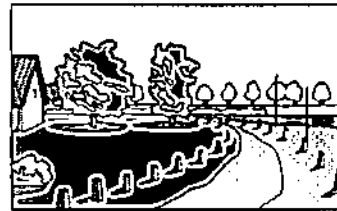




2000 Annual Growth Report



Harford County Government Department of Planning and Zoning

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The 2000 Annual Growth Report

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EXECUTIVE SUMMARY

In accordance with the Harford County Adequate Public Facilities provisions (Section 267-104) of the Harford County Code, the Harford County Annual Growth Report must be updated annually to identify any facilities that are below the County's adopted minimum standards. This year's Annual Growth Report includes information and analysis regarding Public Schools, Water and Sewerage System, and Road Intersections.

Harford County Public Schools:

The adopted adequacy standards for the Public School system are:

- Elementary Schools - 120 % of rated capacity within 2 years.
- Secondary Schools - 120 % of rated capacity within 3 years.

Preliminary Plans for new developments cannot be approved in elementary school districts where the full-time enrollment currently exceeds or is projected to exceed 120 percent of the capacity within two years. All thirty-one elementary schools currently meet adequacy standards. Construction funding has been approved for Abingdon and Church Creek elementary schools that will increase their capacity by 200 and 265 students respectively.

Preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 120 percent of the capacity within three years. Fifteen of the seventeen middle and high schools in Harford County meet adequacy standards. The projected enrollment for the Southampton Middle School during the 2001/2002 school year is 2,040 for a utilization rate of 128 percent. No planning and/or construction funds have been identified at this time. New developments within this attendance area will not be approved but will be reviewed and placed on a waiting list until capacity is available for the year beginning July 1, 2001.

The projected enrollment for C. Milton Wright High School during the 2002/2003 school year is 2,022 for a utilization rate of 123 percent. No planning and/or construction funds have been identified at this time. New developments within this attendance area will not be approved but will be reviewed and placed on a waiting list until capacity is available for the year beginning July 1, 2001.

Harford County Water and Sewerage System:

Based on the Adequate Public Facilities Ordinance and the Harford County Water and Sewer Design Guidelines, preliminary plan approvals, Public Works Utility Agreements, and building permits in areas served by public water and sewer systems can be approved only where adequate capacity exists in the water and wastewater treatment facilities and in distribution and collection lines serving the area.

Harford County's sewerage system's average flow to the Sod Run Wastewater Treatment Plant is 11.6 Million Gallons per Day (MGD) while the design capacity is 20.0 MGD for a total Average Reserve of 8.4 MGD (as of December, 2000). The County Water system's current average daily usage is 9.97 MGD with a peak day consumption of 12.5 MGD. The Water Treatment capacity is 20.7 MGD, leaving a total reserve of 10.73 MGD (as of December 2000). These figures refer only to a County-wide total capacity figure.

The determination of water or sewerage capacity in a specific area of the County can be found in the "Water and Sewer 2000 Adequate Public Facilities Report " with appropriate guidance from the Department of Public Works. A determination of adequacy is made prior to preliminary plan approval, site plan approval, public works utility agreement execution, and building permit approval.

The water system is evaluated for adequacy for providing flows during the maximum day demand with the minimum required pressures for fire flows. Water booster stations and/or transmission lines, service mains, storage tanks, and water treatment plants are evaluated. Areas within the Harford County Development Envelope that exist at the highest elevations of the water pressure zones are evaluated for adequacy on a case-by-case analysis. The anticipated growth within the County is accommodated through a combination of developer funded projects and the County capital improvement program.

The sewer system is evaluated to accommodate expected peak flows through collectors, interceptors, pump stations, force mains, and wastewater treatment plants. Should a problem exist in a collector sewer, it is the developer(s) responsibility to resolve the inadequacy. Inadequacies at major pumping stations and wastewater treatment plants are resolved by programmed capital projects or by projects cooperatively supported by a group of developers.

Harford County Road System:

To determine existing service levels at intersections and the impact of additional traffic, a Traffic Impact Analysis (TIA) must be submitted for developments that generate 249 trips per day at the time of preliminary/site plan review. Proposed development located within the Route 40 Overlay District will not be required to submit a Traffic Impact Analysis unless the proposed use will generate 1,500 trips per day at the time of preliminary/site plan review.

The adequacy standards for road intersections within the study area are based on the property's location within or outside the Development Envelope and are defined as follows:

Inside the Development Envelope: Level of Service (LOS) D.

If existing LOS is E or F at an intersection within the Development Envelope, the developer must mitigate the development's new trips.

Outside the Development Envelope: Level of Service (LOS) C.

If the existing LOS is D or lower, then the developer must mitigate the development's new trips.

A developer is required to provide improvements at intersections within the study area where trips generated by the development lowers the Level of Service (LOS) below the adopted standards. These improvements must bring the level of service to the adopted standard. If the TIA determines that the existing level of service does not meet the adopted standards, the subdivider must mitigate the impact of the trips generated from the development site. The study area is defined for areas within and outside the development envelope as:

Inside the Development Envelope: The TIA study area shall include all the existing County and State roads from point of entrance of site to the second intersection of an arterial roadway or higher functional classification road, in all directions. Developments which generate 1,500 or more trips per day may be required to expand the study area.

Outside the Development Envelope: The TIA study area shall include all existing County and state roads from point of entrance to first intersection of a major collector or higher functional classification road, in all directions.

The determination of existing and projected Levels of Service is calculated in the Traffic Impact Analysis, which is performed by the developer and reviewed by the Departments of Planning and Zoning and Public Works.

In addition to the review of individual Traffic Impact Analyses, the Departments of Planning and Zoning and Public Works have studied a number of major roads and intersections to identify existing conditions. This list represents a cross section of key intersections located inside, outside, and on the fringes of the Development Envelope. There are no signalized and three unsignalized intersections with one or more movements operating at a LOS E or lower during peak hours.

The following intersections contain one or more movements that operate at an unacceptable LOS. The evaluation of the LOS is determined on performance of the intersection during one hour peak traffic periods in the a.m. and/or p.m.:

1. Interstate 95 and MD 24 Ramp
2. MD 152 and Singer Road
3. MD 24 and Forest Valley Road

Developments that impact these intersections will be required to mitigate their impacts to the intersection.

INTRODUCTION

The Annual Growth Report is an on-going analysis of growth trends, facility capacity and service performance. This report was prepared by the Department of Planning and Zoning in coordination with the Department of Public Works - Water and Sewer and Engineering Divisions and the Board of Education. This report provides information on the present development activity as well as past trends and future projections for Harford County and the region.

The information in this report will be used by public officials, citizens and private developers for various purposes:

- to assess facility adequacy during the development review and approval process;
- to assess facility capacity in regard to zoning reclassification decisions;
- to support the evaluation of priority projects in the annual Capital Budget review;
- to identify critical deficiencies which require prompt attention by the County.

GROWTH TRENDS

Population Projection Methodology

Yearly estimates of population and households in Harford County for the Annual Growth Report are determined from the 1990 Census. This data is adjusted to reflect a number of variables including building permits, average household size and household vacancy rates.

The 5 and 10 year projections are based on these estimates with a growth factor applied to determine the rate and quantity of growth in the County. This growth factor is based on the number of building permits anticipated to be issued each year. It is important to note that projections are based on past trends and land availability. The population projections for the five remaining jurisdictions in the Baltimore Region are based on an interpolation of the Baltimore Metropolitan Council's Round 5-C population forecast.

The 1990 Census information at the census block level is utilized for specific analysis of each facility regarding area maps and demographic information. Building permits are identified by facility areas, by subdivision name and/or address of each building permit for each year. This provides the needed information on growth trends by facility service area.

Table 1
Harford County - Baltimore Region
Residential Permit Activity
1996 - 2000

County	1996	1997	1998	1999	2000	Total	Percentage of Baltimore Region
Harford County	1,929	1,695	1,704	1,964	1,593	8,885	15.3%
Anne Arundel County	2,996	2,930	3,822	3,682	2,898	16,328	28.2%
Baltimore City	596	183	152	200	212	1,343	2.3%
Baltimore County	2,443	3,199	3,695	3,309	2,916	15,562	26.9%
Carroll County	1,162	778	919	1,108	1,258	5,225	9.0%
Howard County	1,706	2,027	2,255	2,365	2,240	10,593	18.3%
Total	10,832	10,812	12,547	12,628	11,117	57,936	100.0%

NOTE: Permit totals do not reflect cancelled permits.

Source: Baltimore Metropolitan Council, February, 2001.

Table 2
Harford County - Baltimore Region
Population and Household Projections
2000 - 2010

County	2000 Population	2000 Households	2005 Population	2005 Households	2010 Population	2010 Households
Harford County	226,600	81,200	239,600	88,100	249,300	94,400
Anne Arundel County	480,200	176,100	501,000	188,500	511,200	197,100
Baltimore City	629,300	243,800	627,300	248,500	617,900	249,200
Baltimore County	732,700	299,700	742,500	306,600	752,200	313,500
Carroll County	151,200	53,000	163,000	58,000	172,600	62,700
Howard County	250,700	91,000	264,100	101,000	276,400	108,500
Total	2,470,700	944,800	2,537,500	990,700	2,579,600	1,025,400

Source: Baltimore Metropolitan Council, March, 2001.

Table 3
Baltimore Region
Employment Projections
2000 - 2010

County	2000 Employment	2005 Employment	2010 Employment
Harford	90,300	100,800	109,500
Anne Arundel	273,200	291,300	307,200
Baltimore City	457,500	464,300	470,200
Baltimore County	429,000	444,900	460,800
Carroll	61,800	67,800	71,800
Howard	138,800	153,100	164,400
Total	1,450,600	1,522,200	1,583,900

Source: Baltimore Metropolitan Council, March, 2001.

Table 4
Harford County
Non - Residential Permit Activity
New Permits Valued \$50,000 and Over

Permit Type	1996		1997		1998		1999		2000	
	Number Of Permits	Square Footage	Number Of Permits	Square Footage	Number Of Permits	Square Footage	Number Of Permits	Square Footage	Number Of Permits	Square Footage
Commercial	24	389,119	27	1,164,384	36	502,761	29	356,896	24	315,797
Industrial	12	237,575	14	513,977	0	0	9	490,502	7	330,504
Institutional	10	196,839	8	70,821	8	145,025	15	202,482	13	213,426
Utilities	3	9,038	2	2,828	2	3,160	2	0	1	20,000
Other	4	15,092	3	17,698	2	134,338	0	0	0	0
	53	847,663	54	1,769,708	48	785,284	55	1,049,880	45	879,727

Source: Baltimore Metropolitan Council, March, 2001.

Table 5
Harford County
Non - Residential Permit Activity
Additions, Alterations, and Repairs Valued \$50,000 and Over

Permit Type	1996		1997		1998		1999		2000	
	Number Of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage
Commercial	61	NA	49	NA	36	NA	57	NA	47	NA
Industrial	14	NA	5	NA	11	NA	14	NA	6	NA
Institutional	12	NA	14	NA	12	NA	17	NA	20	NA
Utilities	2	NA	5	NA	2	NA	2	NA	7	NA
Total	89		73		61		90		80	

NA: Data Not Available

Source: Baltimore Metropolitan Council, March, 2001.

PUBLIC SCHOOLS

Introduction

To assess current and future adequacy of the public school facilities, the capacities of the existing schools, the utilization of the schools, and future populations are analyzed. The data in this report regarding the public school system are aggregated by the elementary/middle/high school districts and include school enrollments, county-rated capacities for each school facility, utilization of each school facility, and 3 year projected school enrollments (Tables 6, 7, and 8). In addition, development information such as building permits issued by dwelling type (Tables 9, 10, and 11) and population and households (Tables 12, 13, and 14) are included in this report. School maps and pupil yield factors by dwelling unit type are included in the Appendix.

Analysis

Each school facility has been analyzed in terms of past growth trends, current conditions and future enrollment projections. The information is based on factual data and is aggregated by the current school districts. The information in this report is based on factual data. Based on the Adequate Public Facilities provision of the County Code, the level of service standard for Public Schools are:

- Elementary - 120% of rated capacity within 2 years
- Secondary - 120% of rated capacity within 3 years

Preliminary Plans for new developments cannot be approved in elementary school districts where the full-time enrollment currently exceeds or is projected to exceed 120 percent of the capacity within two years. All thirty-one elementary schools currently meet adequacy standards. Construction funding has been approved for Abingdon and Church Creek elementary schools that will increase their capacity by 200 and 265 students respectively.

Preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 120 percent of the capacity within three years. Fifteen of the seventeen middle and high schools in Harford County meet adequacy standards. The projected enrollment for the Southampton Middle School during the 2001/2002 school year is 2,040 for a utilization rate of 128 percent. No planning and/or construction funds have been identified at this time. New developments within this attendance area will not be approved but will be reviewed and placed on a waiting list until capacity is available for the year beginning July 1, 2001.

The projected enrollment for C. Milton Wright High School during the 2002/2003 school year is 2,022 for a utilization rate of 123 percent. No planning and/or construction funds have been identified at this time. New developments within this attendance area will not be approved but will be reviewed and placed on a waiting list until capacity is available for the year beginning July 1, 2001.

School Enrollment Projection Methodology

The methodology for projecting students utilizes historical data for live births and the number of children enrolled in public schools. Using these data, a series of ratios that reflect grade cohort survival are developed. These ratios include consideration of a number of factors:

1. Births in a given year which affect subsequent kindergarten and first grade enrollments.
2. Net migration of school age children.
3. Net transfer of children between public and private schools.
4. Nonpromotion of children to the next grade level.
5. Dropouts in the later years of secondary school.
6. Shifts between regular grade and upgraded groups other than special education.

This technique of establishing a ratio is used for each successive grade. For example, a ratio is developed between the number of children actually in the first grade in 1985 and the number in the second grade the following year. The ratio, therefore, represents the number of first graders who advance to the second grade. If significant variations exist (such as a rapid increase in home building), then factors such as pupil yields for subdivision activity and development trends must be measured.

In order to ensure accurate projections, development monitoring is a key activity because housing expansion periods have a direct impact on school enrollments. A primary means of calculating projected student enrollment due to a housing expansion period are by using pupil yield factors for new developments.

Pupil yield factors are determined by researching the number of students from a particular community/subdivision that are actually attending their home school. By dividing the number of students accounted for by the number of dwelling units, a pupil generation factor is determined. It is important to note that different pupil yield factors are generated depending on housing type (single family, townhouse, apartment etc.) and school level (elementary, middle and high). Surveys of sample subdivisions to assess an accurate yield factor are completed on a regular basis. (See Appendix)

Table 6
Harford County Elementary Schools
Utilization Chart
2000

Elementary School	Capacity	Actual			Projected					
		2000 - 2001		2001 - 2002		2002 - 2003		2003 - 2004		
		ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.	
Abingdon	895	762	85%	789	88%	805	90%	813	91%	
Bakerfield	500	475	95%	470	94%	460	92%	441	88%	
Bel Air	550	477	87%	471	86%	473	86%	451	82%	
Church Creek	865	720	83%	712	82%	694	80%	689	80%	
Churchville	410	337	82%	356	87%	367	90%	378	92%	
Darlington	200	155	78%	146	73%	138	69%	134	67%	
Deerfield	535	539	101%	506	95%	504	94%	498	93%	
Dublin	325	244	75%	227	70%	209	64%	205	63%	
Edgewood	525	365	70%	357	68%	343	65%	325	62%	
Emmorton	575	505	88%	489	85%	483	84%	481	84%	
Forest Hill	635	554	87%	571	90%	606	95%	633	100%	
Forest Lakes	600	489	82%	454	76%	439	73%	420	70%	
Fountain Green	600	564	94%	576	96%	581	97%	592	99%	
G. Lisby at Hillsdale	475	395	83%	385	81%	382	80%	376	79%	
Hall's Cross Ros	600	370	62%	361	60%	353	59%	347	58%	
Havre de Grace	640	425	66%	398	62%	369	58%	341	53%	
Hickory	700	562	80%	588	80%	550	79%	547	78%	
Home/Wakefield	975	943	97%	919	94%	912	94%	887	91%	
Jarrettsville	585	479	82%	457	78%	459	78%	452	77%	
Joppatowne	535	474	89%	467	87%	468	87%	456	85%	
Magnolia	525	550	105%	540	103%	516	98%	495	94%	
Meadowdale	575	585	102%	600	104%	594	103%	608	106%	
Norrisville	275	193	70%	174	63%	162	59%	155	56%	
North Bend	575	486	85%	443	77%	436	76%	439	76%	
North Harford	550	447	81%	444	81%	429	78%	424	77%	
Prospect Mill	775	795	103%	793	102%	803	104%	777	100%	
Ring Factory	600	621	104%	616	103%	629	105%	623	104%	
Riverside	600	507	85%	474	79%	451	75%	451	75%	
Roye-Williams	685	585	85%	569	83%	559	82%	567	83%	
Wm Paca / Old Post Rd	1,035	946	91%	908	88%	875	85%	859	83%	
Wm. S. James	575	533	93%	522	91%	507	88%	507	88%	
Youth's Benefit	950	989	104%	989	104%	961	101%	951	100%	
TOTAL	19,445	17,071	88%	16,741	86%	16,517	85%	16,322	84%	

Source: Harford County Public Schools & Dept. of Planning & Zoning, October, 2000.

Table 7
Harford County Middle Schools
Utilization Chart
2000

Middle School	Capacity	Actual		Projected									
		2000 - 2001	2001 - 2002	2002 - 2003		2003 - 2004		2004 - 2005					
		ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1,673	1,227	73%	1,240	74%	1,277	76%	1,317	79%	1,284	77%		
Bel Air	1,393	1,218	87%	1,315	94%	1,338	96%	1,358	97%	1,263	91%		
Edgewood	1,438	1,228	85%	1,300	90%	1,325	92%	1,307	91%	1,268	88%		
Fallston	1,058	1,145	108%	1,116	105%	1,137	107%	1,126	106%	1,081	102%		
Havre de Grace	830	599	72%	617	74%	651	78%	661	80%	635	77%		
Magnolia	1,135	881	78%	892	79%	862	76%	809	71%	768	68%		
North Harford	1,380	1,063	77%	1,099	80%	1,109	80%	1,070	78%	978	71%		
Southampton	1,598	1,951	122%	2,040	128%	2,052	128%	2,058	129%	2,019	126%		
Total	10,505	9,312	89%	9,619	92%	9,751	93%	9,706	92%	9,296	88%		

Source: Harford County Public Schools and Department of Planning and Zoning, October 2000.

Table 8

**Harford County High Schools
Utilization Chart
2000**

High School	Capacity	Actual						Projected					
		2000 - 2001		2001 - 2002		2002 - 2003		2003 - 2004		2004 - 2005			
		ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL		
Aberdeen	1,873	1,173	63%	1,173	63%	1,150	61%	1,096	59%	1,120	60%		
Bel Air	1,483	1,556	105%	1,593	107%	1,590	107%	1,669	113%	1,718	116%		
C. Milton Wright	1,650	1,763	107%	1,911	116%	2,022	123%	2,147	130%	2,285	138%		
Edgewood	1,435	1,143	80%	1,157	81%	1,171	82%	1,239	86%	1,263	88%		
Fallston	1,640	1,554	95%	1,637	100%	1,628	99%	1,595	97%	1,572	96%		
Harford Technical	1,038	901	87%	989	95%	1,043	100%	1,083	104%	1,102	106%		
Havre de Grace	908	661	73%	658	72%	685	75%	700	77%	724	80%		
Joppatowne	1,203	1,019	85%	1,025	85%	1,009	84%	996	83%	1,004	83%		
North Harford	1,615	1,187	73%	1,278	79%	1,260	78%	1,297	80%	1,315	81%		
Alternative Education		18											
Total	12,845	10,975	85%	11,421	89%	11,558	90%	11,822	92%	12,103	94%		

Total Secondary	23,350	20,287	87%	21,040	90%	21,309	91%	21,528	92%	21,399	92%
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Source: Harford County Public Schools and Department of Planning and Zoning, October 2000.

Table 9
Harford County Residential Building Permit Activity
by Elementary School District
1996 - 2000

SCHOOL	1996					1997					1998					1999					2000				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
	SF	TH	CONDO	APT/	TOTAL	SF	TH	CONDO	APT/	TOTAL	SF	TH	CONDO	APT/	TOTAL	SF	TH	CONDO	APT/	TOTAL	SF	TH	CONDO	APT/	TOTAL
Abrington	78	91	0	0	170	64	119	0	0	183	50	88	0	0	138	34	131	0	0	185	18	133	0	0	151
Bakersfield	14	55	0	0	69	31	10	0	1	42	33	23	0	1	57	41	8	0	0	50	39	15	0	0	54
Bel Air	1	0	0	1	2	25	15	0	0	41	64	68	0	0	130	61	52	0	0	113	60	47	0	0	107
Church Creek	39	43	116	0	198	29	1	1	1	32	7	5	4	0	16	24	8	19	0	51	16	20	23	0	59
Churchville	18	0	0	3	21	13	0	0	1	14	29	0	0	0	29	22	0	0	1	23	26	0	0	0	26
Darlington	13	0	0	4	17	12	0	0	3	15	14	0	0	0	14	14	0	0	2	14	7	0	0	2	9
Deerfield	39	0	0	0	39	36	0	0	0	36	30	0	0	0	30	30	0	0	0	36	36	0	0	0	36
Dublin	20	0	0	4	24	11	0	0	3	14	7	0	0	1	8	15	0	0	1	16	15	0	0	1	16
Edgewood	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
Emmorton	37	43	0	0	80	12	19	0	0	31	4	0	0	0	4	4	0	0	0	4	16	20	0	0	36
Forest Hill	63	46	24	0	133	74	35	60	1	170	150	30	80	0	240	151	86	68	1	306	151	86	68	1	306
Forest Lakes	69	28	0	0	97	94	21	0	0	115	26	9	0	0	35	26	7	0	0	33	26	7	0	0	33
Fountain Green	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1
G. Lisby at Hillside	11	0	0	0	11	7	0	0	0	7	13	0	1	0	14	18	0	5	0	23	18	0	0	0	23
Hall's Cross Roads	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	2	0	0	0	2	2	0	0	0	2
Havre de Grace	2	0	18	0	18	3	0	17	0	20	7	0	0	0	7	4	0	0	0	4	4	0	0	0	4
Hickory	89	19	0	0	108	123	30	0	1	154	132	51	0	0	183	114	40	6	1	161	114	40	6	1	161
Honestead/Wakefield	52	16	35	0	103	44	1	0	0	45	68	7	0	0	73	97	4	0	0	101	80	6	0	0	86
Jarrettsville	19	0	0	1	20	14	0	0	0	14	21	0	0	1	22	34	0	0	1	35	20	0	0	1	21
Joppatowne	42	17	0	0	59	58	40	12	0	110	45	30	25	0	100	26	38	0	0	64	26	38	0	0	64
Meadowdale	26	0	0	0	26	17	0	0	0	17	25	0	0	0	25	16	0	0	0	16	16	0	0	0	16
Magnolia	90	23	48	0	161	30	30	0	0	60	41	20	0	2	63	40	33	24	0	97	40	33	24	0	97
North Bend	10	0	0	1	11	15	0	0	0	15	26	0	0	5	31	21	0	0	1	22	21	0	0	1	22
North Harford	34	0	0	5	39	28	0	0	3	31	31	0	0	0	31	31	0	0	0	31	42	0	0	0	44
Prospect Mill	42	0	0	5	47	30	0	0	5	35	37	0	2	3	42	35	0	0	11	48	35	0	0	11	48
Ring Factory	93	0	0	0	93	59	0	0	0	59	88	0	39	0	125	72	0	55	1	128	72	0	55	1	128
Riverside	61	70	48	0	177	36	35	36	0	107	36	59	3	0	98	36	59	3	0	98	18	79	0	0	97
Roye-Williams	11	0	0	0	11	7	0	0	0	7	8	0	0	0	8	8	0	0	0	8	22	20	0	0	42
Wm. Paca/Old Post Rd	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Wm. S. James	11	68	0	0	79	43	26	0	1	70	42	30	1	0	73	63	21	0	1	85	63	21	0	1	85
Youth's Benefit	1	0	0	0	1	1	0	0	0	1	3	0	0	0	3	3	0	0	0	3	0	0	0	0	0
TOTAL	1,035	519	285	24	1,863	1,008	383	166	20	1,577	1,126	434	135	18	1,713	1,141	547	177	25	1,880	1,038	430	137	24	1,629

Source: Harford County Dept. of Planning & Zoning, March, 2001.

KEY:
SF = Single Family Dwelling
TH = Townhouse
APT / CONDO = Apartment / Condominium
MH = Mobile Home

Table 10

Harford County Residential Building Permit Activity
by Middle School District
1996 - 2000

SCHOOL	1996						1997						1998						1999						2000					
	BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE					
	SF	TH	CONDO	APT/	MH	TOTAL	SF	TH	CONDO	APT/	MH	TOTAL	SF	TH	CONDO	APT/	MH	TOTAL	SF	TH	CONDO	APT/	MH	TOTAL	SF	TH	CONDO	APT/	MH	TOTAL
Aberdeen	73	62	116	1	252	73	10	1	2	86	69	41	5	2	117	88	16	24	2	130	101	35	23	1	160	101	35	23	1	160
Bel Air	169	129	81	0	379	94	55	36	0	185	109	66	3	0	178	129	103	0	0	232	116	37	0	0	153	116	37	0	0	153
Edgewood	131	195	0	1	327	144	146	0	2	292	124	121	1	0	246	137	152	0	1	290	162	157	0	1	320	162	157	0	1	320
Fallston	113	28	0	0	141	192	21	0	0	213	125	9	36	1	171	113	8	31	1	153	103	0	0	2	105	103	0	0	2	105
Havre de Grace	104	23	64	4	195	45	30	17	3	95	61	20	0	5	86	56	33	24	2	115	25	6	0	2	33	25	6	0	2	33
Magnolia	79	17	0	0	96	82	40	12	0	134	79	30	25	0	134	84	58	0	0	122	60	46	0	0	106	60	46	0	0	106
North Harford	120	0	0	15	135	93	0	0	10	103	120	0	2	9	131	142	0	0	15	157	108	0	0	14	122	108	0	0	14	122
Southampton	246	65	24	3	338	285	81	100	3	469	439	147	63	1	650	412	177	98	4	691	363	149	114	4	630	363	149	114	4	630
TOTAL	1,035	519	285	24	1,863	1,008	383	166	20	1,577	1,126	434	135	18	1,713	1,141	547	177	25	1,890	1,038	430	137	24	1,629	1,038	430	137	24	1,629

Source: Harford County Department of Planning and Zoning, March, 2001.

KEY:

SF = Single Family Dwelling
TH = Townhouse
APT / CONDO = Apartment / Condominium
MH = Mobile Home

Table 11

Harford County Residential Building Permit Activity
by High School District
1996 - 2000

SCHOOL	1998						1997						1998						1999						2000					
	BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE						BUILDING PERMITS ISSUED BY DWELLING TYPE					
	SF	TH	CONDO	APT/ MH	TOTAL	SF	TH	CONDO	APT/ MH	TOTAL	SF	TH	CONDO	APT/ MH	TOTAL	SF	TH	CONDO	APT/ MH	TOTAL	SF	TH	CONDO	APT/ MH	TOTAL	SF	TH	CONDO	APT/ MH	TOTAL
Aberdeen	73	62	116	1	252	73	10	1	2	86	68	41	5	2	117	88	16	24	2	130	101	35	23	1	160	101	35	23	1	160
Bel Air	169	129	81	0	379	112	55	36	0	203	141	89	3	0	213	185	116	0	0	291	144	37	0	0	181	144	37	0	0	181
C. Milton Wright	229	19	0	3	251	245	46	40	3	334	377	114	39	1	531	341	79	55	4	479	330	54	75	4	463	330	54	75	4	463
Edgewood	131	195	0	1	327	144	146	0	2	292	124	121	1	0	246	137	152	0	1	290	162	157	0	1	320	162	157	0	1	320
Fallston	130	74	24	0	228	214	56	60	0	330	155	39	60	1	255	148	93	74	1	316	108	95	39	2	244	108	95	39	2	244
Havre de Grace	104	23	64	4	195	45	30	17	3	95	61	20	0	5	86	56	33	24	2	115	25	6	0	2	33	25	6	0	2	33
Joppatowne	79	17	0	0	96	82	40	12	0	134	79	30	25	0	134	64	58	0	0	122	60	48	0	0	108	60	48	0	0	108
North Harford	120	0	0	15	135	83	0	0	10	103	120	0	2	9	131	142	0	0	15	157	108	0	0	0	122	108	0	0	14	122
TOTAL	1,035	518	285	24	1,863	1,008	383	166	20	1,577	1,126	434	135	18	1,713	1,141	547	177	25	1,890	1,038	430	137	24	1,629	1,038	430	137	24	1,629

Source: Harford County Department of Planning and Zoning, March, 2001.

KEY:

SF = Single Family Dwelling
TH = Townhouse
APT / CONDO = Apartment / Condominium
MH = Mobile Home

Table 12
Harford County Population and Households
by Elementary School District

1996 - 2000

SCHOOL	1996*		1997*		1998*		1999*		2000*	
	Population	Households	Population	Households	Population	Households	Population	Households	Population	Households
Abingdon	10,485	3,704	10,931	3,866	11,356	4,039	11,643	4,169	11,960	4,289
Bakerfield	7,797	2,759	7,988	2,825	8,054	2,865	8,153	2,919	8,203	2,941
Bel Air	9,086	3,216	9,098	3,217	9,155	3,256	9,440	3,380	9,643	3,458
Churchville	6,147	2,175	6,683	2,363	6,730	2,394	6,729	2,409	6,795	2,437
Church Creek	7,740	2,739	7,802	2,759	7,794	2,772	7,821	2,800	7,803	2,798
Darlington	2,255	798	2,303	814	2,329	829	2,359	845	2,372	851
Deerfield	5,717	2,023	5,826	2,060	5,888	2,094	5,930	2,123	5,965	2,139
Dublin	3,884	1,374	3,951	1,397	3,965	1,410	3,961	1,418	3,963	1,421
Edgewood	4,827	1,708	4,830	1,708	4,802	1,708	4,774	1,709	4,726	1,695
Emmorton	4,884	1,729	5,103	1,805	5,156	1,834	5,133	1,838	5,186	1,859
Forest Hill	6,758	2,392	7,121	2,518	7,533	2,680	8,121	2,908	8,844	3,171
Forest Lakes	3,922	1,388	4,188	1,481	4,471	1,590	4,536	1,624	4,576	1,641
Fontain Green	5,967	2,112	5,971	2,112	5,942	2,114	5,906	2,115	5,850	2,098
G. Lisby at Hillsdale	5,388	1,907	5,421	1,917	5,409	1,924	5,411	1,937	5,417	1,943
Hall's Cross Roads	5,226	1,849	5,230	1,849	5,199	1,849	5,213	1,867	5,166	1,853
Havre de Grace	7,328	2,593	7,381	2,610	7,392	2,629	7,363	2,636	7,299	2,618
Hickory	5,230	1,851	5,524	1,954	5,903	2,100	6,351	2,274	6,710	2,406
Homestead/Wakefield	13,613	4,818	13,900	4,915	13,939	4,958	14,043	5,028	14,167	5,080
Jarrettsville	6,460	2,286	6,519	2,305	6,518	2,319	6,534	2,339	6,561	2,353
Joppatowne	8,503	3,009	8,670	3,066	8,913	3,171	9,121	3,266	9,198	3,298
Magnolia	4,095	1,449	4,168	1,474	4,189	1,490	4,228	1,514	4,228	1,516
Meadowvale	7,685	2,720	8,124	2,873	8,237	2,930	8,350	2,990	8,522	3,056
Norrisville	2,274	805	2,305	815	2,332	829	2,399	859	2,433	872
North Bend	5,719	2,024	5,828	2,061	5,877	2,091	5,921	2,120	5,978	2,144
North Harford	5,646	1,998	5,776	2,043	5,836	2,076	5,910	2,116	5,971	2,141
Prospect Mill	7,254	2,567	7,509	2,656	7,730	2,750	8,012	2,868	8,268	2,965
Ring Factory	6,445	2,281	6,925	2,449	7,170	2,551	7,384	2,644	7,565	2,713
Riverside	8,923	3,158	8,959	3,168	8,926	3,175	8,892	3,184	8,913	3,196
Roye-Williams	4,802	1,699	4,808	1,700	4,780	1,700	4,752	1,701	4,709	1,689
Wm. Pacar/Old Post Rd	10,184	3,604	10,404	3,679	10,530	3,746	10,656	3,815	10,773	3,863
Wm. S. James	4,394	1,555	4,400	1,556	4,377	1,557	4,357	1,560	4,313	1,547
Youth's Benefit	13,982	4,948	14,121	4,994	14,279	5,079	14,428	5,165	14,486	5,195
TOTAL	212,600	75,238	217,770	77,010	220,710	78,508	223,830	80,136	226,560	81,246

Source: Harford County Dept. of Planning & Zoning, May, 2001.

*Population estimate as of April 1, 2000 Census data not available.

Table 13
Harford County Population and Households
by Middle School District

1996 - 2000

SCHOOL	1996 *		1997 *		1998 *		1999 *		2000 *	
	Population	Households	Population	Households	Population	Households	Population	Households	Population	Households
Aberdeen	33,319	11,791	34,020	12,031	34,052	12,113	34,142	12,224	34,142	12,243
Bel Air	28,058	9,930	29,080	10,284	29,405	10,459	29,689	10,629	30,001	10,759
Edgewood	31,889	11,285	32,791	11,596	33,379	11,873	33,816	12,107	34,239	12,278
Fallston	21,481	7,602	21,876	7,736	22,317	7,938	22,627	8,101	22,802	8,177
Havre de Grace	17,190	6,084	17,727	6,269	17,877	6,359	17,990	6,441	18,112	6,495
Magnolia	21,736	7,692	22,013	7,785	22,242	7,912	22,454	8,039	22,550	8,086
North Harford	22,782	8,062	23,162	8,191	23,302	8,289	23,498	8,413	23,675	8,490
Southampton	36,143	12,791	37,101	13,120	38,134	13,564	39,612	14,182	41,039	14,717
TOTAL	212,600	75,238	217,770	77,010	220,710	78,508	223,830	80,136	226,560	81,246

Source: Harford County Dept. of Planning & Zoning, May, 2001.

*Population / Households are estimated as of April 1; 2000 Census data not available.

Table 14
Harford County Population and Households
by High School District

1996 - 2000

SCHOOL	1996 *		1997 *		1998 *		1999 *		2000 *	
	Population	Households	Population	Households	Population	Households	Population	Households	Population	Households
Aberdeen	33,319	11,791	34,020	12,031	34,053	12,113	34,148	12,226	34,147	12,245
Bel Air	34,941	12,366	35,969	12,720	36,253	12,895	36,491	13,064	36,863	13,219
Edgewood	31,889	11,285	32,791	11,596	33,379	11,873	33,816	12,107	34,744	12,460
Fallston	24,132	8,540	24,529	8,674	24,954	8,876	25,247	9,039	25,756	9,236
Havre de Grace	17,190	6,084	17,727	6,269	17,877	6,359	17,990	6,441	18,640	6,684
Joppatowne	21,736	7,692	22,013	7,785	22,242	7,912	22,454	8,039	22,531	8,080
North Harford	22,782	8,062	23,162	8,191	23,302	8,289	23,498	8,413	23,583	8,457
C. Milton Wright	26,609	9,417	27,560	9,746	28,648	10,190	30,185	10,807	30,295	10,864
TOTAL	212,600	75,238	217,770	77,010	220,710	78,508	223,830	80,136	226,560	81,246

Source: Harford County Dept. of Planning & Zoning, May, 2001.

*Population/Households are estimated as of April 1; Census data not available.

WATER AND SEWERAGE

Introduction

The data included in this section for the water and sewerage system are aggregated by the water & sewer service area, which essentially reflects the Development Envelope as defined in the 1996 Harford County Land Use Element Plan. Additional information is included in this report on water/sewerage usage by dwelling type and for nonresidential uses, an inventory of existing water consumption/sewerage flows, demand projections (including the basis for their computation), and a list of capital projects contained in the County's Capital Improvements Program for expanding facilities - including project status. This information is extracted from the "2000 Water and Sewer Adequate Public Facilities Report," and can be found on pages 24 - 27 of this report.

Water and Sewer Facility Projection Methodology

Water:

The Harford County water service area is divided into four pressure zones because of varying topography within the Development Envelope. To provide an adequate supply of water, the transmission lines, pumping and storage facilities for all zones must be sized for estimated future demands. In 1990, the average daily water demand by customers served by the County's central system was approximately 5.9 MGD, with a corresponding maximum day demand of approximately 7.6 MGD. In 2000, the County's average day and maximum day demands were 9.97 MGD and 12.5 MGD respectively. To keep pace with the projected growth, staged construction programs are established so that facilities are available as required and are distributed over the long term.

There are seven multiple-use water systems that are not maintained or operated by Harford County, but are subject to the APF provision of the County Code. These systems are listed below:

- 1) Maryland-American Water Co.
- 2) Conowingo Power Co.
- 3) Campus Hills Water Works Inc.
- 4) Darlington
- 5) Greenridge Utilities Inc.
- 6) Lakeside Vista
- 7) Bel Air Heights

Sewerage:

The sewage flows to Harford County's existing Sod Run and Joppatowne Wastewater Treatment Plants (WWTP) originate from a portion of the Development Envelope. The area between the municipalities of Aberdeen and Havre de Grace as well as the cities themselves, are within the Development Envelope and are served by the municipal sewerage facilities. A complete "Sewer System Capacity Analysis" is included on pages 8 - 10 and pages 32 - 147 of the 2000 Water and Sewer Adequate Public Facilities Report.

The average daily influent flow to the Sod Run WWTP in 2000 was approximately 11.6 MGD, exclusive of recycle flows and septage. The average daily influent flow to the Joppatowne WWTP in 2000 was approximately 0.835 MGD. The determination of future wastewater flows to wastewater treatment plants are made by using population and household projections developed by Harford County Department of Planning and Zoning for the years 1995 through 2010. The projections were distributed by local transportation zone (LTZs) by aggregating the ultimate development in terms of equivalent dwelling units into sewerage drainage areas. In order to keep pace with projected growth, construction of an expansion of the Sod Run Wastewater Treatment Plant from 12 MGD in 1995 to 20 MGD by 2000 had been initiated. There are two private multi-use sewerage systems in the County. The Conowingo-Susquehanna Power Company provides sewerage service to the Conowingo Power Plant and some surrounding residences and the Swan Harbor Dell Mobile Home Park that serves about 160 units.

Table 15

JANUARY - DECEMBER 2000 WATER CONSUMPTION & SEWAGE GENERATION

This table reflects the total number of water and sewer customers and the water consumption and sewage generations for residential and commercial/industrial users.

	2000
Total Number of Connections	34,488
WATER	
Average Water Production	9.97 MGD
Maximum Day Water Production	12.5 MGD
Average Water Usage per Connection (gal/day)	310
Residential Unit Water Usage (gal/day)	173
Average Commercial/Industrial Water Usage (gal/day)	3,462
SEWAGE	
Average Sewage Flows	12.4 MGD
Maximum Day Sewage Flows	24.6 MGD
Average Sewage per Connection (gal/day)	372
Residential Sewage Generation (gal/day)	173
Average Commercial/Industrial Sewage Generation (gal/day)	3,462

- MGD = Million Gallons per Day

Table 16

HARFORD COUNTY SYSTEM WATER PRODUCTION PROJECTIONS

SYSTEM WIDE RESIDENTIAL/ COMMERCIAL INDUSTRIAL WATER DEMAND	YEAR												
	1990	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010	2015	2020
FIRST ZONE													
Avg. Day, mgd	3.4	3.2	3.4	4.1	4.05	4.5	4.5	4.6	3.5	6.2	7.0	9.0	10.4
Max. Day, mgd	4.3	4.6	4.8	6.0	4.8	6.5	6.6	6.5	4.6	8.4	9.9	15.3	18.2
Total of Second, Third and Fourth Zones Requirements													
Avg. Day, mgd	2.5	3.5	3.7	3.8	4.5	5.0	5.0	5.7	6.1	6.3	7.9	9.0	9.9
Max. Day, mgd	3.3	3.9	4.0	5.6	5.9	6.8	6.9	7.3	6.9	10.0	12.0	17.7	19.5
Aberdeen													
Avg. Day, mgd	0.0	0.0	0.0	0.5	.05	.03	.01	0.3	0.26	0.5	0.5	0.5	0.5
Max. Day, mgd **	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Maryland-American Water Company													
Avg. Day, mgd	0.0	0.0	0.0	0.0	0.0	.07	.01	.01	.001	.01	.01	.01	.01
Max. Day, mgd **	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total													
Avg. Day, mgd	5.9	6.7	7.1	8.4	8.6	9.6	9.5	10.6	9.9	13.0	15.4	18.5	20.8
Max. Day, mgd	7.6	8.5	8.8	12.1	11.2	14.3	14.5	14.8	12.5	19.4	22.9	34.0	38.7

** - Allocated maximum day flow projections per service agreements.

Table 17

Harford County Present and Projected Sewerage Demands and
Planned Capacities in Million Gallons Per Day - (MGD)

	SERVICE AREAS			
	PLANNING YEAR	HARFORD COUNTY	JOPPATOWNE	SPRING MEADOWS
PER CAPITA SEWAGE FLOW	1993-2010	90	80	65
RESIDENTIAL POPULATION SERVED	1993	70,732	7,000	153
	1994	78,849	7,000	153
	1995	81,696	7,000	153
	1996	85,449	7,300	153
	1997	86,000	7,400	153
	1998	91,547	7,500	153
	1999	97,198	7,600	153
	2000	99,057	7,700	153
	2005	104,000	8,800	153
	2010	113,000	8,500	153
DOMESTIC FLOW (ADF)	1993	7.7	.59	.01
	1994	7.9	.56	.01
	1995	7.7	.56	.01
	1996	8.1	.56	.01
	1997	7.8	.56	.01
	1998	8.4	.71	.01
	1999	8.6	.64	.01
	2000	9.3	.65	.01
	2005	9.4	.85	.01
	2010	10.0	.76	.01
INDUSTRIAL FLOW (ADF)	1993	.4	0.0	0
	1994	.5	0.0	0
	1995	.5	0.0	0
	1996	.5	0.0	0
	1997	.5	0.0	0
	1998	.5	0.0	0
	1999	.5	0.0	0
	2000	.6	0.0	0
	2005	.6	0.0	0
	2010	.6	0.0	0
INFILTRATION/INFLOW (ADF)	1993	1.0	.19	0
	1994	1.4	.19	0
	1995	1.4	.19	0
	1996	1.5	.19	0
	1997	1.4	.19	0
	1998	1.6	.19	0
	1999	1.7	.19	0
	2000	1.7	.19	0
	2005	1.7	.19	0
	2010	1.9	.19	0
TOTAL FLOW	1993	9.1	.78	.01
	1994	9.8	.75	.01
	1995	9.6	.75	.01
	1996	10.1	.75	.01
	1997	9.7	.75	.01
	1998	10.5	.90	.01
	1999	10.8	.80	.01
	2000	11.6	.84	.01
	2005	11.7	.84	.01
	2010	12.5	.95	.01
SYSTEM CAPACITY	1993	10.0	.75	.01
	1994	12.0	.75	.01
	1995	12.0	.75	.01
	1996	12.0	.75	.01
	1997	12.0	.95	.01
	1998	12.0	.95	.01
	1999	20.0	.95	.01
	2000	20.0	.95	.01
	2005	20.0	.95	.01
	2010	20.0	.95	.01

Table 18

2000 Existing Water & Sewer Capital Projects

The Capital Improvement Program establishes projects for expanding water and sewer facilities. This list of 2000 Capital Projects includes the projects status.

Project Number	Project Name	Project Status
6440	Infiltration/Inflow	Initiating implementation of the program
6458	Lower Bynum Run Parallel Interceptor	Phase 3: Under design & Awaiting Rights-of-Way Phase 4: Pending Rights-of-Way and Design required
6486	Whiteford - Cardiff Sewer Petition	Under construction
6509	Singer Road Water Transmission Main	Under construction
6518	Red Pump Road Transmission Main Parallel	Design complete
6540	Country Walk Tank & Booster Station	Under construction
6553	Upper Lake Fanny Sewer Petition	Construction complete
6563	Fox Bow Pumping Station	Construction complete
6575	Tollgate Road and Plumtree Road Water	Design complete
6581	Sod Run Interceptor Sewer Parallel Phase I	Construction complete
6591	Perryman Well Field Improvements	Under construction
6594	Hickory By-Pass Water Mains	Construction complete
6596	Connolly Road Water Petition	Design complete
6603	Abingdon Road Water Main Phase III	Under design
6608	Bush Creek P.S. Force Main Surge Facility Modification	Defining scope
	Old Joppa Road Sewer Petition	Under design and Awaiting Rights-of-Way
	Perryman WTP Granular Activated Carbon Relocation	Request for consultants
	Route 7 Sewer Extension	Defining design scope
	Leeswood Garth Sewer Parallel	Design complete and Awaiting Rights-of-Way and Specification preparation

ROAD SYSTEM

Introduction

The information for the APF Road System contained in this section includes the following: signalized and unsignalized intersection capacity analysis results - existing conditions (Tables 19 and 20), average daily count locations (Table 21), a list of approved county capital projects funded for construction in FY 01 (Table 22), and a list of state consolidated transportation program projects funded for construction FY 01 (Table 23). This information will help identify existing deficiencies in the road system and guide both County and State capital project funding to the most critical road projects.

The intent of the APF Roads provisions of the County Code is to create a mechanism that requires proposed development to make appropriate and reasonable road improvements, based on the proposed development's impact to the road.

Road Intersection Analysis Methodology

A key feature of the APF Road Intersection regulations is the requirement for preparation of a traffic impact analysis (TIA) for residential and nonresidential uses that generate more than 249 trips. Proposed development located within the Route 40 Overlay District will not be required to submit a Traffic Impact Analysis unless the proposed use will generate 1,500 trips per day at the time of preliminary/site plan review. The TIA provides information regarding the impact of generated trips from proposed land uses on traffic safety and traffic operation within a designated area and recommending solutions to mitigate the impact. The method of conducting a Traffic Impact Analysis is outlined in the "Harford County Traffic Impact Analysis Guidelines".

A complete TIA includes the following:

- The designation of the study area as required in the APF regulations based on whether the proposed development is inside or outside of the Development Envelope.

Inside the Development Envelope :

The TIA shall include all the existing County and State roads from the point of entrance of site to the second intersection of an arterial roadway or higher functional classification road, in all directions. Developments which generate 1,500 or more trips per day may be required to expand the study area.

Outside the Development Envelope :

The TIA shall include all existing County and State roads from point of entrance to first intersection of a major collector or higher classification road, in all directions.

- An analysis of existing conditions including traffic counts, lane configuration, and signal timings.
- An analysis of background conditions without site development, including growth in background traffic, future traffic generated by nearby proposed developments and the determination of Levels of Service with any approved/funded State and County Capital projects.
- An analysis of the projected conditions with site development, including the traffic being generated by the proposed development and the background traffic.
- An explanation of the results with recommended improvements as necessary.

The Developer is required to provide improvements where the trips generated by the development reduce the Level Of Service (LOS) from adequate to a LOS below the standard. The standard for intersections within the Development Envelope will be LOS D. If existing LOS is E or F at an intersection within the Development Envelope, the developer must mitigate the impact of the development's new trips. The standard for intersections outside the Development Envelope will be LOS C. If the existing LOS is D or lower, then the developer must mitigate the impact of the development's new trips.

Table 19
Signalized Intersection Capacity Analyses Results
Existing Conditions
2000

Intersection	Level of Service (Peak Hour)	Delay in Seconds (P.M.)
MD 24 and Bel Air South Parkway	D	53.4
MD 7 and U.S. 40	D	36.6
MD 24 and MD 924 (Tollgate)	D	49.6
MD 24 and Ring Factory Road	D	53.6
MD 543 and U.S. 1	C	26.8
MD 924 and Abingdon Road	D	40.3
MD 22 and MD 136	C	32.3
MD 924 and Moores Mill Road	C	31.0
MD 24 and MD 755	C	34.4
MD 22 and Brierhill Road	C	31.6
MD 543 and MD 22	D	42.1
MD 24 and Trimble Road	C	32.6
MD 136 and MD 165	B	15.1
MD 152 and U.S. 1	D	49.7
MD 24 and U.S. 1	D	50.8
MD 152 & Trimble Road	C	26.8
MD 24 and Jarrettsville Road	C	34.5
MD 543 and Wheel Road	C	25.7
MD 152 and Hanson Road	C	25.2
MD 24 and Plumtree Road	C	29.4
MD 924 and Plumtree Road	B	12.7

Table 20
Unsignalized Intersection Capacity Analyses Results
Existing Conditions
2000

Intersection	Level of Service (Peak Hour)	Delay in Seconds (P.M.)
Interstate 95 and MD 24 Ramp	F	--
MD 152 and Singer Road	F	475.0
MD 159 and Spesutia Road	B	13.2
MD 165 and MD 24	C	22.2
MD 24 and Forest Valley Road	F	207.2
MD 7 and MD 159	B	11.5

Table 21
Average Daily Count Locations - 2000

Road Name	Location	Average Weekday Daily Count
Abingdon Road	North of Interstate 95	8,433
Beards Hill Road	North of Churchville Road	10,602
Chapel Road	North of Interstate 95	1,752
Hanson Road	South of Silverbell Road	2,986
Hanson Road	West of Maryland 24	10,743
Jarrettsville Road	East of Maryland 24	9,006
Maryland 152	South of U.S. Route 1	26,450
Maryland 24	North of Singer Road	42,625
Maryland 543	South of Maryland 22	17,050
Maryland 7	West of Maryland 24	6,250
Moores Mill Road	West of Coconut Court	12,693
Moores Mill Road	West of Old English Court	9,226
Pleasantville Road	North of Putnam Road	3,104
Plumtree Road	East of Maryland 24	4,330
Ring Factory Road	West of Maryland 24	3,917
Ring Factory Road	East of Maryland 24	8,507
Singer Road	East of Maryland 24	Under Construction
Singer Road	West of Maryland 24	Under Construction
Stepney Road	North of I-95, South of Carsins Run	1,311
Trimble Road	East of Maryland 24	4,952
Trimble Road	West of Maryland 24	4,770
U.S. Route 1	North of Maryland 152	26,150
U.S. Route 40	North of Maryland 24	17,341

Table 22
List of Approved County Capital Projects
Funded for Construction in FY 01

Bridge Inspection Program	Inspection
Forge Hill Road Bridge	Reconstruction
Greene Road Bridge	Reconstruction
Moore's Mill Road Bridge	Reconstruction
Singer Road Bridge	Reconstruction
Southampton Road Bridge	Reconstruction

Table 23
State Consolidated Transportation Program
Funded for Construction in FY 00

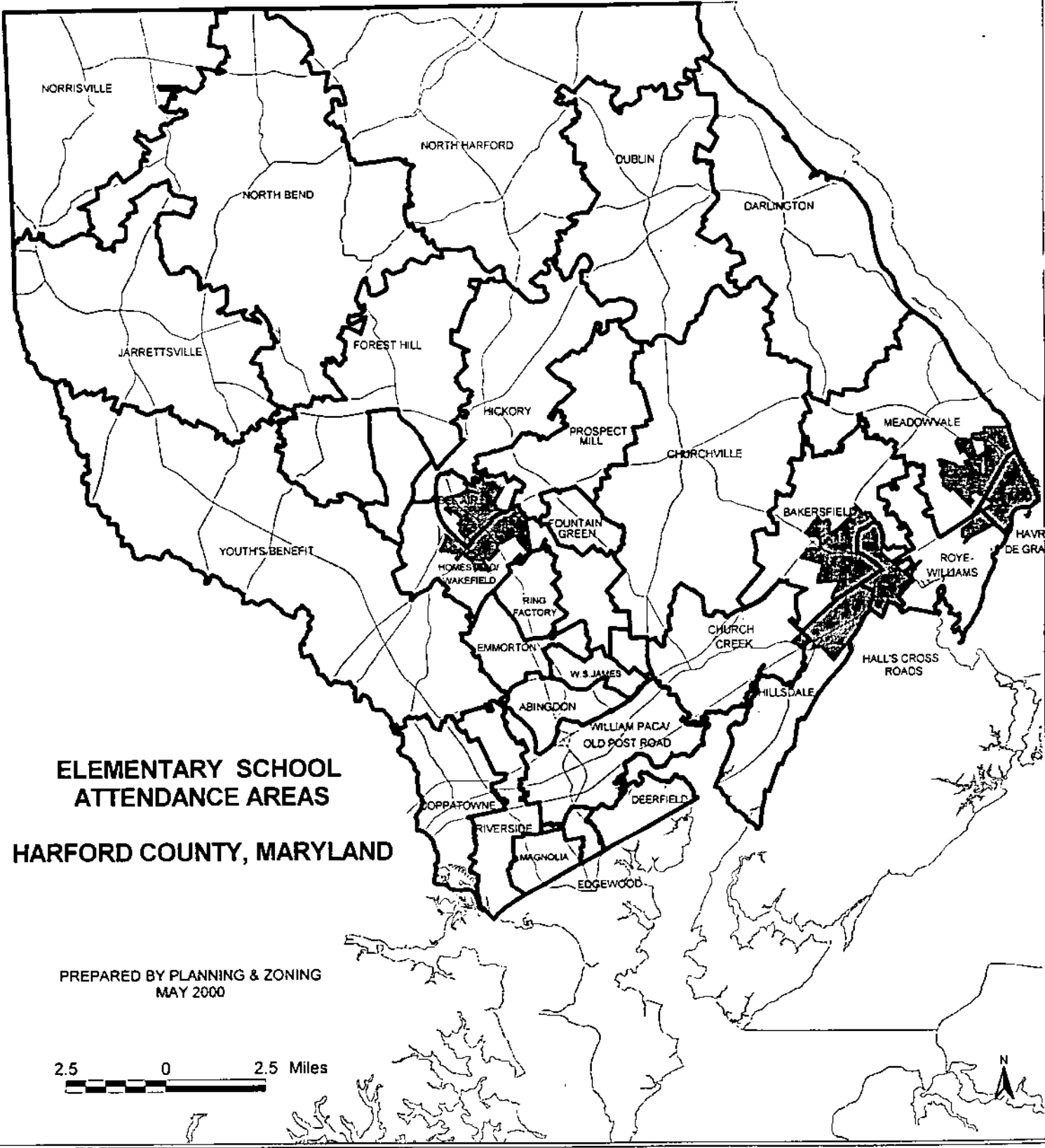
Baltimore Pike from Tollgate Road to Maryland 924	Resurface
Pulaski Highway from Bristol Forest Drive to Stepney Road	Resurface
Maryland 440 from Maryland 136 to U.S. 1	Resurface
Maryland 924 from Box Hill South Parkway to Holly Wreath Court	Provide center left turn lane
Maryland 7 at Belcamp Road	Construct a rideshare facility

APPENDIX

PUPIL YIELD FACTORS

Forty subdivisions were selected from various geographic locations throughout Harford County, to include single family dwellings, townhouse units, apartments/condominium units, and mobile home units. The subdivisions selected represented newly constructed and established subdivisions ranging in size from 28 units to 2,423 units. Additionally, subdivisions were selected to provide a broad range of attendance areas across the County. A count was made of each student who resided in each of the forty subdivisions studied. The data were tabulated by unit type, and the specific pupil yields were calculated for each subdivision in the elementary, middle, and high schools.

UNIT TYPE	GRADES		
	K-5	6-8	9-12
Single Family	.31	.17	.18
Townhome	.25	.09	.09
Apartments (2 Bdrms)	.09	.04	.04
Condo (2+ Bdrms)	.09	.04	.04
Mobile Home	.13	.05	.07



NORRISVILLE

NORTH HARFORD

DUBLIN

NORTH BEND

DARLINGTON

JARRETTSVILLE

FOREST HILL

HICKORY

PROSPECT MILL

CHURCHVILLE

MEADOWVALE

YOUTH'S BENEFIT

HOMESTEAD
WAKEFIELD

FOUNTAIN GREEN

BAKERSFIELD

HAVR
DE GRA

ROYE-
WILLIAMS

RING
FACTORY

CHURCH
CREEK

HALL'S CROSS
ROADS

EMMORTON

W. S. JAMES

ABINGDON

WILLIAM PACA/
OLD POST ROAD

HILLSDALE

**ELEMENTARY SCHOOL
ATTENDANCE AREAS**

HARFORD COUNTY, MARYLAND

POPPATOWNE

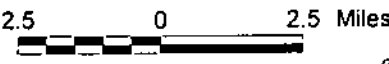
DEERFIELD

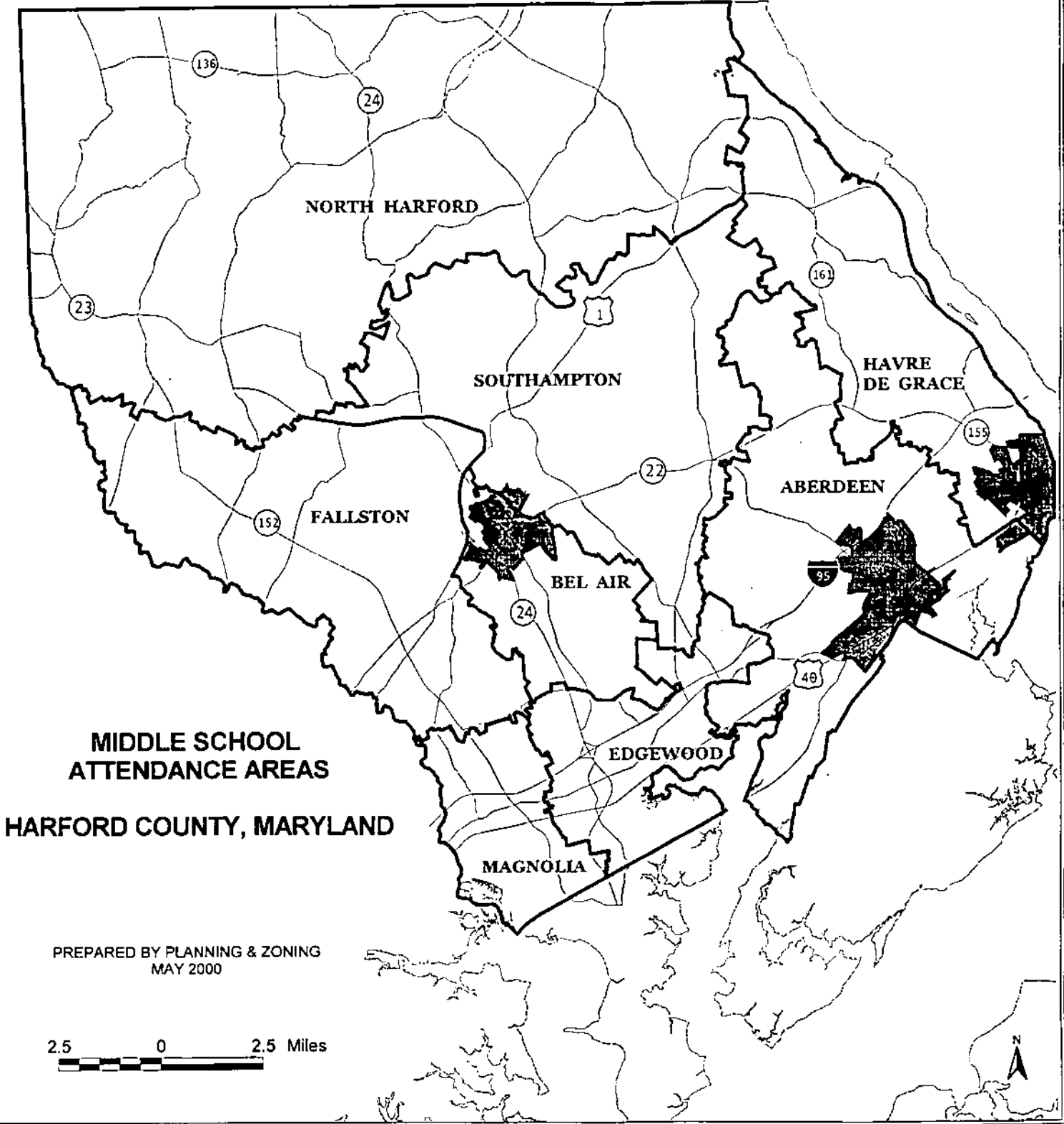
RIVERSIDE

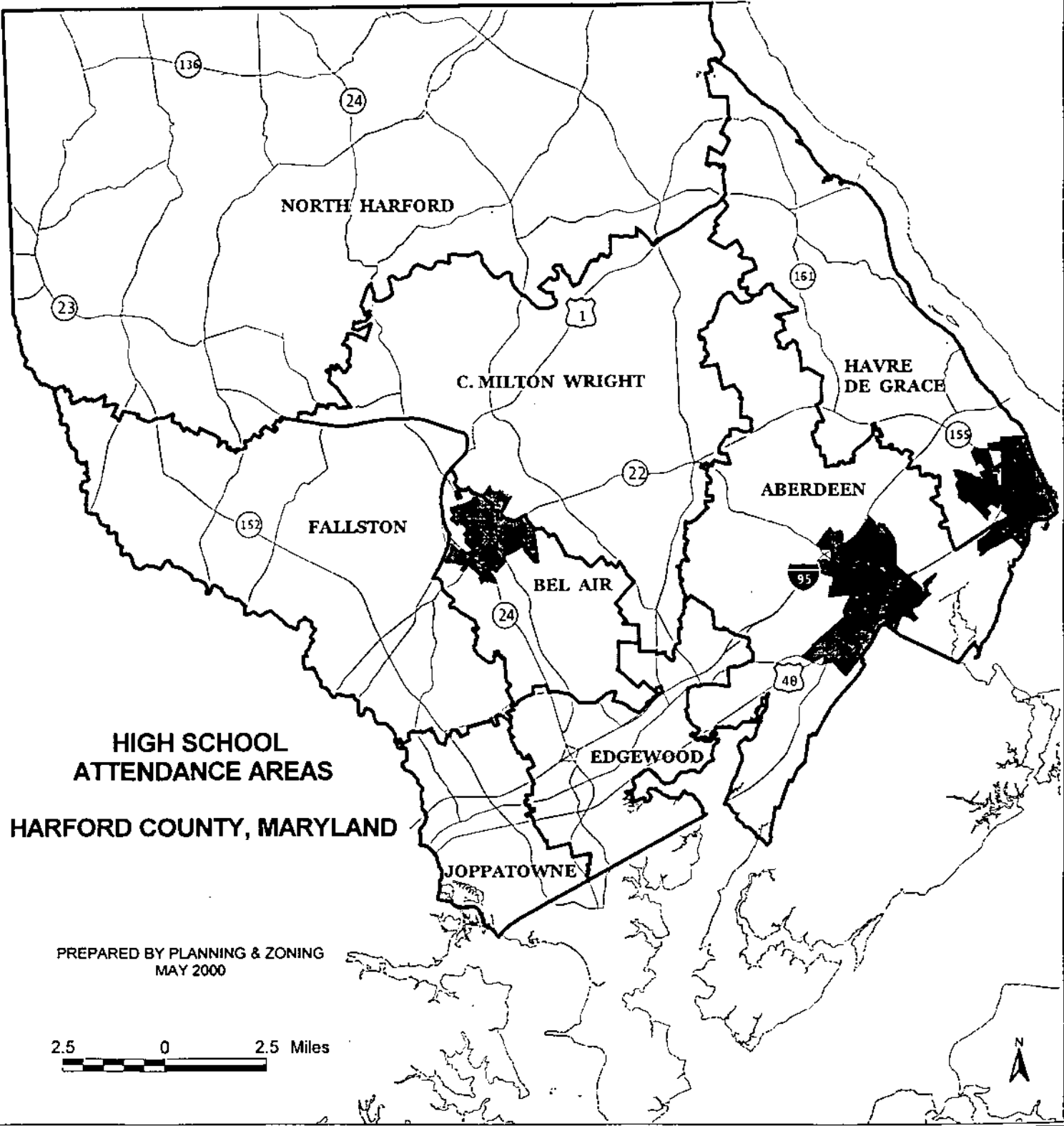
MAGNOLIA

EDGEWOOD

PREPARED BY PLANNING & ZONING
MAY 2000







**HIGH SCHOOL
ATTENDANCE AREAS**

HARFORD COUNTY, MARYLAND

PREPARED BY PLANNING & ZONING
MAY 2000

2.5 0 2.5 Miles

