

**Prepared by the Henrico County
Office of Planning**

July 31, 1992

EXECUTIVE SUMMARY

HENRICO 2010 WORKING PAPER NO. 1: BACKGROUND RESEARCH

Purpose:

"Working Paper No. 1: Background Research" is the first in a series of working papers produced by the Henrico County Planning Office. This working paper presents basic information on population, housing and patterns of land use in the County. It is intended to contribute to the discussion and formulation of goals, objectives and policies to be incorporated into a revised long-range plan for the County -- Henrico 2010. The following will highlight information contained in Working Paper No. 1.

Demographics:

The number of residents of Henrico County is 221,287 as of the beginning of 1991. Population increased by over 20 percent between 1980 and 1990 -- a rate of about 2 percent per year. The population growth rate is expected to slow down in coming years. The County's total population is expected to be about 239,000 by the year 2000, and 261,000 by 2010.

Three overall trends are evident in the population growth between 1980 and 1990: 1) the average age has increased significantly; 2) the proportion of females has grown significantly; and 3) the proportion of non-white residents has grown significantly. The data indicates that growth is occurring much more among the 65 years and over age group and is slowing among the 19 years and younger age group. The older the age group, the more that women outnumber men; there are well over twice as many women age 75 years and older in the County than there are men 75 years and older. In 1980, 15 percent of the County's population was black; in 1990 over 20 percent of the population was black.

The 1990 median income for households in the County was \$35,604. The per capita income was \$18,019. The Census data indicates that 5.4 percent of the residents of Henrico were below the poverty level in 1990.

About 77 percent of Henrico residents (in 1990) are private wage and salary workers and about 18 percent are Federal, State or Local government employees. The remainder are self-employed or unpaid family workers. The total labor force in the County consists of 124,298 people age 16 or older.

Housing:

The total housing stock in the County (94,539 units) is split about 70/30 single-family versus multi-family units. About 60 percent of all the housing units are owner-occupied. About 6 percent of all homes are vacant (on April 1, 1990).

The median home value (in 1990) is \$83,900. Over 90 percent of all homes in the County have public sewage disposal and public/non-well water. The median amount for home mortgage payments is \$763; for renters the median rent is \$436 per month.

Several trends are evident in comparing housing data between the 1980 and 1990 Census. First, the large increase in the number of housing units in the County (a 34 percent increase from 1980 to 1990) is due not only to demand from the overall population growth, but is a result of the shrinking average household size as well; in 1980 the average household size was 2.66 persons while in 1990 that had been reduced to 2.41 persons per household. Second, the multi-family units such as apartments increased at a much faster rate than single-family homes. This trend is further supported by noting that rental housing grew 42 percent between 1980 and 1990, while owner-occupied housing grew by far less -- 28 percent.

Land Use Patterns:

Working Paper No. 1 presents a variety of research results related to the pattern of land use in the County; i.e., where there are concentrations of various land uses such as commercial, industrial, single-family homes, multi-family homes and other uses. It probably comes as no surprise to those familiar with the County that much of the growth in recent years has been concentrated, for the most part, in the western portion of the County. Maps showing concentrations of various land uses clearly reveal that areas in the western portion of the County have a tendency toward higher concentrations of single-family, multi-family, commercial and office uses. The exception to this pattern concerns the location of industrial use, which tends to be concentrated in the eastern portion of the County, generally along the Laburnum Avenue corridor.

Another overall pattern revealed by the research is the affinity for certain uses to locate along specific road corridors; for example, industrial uses along the Laburnum Avenue corridor as mentioned above. Also, commercial and office use along the West Broad Street corridor, and single-family use along the Patterson Avenue corridor.

It also is evident from the mapping of various land uses that concentrations of development so far have been largely within the "loop" formed by I-295 around Henrico County. This is particularly true in the eastern portion of the County where there are few concentrations of specific types of development east of I-295. Simply put, development tends to "thin-out" as one moves away from the boundaries of the City of Richmond.

Lastly, Working Paper No. 1 presents an analysis of where the "major" development projects have located in the County over the last six to eight years. Based on the locations of these major developments, there are two distinct "development areas" in the County. By virtue of the overall amount of growth which has occurred in these areas, they have been termed the "primary" development area and the "secondary" development area. These areas are shown on Figure 20.

For instance, 100 percent of all major office developments have located within the primary development area since 1984. Further, 88 percent of all major multi-family housing developments have located within this area, 66 percent of all major commercial/retail developments and 44 percent of all major subdivisions have located within the primary development area.

One outstanding feature establishes the area along Laburnum Avenue as the "secondary" development area: almost 70 percent of all major industrial/warehouse space has located there since 1984. This amounts to over 2.8 million square feet of industrial/warehouse use in this area.

Conclusion:

Since the intent of Working Paper No. 1 is to present basic background information and research focused on demographics and land use, there is little or no discussion of the impact of the trends in population, housing and land use or how these trends might be addressed through new policies or actions. The process for updating the County's long-range Comprehensive Plan -- Henrico 2010 -- is designed to formulate the goals and objectives needed to guide decisions about these matters over the next fifteen years or so. Working with the community, business interests, elected officials and others is the most practical way to ensure that a consensus is achieved on the proper means to address a continued high quality of life for Henrico residents.

HENRICO 2010

WORKING PAPER NO. 1: BACKGROUND RESEARCH

INTRODUCTION

This Working Paper will highlight some of the basic trends in the growth and development of Henrico County over the last ten years or so. It is intended to contribute to the discussion, investigation and formulation of goals, objectives and policies to guide future growth and development in the County. In turn, these goals and objectives will be incorporated into a revised long range Comprehensive Plan for the County -- "Henrico 2010."

The first part of this Working Paper will address demographics: these are factors which affect people -- how many people there are, where they live, how old they are, what their race and background are, and what their financial condition is. The Working Paper also will present the current forecast for population growth in the County.

A brief description of housing characteristics in the County will be presented next. The number of different kinds of homes, their value and ownership patterns, and some important trends in housing will be discussed.

The last part of this Working Paper will address patterns of land use in the County, investigating where different land uses such as office and industry are concentrated, and what the trends have been for the location of these different land uses over the last six to eight years.

I. POPULATION CHARACTERISTICS

Population Growth and Density

Henrico County's total population as of April 1, 1990 was determined by the U.S. Bureau of Census to be 217,881. The April 1, 1980 total Census population was 180,735. This represents a substantial growth of 37,146 people or a 20.6 percent increase between 1980 and 1990. The Henrico County Planning Office also makes annual population projections. Figure 1 depicts the growth in population using the County's records between 1980 and 1990.

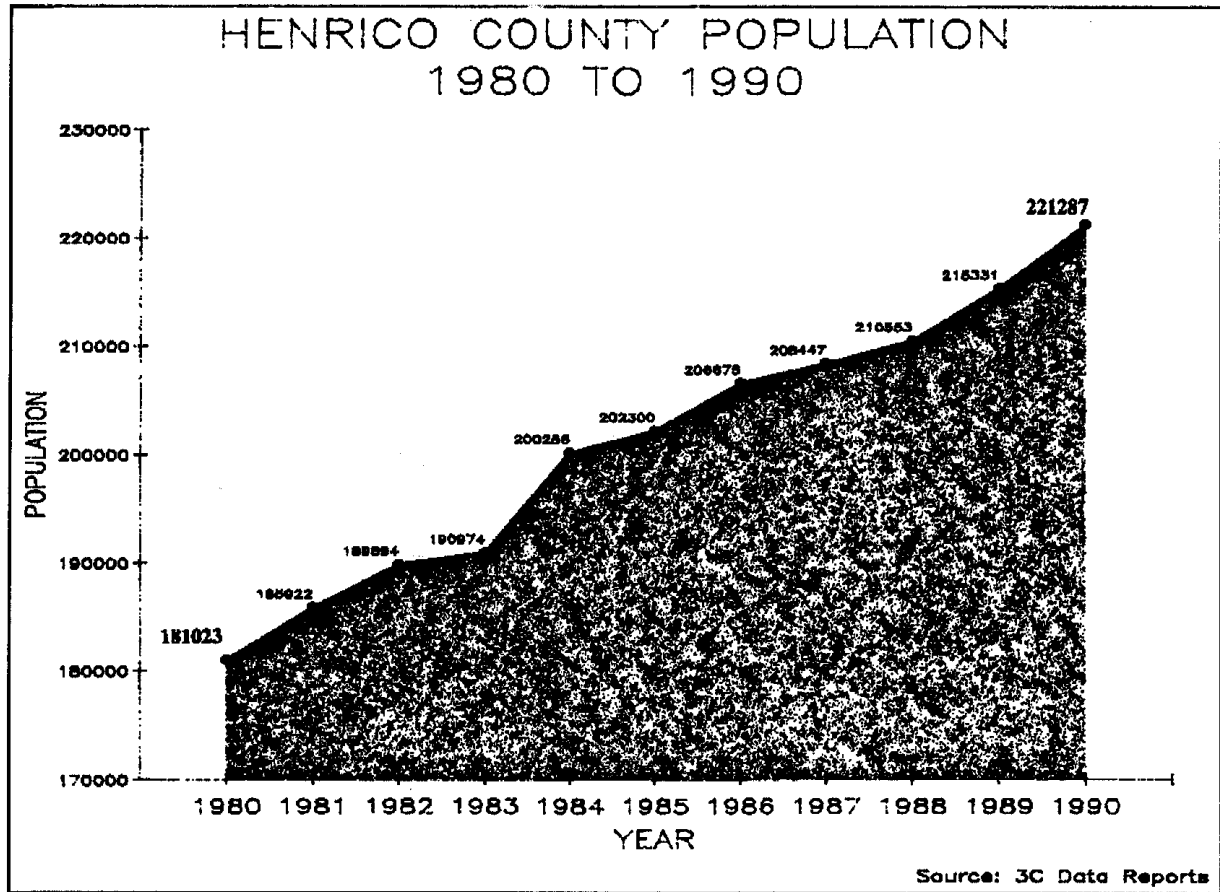


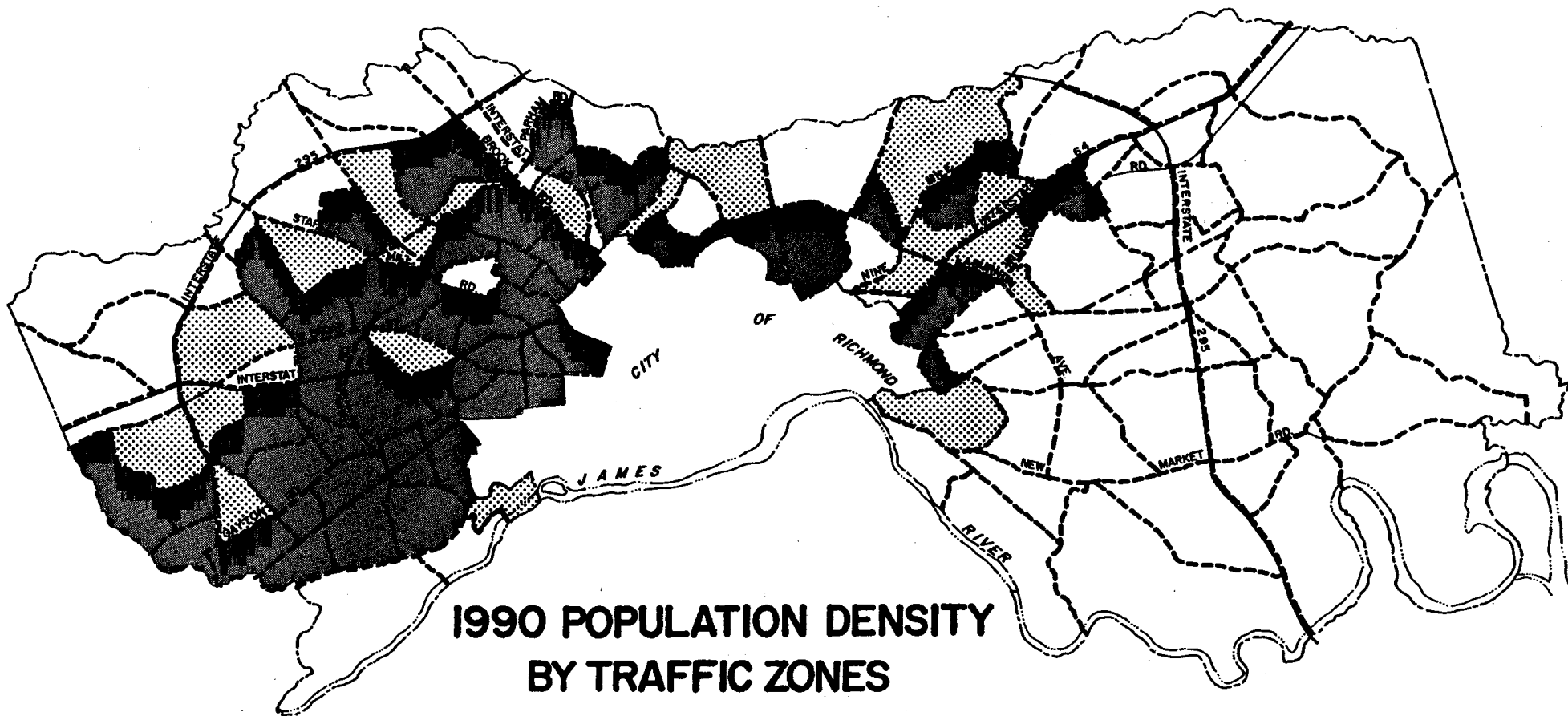
Figure 1

The growth in population corresponds to the County's continuing urbanization. This urbanization is reflected by the average population density of 915 persons per square mile based on the Census data. For comparative purposes, the more rural County of Hanover has a density of 134 persons per square mile.




Figure 2 shows the 1990 population density of "traffic zones" in Henrico County. This figure shows density in terms of persons per acre. As shown in this Figure, population density in the County tends to be highest nearest the boundaries of the City of Richmond and is distinctly weighted toward the western portion of the County. These areas are more developed than the traffic zones which are in the outlying areas.

Age, Sex, Race and Place of Origin

The median age of Henrico County residents is approximately 34 years old. In other words, half of the County's residents are over 34 years old and half are under 34 years old. Slightly over 75 percent of the residents of Henrico are over the age of 18 years. As shown on Figure 3, the combined age ranges of 25 to 44 years old is the most frequent age group; 75,352 people are in this age group which represents about 36 percent of the entire County.



**1990 POPULATION DENSITY
BY TRAFFIC ZONES**

-  **LOW** (< .95/acre)
-  **MED.** (.95-2.37/acre)
-  **HIGH** (> 2.37/acre)

SOURCE: 1990 "3-C" DATA
 Prepared by the Henrico County Planning Office
 PMS
 7/30/92


 COUNTY OF HENRICO
 VIRGINIA

FIG. 2

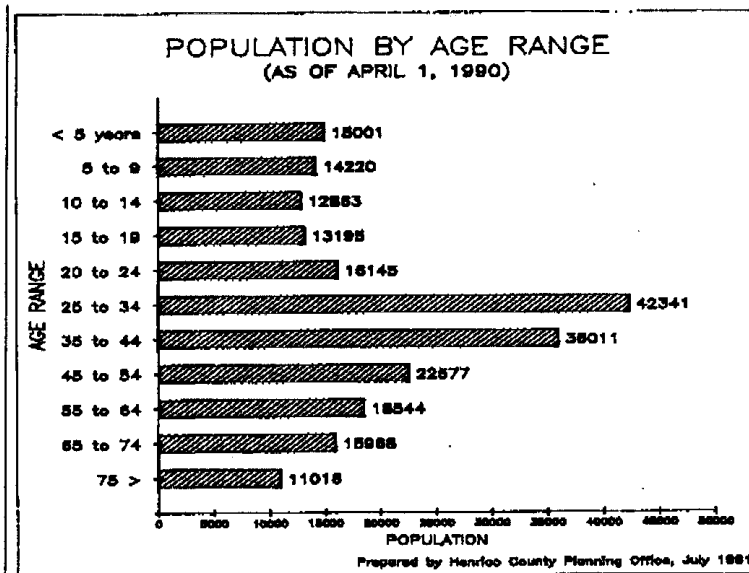


Figure 3

As revealed by the Census data, females outnumber males by 15,459 in total, and surpass the number of males in each age group over the age of 19 years (see Figure 4). Henrico has a sizeable older population; approximately 12.4 percent of the residents are age 65 years or older with females comprising over 62 percent of this "older" age group. For comparison, in 1980, 9.9 percent of Henrico's residents were 65 years or older.

The racial distribution of Henrico County's population (in 1990) is 77.3 percent White, 20.1 percent Black and 2.6 percent "other". "Other" includes residents who are Asian, Pacific Islander, American Indian, Eskimo or Aleut.

Of the County's total population, 7,923 persons (3.6 percent) were not born in the United States. Forty-two percent of these "non-native" residents entered the U.S. between 1980 and 1990. Over two-thirds of the "native" population in Henrico was born in the Commonwealth of Virginia.

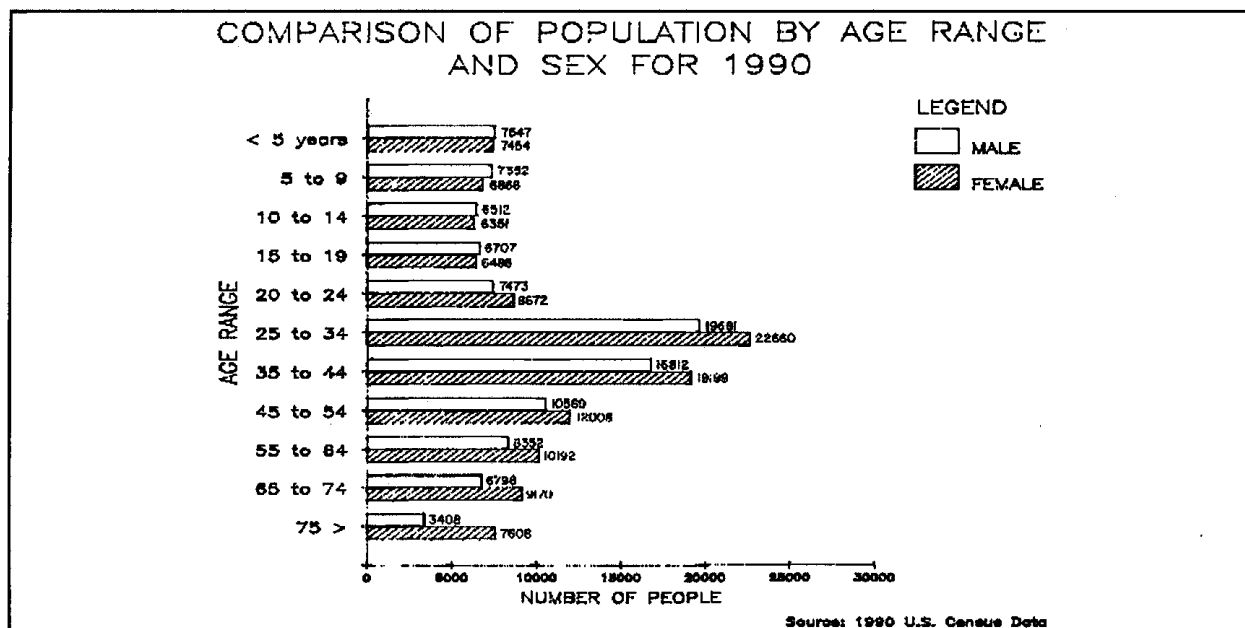


Figure 4

Income and Employment

The (1990) median income for households in Henrico County is \$35,604. This is the amount where half the households have a higher income, and half have a lower income. At either end of the spectrum of household income, slightly over 3 percent of the households make less than \$5,000 per year while slightly under 2 percent of the households make \$150,000 per year or more. The per capita income for Henrico residents (in 1990) is \$18,019.

With respect to income, sample surveys conducted by the Census Bureau suggest that 5.4 percent of the population of Henrico is classified as below the poverty level. Just about 4 percent of the families in the County are considered below the poverty level.

There are 124,298 residents of the County (age 16 and above) who are considered part of the labor force. Over 99 percent (120,294) of these people are employed in civilian jobs, leaving an unemployment rate in the County of 3 percent. The most common occupation in the County, as reported by the 1990 Census, is "Administrative Support" occupations which includes clerical jobs. Approximately 77 percent of employed persons in the County are private wage and salary workers and about 18 percent either are Federal, State or Local government employees. The remainder of employed persons either are self-employed or unpaid family workers.

Trends in Population Characteristics

The data collected by the U.S. Census Bureau reveal three overall population trends between 1980 and 1990: 1) a significant increase in the average age of residents; 2) a higher proportion of females in the population; and 3) a significant increase in the proportion of non-white residents. These trends can be seen in Figure 5 showing the change in these characteristics between 1980 and 1990. These population trends, for the most part, mirror what has happened throughout the United States over this time period.

**TRENDS IN POPULATION CHARACTERISTICS
HENRICO COUNTY
1980 - 1990**

POPULATION CHARACTERISTIC	1980	1990	% CHANGE 1980 - 1990
Less than 18 years	25.9	23.0	(11.2)
18 yrs. or over	74.1	77.0	3.9
65 yrs. or over	9.9	12.4	25.2
White	83.6	77.3	(7.5)
Black	15.0	20.1	34.0
"Other"	1.4	2.6	85.7
Male	47.1	46.5	(1.3)
Female	52.9	53.5	1.1

Figure 5

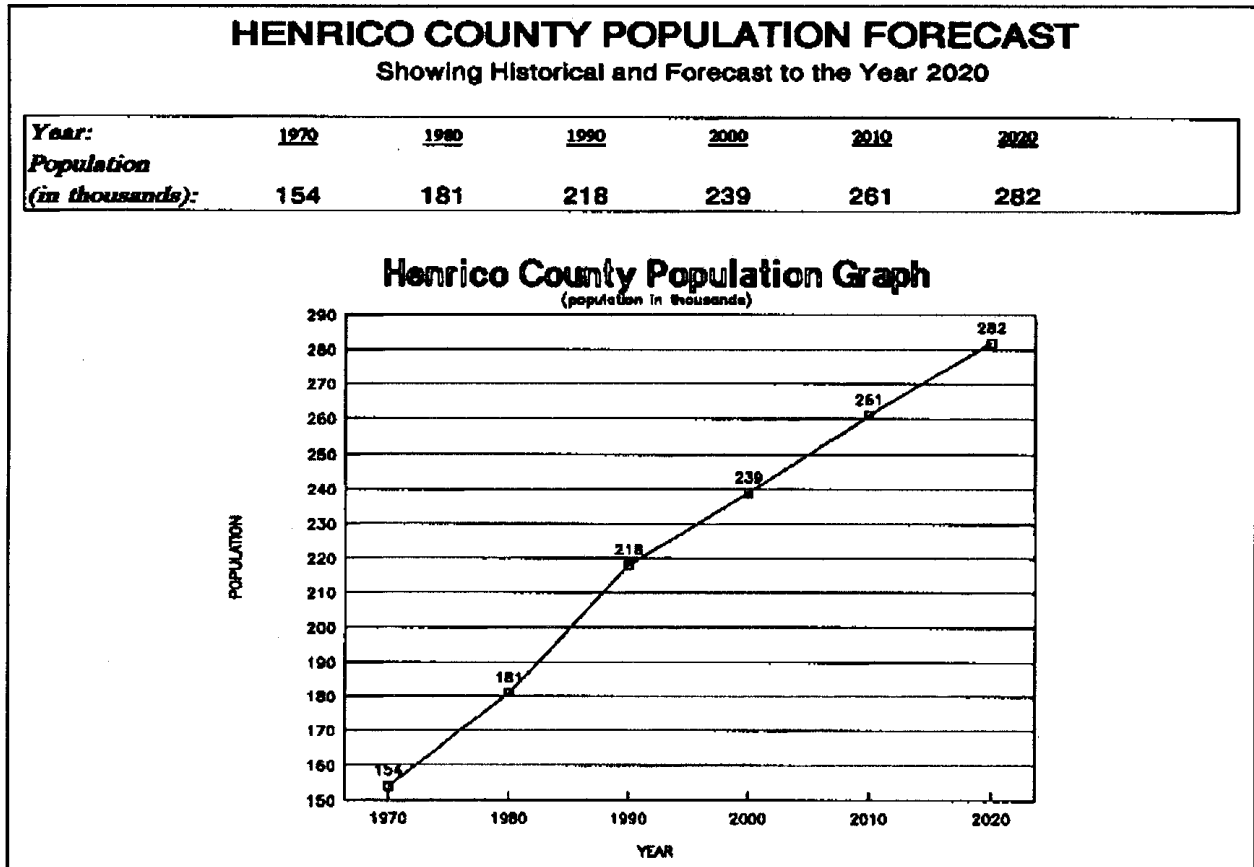
The trend in the aging of the population, on average, may be explained by the fact that as the post-World War II "baby boom" population has matured, the average age of the population as a whole has increased. Within the County, this trend is reflected in the proportion of population below the age of 18 years, which has decreased by over 11 percent since 1980. However, it should be noted that even though the proportion of population less than 18 years old has decreased, there was an absolute increase of over 3,000 residents in this age range between 1980 and 1990.

Also, as the average life expectancy has increased, there has been an increase in the proportion of the population aged 65 years and older. The County experienced a remarkable 25 percent increase in this age group between 1980 and 1990.

The trend toward a higher proportion of female residents possibly could be a result of variation in life expectancy between men and women. In this regard, the trend toward a higher proportion of females and growth in the over 65 years age group may be linked (see Figure 4).

Population Forecast

Figure 6 shows the County's current forecast for total population growth through the year 2020. As shown on this Figure, the total population of Henrico is anticipated to reach approximately 239,000 by the year 2000, 261,000 in 2010 and 282,000 by 2020. These forecasted population figures are based on models prepared for the entire Richmond region and



Source: Adopted Regional Forecast modified by results of 1990 Census

Figure 6

allocated among individual jurisdictions.

It should be noted that a careful examination of the graph shown in Figure 6 reveals a flatter slope of the line between 1990 and 2020, relative to the historical population growth between 1970 and 1990. While the County's population grew at the rather brisk average rate of 3.2 percent per year between 1970 and 1990, this rate of growth is anticipated to slow to the average rate of 2.1 percent per year between 1990 and 2020.

II. HOUSING CHARACTERISTICS

Amount, Value and Ownership

According to the 1990 Census, there is a total of 94,539 housing units in Henrico County. A "housing unit" is defined as a house, an apartment, a mobile home, or a single or group of rooms used as a separate living quarters. Of the year-round housing units in the County (i.e., not including vacation homes, hunting cabins, etc.), about 70 percent are single-family units while the remainder are multi-family units such as apartments. Of the entire stock of housing, approximately 60 percent is occupied by owners, 34 percent by renters and about 6 percent is vacant.

The median value of occupied housing units in the County (1990) is \$83,900. This is the level at which half of the homes are valued above and half below. The median monthly mortgage payment is \$763, and the median rent in the County is \$436.

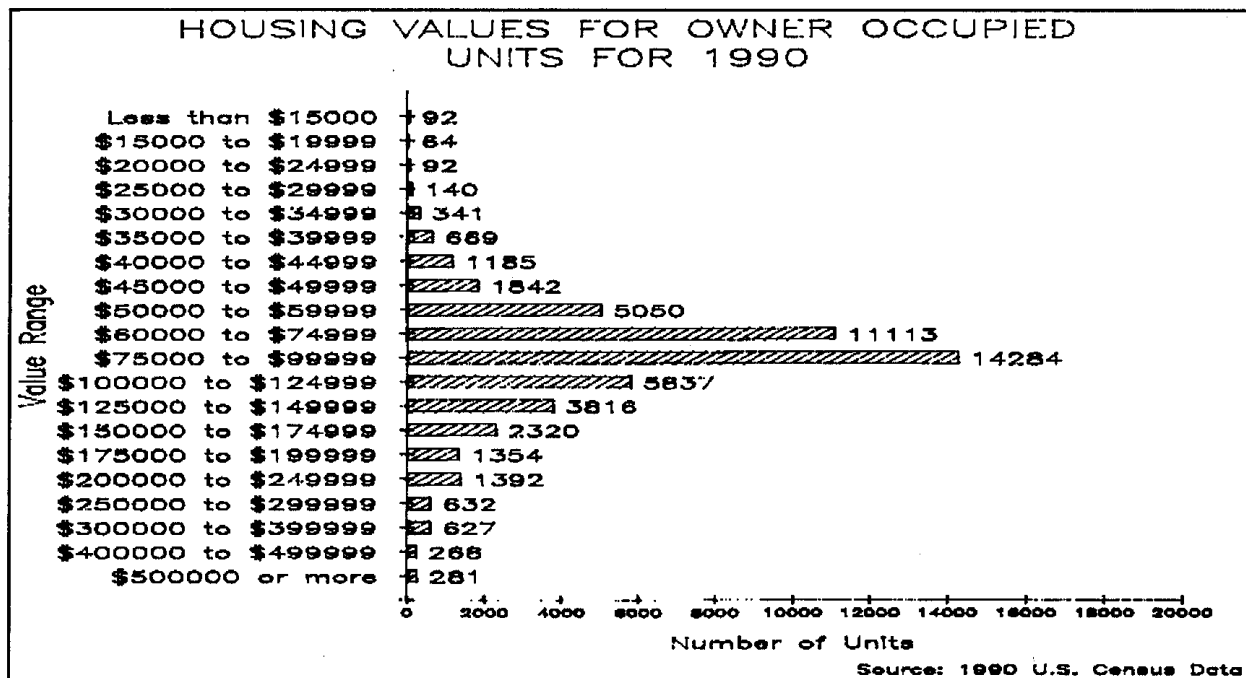


Figure 7

As shown on Figure 7, the greatest number of occupied homes is in the range of \$75,000 to \$99,999 which represents 27.8 percent of all of the units in the County. The owners of

occupied housing units are most likely to be white people between the ages of 35 and 44 years. Approximately 68 percent of the County's residents live in owner-occupied housing, while 32 percent live in rental units and/or group quarters such as dormitories. Condominium housing units accounted for 5,660 (about 6%) out of the total for the County.

There are 20,212 housing units in the County built between 1970 and 1979, and from 11 to 20 years old is the most common age range for homes. Over 90 percent of all the homes in the County have public sewage disposal and a little over 92 percent receive public/non-well water. The most frequent source of home heating of the homes surveyed by the Census Bureau is electricity, with 43 percent of occupied housing having this source of heat.

Trends in Housing Characteristics

The total number of housing units available in Henrico County increased by over 34 percent in the ten years between 1980 and 1990 (see Figure 8). The additional housing built during this time period was most likely in response to the demand generated not only by overall population growth, but also by the shrinking size of the average household which decreased by 10.5 percent since 1980 (from 2.57 persons per household in 1980 to 2.30 in 1990). Fewer persons per household on average means that more housing units are needed for a given size population.

TRENDS IN HOUSING CHARACTERISTICS HENRICO COUNTY 1980 - 1990

CHARACTERISTIC	1980	1990	% CHANGE 1980 - 1990
Total Housing Units	70,428	94,539	34.2
Avg. Household Size	2.57	2.30	(10.5)
Owner Occupied	44,252	56,848	28.5
Renter Occupied	22,785	32,290	41.7
Median Value (\$)	47,400	83,900	77.0
Median Contract Rent(\$)	236	436	84.7
% of Single-Family	76.04 ^{1 2}	70.75 ²	(7.0)
% of Multi-Family	23.96 ^{1 2}	29.25 ²	2.1
Vacant Units	3,362	5,401	60.6

Figure 8

¹Includes year-round housing units only

²Does not include mobile homes/trailers

The value of homes in the County has risen by an average of nearly eight percent per year over the last ten years (1980-1990); from a median value of \$47,400 in 1980 to \$83,900 in 1990. The amount which people pay in rent, on average, has risen slightly faster than the value of homes during this time period, increasing by 8.5 percent annually between 1980 and 1990. The increase in the median amount paid for rent may reflect the provision of more expensive rental units over the last ten years, with "luxury" apartments possibly accounting for a larger share of the rental market than they did in 1980.

The trends in housing characteristics show the changes in the mix of housing unit types in the County. Comparing the increase in multi-family housing versus single-family housing shows that there is more "high-density" housing relative to 1980. This trend also is revealed by noting the relative increase in renter-occupied versus owner-occupied housing since 1980 (see Figure 9).

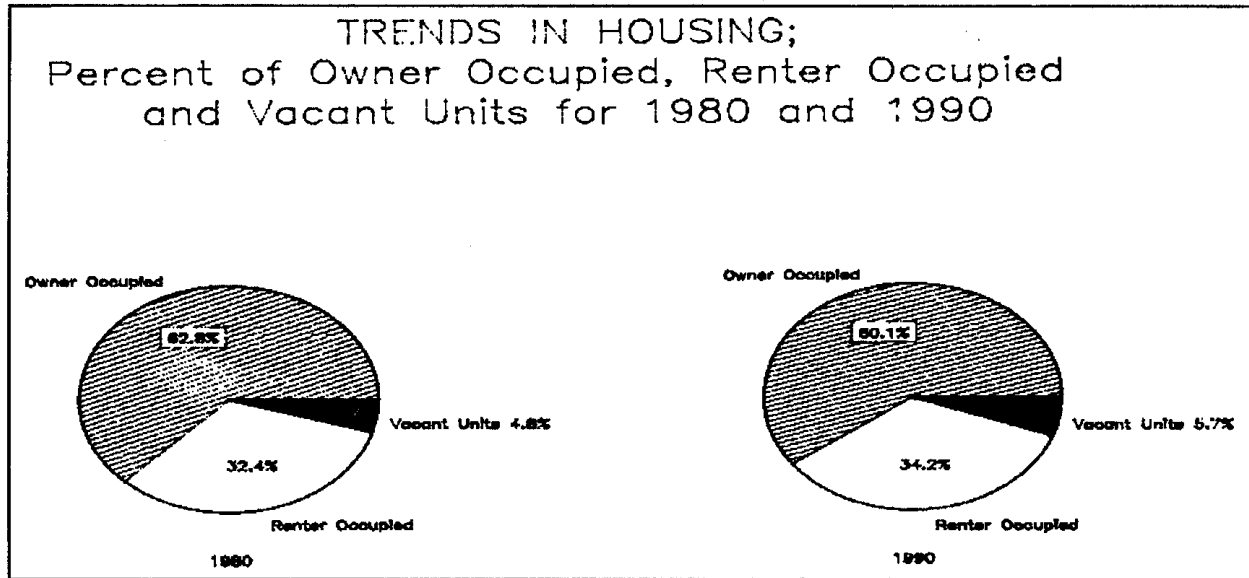


Figure 9

The renter-occupied units increased 42 percent (9,505 units) between 1980 and 1990 (see Figure 10), while owner-occupied units increased 28 percent (12,596). Although the total number of vacant units had a significant absolute increase between 1980 and 1990 (2,039 units or 60.6%), as a proportion of the total housing stock, there was only a slight increase (4.8% in 1980 versus 5.7% in 1990).

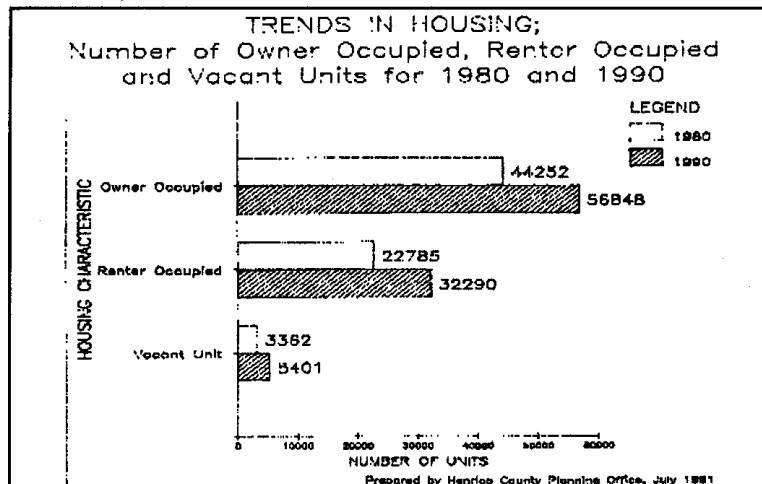


Figure 10

III. LAND USE AND DEVELOPMENT CHARACTERISTICS

Growth, Infrastructure and Land Use Changes

The preceding sections of this Working Paper presented some basic data and trends with respect to population and housing characteristics between 1980 and 1990. This portion of the Working Paper shifts the focus to a closer analysis of where, and what type of development has occurred in the County, particularly since the last time the long range Comprehensive Plan received a thorough review and revision in 1984.

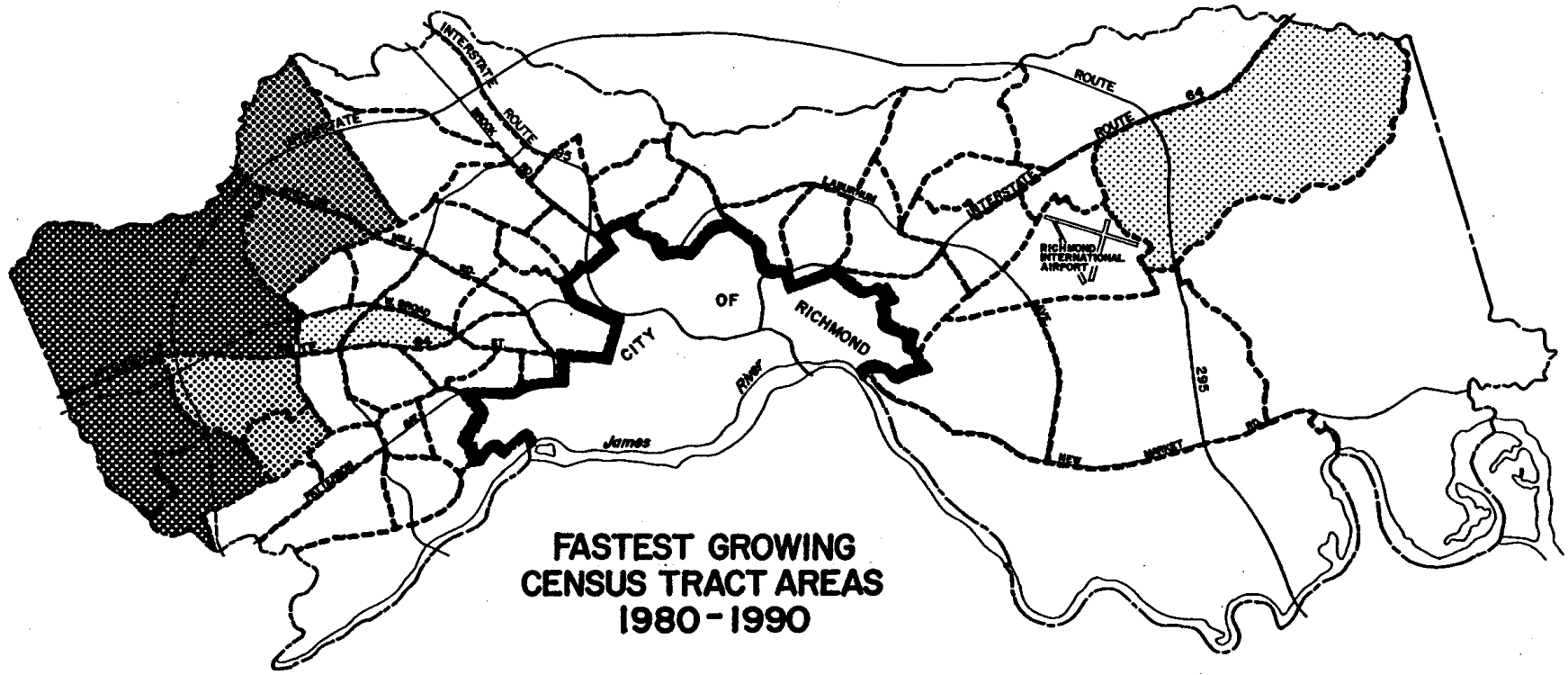
As shown on Figure 11, the westernmost portion of the County was the recipient of the highest rate of growth since the 1980 Census. A combination of these Census tracts in the "west end" of the County grew in population by over 200 percent during this time period. From these data, it is apparent that the west end of the County has been the focus of change in land use to accommodate the rapid increase in residents living in this area.

Along with the growth in the number of residents in the County, infrastructure such as roads, water and sewer lines needs to be provided to accommodate new homes and businesses. In total, there has been a combined 666 miles of roadways, water and sewer lines built during the seven year period from 1984 to 1991 (see Figure 12). This represents a total 26 percent increase in miles of infrastructure provided since 1984.

MILES OF INFRASTRUCTURE 1984-1991		
	Total Miles	Increase
Roads	184	18 %
Water	254	34 %
Sewer	<u>228</u>	<u>28 %</u>
TOTAL	666	26 %

Figure 12


Figure 13(a), along with Figure 13(b), reveals the degree to which various land uses such as single-family and multi-family residential, commercial, industrial and others constitute a portion of all of the acres of land available in the County. In Figure 13(a), these land use components are shown in the form of a "pie chart" wherein each individual land use category is represented as a slice of the "pie", with the entire "pie" being the total number of acres of land in the County -- just over 156,000 acres.



**FASTEST GROWING
CENSUS TRACT AREAS
1980-1990**

Census Tract Area	Percentage Change
	> 200%
	151-200%
	101-150%
	41-100%
	< 40%

SOURCE: 1980 & 1990 U.S. CENSUS DATA
 Prepared by the Henrico County Planning Office
 PMS
 7/30/92


 COUNTY OF HENRICO
 VIRGINIA
FIG. II

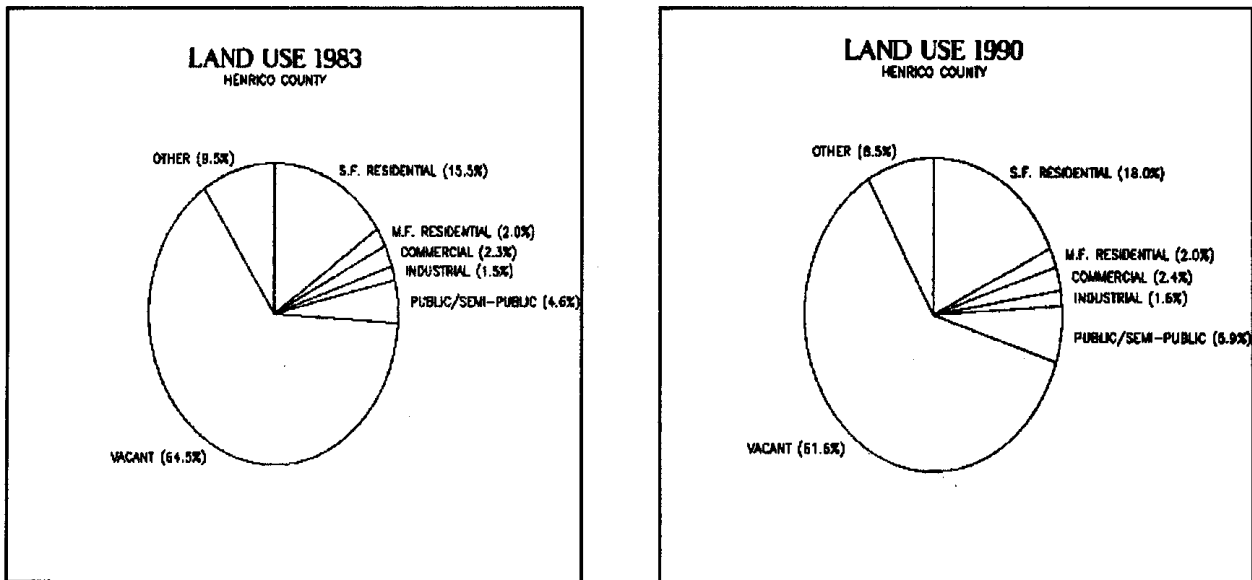


Figure 13(a)

	1990	1983	CHANGE '83 - '90	% CHANGE '83 - '90
POPULATION	221287	190974	30313	15.87%
HOUSING UNITS	95420	74971	20449	27.28%
ACREAGE:				
S.F. RESIDENTIAL	28072.6	24227.8	3844.8	15.87%
M.F. RESIDENTIAL	3153.1	3147.9	5.2	0.17%
COMMERCIAL	3810.6	3650.0	160.6	4.40%
INDUSTRIAL	2514.1	2357.1	157.0	6.68%
PUBLIC/SEMI-PUBLIC	9181.3	7170.8	2010.5	28.04%
VACANT	96199.1	100824.0	-4624.9	-4.59%
OTHER	13269.8	14823.0	-1553.2	-10.48%
TOTAL	156200.6	156200.6	0.0	0.00%

Figure 13(b)

Most of the land in the County is classified as "vacant" (even though a significant amount of this land may be currently in agricultural use). As one might expect, the amount of land classified as vacant has been going down over the years; for example at the end of 1983, 64.5 percent of the County was classified vacant. At the end of 1990 this figure stands at 61.2 percent. It should be noted that not all of this "vacant" land can be considered "developable" since it includes areas in flood plains and other lands which are otherwise restricted in terms of development.

The second largest category of land use, in terms of the number of acres devoted for this purpose, is single-family residential use. Single-family residential also has been one of the fastest growing land uses between the end of 1983 and 1990. At the end of 1990, more than 28,000 acres in the County were attributed to single-family residential use -- an increase of almost 16 percent since the end of 1983.

Beyond a look at the countywide picture of the population and land use changes which have occurred over the years, the remainder of this Working Paper focuses more closely on the geographic distribution of various land uses. The location of various land uses throughout the County, and the trends that have been experienced in where different uses occur, allows an analysis of the "patterns" of land use and the implications these patterns may have for future growth and development.

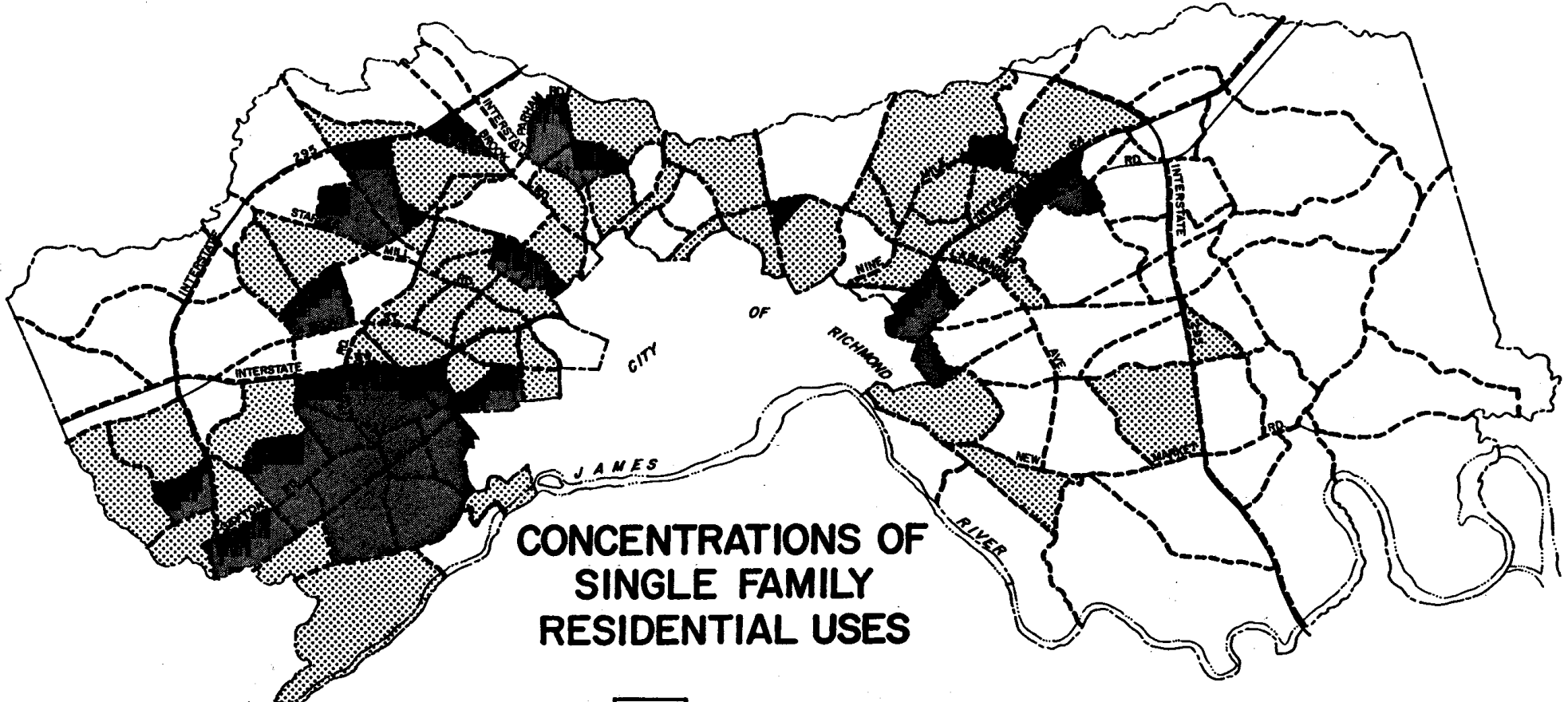
Existing Land Use Patterns

Figures 14 through 20 depict the patterns of various existing land uses in Henrico County. These Figures show the concentrations of various land uses; in other words, showing which areas (i.e., traffic zones) have a higher proportion of specific uses such as commercial or industrial, relative to the rest of the County. In effect, each traffic zone is compared with a hypothetical "average" traffic zone to determine its ranking.




For example, Figure 14 shows concentrations of single-family residential use. For ease of reference, the amount of single-family residential use (measured in acres) has been divided into Low, Medium and High categories. In this case, an area is ranked High (or above average) if more than 39 percent of the area is in single-family residential use. It is ranked Low (below average) if the figure is less than 17 percent. The remainder of this section of the Background Research Working Paper will discuss the pattern of development for each category of land use in the County.

Single-Family Residential (Figure 14) (High: > 39% Low: < 17%): The concentration of single-family residential use occurs principally in the western portion of the County, with a distinct area of concentration in the High category occurring along the Patterson Avenue corridor, stretching westward from the City of Richmond. In the eastern portion of the County, single-family residential use is concentrated principally in the vicinity of Interstate 64, although most traffic zones in this vicinity fall into the Medium category, meaning that between 17 and 39 percent of the total acreage is used for this purpose.

There is a fairly clear pattern showing that single-family residential use is concentrated inside the "loop" formed by Interstate 295. Very few areas outside this loop are categorized above the Low range for single-family use. Only in the far western portion of the County is there any significant concentrations of single-family use outside of the loop formed by Interstate 295 and its continuation in the form of the planned John Rolfe Parkway.



**CONCENTRATIONS OF
SINGLE FAMILY
RESIDENTIAL USES**

-  **LOW**
-  **MED.**
-  **HIGH**

SOURCE: 1990 "3-C" DATA
 1990 TRAFFIC ZONE BOUNDARIES
 Prepared by the Henrico County Planning Office
 PMS
 7/30/92


 COUNTY OF HENRICO
 VIRGINIA

FIG. 14

Multi-family Residential (Figure 15) (High: >4% Low: <2%): Multi-family residential use basically includes apartments, townhouses and duplexes. Concentrations of multi-family residential use, on a countywide basis, occur principally in the western portion of the County. With the exception of one traffic zone, all of the areas west of Parham Road and south of West Broad Street rank either in the Medium or High category in terms of multi-family residential use.

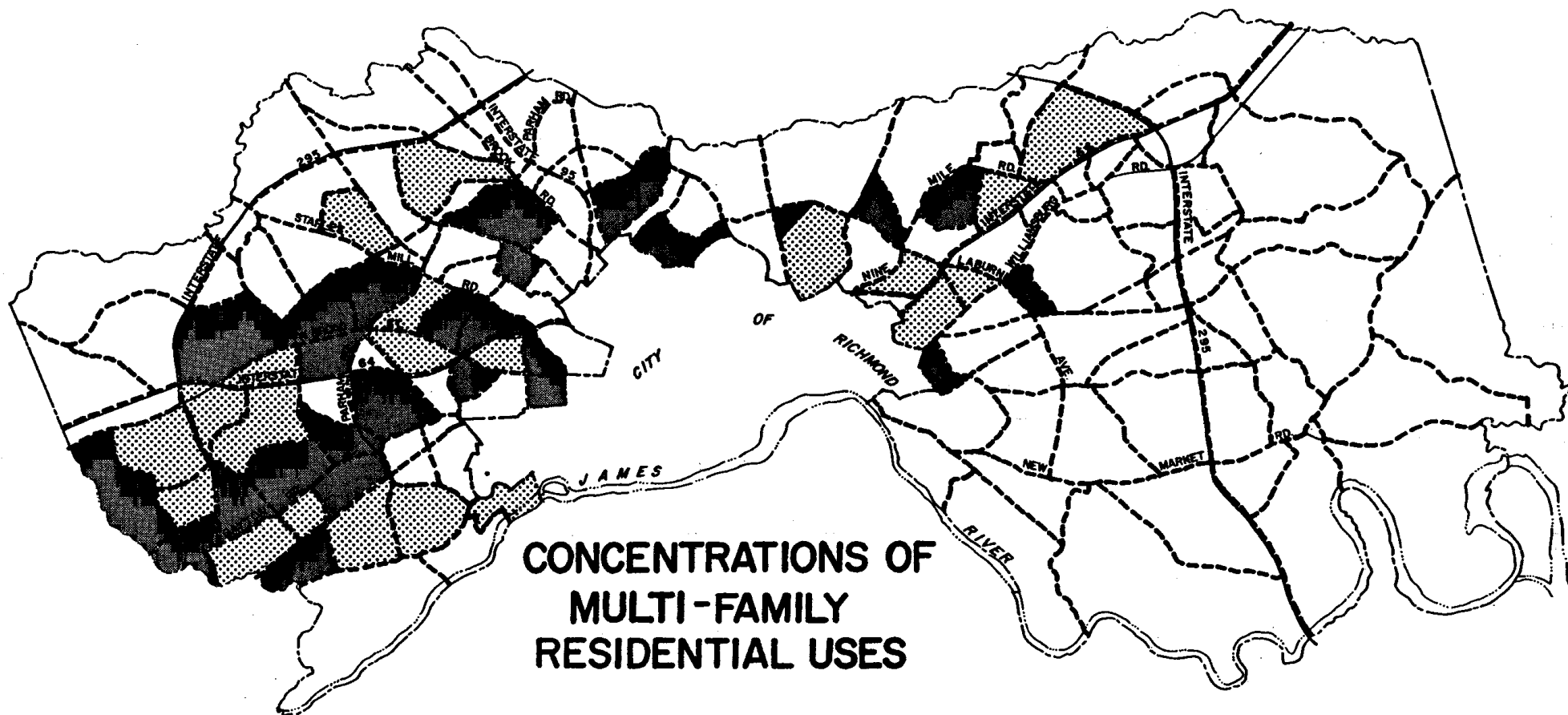
The prevalence of multi-family use tapers-off as one travels eastward, although there is still a scattering of smaller traffic zones that rank in the High category in the north and northeastern portions of the County. In particular, a concentrated area of multi-family use parallels I-64, from the Richmond City boundary to I-295. However, in the far southeastern portion of the County (an area encompassing at least one third of the entire County), all of the traffic zones rank Low in the multi-family category, with less than two percent of land area used for multi-family residential.

Commercial (Figure 16) (High: >5% Low: <3%): The overall pattern revealed in this Figure shows that commercial use in the County (i.e., retail business) has developed along radial transportation routes leading to/from the City of Richmond. For example, in the western portion of the County, concentrations of commercial use parallel just about all of the major transportation corridors fanning-out from the City: Patterson Avenue, West Broad Street, Staples Mill Road and Brook Road. In the eastern portion of the County, this same pattern seems to hold true with Williamsburg Road, Laburnum Avenue and Nine Mile Road being the general corridors where commercial use is concentrated.

Industrial (Figure 17) (High: >4% Low: <2%): While industrial uses are found throughout the County, concentrations of industrial use appear to be grouped roughly into three areas; one area in the western portion of the County, one area in the central portion of the County, and one larger area in the eastern portion of the County. It is difficult to distinguish an overall pattern associated with industrial uses in the County, except to note that, for the most part, industrial uses currently are concentrated in the inner portion of the County nearest the City of Richmond. Very few of the outlying traffic zones show any concentration of industrial use, however, recent rezonings could result in more industrial and research and development uses in these areas in the future.

Office (Figure 18) (High: >2% Low: <1%): Office use is heavily concentrated in the western portion of the County, particularly along the West Broad Street corridor. In the central and eastern portions of the County, only a few, scattered areas show up with some concentration of office use. The one large traffic zone east of I-295 which shows a medium level of office use is due to the categorization of land owned by WRVA Radio, Inc. as office use.

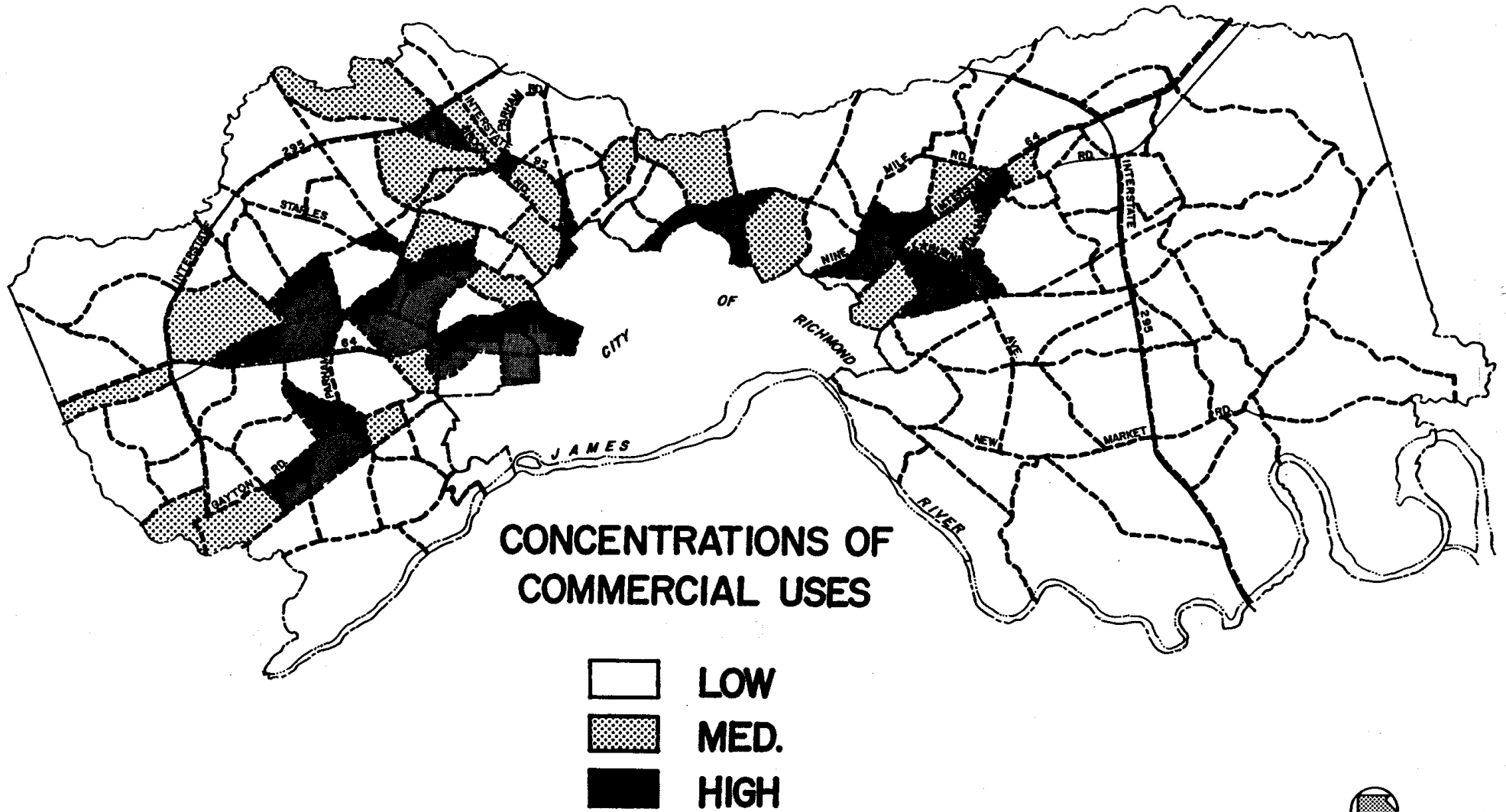
Vacant Land (Figure 19) (High: >81% Low: <33%): The County still has a considerable amount of land classified as vacant; an average traffic zone has almost 50 percent of its area classified as vacant. To be eligible for the High ranking in vacant land (shown in white), a traffic zone must have at least 82 percent of its land area classified as vacant.



SOURCE: 1990 "3-C" DATA
 1990 TRAFFIC ZONE BOUNDARIES
 Prepared by the Henrico County Planning Office
 PMS
 7/30/92


 COUNTY OF HENRICO
 VIRGINIA

FIG. 15



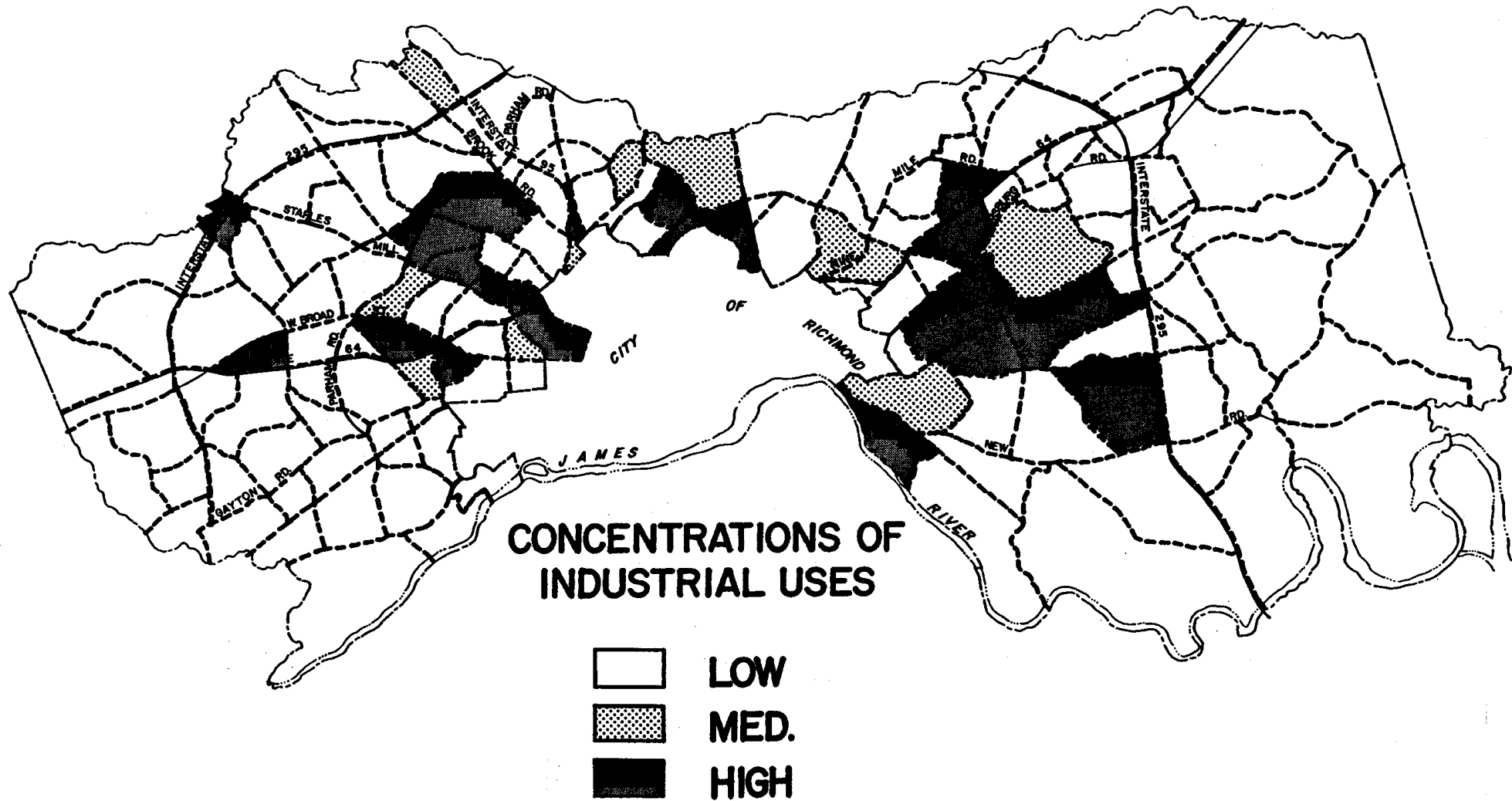
SOURCE: 1990 "3-C" DATA

1990 TRAFFIC ZONE BOUNDARIES
Prepared by the Henrico County Planning Office
PMS

7/30/92


COUNTY OF HENRICO
VIRGINIA

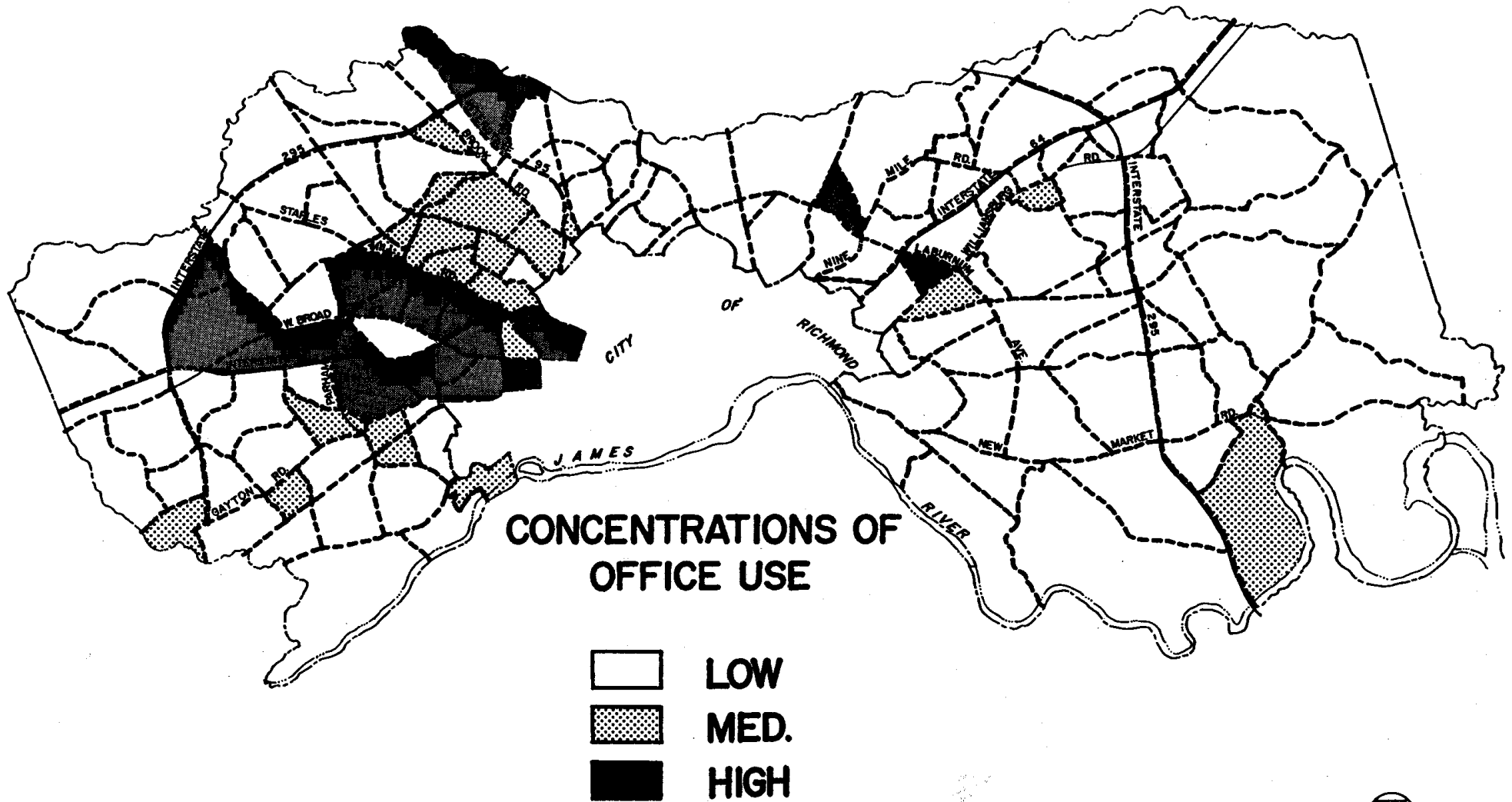
FIG. 16




SOURCE: 1990 "3-C" DATA
 1990 TRAFFIC ZONE BOUNDARIES
 Prepared by the Henrico County Planning Office
 PMS
 7/30/92

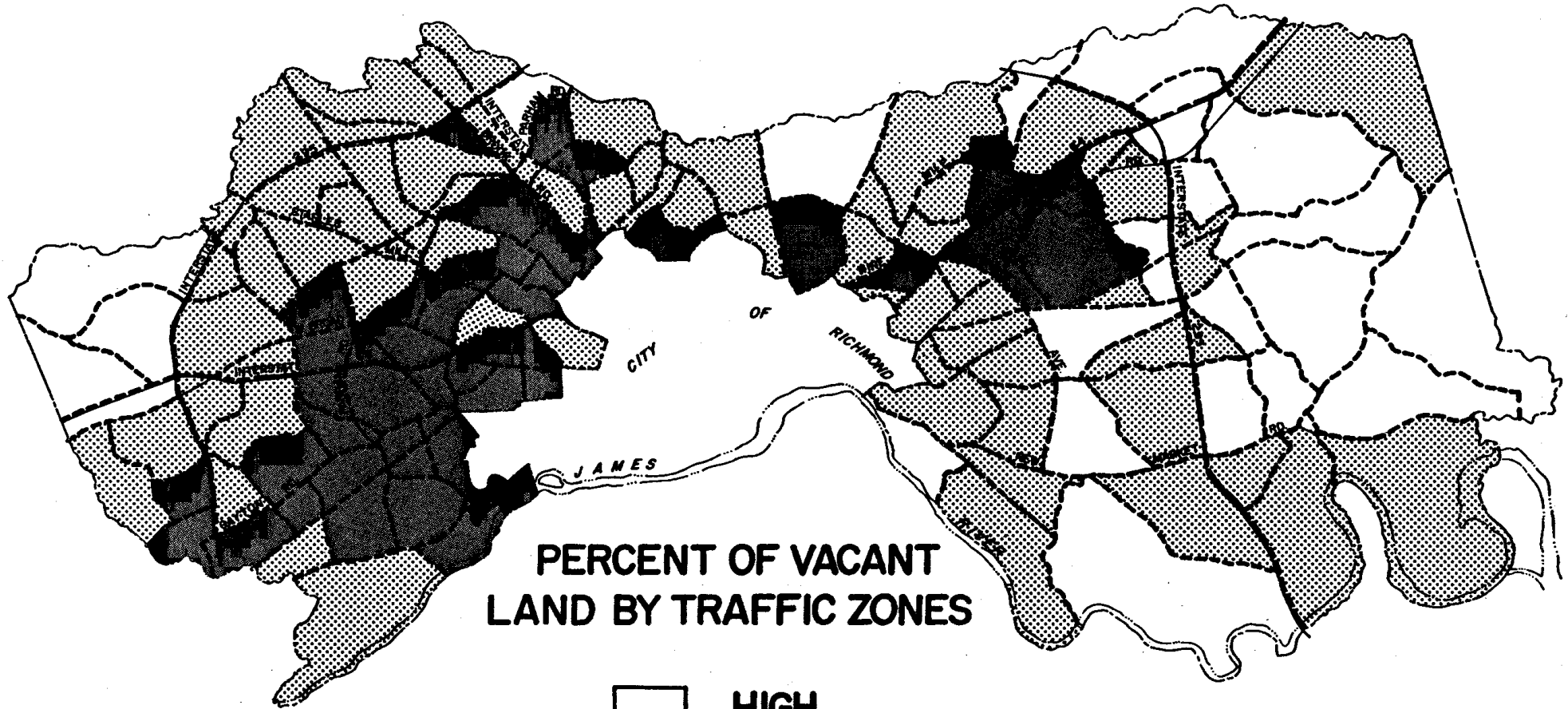

 COUNTY OF HENRICO
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FIG. 17






SOURCE: 1990 "3-C" DATA
 1990 TRAFFIC ZONE BOUNDARIES
 Prepared by the Henrico County Planning Office
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 COUNTY OF HENRICO
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 FIG. 18



**PERCENT OF VACANT
LAND BY TRAFFIC ZONES**

-  HIGH
-  MED.
-  LOW



COUNTY OF HENRICO
VIRGINIA

FIG.19

SOURCE: 1990 "3-C" DATA
 1990 TRAFFIC ZONE BOUNDARIES
 Prepared by the Henrico County Planning Office
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 7/30/92

The most significant concentration of vacant land occurs in the eastern portion of the County, particularly east of I-295. Conversely, areas with a Low ranking in terms of vacant land (i.e., they are more "developed" overall, on average) largely are concentrated in the western portion of the County. It should be noted that land classified vacant is not necessarily "developable" since it includes flood plains, wetlands or otherwise restricted land, as well as farms and other large land holdings.

From Figure 19, it is evident that the pattern of development in general has moved out in a concentric circle away from the boundaries of the City of Richmond. It does appear, however, that the Richmond International Airport has been a major attractor of development, as this location seems to be about the only significant concentration of areas ranking Low on the vacant land scale anywhere in eastern Henrico. Also, it appears that, in this instance, development has not conformed to the concentric growth pattern experienced elsewhere; it has concentrated more in the vicinity of the Airport while land between this area and the City boundaries has not experienced as much development.

In the western portion of the County, only four traffic zones remain in the High category in terms of vacant land. These four areas all are in the far northwestern portion of the County, north of West Broad Street and west of I-295. This is the general location of a major, new approved development -- Wyndham -- which probably will move two or three of these traffic zones into lower categories of vacant land, once a significant portion of Wyndham is built-out.

Implications: By looking at the patterns of various land uses some general conclusions about the nature of growth and development in the County can be made. For instance, it is clear that the bulk of development has occurred within the County to the north and west of the City of Richmond. This holds true for all kinds of development with the possible exception of industrial uses which appear to be more concentrated in the eastern portion of the County.

Another generalization about the pattern of development in the County is that it has expanded outward roughly in a concentric circle around the boundaries of the City of Richmond; most of the land use concentrations are nearest the City. Again, the pattern of industrial development may be an exception.

Certain types of uses, particularly office and retail, are located in distinct association with major transportation corridors. This pattern is evident despite the broad level of detail inherent in analyzing traffic zone-level data.

The location of vacant land shows perhaps most clearly the difference in land use character between western and eastern Henrico. Although there is still plenty of "infill" opportunities available in western Henrico, major concentrations of vacant land, by and large, are confined to the easternmost portions of the County. One could conclude, in general, that the overall pattern of land use has already been determined in the western portion of the County, while much of eastern Henrico is still subject to future decisions regarding its pattern of land use.

Lastly, along with the visual display of existing land use patterns, this analysis also has revealed the prevalence of different land uses. For example, an "average" traffic zone would consist of a total of 1,055 acres. It would have the following breakdown of land uses: 23.8 percent of its acreage in single-family residential use; 2.9 percent in multi-family residential use; 3.5 percent in commercial use; 2.7 percent in industrial use; 1.2 percent in office use; and 48.7 percent vacant. The remaining land area in this hypothetical "average" traffic zone (17.2 percent) would be divided among public/semipublic uses, water and miscellaneous uses (e.g., roads, utility easements).

The following section of this Background Research Working Paper delves further into an analysis of the pattern of land use, growth and development in Henrico County. Instead of focusing on the totality of existing land uses in the County, it will look more specifically at the trends in recent years of where major development projects have located.

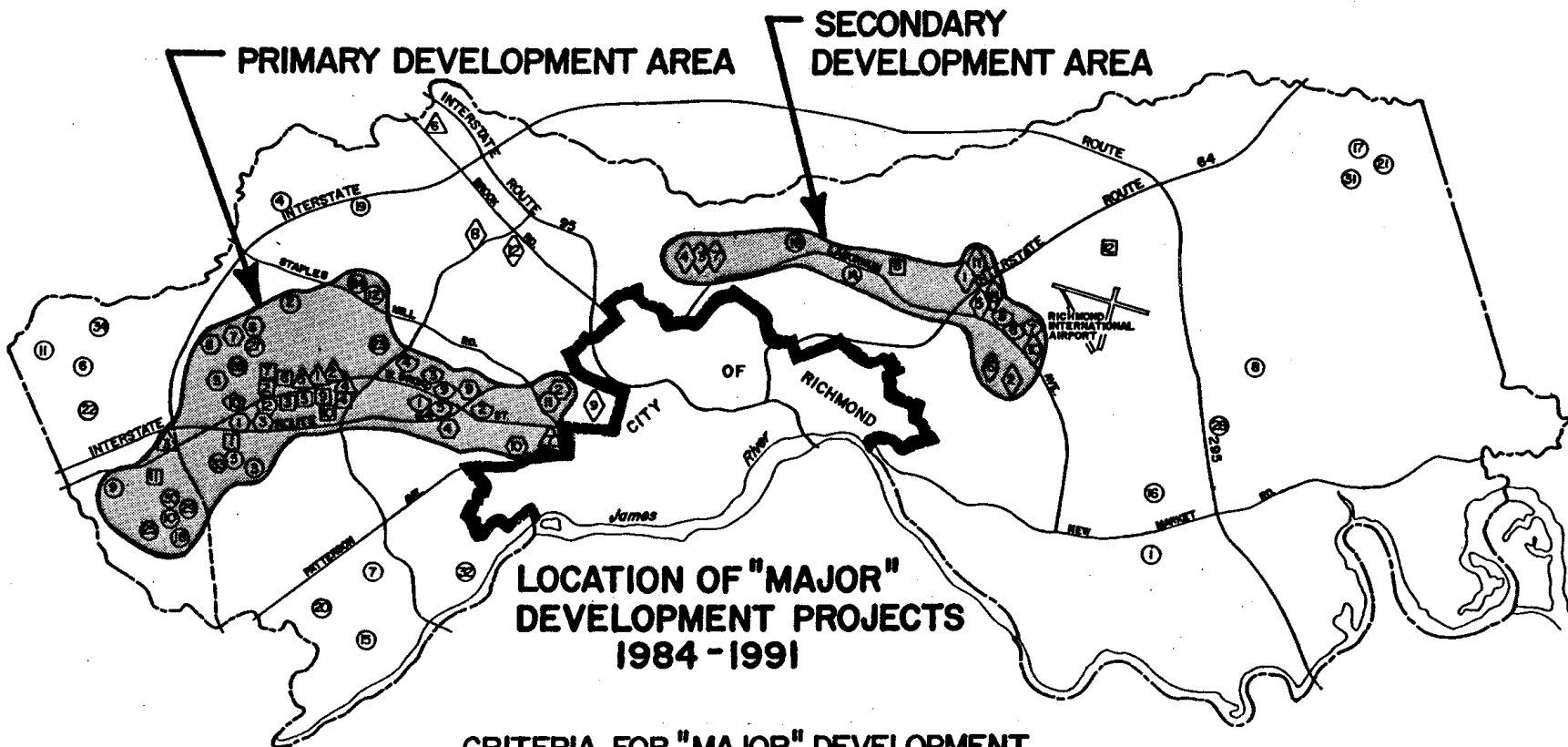
Primary and Secondary Development Areas

To investigate where most of the development in the County has been occurring, the locations of all of the largest development projects since 1984 are shown on Figure 20. The results show that there are two clearly defined areas that have attracted most of the major development projects. These have been labeled the Primary and Secondary Development Areas.

Primary Development Area: The Primary Development Area of the County in the last six to eight years has been in the western portion of the County, in a broad swath centered roughly along the West Broad Street corridor. Within the area outlined on the map, there has been nearly 1,400 acres developed for residential subdivisions since 1984; close to 3,000 multi-family units/apartments have been provided; over 1,000 hotel rooms have been constructed; 1.3 million square feet of shopping center/retail uses have located; and over 6.3 million square feet of office space has been approved for development. These figures represent just the amount of development associated with projects which meet any of the "major" development criteria as shown on Figure 20.

With respect to the proportion of all major development projects in the County, within the area shown as the Primary Development Area, over 44 percent of all "major" subdivisions have located here since 1984. Similarly, 88 percent of all the multi-family/apartment units in this analysis have located within this area. Over 66 percent of all major retail space has developed within this area, over 72 percent of all of the hotel rooms constructed since 1984 are in this area, and 100 percent of all major office uses developed since 1984 are located within this Primary Development Area. It is interesting to note that while 100 percent of all major office developments since 1984 are located in this area, none (0 percent) of the major industrial/warehouse uses have located within the Primary Development Area.

Secondary Development Area: A single, "Secondary" Development Area also is depicted on Figure 20. This area roughly parallels the Laburnum Avenue corridor, stretching from the State Fairgrounds to the Richmond International Airport. Most of the major development projects are located slightly east of Laburnum Avenue.



LOCATION OF "MAJOR" DEVELOPMENT PROJECTS 1984 - 1991

CRITERIA FOR "MAJOR" DEVELOPMENT

NOTE:
Numbers Refer to
Index of "Major"
Developments.

- OFFICE ≥ 150,000 sq. ft.
- △ SHOPPING CENTERS ≥ 100,000 sq. ft.
- ◇ INDUSTRIAL / WAREHOUSE ≥ 150,000 sq. ft.
- HOTELS ≥ 100 rooms
- MULTIFAMILY ≥ 200 units
- SUBDIVISIONS ≥ 50 acres



COUNTY OF HENRICO
VIRGINIA

FIG. 20

MAJOR DEVELOPMENTS (1984 - 1991)

MAP #	PROJECT NAME	ACREAGE	SQUARE FOOTAGE	NO. OF ROOMS/ UNITS	MAP #	PROJECT NAME	ACREAGE	SQUARE FOOTAGE	NO. OF ROOMS/ UNITS		
** TYPE OF USE APARTMENTS					** TYPE OF USE SUBDIVISION						
1	BRAETON BAY	32.93	0	350	1	BATTERY HILLS SOUTH	66.33	0	0		
2	BRECKINRIDGE	21.78	0	300	2	CASTLE POINT	59.44	0	0		
3	BROADMOOR	18.62	0	360	3	CEDAR CHASE	53.91	0	0		
7	CHAMPIONS CLUB	9.58	0	212	4	CHICKAHOMINY BRANCH	76.11	0	0		
6	CHAMPIONS POINTE	9.58	0	232	5	CHURCH RUN	104.40	0	0		
4	COPPER SPRINGS	31.79	0	366	6	CROSS CREEK	115.81	0	0		
5	CULPEPER FARMS	14.90	0	228	7	DEER LODGE	65.30	0	0		
8	GREYSTONE APARTMENTS	16.93	0	200	8	FOX RUN	75.79	0	0		
9	HICKORY CREEK APARTMENTS	21.86	0	294	9	FOXHALL	105.37	0	0		
10	QUARTER MILL APTS	21.32	0	266	10	GLEN GARY	70.39	0	0		
11	THE CHASE	24.70	0	340	11	GRANVILLE ESTATES	121.82	0	0		
12	WELLINGTON PLACE	15.02	0	200	12	LAUREL LAKES	90.48	0	0		
** Subtotal **		239.01	0	3348	13	MAPLEWOOD FARMS	56.07	0	0		
** TYPE OF USE HOTEL					14	MITCHELTREE	85.07	0	0		
1	COMFORT INN EXECUTIVE CTR.	2.50	0	123	15	MOORELAND LANDING	187.76	0	0		
2	COURTYARD BY MARRIOTT	4.80	0	159	16	OLD MILL ESTATES	114.93	0	0		
3	CRICKET INN	4.00	0	126	17	PENDLETON WOODS	53.92	0	0		
4	ECONO LODGE WEST	3.10	0	196	18	PINE RUN	110.20	0	0		
5	EMBASSY SUITES	5.70	0	226	19	QUAIL WALK	56.16	0	0		
6	HAMPTON INN	2.50	0	125	20	RIVERLAKE COLONY	131.33	0	0		
7	HILTON	5.00	0	162	21	SCANDIA LAKE	140.72	0	0		
	KNIGHTS INN	3.70	0	125	22	SHADY GROVE ESTATES	79.25	0	0		
	SHONEY'S INN	4.60	0	120	23	SHANNON GREEN	65.82	0	0		
** Subtotal **		35.90	0	1362	24	TALL TIMBERS	86.95	0	0		
** TYPE OF USE OFFICE					25	THE COLONIES @ WILDE LAKE	177.42	0	0		
2	BLUE CROSS/BLUE SHIELD	13.03	205399	0	26	THE VILLAGE AT INNSBROOK	72.69	0	0		
3	CIRCUIT CITY HEADQUARTERS	25.96	352000	0	27	THE WOODS AT INNSBROOK	55.77	0	0		
4	GLEN FOREST	20.04	214572	0	28	VARINA CHASE	139.30	0	0		
5	INNSBROOK	198.35	1803562	0	29	WATERFORD	74.23	0	0		
6	INNSBROOK NORTH	166.57	1922136	0	30	WELLESLEY	181.82	0	0		
7	LAKEVIEW TOWER	12.31	204572	0	31	WHITE OAK HILLS	50.67	0	0		
8	NORTH LAKE	32.00	403840	0	32	WINDSOR ON THE JAMES	68.06	0	0		
9	PARAGON PLACE	33.46	333920	0	33	WINDSOR PLACE WEST	69.26	0	0		
1	SOVRAN	47.60	226732	0	34	WYNDHAM	64.67	0	0		
10	ST. MARY'S HOSPITAL	24.11	313348	0	** Subtotal **						
11	STAPLES MILL OFFICE PARK	11.50	164643	0					3127.22	0	0
12	WESTERRE	38.85	190620	0	** TYPE OF USE WARENSE/OFFICE -						
** Subtotal **		623.78	6335344	0	1	COCA-COLA	25.00	182844	0		
** TYPE OF USE SHOPPING CENTER					2	EASTPORT	18.70	333059	0		
1	LOWE'S RETAIL	12.20	100000	0	3	FAIRGROUNDS DIST CTR-BLDG H,I	16.50	247800	0		
2	SAM'S CLUB	19.13	130000	0	4	FAIRGROUNDS DIST CTR-BLDG J,K	22.20	317400	0		
3	SHORT PUMP PLAZA	46.32	373137	0	5	INTERNATIONAL BUSINESS PARK	32.21	405400	0		
	T. J. MAXX	9.53	103800	0	7	IRS REGIONAL DISTRIBUTION	18.50	225000	0		
	THE PRICE CLUB	12.86	112620	0	8	NORTH RUN	18.50	248600	0		
6	VIRGINIA CENTER COMMONS	90.30	657386	0	9	R. F. & P. RAILROAD	46.90	357900	0		
7	WILLOW LAWN	37.40	471690	0	10	RICHMOND COLD STORAGE	32.85	289000	0		
** Subtotal **		227.74	1948633	0	6	RICHMOND INDUSTRIAL INTERPORT	112.87	154536	0		
					11	SAMMIS BUSINESS CENTER	20.53	382892	0		
					12	SOVRAN FINANCIAL COMPLEX	169.27	615000	0		
					13	WELLA CORPORATION	15.00	263000	0		
					** Subtotal **						
									549.03	4022431	0

Although there were some significant residential projects within the Secondary Development Area -- over 140 acres of residential subdivisions and 200 multi-family/apartment units -- the most outstanding feature with respect to land use in this area is the amount of industrial/warehouse use which has located in this area since 1984. Over 2.8 million square feet of industrial/warehouse use has located within this area over that time period. This represents almost 70 percent of the square footage associated with major industrial/warehouse projects developed in the County since 1984.

Another feature worth noting in this area is the number of hotel rooms -- 412 hotel rooms have been provided since 1984. Three "major" developments account for the number of hotel rooms in the Secondary Development Area, all in close proximity (and clearly associated with) the Richmond International Airport. These hotel rooms represent approximately 28 percent of all hotel rooms associated with major development projects since 1984.

Along with the major development projects which have located in the Secondary Development Area, it also is interesting to note what has not located in this area. Among the millions of square feet of office and retail use associated with major developments in the County since 1984, no major office developments or retail developments have located within the Secondary Development Area. Clearly, therefore, the Secondary Development Area can be characterized principally as an attractive area for major industrial developments to the exclusion of other, major non-residential uses.

Implications: The research on major development projects described above indicates a clear pattern of geographic distribution of land uses over the last six to eight years. By plotting the locations of these major developments on the map, two areas emerge as the principal locations for major developments since 1984. By virtue of the magnitude of development which has occurred in these areas, they have been termed Primary and Secondary Development Areas.

In terms of the overall pattern of land use, both the Primary and Secondary Development Areas outlined on Figure 20 can be characterized as a linear pattern of growth, with each (to some extent) focused on a major transportation corridor: West Broad Street through the Primary Development Area and Laburnum Avenue through the Secondary Development Area. This pattern of growth has emerged over the years through countless individual locational decisions which have taken into account marketing and economic factors to help ensure the success of each of the major development projects cited on Figure 20 and the accompanying table.

To some extent, it must be realized that what attracts one type of development to a particular area is going to have a similar attraction for a like use. All other factors being equal, the result is a type of "snowball effect", possibly explaining, for instance, why all of the major office developments since 1984 have concentrated generally along West Broad Street, or why more than two-thirds of the major industrial projects have located along Laburnum Avenue between the Fairgrounds and the Airport.

To anticipate what sort of future development patterns may emerge, because of this "snowball effect", it is easy to answer -- "more of the same." In other words, one could anticipate that the West Broad Street corridor will continue to absorb a large portion of the future major office and retail developments while future major industrial/warehouse development will migrate toward the Laburnum Avenue corridor.

What remains to be answered, however, is the desirability of this pattern of growth and development. To what extent should this pattern be encouraged, what alternative patterns of development are more desirable and what means are available for influencing the pattern of growth? These are the types of questions which need to be addressed within the Henrico 2010 Comprehensive Plan update. That will be the focus of future efforts as we move beyond the analyses presented in this Working Paper of what has happened, to the more future-directed analyses of what should happen.