

Balanced and Phased Growth

Introduction

A goal of this General Plan is to have an appropriate balance of land uses. Balanced growth offers all residents opportunities for work, housing and recreation, as well as convenient access to schools, stores, services and green space. In a small county such as Howard, there are many demands on the limited amount of remaining land. Balanced growth ensures that all land use needs are met without favoring one to the detriment of another, and helps promote a healthy fiscal base for the delivery of public services needed by the County's population.

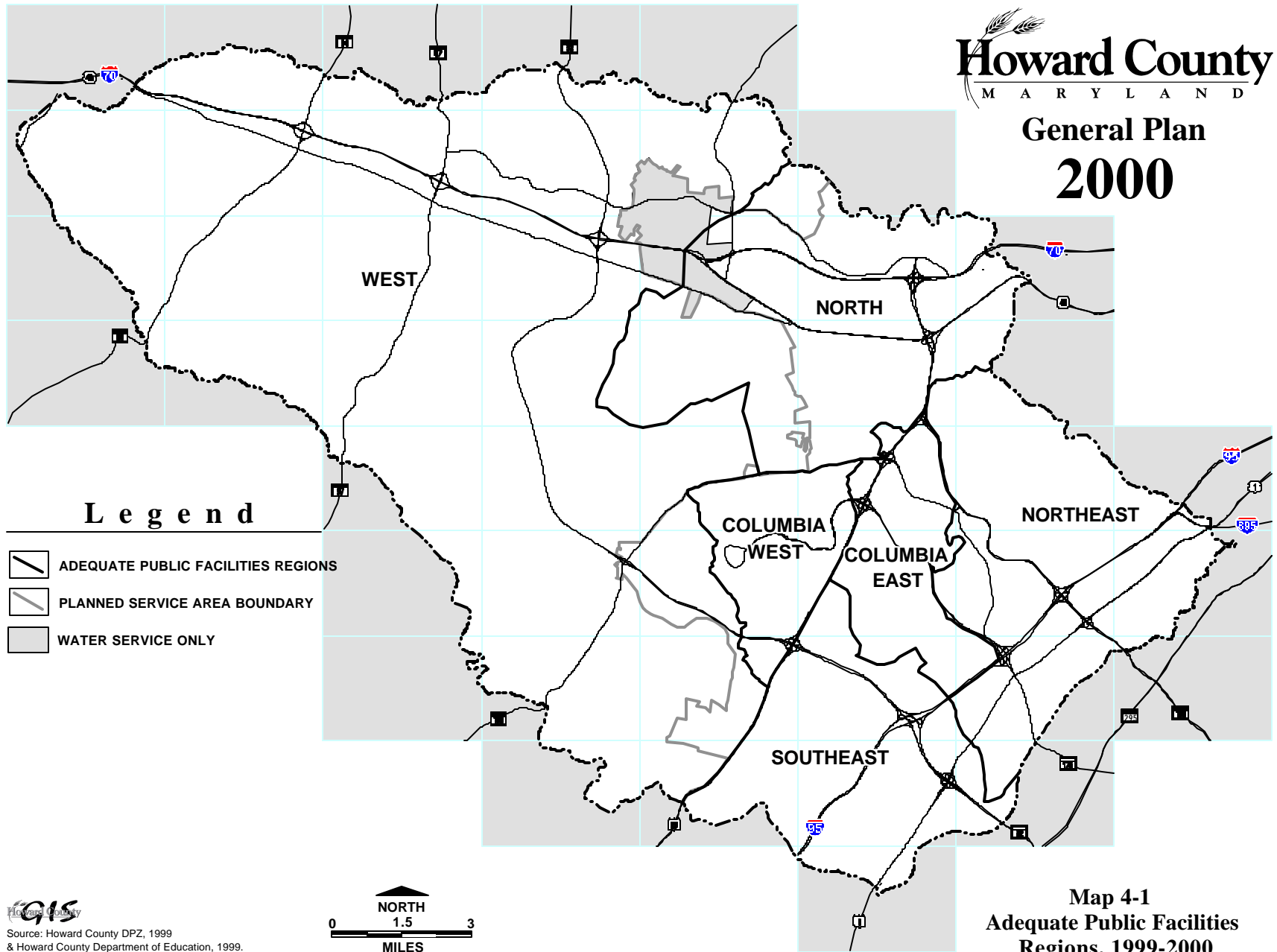
Vision 3:

Our development will be concentrated within a growth boundary, will be served by adequate public facilities and will encourage economic vitality.

With land use patterns substantially established, this General Plan does not recommend major changes to land use designations or to the balance of opportunities for employment and housing. Instead, this chapter examines issues that are growing in importance as the County approaches build-out of its available land. The development pressure on Howard County's limited land resources increases the importance of maintaining the County's planned growth boundary. The boundary encourages more compact development patterns in eastern Howard County, allowing more efficient provision of public services and facilities.

The Adequate Public Facilities Act, passed in 1992, was designed to ensure that public schools and roads are adequate to accommodate new development in the County ([Map 4-1](#)). The Act promotes orderly growth by synchronizing new development with the availability of public facilities in order to achieve the goals and growth targets of the 1990 General Plan. The Adequate Public Facilities process requires development projects pass certain tests as a condition of subdivision or site development plan approval.

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GIS
Source: Howard County DPZ, 1999
& Howard County Department of Education, 1999.

The process also guides County planning for the timely provision of schools, road improvements and other public facilities and services.

In preparing this General Plan, a fiscal analysis was conducted that examined four growth scenarios, as described in Box 4-1. Map 4-2 shows the planning areas analyzed in that study and used to develop growth forecasts. (Refer to the final section of this chapter for the fiscal study results and new growth forecasts.) The fiscal impacts of various growth rates were of spe-

cial concern since a fundamental objective of this General Plan is to maintain the level of services the County offers today as the County accommodates expected growth. Good schools, an efficient transportation system, excellent public safety, high quality public facilities such as the library system, a broad range of human services and numerous recreation programs are all part of a high quality of life enjoyed by County residents. Balanced growth is critical to ensuring that the quality of life is maintained or even improved in the year 2020.

**Box 4-1
Fiscal Impact Scenarios**

The 1990 General Plan expected housing growth to average 2,500 units per year for 20 years, achieving build-out in 2010. Employment forecasts in the 1990 General Plan assumed that approximately 2,750 jobs would be added on an average annual basis until 2010. During the 1990s, the pace of residential construction in the County was below the targets established by the 1990 General Plan. However, a higher ratio of single-family detached units were built than anticipated, yielding population growth that closely matches the 1990 General Plan population forecast. After a decline in jobs during the early 1990s, employment growth was strong during the late 1990s, substantially exceeding the General Plan projections.

Four growth scenarios were considered for the 2000 General Plan fiscal analysis. Each scenario is comprised of housing unit/population projections and employment/job projections:

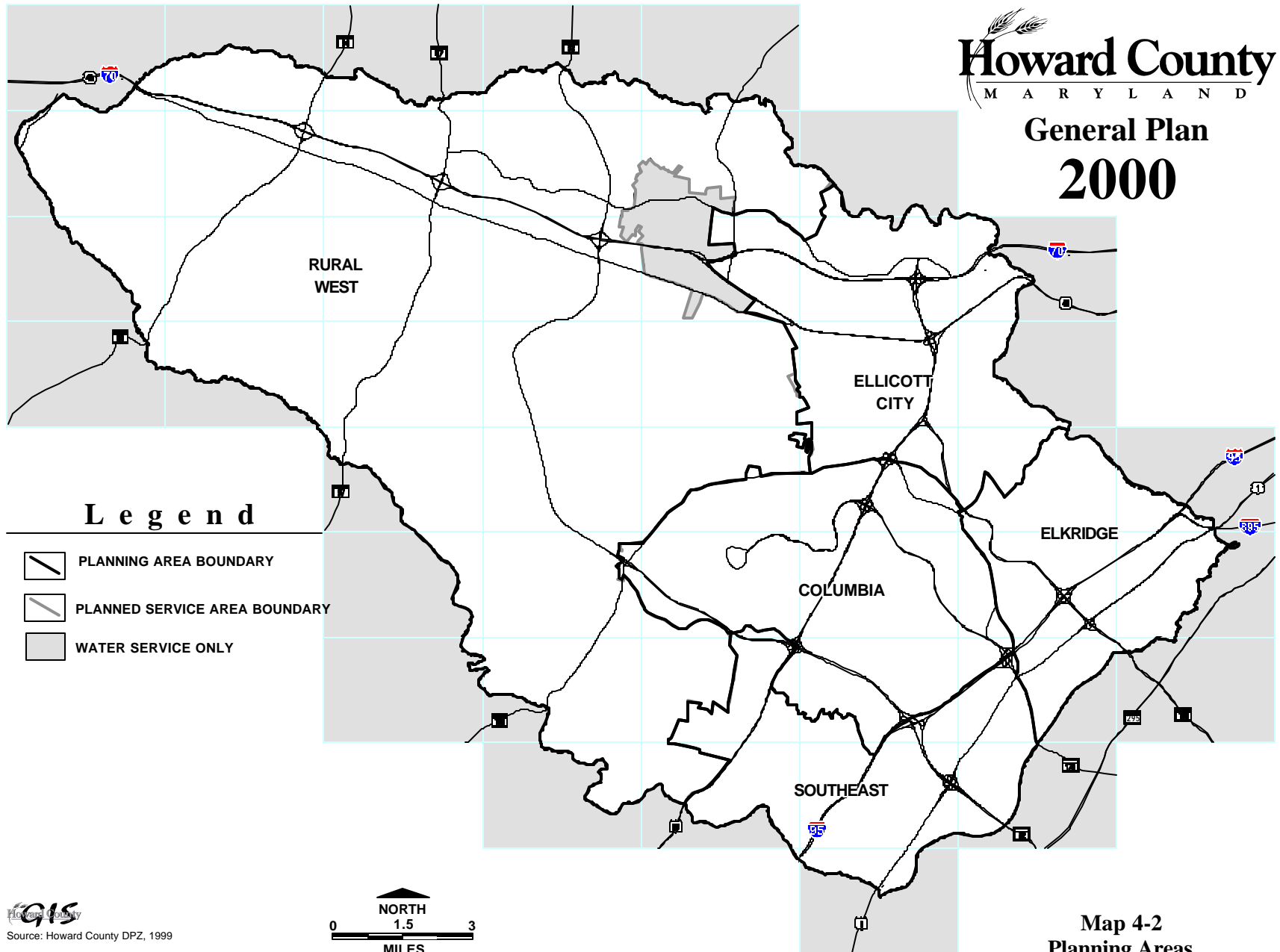
- 1. **Modified General Plan.** This scenario assumes the same population and the same number of housing units as projected in the 1990 General Plan. The annual number of new units declines from 2,740 through the year 2005 to approximately 1,760 new units until build-out of the current zoning capacity is reached in 2015. The employment growth targeted by the 1990 General Plan, with some reallocations reflecting actual increases, averages approximately 2,410 jobs annually from 2000 to 2020. This reflects the 1990 General Plan annual growth rate of 2,860 new jobs from 2000 to 2005 and 2,260 new jobs from 2005 to 2010, with an assumption of 2,260 annual new jobs continuing thereafter to 2020.
- 2. **1990s Trends Extended.** Using the lower annual housing construction trend of the 1990s, approximately 2,000 new housing

units would be built per year until 2020. Current zoning capacity would be attained in 2015, thus additional zoning capacity is required. To achieve this additional capacity, 11,000 more units were added: approximately 4,000 units in the “near” West, 6,000 units of elderly housing were assumed to be built on land currently zoned for commercial uses, and 1,000 accessory apartments were included in single-family detached units throughout the County. The employment forecast shows an increase of approximately 5,000 jobs annually from 2000 to 2020, reflecting the job growth of the late 1990s.

- 3. **Slow Population/General Plan Employment.** This scenario reflects the 1990s trend of 2,000 new housing units annually through the year 2005, declining to 1,500 units annually until 2015, and then to 1,000 units until 2020. At this pace, zoning capacity would be reached in 2021. No zoning change is required. The population is assumed to increase over the time period to approximately the same total population as the Modified General Plan projections, but at a slower pace. The Modified General Plan employment forecast (2,410 jobs annually until 2020) is used in this alternative scenario.
- 4. **Slow Population/High Employment.** This scenario uses the slow household and population forecast as reflected in the third scenario above and the employment forecast of 5,000 jobs per year.

The General Plan fiscal study evaluated the costs and revenues associated with each scenario to determine the fiscal impact on the County’s budget. Refer to the last section of this chapter for further details on the fiscal impact study results.

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GIS
Source: Howard County DPZ, 1999

A number of goals must be pursued to support the General Plan vision for this chapter:

Provide a range of housing options in appropriate locations. This General Plan foresees the build-out of residential land use patterns that have, for the most part, been established. New housing opportunities will occur within existing mixed use districts, as infill within existing neighborhoods and within redevelopment areas. This Plan examines the importance of preserving and renovating existing housing. This Plan also addresses the need for an adequate supply of homes suited to the needs of all incomes, ages and household types, and for those with special needs.

Pursue sustained job growth and a strong, non-residential tax base. This General Plan calls for policies that will allow the strong employment growth experienced during the mid to late 1990s to continue, although probably at a more moderate rate. Sustained economic health requires strong, livable communities and healthy environmental resources, as described in Chapter 5, *Community Conservation and Enhancement* and Chapter 6, *Working with Nature*.

Revitalize and redevelop existing, underused commercial and industrial areas. A growing scarcity of raw land means that the County needs to examine the potential and conditions necessary for revitalization and redevelopment of underused properties. This will provide for future economic development, while enhancing the County's existing communities.

Provide excellent public services for citizens. Howard County has secured most of the land it will need for public facilities. With land resources becoming scarce, the County must quickly pursue sites for the additional facilities and green space that will be needed. In addition, the County must plan for changes in public facility and service needs that will be generated by a growing senior population, aging public facilities and infrastructure, and an increasingly diverse population.

Develop a multimodal transportation system. Design standards for site development and streets must encourage linkages and accessibility for all modes of travel, including auto, transit, bike and pedestrian transportation. This is necessary to provide for the travel needs of all of the County's citi-

zens and to accommodate the job growth needed to sustain the County's economic health.

Use annual targets for employment and housing growth. Phasing of growth is essential to planning for an appropriate balance of land uses. The 1990 General Plan analyzed the fiscal implications of alternative growth scenarios, adopted annual targets for employment and housing growth, and recommended a development monitoring system and adequate public facilities legislation. This General Plan establishes new growth targets to synchronize future development with the provision of needed public facilities.

Recognize the fiscal impacts of growth. The fiscal impacts of various growth rates were analyzed, since a fundamental objective of this General Plan is to maintain the level of services the County offers today as the County accommodates expected growth.

State Planning Mandates

The County's vision for growth management echos the following visions articulated in the amended 1992 State Planning Act:

- Development is concentrated in suitable area;
- Economic growth is encouraged and regulatory mechanisms are streamlined; and
- Adequate public facilities and infrastructure under the control of the County are available or planned in areas where growth is to occur.

The 1997 Smart Growth Act, with its designation of growth areas and rural conservation areas, reinforces these ideas. Howard County's Planned Service Area for both public water and sewer has been designated the County's "Priority Funding Area" for State-funded projects. This chapter addresses the steps the County will need to take to encourage continued economic growth and the types of regulatory mechanisms and incentives that must be considered.

Residential Land Use

Prospects for Residential Growth

The 1990 General Plan expected housing growth to average 2,500 units per year, achieving a build-out in 2010 of 116,600 housing units. This housing capacity projection was estimated prior to the Comprehensive Zoning that followed the completion of the 1990 General Plan.

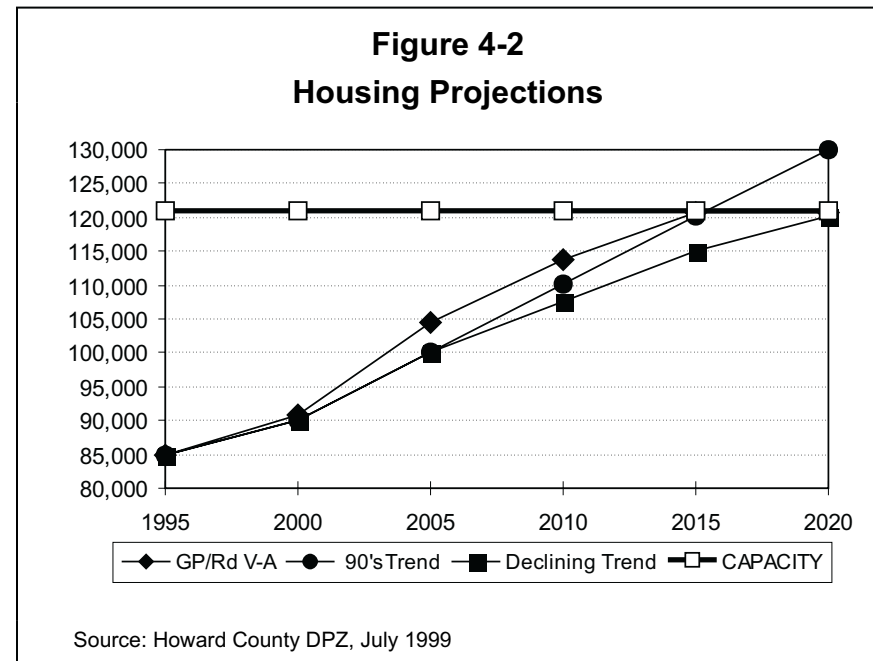
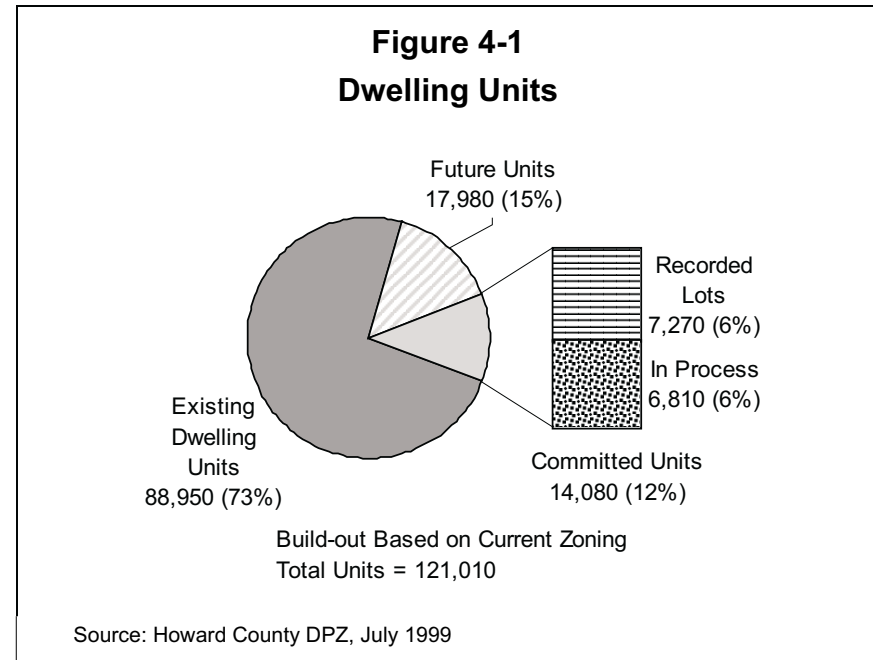
The housing capacity and build-out year has changed since the 1990 General Plan was adopted due to re-zonings and a slowing pace of growth. The present supply of land for housing, based on the latest 1993 Comprehensive Zoning, permits a total build-out of about 121,000 housing units. Of this total, 88,950 units are already built, leaving about 32,000 still to be built (Figure 4-1). However, more than 40% of the remaining units are already committed to development, being either recorded, unbuilt lots or units currently in the development review process.

Most of this decade has been very advantageous for housing development due to the strong economy and low mortgage interest rates. However, residential growth has been consistently below the 1990 General Plan anticipated growth rate. Actual growth during the 1990s approximated 2,000 new dwelling units per year. If growth continues at this rate, the potential housing supply under current zoning will be built-out in 2015 (Figure 4-2).

The slower than expected housing growth rate is largely attributable to the limited supply of undeveloped residentially zoned land. Where larger amounts of land have been available, development demand has been very strong. In the northern and northeastern portions of the County where undeveloped land has been available, the pace of development has been slowed to the number of allocations available each year under the County's Adequate Public Facilities Ordinance.

Availability of Residential Land

The pie chart in Figure 4-1 shows that about 32,000 additional homes can be built in the County. However, about 7,270 of these homes are to be built



on lots already recorded and 6,810 are in the development process, leaving only 17,980 units to be built on land not yet committed to development. Of these 17,980 units, about 5,320 can be built in the West and 12,660 can be built in the East. Figures 4-3 and 4-4 present this information on housing units and acreage by zoning category. Figure 4-5 presents the information by area of the County.

Map 4-3 shows the location of uncommitted residential land in the County grouped by parcel size. The map was developed using Fall 1998 State Assessment data on unimproved parcels, with deductions for development proposals in the plan review process as of Spring 1999, and residential parcels less than ten acres in the Rural West and less than three acres in the East, that were considered not to have additional development potential.

Much of the remaining undeveloped residential land is already committed to either recorded, unbuilt lots or to subdivisions already in process. Of the uncommitted residential land, most of the land is in relatively small, scattered infill parcels within existing developed areas. Since neighbors are

likely to resist significant changes to existing zoning, it is likely that most of the remaining residential land will be developed as currently zoned. Thus, no major zoning changes are proposed as part of this General Plan.

It is important to note that the County must compete with residential development to obtain land for future schools, parks and other types of facilities. Due to the very high cost of land that is zoned for employment uses, the County will generally look for uncommitted residentially zoned parcels to meet future needs. As Figure 4-3 indicates, most of the uncommitted residentially zoned land is rural. Rural property is not well located to provide the diverse facilities and services for the population which lives within the Planned Service Area (PSA). Since the PSA is the County's Priority Funding Area, State funding is generally not available for public facilities in rural areas. In the East, there are only about 5,300 acres of uncommitted residential land to satisfy future needs for housing, public facilities and green space preservation. This land is being developed at a steady pace. The County needs to assess future land acquisition needs and priorities, and implement an acquisition plan while land is still available.

**Figure 4-3
Residential Land Use by Zoning (Acres)**

Zoning	Developed ¹	Recorded			Total
		Unbuilt	In Process	Uncommitted ²	
Rural Density	65,360	4,730	1,740	23,130	94,960
Low Density	23,430	650	900	3,360	28,340
Medium Density	5,310	260	200	570	6,340
High Density	2,100	110	100	150	2,460
Mixed Use	0	0	310	900	1,210
New Town	10,840	190	210	330	11,570
Planned Golf Course Community	200	30	520	30	780
TOTAL	107,240	5,970	3,980	28,470	145,660
Percent	73.6%	4.1%	2.7%	19.5%	100.0%

Source: Howard County DPZ, July 1999

1. Developed land also includes areas in easements, parks and green space that will remain unbuilt.
2. Uncommitted residentially zoned land may currently be in agriculture. It may be converted to residential use, permanent preservation easements, or it may remain in agriculture or other rural uses without preservation easements.

**Figure 4-4
Residential Units, Build-out With Current Zoning**

Zoning	Developed Recorded				Total	Potential Units	Potential Units
	Units	Unbuilt	In Process	Uncommitted		To Build-Out	Percent
Rural Density (RR, RC)	10,400	2,040	570	5,420	18,430	8,030	25%
Low Density (R-ED, R-20)	18,260	1,710	1,290	5,310	26,570	8,310	26%
Medium Density (R-12, R-SC)	11,950	1,030	410	1,830	15,220	3,270	10%
High Density (R-MH, R-SA-8, R-A-15)	16,800	1,270	820	1,490	20,380	3,580	11%
Mixed Use	0	0	1,150	2,630	3,780	3,780	12%
New Town	30,500	950	790	1,300	33,540	3,040	9%
Planned Golf Course Community	40	120	1,230	0	1,390	1,350	4%
Historic	300	10	0	0	310	10	0%
Other Zones	700	140	550	0	1,390	690	2%
TOTAL	88,950	7,270	6,810	17,980	121,010	32,060	100.0%
Percent	73.5%	6.0%	5.6%	14.9%	100.0%		

Source: Howard County DPZ, July 1999

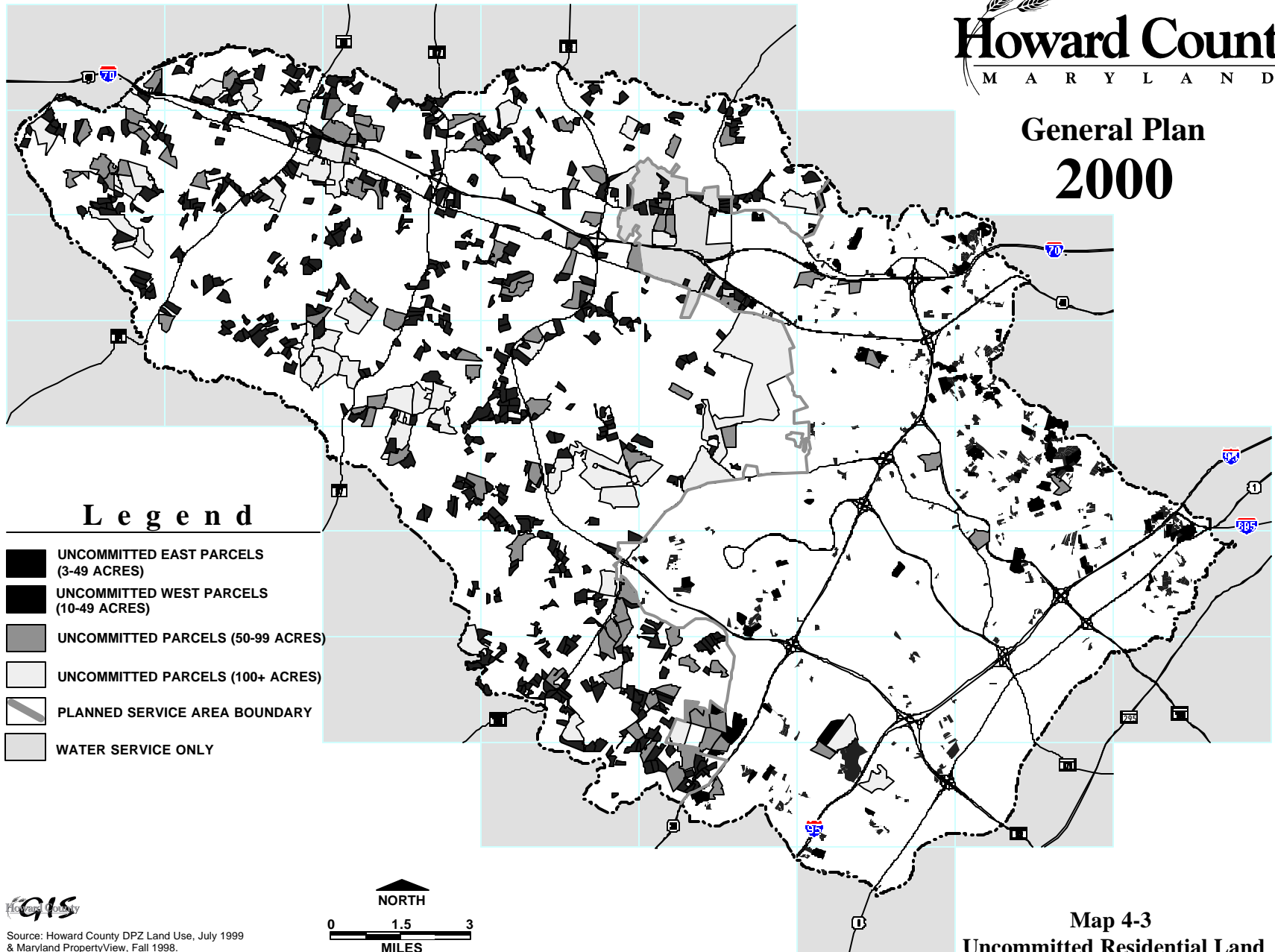
**Figure 4-5
Residential Units By Area**

Region	Developed	Recorded		In Process	Uncommitted	Total
		Unbuilt				
Columbia	36,260	1,720		1,020	1,810	40,810
Elkridge	11,440	1,010		710	2,070	15,230
Ellicott City	17,560	1,580		3,270	3,330	25,740
Southeast	12,740	910		1,240	5,450	20,340
Total East	78,000	5,220		6,240	12,660	102,120
West	10,950	2,050		570	5,320	18,890
Total County	88,950	7,270		6,810	17,980	121,010

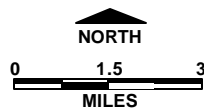
Source: Howard County DPZ, July 1999



General Plan 2000



Source: Howard County DPZ Land Use, July 1999 & Maryland PropertyView, Fall 1998.



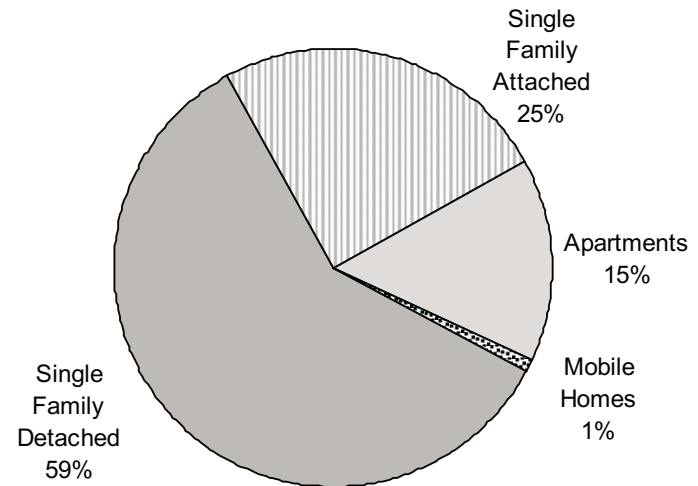
Housing Unit Mix

The 1990 General Plan noted a strong trend, based on the zoning in place in 1989, toward a greater proportion of single-family detached housing. To establish a greater mix of housing in the future, the 1990 General Plan set a new growth target whereby slightly more than half of new units would be single-family detached, almost one-third would be single-family attached and 16% would be apartments. Since 1990, the mix of homes built has been close to this target, with slightly more single-family detached units and slightly less single-family attached units being built. As shown in Figure 4-6, 59% of new units have been single-family detached, 25% have been single-family attached and 15% have been apartments.

The zoning of the land is important since it indicates the type of units likely to be built. For example, only single-family detached homes can be built on Rural Conservation or Rural Residential zoned land. By multiplying the acreage by the density factor for each zoning category, the County’s future mix of housing units can be compared to the current housing mix (Figures 4-7 and 4-8).

In response to the 1990 General Plan, the 1993 Comprehensive Zoning resulted in additional land zoned for single-family attached and apartment development. These zoning changes have decreased the proportion of re-

**Figure 4-6
New Dwelling Units
Use and Occupancy Permits 1990-1999**



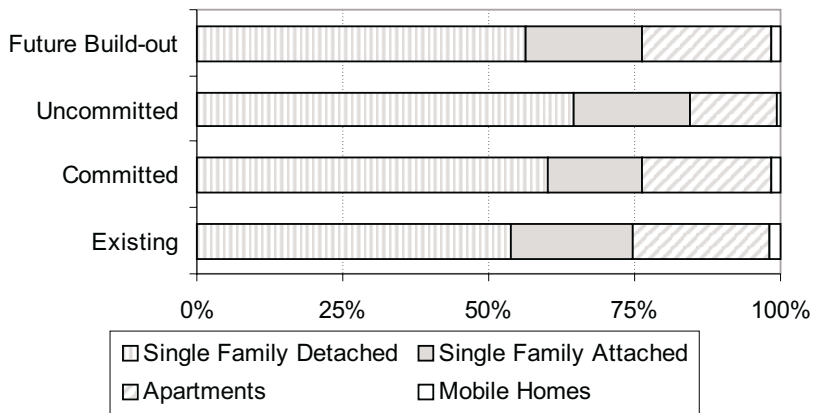
Source: Howard County DPZ, July 1999

**Figure 4-7
Housing Unit Mix by Type**

Stage	Single Family Detached	Single Family Attached	Apartments	Mobile Homes	Total Units
Existing	54%	21%	23%	2%	100%
Recorded Unbuilt	79%	12%	8%	0%	100%
In Process	39%	21%	37%	3%	100%
Committed	60%	16%	22%	2%	100%
Uncommitted	65%	20%	15%	1%	100%
Future Build-out	56%	20%	22%	2%	100%

Source: Howard County DPZ, July 1999

**Figure 4-8
Housing Unit Mix by Type**



Source: Howard County DPZ, July 1999

maining dwelling units (committed and uncommitted) that will be single-family detached from 70% in 1990 to 62% under current zoning. This allows the mix of housing at build-out to be close to the current mix, although with a slight increase in the proportion of single-family detached units and a slight decrease in the proportion of single-family attached and apartment units.

When the present housing mix is arrayed against other counties in the region, as in Figure 4-9, it is apparent that Howard County has a relatively low percentage of single-family detached units compared to Anne Arundel, Carroll and Harford Counties. This comparatively low percentage of detached units in Howard County is partially attributable to the presence of Columbia, which has a large proportion of single-family attached and multifamily units. The more urbanized Montgomery, Prince George’s and Baltimore Counties have slightly lower percentages of single-family detached units compared to Howard County. As indicated earlier, the percentage of single-family detached units in Howard County is expected to increase slightly by build-out, based on units in the development pipeline and the current zoning of uncommitted residential land.

**Figure 4-9
Estimated Regional Housing Stock
by Structure Type, 1999**

County	% Single-Family Detached	% Single-Family Attached	% Multi-Family	% Mobile Homes
Anne Arundel	57.1%	15.1%	26.1%	1.7%
Baltimore	47.0%	25.2%	26.9%	0.8%
Carroll	78.5%	8.2%	11.7%	1.6%
Harford	61.1%	18.3%	15.7%	4.9%
Howard	54.0%	20.6%	23.5%	2.0%
Montgomery	52.0%	17.6%	30.4%	0.1%
Prince George's	52.7%	10.9%	35.9%	0.5%

Source: DPZ for Howard County, M-NCPPC for Prince George’s and Montgomery Counties, BMC & 1990 Census for Remaining Counties

Affordable Housing

The employment section of this chapter indicates the need for additional affordable housing. This need is related to the County’s employment growth and its demand for low and moderate income workers. To the degree that such workers can be housed in the County, economic development prospects are improved. In addition, by providing more affordable housing it becomes possible for residents’ children and parents, as well as teachers, firemen and policemen to live in the County. Opportunities are also increased for residents who are now renters to become homeowners.

Affordable housing is housing that is affordable to low and moderate income households. A low income is defined as 50% or less of the median income for an area, and a moderate income is defined as up to 80% of the median. In 1998, the median household income in Howard County was estimated to be \$69,200. Compared to other counties in the region, Howard County has the highest median income, as shown in Figure 4-10. In 1998, a

Figure 4-10
1998 Median Household Income

Jurisdiction	Median Income
Anne Arundel	\$59,500
Baltimore City	\$35,200
Baltimore County	\$48,600
Carroll	\$56,800
Harford	\$54,300
Howard	\$69,200
Frederick	\$56,700
Montgomery	\$67,300
Prince George's	\$51,100

Source: MDP

moderate income household in Howard County would have earned about \$55,360. A low income household would have earned \$34,600. These low and moderate household incomes are for a typical family of four. Housing units in the \$80,000 to \$120,000 price range are affordable to moderate income households. Housing priced below \$80,000 would be affordable to low income families but is generally unavailable in the unsubsidized, for sale housing market.

Affordable housing, however, is not limited to certain types of dwellings. It can include rental or owner-occupied units, subsidized or market-rate units, and apartment, townhouse, mobile home or single-family detached structures.

The high property values and the high proportion of recently-built homes in Howard County cause most market-rate housing to be priced out of reach of low or moderate income households. However, a rental housing survey conducted in 1998 indicates that market-rate rental units in some communities are affordable to low and moderate income households, based on the reported average monthly rent (Box 4-2). Affordable, market-rate, single-family housing can also be found within the County's mature neighborhoods in the form of older houses with modest square footage and smaller yards.

Box 4-2

1998 Howard County Rental Housing Survey

A 1998 survey of rental housing in Howard County found that there are over 22,000 rental units out of a total of 87,500 housing units. The County has 67 multifamily rental communities as well as individual homes available for rent. Some of these units receive various forms of governmental housing subsidies, while most charge market rates.

Rental units subsidized by Federal or County programs offer most of the housing that is affordable to low income households. Twenty-eight multifamily communities offer 1,782 housing units assisted through Federal or County programs. The majority of these units are located in the Columbia Villages of Long Reach, Oakland Mills and Wilde Lake. Most are one and two bedroom units in multifamily apartment communities.

The average multifamily community containing subsidized units was built approximately 19 years ago. Four subsidized housing developments with 281 housing units, primarily for the elderly, have been built since 1990. Twenty-two percent of the subsidized housing in the County is used by the elderly or disabled.

In the unsubsidized rental market, the most affordable area in Howard County is the Columbia neighborhood of Long Reach, with an average monthly rent of \$826 for 1,459 square feet. The most affordable community outside of Columbia is North Laurel, with an average monthly rent of \$886 for 1,263 square feet.

The amount of affordable housing will not be expanded significantly by new construction. As the supply of residential land diminishes, the price of land and housing is likely to increase. In zoning districts that permit a variety of unit types, builders will, in most instances, choose the most profitable type – higher priced, single-family detached units. There is little undeveloped land in the zoning districts that allow townhouses and apartments. Since much of the remaining land is relatively small infill parcels within single-family detached neighborhoods, rezoning for higher density is unlikely.

Some affordable units will be created within the major Mixed Use Districts (MXD), which permit construction of townhouses and apartments, subject

to certain limits. The MXD regulations require that 5% to 10% of the dwellings be affordable to households with incomes between 50% and 80% of the median income in the Baltimore region. In addition, the Corridor Revitalization Studies discussed in Chapter 5, *Community Conservation and Enhancement*, will evaluate the potential to use some undeveloped or underused sites as small mixed use centers which may include housing. The amount of housing that could be achieved cannot be estimated until these studies are underway.

Existing housing in older neighborhoods includes both rental and owner-occupied units. The Office of Housing and Community Development (OHCD) seeks to promote home ownership to help stabilize single-family neighborhoods where a trend towards a greater proportion of rental properties is leading to deferred maintenance, neglect and code violations. County-sponsored programs to make home ownership more affordable have been very successful. These programs offer such assistance as below market-rate mortgages, settlement/down payment loans and shared equity (co-ownership).

While it will be difficult to construct affordable new units, housing programs can more readily promote the use of older homes to meet affordable housing needs. Creative programs to make use of the existing supply of older homes are expected to be an important part of the County's affordable housing program. It is more cost efficient to establish programs that make existing older homes affordable to low and moderate income households than to subsidize the cost of expensive new housing. Incentives and/or programs to assist with maintenance and renovation would also be beneficial, especially for elderly homeowners.

The OHCD prepares a Consolidated Plan, as required by the US Department of Housing and Urban Development, in order to receive Federal funds for programs such as the Community Development Block Grant. This five-year plan provides a comprehensive strategy for addressing the housing, economic and social needs of low and moderate income individuals and the needs of special populations, such as the homeless and persons with disabilities. The current Consolidated Plan is scheduled to be updated by mid-2001. The 2001 Consolidated Plan will provide an opportunity to

specify the most effective means of providing affordable housing, such as retaining existing assisted housing projects, using existing older homes to address affordable housing needs, and providing affordable housing in small mixed use centers.

The County recently expanded the OHCD's program authority to provide funding for low and moderate income home ownership and to provide loans to encourage revitalization of existing neighborhoods. OHCD is also working with the Economic Development Authority to institute a Live Near Your Work program (similar to one component of the State Smart Growth program) in conjunction with employers in the County. This program will provide grants for home ownership to employees moving closer to their place of employment.

Home ownership programs, combined with programs which promote self-sufficiency, educational attainment, improved job skills and effective financial management, could help reduce demands for subsidized rental housing. Nevertheless, there will be a continuing need for both home ownership and rental assistance programs. Corridor Revitalization Studies and Community Master Plans can be used to identify affordable housing needs, opportunities and strategies for specific areas.

Several programs supply assisted rental housing in the County. The Federal Section 8 rental voucher and certificate program provides subsidies that help low income households rent housing in the private market. OHCD also rents County-owned housing at below market rates, including one County-owned public housing development and scattered housing units. OHCD will continue to purchase and subsidize scattered apartments, townhouses and single-family dwellings as funding levels allow. The supply of assisted or subsidized rental housing is summarized in [Figure 4-11](#). Older assisted housing projects may become eligible for conversion to market rate housing in the future. While the State is responsible for monitoring the status of Federal and State assisted projects, a clearer process for communicating with the State and a process for monitoring other assisted projects are both needed in order for the County to determine an appropriate and timely response to a conversion proposal. The County needs to develop strategies to monitor and maintain existing assisted housing projects as part

**Figure 4-11
Howard County's Assisted Housing in 1998**

Type	Units	Details
Owner Occupied	1,015	Howard County Settlement Down Payment Loan Program (SDLP)
	54	Howard County Shared Equity Program
	36	Howard County Homeownership - Community Development Block Grant Homeownership Rental Property Conversion
	700	Variety of State Programs administered through the State Community Development Administration (CDA)
Rental	1,688	Section 8 Units - New Construction
	230	Howard County owned and developed housing
	246	Housing Commission owned and developed housing
	1,063	Units through Department of Finance in part by Howard County
	792	Units financed through Industrial Revenue Bonds - 792 represents 20% of all units which are set aside for moderate income households
	503	Section 8 Certificates and Vouchers
TOTAL	6,327	Approximately 7% of residential units

Source: Howard County Office of Housing and Community Development

of the larger affordable housing program.

Howard County discourages concentrations of subsidized rental housing. Any multifamily community with 20% subsidized housing can refuse to take additional Section 8 housing certificates. Concentrations of housing that are affordable to low income households create a localized need for social services. For example, families with subsidized housing often move to find better housing. This means the children may change schools frequently. Families and children may need more services to promote self-sufficiency, such as affordable day care, tutoring for middle and high school students, youth mentors, programs to motivate youth, health services and transportation services. Obtaining sufficient funding for these support services is an important element of an effective program to provide affordable housing. The County also provides grant-in-aid support for non-profit providers of emergency, crisis and transitional shelter and related services.

Housing for Seniors and the Disabled

The Maryland Department of Planning projects that the number of County residents over age 65 will increase from 17,030 in 2000 to 47,180 by 2020, an increase from about 7% of the total population to nearly 16% (Figures 4-12 and 4-13). This increase will include both aging residents and in-migration of their elderly parents. The County will need to support the ability of seniors who desire to “age in place” in their own homes or in their own communities. Aging in place can mean different choices at different stages: perhaps initially in an existing home and later in a smaller home or in another type of housing with more support services. The County will need to consider programs to help people stay in their homes and to promote services and housing options for seniors who need help with personal or medical care.

The housing market and County Zoning Regulations have evolved to recognize that as seniors’ ability to live independently diminishes, they often need to move to housing that provides support services. A range of congre-

Figure 4-12
Howard County Population by Age, 1970-2020

Age	1970	1980	1990	2000	2010	2020
0-4	5,702	8,224	15,352	17,690	16,950	15,770
5-19	19,961	31,791	37,275	53,740	60,410	50,940
20-44	21,894	52,064	88,243	98,600	102,980	96,420
45-64	11,027	20,412	35,128	61,890	89,130	93,150
65+	3,327	6,081	11,330	17,030	28,480	47,180
TOTAL	61,911	118,572	187,328	248,950	297,950	303,460
0-4	9%	7%	8%	7%	6%	5%
5-19	32%	27%	20%	22%	20%	17%
20-44	35%	44%	47%	40%	35%	32%
45-64	18%	17%	19%	25%	30%	31%
65+	5%	5%	6%	7%	10%	16%
TOTAL	100%	100%	100%	100%	100%	100%

Source: MDP, September 1999

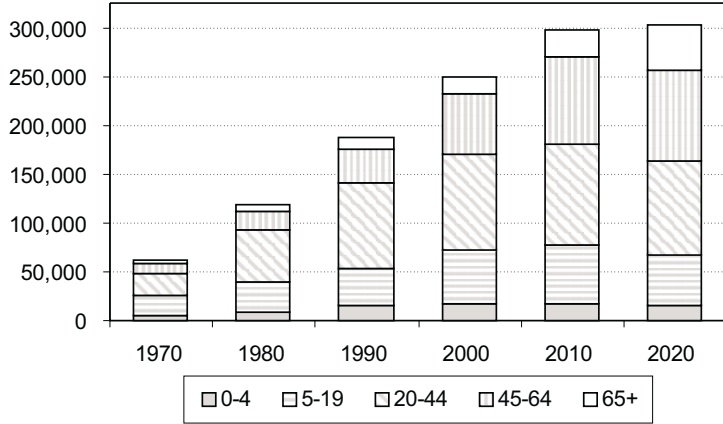
gate and group housing options for seniors exists in the County, offering varying levels of support and services:

Acute Care. Acute care includes nursing homes, hospices and other special care facilities. Howard County has two nursing homes with approximately 543 beds.

Congregate Assisted Living. Congregate assisted living units are generally rental or condominium apartments that do not have full kitchens. Residents have a full meal plan and both health and daily living support services. The County has over 500 beds in congregated assisted living.

Assisted Living in Group Homes. Assisted living in small group homes of 15 or fewer residents is generally more affordable than in the larger congregated facilities. The County has approximately 550 beds in about 80 licensed group homes.

Figure 4-13
Howard County Population by Age, 1970-2020



Source: Howard County DPZ, July 1999

Congregate Independent Living. Congregate independent living units are generally rental or condominium apartments with full kitchens. The County has seven congregated independent living apartment communities for seniors, with a total of about 710 units. Three are low and moderate income communities and the others have some subsidized rental units.

Continuing Care Retirement Communities. The County has one continuing care retirement community that provides a continuum of care including independent living units, assisted living units and skilled nursing care. This community has a total of approximately 290 units. A second continuing care community is planned to add about 250 units.

Retirement Communities. There are two retirement communities in the County providing independent living as well as assisted living units. Although they do not provide skilled nursing services, both are adjacent to and work closely with a nursing home. These communities have a total of 476 units.

Persons with disabilities may also need specialized housing. Disabled persons may have three types of housing needs: modification of existing units for handicap-accessibility; provision of handicap-accessible units; and provision of supervised group homes for persons with developmental disabilities to live independently of their families. Special populations are often transportation-dependent to a much greater degree than the general population. Planning for housing and transportation for the elderly, persons with disabilities and lower income individuals must be closely coordinated.

With the number of seniors expected to triple by 2020, opportunities must be in place to provide for additional senior housing offering various levels of support and services. The growing scarcity of residential land will make it increasingly difficult to find sites for new senior housing. Senior housing has recently been built or approved for construction in two of the County's office/employment districts (Planned Office Research and Planned Employment Center) that permit certain types of congregate and group housing in addition to employment uses. The need for senior housing should be balanced against the County's need to reserve its employment land for economic development.

Although congregate and group home living arrangements are important, most seniors will continue to live in single-family houses, often in homes with mortgages that are substantially paid off. Several types of assistance can help prevent older residents from leaving these homes prematurely, including help with home renovations and home maintenance and transit services for seniors who can no longer drive.

Home renovations are often needed to address increasing physical limitations. "Universal design" refers to a range of design features to accommodate such limitations. Housing with universal design features is suitable for healthy, as well as frail or disabled residents. It is much less expensive to construct homes with universal design than to retrofit them later. Incorporating universal design into the design of new or renovated housing makes these units usable by all County residents, especially households that include an individual of any age with physical limitations. To the extent that these design features are built into the County's housing stock,

housing opportunities will be significantly expanded for this segment of the County's population.

County zoning regulations permit renovation of owner-occupied, single-family homes on lots of 12,000 square feet or larger to create accessory apartments. This may allow a senior homeowner to have a rental unit, which provides income and perhaps some assistance with home maintenance and errands. Accessory apartments also may allow a senior to live independently in the home of an adult child.

Many active seniors desire to sell their large family home and yard to purchase a smaller, easier-to-maintain home with a first floor bedroom. This active senior market is the largest segment of the senior housing market, according to the County's Office on Aging, but it is not well accommodated in Howard County. Many residents have expressed concern about having to move out of the County to find this type of housing. The County needs to encourage both renovation and construction of housing for active seniors. However, in light of competition for the declining residential land supply, it is likely that much of the demand for active senior housing will have to be accommodated by renovation of existing homes. Ranch and split-level homes on smaller lots are good candidates, as are two-story homes that can add a first floor bedroom through remodeling or an addition.

In terms of new construction, senior housing products are evolving rapidly and County zoning regulations do not fully reflect current market distinctions. The regulations for "housing for the elderly" were written with congregate independent and assisted living in mind, but are currently being looked to as a means of addressing the active senior segment of the housing market. Refinement of these regulations is needed to ensure that zoning requirements fit the specific type of housing being built. For example, elderly housing requires a common dining area and permits higher densities, on the outdated premise that all elderly need meal assistance, are less active and will have a limited impact on neighborhood traffic. In order to supplement the congregate and apartment housing choices now available to seniors, the County should amend the Zoning Regulations to provide other housing options for seniors, including attached and detached single story, single

family homes. Such active senior housing developments would be age-restricted and include less extensive shared community facilities than currently required for elderly housing.

In addition, the County needs to reconsider senior housing developments that are currently allowed in the Rural West. The Rural Conservation (RC) and Rural Residential (RR) zoning districts allow housing for the elderly and group assisted housing by special exception. However, the West has fewer services available and does not have transit service that could provide access to services. The regulations related to this special exception use need to be reviewed and revised while keeping in mind the County's overall goals of providing housing opportunity for special populations, including the elderly, in all parts of the County and of assisting those active seniors who wish to age in place within their own communities.

Howard County's housing is expensive, which poses difficulties for seniors on limited incomes. Although several independent living communities for low and moderate income seniors have been built using Federal, State and County financing, the amount of affordable housing built is not keeping pace with the growth of the senior population. Accessory apartments and small group homes allow some affordable housing to be created. Programs to help renovate more affordable existing homes may be an effective way to meet affordable housing needs for seniors and the disabled.

How well senior housing needs are accommodated will influence how many and which seniors retire in Howard County. This has significant implications for government services, tax revenues and the local economy. See the final section of this chapter, *Fiscal Impacts, County Services and Growth Projections*, for further discussion on this issue.

Policies and Actions

POLICY 4.1: Ensure that the County's needs for uncommitted residential land for government facilities and land preservation are met in light of competing needs for housing.

- ◆ ***County Facilities.*** Determine the amount, types and location of land needed for future County and public school facilities.
- ◆ ***Land Preservation.*** Determine agricultural and green space preservation priorities.
- ◆ ***Acquisition Priorities.*** Establish and implement a realistic set of land acquisition priorities through the ten-year Capital Improvement Master Plan.

POLICY 4.2: Provide affordable housing for existing low and moderate income residents and for the diverse labor force needed for continuing economic growth. Reaffirm the County's long-standing policies of dispersing affordable housing units and providing housing for people of all income levels throughout the County.

- ◆ ***Existing Subsidized Housing.*** Develop an effective monitoring and intervention system for Federal and State assisted housing projects to ensure compliance with all requirements concerning conversion of such units to market rental rates.
- ◆ ***Funding for New Affordable Housing.*** Seek funding sources that will enable the Office of Housing and Community Development to expand the supply of affordable housing to serve low or moderate income households, including seniors and persons with disabilities.
- ◆ ***Existing Housing Stock.*** Update the Consolidated Plan to specify the most effective means of using existing older homes as the principal means of addressing affordable housing needs. Increase funding for home ownership programs and provide incentives to convert homes from rental to ownership.
- ◆ ***Services to Promote Self-Sufficiency.*** Provide services that promote self-sufficiency for families in subsidized housing (for example, affordable day care, tutoring for students, mentoring programs for youth, health services and transportation support).
- ◆ ***Homeless Shelter.*** Maintain support for providers of emergency, crisis and transitional shelter and related services.

POLICY 4.3: Ensure an adequate housing supply for the elderly, disabled and special populations.

- ◆ **Congregate Living Arrangements.** Support expansion of affordable congregate housing arrangements throughout the County for the elderly, the disabled and special populations.
- ◆ **Active Senior Housing.** Amend the Zoning Regulations to better distinguish and accommodate active senior, congregate independent and assisted living developments.
- ◆ **Senior Housing in the West.** Review the elderly housing special exception to determine the most suitable criteria and requirements for this special exception use in the Rural Conservation and Rural Residential Districts and, if necessary, amend regulations as appropriate.
- ◆ **Transportation Links.** Encourage the provision of transportation services to better link housing for seniors, the disabled and special populations to services and shopping.
- ◆ **Aging in Place.** Work with the nonprofit and for-profit sectors to assist seniors wishing to remain in their homes by developing programs to assist them with universal design renovations, creation of accessory apartments and needed home maintenance (for example, grants, tax credits and assistance with contracting).
- ◆ **Universal Design.** Educate builders on the concepts of universal design, which incorporates design features that ease use by seniors and persons with disabilities. Evaluate whether revisions to the Building Code are desirable. Develop programs that encourage or require builders to use universal design concepts in new housing and in substantially renovated housing.

Employment Land Use

Prospects for Employment Growth

Job growth in Howard County has been strong since 1980. [Figure 4-14](#) compares job increases in Howard County with other counties in the region and indicates that from 1980 through 1998 Howard County's annual job growth has surpassed that of neighboring counties. This is particularly apparent from 1990 to 1998, when Howard County's job growth was highest of all the surrounding counties in terms of percentage increase and second highest in absolute increase.

The 1990 General Plan established the following targets for annual job growth in Howard County: 2,820 jobs annually between 1990 and 1995; 3,040 between 1995 and 2000; 2,860 between 2000 and 2005; and 2,260 between 2005 and 2010. The national and regional recession in the early 1990s resulted in a net job loss in the County. However, this loss was erased by strong job growth during the remainder of the decade. As indicated in [Figure 4-14](#), 41,200 new jobs were created between 1990 to 1998, an average of about 5,150 new jobs per year, which exceeds the 1990 General Plan projections. Using more recent data from the Maryland Department of Labor, Licensing and Regulation, job growth from 1998 to 1999 was estimated to be even higher, with 6,500 new jobs added.

The Economic Development Authority's (EDA) Strategic Plan: A Vision for 2007 seeks a 5% annual increase in job growth. During the 1990s, a 5% annual increase would have equaled an average of about 5,000 jobs. While 5,000 jobs per year has been achieved over the latter part of this decade, it is an aggressive target for the long term in light of normal business cycle fluctuations, the current low unemployment rate and the anticipated retirement rate of aging baby boomers from 2010 on. The declining availability of large, well-located parcels for new development will also likely impact economic growth rates in the long term. Renovation and redevelopment of older business properties will allow for continued economic growth, but perhaps at a slower rate.

Figure 4-14
Regional Employment (1,000's)

Jurisdiction	1980		1990		1995		1998		1990 to 1998	
	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs	Percent	Jobs	% Increase
Anne Arundel County	176.0	10%	251.4	11%	262.9	11%	275.3	11%	23.9	10%
Baltimore County	309.0	17%	399.6	17%	409.2	17%	433.9	17%	34.3	9%
Carroll County	36.2	2%	52.8	2%	58.7	2%	64.4	3%	11.6	22%
Frederick County	44.2	2%	72.6	3%	86.6	4%	97.2	4%	24.6	34%
Harford County	51.0	3%	75.5	3%	81.9	3%	89.0	4%	13.5	18%
Howard County	56.9	3%	106.6	5%	125.3	5%	147.8	6%	41.2	39%
Montgomery County	349.9	20%	516.3	22%	526.4	22%	566.6	22%	50.3	10%
Prince George's County	264.7	15%	378.4	16%	369.7	16%	393.0	16%	14.6	4%
Baltimore City	504.0	28%	514.4	22%	457.8	19%	454.6	19%	(59.8)	-12%
TOTAL	1,791.9	100%	2,367.6	100%	2,378.5	100%	2,521.8	100%	154.2	7%

Source: U.S. Bureau of Economic Analysis, June 2000

The EDA's Strategic Plan also establishes an annual goal of increasing the County's commercial/industrial assessable real property tax base by 2% over the Consumer Price Index. This goal is a better measure of the benefit that economic development brings to the County, because income tax revenues generated by County job growth only accrue to Howard County when workers are County residents. An increase in property tax revenues from non-residential development, on the other hand, directly benefits the County.

The fiscal study prepared for this General Plan evaluated four scenarios that vary residential and job growth rates, as described previously in [Box 4-1](#). Two scenarios use the 1990 General Plan job growth pace and two scenarios use the 1990s trend pace of 5,000 jobs per year. Refer to the final section of this chapter for a discussion on the fiscal study results and the new job growth targets.

Availability of Employment Land

The County has about 15,000 acres of land zoned for employment uses, of which 37% or 5,470 acres, is undeveloped ([Figure 4-15](#)). However, not all of the undeveloped land is available for development. If parcels that are not

fully developed but are unavailable based on ownership (for example, the Johns Hopkins University Applied Physics Laboratory and W. R. Grace) are excluded, there are only about 3,000 acres of available uncommitted land.

The location of the available uncommitted employment land is identified in [Map 4-4](#). Similar to [Map 4-3](#) showing the uncommitted residential land, [Map 4-4](#) was developed using Fall 1998 State Assessment data on unimproved employment zoned parcels, with deductions for development proposals in the plan review process as of Spring 1999 and with deductions based on ownership.

Much of the undeveloped land is in locations considered highly desirable by developers and businesses. Proximity to I-95 is the most highly sought after location in the County. Columbia and the US 29 corridor are also highly desirable. The I-70 corridor has not been perceived to be as well located, which has slowed the development of the employment land in the Waverly mixed use community near I-70.

Most of the available employment land does not tend to have major devel-

**Figure 4-15
Non-Residential Land (Acres)**

District	Developed/ Committed	In Process	Uncommitted	Total	Percent Undeveloped
Mixed Use	0	160	480	640	100.0%
Planned Golf Course Community	0	40	0	40	100.0%
Historic	70	0	10	80	12.5%
New Town (Columbia)	2,020	0	700	2,720	25.7%
Commercial (B-1, B-2, SC, BR, CC)	1,020	80	270	1,370	25.5%
Office/Industrial/Warehouse (PEC, M-1, M-2, POR)	6,420	840	2,890	10,150	36.7%
TOTAL	9,530	1,120	4,350	15,000	36.5%

Source: Howard County DPZ, July 1999

opment constraints. A few parcels require road extensions that will impact the economics and timing of development. Zoning setback requirements create difficulties in developing some smaller industrial (M-1 and M-2) parcels, especially those adjacent to residential uses. Development of some parcels will be constrained by stream buffers and 100-year floodplain restrictions. These constraints are more significant in the area of US 1, where the land is lower in the watershed and streams are larger, particularly Deep Run, Dorsey Run and the Little Patuxent River.

The County does face constraints, however, in terms of the amount of land available for new development. As indicated in Figure 4-16, which shows the distribution of available uncommitted parcels by size, there are only 11 available parcels that are 50 acres or larger. Over 70% of the parcels are under five acres in size, although these encompass only 13% of the acreage.

Due to the high price of commercially zoned land, there is a tendency for retail uses to be developed to the maximum amount permitted in the industrial and office-oriented zoning districts where land is cheaper. As land resources become more limited, it becomes increasingly important that the purpose of the employment zoning districts be clear and reflected in the uses permitted in those districts. Prime office and industrial land needs to

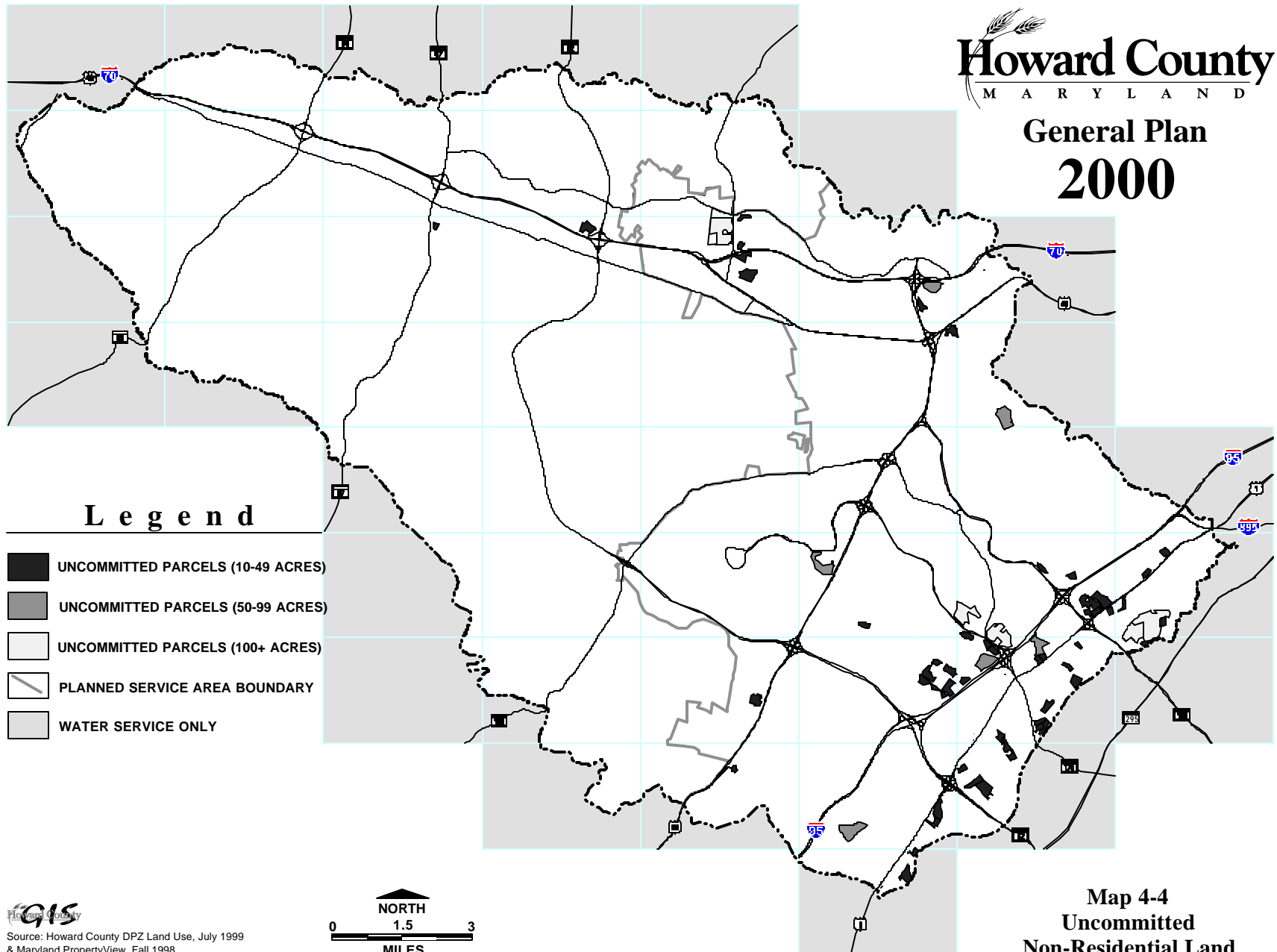
**Figure 4-16
Available Uncommitted Non-Residential Land**

Category	Acres		Parcels	
Less than 5 acres	379	13%	281	74%
Greater than 5 acres and less than 50 acres	1,359	47%	89	23%
Greater than 50 acres	1,136	40%	11	3%
TOTAL	2,873	100%	381	100%

Source: Howard County DPZ, April 1999

be targeted for these employment industries rather than retail uses. This will make the best use of the limited employment land and maximize the Economic Development Authority's potential to attract target industries. Additionally, directing retail uses to retail zoned properties will support the market for space in existing retail centers and avoid the auto-truck traffic conflicts that occur when retail is located in industrial areas.

Howard County
MARYLAND
General Plan
2000



The County's remaining uncommitted employment land could be absorbed quickly if economic growth remains strong. Between July 1997 and July 1999, a time of rapid economic growth for the County, approximately 600 acres of non-residential land were developed. At this rate, the available land would be absorbed within 10 to 12 years. It is not likely, however, that growth could be sustained at this rate over a decade. The inventory is perhaps most constrained by the limited number of large parcels that can be developed for warehousing, which is a strong market, or for planned business parks that will attract the industry sectors targeted by the Economic Development Authority (for example, high technology and corporate headquarters).

The finite supply of potential employment land points out the importance of two key sources of land for continued economic growth: first, the redevelopment and revitalization of older properties, discussed next; and second, the major mixed use centers, discussed later in this chapter.

Redevelopment and Revitalization of Employment Areas

In the long term, the County's ability to accommodate new businesses and industries will depend upon revitalization and redevelopment of older properties that are underused or obsolete. Revitalization focuses on renovation and reuse of older buildings and infrastructure. Redevelopment includes demolition of existing structures, consolidation of small properties to create larger parcels, and new construction that replaces older buildings or incorporates them into new, more intensive development.

Information needs to be assembled on properties with potential for redevelopment or revitalization. An inventory of these properties is the starting point for detailed planning that examines the opportunities as well as the strategies and tools needed to encourage revitalization and redevelopment.

This General Plan calls for redevelopment/revitalization planning that focuses on employment and retail land along the US 1 and US 40 corridors, as well as older business parks and commercial centers elsewhere in the County. Detailed planning may need to focus on nodes along the transportation corridors, such as the MARC stations or highway interchanges. This

planning process will be a major component of the community planning process discussed in Chapter 5, *Community Conservation and Enhancement*. Major communities such as Elkridge, Savage, North Laurel and Ellicott City include portions of the US 1 and US 40 corridors. In addition, the County's community conservation goals encompass many small neighborhoods, mobile home parks and residential motels that are situated within an industrial or commercial context in the US 1 corridor.

Redevelopment will sometimes provide opportunities to introduce new residential uses to create small mixed use developments. These developments, discussed in more detail in Chapter 5, *Community Conservation and Enhancement*, can provide an attractive focus for a community and make efficient use of limited land resources. However, as noted earlier in this chapter, protecting the County's supply of employment land is also an important priority. Well-designed mixed use developments can combine compatible housing, employment and retail uses without requiring large setbacks that restrict development of the employment component or the use of adjacent employment land.

Redevelopment will require addressing factors that already make development difficult within sections of the US 1 and US 40 corridors. The limited availability of large parcels and the size requirements of contemporary employment facilities often inhibit redevelopment. It may be necessary to assemble multiple parcels under separate ownership, which is time-consuming and expensive. Other constraints include problematic highway access from individual parcels, the need for transit to bring workers to jobs, zoning or building code provisions, obsolete older buildings, environmental concerns, aging infrastructure and utilities, and the need for stormwater management systems.

Incentives for revitalization/redevelopment may include additional permitted uses, increased flexibility in bulk regulations, expedited processing, an alteration in the fee schedule for development review fees, tax or development financing incentives, and County capital projects to improve infrastructure. Planning for economic revitalization/redevelopment will be a joint effort of the Department of Planning and Zoning and the Economic Development Authority, with participation from business and residential

groups. Boundaries for revitalization/redevelopment areas will be defined during the planning process, but may need to be refined as individual proposals for infill or redevelopment evolve.

Economic Development Target Industries

The “new economy” so often talked about in recent years has and will continue to create the need for more service and technical jobs and less manufacturing jobs. Figure 4-17 shows the historic and future regional outlook of employment by industry. Service jobs will continue to represent a larger percentage of the regional economy through 2020. The service sector contains a broad range of occupations including medical, legal, engineering, education, research and development, high tech, personal services, and restaurant and hotel jobs. These occupations are diverse, ranging from relatively low skill/low wage jobs to high skill/high wage jobs. As will be discussed later in this chapter, filling low skill/low wage jobs is currently a problem in the County that will need to be further addressed.

Related to the changing economy, the Economic Development Authority

recognizes two types of target employment sectors - natural target industries and outreach target industries. Natural target industries will come into Howard County on their own. These include distribution, health care support offices, and nonprofit and association headquarters. The Economic Development Authority has identified outreach target industries as those that offer high-technology jobs with high-end salaries. Outreach target industries include corporate headquarters, information technology, technology-driven manufacturing, life sciences and information processing.

The outreach target industries have a higher-than-average economic impact on the community. Given Howard County’s strategic location in the Baltimore-Washington corridor and its high quality of life, the County can realistically expect to compete for these target employment sectors. However, the County will need to assure the availability of suitable land. As noted earlier in this section, making the best use of limited land resources will require: protecting existing Light Manufacturing (M-1), Heavy Manufacturing (M-2) and Planned Employment Center (PEC) zoning;

Figure 4-17
Regional Employment by Industry (1,000's)

Job Category	1980		1990		2000		2010		2020	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Farm employment	13.2	0.7%	10.2	0.4%	7.9	0.3%	6.8	0.2%	6.0	0.2%
Agric. and other	9.1	0.5%	19.7	0.8%	23.6	0.9%	26.3	0.9%	28.1	1.0%
Mining	1.5	0.1%	2.5	0.1%	1.7	0.1%	1.6	0.1%	1.6	0.1%
Construction	106.7	5.9%	165.0	7.0%	153.9	6.0%	166.5	5.9%	171.9	5.8%
Manufacturing	192.2	10.7%	170.8	7.2%	139.6	5.5%	134.3	4.8%	129.3	4.4%
Trans. & public utilities	80.1	4.5%	98.6	4.2%	107.6	4.2%	114.2	4.0%	119.5	4.1%
Wholesale trade	82.0	4.6%	103.0	4.3%	106.9	4.2%	114.4	4.1%	119.8	4.1%
Retail trade	308.4	17.2%	398.2	16.8%	422.0	16.6%	467.6	16.6%	491.7	16.7%
Finance, ins. & real estate	134.4	7.5%	208.6	8.8%	215.9	8.5%	238.0	8.4%	248.7	8.5%
Services	439.9	24.5%	745.8	31.5%	925.9	36.4%	1,116.7	39.6%	1,191.6	40.5%
Government	426.2	23.8%	445.9	18.8%	440.2	17.3%	435.6	15.4%	433.0	14.7%
TOTAL	1,793.7	100.0%	2,368.3	100.0%	2,545.2	100.0%	2,822.0	100.0%	2,941.2	100.0%

Source: U.S. Bureau of Economic Analysis (1980-1990), MDP (2000-2020)

encouraging development of the employment areas within Mixed Use Districts; redeveloping underused or obsolete properties; and promoting assembly of land to create large parcels for new development.

In addition, resources such as marketing and incentives are required to attract target industries, especially if the goal is to have these industries assemble land or locate in redevelopment areas. Incentives that Howard County can offer include financial assistance, tax incentives and capital improvements to existing infrastructure.

Economic Development Work Force Needs

According to the Economic Development Authority, there is a desirable match between the skills of the County's resident work force and the white collar employment needs of outreach target industries. The County's resident work force has the education and training needed for jobs in these industries. The County also provides a housing mix and a level of service that is attractive to these employers.

As a result of the County's strong job growth since 1994, unemployment in the County was only 1.4% in January 2000, the lowest in the State. Employers are having difficulty finding workers for both low wage retail and service jobs and higher skilled technical positions. The Howard County Work Force Preparedness Committee's Needs Assessment Study (conducted Fall 1998) indicates that almost 40% of existing jobs and 25% of new jobs needed in the subsequent three years are in the categories of professional/technical. However, in the long term, the chronic shortage of entry-level and unskilled workers is a more serious issue, due to the high cost of housing in the County and lack of transit options, which may constrain the rate of job growth in the future.

The industries that generate lower paying and lower skilled jobs, such as some warehouse/distribution, service and retail businesses, are having an increasingly difficult time attracting resident workers. Many lower skilled workers are available in other parts of the Baltimore-Washington region, but often have transportation problems getting to jobs in Howard County. One evolving solution to this problem has been providing transportation to

County jobs from surrounding jurisdictions that have concentrations of residents seeking employment. Several programs have been initiated in the past few years (reverse commute, employer shuttle, transit links and transit schedule changes). Attracting a resident work force for lower skilled and lower paying jobs would require a greater supply of affordable housing.

More than two-thirds of the County work force commutes to jobs outside this jurisdiction. Attracting County residents to both blue and white collar jobs in the County is a very desirable approach to meeting employment growth targets while reducing transportation costs and commuting time and expenses. The Economic Development Authority has worked with the private sector to encourage qualified Howard County residents who are commuting to jobs outside the County to consider filling job openings within the County. A continuing challenge is to identify effective strategies to accomplish this.

Data from the 2000 Census will become available shortly after this General Plan is adopted. Analysis of this data will allow the County to better understand the characteristics of the resident labor force, to refine the types of target industries that are compatible, and to define accessibility and transportation services needed for non-resident labor.

Policies and Actions

POLICY 4.4: Make efficient use of land resources for long-term economic growth.

- ◆ ***Land Use and Economic Development.*** Coordinate land use policies and economic development programs to encourage both the expansion of current businesses and attraction of new ones.
- ◆ ***Limits on Retail Uses.*** Protect the supply of uncommitted land suitable for target industries by amending the Zoning Regulations to more strictly limit retail uses in the Planned Employment Center (PEC), Manufacturing: Light (M-1) and Manufacturing: Heavy (M-2) zoning districts. Ensure retail space in these districts is accessory to permitted uses only.

- ◆ **Activity Near Transportation Nodes.** Encourage intensification of economic development near transportation nodes and transit services, especially MARC stations, for efficient access.
- ◆ **Revitalization/Redevelopment Plans.** Work with the Economic Development Authority, the private sector and community groups to create revitalization/redevelopment plans for US 1, US 40 and, if appropriate, older business parks or commercial centers in other areas. Plans should identify target areas, specific strategies, appropriate zoning and the incentives necessary to encourage private sector investment in revitalization and redevelopment.
- ◆ **Coordination with Community Plans.** Coordinate planning for renovation and redevelopment of employment sites with community plans for adjacent areas.
- ◆ **Renovation and Redevelopment.** Revise zoning designations and development regulations as needed to facilitate renovation and redevelopment.

POLICY 4.5: Encourage economic growth, provide job opportunities for County residents and ensure the County's fiscal health.

- ◆ **Economic Development Planning.** Assist the Economic Development Authority in updating the Strategic Economic Development Plan for Howard County.
- ◆ **Target Industries.** Support the Economic Development Authority's emphasis on attracting outreach target industries to the County.
- ◆ **Recruiting Howard County Residents.** Develop and expand the Economic Development Authority's programs to recruit Howard County residents who are commuting to jobs outside the County to fill jobs created in the County.
- ◆ **Employment-Related Transportation Needs.** Pursue reverse commute transportation options that help to match available non-resident workers with County employers. Identify and provide for critical em-

ployment-related, intra-County transit service needs.

- ◆ **Employment-Related Housing Needs.** Provide housing opportunities so that people who work in the County may live near employment areas. Promote and pursue the State's "Live Near Your Work" program or a similar County-sponsored program.

Mixed Use Development

The 1990 General Plan proposed creation of five large mixed use centers in eastern Howard County. These mixed use centers were proposed as a way to plan efficient use of the remaining large tracts of undeveloped land in key locations by combining housing, employment, and certain public facilities and services such as schools and recreation. Several of the recommended sites were to be converted from employment zoning to mixed use, to better balance residential and employment land uses and traffic in the area. Mixed use centers were also intended to provide sites for affordable housing and logical stops for public transit, as the mix of activities in these centers would enable transit to be based on a larger potential ridership than only peak hour commuters (Box 4-3). Mixed use was also proposed as a tool to promote redevelopment of smaller sites on US 1 and US 40.

In response to the 1990 General Plan recommendations, the Mixed Use District was created in 1993 to allow major (MXD-3) and minor (MXD-6) mixed use developments. MXD-3 sites are over 75 acres and may be developed at three units per gross acre; MXD-6 sites are smaller, 25 to 75 acre sites, which may be developed at six units per gross acre. The zoning regulations for mixed use centers require a mix of residential and employment uses, an affordable housing component, a community focal point, and substantial open space for environmental protection and community use. Detailed standards for design quality, including the relationship to adjacent areas, must be evaluated by the Howard County Planning Board.

MXD-3 zoning has been applied to four of the five sites proposed in the 1990 General Plan. The fifth proposed site, the Waverly site near MD 99

Box 4-3

Benefits of Mixed Use Centers

Mixed use centers make more efficient use of increasingly limited land resources by:

- allowing different but compatible uses to share the same property.
- creating more opportunities for affordable housing by absorbing land costs for such housing within a larger development and by the ability to share the same infrastructure (roads, utilities, transit).
- creating opportunities to reduce home-to-work commuter trips by providing housing and jobs within easy pedestrian access.
- mixing housing, employment and public facilities to create a more balanced traffic pattern. This makes better use of the local road network than the heavy, one-way, peak hour traffic patterns typical of large employment-only developments.
- providing needed sites for public facilities such as schools, libraries and social services in areas of the County where available land is increasingly hard to find.
- ensuring that sites at prime locations are not limited to housing or employment, which make development of such sites more vulnerable to market fluctuations.
- requiring generous open space, protecting environmental resources and creating proper buffering between mixed use centers and adjacent neighborhoods.

and Marriottsville Road, was approved prior to the 1993 Comprehensive Zoning as a mixed use community created through a composite of several zoning districts. The smallest of the MXD-3 sites, at MD 100 and Snowden River Parkway, was decreased in size and divided by the final alignment of MD 100 and will be developed using conventional zoning districts. The owners of one of the MXD-3 sites, the Chase Property, are seeking approval of plans to quarry part of the site, which will defer MXD development until after 2020. [Map 4-21](#), the summary map located at the

end of this chapter, shows all of the sites currently expected to be developed as MXD by 2020, as well as Waverly, Turf Valley and Lyndwood which used other zoning categories to achieve mixed use.

Of the five major mixed use sites from the 1990 General Plan, only Waverly is under construction. Plans for the two major MXD Districts on MD 216 are moving through the review process, which has been more complicated than anticipated. The MXD zoning provides design flexibility to meet a broad range of performance standards. There has been extensive debate about how these standards are met. These two developments encompass the County's largest remaining tracts of available land within the Planned Service Area. As they develop over the next 10 to 15 years, they will provide valuable land resources to accommodate the demand for employment and residential growth. Based on initial plans, these MXD Districts will provide an estimated 432 acres of residential land, 232 acres of employment land and 361 acres of open space (some of which will be used for public or community facilities). Parcels which have MXD zoning, but have not yet sought to use this zoning option, such as the Price property, should be encouraged to do so by increasing the employment acreage of the major mixed use developments.

The 1990 General Plan also recommended creation of smaller mixed use developments that could provide community centers or focal points within existing communities. The 1993 Comprehensive Zoning approved two MXD-6 sites. One of these MXD-6 sites, Cherrytree, will develop as mixed use. Plans have been submitted and are under review. As for the MXD-3 District, the plan review process has been contentious and protracted.

The County's land use inventory shows few undeveloped properties in the 25 to 75 acre range. However, one intent of the MXD-6 District is to encourage assemblage and redevelopment of obsolete or underused parcels. The complexity, length and unpredictability of the current MXD approval process is a major deterrent to using mixed use on small parcels, which can be more easily developed as a single use. Other strategies are needed to provide small mixed use opportunities that can encourage redevelopment and provide suitable locations for employment and higher density housing.

The Community Master Planning process described in Chapter 5, *Communi-*

nity Conservation and Enhancement, as well as the Corridor Revitalization Studies process described earlier in this chapter will provide opportunities to identify potential sites for small mixed use development. If potential sites and parameters for development of these sites are identified in Community Master Plans or Corridor Revitalization Studies, it should be possible to simplify the subsequent zoning process.

Policies and Actions

POLICY 4.6: Encourage development of the existing major mixed use districts and provide opportunities for creation of small mixed use centers.

- ◆ ***Mixed Use District.*** Amend the Mixed Use District (MXD) regulations to streamline the approval process, particularly for the small Mixed Use District (MXD-6). Alternatively, create a new zoning option that provides a flexible approach and simpler approval process for mixed use development on smaller sites.
- ◆ ***Creation of Small Mixed Use Centers.*** Identify properties suitable for development as small mixed use centers through Community Master Plans and Corridor Revitalization Studies. Rezone the properties as part of a comprehensive zoning plan that will accompany approval of the Community Master Plan or Corridor Revitalization Study.

Public Sewer and Water

Introduction

The pace of residential and employment growth in the County is directly related to the need for additional public water and sewer service. It is important to maintain a growth rate that does not exceed the sewage treatment capacity of the Little Patuxent and Patapsco Wastewater Treatment Plants and the Baltimore City and Washington Suburban Sanitary Commission (WSSC) water supply systems that serve eastern Howard County.

Timing of Sewer and Water Service Priorities

This General Plan incorporates by reference the Master Plan for Water and Sewerage adopted by the County Council on December 6, 1999. Any proposed future amendments to the Master Plan for Water and Sewerage must be reviewed by both the Department of Planning and Zoning and the Maryland Department of Planning for consistency with the General Plan before they are adopted by the County and approved by the Maryland Department of the Environment. Under State law the Water and Sewerage Master Plan must be updated every three years.

The County, in adopting the Master Plan for Water and Sewerage, delineates service priorities within the Planned Service Area as existing, 0-5 years, 6-10 years, and comprehensive (beyond 10 years). In accordance with State regulations, a State permit is required for the construction of sewerage facilities (Box 4-4). This permit may only be obtained if a property is in the 0-5 year priority service area.

The priority service area classification is changed when the development process begins, typically when a Sketch Plan is submitted. This change from the comprehensive or 6-10 year priority to the 0-5 year priority is pro forma. Every six months all such category shifts are batched and approved by the County Council as part of the semi-annual update of the Master Plan for Water and Sewerage. The shifting of property into the 0-5 year priority service area should be a planning function based on the amount of capacity the County is able to allocate at a given time, rather than in response to initial plan submission.

Financing Water and Sewer System Extensions

The County, through the self-sustaining Enterprise Fund, pays most of the construction costs for the public water and sewerage system. Payment is made directly, as in capital projects, or indirectly by reimbursing developers through developer agreements for extensions to new subdivisions. A developer agreement is a contract between the County and a developer under which the developer constructs system extensions for the subdivision. The County reimburses the developer for the cost of the system extensions as properties in the subdivision connect to the system. Reimbursements to the developer are financed by County bond sales. These bonds are retired

Box 4-4

The Water and Sewerage Master Plan

The State mandates that local authorities may not issue building permits unless the water supply and sewerage systems are adequate to serve the proposed development, taking into account all existing and approved developments within the service area. Nor may local authorities record or approve a subdivision plat unless water and sewerage systems would be adequate and completed in time to serve the proposed development. In Howard County, water and sewer capacity is formally allocated to development at the end of the subdivision or site development plan review process.

Howard County has an adopted Master Plan for Water and Sewerage, which must be approved by the Maryland Department of the Environment. This Master Plan establishes and delineates a water and sewerage service area and identifies the remainder of the County as a “no planned service” area.

Prior to the provision of public water or sewer service, a property must be included in the Planned Service Area and must enter the County’s Metropolitan District. Within the service area, service expansion is dependent on the County capital projects construction schedule or, in response to a development proposal, by a Developer Agreement to make needed system improvements. This sequence of events presupposes that the proposed sewer or water improvement represents an orderly extension of service and is consistent with the General Plan and subdivision regulations. Therefore, orderly extension of the public water and sewer system is controlled through the County Capital Budget and ten-year Capital Improvement Master Plan, the Metropolitan District entry process, the subdivision plan review process, and the water and sewer capacity allocation procedures.

using revenues collected from property owners by means of front foot benefit assessments.

Because the County spreads the cost of these sewer extensions across all current sewer construction costs, it is able to finance sewer and water extensions in the East that are necessary because of failing septic systems and/or bad wells, at a low cost to the homeowner. To date, these extensions to replace failing septic systems have generally been to older homes built

prior to construction of the public water and sewer systems. These homes are typically on small lots and were built when septic system standards were less rigorous than today.

Various other methods of financing the extension of service to new subdivisions are used in the region. Several neighboring counties require developers to build extensions to new subdivisions but do not reimburse the developer, while other counties build the extensions themselves using bonds to finance the construction. These bonds are then retired with revenue from front foot benefit assessments. The choice of method to finance system extensions for new development is related to the county’s land use goals and fiscal situation at different stages in its development.

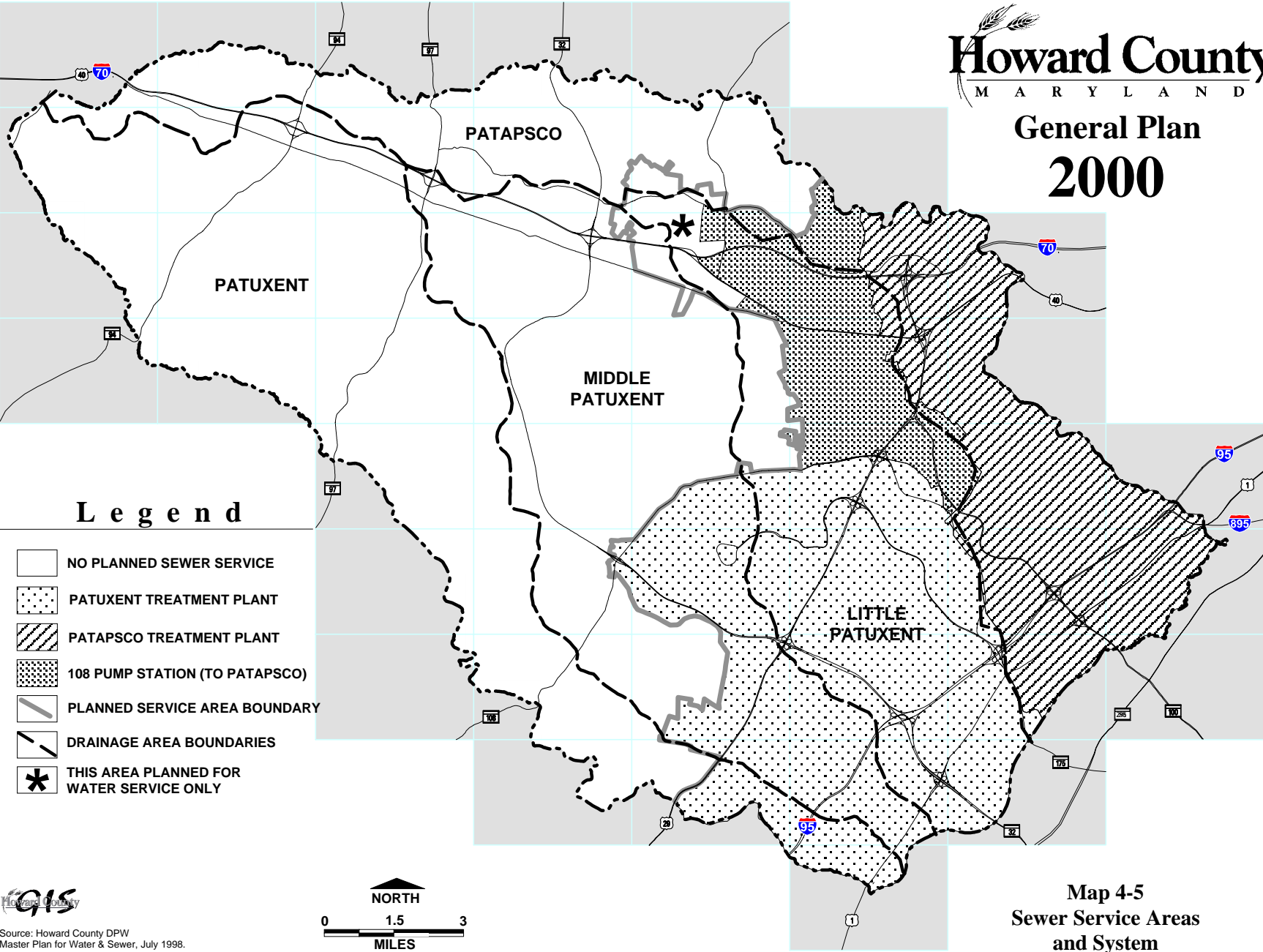
Two potential problems would surface if Howard County were to modify the present financing method and not reimburse developers for sewer and water extensions. First, the cost to individual homeowners petitioning for sewer or water service because of septic/well problems would increase dramatically, since the cost would no longer be spread across the entire system. This problem may be insoluble. In fact, in other jurisdictions that finance sewer and water extensions differently, the extensions to serve houses with septic and well problems are costly. This results in homeowners being reluctant to petition for necessary sewer/water extensions because of the cost. Frequently, the Health Department then steps in to require extension, and the County bears the cost of these extensions.

The second potential problem is that developers will likely add the cost of paying for the sewer and water extension to the price of the house, increasing the price by several thousand dollars. One could argue that houses will sell for what the market will bear and that sewer and water costs will be absorbed. However, the average cost of housing in Howard County is already high. Despite these problems, the logic of the County paying developers for sewer and water extensions and then recouping these costs from the homeowner over time bears further scrutiny.

The Sewer Service System

Map 4-5 shows the sewer service areas and system, and these are further described in Box 4-5. The County will rely on expansions at its Little

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Map 4-5
Sewer Service Areas
and System

Box 4-5

Public Sewer System in Brief

The public sewerage system serves that portion of the County known as the Metropolitan District and is divided into two major service areas, the Patuxent and the Patapsco. The Patuxent Service Area serves the Columbia and Savage sections of the Metropolitan District. The Patapsco Service Area covers the remainder of the Metropolitan District, including the Ellicott City and Elkridge areas, along with the Route 108 Pumping Station Service Area. The Route 108 Pumping Station Service Area is a third large service area which provides system flexibility. This area is north of Route 108 and west of US 29, and was originally part of the Patuxent Service Area. The Route 108 pumping station gives the County the option of diverting flow from this area to the Patapsco Service Area (Map 4-5).

The Patuxent Service Area

The wastewater generated from the Patuxent Service Area is treated at the Little Patuxent Water Reclamation Plant, which is owned and operated by Howard County. The capacity available at any time at this plant is dependent on the schedule of capacity expansion improvements and on the ability of Howard County to acquire the necessary permits from the State of Maryland for discharging increased quantities of treated effluent into the Little Patuxent River, which is a tributary to the Chesapeake Bay.

The Little Patuxent Water Reclamation Plant, located in Savage, currently has a capacity of 18 million gallons per day (mgd) and has allocated approximately 17.5 mgd of its capacity. Note that this current usage includes flows from the Route 108 Pumping Station Service Area. Plans to upgrade and expand the plant to a capacity of 25 mgd are currently underway. Construction of the 25 mgd expansion should be completed by 2002. Each mgd of treatment capacity is sufficient to serve approximately 4,000 homes. The County plans to further expand the plant to a capacity of 29 mgd after 2010, with ex-

pansion to be completed by 2015. Biological nutrient reduction and enhanced phosphorus removal have been added to the plant as a pilot demonstration project, with full implementation scheduled to be complete by 2002. The successful implementation of these processes is key to any expansion of the plant.

The Patapsco Sewer Service Area

For the treatment of sewage from the Patapsco Service Area, Howard County is dependent on the Patapsco Wastewater Treatment Plant, which is owned and operated by Baltimore City. Howard County's share of the treatment capacity at the Patapsco plant is dependent on two factors: (1) agreements with the other jurisdictions sharing the plant—Baltimore City, Baltimore County and Anne Arundel County; and (2) Howard County's contribution to the cost of constructing or expanding the plant. Capital costs are shared among contributing jurisdiction's in proportion to each jurisdiction's share of capacity.

Howard County's share of the plant's current 63 mgd capacity is 10.37 mgd. Current usage by the County approximates 6.3 mgd. Further expansion of the plant to a capacity of 87.5 mgd should be completed by 2005. At that time, Howard County's share of the 87.5 mgd will be at least 12.4 mgd. The actual amount is currently under negotiation.

The Patapsco plant expansion beyond 87.5 mgd will require a new discharge permit from the State. This permit is subject to the same rigorous review process and similar uncertainties as the expansion of the Little Patuxent plant, but to an even greater degree because of the plant's scale and the significance of the Patapsco River's impact on the Chesapeake Bay. Any increase in Howard County's share of the Patapsco plant would require higher costs as well as competition for the available capacity with other jurisdictions experiencing growth pressures.

Patuxent Water Reclamation Plant to provide the majority of the County's future treatment requirements and will minimize use of Baltimore City's Patapsco Wastewater Treatment Plant to remain below the future allowable capacity of 12.4 million gallons per day (mgd).

The County's current growth rate will absorb all of the Little Patuxent plant's planned capacity of 25 mgd by 2005. The County could divert ex-

cess flows to the Patapsco plant, since the total planned capacity from the two plants will be adequate for total projected use. After 2010 however, total projected use will begin to exceed total planned capacity. Therefore, the County plans an additional expansion of the Little Patuxent plant to 29 mgd after 2010, with the expansion to be completed by 2015.

While the County has the financial and engineering capability to expand

the capacity of the Little Patuxent plant, all increases in treatment capacities depend on receiving State discharge permits. A moratorium on sewer allocations could be imposed if plant expansions are delayed or limited.

The ultimate planned expansion for the Little Patuxent Water Reclamation Plant will accommodate the flows from planned future growth in the Little Patuxent sewershed, provided growth phasing is consistent with plant expansion. Planned future growth in the Patapsco sewershed will be accommodated by the County's increased share of the capacity of Baltimore City's plant, once it is expanded in 2005.

The Water Service System

The water for the County's public water supply system is purchased from Baltimore City and from WSSC through a series of negotiated legal agreements (Map 4-6). More than 95% of the County's public water supply is provided through the Baltimore City Central System. In addition to supplying water to Baltimore City and Howard County, the Central System also provides water to Anne Arundel, Baltimore, Carroll and Harford Counties. The Central System's water sources include Loch Raven, Prettyboy and Liberty Reservoirs and the Susquehanna River.

Less than 5% of the County's public water is provided by WSSC. In addition to supplying water to the County, WSSC also provides water to Montgomery and Prince George's Counties. Water sources for WSSC are the Patuxent River reservoirs and the Potomac River. The water from WSSC is normally used in the County's water pressure zone located east of I-95 between Laurel and Jessup. In an emergency, the County system can pump water from WSSC to other areas of the County.

Howard County's water system is currently divided into six pressure zones. An additional seventh water pressure zone is planned in the southern portion of the County for the Hammond Branch Extended area. This area is located west of US 29 between MD 216 and Johns Hopkins Road.

Future water supply needs will place major capital improvement requirements on Howard County. The Baltimore Central System will require major new facilities to provide for the future water needs of Howard

County. The County does not plan to seek additional capacity from the WSSC supply system because this water is more costly than the water from the Baltimore Central System.

The supply of water is not expected to be a constraint on projected growth and development through the year 2020. Some acceleration of improvements to the conveyance and storage facilities will be needed at the County level, but these do not present unusual problems.

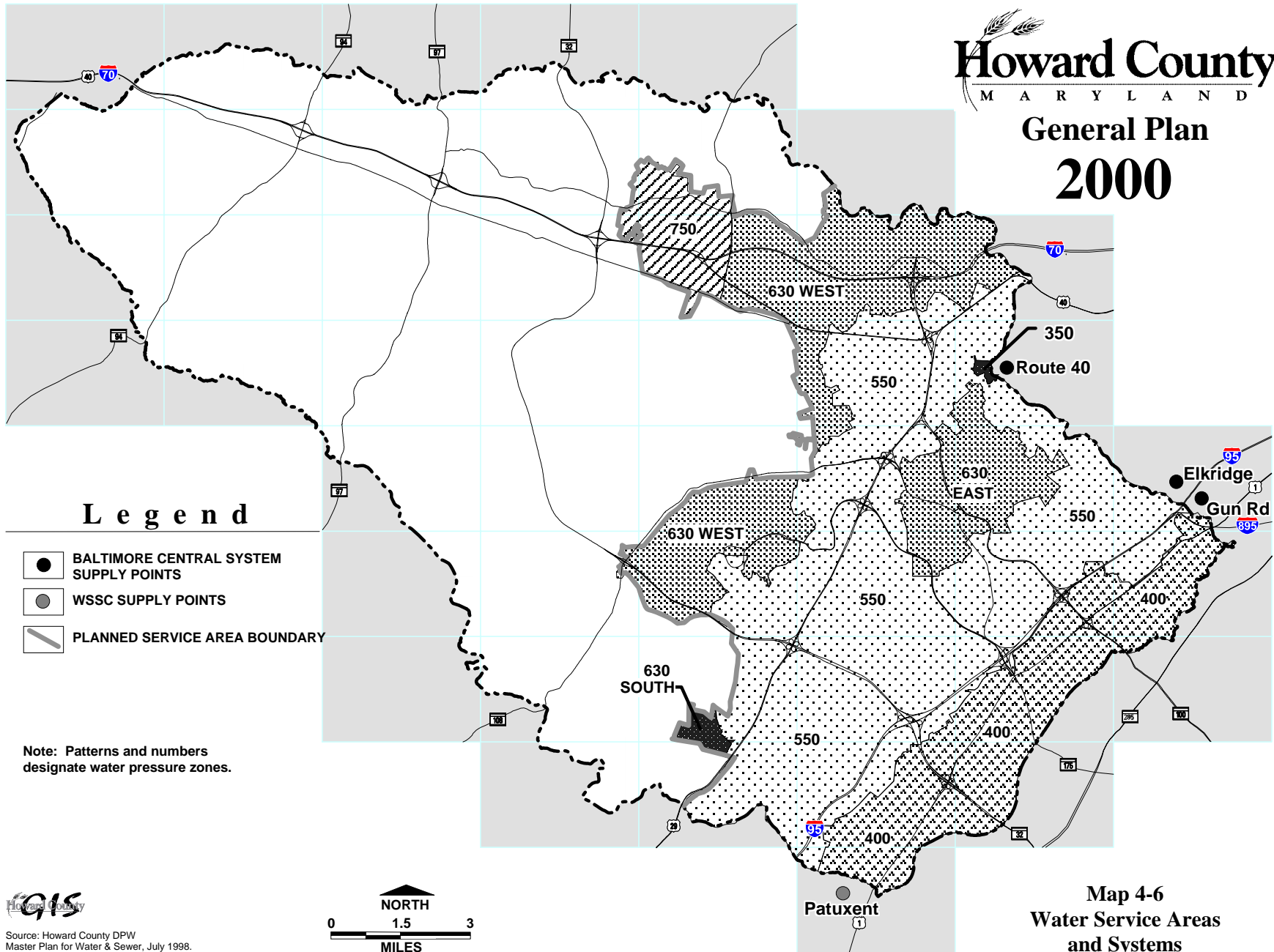
Expansion of the Planned Service Area

Most expansions to the Planned Service Area (PSA) since 1990 have occurred on a site-specific basis to address failing septic systems, potential well contamination and a few changes in land use. In July 1993, the County Council voted to extend the PSA to include the area around the Alpha Ridge Landfill. This extension was done solely out of concern for potential future groundwater contamination originating from the Alpha Ridge Landfill, therefore, only water service is provided in this area. No change from rural land uses or zoning is intended. Sewer service may be provided in this area only for qualifying parcels and under certain conditions. A qualifying parcel is one that is owned by either the Howard County Government or the Board of Education of Howard County and that adjoins another parcel where sewer service is available. Sewer service to a qualifying parcel may be extended only if sewer service can be extended without making sewer service available to any intervening non-qualifying parcel not owned by Howard County Government or the Board of Education of Howard County. *[Amended per CB 18-2006, Effective June 7, 2006]*

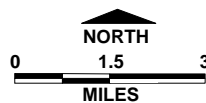
As discussed in Chapter 2, *Responsible Regionalism*, the boundary of the PSA is important not only to determine which parcels will be served by public water and sewer service, but also because the PSA is Howard County's designated growth area (Priority Funding Area). As such, adjustments to the PSA have major ramifications in terms of both permitted development intensity and the level of other County and State services.

Howard County is expected to continue to experience strong demand for economic and residential growth due to its prime location and high quality of life. However, residential land in the PSA is quite limited. One of the

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Source: Howard County DPW
 Master Plan for Water & Sewer, July 1998.



four growth scenarios described previously in **Box 4-1** included consideration of an expansion of the present water and sewer service area boundaries to accommodate additional residential units. Based on the fiscal analysis, there is no compelling fiscal need for additional growth that justifies an expansion of the PSA boundary.

Although this General Plan does not propose an expansion of the Planned Service Area to accommodate future residential or commercial growth, it should be anticipated that in the future there may be isolated situations where minor adjustments may be appropriate. Any requests for a General Plan amendment for expansion of the Planned Service Area should be denied unless the following minimum criteria are met: the proposed expansion of the Planned Service Area is part of a proposed zoning and is consistent with the General Plan and Smart Growth policies, or the proposed expansion of the Planned Service Area is intended to provide for a public or institutional use such as a religious facility, charitable or philanthropic institution, or academic school. In each case sewer and water infrastructure capacity [Amended per CB 44-2002, Effective July 2, 2002] and costs shall be analyzed to confirm the feasibility and availability of scheduled capacity. Institutional or public use expansions of the Planned Service Area boundary are limited to institutional or public properties adjoining the existing boundary of the Planned Service Area without including an intervening privately owned parcel currently not located in the Planned Service Area. [Amended per CB 18-2006, Effective June 7, 2006] An amendment to the Planned Service Area for an institutional use shall only include the minimum parcel size necessary to serve the proposed use. Subdivision of the parcel consistent with the Planned Service Area boundary amendment shall occur subsequent to the Council Bill approving the amendment and prior to the inclusion of the parcel into the Metropolitan District. Any proposed institutional use for the remaining parcels not included in the Planned Service Area may be the subject of an additional amendment at a subsequent date. If an amendment to the Planned Service Area is approved for a public or institutional use, it shall be approved with conditions limiting the expansion to the particular use proposed at the time of expansion and providing a deadline by which the improvements for the proposed use must be completed and connected to the public water and/or sewerage system. If the parcel is not used for the public or institutional use

proposed at the time of passage of the Bill and is not actually constructed and connected to the public water and/or sewerage system by the deadline specified in the Bill, the Planned Service Area expansion and the Metropolitan District inclusion, if applicable, shall be null and void and the Planned Service Area as it relates to the parcel shall revert to that in place prior to the Council Bill approving the expansion, without any additional action of the Council. [Amended per CB 44-2002, Effective July 2, 2002]

Policies and Actions

POLICY 4.7: Ensure the adequacy of water and sewer services.

- ◆ ***Plant Capacity Expansion.*** Accommodate flows from projected growth in the Planned Service Area by constructing the planned expansion of the Little Patuxent Water Reclamation Plant.
- ◆ ***Master Plan for Water and Sewerage.*** Do not include capital projects for capacity expansion beyond the needs of the current Planned Service Area.
- ◆ ***Priority Category Shifts.*** Defer shifts into the 0-5 year priority status for development proposals until they have received Adequate Public Facilities Ordinance approval.
- ◆ ***Developer Agreements.*** Assess the merits of refining the current method of financing water and sewer extensions through developer agreements.

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Transportation

Highways

Transportation strategies in the 1990 General Plan focused on ways to address rapidly increasing traffic demands. A top priority was placed on planning for and funding Howard County's portion of a highway grid system serving the Baltimore-Washington region. Many of the highway

projects identified in the 1990 General Plan are now open to traffic or are well along in the planning and engineering process.

The transportation challenges for this General Plan are broader. As the County matures, the sustainability and redevelopment of the County's existing communities and infrastructure will assume more importance. Rather than simply building more and bigger roads, the County must look at ways to make transportation infrastructure and programs more efficient, more diverse and more responsive to environmental and community concerns. The County and State must also place a high priority on adequately maintaining existing infrastructure and operating programs.

Between 1990 and 1999, traffic increased by about 40% on Howard County roadways. Most of this travel is accounted for by personal vehicles with only one occupant. The increase in auto use in Howard County and throughout the region during this period has been due to many factors, including population growth, County residents' higher per capita rate of automobile ownership, relatively low gasoline prices and growth in the labor force. Also, since 1990, a higher proportion of trips are non-work related and by senior citizens. Unavoidably, traffic volumes in Howard County will continue to rise and traffic congestion will continue to worsen during peak traffic periods at some locations. Continuing population and employment growth, as well as such factors as changes in travel behavior (for example, more two-earner families commuting to work), increasing through traffic (resulting from regional growth) and the limited options for expansion of highway capacity are the causes.

The 1992 Adequate Public Facilities legislation was enacted to aid in ensuring that the road network would meet future needs and to require new development to test and, if necessary, improve critical intersections. The Adequate Public Facilities legislative package has allowed Howard County to fulfill many of the 1990 General Plan's objectives with regard to controlling the pace and location of development. Through associated State legislation, the County gained approval to levy an excise tax on all new building construction, in order to fund and/or leverage State funding for high priority roadway improvements. Between April 1992 and June 1998, approximately \$33.8 million in excise tax revenues was collected.

The County Capital Improvement Program (CIP) has programmed highway projects through the year 2003, using \$84 million in excise taxes and excise tax funded bonds. Many of these projects are part of a prioritized and phased road improvement plan set forth in the County's 1996 Comprehensive Transportation Plan. Nonetheless, traffic volumes, especially on our major highways, are increasing faster than the ability to add highway capacity.

The highway network serving Howard County consists of local roads, collectors, arterials and freeways (also referred to as principal arterials). Each roadway type has a defined traffic carrying function, and depends on the others to carry its share of total network traffic. The entire highway network depends upon the regionally significant highways, typically those roads with the greatest traffic carrying capacity, operating efficiently and effectively. If I-95 is gridlocked during the morning rush hour, for instance, some motorists divert to other routes while other motorists back up on the ramps entering and exiting the highway. As a result, traffic becomes congested on the lower classification roads, such as MD 175, MD 216 and US 1, which feed into or run parallel to I-95. Clearly, therefore, high priority must be given to maintaining adequate capacity on the regional travel corridors and to keeping these roads free of delaying incidents.

Data provided by the Baltimore Metropolitan Council (BMC) indicates that between 1999 and 2020, travel on roadways in Howard County will increase by nearly 28%, from just over one million vehicle miles of travel (VMT) per day to nearly 1.3 million VMT. Regional through traffic, which makes up about one-sixth of this total, is projected to grow even faster, by 37%. [Map 4-7](#) shows expected growth in through traffic. Clearly, the County has no control over growth in through traffic, which has its origins and destinations outside Howard County, but must nonetheless accommodate it.

[Map 4-8](#) depicts locations within the highway network that have deficient levels of service during the evening peak period ([Box 4-6](#) explains the level of service concept). This map also provides guidance as to where improvements need to be made soon. While the evening peak hour was selected for this analysis, it is important to recognize that the patterns and locations of

congestion often differ during the morning and evening peak periods. For example, I-95 within Howard County functions at generally acceptable levels during the evening peak, but experiences frequent southbound back-ups in the morning peak. Additionally, peak period traffic often lasts for two or more hours, reflecting motorist attempts to travel during the least congested commute times.

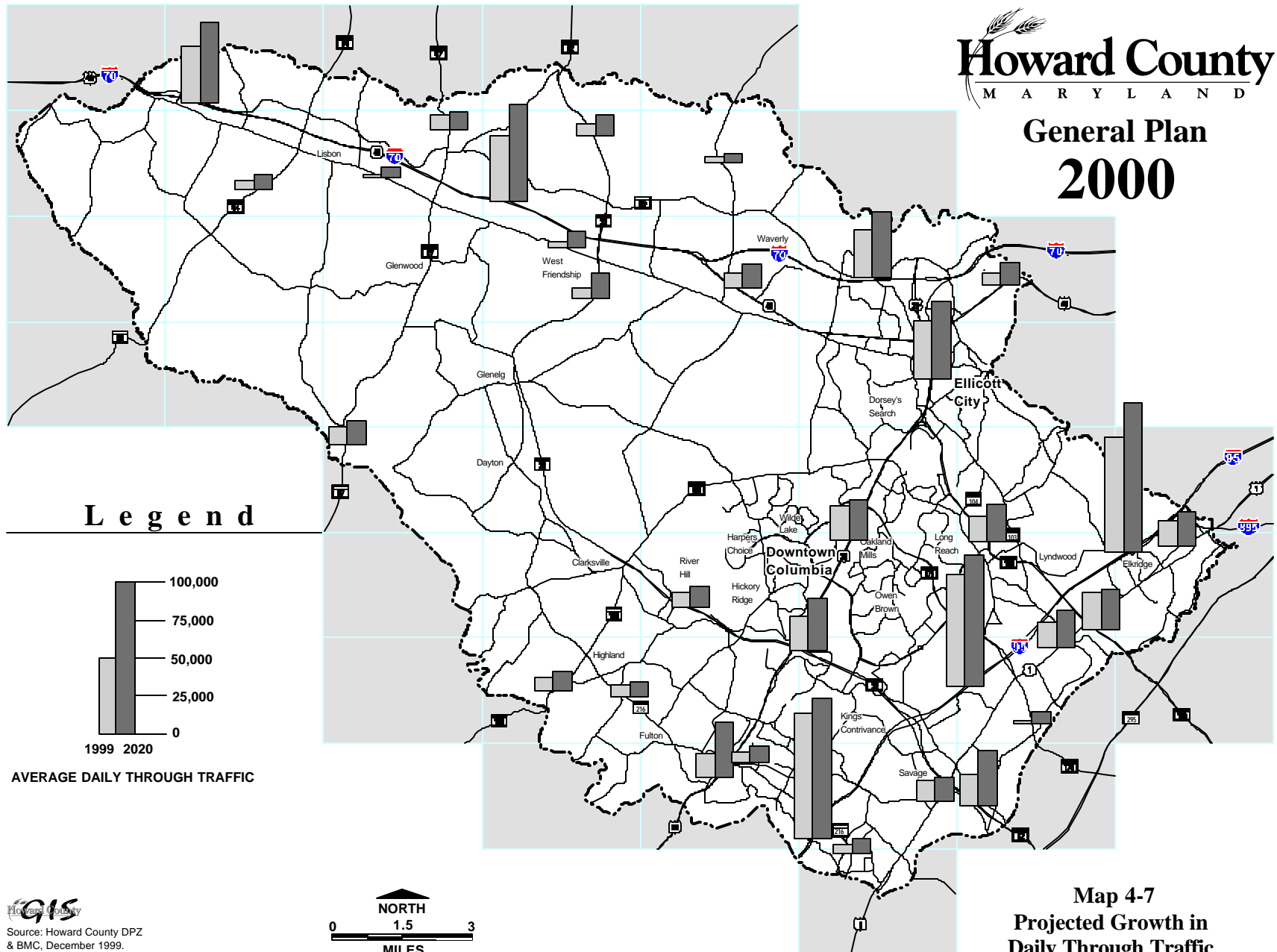
[Map 4-8](#) indicates that most roads in the County currently function acceptably during the peak hours. Peak period traffic congestion (level of service E or F) occurs in a limited number of locations in Howard County (for example, US 29, MD 175, MD 32 and MD 100), primarily in commuter travel corridors that carry a significant proportion of through traffic. For most of these locations, mitigating improvements are either under construction (for example, MD 175/Snowden River Parkway interchange, US 29/MD 216 interchange); programmed for construction (for example, widening of eastbound MD 32 between US 29 and Broken Land Parkway); or are in the planning and design phases (for example, MD 32 from MD 108 to I-70).

The analysis underlying [Map 4-8](#) also reveals that for most signalized arterials, the through movement at successive intersections typically operates at acceptable levels. However, a number of signalized intersections do not have sufficient physical capacity to accommodate total peak period demand. By providing sufficient "green time" along the arterials, some of the secondary roads which cross these arterials experience congestion or delay during peak hours.

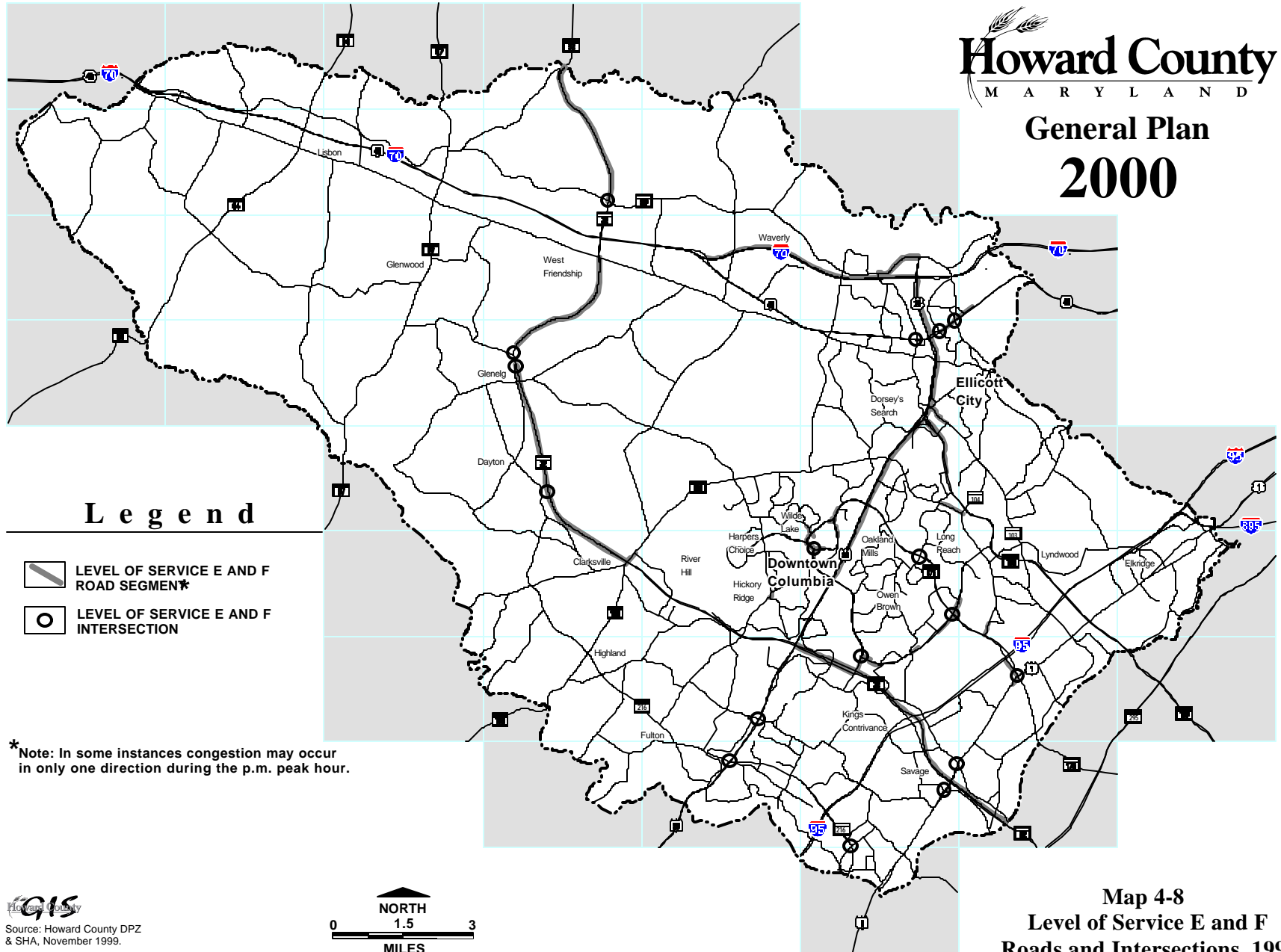
As a result of long-term planning by the State, Howard County and the BMC, many of the observed changes in travel demand and travel patterns were foreseen. In response, capacity has been added to major roads in the County such as I-95, MD 32 and US 29. The process of planning and funding new highway capacity, however, has become increasingly difficult. The cost in time and money to avoid wetlands, reduce noise impacts and acquire rights-of-way are substantially higher now than when those roads or road expansions were initially conceived. Also, there are practical limitations to how much further individual facilities can be expanded without incurring excessive costs or causing excessive environmental and/or community impacts.

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Box 4-6

Highway Level of Service

Highway Level of Service (LOS) is a quantitative and qualitative measure of how well traffic flows on a given street or highway. Level of Service relates to such factors as highway width, number of lanes, percentage of trucks, total traffic volume, turning movements, lateral clearances, grades, sight distance and other factors which affect the quality of flow.

Level of Service can be described as follows:

Level A is a condition with low traffic volumes, high speeds and free-flow conditions.

Level B is a condition with light traffic volumes, minor speed restrictions and stable flow.

Level C is a condition with moderate traffic volumes, where speed and maneuvering are restricted to a limited degree by the amount of traffic.

Level D is a condition with heavy traffic operating at tolerable speeds, although temporary slowdowns in flow may occur.

Level E is a condition of very heavy flow and relatively low speeds. Under Level E the traffic is unstable and short stoppage may occur.

Level F is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. It is an unstable traffic condition under which traffic often comes to a complete halt.

If the State and County are limited in their abilities to provide new capacity at the pace at which demand is growing, then it seems inevitable that motorists must learn to adjust to gradually increasing congestion, not just in Howard County, but as a fundamental fact of living in the Baltimore-Washington region. There are, however, a number of ways to mitigate at least some of the adverse impacts of increased travel demand.

Increasingly, State and local governments are considering the expansion of highway capacity as just one strategy in an arsenal of multimodal approaches that include bus, rail, park-and-ride, congestion management and

other strategies. In addition, the County must focus on increasing the efficiency of existing facilities. Relatively inexpensive strategies, such as traffic signal coordination, often can enhance the traffic carrying ability of roads and defer the need for more costly and potentially disruptive highway improvements.

The highest priority highway projects, therefore, are those which bring benefit to the greatest number of motorists and which enhance the efficiency and effectiveness of the overall transportation network serving the Baltimore-Washington region. Howard County works in coordination with the Maryland Department of Transportation (MDOT), BMC, the Metropolitan Washington Council of Governments (MWCOCG) and surrounding jurisdictions to identify these regionally significant, high priority improvements within a multimodal context, and to develop a phased approach to implementing those initiatives.

To plan for traffic demands in the future, assumptions regarding future land uses, demographics and transportation improvements are fed into a regional computer model which simulates traffic volumes for the Baltimore-Washington area. In 1996 and 1997, the County developed traffic forecasts for the year 2010 as part of the Comprehensive Transportation Plan. The Plan tested the effectiveness of a variety of highway network improvement scenarios that were deemed feasible within anticipated funding constraints. The analysis concluded that future highway resources should be directed primarily toward correcting existing and projected deficiencies on the major regional highways and secondarily to improving the lesser State and County arterials which serve those facilities. That finding was reaffirmed in the 1998 Baltimore Regional Transportation Plan (BRTP). [Map 4-9](#) and [Figure 4-18](#), which were derived from those two studies as well as continuing discussions with MDOT and BMC, show key highway improvements, which are anticipated by 2020 to address projected demand within projected funding constraints.

MDOT's decision-making about regional highway improvements is also guided by the State's Smart Growth policies. For example, MD 32 between I-70 and MD 108 is outside the County's approved Priority Funding Area (PFA). However, this highway segment connects the road network within

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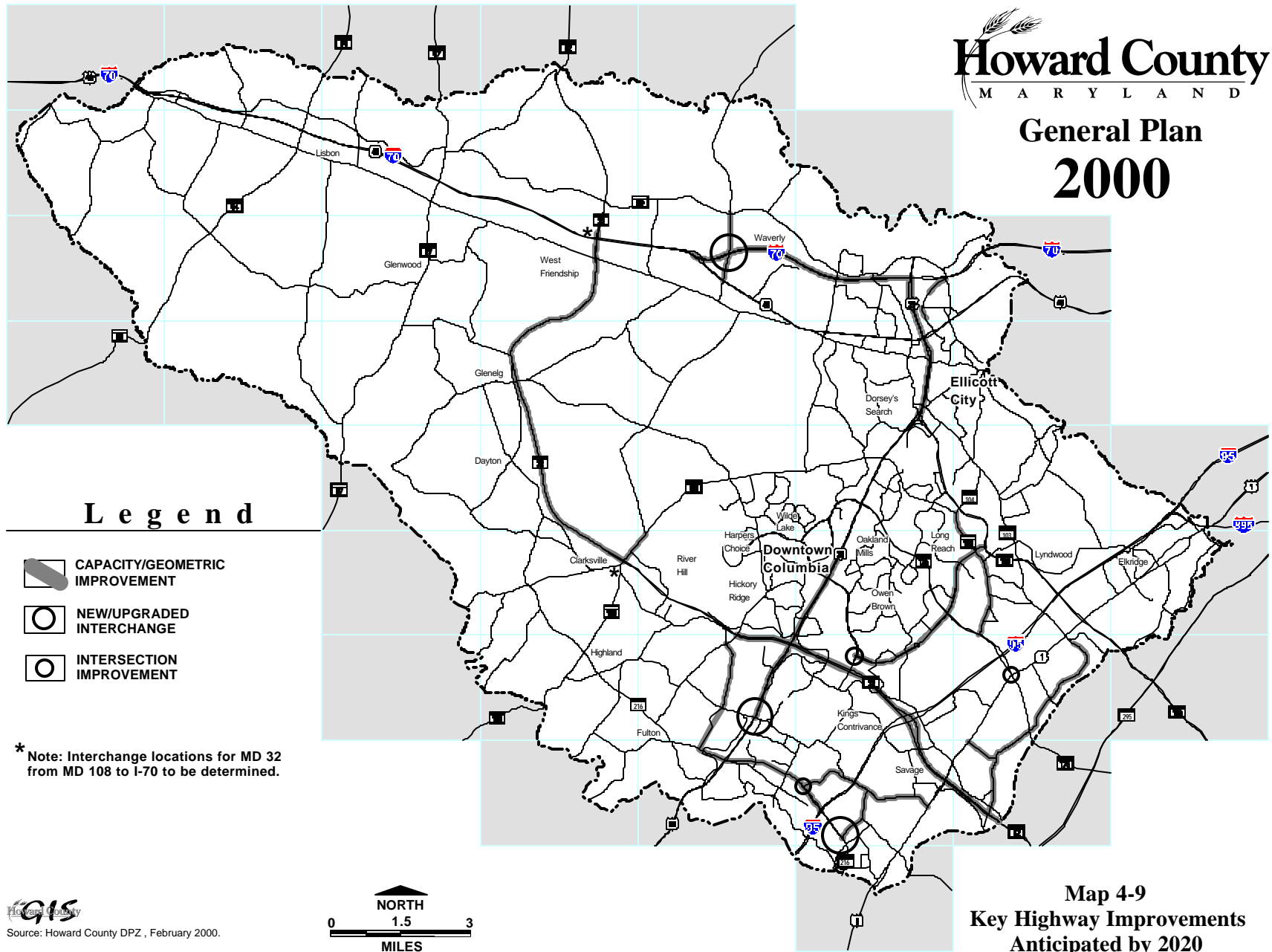


Figure 4-18
Key Highway Improvements Anticipated By 2020

Interchange/Intersection	Description		
I-70/Marriottsville Rd	Interchange, (add ramps to facilitate all movements)		
US 29/Gorman/Hopkins Rd	Interchange		
MD 32, I-70 to MD 108 ^{1,4}	Interchanges		
MD 216/Loop Rd East ²	Interchange		
MD 216/Loop Rd West ^{2,4}	Interchange/intersection		
MD 175/US 1	Intersection, (capacity improvement)		
Broken Land/Snowden River Pwky	Intersection, (capacity improvement)		
Roadways	Description	From	To
I-70	Expand to 6 Lanes	US 40	US 29
US 29	Expand to 6 Lanes	Gorman Rd	Pedestrian Bridge
US 29	Expand to 8 Lanes	I-70	MD 100
MD 32 ¹	Expand to 8 Lanes	US 29	A A Co. Line
MD 32	Expand to 6 Lanes	US 29	Cedar La
MD 32 ⁵	Expand to 4 Lanes	MD 108	Carroll Co. Line
MD 108 ³	Expand to 4 Lanes	Trotter Rd	MD 32
MD 108 ³	Expand to 4 Lanes	MD 100/MD 104	MD 175
MD 216	Expand to 4 Lanes	US 29	Sanner Rd
MD 216	New 6 Lane Roadway	US 29	I-95
Dorsey Run Rd	New 2 Lane Roadway	MD 176	MD 175
Dorsey Run Rd	Expand to 4 Lanes	MD 175	MD 32
Gorman Rd ³	Expand to 3 Lanes	Stephens Rd	US 1
Loop Rd ²	New 4 Lane Roadway	MD 216 W. of I-95	MD 216 W. of All Saints Rd
Marriottsville Rd ²	Expand to 4 Lanes	MD 99	MD 144
North Ridge Rd	New 2 Lane Roadway	Carls Ct.	Rogers Ave.
Patuxent Range Rd	Expand to 4 Lanes	US 1	Dorsey Run Rd
Sanner Rd	Expand to 4 Lanes	J. Hopkins Rd	Pindell School Rd
Sanner Rd ²	New 4 Lane Roadway	J. Hopkins Rd	MD 216
Snowden River Pkwy	Expand to 6 Lanes	MD 100	Broken Land Pkwy

1. Anticipate partial completion by 2020.

2. Expect partial or full developer funding

3. Equivalent lane capacity (includes acceleration, deceleration, turn and bypass lanes)

4. Interchange/intersection option(s) under study

5. See text on Page 106

Source: Howard County DPZ, March 2000

the PFA to the Interstate system. In recent years there has been a rapid increase in interstate and regional traffic, creating peak hour congestion and many serious accidents along this segment. MDOT has studied many options for improving safety and expanding capacity, however, these have generated heated public debate about whether improvements to this segment of MD 32 are consistent with Smart Growth policies. Safety improvements must be addressed in the short term, however, if capacity improvements are not made, increasing traffic will spill over onto adjacent rural roads causing new safety and congestion problems. MDOT is appointing an expert panel to review how Smart Growth should apply to such projects.

Because of the long lead time required for planning, engineering and construction, not all of the needed regionally significant highway improvements can be constructed within the timeframe of this General Plan. [Figure 4-19](#) indicates several regionally significant highway improvements which are anticipated to be completed after 2020.

In addition, other goals of this Plan, such as protection of the rural character of Western Howard County, along with the growing statewide priority to conserve rural areas, should be taken into account before proceeding with highway capacity expansion. The potential for highway expansion to increase development, which could ultimately exacerbate traffic congestion in Howard County, should be taken into account. Careful and credible analysis should be undertaken on the land use and traffic implications of such capacity expansions (for example, MD 32 from MD 108 to I-70) and on other means of alleviating congestion or safety concerns, before the decision is made to proceed with capacity expansion.

Transit

The 1990 General Plan identified the need for expanded local transit service and better coordination with regional transit services. To address these needs as part of the Comprehensive Transportation Plan, the County undertook an intensive, two-year consultant study of transit needs, organizational issues and funding options. That study was completed in 1996.

As a result of this study, the County created a new transit system known as Howard Transit (formerly called the Howard Area Transit Service or HATS). Howard Transit has restructured and coordinated transit services in the County to better meet client needs and operate more cost effectively. The restructured transit system has a fixed route bus service operating in the more populated portions of the County, including Columbia, Ellicott City, Dorsey, Savage and North Laurel (as shown previously in [Map 2-5](#)). The system also includes a demand responsive (by request) curb-to-curb paratransit service which serves clients of various County social service programs for the elderly, low income and disabled. This service also responds to the requirements of the Federal Americans with Disabilities Act (ADA). The County has also instituted a morning and evening peak period shuttle bus operation, known as the Spirit Shuttle, that provides free bus service between the MARC rail system and employment sites in the I-95/US 1 corridor and western Anne Arundel County.

Ridership on the Howard Transit system has been growing steadily since its inception. From fiscal year (FY) 1997, the first year of the Howard Transit system, through FY 1999, ridership on the fixed route service component grew by 56% to nearly 192,000 trips per year. During this same period, paratransit service increased more than 50% to almost 96,000 trips in FY 1999. Unfortunately, attempts to provide transit service to western Howard County have been less successful due to the lower densities of residential and commercial development. In response to passenger surveys and evaluations of services provided to date, a number of improvements have been implemented or are underway to meet passenger requests for both local and regional transit services ([Box 4-7](#)). In addition, a comprehensive, systemwide analysis of the Howard Transit services and operations will be undertaken in FY 2001, with Federal and State funding assistance through a Transit Development Program grant.

Public transit has the potential to alleviate some of the impacts of growth. Additional buses can be put into service more easily than additional lanes or roads can be added to the road network. As the transit and high occupancy vehicle (HOV) systems mature, growth management tools should recognize and reinforce the potential of transit and HOV improvements to partially mitigate traffic congestion. Furthermore, as population and em-

**Figure 4-19
Key Highway Improvements Anticipated To Be Completed After 2020**

Interchange/Intersection	Description		
US 29/Rivers Edge Rd	Interchange		
MD 32, I-70 to MD 108 ¹	Interchanges (Under Study by SHA)		
Roadways	Description	From	To
I-70 ²	Expand to 8 Lanes	US 29	Balt. Co. Line
I-95 ²	Expand to 10 Lanes	Balt. Co. Line	P.G. Co. Line
US 29 ²	Expand to 6 Lanes	MD 216	Mont. Co. Line
MD 32 ³	Expand to 4 Lanes	I-70	Carroll Co. Line
MD 32 ¹	Expand to 8 Lanes	US 29	A.A. Co. Line
MD 100 ²	Expand to 6 Lanes	I-95	A.A. Co. Line

1. Improvement expected to be partially completed prior to 2020
2. Project limits extend beyond County boundaries.
3. See text on Page 106.

Source: Howard County DPZ, March 2000

Box 4-7

Short-Term Transit Initiatives

Over the past three years, the County has conducted passenger surveys, formed a Passenger Advisory Group and tested new transit options. As a result of these efforts, the County has implemented or is currently in the process of implementing the following short-term improvements to the Howard Transit Service:

- Expanding and upgrading the fleet.
- Expanding route coverage to include new areas within the County as well as locations in neighboring jurisdictions.
- Increasing service frequency.
- Expanding service hours.
- Providing additional transfer opportunities to other local (Connect-A-Ride) and regional (MTA bus and MARC rail) transit services.
- Providing more frequent scheduled paratransit service to medical centers.
- Expanding the range of eligible trip purposes for paratransit service.
- Providing additional passenger amenities, such as shelters and benches.
- Expanding public outreach and marketing programs including the development of Howard Transit and Commuter Solutions Internet sites.

ployment densities increase in developing areas of the County, it may become practical and desirable for the County to extend local Howard Transit bus service to currently unserved areas of the County.

Demand for public transportation is expected to grow significantly by 2020, in part, as a result of the County's growing senior citizen population. While many seniors will continue to drive, a growing number will rely on public transit, whether fixed route public transportation (such as bus or rail) or curb-to-curb paratransit services.

Another factor impacting transit demand is Howard County's strong economy. Many County employers have difficulty finding employees for entry level and lower skilled jobs, especially for second and third shift positions. At the same time, there are citizens living in the County, as well as other parts of the region, who are unable to work because transit service does not exist to provide connections to job sites. Therefore, as Howard County's job base continues to grow, there will be an ongoing need for transit connections from residential areas to employment sites.

Planning for transit and other non-single occupant vehicle modes of travel (such as ridesharing and HOV lanes) is an essential aspect of planning for balanced growth. Transit service, however, requires significant public sector subsidies. To achieve even seemingly modest shifts from autos to transit requires a serious commitment of capital and operating funds from both the local and State governments. Increasingly, the private sector may also need to bear some of this burden.

The amount of traffic diverted to higher occupancy vehicles depends, in part, on whether HOV lanes are used (Box 4-8), or whether transit is provided via buses, light rail or heavy rail. Each of these modes provides for progressively greater ridership. Each, however, is progressively less flexible in routing and frequency of stops, and increasingly costly. During the 20-year time frame for this General Plan, Howard County will not likely achieve the population or traffic densities necessary to justify new rail service. Nonetheless, it is important that we preserve the necessary rights-of-way in some of our regional travel corridors, as identified on Map 4-10, so as not to preclude these options from future plans. During the next twenty years, the County's efforts in these corridors should focus on ex-

Box 4-8

High Occupancy Vehicle Lanes

High Occupancy Vehicle (HOV) lanes are lanes of a highway that have restricted or controlled access reserved for buses, vanpools and carpools, usually carrying three or more persons per vehicle:

The advantages of HOV lanes include:

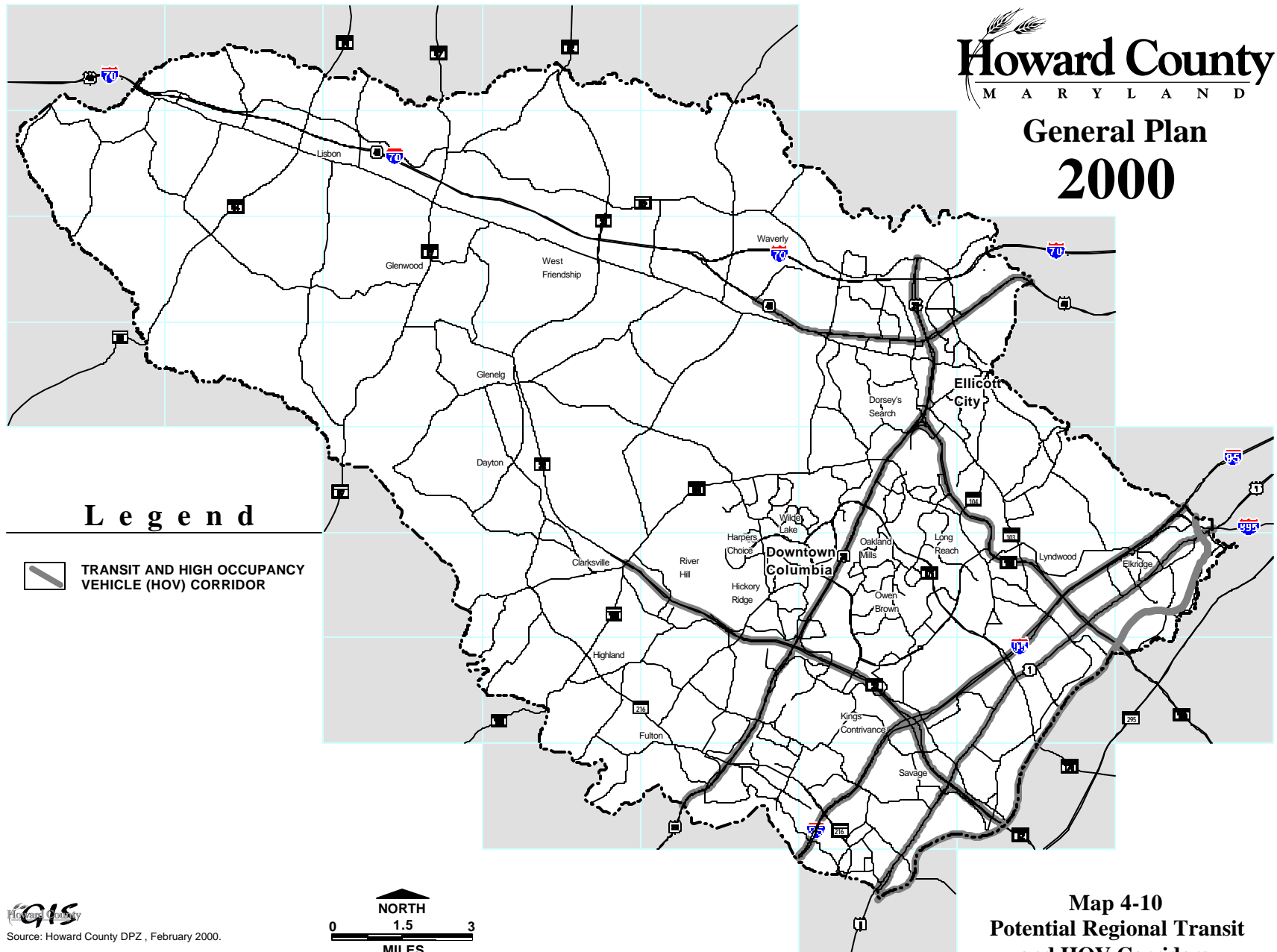
- Additional person-carrying capacity for congested highway corridors.
- Deferral of the need to construct additional highway capacity (lanes).
- Enhancement of public transit schedule reliability and reduction of transit travel times.
- Reduction of energy consumption and environmental pollution by reducing the number of vehicles on the road and improving the overall efficiency of the highway system.

panding local and regional bus route coverage, increasing bus service frequency (especially for reverse commute services) and adding HOV lanes.

Park-and-ride lots are necessary to support ridesharing and transit. Existing park-and-ride lots are shown on Map 4-11. Since 1990, four new park-and-ride lots were built in the County and several existing lots were expanded, increasing capacity by more than 2,000 spaces. However, use of these lots has only increased slightly during this time period, demonstrating how difficult it is to convince motorists to switch to other travel modes (Figure 4-20).

Public transportation and land use strategies can be integrated to increase transit ridership. Land use strategies which may have positive impacts on transit use include: employer funded shuttle services; path and sidewalk linkages to connect transit facilities to major employment sites and residential areas; transit-oriented development, with new development or

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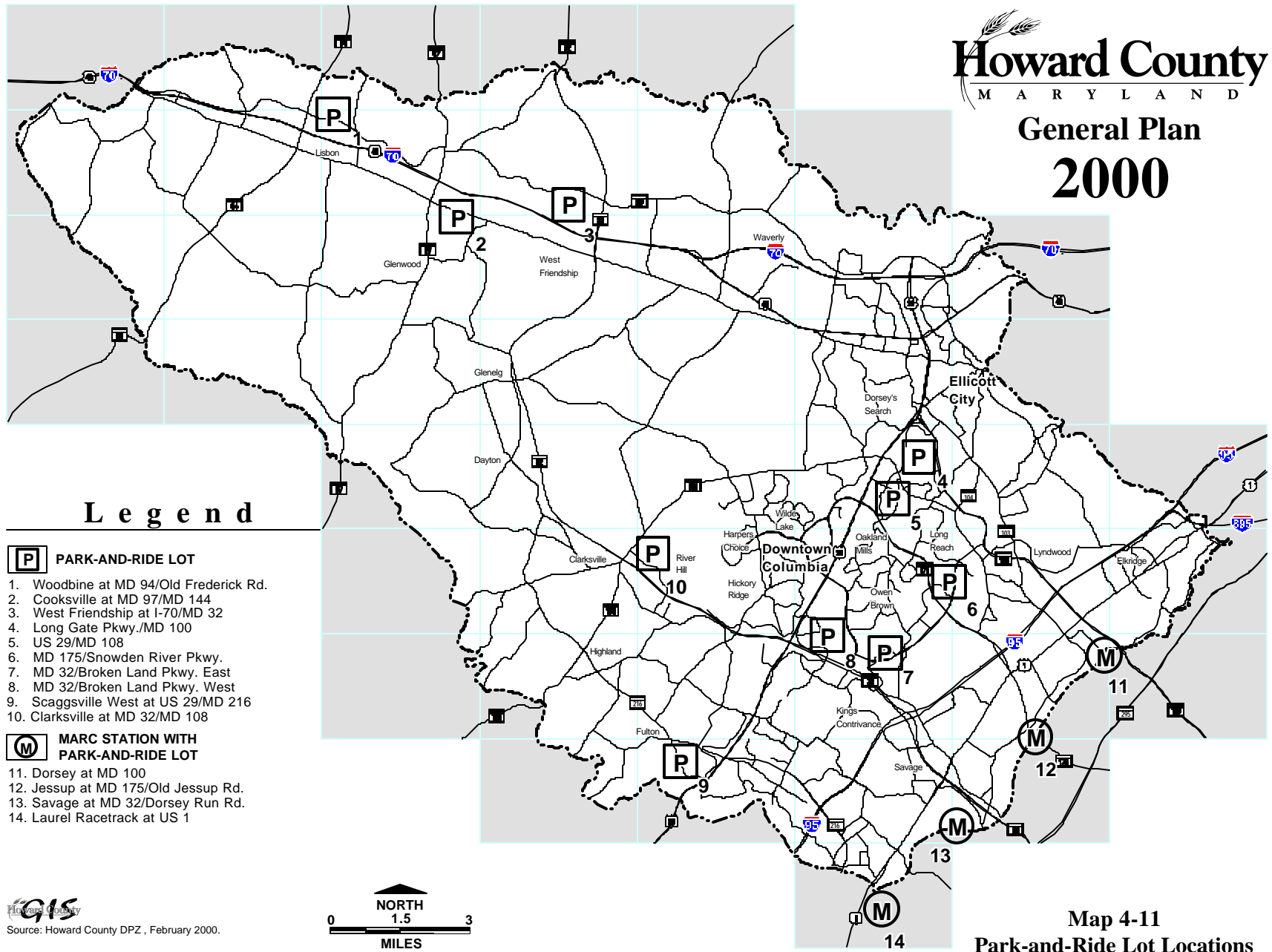
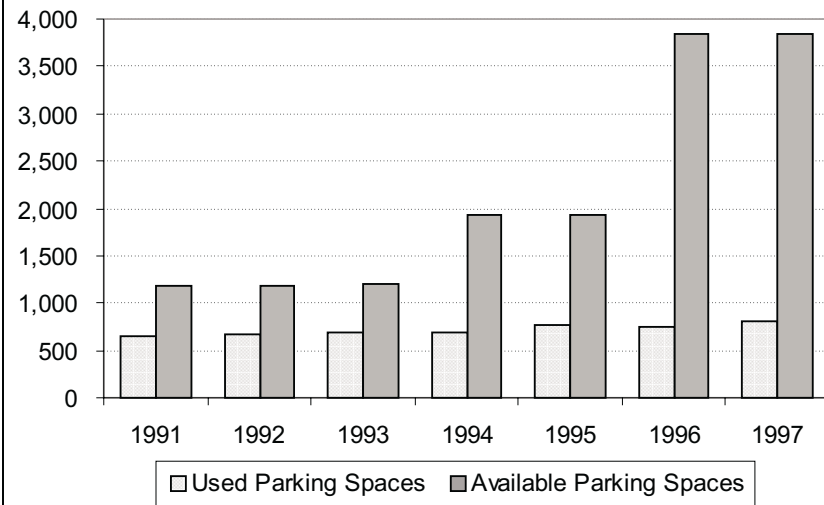


Figure 4-20
Park-and-Ride Usage, 1991-1997



Source: Howard County DPZ

redevelopment focused around rail stations and major bus transfer points; and new park-and-ride lots located near the periphery of the County to capture possible carpoolers and transit patrons before they reach areas of higher traffic congestion. Such strategies can also assist in meeting the County's job creation and job retention objectives.

Other techniques can also be marginally effective in improving traffic situations and encouraging a shift to higher-occupancy vehicles. These include flexible work hours, reducing the required parking requirements for developers who commit to carpooling/vanpooling programs or to Transit Management Associations, and charging for parking. These approaches are difficult to monitor and enforce, and the notion of parking fees does not yet have broad applicability in a moderate density area like Howard County, except in very specific places like the historic commercial area of Ellicott City.

It is important to use each mode or transportation strategy to its maximum efficiency and cost effectiveness. This is particularly true of intra-County bus service which, in addition to serving the general population, provides an essential service to a number of transportation-dependent populations (including the elderly, lower income individuals, persons with disabilities and youths). In addition, a number of the County's goals and policies on affordable housing, workforce placement and retention, and human services are dependent upon public transportation. A viable intra-County transit system facilitates employment, stimulates economic development and increases the opportunities for transportation-dependent persons to be fully participating members of the community.

Despite increased marketing and public outreach efforts, citizens are often unaware of the many public transportation opportunities available in Howard County. This is due, in part, to the diversity of fixed route and providers. In particular, many of the services (especially nonprofit human service agency providers) offer service only to a limited clientele and/or encompass service areas beyond Howard County. Because routes, schedules, fares and other transit information change frequently, up-to-date information on public transportation is essential, especially for transit dependent residents. Howard Transit will provide information regarding its services and the transit services it connects to. However, creating a single, up-to-date point of contact for information on all transit resources is extremely difficult. Since the Internet provides opportunities for improved information exchange, Howard Transit will make a concerted effort to link Howard County's website with those of other public and private transit providers.

Bicycle Travel

Bicycles are an energy efficient, environmentally sound alternate means of transportation. Surveys conducted in 1996 and again in 1997/1998 indicated that cycling for recreational purposes is prevalent in Howard County. Cycling to work, school and shopping also occurs, but not to the same degree as for recreation.

While some roads or roadway shoulders in the County may serve as safe bike routes for recreational uses, the lack of bike routes and/or bike lanes

on collector and arterial roads discourages cycling as an alternate means of transportation, especially for commuting. Where sufficient right-of-way does exist on collectors and , roadway shoulders are frequently unpaved or are in poor condition. Where shoulders are paved and roads are regularly used by bicyclists, the routes are generally not signed for bicycle use. Motorists unaware of bicycle traffic may, therefore, present a hazard to cyclists and vice versa. The lack of bicycle storage facilities at most commercial and employment facilities and transit stops also discourages bike travel.

As part of the Comprehensive Transportation Plan, a County-wide assessment was undertaken of pedestrian/bicycle facilities. The study identified gaps in the network of sidewalks, paths and roadways that serve cyclists. Additionally, an inventory was developed of paved shoulders, curb lane widths, posted speed limits and other roadway conditions, to assess the suitability of various roadways for bicycle travel and to identify and prioritize improvements which could enhance bicycle travel in the County. Since that time, a number of these options have been implemented or programmed in the County's Capital Improvement Program. County and State capital projects for road improvements can provide opportunities to add bike lanes, adequate paved shoulders and/or sidewalks. The Design Manual standards for County roads should be reviewed to consider pedestrian/bicycle use.

Howard County also participates in Federally-funded safety programs run by the State Highway Administration which, in addition to many other traffic safety issues, address bicycle and pedestrian safety. Howard County's program, operated under the auspices of the County Executive's Office, is the Traffic Action Group for Safety and has regional and state-wide counterparts.

Policies and Actions

POLICY 4.8: Maintain acceptable traffic conditions through 2020.

- ◆ ***Adequate Public Facilities Ordinance (APFO).*** Review periodically and revise, as necessary, all aspects of the County's Ade-

quate Public Facilities legislation.

- ◆ ***Major Road Improvements.*** Pursue the construction of road improvements shown on the Transportation Map 2020 of this General Plan.
- ◆ ***Other Road Improvements Priorities.*** Evaluate and prioritize other potential highway improvement options through an update of the 1996 Comprehensive Transportation Plan. Emphasize capacity improvements on the regionally significant through routes and efficiency improvements to the local network to mitigate traffic through neighborhoods.
- ◆ ***Excise Taxes.*** Continue to use APFO-generated excise tax revenues to fund and/or leverage State and Federal funding for highway capacity improvements, particularly on priority through routes.

POLICY 4.9: Reduce dependence on the automobile for inter-County travel.

- ◆ ***Alternatives.*** Promote the use of transit, ridesharing, bicycling and other alternatives to single occupant vehicles to reduce regional highway travel demand.
- ◆ ***Regional Transit Corridors.*** Seek to initiate or increase regional and local transit service in the corridors identified on Map 4-10 of this General Plan and ensure that future highway improvements in transit corridors do not preclude transit service.
- ◆ ***Land Use/Transit Coordination.*** Coordinate land use changes along existing and planned transit corridors to support and reinforce ridership potential. Provide transit connections between residential areas within and outside Howard County to employment sites in the County.
- ◆ ***New Development to Accommodate Transit.*** Promote increases to transit ridership potential by reviewing new developments for their ability to accommodate buses. Encourage the reservation of space for

sheltered transit stops in major employment and mixed use centers.

- ◆ **Park-and-Ride Lots.** Promote greater use of existing park-and-ride lots through transit connections and the rideshare program. Identify and assist in the acquisition or lease of new park-and-ride lots to support transit corridors. Such actions may include cooperative arrangements with private development, such as shared use of shopping center parking lots.
- ◆ **Bikeways and Bike Stations.** Provide bike paths to rail stations and/or park-and-ride lots, with bike racks or lockers.

POLICY 4.10: Reduce dependence on the automobile for travel within the County, and serve the needs of transit-dependent populations.

- ◆ **Transit Development Program.** Prepare a Transit Development Program in fiscal year 2001, to evaluate and prioritize a range of transit improvements to improve mobility within Howard County and connections to regional transit.
- ◆ **Howard Transit Fixed Route Coverage.** Expand fixed route coverage of the Howard Transit system to incorporate unserved areas of greatest existing residential and employment density (such as Elkridge), and plan for potential future routes to anticipated growth areas (for example, North Laurel and Fulton) without downgrading existing fixed routes where ridership is sustainable or growing.
- ◆ **Quality of Fixed Route Service.** Implement strategies which make the use of Howard Transit's fixed route service more reliable (upgrading the fleet), more convenient (more frequent service, longer hours and greater route coverage) and generally a more pleasant travel experience (added patron amenities such as shelters and benches).
- ◆ **Paratransit.** Expand Howard Transit's paratransit services to medical facilities, job sites and other areas of highest demand requested by the County's elderly, disabled and low income populations.
- ◆ **Funding.** Use the Transit Development Plan to evaluate the costs of

projected expansions and other improvements to the Howard Transit system to address the needs of transportation dependent populations and determine what resources can be utilized to meet these costs. Explore additional public and private funding sources to improve the level and quality of fixed route and paratransit service.

- ◆ **Transit Outreach.** Develop a central County clearinghouse to provide greater ease of access to, and better information about, all publicly provided transit services. Increase marketing and public outreach programs to educate the public on the availability and benefits of Howard Transit and other public transportation services.

POLICY 4.11: Enhance and encourage walking and bicycling.

- ◆ **Pedestrian/Bicycle Improvement Priorities.** Prioritize potential pedestrian and bicycle facility improvements through an update of the 1996 Comprehensive Transportation Plan. Emphasize improving safety, eliminating system gaps, creating consistency with or enhancement of community character, and providing connections to such uses as bus and rail stops, libraries, shopping, schools, employment centers and government services.
- ◆ **Community Planning.** Evaluate and prioritize pedestrian/bicycle facility needs for communities or subareas within the County, and seek to link these community systems to the regional pedestrian/bicycle network.
- ◆ **Capital Projects.** Implement priority pedestrian and bicycle improvements. When planning for road construction or reconstruction through the State's Consolidated Transportation Program and the County's Capital Improvement Program, encourage the construction of sidewalks, designated bike lanes and/or the use of paved roadway shoulders for bike routes, as appropriate.
- ◆ **Regulatory Revisions.** Explore potential revisions to the Howard County Design Manual and the Subdivision and Land Development Regulations to encourage and accommodate bicycling as both a recreational and commuter-oriented activity

Schools

Introduction

The excellence of the Howard County Public School System (the Public School System) is integral to the County's quality of life and fiscal health. Many residents move to or remain in the County because of the quality of the Public School System, and businesses find that the Public School System makes a Howard County location attractive to potential employees. For the past ten years the Howard County Public School System has ranked among the top systems in the State, according to the annual Maryland School Performance Program Report.

School enrollments are projected to level off, and in some areas decline, over the next 10 to 15 years. As the need to build new schools diminishes, the County will have an opportunity to focus on improving programs, upgrading facilities and renovating aging buildings. The cost of building and opening new schools over the past decade limited the Public School System's ability to meet new program and service needs. New issues will be raised in the future by the need to address declining enrollments in some schools, to maintain an increasing number of aging school buildings and to sustain the excellence of school programs in a time of slower growth.

Status of School Planning

The Public School System receives most of its funding from Howard County government. However, it operates under the authority of State law and under the direction of the elected Board of Education.

The Public School System initiated community-based strategic planning in 1985. In 1995, the Board of Education approved an updated strategic plan entitled *Beyond the Year 2000*. School Improvement Teams, with the help of staff, implement the strategic plan at the school level. School Improvement Teams include the school principal, teachers, staff, parents, community members and, sometimes, students, and have existed in all County schools since the 1995-96 school year.

Planning for school construction, renovation and maintenance is accom-

plished through the capital budget process. The Public School System annually approves a Proposed Capital Budget, a five-year Capital Improvement Program (CIP) and a ten-year Long Range Master Plan.

The other primary planning document is the Howard County Public School System Master Plan, updated annually, as required by the State Department of Education. This plan compiles data on current and projected school capacities, enrollment, construction plans and renovations.

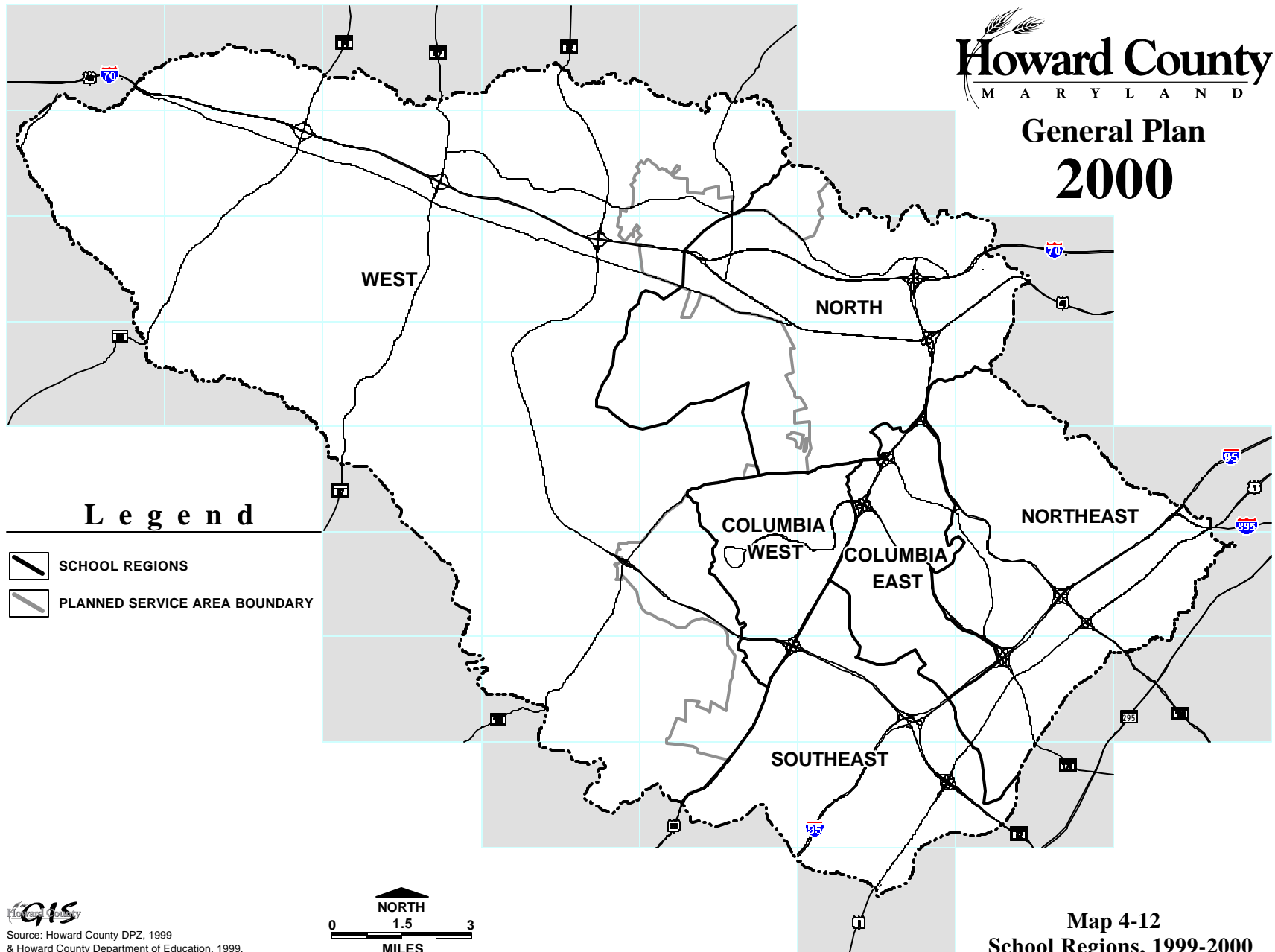
Adequate Public Facilities Ordinance

Howard County's Adequate Public Facilities Ordinance (APFO) requires that roads and schools are adequate to serve new development and that the pace of residential growth does not exceed the rate recommended in the 1990 General Plan. The APFO postpones the approval of new housing if adequate school capacity is not available, providing the predictability needed for planning and building additional school capacity.

The APFO measures adequacy of school capacity at the elementary school level. School capacity is measured for both individual schools and for six school regions, each consisting of several contiguous elementary school districts. School district boundaries are subject to change annually, which may also alter regional configurations. The regions for the 1999-2000 school year are shown on [Map 4-12](#).

Although growth in enrollment is expected to slow dramatically over the next ten years, the APFO will still be needed to pace residential growth and ensure that adequate school capacity is available. An Adequate Public Facilities Committee was formed in 1991 to develop the County's initial adequate public facilities ordinance. This Committee has reconvened twice, in 1995 and 1999-2000, to evaluate the ordinance's effectiveness and recommend refinements. Amendments approved in March 2000 included reducing the threshold for closing an elementary school district to new development when the affected school is over capacity from 120% to 115%, and limiting the number of housing allocations that can be granted in a single school district in any one year to 300, if the school region exceeds 100% of capacity. Amendments will be submitted in the Fall of 2000 to add a school capacity test at the middle school level. This will require re-

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GIS
Source: Howard County DPZ, 1999
& Howard County Department of Education, 1999.

structuring the allocation areas since elementary and middle schools regions are different. Periodic review and adjustments will likely be needed as enrollment conditions change.

Enrollment Growth and School Capacity

The Public School System experienced rapid growth during the 1990s, building 20 new schools, replacing two schools and expanding several others. This construction allowed the Public School System to provide for enrollment increases of more than 11,000 students from 1990 through 1998. (By comparison, enrollment grew by approximately 5,000 students during the 1980s and 6,000 during the 1970s.) The expansion also alleviated a shortage of about 1,100 seats in 1990. [Maps 4-13, 4-14 and 4-15](#) show the County's elementary, middle and high schools, and school district boundaries.

The aggressive school construction program in the 1990s enabled the Public School System to accommodate enrollment growth. As of April 2000, the Public School System as a whole had enough seats for students. However, student population was not evenly distributed among school districts. In three of the six school regions – North, Northeast and West – enrollment exceeded 100% of available capacity. The other three school regions – Columbia East, Columbia West and Southeast – had space available for additional students ([Figure 4-21](#)). Elementary schools have greater capacity problems than middle and high schools. The capacity for elementary schools in four of the six regions – North, Northeast, West and Columbia West – exceeded 100% as of April 2000. However, capacity concerns are anticipated to shift from elementary to middle and high schools in the future, due to changing demographics.

Enrollment increases in the County will slow over the next decade as the County's population ages. The Public School System projections show increases of about 4,600 students between 1999 and 2007, reaching a peak of 47,100 students. The projections for 2008 and 2009 show a slight decline of about 400 students. Beyond 2010, continuing slight declines in the school age population are projected by the Maryland Department of Planning ([Box 4-9](#)).

Elementary school enrollment in the County is expected to begin a slow decline as early as 2003. Middle school enrollment is expected to peak in 2007 and high school enrollment is expected to peak in 2010. By 2009, most of the projected growth will be at the high school level, with an additional 4,000 high school students in the system ([Figure 4-22](#)).

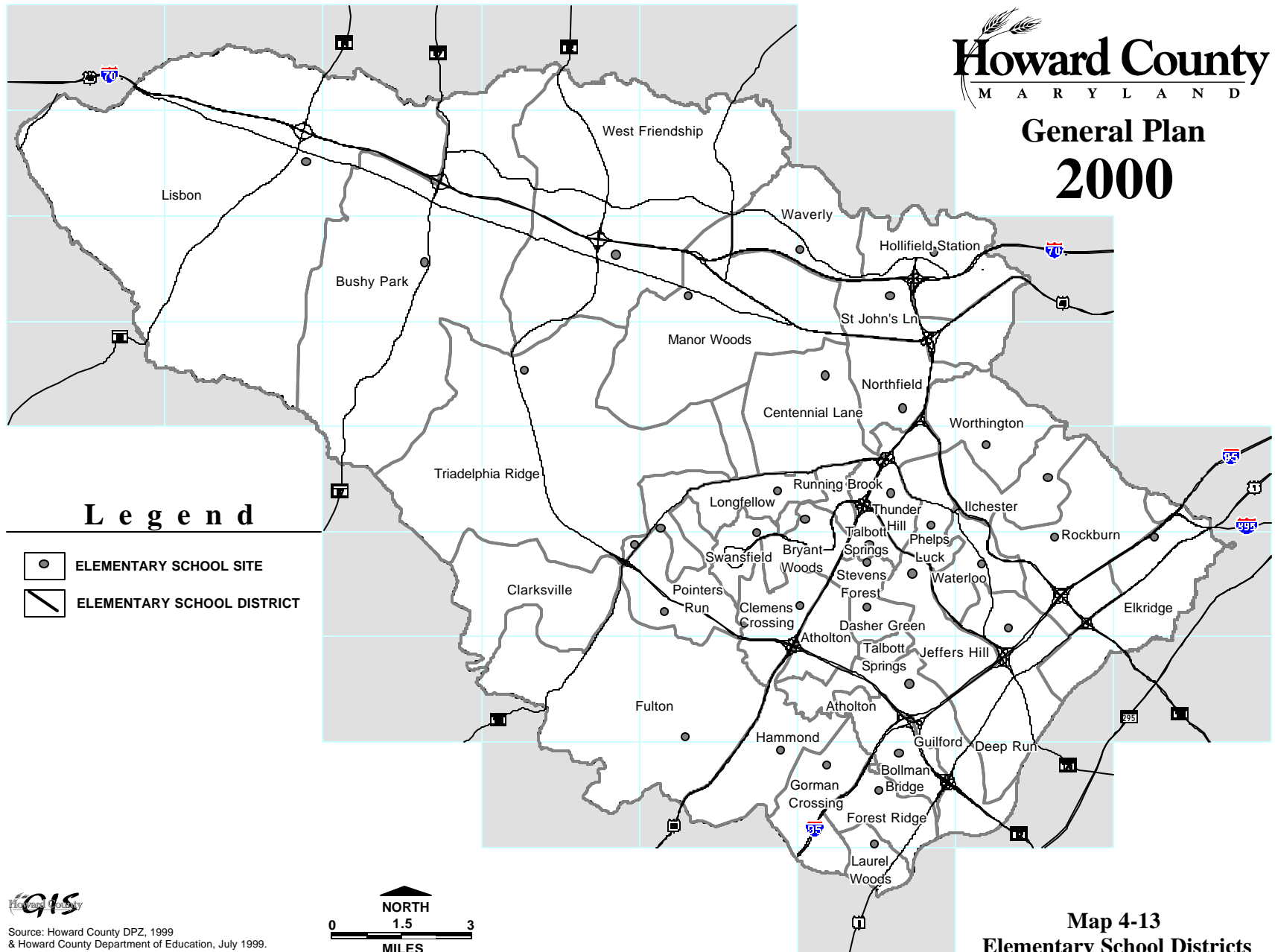
Based on expected enrollment, new school construction will slow dramatically. The County's approved FY 2001-2006 Capital Improvement Program proposes funding for construction of only three additional schools, a high school in 2002, a middle school in 2004 and an elementary school in 2003. The CIP also calls for additions to expand the capacity of many of the County's high schools and elementary schools, and replacement/expansion of one middle school. Based on current enrollment projections, the Public School System's ten-year plan proposes no new schools beyond the five-year horizon of the CIP. This situation could change if future enrollments do not decline as anticipated.

Projecting enrollments is complex. While short-term County-wide estimates have been fairly accurate, projections for individual schools have often not been. This has contributed to schools which are significantly under or over capacity. Such errors have generated unanticipated budget requests and undermined public confidence in school facility planning. Due to the high cost of school construction and the need to budget for other public facilities, the Public School System needs to be accountable for the accuracy of enrollment projections and budget requests. The Public School System has been investigating alternate projection methodologies in order to generate more reliable enrollment projections.



The currently planned high school and middle school construction is driven by the expected enrollment increases. However, school capacity is also impacted by the Public School System's programmatic decisions. Some of the elementary school expansions are needed due to the Public School System's decision to reduce class sizes for first and second grades. Reducing class size to 19 students generated a need for additional classrooms to accommodate 2,300 students.

Effective school planning not only requires projecting and providing for expected increases in enrollment, but also making the best use of existing

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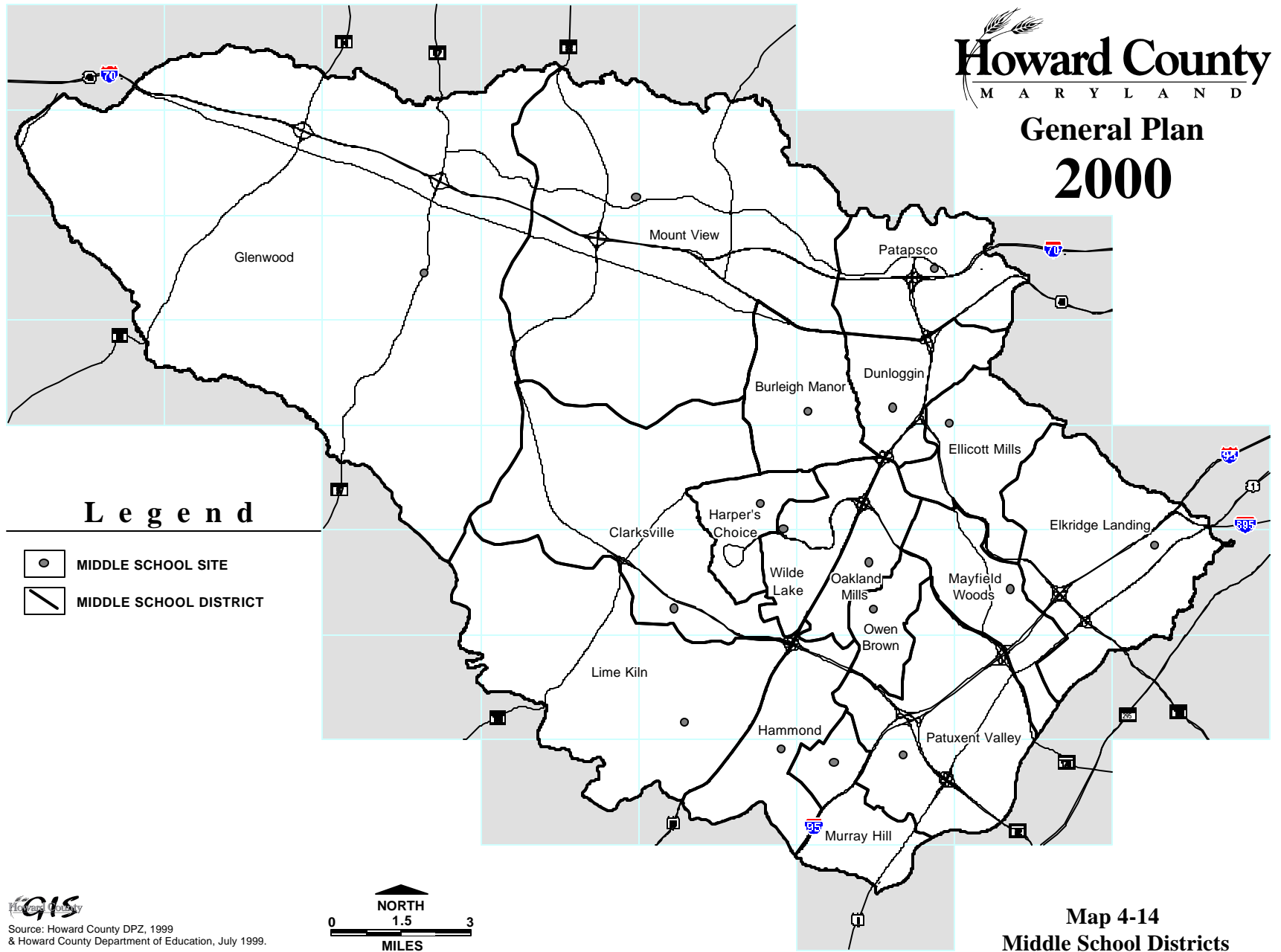
Legend

-  ELEMENTARY SCHOOL SITE
-  ELEMENTARY SCHOOL DISTRICT

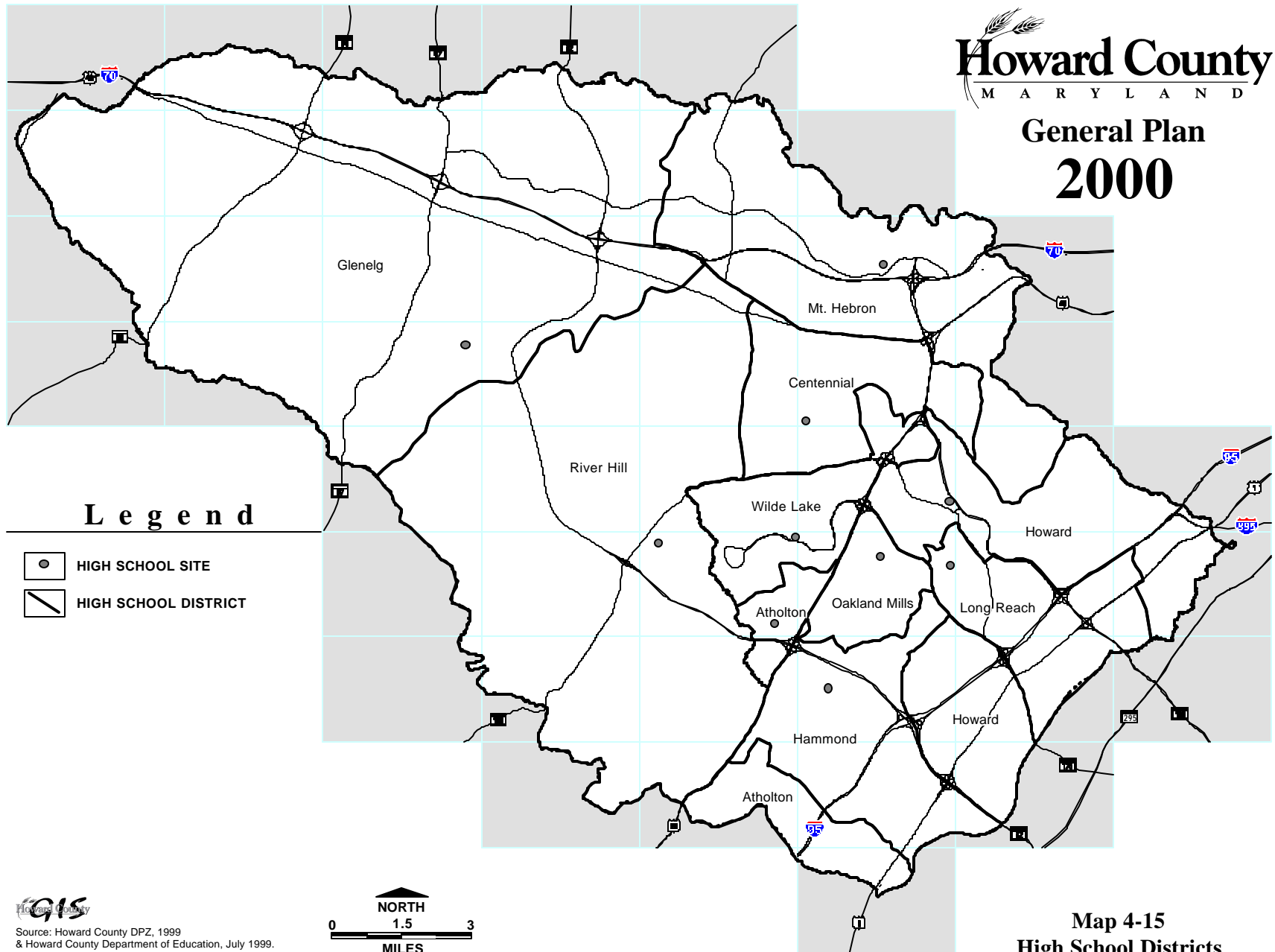
GIS
 Source: Howard County DPZ, 1999
 & Howard County Department of Education, July 1999.



Map 4-13
Elementary School Districts



Howard County
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2000



Source: Howard County DPZ, 1999
& Howard County Department of Education, July 1999.



**Figure 4-21
School Enrollment and Capacity by Region**

School Region/ Level	F.T.E. Program Capacity	F.T.E. Enrollment	Percent Capacity Utilized	School Region/ Level	F.T.E. Program Capacity	F.T.E. Enrollment	Percent Capacity Utilized
COLUMBIA EAST				NORTHEAST			
Elementary	2,470	2,385	96.6%	Elementary	3,518	3,897	110.8%
Middle	1,140	970	85.1%	Middle	1,951	1,934	99.1%
High	1,157	970	83.8%	High	2,655	2,736	103.1%
TOTAL	4,767	4,325	90.7%	TOTAL	8,124	8,567	105.5%
COLUMBIA WEST				SOUTHEAST			
Elementary	2,106	2,129	101.1%	Elementary	3,618	3,583	99.0%
Middle	1,107	1,088	98.3%	Middle	2,013	1,902	94.5%
High	1,422	1,395	98.1%	High	1,382	1,140	82.5%
TOTAL	4,635	4,612	99.5%	TOTAL	7,013	6,625	94.5%
NORTH				WEST			
Elementary	3,377	3,532	104.6%	Elementary	3,513	3,662	104.2%
Middle	1,814	1,801	99.3%	Middle	2,568	2,582	100.5%
High	2,130	2,513	118.0%	High	3,596	3,548	98.7%
TOTAL	7,321	7,846	107.2%	TOTAL	9,677	9,792	101.2%
Source: Program capacity from Superintendent's Proposed Capital Budget FY 2001. Enrollments from Howard County Public School System Enrollment Report, 4/30/00. Percent of Capacity Utilized = enrollment divided by capacity. F.T.E. = Full Time Equivalent. Data includes special education but does not include pre-K.				COUNTYWIDE			
				Elementary	18,602	19,187	103.1%
				Middle	10,593	10,277	97.0%
				High	12,342	12,302	99.7%
				TOTAL	41,537	41,766	100.6%

school facilities and balancing enrollments among schools. Neighborhoods generally have a life cycle that influences the number of children at any given time. Depending on the type and cost of housing, young families with children move in and, over time, the neighborhood population matures. Inevitably, there will be fluctuation in neighborhood school enrollment over time.

As County growth slows, neighborhood cycles and demographic shifts will become more important to predict accurately in order to minimize future imbalances between the location of schools and student populations. Be-

cause enrollments are declining in some older neighborhoods in the Columbia East and Southeast regions, some schools are expected to be significantly under-capacity in these areas, based on current school district boundaries. At the same time, rising enrollments will continue to strain the capacity of schools in the Northeast and West school regions, which have a large proportion of newer neighborhoods dominated by larger single-family homes. Eventually, declining enrollments are predicted to reverse over-capacity in some of these schools, especially at the elementary school level.

Box 4-9**Projecting School Enrollment**

The Howard County Public School System projects school enrollments using a cohort survival method, which analyzes historic trends to predict the percentage of infants born in the County that will enter school five years later, the percentage of children in the first grade that will progress to second grade and so on. Regional projections of household growth based on development trends are used as control totals. The cohort survival method works well for communities that are not experiencing either much new construction or changes in household size and age characteristics. These factors can significantly impact the accuracy of projections particularly in individual school districts. Enrollment projections for some areas of the North, Northeast and West have been too low in recent years, resulting in school capacity shortfalls.

Current projections use the Baltimore Metropolitan Council's (BMC) Round V-A forecasts of growth as control totals. The Round V-A forecasts for Howard County are based on the 1990 General Plan growth target of 2,500 new dwellings per year. Two additional residential growth rates were examined as part of the fiscal analysis of four growth scenarios for this General Plan update (See [Box 4-1](#)). One variation assumes that the actual growth rate of the 1990s, about 2,000 units per year, will continue. The other two alternatives reflect a declining pace of growth, assuming that housing construction will slow as land becomes scarcer and more costly. Both variations could result

in slower enrollment growth, with peak enrollment achieved later than predicted using the BMC's Round V-A forecasts.

Beyond 2010, Maryland Department of Planning population projections show a decline in the County's total school age population (5-19 years). However, because of the uncertainty of long-range forecasts, the Howard County Public School System considers only a ten-year window for school planning. Numerous factors affect the accuracy of long-range projections, such as the mix of unit types constructed and the demographic composition of families moving to the County. As residential construction slows, school enrollments will be strongly affected by the individuals and families who move into existing neighborhoods. The County will be shifting from a growing jurisdiction, in which most newcomers move into new housing, to a maturing jurisdiction, in which turnover of existing housing stock will be the primary factor in determining demographic changes.

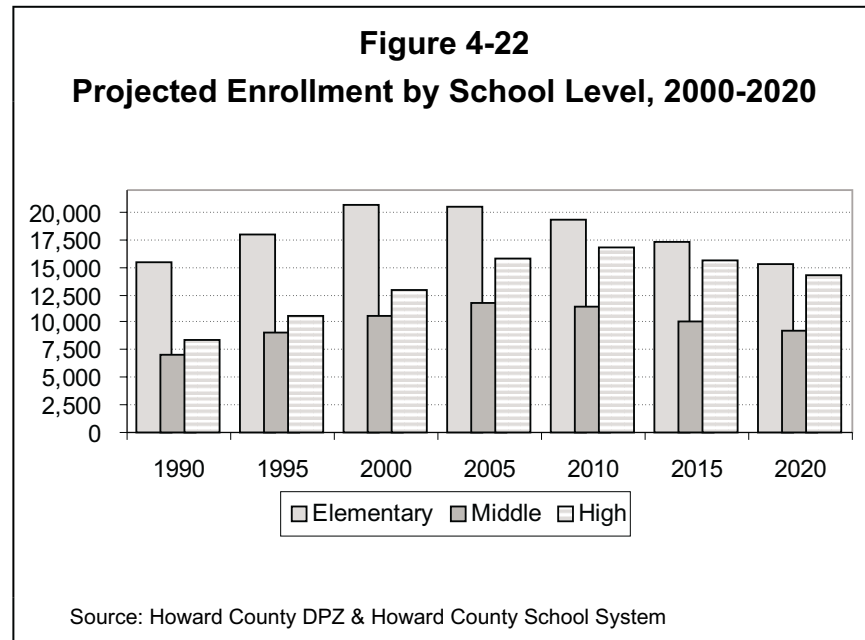
Projections of declining enrollments in the future, which are based in part on predictions for birthrate and household size, need to be monitored. They could prove to be misleading if turnover in the County's maturing neighborhoods leads to a new influx of families with young children or if the County's birthrate and average household size prove to be higher than indicated by current forecasts.

Redistricting allows the Public School System to shift school population from an overcrowded school to nearby schools with excess capacity. However, redistricting is often disruptive for students, parents and the Public School System. Redistricting is more controversial when there are concerns about older schools in mature neighborhoods that have capacity to receive redistricted students. Public perceptions of older school facilities and/or school performance, have been studied by the Leadership Committee on School Equity. The importance of addressing school equity and of addressing concerns about older schools is discussed in Chapter 5, *Community Conservation and Enhancement*. Rapid growth and school construction in some areas have already resulted in frequent redistricting. Where redistricting is used to balance enrollments, the redistricting plan needs to be coordinated with the General Plan's growth projections and Public School System enrollment projections to achieve the goal of

long-term stability in school district boundaries.

Relocatable classrooms are often used as an interim solution until a new school is justified. In some areas of Howard County, enrollments may begin to decline, especially in elementary schools, before a new school is justified. In these cases, relocatable classrooms will provide short-term capacity while enrollment peaks.

Other tools are available to balance enrollments among schools. The Public School System plans to increase middle and high school capacity by expanding many of the County's middle and high schools rather than building new schools. If enrollment does decline, these additions can be used for other educational or community programs. Some jurisdictions use magnet schools at all levels to encourage a voluntary balancing of enroll-



ments among schools, as well as to provide students with some additional program options.

These strategies need to be weighed against school construction projects that will be needed only during the period of highest enrollment, or that add schools in one area of the County while schools in other areas have excess capacity. It will be important for the Board of Education and the County to continue to monitor enrollment trends while choosing short-term and long-term actions that provide sufficient capacity, maintain the high quality of County schools and recognize the County’s fiscal constraints.

School Sites

The Public School System owns sites for the planned new high school and middle school, but has had difficulty finding a new elementary school site in the Northeast School Region. There are few sites within the Planned Service Area large enough to accommodate the minimum acreage requirements of new schools. Effective use of existing school capacity during the period of peak enrollment will be especially important, as sites for

new schools may simply not be available. If additional schools need to be built in the future, the limited land supply may increase the price of the land and provide additional challenges during site design.

The Public School System owns five unused sites and has eight additional reserved sites in Columbia. Nine of these 13 sites are 11 acres or smaller, making them inadequate based on current acreage policy guidelines shown in Figure 4-23. Nevertheless, it is advisable for the Public School System to maintain these land holdings until the projected enrollment declines materialize. When enrollments stabilize, the Board of Education can work with the County and communities through the Community Master Planning process (described in Chapter 5, *Community Conservation and Enhancement*) to consider alternative uses for these parcels.

Design and Use of School Facilities

The 1990 General Plan recommended that new schools be designed for greater flexibility, including such changes as increasing the size of school sites to accommodate recreation programs; designing facilities to allow sharing of space with other public services; and increasing the size of core facilities, such as gyms and cafeterias. These design changes would allow greater community use and provide greater flexibility for accommodating relocatable classrooms.

Some of these recommendations were implemented. Nine schools built during the 1990s included expanded space for recreation programs, with funding for these additional spaces from the County’s Department of Recreation and Parks budget. However, these multiuse spaces were included in

Figure 4-23
Board of Education School Site Size Policy Guidelines

School Type	Student Capacity	Range in Usable Acres
Elementary	up to 660	10 acres + 1 acre per 100 pupils
Middle	600-700	20 acres + 1 acre per 100 pupils
High	1,200-1,500	30 acres + 1 acre per 100 pupils

Source: Board of Education Policy #1611, School Site Selection & Acquisition

fewer than half of the new schools built during the 1990s. In general, the size of new elementary and middle schools decreased, rather than increased, to limit school construction costs.

Although few new schools are planned during the next decade, there will be ongoing opportunities to build flexibility into school design. Additions, renovation and sometimes replacement of aging schools will be increasingly important. These projects will allow design improvements to meet educational or community objectives.

To enhance educational opportunities, the Maryland State Department of Education (MSDE) published *Conserving and Enhancing the Natural Environment: A Guide for Planning, Design, Construction, and Maintenance of New and Existing School Sites*, in 1992. The manual endorses the use of native plants on school sites, and the preservation or creation of habitat areas such as forests, meadows and wetlands. The intent is to enhance educational curriculum with outdoor learning, encourage student participation in environmental restoration projects, protect the environment, and reduce the cost of mowing and school site management.

Educational objectives have first priority in the design and use of schools. Nevertheless, schools are and will continue to be community resources. During non-school hours, schools are used for a variety of recreational programs and community meetings. Where school design can incorporate storage space, extra athletic fields or other spaces to support these community uses, these functions can be enhanced while minimizing interference with school programs.

The Public School System anticipates using any space which may become available due to an enrollment decline to both improve and add to existing instructional programs. These programs could include class size reduction, full day kindergarten, pre-kindergarten, or expanded media center or computer lab space. There may also be potential to allow more use of space for other community purposes.

The Public School System does not expect to close schools due to declining enrollments. In fact, if community planning efforts are successful at implementing neighborhood conservation programs, patterns of declining

enrollment in older neighborhoods may be reversed. If neighborhoods are revitalized, young families may be attracted into the area, restoring school enrollments to a higher level.

If school closings do, however, become necessary, school buildings should be converted to public or community uses rather than nonprofit or private sector residential or commercial uses. Appropriate uses could include senior centers, recreation centers, adult education centers, and satellite offices for health and human services. Leasing for supportive nonprofit or private sector uses may be appropriate in some instances; however, sale or major alterations of school buildings should be avoided until long-term enrollment patterns are clear.

School Maintenance and Renovation

As County schools age, renovation of older schools will become a greater portion of the Public School System's budget. Renovation of older schools can be complex. Needed renovations may involve heating and air conditioning systems; roof replacement; renovations of classrooms, media centers, gymnasiums and other core facilities; and technology upgrades. Requirements to accommodate special education students have produced needs for access improvement and equipment. Participation in planning by principals, parents and teachers has resulted in more comprehensive but costly renovations. Adequate funding for maintenance, technology upgrades and other renovations to older schools is critical if school equity is to be achieved.

Complete renovation of outdated school facilities can be costly (Figure 4-24). The \$25.9 million replacement of Wilde Lake High School, completed in 1996, and the planned \$11.7 million replacement of Ellicott Mills Middle School in 2001, were both initially conceived as building renovations at a significantly lower cost. Two renovation projects for elementary schools built in the 1970s are projected in the FY 1999 Capital Budget to cost about \$3 million each. Neither project will expand the size of the school. While these costs could decrease as detailed plans are prepared, the projected cost, close to 40 % of the cost of new elementary schools recently completed, illustrates the upcoming expense of maintaining the County's aging schools.

Figure 4-24

School Renovation and Maintenance Costs, 2000-2009

Category	10-Year Capital Budget Total	Average Annual Expenditures
Systemic Renovations	\$91,500,000	\$9,150,000
Replacement/Renovation	\$12,003,000	\$1,200,300
Roofing Projects	\$10,000,000	\$1,000,000
Partitions	\$1,250,000	\$125,000
Barrier Free Projects	\$1,150,000	\$115,000
TOTAL	\$115,903,000	\$11,590,300

Source: Howard County FY2000 Capital Budget

Figure 4-25

Per Pupil Expenditures for Selected Jurisdictions

County	Expenditures
Anne Arundel	\$6,629
Baltimore	\$6,918
Carroll	\$6,066
Frederick	\$6,116
Howard	\$7,190
Montgomery	\$8,287
Prince George's	\$6,585

Source: MD State DOE, Maryland School Performance Program Report 1999

Financial Impacts

The Public School System is the largest element of the County's budget, accounting for over half of the County government's operating expenses.

The following data indicates the impact of the school system on the County's budget:

- The average per pupil cost for the 1998-1999 school year was \$7,190. Howard County's per pupil expenditure was the highest in the Baltimore region and the second highest in the State, after Montgomery County (Figure 4-25).
- In FY 2000, the operating budget for public education was \$273 million. Of this, the County's share was \$199 million (73%) and the State's contribution was \$69 million (25%), with other sources accounting for 2%. The County's share of the Public School System's budget represented 55.5% of the total Howard County Operating Budget, up from 51% in 1989.
- School operating costs increased 76% over the past decade, from \$155 million in FY 1990 to \$273 million in FY 2000.
- The County's FY 2000 Capital Budget allocates \$36.2 million for schools, 32% of the total Capital Budget. From FY 1992 through FY 1999, the capital budget allocation for schools ranged from \$28 to \$45 million and represented an average of 40% of the County's annual capi-

tal expenditures. The FY 2001 through 2005 Capital Improvement Program shows expenditures remaining high, between \$28 and \$39 million, for the next three years as the new high school and middle schools are built.

As the need for new construction lessens, renovation projects will be an increasingly larger proportion of the capital budget for schools. Renovation projects, especially replacement of obsolete facilities, can approach the cost of building a new school. However, as growth slows, the County will have a smaller influx of new taxpaying homeowners to fund these costs.

The operating expense of opening new schools during the 1990s, combined with budget constraints, kept new program initiatives to a minimum. The Public School System's FY 1999 Operating Budget listed ten key areas of need for additional funds. These areas include initiatives to address disruptive behavior, respond to the needs of aging schools, expand health services, increase technology resources (hardware, software and technical support), improve reading performance, address the needs of underachieving students and provide additional staff training. Reducing class sizes for first and second grades has also become a Public School System priority. In the long term, funds for program initiatives must be available if the quality of the Public School System is to be maintained and enhanced.

Policies and Actions

POLICY 4.12: Enhance predictability of school planning.

- ◆ ***Accuracy of Enrollment Projections.*** Work with the Public School System to improve the accuracy of enrollment projections by adopting a methodology that more effectively weighs the varying impacts of growth and neighborhood population cycles on individual schools.
- ◆ ***Coordination of Program and Facility Planning.*** Work with the Public School System to provide greater predictability and accountability regarding school capacity and budget needs by closely coordinating planning for school facilities and implementation of program enhancements.

POLICY 4.13: Work with the Public School System to adequately accommodate future school population in ways that minimize the need to construct new schools.

- ◆ ***Full Use of School Facilities.*** Balance enrollment between under- and over-capacity schools by redistricting or alternative strategies such as magnet schools, special academic or after school programs, to encourage full use of schools that have additional capacity.
- ◆ ***New School Construction Minimized.*** Accommodate the expected short-term peak enrollments, where necessary, by using modular classrooms and additions.
- ◆ ***Funding for Maintenance, Renovation and Program Initiatives.*** Provide sufficient funding to maintain and renovate school facilities and to allow program initiatives that will sustain and enhance the quality of the Public School System.

POLICY 4.14: Use space in schools with declining enrollments for school programs and other uses that support community conservation.

- ◆ ***School Use.*** Return current classrooms originally designed as special

purpose rooms to their original purpose. Accommodate programmatic changes such as reduced class sizes, expanded kindergarten and pre-school programs, and expanded media centers or computer labs.

- ◆ ***Community Use.*** Expand the use of schools for other programs that benefit the community such as civic, educational, recreational and family support activities.

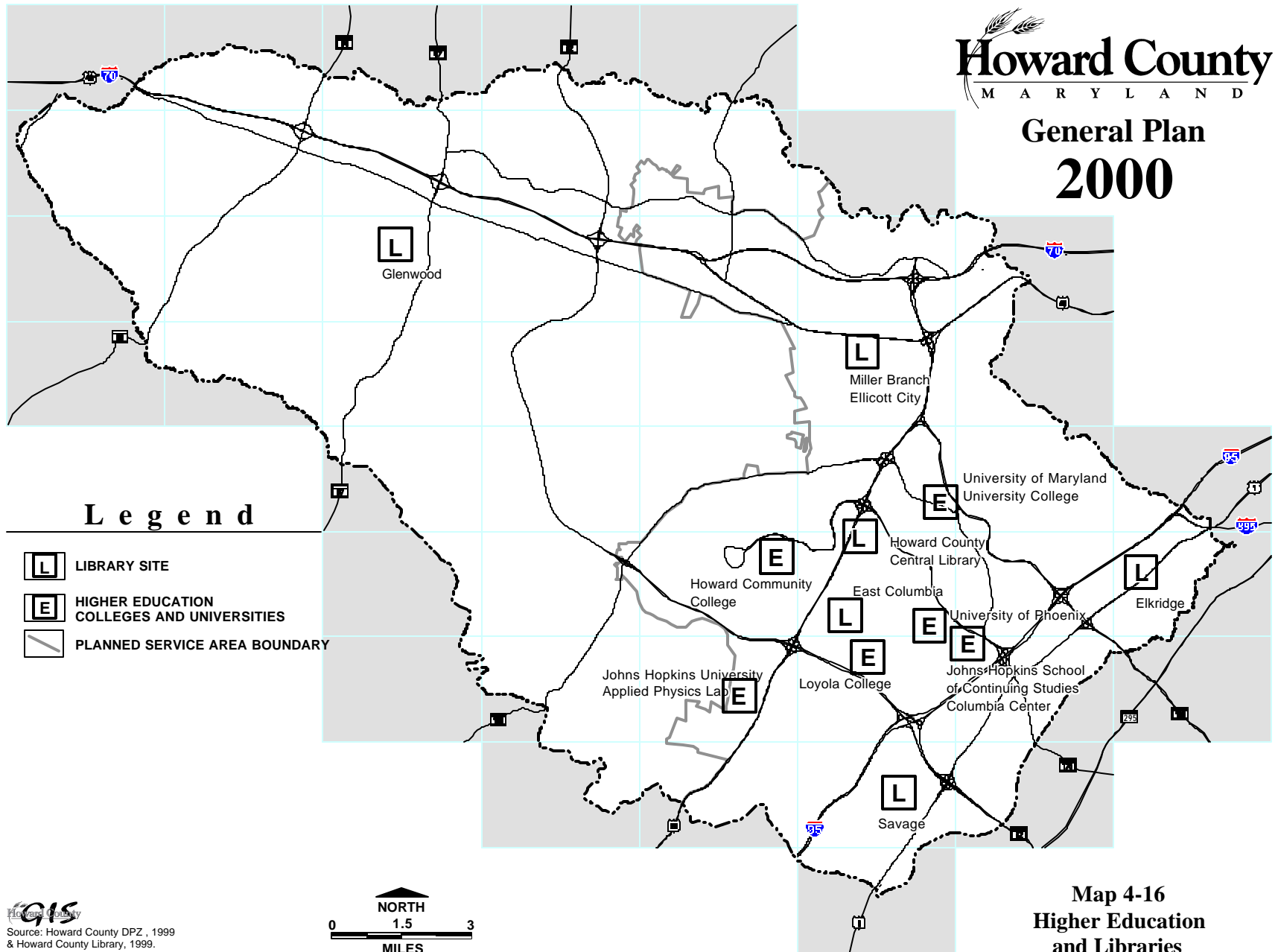
POLICY 4.15: Enhance design and use of school facilities.

- ◆ ***Flexibility in School Design.*** Consider options that increase flexibility in the design of new or renovated schools, to allow accommodation of relocatable classrooms for fluctuating school populations or to provide for community needs.
- ◆ ***Natural Environmental Areas.*** Conserve and enhance the natural environment on school sites to create schoolyard habitat for outdoor learning.
- ◆ ***School Sites.*** Work with the Public School System and community to determine the best use for sites owned by or reserved for the Public School System that are too small or poorly located for school sites or that will not be needed for future schools. Defer decisions on these sites until enrollments have stabilized and it is clear that there is no long-term need for schools at these locations.

Higher Education

In 1999, Howard Community College had enrollment in credit and non-credit classes of approximately 20,000. This is the largest enrollment of institutions for higher and continuing education in the County. Other institutions include the Johns Hopkins University Applied Physics Laboratory, the Johns Hopkins School of Continuing Studies' Columbia Center, Loyola College, the University of Phoenix and the University of Maryland University College ([Map 4-16](#)).

Howard Community College (HCC) has seen a steady increase in enrollment since it was established in 1970 and is the leading choice of County



residents enrolled as undergraduates in a Maryland college. The proportion of graduating Howard County high school students who enroll at Howard Community College has increased from 15% of high school graduates in 1992 to 20% in 1998. From 1990 to 1999, enrollment in credit classes increased 19% from 6656 to 7902. Enrollment in non-credit classes was stable over this period at approximately 12,500. HCC projects enrollment to increase 25-35% over the next ten years.

Howard Community College operating funds come from several sources. In 1998, about 37% of HCC's operating funds came from tuition and fees, 36% came from Howard County government, 17% came from the State of Maryland and 10% came from other sources. State support has declined from 20% of the operating funds in 1989, and from about 40% earlier in the College's history. The College's budget request for Fiscal Year 2001 proposes tuition increases for students from outside Howard County and a funding increase of 7.5% from the County, to fund increased staff and operating costs associated with enrollment increases.

The College has built no new buildings since 1989 and is experiencing space shortages. New construction is necessary if the College is to accommodate future enrollment increases. The current capital program calls for one new building to be built in FY 2003, with classrooms, office space and a child care facility. A Facilities Master Plan completed in 2000 addresses the College's long-term needs. The plan shows an ultimate development of ten new buildings to join the current five buildings on the College's 120-acre campus. Expansion will proceed incrementally based on enrollment increases and availability of funding, however, this long-range plan will guide decisions on placement and design of buildings.

One factor that may influence the pace of building expansion is technology-mediated education. In the distance learning area, "online" instruction will become the preeminent mode. In addition to the current three online degrees in General Studies, Liberal Arts and Business Administration, HCC foresees making all non-clinical instruction in the allied health programs available online. The new CampusWeb mode, where half of the course is taught on site and the other half online, is the possible model of the future. Over the long term, online will cease to be a distinguishing fac-

tor among courses.

Howard Community College makes a significant intellectual, cultural and economic contribution to community life. As part of its State-mandated role, HCC strives to provide training in skills important to the business community, as well as continuing education courses and public services that benefit the community's citizens. As such, and especially given HCC's technological capabilities, the College can play a role in economic and community development. Complementing economic development through education and training (including technical training for skilled workers) will become increasingly significant as employers seek to maximize a shrinking labor pool. Additionally, with many students already enrolled on a non-credit basis, HCC clearly promotes life-long learning. As the population ages, many seniors will take advantage of opportunities for the non-credit pursuit of intellectual and cultural interests.

Policies and Actions

POLICY 4.16: Support and enhance Howard Community College's role in the community.

- ◆ ***Expansion of Howard Community College.*** Continue the strong County commitment to Howard Community College (HCC). As feasible, provide funding for expansion necessary to support enrollment growth. Support HCC in obtaining funds from the State or other sources.
- ◆ ***Howard Community College as a Community Resource.*** Encourage HCC to strengthen its role as a resource for community development, especially through its technology expertise and infrastructure, research capability, faculty expertise, ties to the County's neighborhoods, and diverse student and staff population.
- ◆ ***Work Force Training.*** Encourage HCC to work with the Economic Development Authority and the private sector to develop programs to meet work force development and retraining needs, especially in technology related fields.

Libraries

Like the Public School System, the Howard County Library is outside the system of agencies and services directly responsible to the County Administration or County Council. Although the County Administration and the County Council must approve all capital improvements and the annual budget of the library system, the scope of operations, long-term planning and programming of new services are carried out by the Director and a Board of Trustees.

Strategies for improving library services and promoting life-long learning and enrichment are contained in the current Howard County Libraries Strategic Plan, published in 1999. Ongoing strategies include offering training in library resources and taking annual surveys of library users. The library system also plans to continue to expand its online resources.

The Howard County library system consists of six facilities: the Central Library in Columbia Town Center, two major branch libraries (East Columbia and the Miller Library in Ellicott City) and two branch libraries (Elkridge and Savage). Three of these facilities (East Columbia, Elkridge and Savage) have been built since 1990. An additional major branch library will open this year in the Glenwood Multi-Service Center, replacing the Lisbon library (Map 4-16, Figure 4-26). Given the locations of existing and planned growth, two additional major branch libraries are being considered. However, the need for additional library capacity must be assessed in light of the rapid evolution of the Internet and other technologies for accessing information. If any additional library capacity is determined to be needed, it should be provided in the East to accommodate growth within the Planned Service Area, via additions to existing libraries or as new facilities.

The construction phase of library development will conclude with the build-out of land in the County. Renovation projects will be an increasingly larger proportion of the capital budget for libraries. Howard County Libraries Strategic Plan recommends that the County’s libraries be completely renovated – including roofing and heating, air conditioning and electrical systems – on a 20-year cycle. Between those renovations, build-

Figure 4-26
Library Facilities

Name	Type of Facility	Square Feet	Year Built	Renovation Programmed
Central	Central	46,000	1981	2001
East Columbia	Major Branch	40,000	1994	2014
Miller	Major Branch	28,000	1986	2003
Glenwood	Major Branch	30,000	2000	2020
Elkridge	Branch	14,700	1993	2013
Savage	Branch	14,700	1991	2011
Lisbon (leased)	Community	1,200	1981	To Close 9/30/00

Source: Howard County Library Strategic Plan, November 1999

ings should also be recarpeted and repainted on a 20-year cycle.

Libraries are one of the key community building blocks that the public sector provides. Their placement should strive to establish a strong civic presence in harmony with complementary land uses such as other public services, recreation facilities or, possibly, commercial or institutional uses. Pedestrian access from nearby neighborhoods is also an important consideration.

The concept of combining various community-serving functions such as senior centers, health clinics and indoor recreation centers with libraries has merit; it increases the critical mass of complementary uses and benefits from economies of scale. A senior center, for example, can make use of community meeting rooms associated with the library. The location of the and Savage Libraries in conjunction with a senior center has proven to be very effective. A senior center is being constructed next to the Miller Library in Ellicott City in FY 2001.

Policies and Actions

POLICY 4.17: Enhance residents’ access to library resources.

◆ **Expansion Needs.** Evaluate the need for additional library capacity to

serve growth areas in light of the Internet and other evolving means of accessing information. Provide necessary expansion via additions or new facilities within the Planned Service Area.

- ◆ **Libraries as Community Focal Points.** Enhance the design of existing and any future libraries to help create a civic focal point. Where feasible, integrate libraries with complementary public uses, open space and other community uses.

Parks and Recreation

Introduction

Parks, open space and varied types of recreation, from organized sports to arts and crafts, contribute to the high quality of life County residents enjoy. But this variety requires many different types of facilities, and makes planning and managing the parks and recreation system quite challenging. Recreation areas, parks and open space are often incorrectly referred to as interchangeable aspects of the same service to the public. However, they serve different purposes and have different characteristics. Parks or open space acquired to protect environmental resources may not be suitable for intensive recreation facilities. The recreation potential of such areas may be limited to low intensity or passive activities such as hiking or nature studies.

The Howard County 1999 Comprehensive Recreation, Parks and Open Space Plan (the R & P Plan) is the County’s primary vehicle for determining needs for parkland, open space and recreation. The 1999 R & P Plan analyzes future needs based on expected population growth, demographic characteristics, the acreage needed for anticipated facilities and the land resources needing protection.

The 1999 Comprehensive Recreation, Parks and Open Space Plan and any subsequent revisions are incorporated into this General Plan by reference. The detailed projections of future needs are not replicated here. However, this General Plan does address some key issues the County will face over the next 20 years in planning for and providing the open space, parks and

recreation facilities that will enable Howard County to maintain and enhance its high quality of life.

Parkland Acquisition Goals

The Maryland Department of Natural Resources (DNR) helps local jurisdictions acquire parkland through Program Open Space, which is funded by property transfer taxes. To qualify for Program Open Space funds, the County must demonstrate that it is working to meet the State standard of 30 acres of County-owned parkland for each 1,000 residents. Since 1970, Howard County has received \$28 million in Program Open Space funds, and the current allocation to the County is \$2.5 million per year.

The State parkland standard is difficult to meet, and is not met by any central Maryland jurisdiction. Assessing how close Howard County is to meeting this goal is a somewhat complicated issue (Figure 4-27). Currently, County parkland totals 3,387 acres, which is only 13 acres per 1,000 residents. However, the County also owns 1,711 acres in natural resource areas and 2,410 acres of open space dedicated through the subdivision process, which would bring the total holdings to 7,508 acres, or 30 acres per 1,000 residents. However, the State does not allow dedicated open space to count towards meeting the parkland standard. If the quasi-public Columbia Association holdings of 3,180 acres and the 706 acres of athletic fields on

Figure 4-27
Public and Quasi-Public Green Space

Ownership	Acres
County Parks	3,387
County Natural Resource Area	1,711
County Owned Open Space	2,410
School Athletic Fields	706
Columbia Association Open Space	3,180
HOA Open Space	780
State Parks	9,752
WSSC Lands	2,200
TOTAL	24,126

Source: Howard County Department of Recreation and Parks, 1999

public school sites are added to this total, the County exceeds the State standard. The appropriateness of only considering County purchased parkland to count towards meeting the State standard should be reconsidered.

Given the rapidly decreasing amount of undeveloped land in the urban areas of the County, if the State standard is used, it is not certain that future sites can be acquired to keep pace with the growth in population. Based on 30 acres for every 1,000 residents, a total of 9,105 acres of County parkland would be needed by 2020, using the current official Round V-A forecasts of the County's population in 2020 of 303,500.

To achieve the goals of providing an acceptable level of service for parks and recreation and locating recreation facilities close to people, most of the acquisition and development of park and recreation facilities should be in the East. This acquisition strategy is also consistent with Smart Growth policies to provide a higher level of service within Priority Funding Areas than in outlying rural areas. A crucial planning question is where such facilities are to be located in the more urban East, which has limited undeveloped land, pressure for more housing and employment, and a need to protect the remaining environmental and landscape resources. Funding is also a critical consideration. In light of the high cost of land in the East and competing budget priorities, it will be difficult to achieve parkland acquisition priorities. Creative funding alternatives should be explored.

Balancing Preservation and Active Recreation

The State standard for parkland of 30 acres per 1,000 residents does not specify the proportion that should be developed for active recreation. The 7,508 acres of County-owned parks and green space are weighted heavily towards passive environmental holdings. Most of this land (55%) is natural resource areas and open space dedicated through the subdivision process. Of the 3,387 acres (45%) that are within County parks, only 889 acres are developed for active recreation. (Figure 4-28)

The standard established by the National Recreation and Parks Association (NRPA) for land set aside for environmental preservation is 60 acres for every 1,000 population. Howard County exceeds this standard, due primarily to the large amount of State parkland and land owned by the

Washington Suburban Sanitary Commission (WSSC) along the rivers that form the County's boundaries (Map 4-17, Figure 4-27). Most of the green space in the County, which totals 24,126 acres, is in passive recreation or environmental conservation.

At this time, the percentage of land developed for active recreation in the County is disproportionately low compared to total park and open space holdings. There is a pressing need for the County to develop realistic goals for future parkland acquisition and development of active recreation sites, based on current holdings, potential land availability and funding constraints. Such goals must be developed with participation from citizen organizations that represent both environmental preservation and active recreation interests.

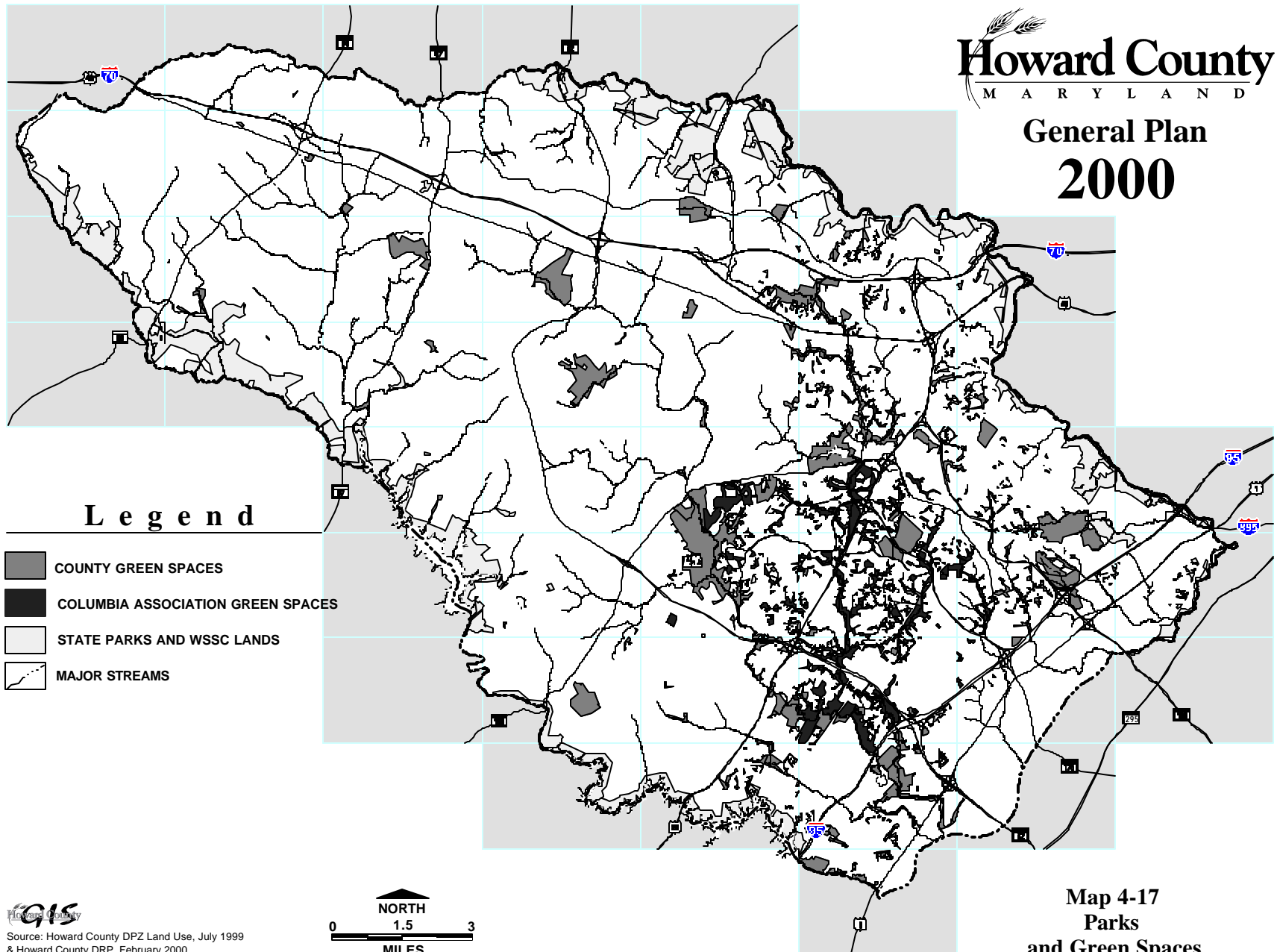
Residents and community organizations also need to be involved in the detailed planning for active recreation facilities. As the County's population has grown, the location and design of County parks with active recreation areas has become more contentious. Nearby residents often express concerns about lighting and noise from athletic fields designed for evening use, as well as more generalized safety concerns due to the proximity of publicly-accessible parkland close to their homes. The development of Community Master Plans, as discussed in Chapter 5, *Community Conservation and Enhancement*, will provide a forum for the Department of Recreation and Parks (DRP) and community organizations to identify ap-

Figure 4-28
Inventory of County Parks

	Developed Parkland	Undeveloped Parkland	Total Parkland
West	144	1,066	1,210
Columbia	139	369	508
Ellicott City	355	213	568
Elkridge	145	652	797
Southeast	106	198	304
TOTAL	889	2,498	3,387

Source: Howard County Department of Recreation and Parks, 1999

Howard County
MARYLAND
General Plan
2000



propriate locations for parks and recreation facilities, and to discuss means to mitigate any negative impacts of park design on adjacent communities.

Open Space and Pathway Networks

A challenge for the County in the next decade is linking parkland and open space holdings. Land set aside for environmental or landscape protection has rarely been purchased; most of the County's open space holdings have been acquired through dedication during the subdivision process. Except in Columbia, the lack of an open space plan and of funding for open space acquisition are two reasons that the County's open space holdings do not form a continuous and extensive network of open spaces.

As discussed in Chapter 6, *Working with Nature*, interconnected networks of open space and parkland allow better protection of the County's streams, rivers and forest corridors, provide wildlife habitat and corridors, and offer opportunities for pathway and trail systems. These goals have strong support from County residents. In 1994, the DRP conducted a survey of County residents to determine their recreational preferences. In the 5,848 questionnaires returned, the top four public preferences were for wildlife areas, hiking, scenery and stream conservation. The 1999 R & P Plan identifies a proposed system of County greenways. The DRP in cooperation with other County agencies should develop a detailed greenway master plan to identify specific environmental features and land that should be in either public ownership or under permanent protective easements. Such a plan would be helpful in evaluating the design of open space created through the development process and in determining County open space and park land acquisition priorities.

In 1999, there were 20 miles of bike trails, 13 miles of equestrian trails and 34 miles of hiking trails on County-owned or leased land. In addition, Columbia has over 80 miles of pathways on Columbia Association land. Howard County is evaluating potential pathway alignments that could link Alpha Ridge and David W. Force Parks to the County's spinal pathway, which is nearly completed from Centennial Park to Savage Park. If the extension to Alpha Ridge Park can be accomplished, the spinal pathway will cover a distance of approximately 30 miles. In addition, Howard County has coordinated extensively with the Columbia Association (CA) to link

County paths with the existing Columbia network, to map the pathway systems, and to clarify ownership and responsibility for maintenance. (A map of pathways in Columbia and Howard County is available from the CA or DRP.) As discussed in Chapter 2, *Responsible Regionalism*, the County is also working with the Baltimore Metropolitan Council and with adjacent jurisdictions to develop a plan for linking Howard County trails to a regional network of pedestrian and bicycle facilities.

As the County's trail and pathway system develops, common guidelines for signs need to be established for Columbia and County pathway systems. In addition, signs throughout the County need to be coordinated to enable users to easily identify and locate recreational opportunities.

Although County development regulations require the provision of open space, the open space generally has limited value for recreation. Open space areas frequently include environmentally sensitive land, stormwater management facilities and sewer or drainage easements, and may include some unusable disconnected fragments of land. Refinements to the open space standards are needed and are discussed in Chapter 5, *Community Conservation and Enhancement*.

Facility, Program and Budget Needs

Public parks, open space, recreation facilities and recreation programming are primarily the responsibility of the Department of Recreation and Parks. In 1999, DRP, with an annual operating budget of \$14.2 million, had 121 full-time staff, and 471 part-time staff.

Park and recreation facilities require funds for acquisition, site development and operation. Acquisition funding has come from several sources: Program Open Space, Transfer Tax, the County General Fund and General Obligation Bonds. The extent to which parks and recreation facilities are developed is closely correlated with funding needed to maintain and operate these facilities. Many of the needs indicated in the 1995 Comprehensive Recreation, Parks and Open Space Plan have not been achieved due to restrictions in operating funds.

DRP currently offers an extensive array of recreation programs. Changing

demographics will create a need for programs for groups that are increasing or that may currently be underserved, such as seniors, persons with disabilities and youth at risk. Currently, the most frequently expressed concern of residents is that the demand for youth activities outweighs the supply. This problem is more a result of facility shortages than lack of programming.

In 1976, DRP began charging user fees for recreation programs. This policy was instituted to allow program expansion based on population growth and demand for services, without increasing tax revenue or competing with other County services for available funds. In FY 1976, the budget from user fees was approximately \$50,000. In FY 2000 this budget has risen to approximately \$8.3 million (\$2 million of which is from the Timbers at Troy Golf Course). Approximately 55% of the DRP budget comes from user fees. While user fees are sufficient to cover program expenses, most recreation programs are not “profitable” and are not likely to be provided by the private sector. Those that do generate surplus income enable the Department to provide subsidies to individuals and groups that could not otherwise afford to participate.

Planning for recreation facilities and programs is made more complex by the variety and number of organizations providing recreation services in the County. In evaluating the need for facilities and programs, the Department of Recreation and Parks must be aware of services being provided by others. To this end, the 2003 update of the Comprehensive Recreation, Parks and Open Space Plan will include a more complete inventory of private and public recreational facilities and services than has been included in the past.

In Columbia, the Columbia Association operates an independent system of open space and recreation facilities. Although this system is supported by a special homeowner’s fee paid by Columbia residents, many of CA’s facilities are open to County residents. Recreation programs are also provided by many other public and private organizations, including the Office on Aging, hospitals, schools, the Cooperative Extension Service, Howard Community College, 4-H, Boys and Girls Clubs, Boy Scouts, Girl Scouts, Camp Fire Girls, the YMCA, churches, synagogues, and apartment and housing complexes. Commercial recreation facilities include community

swimming pools, health and tennis clubs, ice rinks, golf courses, visual art centers and outdoor/environmental education or nature centers.

The Department of Recreation and Parks will continue to build partnerships with other public and private interests so that the Department is not competing with, but rather is complementing the efforts of other groups. The County may be able to enhance its ability to provide recreation facilities through partnerships with the private sector. For example, the Department of Recreation and Parks might provide training and expertise to private organizations that are willing to dedicate space, funding, and/or personnel to a recreational program. The Department of Recreation and Parks will review the need for a central information clearinghouse that identifies what opportunities are available through public, quasi-public and private organizations, as more nonprofit and private enterprises participate in providing recreational and leisure opportunities.

School sites are obvious locations for many recreation facilities, especially athletic fields and gymnasiums. However, planning for the use of school facilities for other public recreation programs has been difficult. This is especially true when school sites have barely adequate land to meet their own needs much less the space to accommodate additional recreation uses. During the 1990s, several schools were developed with additional space for community recreation needs. Few new schools are projected to be needed, diminishing the opportunity to develop community recreation facilities on school sites. However, the ongoing need for renovation of older schools will provide the opportunity to add recreation facilities for community use where school sites have enough space to support these uses.

Effective planning for the County’s recreation and parks system will require analysis of the needs of an aging and more diverse population, clearer acquisition priorities, adequate funding and close coordination with other balanced growth policies.

Policies and Actions

POLICY 4.18: Enhance the County park system and recreational facilities.

- ◆ **Acquisition Goals.** Establish specific, realistic goals for acquisition of land for environmental conservation and active recreation in the 2003 update to the Comprehensive Recreation, Parks and Open Space Plan (2003 R & P Plan). Involve organizations that represent environmental preservation and active recreation interests in developing these goals.
- ◆ **Acquisition Schedule.** Accelerate acquisition of land to meet the County's long-term recreation needs since suitable sites are disappearing rapidly. Priority for park acquisition should be directed inside the Planned Service Area where population is greatest.
- ◆ **Greenway Systems.** Develop a detailed greenway plan to create continuous greenways that preserve environmental and landscape resources, protect water quality and habitat corridors, and provide trail or path access in appropriate areas. Incorporate this greenway plan into the 2003 R & P Plan.
- ◆ **Trails and Pathways.** Develop a County-wide plan for trails and pathways with an emphasis on connecting the existing system with other areas of the County. Incorporate the trail and pathway plan into the 2003 R & P Plan and prioritize future funding requests.
- ◆ **Community Planning.** Refine County-wide objectives for acquisition of parkland, restoration or improvement of open space, and development of recreation programs or facilities. Look for opportunities within existing neighborhoods to develop neighborhood parks, recreation facilities or green space.
- ◆ **Design of Active Recreation Sites.** Design facilities for active recreation with input from community residents and organizations, using design features that mitigate potential visual and noise impacts and address safety concerns.

POLICY 4.19: Improve management and delivery of recreational services.

- ◆ **Identifying Needs.** Use demographic studies and/or surveys to iden-

tify the need for future programs or recreational facilities to meet the needs of an aging and more diverse population.

- ◆ **Coordination with Columbia Association.** Continue to facilitate and encourage cooperation and coordination between the Columbia Association and the Department of Recreation and Parks in recreational planning and programming.
- ◆ **Cooperation with Howard County Public School System.** Improve cooperative agreements between the Department of Recreation and Parks and the Public School System for the joint use of school and recreation facilities. Consider County funding for school sites that exceed the Public School System's acreage requirements and that provide facilities for community usage. Improve cooperation on the design, development, management and maintenance of recreation facilities on school sites.
- ◆ **Partnerships with Public and Private Organizations.** Build partnerships with commercial and nonprofit providers so that the Department of Recreation and Parks programs complement and support efforts by alternative providers. Review the need for a central information clearinghouse that identifies what opportunities are available through public, quasi-public and private organizations.

Police Protection

Police protection is the most visible component of the criminal justice system. In Howard County, the Department of Police is the primary provider of police protection. The State Police is responsible for police coverage on the two interstate highways traversing the County (I-95 and I-70), and has investigative authority at State-owned/leased facilities (Patuxent Institute and Clifton T. Perkins Hospital).

Organization and Operations

In 1996, the Department of Police instituted a comprehensive reorganization to enhance the efficiency of personnel and resource management. A

fundamental change involved shifting from an organizational structure comprised of three Bureaus to operating under two Commands, the Operations Command and the Administration Command.

The Operations Command, which includes Patrol, Criminal Investigations and the Special Operations Division, requires the majority of the Department’s resources. The Administration Command provides necessary support services and includes the Human Resources Bureau, the Management Services Bureau, the Automated Enforcement Division and the Budget/Fiscal Section. Realigning nonenforcement tasks to an Administration Command lightens the management load for the Operations Command and allows it to better concentrate on patrol operations and investigations.

All functions of the Police Department were housed in the Warfield Building at the Police Headquarters in Ellicott City until 1994, when the Southern District Station was opened (Map 4-18). With the opening of the new station, the Department’s patrol function was divided into the Northern and Southern Districts, each headed by a District Commander who holds the rank of Captain. The vast majority of the 109,076 calls for service in 1999 were handled by the two Patrol Districts. The Districts also manage the Department’s K-9 teams, bicycle patrol and telephone reporting operations. The new Southern District Station made it possible to cover more area with the same number of staff. Sixty percent of the calls for service received by the Police Department are now in the Southern District.

The Education and Training Division, located in the Gateway Building, is responsible for a wide range of training. Training includes entry-level academy classes for recruit officers, simulated police academy training for adults and high school students, as well as mandated and specialized training for veteran police officers.

A commonly used measure of police service is the number of sworn police officers in relation to the population. Figure 4-29 shows this relationship for Howard County from 1994 to 1998. The ratio of sworn officers per 1,000 population varies significantly among communities in the region, depending upon the nature of coverage, density and overall population of the community. For example, the ratio for Carroll County is about 1.07 of officers per 1,000 population while for Baltimore County it is about 1.97 officers per 1,000 population. The national average is 2.7 officers per 1,000 population.

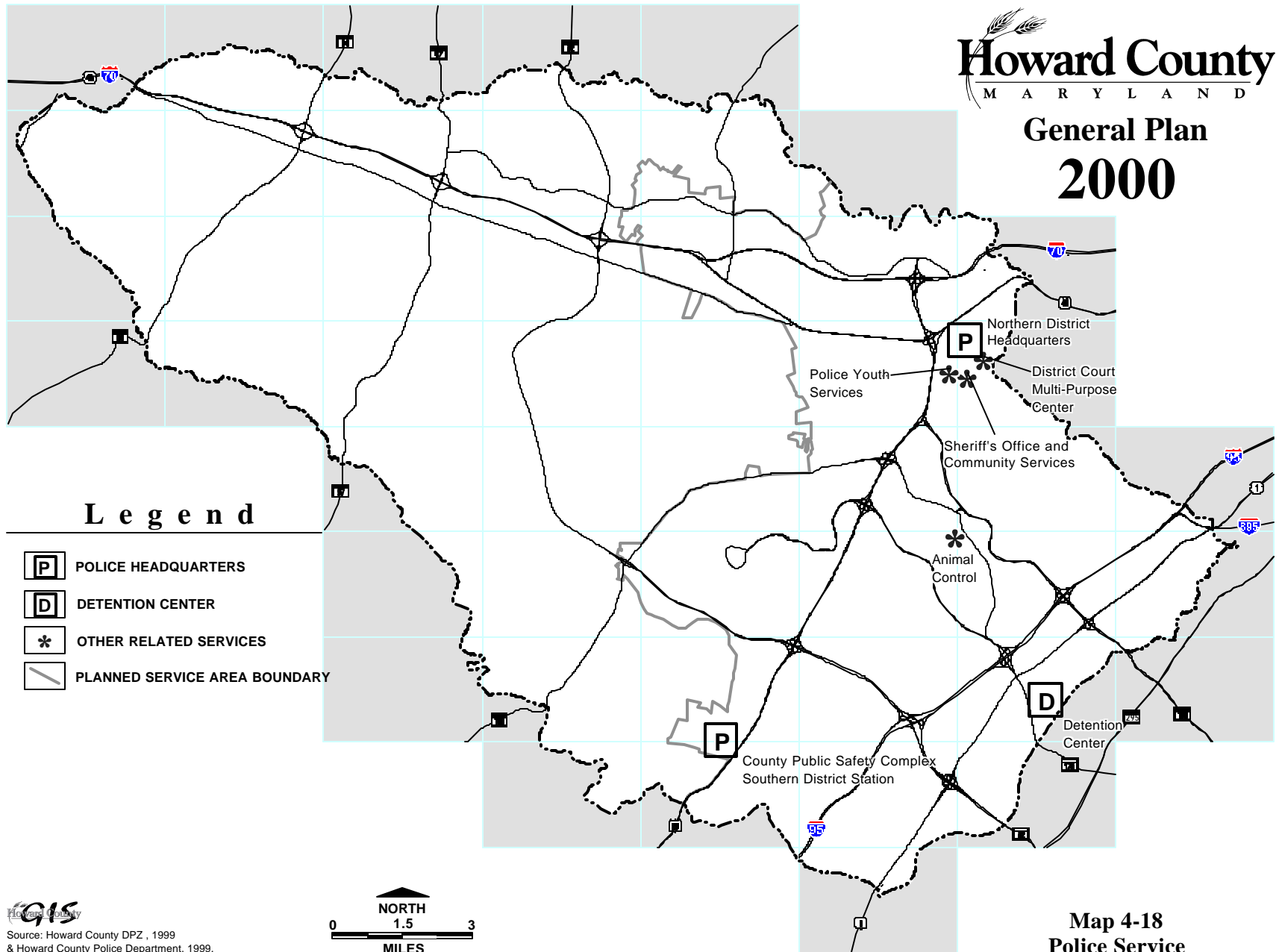
A better understanding of service needs is gained when the increase in calls for service is related to population growth and police officers. Figure 4-29 shows a clear increase (+9% over five years) in the number of calls per sworn officer. The number of calls is an indicator of police activity for not only call-related police services, but also other activities, such as routine patrolling, crime follow-up and police support services. Increases in support services, such as crime lab work and criminal investigation, are often the direct result of increased calls to the Police Department.

Figure 4-29
Police, Calls for Service, Authorized Strength and Budget

	1994	1995	1996	1997	1998
Population	211,983	218,626	226,594	231,722	237,372
Calls for Service	96,692	99,469	106,928	107,174	105,738
Calls for Service per 1,000 Population	456	455	472	463	445
Police Officers	315	340	327	315	313
Police Officers per 1,000 Population	1.49	1.56	1.44	1.36	1.32
Annual Budget (millions)	\$22.9	\$24.3	\$24.1	\$24.1	\$25.6

Source: Howard County Police Department

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GIS
Source: Howard County DPZ, 1999
& Howard County Police Department, 1999.

Figure 4-30 shows that the number of severe crimes reported in Howard County decreased 13% between 1994 and 1998. Other less severe crimes increased 6% and arrests increased 2% during the same five-year period. Since 1994, the number of officers per 1,000 population has decreased while the number of calls for service per officer has increased. However, other key variables influence police service needs, including economies of scale, organizational structure, density of population, socioeconomic factors and crime trends. Changes in the Police Department, especially the opening of the Southern District Station and increased automation, have increased its efficiency. The Police Department leadership reports that if all positions were filled, the number of officers authorized for 1999 would be sufficient to address calls for service.

Service and Facility Needs

As County population continues to grow, some expansion of police facilities and personnel will be needed. A detailed projection of future police facility and service needs is beyond the scope of this General Plan. The Police Department analyzes demand for services regularly in order to configure police beats and to assess facility and personnel needs. However, several trends noted in this General Plan indicate important priorities for police programs over the next 10 to 20 years:

- Initiated in 1993, community policing is a top priority of the Police Department and complements the emphasis of this General Plan on community conservation and community planning. The community policing program includes a Police Foundation (composed of business leaders) and a Citizen’s Advisory Council that advise the Police Chief. The program also includes a Citizens Police Academy and six satellite offices located within communities in storefronts or apartment complexes. Officers generally remain stationed in the same area so they become familiar with the community.
- A related issue is assistance to communities experiencing particular problems with crime. Howard County is participating in the Federal Hot Spot Program, which seeks to reduce crime within targeted communities through grant funding for satellite office expansion and additional staffing. In the Village of Long Reach, Howard County’s first Hot Spot location, a 17% reduction in calls for service has occurred since the

**Figure 4-30
Severity of Crimes and Total Arrests**

	1994	1995	1996	1997	1998
Total Arrests	7,126	7,899	8,185	8,094	7,242
UCR Part I Crimes	8,802	9,217	8,978	8,694	7,676
UCR Part II & III Crimes	10,793	11,291	12,841	12,865	11,484

Source: Howard County Police Department

Note: Uniformed Crime Reporting (UCR) Part I Crimes include: murder, theft, assault, robbery, burglary, auto theft and rape. UCR Part II & III Crimes include: forgery, fraud, embezzlement, vandalism, sex offenses, drug violations, DWI and family child neglect or abuse.

opening of the neighborhood satellite office in April 1998. The community views the Hot Spot designation as a valuable resource for their community. A second Hot Spot grant was approved for the Village of Harper’s Choice. North Laurel also applied for funding, but was not approved. However, the Horizon Foundation has earmarked \$105,000 for North Laurel to establish a community policing program similar to those in the Columbia Villages of Long Reach and Harper’s Choice.

- In the past five years, the Police Department reports an increase in juvenile arrests for crimes such as simple assault, vandalism or disorderly conduct. Police officers coordinate or assist with several programs aimed at preventing juvenile crime. Nine police officers funded by a Federal grant are stationed throughout County high schools. Youth programs, such as Drug Abuse Resistance Education (DARE) and Gang Resistance Education and Training (GREAT), have been instituted in high schools and middle schools. Ideally, school liaison programs would be extended into all high schools and middle schools. The Police Department is studying the effectiveness of their youth programs to see if funding should be reallocated.
- Police services will need to accommodate a changing population with a higher proportion of elderly residents and an increase in Asian and Hispanic populations.

Regarding future facility needs, no additional police stations are currently projected. However, if calls for service in western Howard County increase

with population growth, additional police resources may be necessary. In the long term, provision of additional service in the West may need to be considered. There is a need for a Police Training Center (including a shooting range, pursuit driving track, classrooms and other related police academy activities) to provide for the comprehensive training of new officers and to continue in-service training of personnel. A joint Police – Fire Training Center is being considered.

Policies and Actions

POLICY 4.20: Enhance police protection.

- ◆ ***Adequate Resources.*** Ensure that public safety agencies are staffed to provide adequate resources based on levels of crime and demand for services.
- ◆ ***Automated Systems.*** Continue to improve the automated police information and record management system, enabling police personnel to handle more calls for service while minimizing the need for more personnel.
- ◆ ***Community Policing Programs.*** Continue to focus on crime prevention and community policing programs that allow police officers to work in partnership with communities to solve crime and improve the quality of life.
- ◆ ***Youth Programs.*** Dedicate appropriate resources to expand school liaison programs into all high school and middle schools and to strengthen other proactive programs.
- ◆ ***Demographic Changes.*** Adjust services and programs to accommodate an increasingly elderly and diverse population.
- ◆ ***Traffic Enforcement.*** Provide additional traffic enforcement resources to address the increase in traffic in residential communities and on major through roads.

Fire and Rescue Services

Organization and Operations

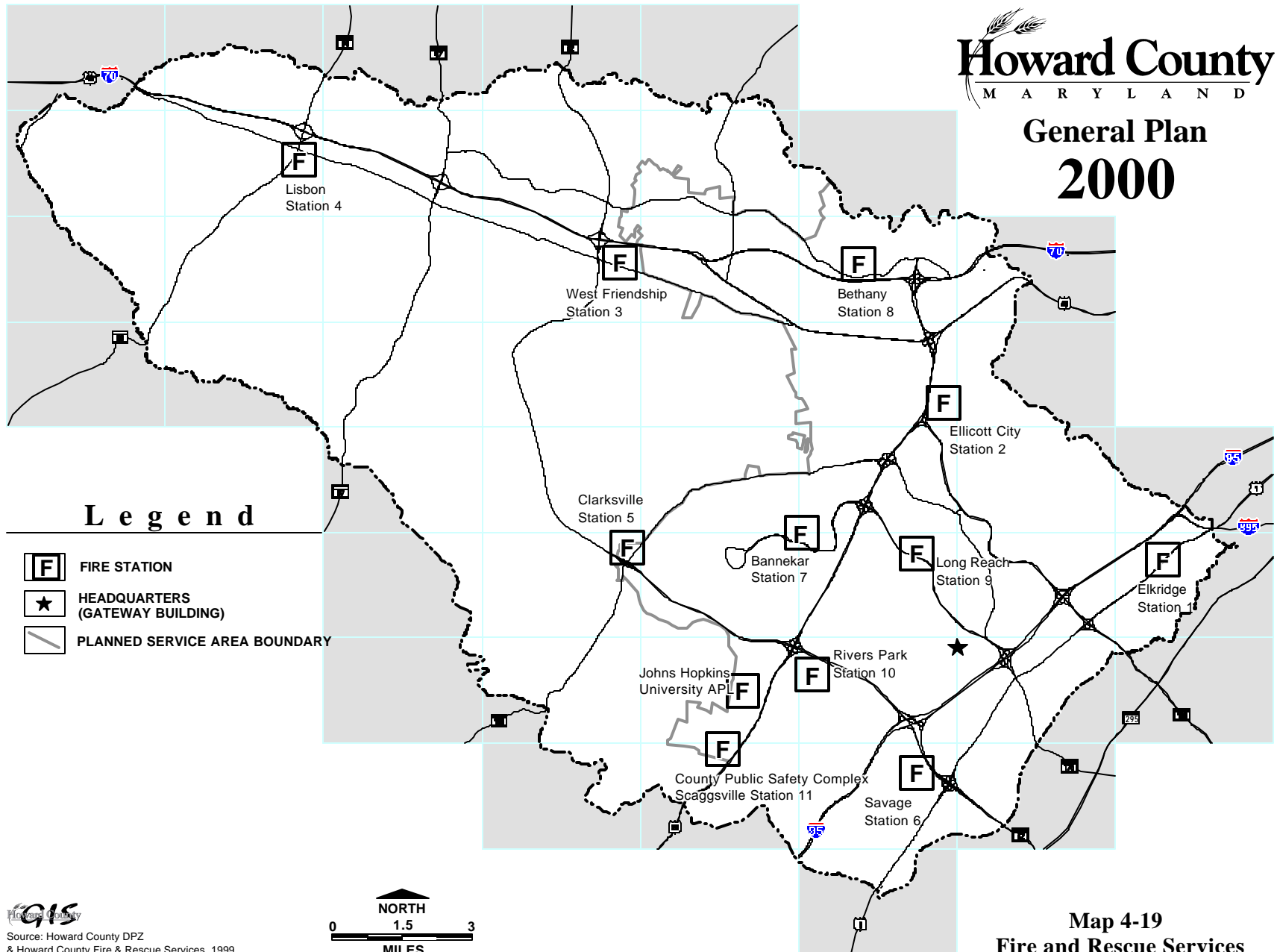
Howard County's Department of Fire and Rescue Services is responsible for emergency medical services (EMS), fire suppression and prevention, emergency services training, emergency management and rescue services. In addition, the Department is responsible for the Office of Emergency Management. Arson investigation is handled by the State Fire Marshall's office, but representatives from the County Police and Fire and Rescue Services Departments are part of an Arson Task Force that works closely with the State Fire Marshall's office. Howard County's Department of Fire and Rescue Services is one of only 27 agencies throughout the world accredited by the Commission on Fire Accreditation International.

The Department of Fire and Rescue Services is a combination career and volunteer department. Staffing for Fiscal Year 2000 consists of approximately 175 operationally active volunteers and 263 career personnel, all of whom participate in emergency operations. Additionally, there is an administrative staff of 18 uniformed personnel and 14 civilians.

The Department operates 11 fire stations ([Map 4-19](#)), with over 100 emergency vehicles. Volunteers manage seven of the 11 stations (Elkridge, Ellicott City, West Friendship, Lisbon, Clarksville, Savage and Bethany). The Banneker, Long Reach, Rivers Park and Scaggsville Stations are County- managed. Nine of the 11 stations have a complement of full-time career employees. The West Friendship and Lisbon Stations have two contingent employees assigned to supplement volunteer staffing. Supplemental resources are provided through Mutual Aid Agreements with each of the surrounding jurisdictions, as well as a private fire station at the Johns Hopkins Applied Physics Laboratory.

The County is divided into the Metropolitan and Rural fire tax districts. The boundary between the two districts is the same as the Planned Service Area boundary for public water and sewer. Funding for fire and rescue services is provided by the Fire Tax, Transfer Tax, grants and, occasionally, the General Fund.

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Service and Facility Needs

The Department of Fire and Rescue Services responded to 20,670 emergency incidents in 1998. (An incident is a fire, rescue, request for emergency medical service or other related emergency request to which the Department responds.) Seventy percent of these incidents were for emergency medical service (EMS), 4% were fire-related, and 26% were other calls. Other calls may include hazardous materials or technical rescues. Since an incident may elicit a response from one or more stations, the responses exceed the incidents. The incidents in 1998 required 47,806 responses, and for 1999 required 50,461 responses.

Emergency incidents increased 73% between 1988 and 1998 (Figure 4-31). The proportion of calls that are for emergency medical services increased from 66% of all incidents in 1988 to 70% in 1998 (Figure 4-32). The proportion of emergency medical calls is likely to increase further as the County's elderly population increases.

The increase in population and calls for service has led to a need for expanded fire and rescue facilities. A new, larger fire station for Ellicott City opened in 1997 and a joint fire/police station in southern Howard County opened in 1994. The Capital Improvement Program calls for two new fire and/or EMS stations, one planned for western Howard County (Glenwood) and another station is under consideration in the Elkridge area. The Glenwood Station is to be funded in the FY 2003 budget, with a projected completion date of 2004. The Elkridge area station is to be funded in the FY 2005 budget, with a projected completion date of 2007. After these two stations are built, there is no anticipated need for additional stations. If call volumes indicate a need for additional capacity, new fire or rescue units would be added through expansion of the existing stations.

An increase of 15 firefighters has been included in the FY 2001 budget. The increase should adequately cover the proposed new station at Glenwood. It is critical to meet staffing needs before opening a new station. Additional staff are also needed within the Department's Life Safety Bureau, which handles the Fire Safety Inspection Program. The program needs to have sufficient staffing to allow one uniformed individual to be assigned to each shift to handle arson reports and coordinate inspections. In

addition, a combined fire/police arson task force needs to be established.

Since 1990, the Department's volunteer force has declined from approximately 200 to about 175 active volunteers. The County needs to enhance its retention and recruitment program for volunteers. Unless the Department can recruit more volunteers and retain its experienced, trained volunteers, it will need to hire more career personnel.

Figure 4-31
Fire & Rescue Incidents and Responses

	1988	1998	Percent Increase
Population	167,300	237,372	42%
Total Responses	16,791	47,806	185%
Responses per 1,000 population	100.4	201.4	101%
Total Incidents	12,058	20,670	71%
Incidents per 1,000 population	72.1	87.1	21%

Source: Howard County Department of Fire & Rescue Services

Figure 4-32
Fire & Rescue Incidents by Station, 1998

Station #	Station Name	Fire	EMS	Other	Total
1	Elkridge	124	1,307	641	2,072
2	Ellicott City	87	1,922	564	2,573
3	West Friendship	31	589	233	853
4	Lisbon	26	634	235	895
5	Clarksville	42	497	234	773
6	Savage	147	1,941	787	2,875
7	Banneker	138	2,846	723	3,707
8	Bethany	56	867	325	1,248
9	Long Reach	133	2,527	952	3,612
10	Rivers Park	51	637	332	1,020
11	Scaggsville	53	711	278	1,042
TOTAL		888	14,478	5,304	20,670

Source: Howard County Department of Fire & Rescue Services

Training facilities for the Department of Fire and Rescue Services are located at the Gateway Building and at other off-site locations. Long-term fire and rescue training facilities are needed that include specialized facilities such as live fire, hazardous materials and driver training. There has been consideration of a joint Police and Fire Training Center.

Replacement of aging equipment will be a major issue in the next few years. To replace the aging vehicle fleet will cost approximately \$7 to \$9 million.

The last and perhaps most important aspect of fire prevention is public awareness. The Department of Fire and Rescue Services wants to enhance its prevention outreach program to further educate the public on fire prevention and safety techniques. It would be desirable to adopt code changes to require early detection and suppression systems in more structures, especially historic structures and small commercial structures under 5,000 square feet in size which are not currently required to have sprinklers. A program of post-occupancy inspections of commercial structures to identify code violations or other potential hazards is also being considered.

Policies and Actions

POLICY 4.21: Minimize loss of property, loss of life and injury due to fire or medical emergencies.

- ◆ ***New Fire Stations.*** Construct and staff the two new fire and/or EMS stations (Glenwood and Elkridge area) in the current Capital Improvement Program.
- ◆ ***Fire and Rescue Vehicles.*** Provide funding to update the fleet of fire and rescue vehicles.
- ◆ ***Training Center.*** Determine and implement the best solution for fire and rescue training needs.
- ◆ ***Volunteer Program.*** Enhance the volunteer recruitment program and

examine ways to increase retention of trained and experienced volunteers.

- ◆ ***Public Education.*** Expand public education programs.
- ◆ ***Fire Safety Inspection Program.*** Strengthen the Fire Safety Inspection Program to provide for a more efficient inspection program.
- ◆ ***Post-Occupancy Inspection.*** Initiate post-occupancy inspections for commercial uses.
- ◆ ***Fire Sprinklers in Small Commercial Buildings.*** Investigate costs and benefits of requiring fire sprinkler systems in commercial buildings of any size (currently required in businesses 5,000 square feet or more). Alternatively, the County could promote the use of sprinklers through public information or incentives in buildings less than 5,000 square feet.
- ◆ ***Historic Structures.*** Examine methods of protecting historic structures from fire damage through such means as encouraging installation of sprinklers and using fire suppression techniques that minimize damage to historic materials.

Health and Human Services

As Howard County looks to the next ten to twenty years it must continue to improve the health and well-being of all of its residents. To accomplish this goal, County government will need to think and act in new ways that result in stronger and more productive partnerships with business, not-for-profit service providers and capacity building organizations, and the many community based groups concerned with quality of life issues. Changing demographics and a dynamic economic environment can be expected to present new and challenging problems and issues. The County's effectiveness in addressing the residents' health and human service needs will contribute to meeting other important General Plan objectives.

Human Service Needs

Human services enhance the quality of life for the entire community by promoting social and economic well-being for individuals, families and groups. The need for human services is universal and not limited to a few segments of society. Human services may include, but are not limited to, physical and mental health, social, legal, employment, transportation, childcare and continuing education services operated by governmental, nonprofit and for-profit organizations. The local human services system includes a diverse array of public and private providers. It is a complex, interconnected delivery system that depends upon the resources of many different organizations (Map 4-20 shows some of the health and human service facilities in the County):

- Howard County's Department of Citizen Services encompasses the Offices on Aging, Consumer Affairs, Children's Services, Disabilities Service, the Commission for Women and other County human services. The Department operates the County's ten senior centers. The Department also administers the Community Services Partnerships under which the County purchases human services.
- The Department of County Administration manages the Employment and Training Center and the Office of Housing and Community Development.
- The Howard County Department of Health operates three health centers, and the Department of Social Services manages welfare programs. Both are State agencies that receive some County funding.
- The State Department of Labor, Licensing and Regulations operates the Job Services and Unemployment Insurance Programs. The State Department of Juvenile Justice operates programs for delinquent youth. The Cooperative Extension Service, which is involved in nutrition programs, is also a State agency.
- The Federal Social Security Administration administers retirement programs.
- There are over 200 nonprofit providers such as Grassroots, Domestic Violence Center, The ARC of Howard County, Development Services Group, Urban Rural Transportation Alliance, STARR Center, Winter Growth and the Howard County General Hospital (a member of Johns Hopkins Medicine), to name a few. Many belong to the Association of

Community Services.

- Private for-profit providers include Taylor Manor Hospital, two nursing homes, six large assisted living facilities and over 80 small assisted living group homes.

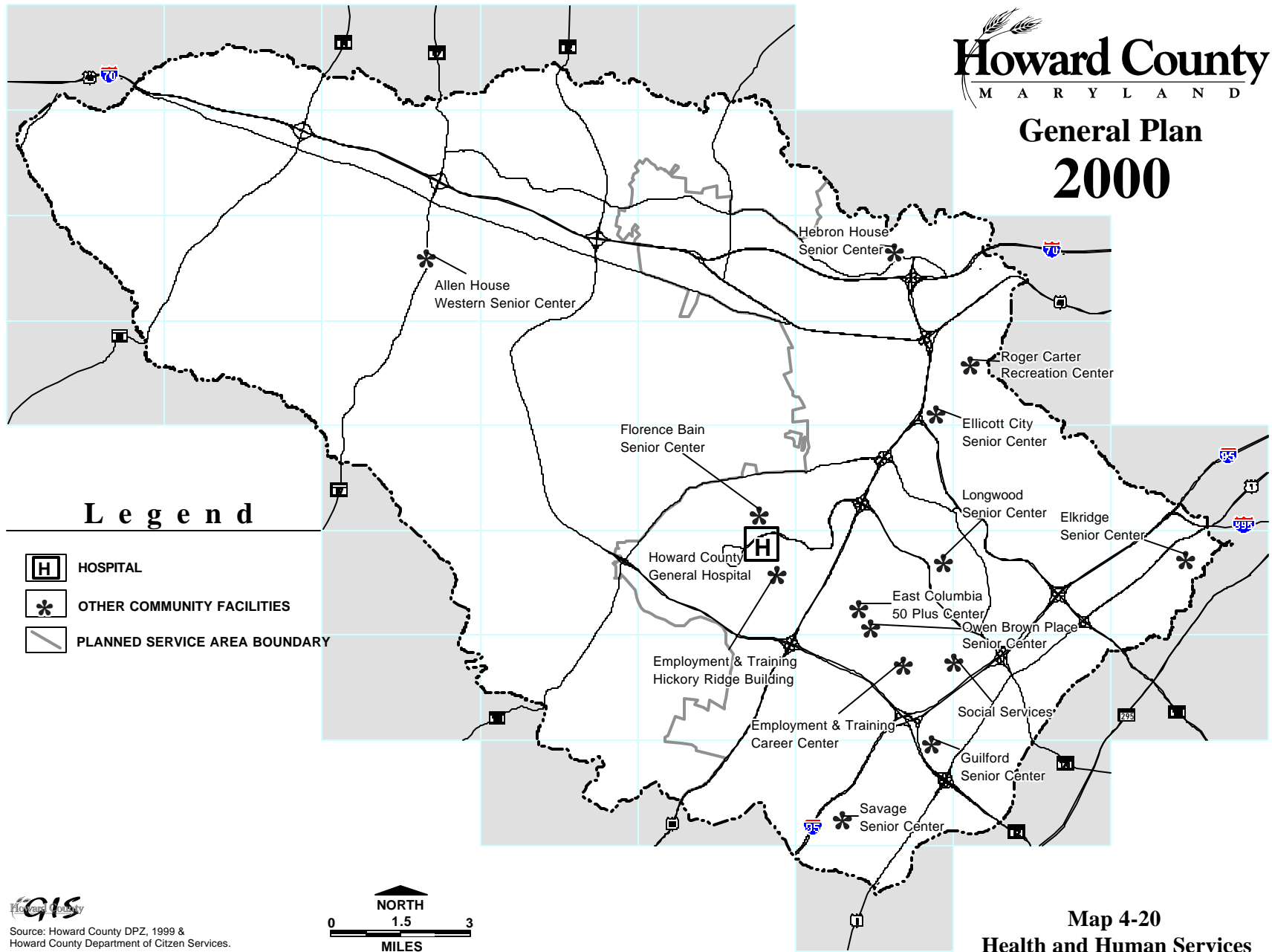
People of all ages and socioeconomic groups require human services. However, population characteristics, especially age and income, have an important direct effect on the need for services and the population's ability to obtain them.

Aging of the population is already a significant factor in planning for human services and it will become increasingly important. The population of those over 65 will more than triple from 14,700 in 1995 to about 47,000 in 2020. Within this population the percentage of those over 85 will increase, along with a disproportionate need for human services. The growth in the elderly population will result in increased needs for health services, personal care services, senior centers, day care, nutrition sites, specialized housing, home maintenance assistance and other services addressing the needs of this population. The housing needs of seniors, the disabled and special needs population, as well as low and moderate income households, are discussed in the previous section on Residential Land Use.

The youth and families of Howard County will also require human services in increasing numbers, as the population grows and two-income or single parent families require child care, before and after school activities, and parent substitute services such as transportation to activities. Parenting skill support for some families will help prevent future need for some types of services. An emphasis on after school activities is especially important for "latch key" children (ages 10-15), who are left alone at home until their parents return from work.

Howard County currently has a low unemployment rate of 1.4%. It is difficult for businesses to fill entry-level jobs, and with continuing strong job creation anticipated, this problem will intensify. People previously considered to be outside the work force will be hired to fill some critical labor shortages. These include people with disabilities, retired people, welfare recipients, foreign-born individuals and underemployed people. Employment training is important to people leaving welfare and entering the work

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force, persons with disabilities seeking an independent life, new job seekers and the retired re-entering the work force. As the shift from an industrial to an information economy continues, retraining the work force with new job skills becomes a necessity for displaced workers, as well as the work force as a whole.

Health Service Needs

Howard County residents benefit from a wide variety of local health care providers and services, and from being in close proximity to health care facilities and academic medical centers in the Baltimore and Washington regions. As with human services, the health care delivery system is complex and depends upon the resources of many organizations, such as:

- Walk-in clinics, health maintenance organizations, preferred provider organizations and numerous private providers.
- Howard County General Hospital is licensed for 233 beds. These beds are assigned to serve patients in the following categories: 29 obstetric, 35 psychiatric, 4 pediatric, 12 critical care, 36 intermediate care and 117 medical/ surgical. In addition, the hospital provides care in 30 normal newborn bassinets and 18 neonatal intensive care bassinets.
- St. Agnes Nursing and Rehabilitation Center in Ellicott City (182 beds) and Lorien Nursing Home (311 beds) and five home health agencies serve the County's disabled and senior citizens. There are two for-profit and one nonprofit adult day care centers in the County. Many County residents are also served by nursing homes and home health care providers in other jurisdictions.
- Hospice Services of Howard County provides the terminally ill and their families with nursing care and support services within patients' homes. In addition, one inpatient hospice bed is provided at Howard County General Hospital. Twenty-four additional inpatient hospice beds are available in Towson.
- The Howard County Health Department provides a variety of clinical services to County residents, including maternity, family planning, child health, communicable disease and addictions treatment and education. The Health Department privatized mental health services in 1999, through Sheppard Pratt Health System. The Health Department also provides addictions services at the Howard County Detention Center, where

an estimated 80% of inmates have addictions problems.

- The AIDS Alliance of Howard County coordinates services for people with HIV/AIDS who live or work in the County. The Howard County Health Department provides HIV/AIDS Counseling and Testing Services.
- Vantage Place serves Howard County residents with chronic mental illness (71 beds). Vantage Place also provides 13 beds for persons with head injuries.
- The Howard County Association of Retarded Citizens Community Choice Program provides 140 beds for developmentally disabled citizens through a combination of group homes, alternative living units (including apartments), independent homes and community supported living arrangements.

In 1997, the Howard County Health Department prepared an assessment of present and future health care needs of County residents, demographics and the special needs of uninsured individuals. The priorities identified as important for most residents were heart disease, cancer (especially breast and lung), drug abuse and alcoholism, AIDS, health insurance for the uninsured, and assurance of access to services for low income and senior citizens. This report was recently updated and is the most comprehensive analysis of health-related data for Howard County available. Cancer and heart disease remain the top two priorities for Howard County in terms of leading causes of death and of Years of Potential Life Lost (a weighted measure for the age of death of an individual in relation to average life expectancy).

Because seniors have more chronic health problems, they require a broad range of health services – inpatient, outpatient and in the home. As the County's population increases and ages, additional beds and facilities will be required. Although three adult day care centers are located in Columbia, other day care centers will likely be needed in other parts of the County. There is a need for more homebound care for the elderly and people with disabilities. Homebound care would include personal care, in-home nursing, housekeeping, grocery and meal assistance, and respite for care givers.

Access to Health and Human Services

Barriers that hinder people's use of the services they need include lack of transportation, inconvenient or limited hours of service, cultural barriers and financial constraints. Most of the clients who use Health Department services have a low income or are above medical assistance guidelines but below 150% of the poverty level. Since many people who use clinics do not have cars, the location and accessibility of clinics is paramount. Health Department services are not currently easily accessible to County clients. Department services are located in Ellicott City, Columbia and Savage, which have limited transit access. Additional clinics should be located in areas with concentrations of low income residents. Based on a review of schools with large numbers of children eligible for free lunch, an indicator of low income families, additional health services in the northeast portion of the County may be needed.

The low income population in the western portion of the County is sparse and widely distributed. To be able to reach and provide services to these residents, a small satellite facility in the western part of the County, preferably located in a multipurpose center, may be needed in the future.

Many human service providers are concentrated in Ellicott City and Columbia, leaving some areas of the County underserved, especially the communities along US 1 and in the West. Ideally, service providers would be located on transit routes or within walking distance for many clients. For many types of services, full-time operations in numerous satellite locations are not warranted, but there may be a need for part-time outreach operations. Portions of public or private facilities, such as schools, libraries or churches, may make ideal satellite locations during hours when they are not otherwise fully used for their normal operations. This may be appropriate in the Rural West, which should be served at a different level than the East, which encompasses the Planned Service Area.

While there is value in having part-time facilities, even for very limited hours on evenings and weekends, it is important to offer services at a specified, regular time and place. It can be difficult for people to learn of and use services that vary in the time and place of availability.

The 1990 General Plan endorsed policies of decentralizing health and human service delivery systems, locating services close to those who need them, and establishing multi-service centers to allow convenient access and efficient use of space and resources. This General Plan reinforces these policies and emphasizes that services should be concentrated within the Planned Service Area. Since 1990, the County has developed sites in which senior centers, health centers and/ or libraries have shared sites. Most of the County's senior centers are or will be located with other uses. The centers are accessible by paratransit, but most are not on the fixed route bus schedule. Transit services to meet the needs of seniors, disabled and other transit-dependent individuals are discussed in the Transportation section of this chapter.

The elderly, teens and foreign-born individuals are often reluctant to seek certain services. Cultural and language differences also pose barriers to effective knowledge, use and delivery of health and human services. The 2000 Census is expected to document the significant growth in Howard County's teens, elderly and foreign-born population since 1990. Age, cultural and ethnic diversity is expected to continue to increase rapidly over the next two decades and should be anticipated in planning for future service delivery.

Planning and Coordination

In Maryland and in Howard County there are dual systems for policy making, funding and the provision of health services and for the array of services and programs generally referred to as human services. It is important to emphasize the essential interrelatedness and interdependence of these service delivery systems.

Coordinating health and human services for greater efficiency and effectiveness is a high priority. The organization and development of integrated services is crucial to maximizing resources and coordinating help to people needing more than one form of assistance.

Howard County lacks a comprehensive system for health and human services. Development of such a system would improve coordination among service providers and optimize the use of resources. Important elements in

a comprehensive health and human services system include: a needs assessment (what the community is lacking in services); a service providers database (who is providing services); a service delivery database (what services are delivered to what number and types of people); and a health and human services master plan. Such a comprehensive system requires an integration of the existing health and human service organizations and that they jointly develop the system. Implicit in this model is the shared responsibility for the performance of the system (as defined by performance criteria) and the seamless sharing of information and data (excluding confidential client information).

The most complete, currently existing element is the human service providers database. The inventory is available to citizens in several locations, including the Department of Citizen Services, Howard County Library, United Way Community Partnerships, Howard County Information & Referral, and the Association of Community Services. However, using the database is not easy for the average citizen. It is primarily used as a resource for service providers. Optimally, a comprehensive, citizen friendly information service would be available to residents, providers and emergency workers on a 24-hour basis in a variety of formats (telephone, websites). Such a service would need to involve all of the current information providers and a clear strategy for updating the information.

A great deal of effort is made to keep updated information about all the human service providers, but there are over 200 nonprofit, for-profit and government providers in the County. The number of providers increases considerably if human service assistance provided by faith organizations such as churches and synagogues is included. Data collection and management is difficult because most of the providers are relatively small. Of the nonprofit agencies, 55% have from 1 to 120 paid staff, and 45% are operated entirely by volunteers.

Health and human services do not currently have defined client to staff ratios, which would need to vary by service type. However, some standards would help in planning and service delivery. Unlike schools and roads, which are reviewed for adequacy at the time of subdivision plan review, no mechanism exists to review human service needs or the relationship of ser-

vice needs to community growth and change.

Human service providers have used the limited available data and projections to anticipate the impact of future growth and demographic shifts on various populations. A comprehensive plan could help identify and fill deficiencies in the available data and assess the potential impact of growth and changing demographics. Such a plan could target the County government's approach to providing services and to distributing grant funds. The plan should address coordination of services among providers, missing components or redundancies in the system of care, means of addressing service gaps or duplication, accessibility of services, means of improving cost effectiveness and an ongoing process of evaluating implementation. There is significant competition for grants through the Department of Citizen Services' Community Services Partnership Program. A comprehensive plan would help the Department of Citizen Services evaluate and target grant distribution to fill gaps, encourage more effective service delivery, be responsive to emerging needs, promote healthy competition and allow for demonstration programs.

The Health Department has initiated the development of a ten-year Comprehensive Health Improvement Plan (CHIP). It is being drafted with the active participation of health groups and agencies, as well as a large group of diverse citizen volunteers. Six focus areas have been identified: Cancer, Tobacco Control, Substance Abuse, Mental Health, Injury and Violence Prevention, and Health Issues of the Aging Population. Goals, detailed actions with designated lead agencies and an implementation strategy will be developed. An annual progress report is anticipated to address accountability.

The Howard County – A United Vision Report, issued in 1999, recommended that the County “develop a viable community action plan to improve health and human services”. The Health Department's CHIP should be a major component of a Comprehensive Health and Human Services Plan. Coordination between the Department of Health and the Department of Citizen Services will be critical to this effort as will other groups such as the Children's Board, the Mental Health Authority and the Association of Community Services. The human services component of

the Comprehensive Health and Human Services Plan has not been started, but should be developed as soon as possible. It is not critical that planning for health and human services be undertaken as a single project. The health and human services components of the plan can be developed as separate studies as long as the key services and issues requiring coordination are addressed in a consistent, integrated manner and key stakeholders are involved in both planning efforts.

Corridor Revitalization Studies and Community Master Plans, as discussed in Chapter 5, *Community Conservation and Enhancement*, can be appropriate vehicles to examine the health and human service needs and opportunities for particular areas in greater detail.

Capacity Building with Not-for-Profits for Health and Human Services

Since the adoption of the 1990 General Plan, a new force has appeared in the health services field that is expected to exert a major influence on health services offered in the County. The Horizon Foundation, established in 1998, is the largest, independent, nonprofit public charity in Howard County. Formed after the merger of Howard County General Hospital and Johns Hopkins Medicine, the Horizon Foundation has an endowment of \$72 million. The Foundation's mission is to fund a variety of programs to promote the health and well-being of the Howard County community. The Horizon Foundation has set the following goals to be achieved over the next several years: solidify and expand Howard County's health/wellness infrastructure; improve social and environmental conditions within the County; increase access to health and health-related human services and strengthen the integrity of local safety net programs; and address specific community health issues in a manner that enables the County to substantially exceed national state-level health/wellness targets.

County government should develop a solid working relationship with the Horizon Foundation as it has traditionally done with the United Way, the Columbia Foundation and other not-for-profit capacity building organizations. Capacity building organizations such as these provide critical funding to help the public sector and the many non-profit health and human service providers enhance and expand both programs and operating capa-

bilities. These capacity building organizations should be actively involved in developing the Comprehensive Health and Human Services Plan.

Policies and Actions

POLICY 4.22: Develop a Comprehensive Health and Human Services Plan.

- ◆ ***Health Services Improvement Plan.*** Support efforts by the Health Department, together with the Horizon Foundation, the Department of Citizen Services and health service providers, to develop a ten-year Comprehensive Health Services Improvement Plan.
- ◆ ***Comprehensive Health and Human Services Plan.*** Use the Comprehensive Health Services Improvement Plan as a major component of a Comprehensive Health and Human Services Plan for the County. This Plan should reflect a comprehensive assessment of needs, resources, proposed actions and an implementation strategy with a clear identification of leadership roles, as well as assurances of accountability as measured by performance criteria.
- ◆ ***Community or Corridor Plans.*** Use Community Master Plans and Corridor Revitalization Studies to help identify health and human service needs and appropriate means of improving access to services in particular areas.
- ◆ ***Capacity Building.*** Continue to build positive, collaborative relationships with the Horizon Foundation, United Way, the Columbia Foundation and other capacity building organizations, as well as the for-profit business community, as essential resources for achieving the goals set out in the Comprehensive Health and Human Services Plan.
- ◆ ***Adequacy of Hospital and Nursing Home Beds.*** Assist public and private providers to ensure that adequate hospital and nursing home beds are available to meet the current and future needs of the County. The County will work with Howard County General Hospital and the

State Office of Health Care Quality to ensure that there are an adequate number of hospital beds to serve the County's future projected population growth.

- ◆ **Health and Human Service Care Programs.** Encourage and, where possible, assist the provision of adequate inpatient, outpatient and in-home health and human services care programs to County residents, including treatment for seniors, those in need of addictions services, the mentally ill, and the chronically and terminally ill.
- ◆ **Residential Opportunities.** Meet the needs of special populations in a more traditional residential neighborhood setting. Work cooperatively with the State and the private sector to provide a variety of residential options.

POLICY 4.23: Enhance the delivery and accessibility of health and human services.

- ◆ **Data Sharing.** Assist service providers by analyzing and distributing 2000 census data, Horizon Foundation database, and local and national data repositories.
- ◆ **Technology Enhancement.** Enhance information technology to show program availability and coordination of agencies to strengthen health and human service delivery systems.
- ◆ **Funding Distribution.** Review the current Community Service Partnerships grants distribution system to determine its effectiveness in targeting County assistance for services needs, and adjust as appropriate.
- ◆ **Partnerships for Health and Human Services Delivery.** Promote partnerships among government, business and nonprofit sectors for the networking and coordination of health and human services delivery. Incorporate the human services component of the faith community.

- ◆ **Multi-Service Centers.** Establish multi-service centers where feasible, in visible, frequently used locations within the Planned Service Area. These centers should be used as focal points for the distribution of health and human services information through the use of enhanced technology. Consider the use of convenient, decentralized facilities with limited hours to make services more readily accessible.
- ◆ **Transit and Pedestrian Access.** Locate health and human service facilities in buildings that are on transit routes and that are accessible by pedestrian connections and/ or reroute transportation to service centers. Promote the provision of fixed route and paratransit services to increase accessibility for transit-dependent individuals to health and human service care facilities.
- ◆ **Services to Low Income Populations.** Expand the scope of public health and human services to low income households and uninsured individuals, and support private health and human service provider efforts to serve these populations.

POLICY 4.24: Expand employment development programs for minorities, elderly, disabled, welfare recipients and youth.

- ◆ **Employment Development Program.** Expand employment development programs directed toward minorities, elderly, disabled and youth, as well as those leaving public support systems. Enhance training programs and work-referral systems.
- ◆ **Coordination of Job Training Opportunities.** Continue cooperation among the Employment and Training Center, Economic Development Authority, Public School System, Howard Community College, and the Departments of Citizen Services and Social Services to identify employers' needs for trained workers and to develop appropriate training programs.

POLICY 4.25: Assure a comprehensive health and human services system is supported by a sufficient number of health and human service professionals.

- ◆ **Promotion of Health Care and Human Service Professions and Opportunities.** Assist with the promotion of health care and human service professions and educational opportunities at high schools, local universities, the Howard Community College and the Public School System.

Solid Waste

Solid Waste Management System

A significant shift in solid waste management has occurred since 1990, when Alpha Ridge Landfill was the destination for most of Howard County's solid waste. Solid waste management has become a more dynamic and complex issue. Howard County and neighboring jurisdictions are increasingly dependent on private industry or regional organizations for services ranging from markets for recycled goods to processing and disposal of waste. As noted in Chapter 2, *Responsible Regionalism*, these changes have made regional cooperation essential for cost effective and environmentally sound solid waste management. It has also become increasingly important for the County to be able to respond effectively to changes in industries, markets and technology.

The County's 1993 Solid Waste Management Plan, adopted after two years of study by an advisory committee, called for the County to develop an integrated solid waste management system using a combination of programs and facilities including source reduction and reuse, recycling, composting, waste-to-energy and landfill disposal. Since adoption of this plan by the County Council in 1994, many facets of this integrated system have been implemented.

The 1990 General Plan estimated that Howard County's Alpha Ridge Landfill would reach capacity by 2003 under the management practices then in effect. Since 1990, the landfill's operating life has been extended significantly. The landfill's currently active cell is now predicted to reach capacity after 2010. Alpha Ridge has room for two additional cells which could provide capacity until some time after 2080. This dramatic extension of the landfill's operating life has been accomplished primarily by divert-

ing the County's solid waste to private, out-of-state landfills. Recycling and, to a lesser extent, composting of yard waste have also significantly reduced the volume of solid waste.

Landfill Disposal of Solid Waste

In 1990, tipping fees at Alpha Ridge increased from \$18 to \$40 per ton, in response to new Federal and State landfill regulations that increased costs for operation, construction, remediation and closure. Fees increased again in 1994 to \$60 per ton to cover increasing costs and to discourage the disposal of private waste at Alpha Ridge. As a result, most of the County's private solid waste stream (waste from businesses) is now transported by commercial waste hauling firms to less expensive private facilities in Virginia and Pennsylvania. Flows of private solid waste to Alpha Ridge are now approximately 10% of 1994 levels.

The County is also exporting its municipal solid waste (that is, waste from residences and public uses) to a private landfill. In 1996, the County contracted with a private firm to transport its municipal solid waste to a private waste transfer station in Anne Arundel County and then to a landfill in Virginia. This waste export agreement was to expire in 2003; however, the County recently accepted an option for annual renewal to 2013, which was offered as a condition of a corporate merger involving the contracted solid waste disposal firm.

Reduction, Reuse and Recycling

The County's waste reduction program includes public outreach and education about changes in purchasing practices and product reuse, grass recycling and backyard composting, and salvage and reuse programs. The County also has a fully implemented recycling program, and a number of materials are now recycled. Through these recycling efforts, Howard County has increased its recycling rate from approximately 13 % of total waste in 1992 to approximately 36 % in 1998 (Figure 4-33).

The County's 1999 Solid Waste Management Plan calls for increasing recycling to 40% of the County's solid waste stream. Increases will be accomplished through continuing public education programs as well as by new technologies and markets that may add to the list of recyclable materi-

Figure 4-33
Recycling Program Growth, 1992-1998

Year	Residential		Commercial		Total Tons	Overall Recycling Rate
	Residential Tons	Residential Recycling Rate	Commercial Tons	Commercial Recycling Rate		
1992	15,571	15.60%	8,082	8.60%	23,653	12.60%
1993	21,891	19.70%	27,929	24.30%	49,820	22.10%
1994	32,799	25.70%	39,890	34.40%	72,689	29.80%
1995	30,268	23.00%	52,658	41.20%	82,926	31.60%
1996	34,617	27.90%	47,601	37.30%	82,218	32.30%
1997	37,605	29.10%	49,042	39.40%	86,646	34.20%
1998	39,245	30.40%	52,964	42.10%	92,209	36.20%

Source: Howard County Recycling Program - 1997 & 1998 Annual Reports

als. Markets exist or can be established for some materials not currently targeted for recycling; however, source separation difficulties limit the ability to recycle these materials. Other materials, such as construction, demolition and land clearing debris, need more fully developed markets before recycling efforts for those materials can be expanded.

The County's recycling program is very close to reaching the 40% goal of the Solid Waste Management Plan, which is a rate almost double the State-mandated rate of 20% and slightly above the State average. This success is due in no small part to the County's continuing public education programs on recycling. One of the ways in which recycling benefits the County is a reduction in the amount of solid waste generated and the resultant reduction in tipping fees paid to dispose of waste. Another cost savings in this regard is waste reduction. The County's current waste reduction efforts include effective programs such as backyard composting, grasscycling and distribution of information on household hazardous waste reduction. Building on the existing public education program to promote solid waste reduction has the potential to reduce further the amount of solid waste generated in the County.

Future Planning for Solid Waste Management

It is unlikely that another County-operated landfill will be sited in Howard

County, due to the lack of an appropriate 400 to 500-acre site. The County must prepare for long-term reliance on source reduction and reuse, recycling, composting and waste export, either to a landfill or a waste-to-energy (WTE) facility. A combination of local and regional or out-of-region facilities will continue to be needed.

Currently, substantial capacity exists at private, out-of-State landfills. The relatively low cost of disposal at these facilities makes this the most cost effective approach at this time. A contract with a regional WTE facility (such as the BRESKO plant in Baltimore City) would be more costly based on current fees, and may require landfill disposal of the ash residue (approximately 10 to 20% of the original volume of waste) if not recycled or landfilled by a WTE facility.

Although there is significant competition among out-of-region disposal facilities at this time, there is less competition locally among private export haulers. This lack of local competition, evidenced by the limited number of waste transfer stations convenient to Howard County, may limit the County's options for waste export agreements. The County's current contractor is the only private firm that has a large-scale transfer station located in close proximity to the County. The County will need an alternate transfer station, whether operated by the County or a private firm, if it ever

wishes to use a different private hauler.

Alpha Ridge Landfill is the County's back-up disposal site if out-of-County options fail. Approximately two years would be required to design and build a new fill cell at the Alpha Ridge Landfill. The County must ensure, therefore, that the capacity of the current cell is at all times adequate for disposal of the County's municipal solid waste for at least two years. The Solid Waste Management Plan proposes an annual evaluation of the current cell, with a capital project to build a new cell initiated when available capacity is projected to drop below a two-year capacity.

If waste export options fail and the County once again becomes dependent on Alpha Ridge, other solutions would need to be developed before the total capacity at Alpha Ridge is depleted. The 1999 Solid Waste Management Plan estimates that the landfill capacity would be fully used in 2027 if Alpha Ridge became the sole disposal site for the County's municipal waste in 2003. Planning for alternate facilities should begin at least ten years before the predicted end of the operating life of Alpha Ridge. As discussed in Chapter 2, *Responsible Regionalism*, an alternate disposal site is more likely to be a regional facility than a facility solely for County use. Based on this discussion, solid waste disposal will not be a constraint on the County's projected growth through 2020. Waste disposal will require a combination of recycling, composting and waste export to an out-of-state or regional facility. If export options fail, the County has sufficient capacity at Alpha Ridge Landfill to dispose of its municipal waste while alternate facilities are planned and built.

Policies and Actions

POLICY 4.26: Provide for environmentally sound and cost effective solid waste management.

- ◆ ***Planning for Future Capacity.*** Use the County's annual option to extend its current contract for solid waste export until 2013 if this is deemed the most cost effective solution. During the contract period, explore waste-to-energy and other options.

- ◆ ***Promoting Solid Waste Reduction.*** Continue to expand programs for solid waste reduction, reuse, recycling and composting. Pursue expansion of the recycling program to include additional materials as technologies and markets become available. Build on the existing public education program to promote solid waste reduction, with the goal of establishing and achieving further specific, numeric reductions in the amount of solid waste generated in the County.
- ◆ ***Waste Transfer Station.*** Monitor the need for a waste transfer station within Howard County or close enough to the County boundary to be used for Howard County's waste transport needs.
- ◆ ***Maintaining Capacity at Alpha Ridge.*** Evaluate the need for a new cell at the Alpha Ridge Landfill on an annual basis. Initiate design and construction of a new cell when available space is projected to drop below a two-year capacity.
- ◆ ***Timing of Solutions.*** Ensure that the County has reliable options for solid waste processing and disposal that allow a lead time of ten years for planning and construction of new facilities or development of new programs.

Fiscal Impacts, County Services and Growth Projections

The previous sections discussed many issues regarding the relationships among land use, growth, and the need for County facilities and services. It is important to determine an appropriate balance between competing land use to be accommodated in the relatively limited amount of available land. This balance and the pace of growth must take into consideration future infrastructure and service needs. Infrastructure and services should be properly phased, financed and planned for new growth, but this should not be done at the expense of existing infrastructure and services.

As the County approaches build-out, the maintenance of existing infrastructure and services will become of increasing importance while planning for new growth will become less of a concern. After 2010, residential and employment growth is expected to slow, given the shrinking land supply, and this shift in priorities will come to the forefront. As the County matures over the next 20 years, service demands and budget conditions are likely to be quite different than those experienced over the last 30 years. Planning for this transition is critical to maintaining the health of the County as it matures.

Fiscal Impacts of Growth

Fiscal impact analysis is a tool that can be used to learn about the impacts new growth has on the County’s services and budget. Box 4-1, shown at the beginning of this chapter, described the four scenarios analyzed as part of

this General Plan update. Each of the four growth scenarios represents a possible future. The scenarios were derived based on growth trends, available land capacity, current zoning and existing policies and regulations, as well as possible future needs such as an increase in senior housing.

The results of the fiscal analysis, as summarized in Box 4-10, have helped develop a better understanding of how the quantity and pace of residential versus employment growth impact the demand for County services and facilities and, thereby, the County’s budget. Based, in part, on these results, future residential and employment growth projections are proposed in this Plan for 2000 to 2020. The proposed growth targets are described later in this section.

An important and primary assumption used in the fiscal analysis is the maintenance of current levels of service. As part of the fiscal study, current

Box 4-10

Fiscal Impact Study Results

As described in Box 4-1, four growth scenarios were analyzed for the fiscal study. The goal of the scenarios was to produce a wide range of growth possibilities, taking market realities and land capacity into account. In this way, a wide range of fiscal results would be produced allowing a clear understanding of differences between the type, pace and amount of growth.

1990 to 2020 Average Annual Fiscal Results FY 2000 Budget -- \$439.5 million

Scenario	Average Annual Net Revenues (millions)	Percent of 2000 Budget
Modified Plan	\$9.1	2.07%
90s Trend	\$3.9	0.89%
Slow Pop./GP Emp.	\$2.5	0.57%
Slow Pop./High Emp.	\$1.6	0.36%

Source: Tischler & Associates, Inc., March 2000

The biggest difference between the four scenarios was the amount of jobs projected. Two of the scenarios, 1990s Trend and Slow Population/High Employment, projected about 5,000 new jobs per year. The other two scenarios, Modified General Plan and Slow Population/General Plan Employment, projected about half as many jobs (an average of 2,410 jobs per year). Another difference is the amount and pace of residential development. However, the residential variation between scenarios was not as great as the employment variation given the relatively limited amount of residential capacity.

The overall conclusion of the fiscal study is that the four scenarios generate slightly positive, but essentially fiscally neutral results. All scenarios generate net surpluses, indicating that new growth pays for itself. However, the net surpluses are relatively modest, leaving little room for any level of service increases. Compared to the current General Fund budget of \$439.5 million, the net surpluses range from 0.36% of the budget for the Slow Population/High Employment scenario to 2.07% of the budget for the Modified General Plan scenario. These differences are relatively small and allow the County the flexibility to set growth policy regarding the amount, type and pace of development without major financial constraints.

levels of County services have been analyzed and new growth is projected to receive these same service levels. Therefore, equity is built into the results because new growth does not receive, nor is expected to provide, higher levels of service than existing development. New growth, however, should not occur at the expense of existing communities. Hence, the question of whether or not new growth pays for itself is of vital concern.

The results of the fiscal study indicate that the fiscal impact of new growth is positive and that there is not a significant difference between growth scenarios. The County is therefore in the fortunate position to choose growth targets independent of major fiscal constraints.

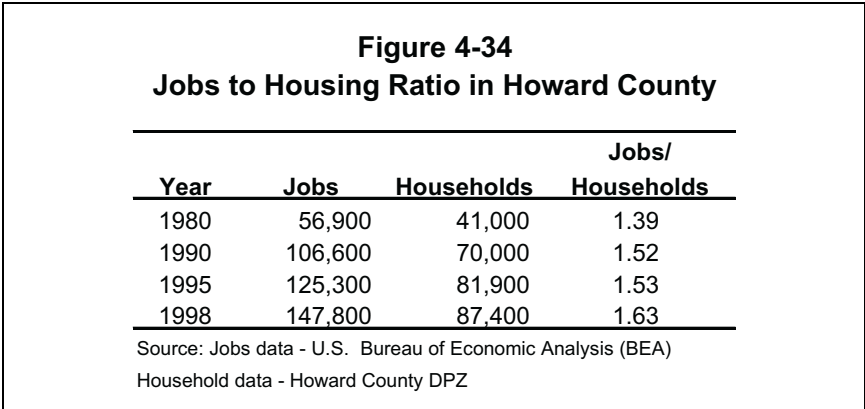
The results clearly indicate that new growth pays for itself. Therefore, the existing tax base in the County is not subsidizing growth. It is also clear, however, that the surpluses generated are relatively small, which indicates that new growth is not subsidizing existing services. This is just as important and indicates that as growth slows and eventually stops due to build-out, the existing fiscal structure of the County will not suffer. However, the existing budget does not take into account the changing needs of a maturing County, such as the cost of replacing existing public facilities and infrastructure, the impacts of an aging housing stock or the needs of an aging population. These issues are discussed at the end of this chapter.

Balancing Jobs and Housing Growth

Since the fiscal study determined that there is a minimal fiscal difference among the growth scenarios, other policy considerations must be weighed. One is the appropriate balance between housing and job growth.

A common measure of how growth has been progressing is the ratio of jobs to housing. Figure 4-34 shows the most recent jobs to housing ratio, based on 1998 US Bureau of Economic Analysis (BEA) employment data. The 1980, 1990 and 1995 ratios are also shown for comparison. The jobs to housing ratios have been increasing over time. Since 1990, this has resulted from slower than expected housing growth and faster than expected employment growth.

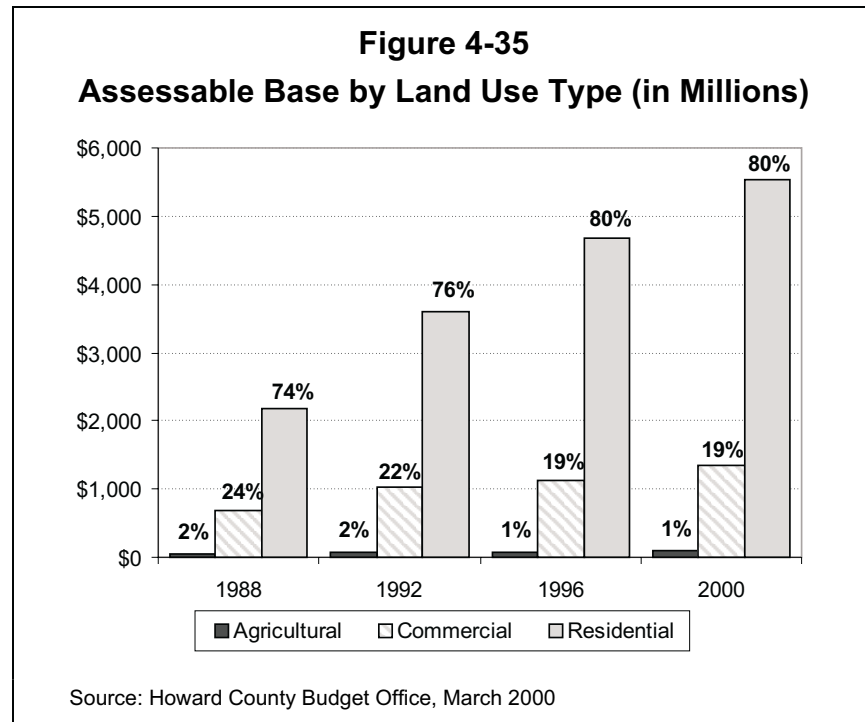
While a high jobs to housing ratio is generally desirable, an important con-



sideration is the ratio of jobs held by County residents. This has a significant impact on both where income taxes are paid and on the amount of traffic generated. In 1990, 36% of the County resident labor force worked in the County, 64% commuted to areas outside the County, and 58% of jobs in the County were filled by non-County residents.

Another indicator related to the balance of jobs and housing is the relative property tax assessment value. Figure 4-35 shows the assessable base by land use type, comparing residential, commercial and agricultural values for various years. The residential percentage of the total assessable base in the County has increased slightly since 1988. In 1988, residential development was 74% of the total assessable base compared to 24% for commercial properties. By 1996, the residential percentage increased to 80% while the commercial percentage declined to 19%. Since 1996, however, this percentage has stabilized, mostly due to the increased levels of non-residential growth in the late 1990s.

The residential versus non-residential values are not only impacted by the relative amount of development, but also by fluctuations in the residential and commercial real estate markets. In general, it is good for the fiscal health of the County to have a reasonable balance between the residential and non-residential tax base. This allows for more diversification of tax revenues, dampening negative impacts of a decline in the residential or employment markets. For example, if the County has a relatively high reliance on residential property tax revenues (such as the current 80%), a decline in



housing values will have a large negative impact on the budget. As residential growth slows, if employment growth continues at a relatively fast pace, the non-residential tax base percentage should increase.

2000 to 2020 Growth Projections

Employment, housing and population growth projections for this General Plan have been developed based on historic and current growth trends, available land capacity, current zoning, rural land preservation policies, shifting County demographics, and goals for housing and employment. The projections also reflect citizens' comments about how they envision the County's future. In large part, development policies are not significantly different from those of the 1990 General Plan, which guided subsequent comprehensive zonings and development of the Adequate Public Facilities Act. There are, however, significant differences in growth pace and distribution.

Employment growth targets in this General Plan are higher than in the 1990 General Plan, given recent trends of higher than expected employment growth due to the strong economy and the County's prime location in the Baltimore-Washington corridor. For housing, the 1990 General Plan expected build-out in 2010. Build-out is now expected in 2018 in the East, due to a small amount of additional capacity from comprehensive zoning and slower than expected housing growth during the 1990s. Build-out in the Rural West will occur after 2020, based on proposed development limits discussed below.

Employment Growth

Figure 4-36 shows the projected employment targets at five-year intervals, beginning in 2000. Actual job growth from 1990 to 2000 is also shown for comparison. These projections assume that the strong economy, which has created significant job growth particularly during the later part of the last decade, will continue into the next decade. From 1990 to 2000, an estimated 53,400 jobs, or an average of 5,340 jobs per year, were added to the County. It is assumed that this trend will continue at a lower average annual rate of about 4,000 jobs per year from 2000-2010. After 2010, job growth will slow to an average of 3,000 new jobs per year. This slowdown is antic-

Figure 4-36
Howard County Employment Growth Targets

Year	Job Increases	Total Jobs
1990 ¹		106,600
2000 ²	53,400	160,000
2005	20,000	180,000
2010	20,000	200,000
2015	15,000	215,000
2020	15,000	230,000
20 Year Job Growth		70,000

1. Source: U.S. Bureau of Economic Analysis (BEA)

2. 2000 Job estimate based on 1998 BEA actual value of 147,800 jobs plus job increase estimates by the MD Dept. of Labor, Licensing, & Regulation

**Figure 4-37
Housing Forecasts Annual Intervals**

Year	Housing Units in East				Units in Rural West		Total Housing Units	
	Senior Unit Set-Aside	Other Unit Increase	Total Unit Increase	Cumulative Total	Increase	Cumulative Total	Total Unit Increase	Cumulative Total
2000 (1)				79,550		11,400		90,950
2001	250	1,500	1,750	81,300	250	11,650	2,000	92,950
2002	250	1,500	1,750	83,050	250	11,900	2,000	94,950
2003	250	1,500	1,750	84,800	250	12,150	2,000	96,950
2004	250	1,000	1,250	86,050	250	12,400	1,500	98,450
2005	250	1,000	1,250	87,300	250	12,650	1,500	99,950
2006	250	1,000	1,250	88,550	250	12,900	1,500	101,450
2007	250	1,000	1,250	89,800	250	13,150	1,500	102,950
2008	250	1,000	1,250	91,050	250	13,400	1,500	104,450
2009	250	1,000	1,250	92,300	250	13,650	1,500	105,950
2010	250	1,000	1,250	93,550	250	13,900	1,500	107,450
2011	250	1,000	1,250	94,800	250	14,150	1,500	108,950
2012	250	1,000	1,250	96,050	250	14,400	1,500	110,450
2013	250	1,000	1,250	97,300	250	14,650	1,500	111,950
2014	250	1,000	1,250	98,550	250	14,900	1,500	113,450
2015	250	1,000	1,250	99,800	250	15,150	1,500	114,950
2016	250	750	1,000	100,800	250	15,400	1,250	116,200
2017	250	750	1,000	101,800	250	15,650	1,250	117,450
2018	250	750	1,000	102,800	250	15,900	1,250	118,700
2019	250	750	1,000	103,800	250	16,150	1,250	119,950
2020	250	500	750	104,550	250	16,400	1,000	120,950
20 Year Growth	5,000	20,000	25,000		5,000		30,000	

Source: Howard County DPZ

(1) Total housing units in 2000 estimated based on actual units as of end of 1999 plus estimated increase to July 1, 2000.

Note: Housing unit forecasts by planning area are based on aggregation of statistical areas (Map 4-2). The planning areas closely approximate the division between the East and the Rural West as defined by all areas zoned RC or RR and not served by public sewer.

ipated to result primarily because of a declining land supply, as well as an increase in traffic congestion. An increasingly tight labor market, as the baby boom generation retires, may also slow employment growth. Average annual growth over 20 years is, therefore, 3,500 jobs per year, totaling 70,000 new jobs. At this rate, Howard County will have an estimated 230,000 jobs by 2020.

These employment projections do not impose a limit on job growth. Rather they are an estimate based on realistic expectations of what the economy can sustain and available employment land capacity. Job growth may exceed these expectations, particularly if revitalization and redevelopment of older employment properties occurs. Higher job growth is generally positive from a fiscal standpoint, particularly if jobs can be filled by County residents rather than commuters.

Housing Growth

Housing growth, unlike job growth, is phased by the County’s Adequate Public Facilities Act. Because of the higher service demands of residential development, it is important that housing does not grow at a faster pace

than anticipated. General Plan 2000 housing forecasts will be used to develop the Adequate Public Facilities housing allocation chart, which controls the pace of residential development.

Figure 4-37 shows the housing unit growth forecasts for the Rural West and the East, beginning in 2000. These forecasts have been developed for the five areas shown previously on Map 4-2. The East includes Ellicott City, Elkrigde, Columbia and Southeast, which are within the Planned Service Area for sewer service. The Rural West is outside the PSA for sewer service. The water service only area around the Alpha Ridge Landfill will be part of the Rural West. To integrate General Plan 2000 housing forecasts into the Adequate Public Facilities (APF) allocations chart, allocations should be established among these five planning areas – the four in the East plus the Rural West. This is a change from the current APF regulations which establish the allocations by six school regions as shown previously in Map 4-1. Unlike the current school regions, which change over time and are hard to understand, these new regions would be fixed and relate to recognizable area boundaries. Most importantly, these planning areas, which will clearly distinguish the East and Rural West, are necessary

**Figure 4-38
Housing Forecasts, Five Year Summary**

Year	Housing Units in East				Units in Rural West		Total Housing Units	
	Senior Unit Set-Aside	Other Unit Increase	Total Unit Increase	Cumulative Total	Cumulative Increase	Cumulative Total	Total Increase	Cumulative Total
2000 (1)				79,550		11,400		90,950
2005	1,250	6,500	7,750	87,300	1,250	12,650	9,000	99,950
2010	1,250	5,000	6,250	93,550	1,250	13,900	7,500	107,450
2015	1,250	5,000	6,250	99,800	1,250	15,150	7,500	114,950
2020	1,250	3,500	4,750	104,550	1,250	16,400	6,000	120,950
20 Year Growth	5,000	20,000	25,000		5,000		30,000	

Source: Howard County DPZ

(1) Total housing units in 2000 estimated based on actual units as of end of 1999 plus estimated increase to July 1, 2000.

Note: Housing unit forecasts by planning area are based on aggregation of statistical areas (Map 4-2). The planning areas closely approximate the division between the East and the Rural West as defined by all areas zoned RC or RR and not served by public sewer.

to implement a limit of 250 housing allocations per year in the Rural West, as well as the set-aside of 250 senior housing allocations per year in the East, as discussed later in this section.

The housing forecast establishes a net increase of 30,000 units in the County from 2000 to 2020, at an average of 1,500 new units a year. This average annual rate is 1,000 units less than the 2,500 average annual rate as forecast in the 1990 General Plan and 500 units less than the actual 1990s trend of about 2,000 new units per year. These forecasts reflect the slowing pace of housing growth in the County. It is interesting to note that the average growth in the late 1980s was about 4,300 units per year. Figure 4-38 summarizes the forecasts at five-year intervals.

The amount of new units permitted will vary at different intervals. From 2000 to 2003, a growth rate of 2,000 units per year will be maintained. From 2003 to 2015, the growth will slow to 1,500 new units per year. From 2015 to 2019, the pace of growth will slow further to 1,250 new units per year. To complete the 30,000 unit net increase from 2000 to 2020, an additional 1,000 new units will be added in 2020. These projections assume no changes to the Planned Service Area boundary and no zoning map amend-

ments. The current pace of 2,000 units per year continues to 2003 due to the strong economy and the amount of units currently in the allocation pipeline. (Allocations are granted based on an anticipated average of three years before housing completion, so developments under review in 2000 are given allocations for 2003.) Housing unit growth after 2003 declines as the residential land supply diminishes.

As shown in Figures 4-37 and 4-38, housing growth forecasts are also allocated between the East and the Rural West portions of the County. The growth targets establish a limit of 250 new units per year in the Rural West from 2000 to 2020. In the East, this allows for 1,750 new units per year from 2000 to 2003, 1,250 new units per year from 2003 to 2015, 1,000 new units per year from 2015 to 2019 and 750 new units in 2020. These allocations yield an additional 5,000 new units in the West and 25,000 new units in the East from 2000 to 2020.

As reflected in Figures 4-37 and 4-38, the growth targets also establish a set-aside of 250 units per year in the East for senior housing. Senior housing units will be eligible for the pool of allocations reserved for senior housing, regardless of the project’s geographic location in the East. Any

**Figure 4-39
Total Housing Forecasts in the East**

Year	Columbia		Elkridge		Ellicott City		Southeast		TOTAL EAST	
	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Cumulative Total
2000 (1)		36,920		11,730		17,960		12,940		79,550
2005	1,930	38,850	910	12,640	1,950	19,910	1,710	14,650	6,500	86,050
2010	1,100	39,950	650	13,290	1,740	21,650	1,510	16,160	5,000	91,050
2015	790	40,740	820	14,110	1,790	23,440	1,600	17,760	5,000	96,050
2020	70	40,810	770	14,880	1,190	24,630	1,470	19,230	3,500	99,550
TOTAL INCREASE	3,890		3,150		6,670		6,290		20,000	

Source: Howard County DPZ

(1) Housing units in 2000 estimated based on actual units as of end of 1999 plus estimated increase to July 1, 2000.

Note: Housing unit forecasts by planning area are based on aggregation of statistical areas (Map 4-2). The planning areas closely approximate the division between the East and the Rural West as defined by all areas zoned RR or RC and not served by public sewer. Forecasts do not include 5,000 senior set-aside units.

**Figure 4-40
Housing Forecasts in the East by Unit Type**

COLUMBIA	Single Family Detached		Single Family Attached		Apartments		Mobile Homes		TOTAL COLUMBIA		
	Year	Cumulative		Cumulative		Cumulative		Cumulative		Cumulative	
		Increase	Total	Increase	Total	Increase	Total	Increase	Total	Increase	Total
2000 (1)		14,850		10,080		11,990		0			36,920
2005	510	15,360	300	10,380	1,120	13,110	0	0	1,930		38,850
2010	280	15,640	290	10,670	530	13,640	0	0	1,100		39,950
2015	190	15,830	340	11,010	260	13,900	0	0	790		40,740
2020	70	15,900	0	11,010	0	13,900	0	0	70		40,810
TOTAL INCREASE	1,050		930		1,910		0		3,890		

ELKRIDGE	Single Family Detached		Single Family Attached		Apartments		Mobile Homes		TOTAL ELKRIDGE		
	Year	Cumulative		Cumulative		Cumulative		Cumulative		Cumulative	
		Increase	Total	Increase	Total	Increase	Total	Increase	Total	Increase	Total
2000 (1)		5,500		2,450		2,670		1,110			11,730
2005	700	6,200	30	2,480	0	2,670	180	1,290	910		12,640
2010	560	6,760	0	2,480	0	2,670	90	1,380	650		13,290
2015	540	7,300	250	2,730	10	2,680	20	1,400	820		14,110
2020	470	7,770	300	3,030	0	2,680	0	1,400	770		14,880
TOTAL INCREASE	2,270		580		10		290		3,150		

ELLCOTT CITY	Single Family Detached		Single Family Attached		Apartments		Mobile Homes		TOTAL ELLICOTT CITY		
	Year	Cumulative		Cumulative		Cumulative		Cumulative		Cumulative	
		Increase	Total	Increase	Total	Increase	Total	Increase	Total	Increase	Total
2000 (1)		11,610		2,200		4,150		0			17,960
2005	720	12,330	670	2,870	560	4,710	0	0	1,950		19,910
2010	570	12,900	360	3,230	810	5,520	0	0	1,740		21,650
2015	650	13,550	210	3,440	930	6,450	0	0	1,790		23,440
2020	650	14,200	260	3,700	280	6,730	0	0	1,190		24,630
TOTAL INCREASE	2,590		1,500		2,580		0		6,670		

SOUTHEAST	Single Family Detached		Single Family Attached		Apartments		Mobile Homes		TOTAL SOUTHEAST		
	Year	Cumulative		Cumulative		Cumulative		Cumulative		Cumulative	
		Increase	Total	Increase	Total	Increase	Total	Increase	Total	Increase	Total
2000 (1)		6,150		3,920		2,240		630			12,940
2005	1,000	7,150	660	4,580	50	2,290	0	630	1,710		14,650
2010	610	7,760	650	5,230	250	2,540	0	630	1,510		16,160
2015	610	8,370	580	5,810	340	2,880	70	700	1,600		17,760
2020	720	9,090	500	6,310	250	3,130	0	700	1,470		19,230
TOTAL INCREASE	2,940		2,390		890		70		6,290		

Source: Howard County DPZ

(1) Housing units in 2000 estimated based on actual units as of end of 1999 plus estimated increase to July 1, 2000.

Note: Housing unit forecasts by planning area are based on aggregation of statistical areas (Map 4-2). The planning areas closely approximate the division between the East and the Rural West as defined by all areas zoned RR or RC and not served by public sewer. Forecasts do not include 5,000 senior set-aside units.

additional senior housing beyond the 250 unit per year set-aside could seek available allocations for the area in which the project is located. The senior housing allocation set-aside is intended to be an incentive to construct more senior housing.

The forecasts assume that an additional 5,000 acres will be preserved in the Rural West through the Agricultural Land Preservation Program. Based on the current average density realized from cluster, non-cluster and density exchange subdivisions, the purchase of development rights on 5,000 acres will reduce the capacity of the West by about 1,400 single-family units. This will reduce capacity in the West from about 18,900 units to 17,500 units. With this reduction in housing capacity and the 250 unit per year limit, build-out in the Rural West will not occur until 2025.

The housing unit capacity in the East, based on current zoning, is about 102,100 units. Based on the growth targets, the East is expected to reach existing zoned capacity by around 2018. However, some additional capacity may be created via redevelopment and/or special exceptions for senior housing. Based on the growth forecasts and the estimated capacity in the East, about 2,400 additional units would have to be accommodated in order to continue developing at the forecast pace to 2020. These units could re-

sult from additional senior housing units permitted in some employment zoning districts or by special exception in residential zoning districts, as well as additional units created by redevelopment of older employment areas.

Figure 4-39 shows the more detailed projections for the East’s four planning areas. The forecasts by planning area were determined based on the recent historical pace of growth, the current number of housing unit allocations granted, known projects in the development pipeline, existing zoning and available land capacity. From 2000 to 2020, a total of 20,000 units are forecast. This does not include the 5,000 senior set-aside units, which are not allocated to particular planning areas. The housing unit forecasts by planning area as shown in Figure 4-39, as well as the 250 annual units in the West (Figure 4-38), will serve as the basis for determining the annual Adequate Public Facilities allocation chart. Appendix A provides information on the methodology and the statistical area base data used to determine the housing allocation forecasts for each of the five planning areas, as well as projections of housing unit mix and population.

Figure 4-40 shows a more detailed breakdown by type of unit for planning areas in the East (the Rural West will only have single-family detached

**Figure 4-41
Housing Forecasts in the County by Unit Type**

TOTAL COUNTY	Single Family Detached		Single Family Attached		Apartments		Mobile Homes		TOTAL COUNTY	
Year	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Cumulative Total	Increase	Total
2000 (1)		49,510		18,650		21,050		1,740		90,950
2005	4,180	53,690	1,660	20,310	1,730	22,780	180	1,920	7,750	98,700
2010	3,270	56,960	1,300	21,610	1,590	24,370	90	2,010	6,250	104,950
2015	3,240	60,200	1,380	22,990	1,540	25,910	90	2,100	6,250	111,200
2020	3,160	63,360	1,060	24,050	530	26,440	0	2,100	4,750	115,950
TOTAL INCREASE	13,850		5,400		5,390		360		25,000	

Source: Howard County DPZ

(1) Housing units in 2000 estimated based on actual units as of end of 1999 plus estimated increase to July 1, 2000.

Note: Forecasts do not include 5,000 senior set-aside units.

**Figure 4-42
Household Population Projections**

Region	2000	2005	2010	2015	2020
Columbia	94,980	95,040	95,660	95,660	93,900
Elkridge	31,220	32,430	33,700	35,280	36,640
Ellicott City	49,760	52,390	55,320	58,170	59,910
Southeast	35,080	38,350	41,530	44,730	47,530
Rural West	35,680	37,870	40,810	43,660	46,410
New Senior Housing	0	1,500	3,000	4,500	6,000
TOTAL	246,720	257,580	270,020	282,000	290,390

**Figure 4-43
Group Quarters Population**

Region	2000	2005	2010	2015	2020
Columbia	1,380	1,380	1,380	1,380	1,380
Elkridge	1,260	1,320	1,370	1,420	1,440
Ellicott City	860	870	870	880	880
Southeast	300	310	310	310	310
Rural West	200	200	200	200	200
TOTAL	4,000	4,080	4,130	4,190	4,210

Source: Howard County DPZ

**Figure 4-44
Total Population**

Region	2000	2005	2010	2015	2020
Columbia	96,360	96,420	97,040	97,040	95,280
Elkridge	32,480	33,750	35,070	36,700	38,080
Ellicott City	50,620	53,260	56,190	59,050	60,790
Southeast	35,380	38,660	41,840	45,040	47,840
Rural West	35,880	38,070	41,010	43,860	46,610
New Senior Housing	0	1,500	3,000	4,500	6,000
TOTAL	250,720	261,660	274,150	286,190	294,600

Source: Howard County DPZ

**Figure 4-45
Persons per Household**

Unit Type	Current	2005	2010	2015	2020
Single Family Detached	3.1298	2.9916	2.9374	2.8832	2.8290
Single Family Attached	2.5797	2.5065	2.4798	2.4531	2.4264
Apartments	1.8711	1.7563	1.7045	1.6526	1.6008
Mobile Homes	2.4029	2.2970	2.2506	2.2041	2.1576
New Senior Housing		1.2000	1.2000	1.2000	1.2000

Source: Howard County DPZ

units). These detailed forecasts were determined based on the factors mentioned above, in particular existing zoning, which dictates the type of development and densities allowed in certain areas. Figure 4-41 shows the resulting total County-wide forecast by housing unit type including the Rural West. This does not include the 5,000 senior set-aside units, which will most likely be predominantly apartment units, but could also be townhouses or detached units.

Population Growth

The estimated household population in 2020, based on these growth assumptions, is 290,400 (Figure 4-42). Including an estimated group quarters (institutional and group home) population of about 4,200 in 2020, the total County-wide population is projected to be 294,600 (Figures 4-43 and 4-44). Population in 2020 is based on the mix of current and future units reflected under current zoning and the household growth assumptions outlined above. The projections also take into account the anticipated decline in average household size due to the aging population. Household sizes by unit types are the same as in the current Baltimore Metropolitan Council’s official Round V-A population projections (Figure 4-45).

The General Plan’s housing and employment projections are important. They will be used when the Baltimore Metropolitan Council next updates the official regional forecasts. These official forecasts are used by County and State agencies in planning and budgeting for facilities and services to meet future County needs.

Policies and Actions

POLICY 4.27: Use General Plan forecasts to guide County and regional decision-making.

- ◆ **Regional Forecasts.** Incorporate General Plan housing, population and job forecasts into the Baltimore Metropolitan Council’s official regional forecasts.
- ◆ **Adequate Public Facilities.** Incorporate the General Plan housing forecasts into the Adequate Public Facilities Housing Allocations Chart.
- ◆ **Development Monitoring System.** Monitor the amount and type of actual housing and job growth for comparison with General Plan forecasts.

Fiscal Impacts of a Maturing County

The fiscal study for General Plan 2000 has two parts. The first part examined the fiscal impacts of alternative growth scenarios, as discussed earlier. The second part will investigate the fiscal implications of the County’s transition to a more mature jurisdiction. The complete results for part two

will be available when the General Plan 2000 is considered by the County Council in September. The issues being examined are presented below.

Maintenance and Replacement of Aging Facilities

As the County's neighborhoods mature, so will existing infrastructure including roads, water and sewer lines, and stormwater management facilities, as well as public buildings and other facilities. The costs of maintaining and replacing existing facilities will need to be balanced with the cost of new facilities to accommodate growth.

As growth slows and as facilities age, more emphasis will have to be placed on these maintenance and replacement costs. The County should be proactive in anticipating this shift and set up renovation and replacement programs. As bonds for growth-related facilities are paid off, the County will have additional bonding capacity to help finance maintenance and/or replacement. Proper phasing of facility replacement will help the County better accommodate these needs in the future.

Other Potential Fiscal Implications

In terms of both tax revenues and changing public service needs, there are a number of other aspects of the County's maturing that may impact the County's future fiscal situation. As growth slows, one important question is the relation of property values to a dwindling land supply over time. Changes in real property values are difficult, if not impossible, to predict. It is likely, however, that as the land supply diminishes property values will increase, particularly if community conservation and enhancement programs are effective and Howard County's aging communities continue to be highly desirable places to live and work. Any increase in property values will certainly help the future fiscal picture in Howard County. Given that property taxes are almost half of General Fund revenues and about one-third of total County revenues, even a relatively small increase in real property taxes will have a large and positive impact on the budget.

Although a decrease in land supply may likely have a positive impact on real property values, there are numerous other unpredictable factors that influence property values. The most important factor is the state of the national, regional and local economies. A recession, like the one that oc-

curred in the early 1990s, may cause a decrease in property values followed by an unknown recovery time, depending on the extent of the economic downturn. Another factor is how the amount, pace and type of new development in surrounding counties, such as Anne Arundel, Carroll and Frederick, will impact the regional housing and employment land supply and, thereby, County property values. Additionally, the aging of the housing stock may impact property values negatively. Therefore, it cannot be assumed that property values will automatically increase as the County approaches build-out.

Another important related issue is housing affordability. As discussed previously, providing affordable housing for existing low and moderate income residents to support economic development goals is already a challenge. Although higher property values are beneficial from a fiscal standpoint, they would make it more difficult to meet affordable housing needs.

There is generally a strong connection between income tax revenues and residential property tax revenues. More expensive homes require a higher household income. Therefore, an increase in real property values will, presumably, also result in an increase in income tax revenues. Income tax revenues are another large revenue source for the County, representing about one-third of General Fund revenues and about 20% of total County revenues. Property and income tax revenues combined represent about 80% of General Fund revenues and slightly more than 50% of total County revenues. Therefore, any change in real property tax revenues typically has a big impact on the County budget.

Howard County's population is aging, but it is not known how many seniors will remain in the County. Assuming the population of the County ages in place, there may be an increase in the number of households with relatively lower, fixed retirement incomes compared to their incomes during peak earning years. As a result, the relationship between high property values and high income tax revenues may be less closely linked in the future. If retirees continue to live in the County, there will be significantly increased demand for services to meet seniors needs, such as health and emergency services, human services, housing, recreation and transit. How-

ever, the number of school age children will decline, potentially making more budget funds available to address senior needs. Conversely, if a larger percentage of seniors retire outside the County and their homes are filled by families with school age children, a very different service and budget situation will result.

A preliminary assessment of these issues is being undertaken in part two of the fiscal study. These evolving trends should be further studied in the years following adoption of this General Plan. Given the complexity of the variables and the highly speculative nature of assumptions, key indicators

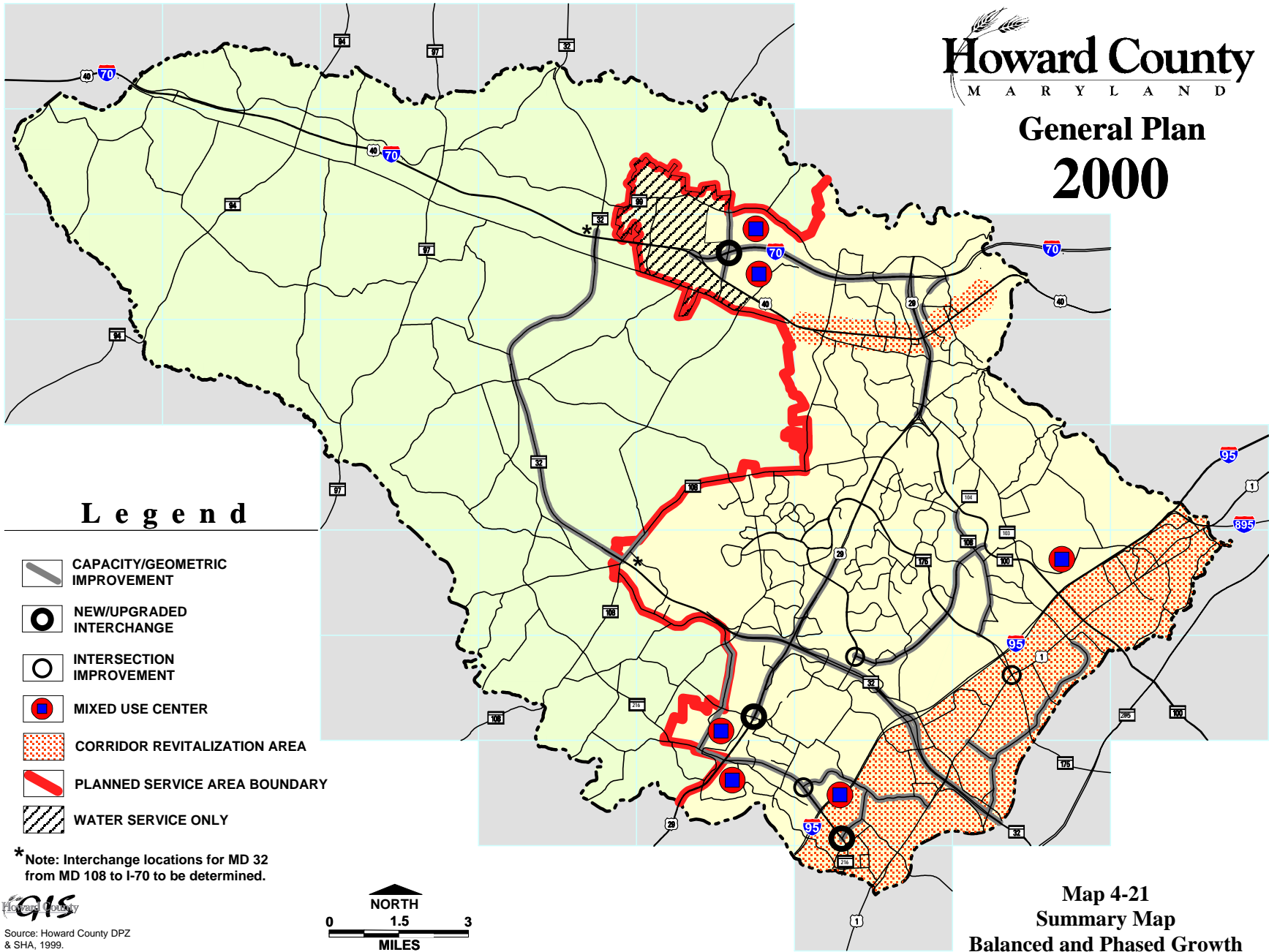
should be monitored and reviewed periodically. The transition from a fast growing County to a maturing built-out County is just beginning. Over time, these trends will become clearer.

Summary Map








[Map 4-21](#), Summary Map – Balanced and Phased Growth, summarizes and illustrates some of the policies and actions described in this chapter.

Howard County MARYLAND

General Plan 2000



Legend

-  CAPACITY/GEOMETRIC IMPROVEMENT
-  NEW/UPGRADED INTERCHANGE
-  INTERSECTION IMPROVEMENT
-  MIXED USE CENTER
-  CORRIDOR REVITALIZATION AREA
-  PLANNED SERVICE AREA BOUNDARY
-  WATER SERVICE ONLY

* Note: Interchange locations for MD 32 from MD 108 to I-70 to be determined.



Source: Howard County DPZ & SHA, 1999.



Map 4-21
Summary Map
Balanced and Phased Growth