
Three-person Family	22%	18,000	70%	<u>13,000</u>	<u>(39,000)</u>
Market for small units				60,000	(101,000)

Source: Arthur D. Little, Inc. estimates

Table 4

FAMILY INCOME, FAIRFAX COUNTY

1960 Estimate and Projections to 1970 and 1980

<u>Income Group</u>	<u>Percentage of Families</u> (not including unrelated individuals)		
	<u>1960</u>	<u>1970</u>	<u>1980</u>
Under \$2000	5.6	4.0	2.4
\$2000-\$2999	4.2	4.0	4.0
\$3000-\$3999	4.8	4.0	3.4
\$4000-\$4999	6.1	4.0	3.4
\$5000-\$5999	7.5	5.8	4.0
\$6000-\$7499	15.4	10.7	7.8
\$7500-\$9999	23.4	22.5	18.0
\$10,000-\$14,999	22.0	26.0	29.0
\$15,000-\$19,999	6.5	10.5	15.0
Over \$20,000	4.5	8.5	13.0
	<u>Cumulative</u>		
Under \$2000	5.6	4.0	2.4
Under \$3000	9.8	8.0	6.4
Under \$4000	14.6	12.0	9.8
Under \$5000	20.7	16.0	13.2
Under \$6000	28.2	21.8	17.2
Under \$7500	43.6	32.5	25.0
Under \$10,000	67.0	55.0	43.0
Under \$15,000	89.0	81.0	72.0
Under \$20,000	95.5	91.5	87.0
Median Family Income	\$8000	\$9500	\$11,000