REPORT

BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM

TITLE: 2022 Feasibility Study **DATE:** June 9, 2022

PRESENTER(S): Timothy Rogers, Manager, School Planning

Strategic Call To Action Alignment: This process supports the Strategic Call to Action (SCTA) by providing operations and practices that are responsive, transparent, fiscally responsible and accountable.

OVERVIEW:

Annually, the Board of Education reviews long-term capital planning options and school capacity utilizations through the Feasibility Study. This report starts the capital budget process. The annual student enrollment projection is introduced; identification of potential new capital projects (e.g., additions, renovations) or changes to previous capital projects are discussed; and anticipated attendance area adjustments within the timeframe of the capital improvement program are presented in this report. Plans examined in this document may be implemented in the approval of the capital budget or changes in school attendance areas.

The 2022 Feasibility Study includes redistricting scenarios to open New HS #13 for implementation in SY 2023-24. Also included is a review of the enrollment projection methodology and results by Cooperative Strategies, LLC.

Attachment:

1. 2021 Feasibility Study

RECOMMENDATION/FUTURE DIRECTION:

Proceed with the recommendations presented in this report.

SUBMITTED BY:

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Manager, School Planning

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Superintendent

Karalee Turner-Little
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2022

Feasibility Study

An Annual Review of Long-Term Capital Planning and Attendance Area Adjustment Options

Howard County Public School System

Howard County Public School System

Feasibility Study: An Annual Review of Long-Term Capital Planning and Attendance Area Adjustment Options

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Michael J. Martirano, Ed. D.

Board of Education

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Antonia Watts, Vice Chair
Christina Delmont-Small
Yun Lu, Ph. D.
Jennifer Swickard Mallo
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Peter J. Banyas

June 2022

Howard County Public School System

Feasibility Study: An Annual Review of Long-Term Capital Planning and Attendance Area Adjustment Options

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Appendix A and Appendix D

This is a publication of the Howard County Public School System.

Electronic copy of the 2021 Feasibility Study can be found on the school system's website at www.hcpss.org/school-planning/

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An Annual Review of Long-Term Capital Planning and Attendance Area Adjustment Options

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Executive Summary

June 2022

Executive Summary

This document contains a comprehensive look at the ten-year student enrollment projections for all K-12 schools in the county and is based on currently available data by school geography. The intent is to provide the most updated student enrollment projection and capacity planning strategies to the Board of Education, staff members and community. Projections are produced each spring, predicting the number of students for September 30 for each year. This projection will be used to inform short- and long-term facility planning decisions, as well as operating and capital budget proposals.

Inputs to the projection are updated annually and include student enrollment, birth counts and projections, and cohort survival ratios, as well as students yielded from sales of existing housing, apartment turnover and new housing units. Students who are new to their school, resulting from any type of housing transaction, contribute to the projection and all housing units are included regardless of age or type. Cooperative Strategies reviewed our projection methodology, inputs and outputs again this year. Their analysis and findings were favorable, and are presented in Appendix D.

The projected K-12 enrollment for School Year 2022-2023 is 56,477 students, which is a projected gain of approximately 473 students, and represents 0.84 percent growth over SY 2021-2022 enrollment of 56,004 (including Cedar Lane). Enrollment for School Year 2021-2022 was approximately 4 percent (2,300 students) lower than the enrollment projected in the 2021 Feasibility Study. The enrollment growth projected for 2021 assumed recovery of much of the "missing" enrollment from SY 2020-2021 plus a resumption of near typical annual enrollment growth. The enrollment did not recover as quickly as the projection indicated. This has led to adjustments to our methodology to reflect the current thinking on new enrollment trends, resetting the trajectory of the projection. By School Year 2031-32 an increase in enrollment of approximately 2,900 students is projected.

This updated outlook on future enrollment has resulted in updated recommendations for planned capacity projects. Upon the completion of New HS #13 and Hammond HS addition for School Year 2023-2024, and boundary adjustments to utilize those seats, the focus shifts to middle school capacity. Additions to Oakland Mills MS and Dunloggin MS should be the next priority, while the projected slower enrollment growth at the elementary level indicates a delayed need for New ES #43 in the Southeast. Additionally, this projection indicates capacity projects at Centennial HS and Patapsco MS could be delayed as enrollment growth in those areas of the county eases. Delaying some of these planned projects allows for the insertion of new capacity to meet the PreK requirements of the Blueprint for Maryland's Future legislation. While planning is in the early stages, it is clear that new facilities will be needed as PreK eligibility expands. Regional Early Childhood Centers are proposed for West and East Columbia, and Ellicott City, as well as within new elementary schools.

In addition to enrollment projections and capacity planning considerations, this document also presents scenarios for the New HS #13 attendance area and associated boundary adjustments. Appendix A includes four scenarios developed by Cooperative Strategies. The scenarios take some cues from ideas considered during the 2019 boundary review process into a data-driven, objective review of options. A new addition to the process this year enabled experimentation with various ways to optimize boundaries based on policy considerations. One lesson learned was that mechanical optimization can't account for all of the considerations planners are able to incorporate into boundary scenarios.

HCPSS enrollment is anticipated to continue to increase. However, as development policies restrict new housing and buildable land becomes more scarce, the annual rate of enrollment growth is expected to diminish. Declining birth rates, seen in state-wide trends over the last six years will also begin impacting the rate of enrollment growth. As the Nation, and Howard County, begin to move out of the peak impacts of the Covid-19 Pandemic, economic impacts will continue to be felt. Changes in the delivery of capacity projects are recommended for the upcoming capital budget and long-range master plan request and are outlined on page 16 of this document.

Additional information about the process and timeline, Frequently Asked Questions (FAQ), and details about public input opportunities are available on the HCPSS website at www.hcpss.org/school-planning/.

Section 2

Planning Considerations

Planning assumptions and considerations regarding enrollment growth and other factors are addressed in this section. These factors are reviewed and updated on an annual basis. Implications of the factors discussed in this section include capital planning decisions. This section presents a discussion of the major components and adjustments included in this year's planning considerations.

June 2022

Introduction

The Office of School Planning is pleased to present the 2022 Feasibility Study report for the HCPSS. The report provides detailed information on the number of students projected for each school at HCPSS on September 30th of each school year for the period beginning in school year 2022-2023 and ending in School Year 2033-2034. Projection accuracy is reported annually to the Board of Education (Board) each January/February. To project future enrollment, HCPSS uses multiple sets of data, which include the number of births for Howard County, the five-year history of cohort survival (i.e., ratio of students moving from one grade to the next in the same school), first-time sales of newly-constructed homes, resales of existing homes, apartment turnover, and out of district enrollment at regional programs. Each data point is projected separately based on specific, appropriate methodologies for each category.

Enrollment projections are a valuable planning tool to help predict the need for new or expanded schools and determine how many teachers are needed each year in each school and grade. Enrollment projections are also used for facility planning purposes to estimate the expected needs for each school, including the potential for relocatable classrooms, new seats, and removal/placement of regional programs.

Each year, the Board reviews the capital planning options and boundary adjustment considerations through a feasibility study. The report has four goals:

- Inform the long-term planning process.
- Facilitate discussion for decisions that may lay ahead.
- Provide strategic information to the school system.
- Prepare for school boundary adjustments.

The Office of School Planning presents the student enrollment projection, projection trends, comprehensive strategies for the capital improvement program (i.e., timing, location and number of seats in additions) and the need for attendance area adjustments anticipated within the ten-year Long-Range Master Plan. This is primarily an analysis of needs and potential strategies to address those needs. Any plans examined in this document may only be implemented through the Board's approval of the capital budget and/or attendance area changes. Funding constraints may not allow capital projects recommended in this document to proceed as recommended. Annual enrollment projections are also used in short-term decision-making, such as determining staffing, school supplies and allocating relocatables.

Additionally, this document contains items required by the County Council under the Adequate Public Facilities Ordinance. These include a listing of State and Local Capacities, each school's most recent boundary adjustment, and factors contributing to growing enrollment. Funding and boundary adjustment assumptions for schools that are projected to be open to new residential development in the testing year due to a capital project or attendance area adjustments associated with a capital project are noted if applicable.

Experience has shown that by presenting this report annually, assumptions and trends can be evaluated on a regular basis and appropriate adjustments can be made to the capital budget or attendance area plans. Changes may need to be considered to react to and plan for anticipated population shifts or new residential development.

Enrollment Projections

HCPSS Current Enrollment

On September 30, 2021, the total K-12 enrollment was 56,004 students (including 110 students at Cedar Lane). This total includes students from kindergarten to twelfth grade. Figure 2.1 below is a waterfall chart that illustrates the net change of student enrollment over the last three years.

Figure 2.1 2019 - 2021 Waterfall Chart

Figure 2.1 illustrates the total "ins and outs" (increase and decrease) over the last three years. New students arrive in HCPSS each year, and are mainly from new homes, resales, and kindergarten students enrolling in HCPSS for the first time. The exiting student group includes graduating twelfth graders, families moving out of Howard County and family choice (to enroll in private school or homeschool).

Student Groups	Counts
2019 Total Enrollment	**57,518**
2020 New Students	6891
2020 Exiting Students	-8130
2020 Total Enrollment	**56,279**
2021 New Students	8368
2021 Exiting Students	-8643
2021 Total Enrollment	**56,004**

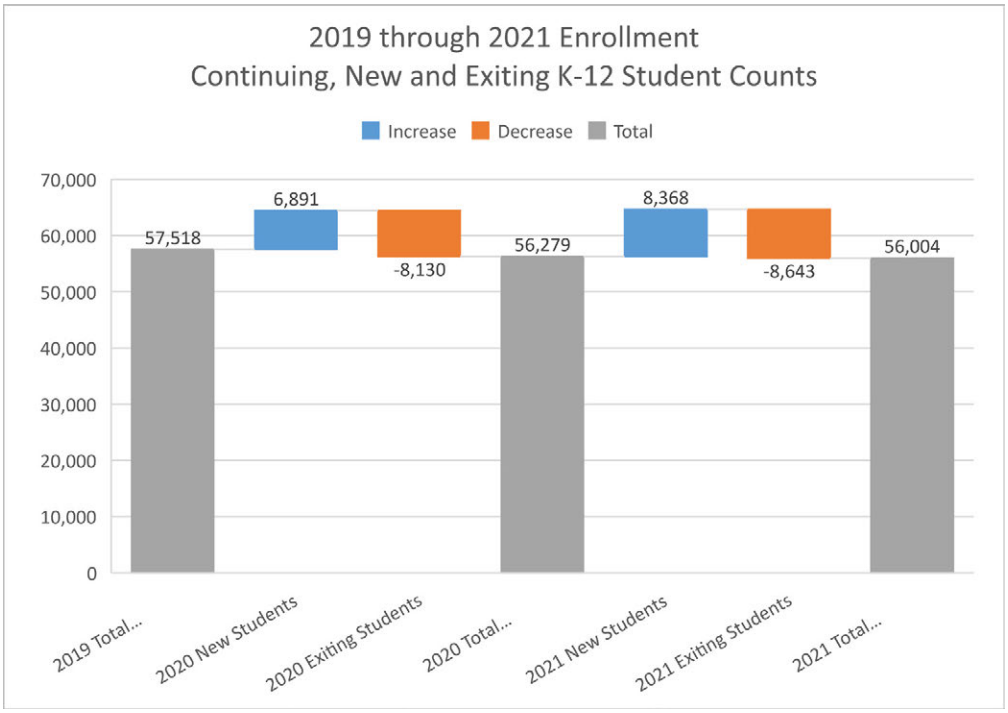


Table 2.1 By Grade Enrollment for September 30, 2021

Enrollment by Grade

Elementary	Projection
K	3,810
1st	3,905
2nd	4,031
3rd	4,171
4th	4,121
5th	4,328

Middle	Projection
6th	4,283
7th	4,423
8th	4,613

High	Projection
9th	4,914
10th	4,562
11th	4,304
12th	4,539

Enrollment Projections

Projection Methodology

HCPSS, as well as most other school districts, uses cohort survival ratio as a student enrollment projection methodology. For the purposes of the school system, a cohort is a group of students at a specific grade level.

The cohort survival ratios are calculated based on actual student data and are aggregated by school attendance area to maintain comparability regardless of any changes in school attendance area boundaries. Cohort-survival ratios project how many second graders will result from last year's first graders, how many third graders will result from last year's second graders, and continues until the number of twelfth graders from last year's eleventh graders is predicted, based on recent historical student data. This calculation is done for each grade level, at each school, using the most recent three to five years of historical data to predict future enrollment. The most recent past is viewed as the best predictor of the near future.

Figure 2.2 Cohort Survival Ratio

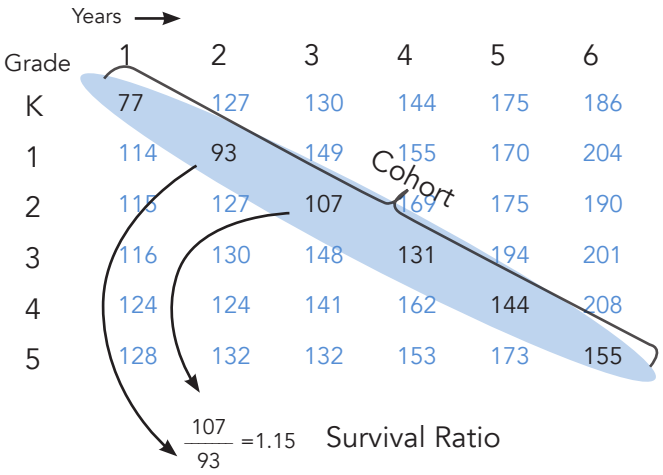


Figure 2.2 illustrates a cohort survival ratio. In the example, the rate of 1.15 can be used to predict how many second graders will result from the previous year's first graders. A cohort survival rate that is greater than one (1), indicates more students entered the grade than progressed from the previous grade. A cohort survival rate of less than one (1) indicates there are fewer students moving to the next grade at that school than the count of students from the previous grade in the previous year.

In addition to cohort survival ratios, HCPSS uses Howard County birth data, student yields from first-time sales of newly-constructed homes, resales of existing homes, and apartment turnover, as well as enrollment in regional programs.

Cooperative Strategies, LLC, reviewed the HCPSS projection methodology in 2013, 2015, 2019, and again in 2022. The 2013, 2015, and 2019 enrollment projections had a high level of projection accuracy and Cooperative Strategies recommends to continue use of the same methodology moving forward. The same approach was used in development of the 2022 projections with consideration given to the impact that the COVID-19 pandemic had on enrollment in the 2020-2021 and 2021-2022 school years. The pandemic introduced an unforeseen level of volatility in HCPSS enrollment as well as K-12 enrollment nationwide. While the methodology used is still a reliable approach, trends such as live births, enrollment, housing, etc. will need to be monitored closely over the next few years as new trends are established. "Best practices" are followed for methodology, data, and data usage as well as analysis of accuracy. Both the science (e.g., cohort survival with student yield from new housing) and art (e.g., local knowledge, historical accuracy) are integral to the accuracy of projections. Unforeseen changes in factors such as enrollment or live birth trends, boundary changes and changes and/or additions in program offerings can have impacts on the K-12 projected enrollment that may not be predictable.

Enrollment Projections

New Variables Impacting Projection Accuracy

School enrollment projections attempt to predict choices families will make that impact future enrollment using historical data on those choices. This projection was impacted by three variables unique to this period in time, which limits the effectiveness of using historical trends to predict the future. Historical cohort survival and housing yield rates are the foundation of enrollment projection methodologies.

- Following the onset of the Covid-19 Pandemic, and the institution of online education modes and masking requirements, many families made the decision to withdraw their students from HCPSS. Statewide, homeschooling was up 57 percent between School Year 2019-2020 and School Year 2020-2021. Additionally, parents delayed Kindergarten entry for their children, resulting in unexpectedly lower enrollment. This volatility in enrollment patterns has resulted in unreliable trend data and lower than normal projection accuracy.
- Prior to the pandemic, in 2019, the Board adopted adjustments to 57 schools, to be implemented in School Year 2020-2021. Families made housing and enrollment choices based on these new boundaries that they may not have made otherwise. The effects of these choices would have been evident in the School Year 2020-2021 enrollment if it had not coincided with the impacts of the pandemic.
- There is a nationwide decline in birth rates that is now impacting kindergarten enrollment and projections in Howard County. Annual live birth counts from Maryland Department of Health and Mental Hygiene have been declining since 2016, with an 11 percent overall decrease since 2016. This is one factor contributing to an overall decline in population growth in the US. The Maryland Department of Planning (MDP) recalculates birth projections for each county in five year increments. The birth projection we received from MDP in fall of 2022 included this recent historical data, leading to a declining birth projection for the County. This update will impact the projected future enrollment growth in HCPSS.

The Office of School Planning is working closely with stakeholders and data sources on all of these topics, and will be tracking impacts to enrollment throughout the year. These concerns will impact the accuracy of this projection by presenting new factors that don't have historical data to use in modeling.

HCPSS Projected Enrollment

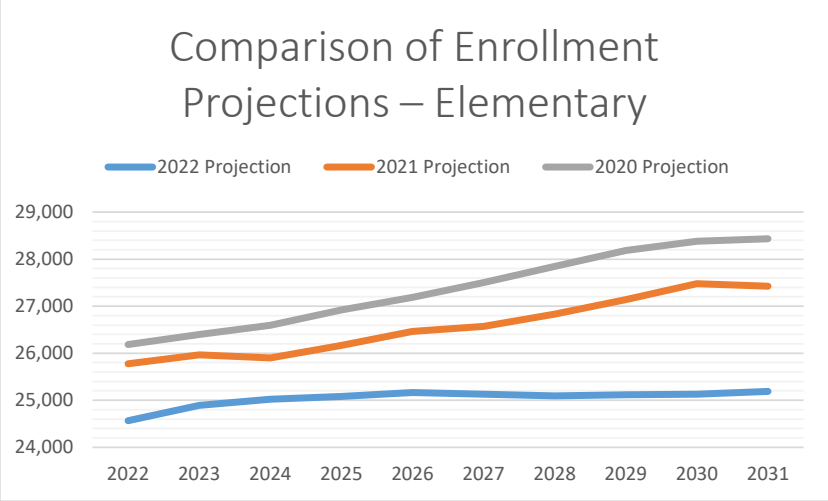
The ten-year K-12 projected enrollment for School Year 2022-2023 through 2031-2032 continues to show enrollment growth at all levels.

The projection is presented through school year 2033-2034 in Section 3 of this document. Certain decisions such as site acquisition are appropriately informed by the latter part of the projection. Planning issues may become apparent by comparing the current projection to those made in previous years. The following charts use a ten-year series and present three consecutive annual projections.

It is anticipated that for school year 2022-2023, we will receive a net increase of 473 students for a systemwide total of 56,477 students. This increase comes from a variety of migration patterns and includes sales of existing homes and new construction. It is important to note that new construction is only new construction for one year in the HCPSS projection. After the first year, the new students generated by homes constructed in previous years are counted through cohort survival or resale calculations.

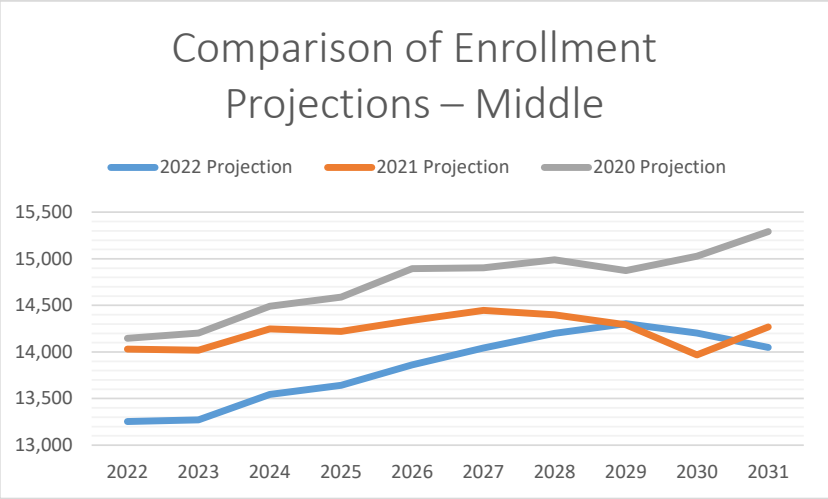
Enrollment Projections

Figure 2.3 Comparison of Three Enrollment Projections - Elementary



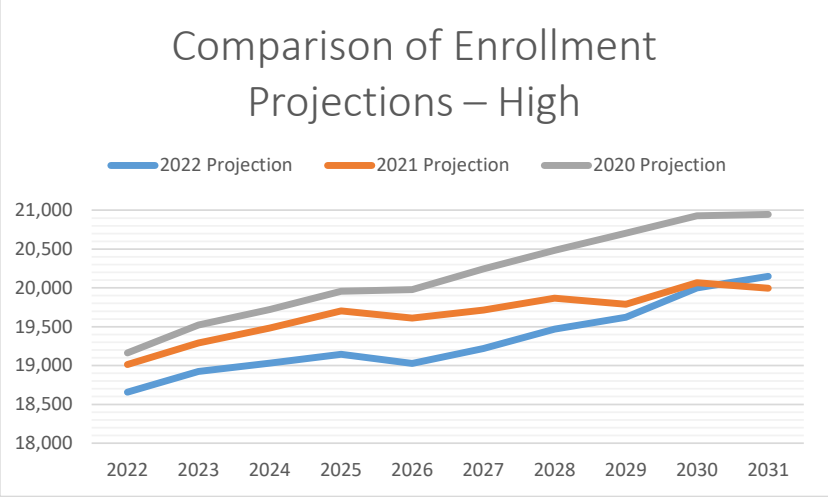
The 2022 elementary projection includes a similar rate of enrollment growth in the near-term, while trending towards a lower enrollment in the long-term view. The trend in the 2022 projection is for elementary enrollment to increase by 821 students by 2031. This lower projection is likely due to the combined impacts of the pandemic and declining birth rates.

Figure 2.4 Comparison of Three Enrollment Projections - Middle



The middle school projected enrollment is expected to increase by 731 students prior to 2031. The 2022 middle school enrollment growth trend rate is similar to the 2021 projection in the near term with lower long-term growth than both the 2020 and 2021 projections. The later years of the 2022 projection show a decline in middle school enrollment. This new possible trend will require further study. Most of the projected growth is in the northwest and southeast.

Figure 2.5 Comparison of Three Enrollment Projections - High



High school enrollment is projected to increase by 1,831 student by 2031, as shown in Figure 2.5. As a result of this growth, the combined capacity utilization of all high schools will be approximately 108 percent in 2022. Most of this growth is within the Route 1 Corridor as well as in the northwest portions of the County. The opening of New HS #13 and the addition to Hammond HS will bring the countywide utilization to around 99 percent in 2023.

Enrollment Projections

Projection Growth Factors

The Adequate Public Facilities Ordinance adopted by the County Council in 2018 requires that HCPSS report factors that contribute to growing enrollment. This chart compares the student enrollment from school year 2021-2022 with the updated projection for school year 2022-2023, identifying schools with a projected enrollment increase. The section of the chart labeled "Projected 2022 Student Yield" shows the estimated breakdown of the contribution of each housing factor on the number of students added to each school for school year 2022-2023. Counted here are students projected to arrive at each school due to turnover of multi-family housing, resale of existing homes, and new construction. "Other factors" is the sum of all other contributing factors to change in enrollment between years for each school and includes projected change due to cohort size rising to the next level, changes to cohort survival rates, changes in birth counts from 5 years ago, change in birth to kindergarten survival rates, adjustments to out of district counts (including known exemptions at time of projection), students moving into an attendance area between birth and five years old, and adjustments based on previous projection accuracy.

Table 2.2 Elementary School Student Yield Data

	Offical 2021 Enrollment	Projected 2022 Enrollment	Projected Enrollment Change	Projected 2022 Utilization	Projected 2022 Student Yield			
					Apt Turnover	Resale	New Construction*	Other Factors
Atholton ES	453	456	3	108%	8	16	0	-21
Bellows Spring ES	672	707	35	103%	28	13	9	-15
Bollman Bridge ES	640	651	11	107%	55	9	2	-56
Bryant Woods ES	312	333	21	92%	20	5	3	-7
Bushy Park ES	570	566	-4	84%	0	34	7	-45
Centennial Lane ES	658	656	-2	109%	16	32	7	-57
Clarksville ES	539	561	22	103%	21	19	2	-20
Clemens Crossing ES	563	547	-16	105%	13	13	2	-43
Cradlerock ES	425	436	11	110%	8	9	0	-7
Dayton Oaks ES	685	680	-5	97%	0	45	21	-71
Deep Run ES	647	664	17	86%	20	3	0	-5
Ducketts Lane ES	560	559	-1	86%	15	11	3	-30
Elkridge ES	794	787	-7	107%	23	23	8	-61
Forest Ridge ES	625	630	5	94%	8	12	11	-26
Fulton ES	822	811	-11	110%	1	21	10	-43
Gorman Crossing ES	733	768	35	104%	-1	18	9	9
Guilford ES	468	475	7	102%	20	12	5	-30
Hammond ES	622	634	12	97%	5	24	0	-17
Hanover Hills ES	761	788	27	103%	20	5	13	-11
Hollifield Station ES	750	772	22	105%	40	14	8	-40
Ilchester ES	510	486	-24	87%	10	15	2	-51
Jeffers Hill ES	395	398	3	106%	17	6	0	-20
Laurel Woods ES	578	604	26	99%	24	11	2	-11
Lisbon ES	402	399	-3	76%	0	20	7	-30
Longfellow ES	469	466	-3	91%	19	12	0	-34
Manor Woods ES	697	702	5	103%	7	34	3	-39
Northfield ES	718	701	-17	100%	4	30	0	-51
Phelps Luck ES	647	657	10	110%	23	15	2	-30
Pointers Run ES	743	759	16	102%	0	36	3	-23
Rockburn ES	582	602	20	103%	0	19	1	0
Running Brook ES	378	374	-4	83%	33	1	0	-38
St Johns Lane ES	651	666	15	109%	15	22	0	-22
Stevens Forest ES	311	302	-9	79%	7	10	0	-26
Swansfield ES	497	521	24	83%	10	14	24	-24
Talbott Springs ES	410	416	6	85%	11	8	0	-13
Thunder Hill ES	485	506	21	99%	32	7	0	-18
Triadelphia Ridge ES	562	586	24	100%	0	32	17	-26
Veterans ES	828	842	14	105%	31	30	16	-63
Waterloo ES	546	535	-11	89%	17	12	3	-42
Waverly ES	831	801	-30	102%	7	46	9	-92
West Friendship ES	382	377	-5	91%	0	29	3	-36
Worthington ES	405	386	-19	87%	0	12	0	-31

*New construction category includes student yield from first year of occupancy

Enrollment Projections

Table 2.3 Middle School Student Yield Data

	2021 Enrollment	Projected 2022 Enrollment	Projected Enrollment Change	Projected 2022 Utilization	Projected 2022 Student Yield			
					Apt Turnover	Resale	New Construction *	Other Factors
Bonnie Branch MS	664	668	4	95%	-5	11	2	-5
Burleigh Manor MS	785	791	6	102%	-7	9	3	1
Clarksville MS	665	637	-28	99%	1	10	12	-51
Elkridge Landing MS	687	698	11	90%	1	12	3	-6
Ellicott Mills MS	725	681	-44	97%	0	12	6	-61
Folly Quarter MS	664	646	-18	95%	0	18	15	-51
Glenwood MS	490	463	-27	85%	0	17	5	-49
Hammond MS	583	624	41	103%	-1	7	7	28
Harpers Choice MS	505	504	-1	100%	-7	4	0	2
Lake Elkhorn MS	602	579	-23	90%	0	5	0	-28
Dunloggin MS	625	609	-16	108%	-13	3	0	-6
Lime Kiln MS	619	648	29	90%	0	18	3	8
Mayfield Woods MS	758	736	-22	92%	-8	-1	1	-13
Mount View MS	866	907	41	114%	0	30	6	5
Murray Hill MS	634	618	-16	93%	-5	8	2	-20
Oakland Mills MS	475	474	-1	94%	-8	-3	0	10
Patapsco MS	663	677	14	105%	-9	12	3	8
Patuxent Valley MS	800	828	28	109%	-2	4	5	21
Thomas Viaduct MS	857	836	-21	113%	-2	9	9	-38
Wilde Lake MS	628	629	1	85%	-5	8	1	-3

*New construction category includes student yield from first year of occupancy

Table 2.4 High School Student Yield Data

	Offical 2021 Enrollment	Projected 2022 Enrollment	Projected Enrollment Change	Projected 2022 Utilization	Projected 2022 Student Yield			
					Apt Turnover	Resale	New Construction*	Other Factors
Atholton HS	1460	1535	75	100%	0	14	0	60
Centennial HS	1379	1406	27	103%	3	18	6	0
Glenelg HS	1300	1342	42	95%	0	17	8	17
Hammond HS	1320	1364	44	112%	12	14	2	15
Howard HS	1798	1715	-83	123%	5	10	3	-101
Long Reach HS	1644	1735	91	117%	8	7	3	73
Marriotts Ridge HS	1665	1693	28	105%	-8	11	3	23
Mt Hebron HS	1567	1621	54	116%	2	12	3	37
Oakland Mills HS	1346	1431	85	102%	2	5	4	74
Reservoir HS	1827	1924	97	124%	2	12	9	75
River Hill HS	1509	1457	-52	98%	2	13	13	-80
Wilde Lake HS	1378	1434	56	101%	12	11	2	32

*New construction category includes student yield from first year of occupancy

New construction and Resale Student Yields

Projected counts for new construction indicate the estimated number of students based on the first year of occupancy. After the first year of occupancy of newly constructed units, the houses and apartments are included in the total existing unit counts for the schools' attendance areas, which impacts projected students for resale, apartment turnover and other factors. The projection methodology is based on identifying the students arriving new to their school in each year from each category of housing transaction. The historical yield rates are then used to project the number of students expected from each type of transaction in the future. Only new students from newly occupied homes are counted as students yielded from "New Construction". Students moving into any home and arriving at a new school after the year in which it is permitted for occupancy are counted as student yield from resale of an existing home. All students new to their school, for any reason related to a housing transaction are counted in the historical yield rate calculations, and all housing units are used in the calculation of the various impacts of those transactions for projecting future enrollment.

Relationship to Capital Budget

Figure 2.6 Capital Budget and Boundary Review Flow Chart

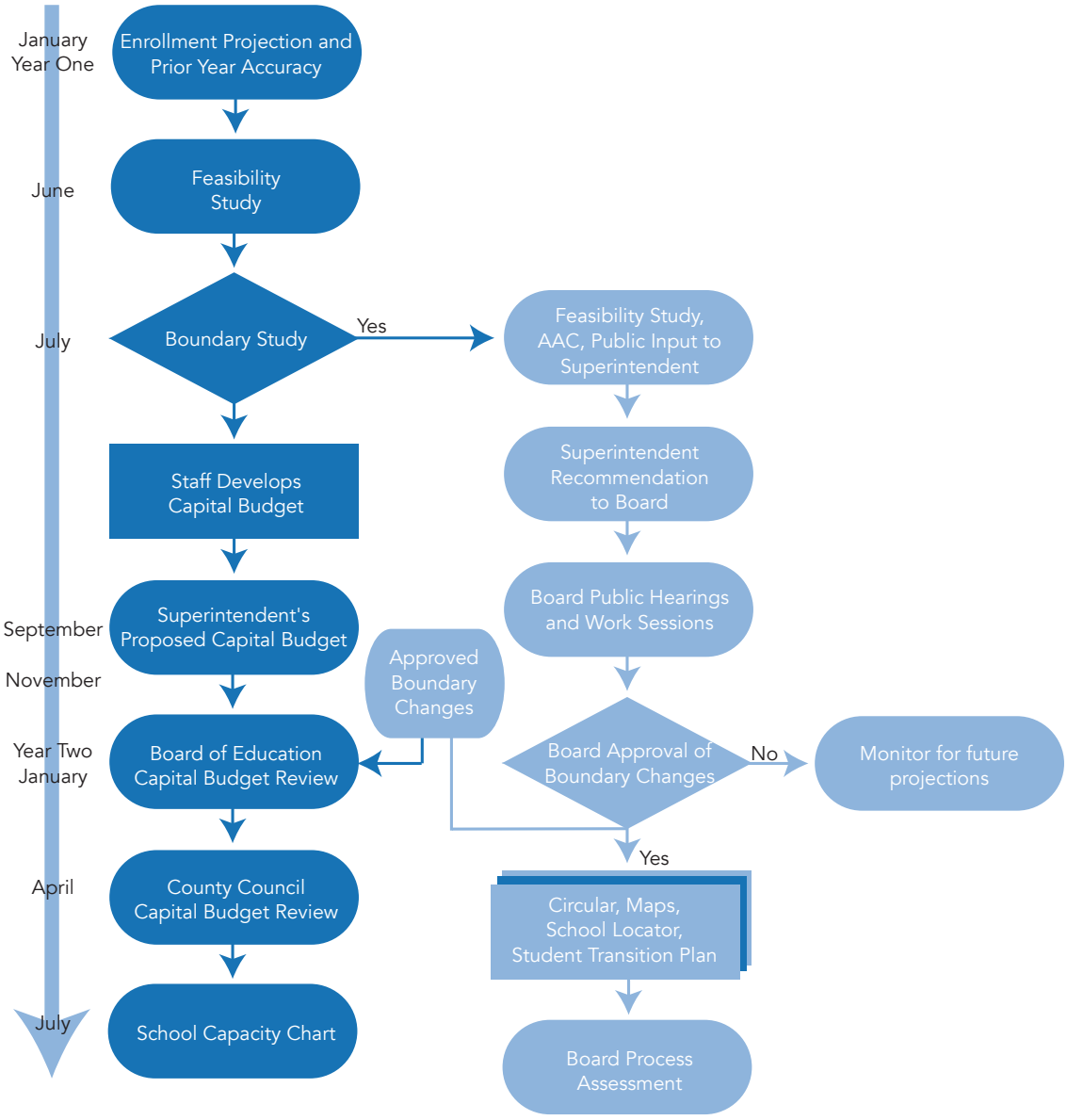


Figure 2.6 shows the school boundary adjustment process in the context of the capital budget cycle. The feasibility study is presented as the capital budget is being prepared. The graphic shows that while school boundary adjustments may not take place annually, they are given consideration annually in the feasibility study. There are a number of ways to address enrollment growth. In some cases, new capacity or a capital project is the best solution. In other cases, school boundary adjustments consistent with policy may allow better use of existing capacity. Relocatable classrooms can be used to temporarily relieve crowding. The process is ongoing but may be tracked through this document and the capital budget process.

Relationship to Capital Budget

The annual capital budget contains a Capital Improvement Program (5-year plan) and Long-Range Master Plan (ten-year plan). Table 2.5 is a copy of the Fiscal Year (FY) 2023-2032 Long-Range Master Plan from FY 2023 Board Approved Capital Budget. Capital projects are shown with anticipated funding phased out over future fiscal years. The Feasibility Study evaluates enrollment trends and discusses adjustments and changes that may be reflected in the Capital Improvement Program (CIP) and Long-Range Master Plan.

The Adequate Public Facilities Ordinance adopted by the County Council in 2018 requires that HCPSS reports funding and attendance area adjustment assumptions for projects that are open due to a capital project or attendance area adjustments associated with a capital project. The Board Approved FY 2023-2032 Long-Range Master Plan as approved by the Board on May 26, 2022, is below.

State funding eligibility for new capacity is based on utilization rates of adjacent schools, and may be affected if available seats at nearby schools are not more fully utilized.

Table 2.5 FY 2023-2032 Board of Education Approved Long-Range Master Plan

FY 2023-2032 Long-Range Master Plan

Board of Education's Approved **May 26, 2022**

(In Thousands)

Capacity	Project	County Project	Occupancy	Approved Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total Approp. plus FY23-FY32 Request
1,658	New HS #13	E1035	Sept 2023	97,685	$ 25,357	$ 6,955	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 129,997
200	Hammond HS Renovation/Addition	E1024	Sept 2023	67,038	34,900	4,616	-	-	-	-	-	-	-	-	106,554
233	Dunloggin MS Renovation/Addition	E1049	Sept 2027	-	-	4,004	6,673	21,352	13,345	6,673	1,135	-	-	-	53,182
788	New ES #43	E1039	Sept 2027	-	-	5,115	25,577	27,282	8,526	1,705	-	-	-	-	68,205
292	Oakland Mills MS Renovation/Addition	E1036	Sept 2027	-	-	4,269	7,115	22,768	14,230	7,115	1,423	-	-	-	56,920
	Oakland Mills HS Renovation	TBD	Sept 2030	-	-	-	-	8,250	13,750	33,000	27,500	24,750	2,750	-	110,000
340	Centennial HS Renovation/Addition	E1025	Sept 2031	-	-	-	-	-	-	8,808	14,680	46,977	28,360	14,680	113,505
600	New ES #44	E1040	TBD	-	-	-	-	-	-	4,542	22,710	24,224	7,570	1,514	60,560
TBD	New HS #14	E1052	TBD	-	-	-	-	-	-	-	-	12,322	61,611	65,718	139,651
TBD	Regional Early Childhood Center	E1053	TBD	-	-	-	-	-	-	-	-	-	1,435	2,392	3,827
298	Northern Region ES Addition	E1054	TBD	-	-	-	-	-	-	-	-	-	-	745	745
195	Patapsco MS Renovation/Addition	TBD	TBD	-	-	-	-	-	-	-	-	-	-	4,216	4,216
	Jeffers Hill ES Renovation	TBD	TBD	-	-	-	-	-	-	-	-	-	-	2,040	2,040
	Systemic Renovations/Modernizations	E1044		69,201	30,630	33,767	31,843	23,909	26,226	23,000	17,000	17,000	17,000	17,000	306,576
	Roofing Projects	E1046		17,997	5,000	1,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	63,997
	Playground Equipment	E0990		3,430	250	250	500	500	500	500	500	500	500	500	7,930
	Relocatable Classrooms	E1045		8,000	2,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	23,500
	Site Acquisition & Construction Reserve	E1047		-	1,000	-	-	-	2,000	2,000	2,000	2,000	2,000	2,000	13,000
	Technology	E1048		7,500	5,500	5,500	7,500	7,500	5,500	5,500	5,500	5,500	5,500	5,500	66,500
	School Parking Lot Expansions	E1012		4,800	600	600	600	600	600	600	600	600	600	600	10,800
	Planning and Design	E1038		1,100	450	300	300	300	300	300	300	300	300	300	4,250
	Barrier Free	E0989		6,153	200	200	200	200	200	200	200	200	200	200	8,153
	TOTALS			**$ 282,904**	**$ 105,887**	**$ 68,076**	**$ 86,808**	**$ 119,161**	**$ 91,677**	**$ 100,443**	**$ 100,048**	**$ 140,873**	**$ 134,326**	**$ 123,905**	**$ 1,354,108**

This is a long-range master plan that evolves annually and changes based on need and funding availability.

Ten-Year Long-Range Master Plan = $1,071,204

Capacities

Equitable evaluation of the impact of projected enrollment growth requires calculation of school capacities. Capacities are not necessarily fixed to the capacity designed when a building first opened. Changes in space usage, program location, and building or program specifications can change capacity. Capacity methodologies have been reviewed at all three levels. The results from the capacity studies are integrated into any recalculation of capacities due to relocation of regional programs, additions or renovations. The Feasibility Study expresses the projected enrollment by level and by school as a function of capacity utilization. Capacity utilization is the comparison of a facility's program capacity and its enrollment or projected future enrollment. In the Post-Measure Tables (Section 3), the effects of potential capacity projects, or regional program moves on utilization are depicted.

The example below from this Feasibility Study illustrates how capacity is shown in these tables. Table 2.6 shows the effect of the larger capacity on the capacity utilization at Hammond HS after the school's addition. The capacity columns show the number of seats, which changes from 1,220 to 1,509 in 2023 when an addition opens. The corresponding calculation of the percentage utilization also changes, dropping from 111.8 percent in School Year 2022-2023 to 94.0 percent in School Year 2023-2024.

Table 2.6 Capacity Chart Example

		Capacity			2022-23		2023-24	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**
Atholton HS		1530	1530	1530	1535	100.3	1574	102.9
Centennial HS	A	1360	1360	1360	1406	103.4	1400	102.9
Glenelg HS		1420	1420	1420	1342	94.5	1358	95.6
Hammond HS	A	1220	1509	1509	1364	111.8	1419	94.0

High school program capacities are a product of either 80 or 85 percent of the total number of teaching stations multiplied by 25 students. The minimum square footage for a teaching space is 660 square feet at all levels. This calculation excludes special education classrooms and special-use rooms. The varying utilization percentage of 80 percent or 85 percent is applied because not all teaching stations can be scheduled for every period of the school day and not all schools meet the general education specifications for space requirements. Many of these rooms are designed for a specific class and cannot be adapted for other uses, leaving them unused for a portion of the day.

Middle school program capacities are a product of 95 percent of the total number of teaching stations multiplied by 20.5 students, exclusive of special education classrooms. Like high schools, not all teaching stations can be scheduled for use every period of the school day.

Elementary school program capacities are based on 22 students for each Kindergarten classroom, 19 students for each classroom in Grades 1 and 2, and 25 students for each classroom in Grades 3–5. Not included in the capacities for elementary schools are resource/instructional spaces that are utilized on a schoolwide basis where no one group of students is assigned exclusively. Some examples of spaces not included in the capacity are gymnasiums, cafetoriums, art rooms, music rooms, media centers, gifted and talented rooms, rooms dedicated to Special Education, or regional programs such as Regional Early Childhood Centers or Pre-Kindergarten.

Capacities

Another constraint on facilities is the usage restrictions for schools that are not on public sewer. The HCPSS currently has on-site wastewater treatment systems that are adequate for current local capacities at Manor Woods ES, Lisbon ES, West Friendship ES, Glenelg HS, Marriotts Ridge HS/Mount View MS, Glenwood MS/Bushy Park ES, Folly Quarter MS/Triadelphia Ridge ES, and Dayton Oaks ES.

Schools with Title I status receive additional staffing and administration may need to adjust room usage to best allocate these additional resources. For School Year 2021-2022, schools with Title I schoolwide programs include Bollman Bridge ES, Bryant Woods ES, Cradlerock ES, Deep Run ES, Ducketts Lane ES, Guilford ES, Laurel Woods ES, Longfellow ES, Phelps Luck ES, Running Brook ES, Stevens Forest ES, Swansfield ES, and Talbott Springs ES. The impact of Title I on K-5 capacity should be further studied. It is recommended that adjustments are made to accurately portray the implementation of Title I staffing on space usage.

As mentioned previously, capacities can change with the placement of regional programs, renovations and additions. In many instances, local capacities differ from the state-rated capacities. Local K-12 program capacity calculations do not include rooms used for Pre-Kindergarten programs. For School Year 2022-2023, several regional special education and Pre-Kindergarten programs will be expanded or added and school floor plans were studied to determine the impact on K-5 capacity. As such, rooms will be either added to or subtracted from the capacity and the changes are noted below pending approval of FY 2023 budget request:

Table 2.7 School Capacity and Regional Program Changes for School Year 2022-2023

School	Change	Reasons
Bellows Spring ES	-38	PreK transition to full day/expansion, MINC, ALS
Bollman Bridge ES	-57	PreK transition to full day/expansion, Upper Learner and Primary Learner
Bushy Park ES	-63	PreK transition to full day/expansion, MINC
Centennial Lane ES	-44	PreK transition to full day/expansion
Elkridge ES	-22	PreK transition to full day/expansion
Forest Ridge ES	-22	PreK transition to full day/expansion
Jeffers Hill ES	-25	PreK transition to full day/expansion
Running Brook ES	-41	PreK transition to full day/expansion, MINC
Swansfield ES	-25	PreK transition to full day/expansion
Talbott Springs ES	-50	PreK transition to full day/expansion
Folly Quarter MS	+20	Added Regional Academic Life Skills, reclaim Recreation and Parks space
Thomas Viaduct MS	+39	Reclaim Recreation and Parks space

Capacities

The Adequate Public Facilities Ordinance adopted by the County Council in 2018 requires that HCPSS report State and Local Capacities. State rated capacities are calculated based on a minimum square footage of 550 per elementary teaching station and 500 square feet per middle or high school teaching station. Relocatable classrooms are excluded from the calculation. The formula to calculate state rated capacity is based on the number of rooms used for a specific purpose (Pre-Kindergarten, Kindergarten, Grade 1-5, Special Education, Grade 6-12 [General], Career and Technology, Alternative Education) multiplied by the number of seats, and then summed:

ES = (# Pre-Kindergarten x 20) + (# Kindergarten x 22) + (# Grade 1-5 x 23) + (# Special Education x 10)
MS = 85% x (# General x 25) + (# Career x 20) + (# Special Education x 10) + (# Alternative x 15)
HS = 85% x (# General x 25) + (# Career x 20) + (# Special Education x 10) + (# Alternative x 15)

Review and update of State-Rated Capacities occur individually on an as-needed basis (ex. after additions, new schools). Additionally, the Interagency Commission on School Construction has a workgroup reviewing SRC calculation methodologies and the impact of those calculations on the state funding formula. Elementary schools have been reviewed and updated as of March 2020. The methodology to calculate middle and high school SRCs and/or the SRCs may also be updated.

Table 2.8 Local Capacity and State Rated Capacities for School Year 2021-22

Elementary	Local	State
Atholton ES	424	463
Bellows Spring ES	726	767
Bollman Bridge ES	666	775
Bryant Woods ES	361	438
Bushy Park ES	738	727
Centennial Lane ES	647	731
Clarksville ES	543	517
Clemens Crossing ES	521	525
Cradlerock ES	398	573
Dayton Oaks ES	700	793
Deep Run ES	769	798
Ducketts Lane ES	650	709
Elkridge ES	760	842
Forest Ridge ES	691	662
Fulton ES	738	762
Gorman Crossing ES	735	902
Guilford ES	465	464
Hammond ES	653	681
Hanover Hills ES	810	958
Hollifield Station ES	732	727
Ilchester ES	559	686
Jeffers Hill ES	402	412
Laurel Woods ES	609	680
Lisbon ES	527	513
Longfellow ES	512	556
Manor Woods ES	681	593
Northfield ES	700	731
Phelps Luck ES	597	617
Pointers Run ES	744	780
Rockburn ES	584	716
Running Brook ES	490	582
St Johns Lane ES	612	593
Stevens Forest ES	380	450
Swansfield ES	653	681
Talbott Springs ES	377	434
Thunder Hill ES	509	532
Triadelphia Ridge ES	584	614
Veterans ES	799	914
Waterloo ES	603	660
Waverly ES	788	948
West Friendship ES	414	422
Worthington ES	443	562

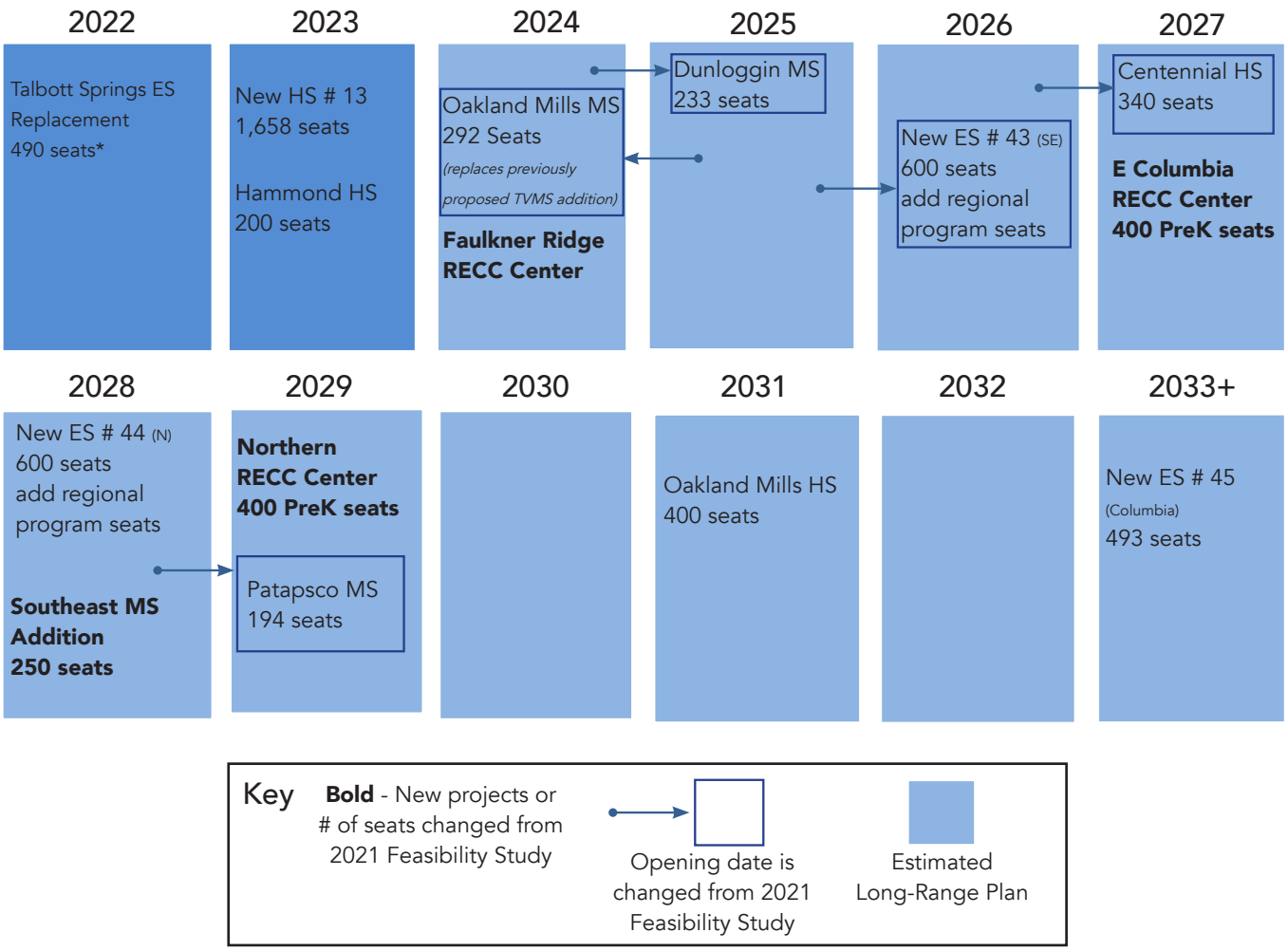
Middle	Local	State
Bonnie Branch MS	701	732
Burleigh Manor MS	779	795
Clarksville MS	643	619
Dunloggin MS	565	619
Elkridge Landing MS	779	760
Ellicott Mills MS	701	816
Folly Quarter MS	662	732
Glenwood MS	545	640
Hammond MS	604	679
Harpers Choice MS	506	619
Lake Elkhorn MS	643	765
Lime Kiln MS	721	732
Mayfield Woods MS	798	773
Mount View MS	798	760
Murray Hill MS	662	685
Oakland Mills MS	506	598
Patapsco MS	643	598
Patuxent Valley MS	760	770
Thomas Viaduct	701	754
Wilde Lake MS	740	590

High	Local	State
Atholton HS	1440	1543
Centennial HS	1360	1091
Glenelg HS	1420	944
Hammond HS	1220	1434
Howard HS	1400	1051
Long Reach HS	1488	1434
Marriotts Ridge HS	1615	1434
Mt Hebron HS	1400	1408
Oakland Mills HS	1400	1135
Reservoir HS	1551	1339
River Hill HS	1488	1483
Wilde Lake HS	1424	1434

Capacities

The FY 2023 Capital Budget will include updates to the long-range plan. Figure 2.7 below shows recommended timing of planned and proposed capacity projects, noting changes from the 2021 Feasibility Study. The year shown represents the school year in which occupancy is recommended. The projects, number of seats, and timing shown here are based on the needs and possible strategies outlined in this document. This will inform the capital budget planning process, but other factors may alter these projects.

Figure 2.7 Capacity Projects



* 490 is the total number of planned K-5 seats in the Talbott Springs ES replacement school.

Policy Guidance

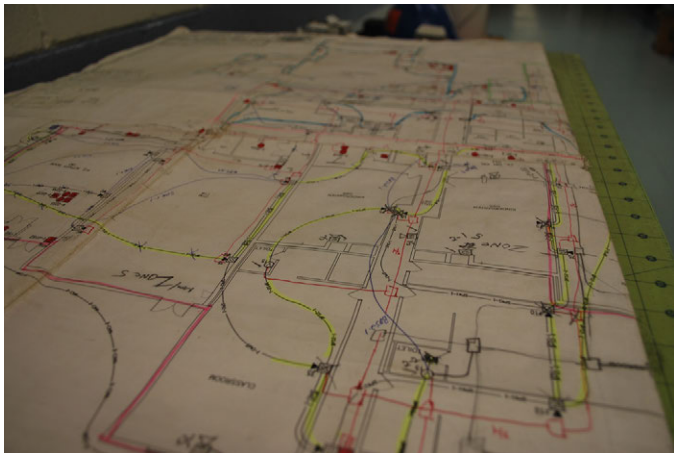
This document is guided by Board Policy 6010. Projects in the Capital Improvement Program that increase student capacity can be tested in a feasibility study with an attendance area adjustment plan consistent with stated policy goals. The Board will review the plan and set direction, as appropriate, during the attendance area adjustment and/or capital budget presentations each year. Policy 6010 discusses consideration of boundary adjustments under certain conditions such as the opening of a school or adjusting to some other change. When school capacity utilization projections fall outside the capacity utilization range of 90 – 110 percent, attendance area adjustments may be considered. When boundary line changes are planned, staff will refine the goal-directed short- and long-range plan in the Feasibility Study based on the most recent set of projections that conform to Policy 6010 Implementation Procedures. The Superintendent will seek feedback on the Feasibility Study consistent with the direction set by the Board and the standards and factors in Policy 6010. Various methods will be used to collect additional input from the public. A Superintendent's plan that takes into account the Feasibility Study, as well as community input, is presented to the Board.

The Board evaluates the Superintendent's plan according to the standards of Policy 6010, which are found in Standards Section B in Appendix B. In the Board's deliberations, new scenarios using these considerations may be reviewed, assessed, and considered. It is unlikely that one plan can fully satisfy all considerations.

The Board reviewed and updated Policy 6010 in 2016, 2018, 2019 and 2020/21. Changes implemented after the 2017 boundary review included a modified schedule that included the development of a scope early in the process, shortened Attendance Area Committee (AAC) deliberations, adjusted the role of the AAC (review and audit the Feasibility Study considerations and scenario, but no longer receive public input or develop alternative scenarios), changed the delivery date of the Superintendent's Recommendation to the Board, and provided the Board with more time to hold public hearings and work sessions and added flexibility to adapt with changes in proposed scope during the process. Policy changes implemented after the 2019 boundary review included updated definition and use of the term target utilization, clarification of considerations for demographic characteristics of student population, that the Board may direct the Superintendent to develop alternative scenarios, and updates to Public Hearing requirements based on Education Article 4-109-1. The current version of the policy can be found in Appendix C (Section 5).

Alignment with Strategic Call to Action

The Strategic Call to Action, a vision built on equity, is fueled by the belief that every student possesses the skills, knowledge and confidence to lead a successful life and positively influence the larger community. The anticipation of growth trends and planning for adequate permanent or temporary space is needed to serve student needs. When attendance area changes are necessary, a student-centered transition process is provided to welcome the students to their new school. These efforts are made to ensure every student achieves academic excellence in an inspiring, engaging, and supportive environment.



Crucial decisions about budget and attendance areas must be the result of an open process that includes many stakeholders. Board decisions need to be informed by both the technical guidance of staff, and the concerns and desires of families and the community. For this reason, the Office of School Planning maintains an extensive web presence and supports many meetings of committees, parent-teacher associations (PTAs), and other community groups. It is also necessary that the Office of School Planning serves as a liaison to various county and state agencies to communicate agency direction. These efforts ensure that families and the community are engaged and supported as partners in education.

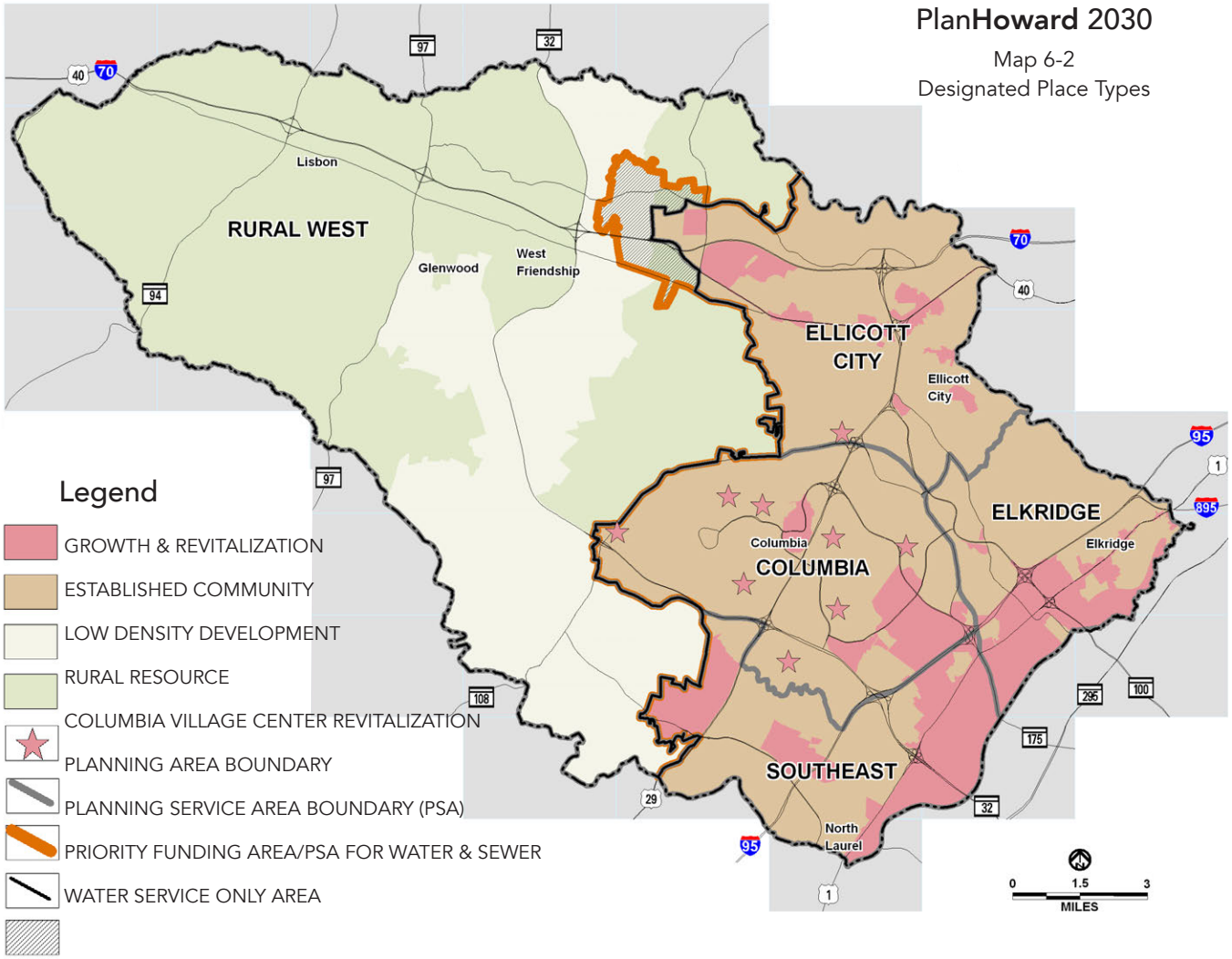
Land Use

The Howard County General Plan, PlanHoward 2030 guides development. This plan sets forth priorities for growth and redevelopment for the County. It was adopted by the County Council in July 2012, and took effect in October 2013. The General Plan is further implemented by zoning. Zoning tells property owners two things 1) what is permissible to build, and 2) the rules to place buildings on the property.

The General Plan included the adoption of a designated places map. Figure 2.8 depicts the Plan Howard Designated Places map. Most future development, and anticipated school needs, are planned where the map shows "Growth and Revitalization" areas in pink. Generally, these are in the eastern part of the county and Columbia's Village Centers. Projected enrollment growth provided in this Feasibility Study is associated with anticipated future development.

The Department of Planning and Zoning provides the Office of School Planning with the number of existing and projected housing units in the county. Future housing is calculated using a software tool that simulates the residential build-out of the County's remaining undeveloped, residentially-zoned

Figure 2.8 Plan Howard 2030 Designated Places Map



Land Use

properties under real-world conditions. Constraints imposed by current zoning of properties, the logistics of residential construction, and the growth limits of the County's General Plan are included in the housing projection. The output from this simulation informs the enrollment projection.

The FY 2023-2032 Board of Education Requested Long-Range Master Plan includes funding requested for construction of two new elementary schools, two new high schools, as well as the renovation/ addition of two high schools and three middle schools, an elementary school addition and a regional early childhood center. The timing of residential development depends upon actual land development applications, which can change. Projections are adjusted yearly to account for phasing of the new residential development.

State law requires that the General Plan be updated on a ten-year cycle. Howard County DPZ initiated the "HoCo by Design" General Plan process in February 2020, and anticipates the adoption process to begin. This new plan will provide updated growth projections, and establish the pace and priorities for future residential growth in the county. Development scenarios presented in the spring of 2021 consider options to establish targeted areas of concentrated growth in the eastern portion of the county. This pattern of development is preferred to the ad-hoc subdivision of existing lots due to the ability to strategically plan for schools and needed infrastructure in these targeted areas. The Office of School Planning will continue to be involved in the HoCo by Design process.

Figure 2.9 Residential Development

Oxford Square construction.

Verde apartments at Howard Square.

Maple Lawn section shown in 2013 (left) and 2015 (right).

HCPSS Facilities and Land Bank

HCPSS maintains well over seven million square feet of school facilities and other buildings in service of delivering the educational program and for use by the community. This document examines utilization of the 74 elementary, middle, and high schools, and anticipates future schools.

HCPSS School Facilities

77 schools

- 42 elementary schools
- 20 middle schools
- 12 high schools
- 3 education centers

HCPSS maintains sites for future school construction, commonly known as the "Land Bank." Most planned school sites result from agreements made during Columbia's planning and development. Howard County has aided the school system in the past through exchanges of county land where needed. HCPSS will continue to evaluate options for adding to the land bank to accommodate future PK-12 needs. HCPSS is working with Howard County Government to transfer the site within Turf Valley purchased by the County. The site will be added to the HCPSS Land Bank after the land transfer from the County is completed. Figure 2.9 shows the inventory of school sites as presented in the annual capital budget. The land bank includes the Mission Road site for New HS #13, which is under construction and scheduled to open in School Year 2023-2024.

Table 2.9 Land Bank

Owned Sites	Acreage	Location	Date Acquired	Cost
Sunny Spring Drive (aka Hawthorne Park)	10	Sunny Spring Drive, between Cricket Pass and Golden Hook	1974	$1.00
Future Middle School Site	41	2865 Marriottsville Road	2007	$1,700,000
Faulkner Ridge Center	9.01	10598 Marble Faun Lane	1968	$1.00
Clary's Forest	10	Little Patuxent Parkway, at its intersection with Bright Passage	2018	$0.00
Dickinson Park	11	Eden Brook Drive, between Sweet Hours Way and Weather Worn Way	2019	$0.00
Huntington Park	11	Vollmerhausen Road, between Murray Hill Road and Polished Stone	2019	$0.00
Mission Road	79	Mission Road across from Concord Drive	2019	Purchased by county

Most Recent Attendance Area Adjustments

The Adequate Public Facilities Ordinance adopted by the County Council in 2018 requires that HCPSS reports the most recent attendance area adjustments for each school.

Table 2.10 Most Recent Attendance Area Adjustments Chart

Most Recent Redistricting

	In effect
Atholton ES	2012
Bellows Spring ES	2020
Bollman Bridge ES	2012
Bryant Woods ES	2020
Bushy Park ES	2002
Centennial Lane ES	2007
Clarksville ES	2020
Clemens Crossing ES	2020
Cradlerock ES	2020
Dayton Oaks ES	2012
Deep Run ES	2018
Ducketts Lane ES	2020
Elkridge ES	2020
Forest Ridge ES	2012
Fulton ES	2020
Gorman Crossing ES	2012
Guilford ES	2020
Hammond ES	2020
Hanover Hills ES	2018
Hollifield Station ES	2020
Ilchester ES	2020
Jeffers Hill ES	2020
Laurel Woods ES	2012
Lisbon ES	1998
Longfellow ES	2020
Manor Woods ES	2020
Northfield ES	2020
Phelps Luck ES	2020
Pointers Run ES	2020
Rockburn ES	2018
Running Brook ES	2020
St Johns Lane ES	2020
Stevens Forest ES	2020
Swansfield ES	2020
Talbott Springs ES	2020
Thunder Hill ES	2020
Triadelphia Ridge ES	2020
Veterans ES	2020
Waterloo ES	2020
Waverly ES	2020
West Friendship ES	2020
Worthington ES	2007

	In effect
Bonnie Branch MS	2020
Burleigh Manor MS	2020
Clarksville MS	2018
Dunloggin MS	2020
Elkridge Landing MS	2020
Ellicott Mills MS	2020
Folly Quarter MS	2020
Glenwood MS	2004
Hammond MS	2020
Harpers Choice MS	2020
Lake Elkhorn MS	2020
Lime Kiln MS	2018
Mayfield Woods MS	2020
Mount View MS	2020
Murray Hill MS	2020
Oakland Mills MS	2020
Patapsco MS	2020
Patuxent Valley MS	2020
Thomas Viaduct MS	2020
Wilde Lake MS	2020

	In effect
Atholton HS	2020
Centennial HS	2020
Glenelg HS	2020
Hammond HS	2020
Howard HS	2020
Long Reach HS	2020
Marriotts Ridge HS	2020
Mt Hebron HS	2020
Oakland Mills HS	2020
Reservoir HS	2020
River Hill HS	2020
Wilde Lake HS	2004

Section 3

Needs and Strategies

The HCPSS Office of School Planning reviews updated enrollment projections and studies the feasibility of boundary changes, and other means of addressing capacity utilization issues, each year. In years where boundary changes are anticipated, or when the Superintendent has provided direction to review boundary change options, this document serves as the report for the analysis of options.

This section contains a review of the implications of the new projections and identifies needs and potential strategies. When school capacity utilization is outside of the capacity utilization range per Board Policy (90 - 110 percent), school boundary adjustments may be considered.

Strategies could include boundary studies, additions, capacity projects in conjunction with systemic renovations, as well as new schools, in an effort to maximize efficient use of existing sites and school buildings to provide seats to meet anticipated demand.

Pre-measures charts are included in this section, showing the effect of projected enrollment without any attendance area adjustments. The pre-measures format shows FY 2023 capital projects as requested by the Board in February 2022.

Post-measures charts are included in this section, also showing the effect of projected enrollment without any attendance area adjustments. The post-measures format shows capacities recommended in this report for consideration for the upcoming FY 2024 Capital Budget request.

Needs and Strategies

Systemwide Needs and Strategies: Board Policy 6010 established a capacity utilization range of 90-100 percent as the desired outcome of boundary adjustments. Capacity Utilization is the relationship between a school's enrollment (or projected enrollment) and its permanent (brick and mortar) capacity. In this section, strategies are presented to bring schools closer to this range to address or prevent crowding.

The enrollment projection underpinning this section is described in more detail in a previous section. HCPSS enrollment projections are updated annually, incorporating current birth, housing, and student yield trends for each school, in addition to historical cohort survival rates. This methodology yields highly accurate year one results, typically >99.5 percent accurate. As a projection looks further into the future, accuracy decreases, as the historical data becomes less relevant the further it is from the projected year (data from 2017-2021 is a much better predictor for 2022 than it is for 2026 or 2031). Typically, HCPSS projections are 98 percent accurate for the fifth year, and 94 percent for the tenth year. The effects of the pandemic on student enrollment nationwide are well documented. HCPSS projection accuracy decreased to approximately 96 percent for the last two projections. The projection presented in this report excludes anomalous data from 2020 and 2021 and has been evaluated by our Planning Consultant, Cooperative Strategies as an additional preparatory step following the enrollment impacts of the pandemic.

The revised school boundaries adopted by the Board in November 2019 took effect in September 2020. The boundary changes resulting from the 2019 comprehensive review affected 57 of 74 schools and changed the school assignment of approximately 5,400 students. Typically, a countywide boundary adjustment of this magnitude would have noticeable impacts on school enrollment and projection accuracy as families re-assess their school options considering the changes. These changes took effect simultaneously with the implementation of countywide virtual learning in September of 2020. Public school enrollment across the nation dropped as parents chose to delay entering kindergarten and to withdraw their students from public school for homeschooling and private schools in unpredictable numbers. This has altered the trajectory of enrollment growth for HCPSS, impacting the trends that contributed to the rapid enrollment growth in the county.

School Year 2022/23 (Spring 2022 Projection)

	Lowest	*<90%*	*90-100%*	*100-110%*	*>110%*	*Highest*
Overall	**76%**	**15**	**20**	**31**	**8**	**124%**

Needs and Strategies

In the following sections, New HS #13 boundary review will be identified as a key strategy for addressing high schools in the eastern part of the county with high capacity utilization. Opening of this school for School Year 2023-2024 will provide 1,658 seats in the Jessup area, and boundary adjustments will enable relief from crowding for several schools. Boundary options for New HS #13, including adjustments to surrounding schools, are presented in Appendix A.

Previous studies mentioned potential boundary adjustments to elementary schools in Eastern Columbia to take advantage of the additional 163 seats of capacity in the new Talbott Springs ES. Due to the growing need for early childhood and special education programming, as well as the requirements of the Maryland Blueprint legislation, this added capacity will be used for these programs.

The Feasibility Study typically focuses on the projected K-12 student enrollment and the needs related to the general growth of the school system; however, Pre-Kindergarten and special education program needs have risen steadily, requiring more classroom space. If funded, thirteen capacity-sized elementary classrooms will be transitioned from K-5 use to early childhood programs for School Year 2022-2023. Other spaces are under consideration, depending on budget, staffing and need. Additionally, with the state legislature's approval of the Blueprint for Maryland's Future Act (House Bill 1300), based on the recommendations of the Kirwan Commission, a proactive approach regarding Pre-Kindergarten needs should be considered and balanced with K-5 growth. Several capital projects are recommended in this study to address these needs. Additional planning is underway to identify needs and desired solutions to address needs of the Blueprint program initiatives related to expansion of Pre-K services.

This information is provided as context to the discussion of needs, based on enrollment projections, and potential strategies to address projected crowding. The strategies found in this section are driven by projections based on historical data for many factors affecting enrollment at each school. Events such as boundary changes and the global pandemic may shift these factors in unforeseen ways, necessitating changes to strategies in subsequent reports.

Elementary Schools Needs and Strategies

Elementary School Needs and Strategies:
At the elementary level, multiple strategies should be considered to meet the early childhood through fifth grade needs of the growing Howard County population. Continuation of planning for New ES #43 and New ES #44 and boundary adjustments, as well as planning for new Regional Early Childhood Centers, are recommended. Relocatable classrooms are in use to provide interim capacity where needed. The FY 2023 Capital Budget and FY 2024-2028 CIP continue many of the previously identified improvements needed to address capacity needs. However, available funding remains constrained, delaying needed projects in the future.

Recent boundary adjustments and new trends impacting the enrollment projection have resulted in some shifts in priorities for this report. Refer to page 16 for a graphic view of the priority changes. The summary of planned capital projects includes:

- Completion of Talbott Springs ES Replacement, adding 113 seats of K-5 capacity and at least two additional classrooms for early childhood programs.
- Begin planning for an 14-20 classroom Regional Early Childhood Center (RECC) in western Columbia for opening in School Year 2024-2025. Prioritize renovation of the Faulkner Ridge Center for this purpose.
- Continue planning for New ES #43 in the southeast, including approximately ten classrooms for early childhood programs, to open for School Year 2026-2027.
- Continue planning for New ES #44, including approximately ten classrooms for early childhood programs, to open for School Year 2029-2030 at the Turf Valley site.
- Plan for RECCs in East Columbia and Northern (Ellicott City) areas to open before 2029.

Annual increases in space needs for early childhood programming and special education programming have resulted in approximately ten elementary classrooms converted from K-5 (capacity) use into non-capacity uses each year. Pending funding approval, there will be over 120 elementary classrooms in use for regional early childhood programs and related programs, and Pre-K programming. Implementation of the prekindergarten requirement of the Blueprint for Maryland's Future law (HB1300) will require additional capacity beyond what can be accommodated in existing school buildings. Estimates show HCPSS may need as many as 120 classrooms to satisfy the public share of the capacity need to provide voluntary full-day pre-kindergarten services to all three and four-year olds that qualify. This is a high-end estimate for this early stage in the planning process. Some of the need will be met by converting existing half-day rooms to full-day programs. Pending budget requests would facilitate this conversion, adding at least 13 full-day rooms. To provide the additional needed capacity, the recommended approach at this early stage is to pursue construction of four Regional Early Childhood Centers (RECCs), each with 18-20 classrooms, and include RECCs within the two proposed new elementary schools. Guidance regarding implementation is still evolving, and further study and planning will be necessary. Alternative strategies could include additions to elementary schools, renting or leasing commercial space, or other space solutions.

Based on our projection, in School Year 2022-2023, most elementary schools will have 100 percent utilization or less. Twenty-one elementary schools will be utilized more than 100 percent but less than 110 percent. One school is expected to be utilized at 110 percent: Fulton ES. No elementary schools are projected to be utilized above 110 percent for School Year 2022-2023. On the low end, fifteen schools have estimated utilization of less than 90 percent. Continuing residential development in the areas of Fulton, North Laurel, and Turf Valley will drive the need for seats in the Southeastern and

Elementary Schools Needs and Strategies

Northwestern parts of the county. Recent enrollment increase, and lesser enrollment impacts from the pandemic in the Ellicott City area have pressured utilization at elementary schools in that area. Recent capacity projects and lower than expected student yields in Columbia Town Center have negated the need for a new elementary school in that area.

In the southeastern area, recent residential development in the Route 1 corridor has pushed enrollment at the six schools serving this area to 95 percent utilization for School Year 2021-2022. Prior to the impacts of the pandemic, it was estimated this area would be utilized over 100 percent, exceeding 115 percent by 2030. Large residential developments at Laurel Park (Paddock Pointe) and the Maryland Milk Producer's Property (Wellington Farms) are in their early stages and will contribute to enrollment growth in the near-term. Paddock Pointe is in the Forest Ridge ES attendance area. Planned for completion in 2030, this development will have 1,000 units in a mix of apartments and townhomes. Projections show enrollment growth of approximately 150 students at Forest Ridge ES, mostly due to the net impacts of this new development. This will bring capacity utilization at Forest Ridge ES to 117 percent. Also in this area, Wellington Farms is a mix of single-family detached homes and townhomes and will add 394 units to the Hammond ES attendance area. The net impact of this development, when combined with other factors influencing the enrollment projection, is an enrollment increase of 100 students at Hammond ES and a peak capacity utilization of 113 percent in 2032. In addition, enrollment at Bollman Bridge ES is expected to increase by approximately 135 to a peak capacity utilization of over 125 percent by 2030. These needs, combined with projected enrollment for Gorman Crossing ES, Hanover Hills ES, and Laurel Woods ES indicate a need for approximately 300 seats in this area to maintain 100 percent utilization through 2030. Construction of New ES #43 in this area, on one of the sites in the HCPSS land bank, should be a priority in the capital planning process. A facility including a minimum of 400 seats of K-5 capacity, along with ten - twelve rooms for early childhood programming should be planned as soon as possible for this area of the county. Focused boundary review in this area would enable use of these seats to improve capacity utilization at crowded schools.

In the northwestern area of the county, enrollment has increased steadily, leading to an estimated 100 percent capacity utilization at Manor Woods ES, Waverly ES, and West Friendship ES combined. By 2031 this grouping has an estimated capacity utilization of 104 percent, with a need of approximately 100 seats to stay below 100 percent utilization. Much of this increase can be attributed to the continued development of the Turf Valley golf course and other nearby projects such as the Chapelgate Woods development. To the East of this group, St. John's Lane ES and Veterans ES are estimated at 122 percent and 109 percent utilization, respectively, in 2031. Estimates show these two areas together, including all five schools, will need approximately 325 seats to maintain 100 percent utilization for the next ten years. Recent investments in capacity at Waverly ES and relocatable classroom placements at all schools have proven to be useful interim steps. Previous, pre-pandemic, projections once indicated this region may need as many as 900 seats to maintain 100 percent utilization through 2030. Updated projections show less enrollment growth due to the lasting effects of the pandemic and incorporation of reduced live birth projections. A new elementary school with a minimum of 400 seats for K-5, located within the Turf Valley development, should provide the needed seats to accommodate current enrollment and future enrollment growth. In addition, approximately ten rooms of capacity should be included within this facility to accommodate estimated early childhood programming needs due to implementation of Blueprint for Maryland's Future. Focused

Elementary Schools Needs and Strategies

boundary review would be required in order to maximize use of this capacity to provide needed relief from projected crowding in this area.

The Elementary Schools in Western Columbia are projected to be under 100 percent utilization, as a group, through 2031. However Bryant Woods ES, Clemens Crossing ES, and Running Brook ES are projected to exceed 110 percent utilization in 2026, 2027, and 2030, respectively. Longfellow ES will stay below 100 percent through 2031. Due to recent boundary changes and the impacts of the pandemic on enrollment, Swansfield ES has a projected declining enrollment trend through 2031, dropping to 70 percent in that year. Previous Feasibility Studies indicated the need for a new elementary school in this area. This is no longer supported by projections. A total of 11 relocatable classrooms will provide interim capacity as enrollment increases at Bryant Woods ES, Clemens Crossing ES, and Running Brook ES. Future studies will consider the feasibility of focused boundary adjustments to utilize the available capacity at Swansfield ES to balance this region.

School Year 2022/23 (Spring 2022 Projection)

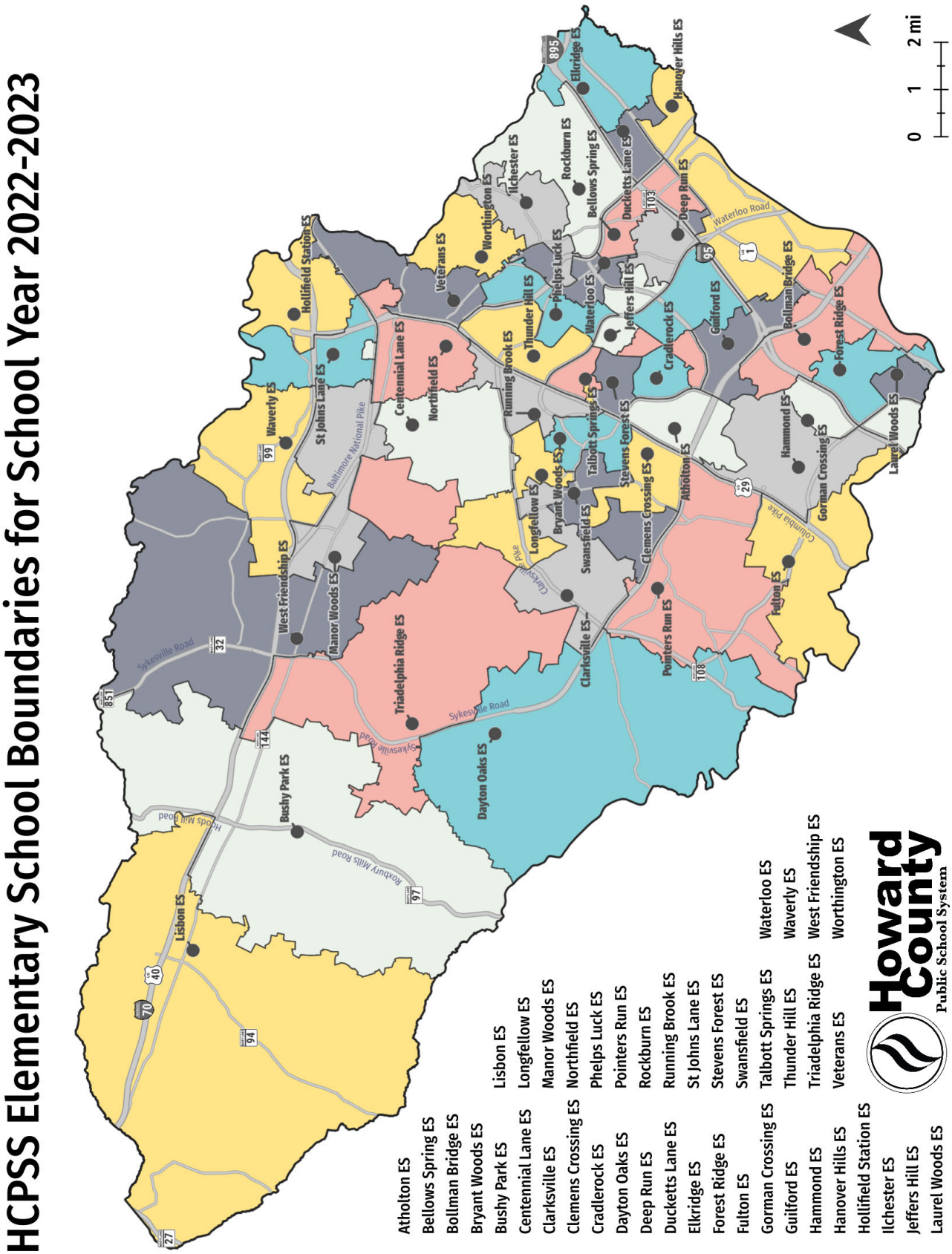
	Lowest	*<90%*	*90-100%*	*100-110%*	*>110%*	*Highest*
ES	76%	11	9	21	1	110%

Elementary School Summary

Schools	Projected SY2022-23 Utilization	Projected SY2031-32 Utilization	Approx. seats needed for 100% through 2031	Strategies
Bollman Bridge ES, Forest Ridge ES, Gorman Crossing ES, Hammond ES, Hanover Hills ES, Laurel Woods ES	97	107	300	Relocatables; ES #43
Manor Woods ES, Waverly ES, West Friendship ES	100	104	100	Existing relocatables; Bushy Park ES capacity; ES #44
Hollifield Station ES, Veterans ES, St Johns Lane ES	104	111	225	Relocatables; ES #44; ES addition

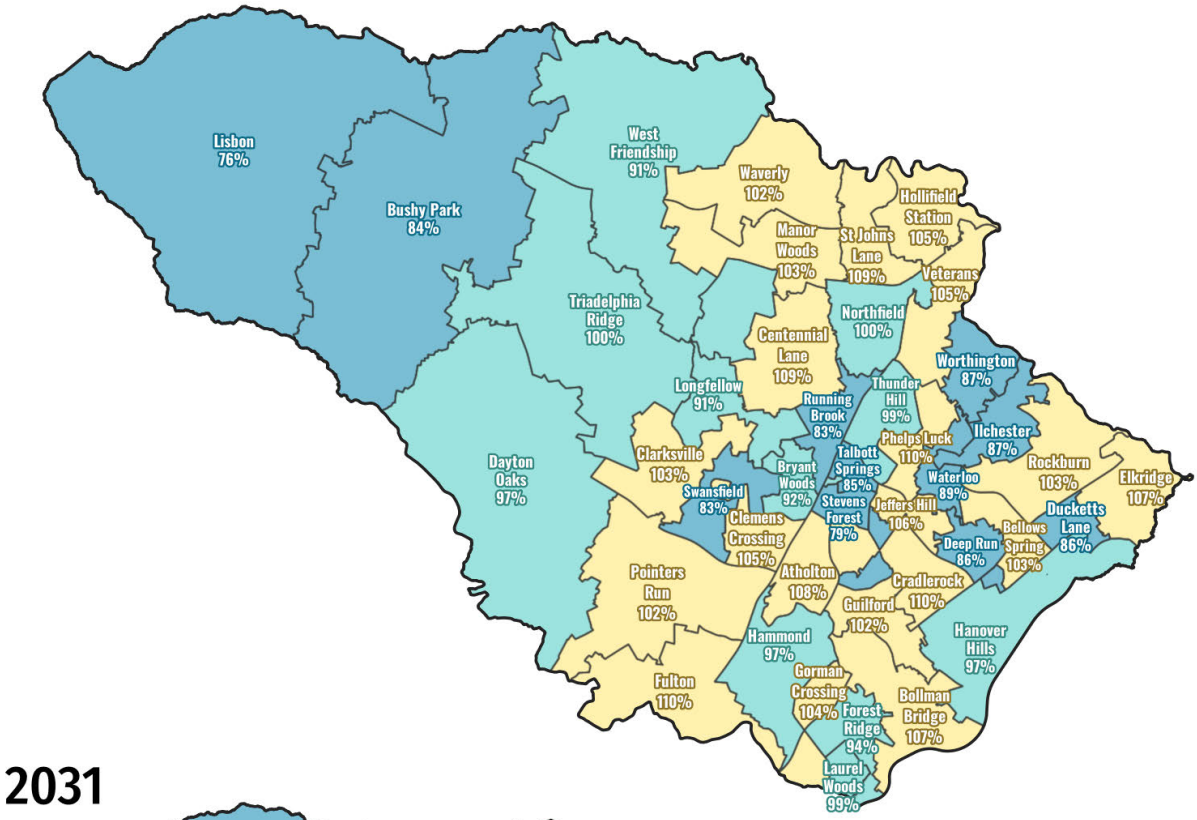
All utilizations and estimated seat counts are from HCPSS 2022 enrollment projection presented in this report. These projections are updated every year, requiring re-evaluation of needs and strategies. This is a summary, other factors may be considered in developing strategies for addressing crowded schools.

Elementary Schools - School Year 2022-2023 Boundaries

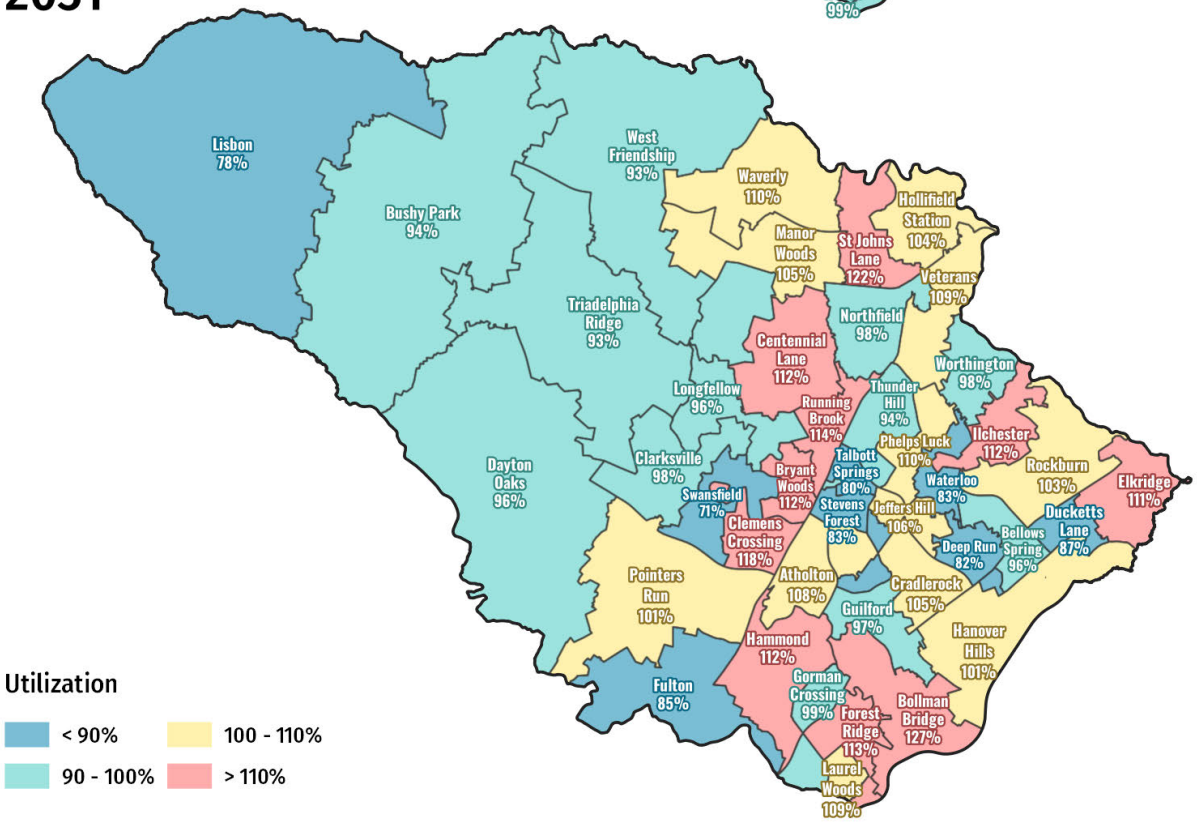


Elementary Schools Utilization Map

2022



2031



2031 utilization map includes proposed additions to existing schools, as recommended in the strategies, but does not include new schools or potential future boundary changes.

Elementary Schools Pre-Measures Chart

Pre-Measures

ELEMENTARY SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Board of Education's Requested FY 2023 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, Board of Education's FY 2023 requested capacities, and Board Approved School Boundaries for School Year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Atholton ES		424	424	424	456	107.5	479	113.0	475	112.0	469	110.6	471	111.1	451	106.4	450	106.1	445	105.0	460	108.5	457	107.8	456	107.5	452	106.6
Bellows Spring ES		726	726	726	707	97.4	730	100.6	757	104.3	769	105.9	761	104.8	727	100.1	714	98.3	706	97.2	678	93.4	659	90.8	639	88.0	631	86.9
Bollman Bridge ES		666	666	666	651	97.7	669	100.5	691	103.8	693	104.1	717	107.7	729	109.5	742	111.4	759	114.0	765	114.9	772	115.9	774	116.2	775	116.4
Bryant Woods ES		361	361	361	333	92.2	343	95.0	341	94.5	358	99.2	363	100.6	387	107.2	388	107.5	389	107.8	403	111.6	404	111.9	414	114.7	418	115.8
Bushy Park ES		738	738	738	566	76.7	561	76.0	549	74.4	574	77.8	594	80.5	603	81.7	623	84.4	635	86.0	651	88.2	634	85.9	633	85.8	624	84.6
Centennial Lane ES		647	647	647	656	101.4	678	104.8	689	106.5	704	108.8	705	109.0	693	107.1	687	106.2	684	105.7	682	105.4	677	104.6	668	103.2	665	102.8
Clarksville ES		543	543	543	561	103.3	545	100.4	536	98.7	533	98.2	530	97.6	532	98.0	528	97.2	527	97.1	527	97.1	532	98.0	536	98.7	536	98.7
Clemens Crossing ES		521	521	521	547	105.0	558	107.1	558	107.1	568	109.0	567	108.8	571	109.6	577	110.7	594	114.0	610	117.1	617	118.4	626	120.2	630	120.9
Cradlerock ES		398	398	398	436	109.5	448	112.6	449	112.8	446	112.1	444	111.6	438	110.1	424	106.5	417	104.8	418	105.0	417	104.8	415	104.3	413	103.8
Dayton Oaks ES		700	700	700	680	97.1	697	99.6	725	103.6	722	103.1	699	99.9	692	98.9	690	98.6	685	97.9	665	95.0	669	95.6	657	93.9	655	93.6
Deep Run ES		769	769	769	664	86.3	661	86.0	628	81.7	631	82.1	634	82.4	630	81.9	631	82.1	632	82.2	631	82.1	631	82.1	631	82.1	630	81.9
Ducketts Lane ES		650	650	650	559	86.0	549	84.5	553	85.1	580	89.2	577	88.8	575	88.5	571	87.8	577	88.8	574	88.3	567	87.2	562	86.5	557	85.7
Elkridge ES		760	760	760	787	103.6	797	104.9	809	106.4	800	105.3	819	107.8	814	107.1	813	107.0	826	108.7	819	107.8	820	107.9	818	107.6	820	107.9
Forest Ridge ES		691	691	691	630	91.2	647	93.6	647	93.6	617	89.3	640	92.6	653	94.5	675	97.7	694	100.4	726	105.1	759	109.8	775	112.2	781	113.0
Fulton ES		738	738	738	811	109.9	799	108.3	801	108.5	748	101.4	716	97.0	674	91.3	650	88.1	648	87.8	621	84.1	628	85.1	618	83.7	613	83.1
Gorman Crossing ES		735	735	735	768	104.5	761	103.5	762	103.7	761	103.5	770	104.8	764	103.9	741	100.8	729	99.2	741	100.8	729	99.2	722	98.2	714	97.1
Guilford ES		465	465	465	475	102.2	465	100.0	462	99.4	462	99.4	456	98.1	456	98.1	461	99.1	460	98.9	454	97.6	451	97.0	449	96.6	443	95.3
Hammond ES		653	653	653	634	97.1	632	96.8	639	97.9	640	98.0	659	100.9	668	102.3	679	104.0	710	108.7	731	111.9	732	112.1	736	112.7	733	112.3
Hanover Hills ES		810	810	810	788	97.3	835	103.1	905	111.7	932	115.1	924	114.1	923	114.0	912	112.6	875	108.0	830	102.5	820	101.2	801	98.9	793	97.9
Hollifield Station ES		732	732	732	772	105.5	804	109.8	806	110.1	795	108.6	796	108.7	777	106.1	766	104.6	763	104.2	761	104.0	761	104.0	758	103.6	753	102.9
Ilchester ES		559	559	559	486	86.9	480	85.9	467	83.5	492	88.0	497	88.9	523	93.6	544	97.3	574	102.7	606	108.4	627	112.2	638	114.1	640	114.5
Jeffers Hill ES		402	402	402	398	99.0	408	101.5	406	101.0	396	98.5	390	97.0	377	93.8	376	93.5	380	94.5	372	92.5	379	94.3	375	93.3	371	92.3
Laurel Woods ES		609	609	609	604	99.2	619	101.6	641	105.3	678	111.3	683	112.2	680	111.7	670	110.0	661	108.5	669	109.9	663	108.9	660	108.4	662	108.7
Lisbon ES		527	527	527	399	75.7	401	76.1	395	75.0	384	72.9	393	74.6	396	75.1	407	77.2	409	77.6	407	77.2	412	78.2	415	78.7	414	78.6
Longfellow ES		512	512	512	466	91.0	477	93.2	470	91.8	476	93.0	490	95.7	482	94.1	490	95.7	487	95.1	492	96.1	491	95.9	487	95.1	485	94.7
Manor Woods ES		681	681	681	702	103.1	742	109.0	737	108.2	735	107.9	739	108.5	740	108.7	738	108.4	725	106.5	712	104.6	712	104.6	704	103.4	694	101.9
New ES #43	NS	0	0	0																								
New ES #44	NS	0	0	0																								
Northfield ES		700	700	700	701	100.1	682	97.4	685	97.9	681	97.3	678	96.9	679	97.0	683	97.6	689	98.4	685	97.9	683	97.6	676	96.6	675	96.4
Phelps Luck ES		597	597	597	657	110.1	676	113.2	655	109.7	651	109.0	652	109.2	636	106.5	648	108.5	635	106.4	636	106.5	648	108.5	644	107.9	636	106.5
Pointers Run ES		744	744	744	759	102.0	792	106.5	786	105.6	773	103.9	753	101.2	773	103.9	764	102.7	737	99.1	740	99.5	748	100.5	745	100.1	737	99.1
Rockburn ES		584	584	584	602	103.1	631	108.0	627	107.4	620	106.2	613	105.0	612	104.8	604	103.4	598	102.4	596	102.1	601	102.9	607	103.9	609	104.3
Running Brook ES		490	490	490	374	76.3	373	76.1	391	79.8	416	84.9	432	88.2	450	91.8	465	94.9	482	98.4	499	101.8	514	104.9	525	107.1	533	108.8
St Johns Lane ES		612	612	612	666	108.8	705	115.2	720	117.6	728	119.0	734	119.9	751	122.7	752	122.9	749	122.4	744	121.6	749	122.4	751	122.7	752	122.9
Stevens Forest ES		380	380	380	302	79.5	316	83.2	312	82.1	321	84.5	317	83.4	316	83.2	314	82.6	312	82.1	310	81.6	316	83.2	312	82.1	310	81.6
Swansfield ES		653	653	653	521	79.8	508	77.8	509	77.9	492	75.3	484	74.1	467	71.5	453	69.4	440	67.4	440	67.4	443	67.8	438	67.1	434	66.5
Talbott Springs ES	R	540	540	540	416	77.0	408	75.6	401	74.3	393	72.8	401	74.3	406	75.2	396	73.3	392	72.6	382	70.7	391	72.4	397	73.5	400	74.1
Thunder Hill ES		509	509	509	506	99.4	501	98.4	501	98.4	495	97.2	499	98.0	493	96.9	484	95.1	481	94.5	479	94.1	479	94.1	477	93.7	475	93.3
Triadelphia Ridge ES		584	584	584	586	100.3	600	102.7	603	103.3	619	106.0	613	105.0	599	102.6	592	101.4	581	99.5	559	95.7	542	92.8	526	90.1	508	87.0
Veterans ES		799	799	799	842	105.4	853	106.8	878	109.9	890	111.4	896	112.1	908	113.6	892	111.6	885	110.8	884	110.6	869	108.8	861	107.8	852	106.6
Waterloo ES		603	603	603	535	88.7	527	87.4	530	87.9	508	84.2	510	84.6	508	84.2	497	82.4	494	81.9	500	82.9	498	82.6	493	81.8	490	81.3
Waverly ES		788	788	788	801	101.6	793	100.6	792	100.5	793	100.6	802	101.8	814	103.3	822	104.3	844	107.1	854	108.4	867	110.0	866	109.9	859	109.0
West Friendship ES		414	414	414	377	91.1	377	91.1	377	91.1	390	94.2	388	93.7	376	90.8	378	91.3	379	91.5	379	91.5	384	92.8	385	93.0	392	94.7
Worthington ES		443	443	443	386	87.1	365	82.4	354	79.9	349	78.8	360	81.3	385	86.9	405	91.4	425	95.9	434	98.0	435	98.2	425	95.9	419	94.6
Countywide Totals		25457	25457	25457	24567	96.5	24892	97.8	25019	98.3	25082	98.5	25166	98.9	25128	95.7	25096	95.6	25114	95.7	25126	95.7	25187	93.8	25095	93.5	24983	93.1

'NS' New School proposed in FY 2023 Capital Budget

'R' Replacement School proposed in FY 2023 Capital Budget

Elementary Schools Post-Measures Chart

Post-Measures

ELEMENTARY SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Proposed FY 2024 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, potential FY 2024 requested capacities and Board of Education approved school boundaries for school year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Atholton ES		424	424	424	456	107.5	479	113.0	475	112.0	469	110.6	471	111.1	451	106.4	450	106.1	445	105.0	460	108.5	457	107.8	456	107.5	452	106.6
Bellows Spring ES		688	688	688	707	102.8	730	106.1	757	110.0	769	111.8	761	110.6	727	105.7	714	103.8	706	102.6	678	98.5	659	95.8	639	92.9	631	91.7
Bollman Bridge ES		609	609	609	651	106.9	669	109.9	691	113.5	693	113.8	717	117.7	729	119.7	742	121.8	759	124.6	765	125.6	772	126.8	774	127.1	775	127.3
Bryant Woods ES		361	361	361	333	92.2	343	95.0	341	94.5	358	99.2	363	100.6	387	107.2	388	107.5	389	107.8	403	111.6	404	111.9	414	114.7	418	115.8
Bushy Park ES		675	675	675	566	83.9	561	83.1	549	81.3	574	85.0	594	88.0	603	89.3	623	92.3	635	94.1	651	96.4	634	93.9	633	93.8	624	92.4
Centennial Lane ES		603	603	603	656	108.8	678	112.4	689	114.3	704	116.7	705	116.9	693	114.9	687	113.9	684	113.4	682	113.1	677	112.3	668	110.8	665	110.3
Clarksville ES		543	543	543	561	103.3	545	100.4	536	98.7	533	98.2	530	97.6	532	98.0	528	97.2	527	97.1	527	97.1	532	98.0	536	98.7	536	98.7
Clemens Crossing ES		521	521	521	547	105.0	558	107.1	558	107.1	568	109.0	567	108.8	571	109.6	577	110.7	594	114.0	610	117.1	617	118.4	626	120.2	630	120.9
Cradlerock ES		398	398	398	436	109.5	448	112.6	449	112.8	446	112.1	444	111.6	438	110.1	424	106.5	417	104.8	418	105.0	417	104.8	415	104.3	413	103.8
Dayton Oaks ES		700	700	700	680	97.1	697	99.6	725	103.6	722	103.1	699	99.9	692	98.9	690	98.6	685	97.9	665	95.0	669	95.6	657	93.9	655	93.6
Deep Run ES		769	769	769	664	86.3	661	86.0	628	81.7	631	82.1	634	82.4	630	81.9	631	82.1	632	82.2	631	82.1	631	82.1	631	82.1	630	81.9
Ducketts Lane ES		650	650	650	559	86.0	549	84.5	553	85.1	580	89.2	577	88.8	575	88.5	571	87.8	577	88.8	574	88.3	567	87.2	562	86.5	557	85.7
Elkridge ES		738	738	738	787	106.6	797	108.0	809	109.6	800	108.4	819	111.0	814	110.3	813	110.2	826	111.9	819	111.0	820	111.1	818	110.8	820	111.1
Forest Ridge ES		669	669	669	630	94.2	647	96.7	647	96.7	617	92.2	640	95.7	653	97.6	675	100.9	694	103.7	726	108.5	759	113.5	775	115.8	781	116.7
Fulton ES		738	738	738	811	109.9	799	108.3	801	108.5	748	101.4	716	97.0	674	91.3	650	88.1	648	87.8	621	84.1	628	85.1	618	83.7	613	83.1
Gorman Crossing ES		735	735	735	768	104.5	761	103.5	762	103.7	761	103.5	770	104.8	764	103.9	741	100.8	729	99.2	741	100.8	729	99.2	722	98.2	714	97.1
Guilford ES		465	465	465	475	102.2	465	100.0	462	99.4	462	99.4	456	98.1	456	98.1	461	99.1	460	98.9	454	97.6	451	97.0	449	96.6	443	95.3
Hammond ES		653	653	653	634	97.1	632	96.8	639	97.9	640	98.0	659	100.9	668	102.3	679	104.0	710	108.7	731	111.9	732	112.1	736	112.7	733	112.3
Hanover Hills ES		810	810	810	788	97.3	835	103.1	905	111.7	932	115.1	924	114.1	923	114.0	912	112.6	875	108.0	830	102.5	820	101.2	801	98.9	793	97.9
Hollifield Station ES		732	732	732	772	105.5	804	109.8	806	110.1	795	108.6	796	108.7	777	106.1	766	104.6	763	104.2	761	104.0	761	104.0	758	103.6	753	102.9
Ilchester ES		559	559	559	486	86.9	480	85.9	467	83.5	492	88.0	497	88.9	523	93.6	544	97.3	574	102.7	606	108.4	627	112.2	638	114.1	640	114.5
Jeffers Hill ES		377	377	377	398	105.6	408	108.2	406	107.7	396	105.0	390	103.4	377	100.0	376	99.7	380	100.8	372	98.7	379	100.5	375	99.5	371	98.4
Laurel Woods ES		609	609	609	604	99.2	619	101.6	641	105.3	678	111.3	683	112.2	680	111.7	670	110.0	661	108.5	669	109.9	663	108.9	660	108.4	662	108.7
Lisbon ES		527	527	527	399	75.7	401	76.1	395	75.0	384	72.9	393	74.6	396	75.1	407	77.2	409	77.6	407	77.2	412	78.2	415	78.7	414	78.6
Longfellow ES		512	512	512	466	91.0	477	93.2	470	91.8	476	93.0	490	95.7	482	94.1	490	95.7	487	95.1	492	96.1	491	95.9	487	95.1	485	94.7
Manor Woods ES		681	681	681	702	103.1	742	109.0	737	108.2	735	107.9	739	108.5	740	108.7	738	108.4	725	106.5	712	104.6	712	104.6	704	103.4	694	101.9
New ES #43	NS	0	0	0																								
New ES #44	NS	0	0	0																								
New ES #45	NS	0	0	0																								
Northfield ES		700	700	700	701	100.1	682	97.4	685	97.9	681	97.3	678	96.9	679	97.0	683	97.6	689	98.4	685	97.9	683	97.6	676	96.6	675	96.4
Phelps Luck ES		597	597	597	657	110.1	676	113.2	655	109.7	651	109.0	652	109.2	636	106.5	648	108.5	635	106.4	636	106.5	648	108.5	644	107.9	636	106.5
Pointers Run ES		744	744	744	759	102.0	792	106.5	786	105.6	773	103.9	753	101.2	773	103.9	764	102.7	737	99.1	740	99.5	748	100.5	745	100.1	737	99.1
Rockburn ES		584	584	584	602	103.1	631	108.0	627	107.4	620	106.2	613	105.0	612	104.8	604	103.4	598	102.4	596	102.1	601	102.9	607	103.9	609	104.3
Running Brook ES		449	449	449	374	83.3	373	83.1	391	87.1	416	92.7	432	96.2	450	100.2	465	103.6	482	107.3	499	111.1	514	114.5	525	116.9	533	118.7
St Johns Lane ES		612	612	612	666	108.8	705	115.2	720	117.6	728	119.0	734	119.9	751	122.7	752	122.9	749	122.4	744	121.6	749	122.4	751	122.7	752	122.9
Stevens Forest ES		380	380	380	302	79.5	316	83.2	312	82.1	321	84.5	317	83.4	316	83.2	314	82.6	312	82.1	310	81.6	316	83.2	312	82.1	310	81.6
Swansfield ES		628	628	628	521	83.0	508	80.9	509	81.1	492	78.3	484	77.1	467	74.4	453	72.1	440	70.1	440	70.1	443	70.5	438	69.7	434	69.1
Talbott Springs ES	R	490	490	490	416	84.9	408	83.3	401	81.8	393	80.2	401	81.8	406	82.9	396	80.8	392	80.0	382	78.0	391	79.8	397	81.0	400	81.6
Thunder Hill ES		509	509	509	506	99.4	501	98.4	501	98.4	495	97.2	499	98.0	493	96.9	484	95.1	481	94.5	479	94.1	479	94.1	477	93.7	475	93.3
Triadelphia Ridge ES		584	584	584	586	100.3	600	102.7	603	103.3	619	106.0	613	105.0	599	102.6	592	101.4	581	99.5	559	95.7	542	92.8	526	90.1	508	87.0
Veterans ES		799	799	799	842	105.4	853	106.8	878	109.9	890	111.4	896	112.1	908	113.6	892	111.6	885	110.8	884	110.6	869	108.8	861	107.8	852	106.6
Waterloo ES		603	603	603	535	88.7	527	87.4	530	87.9	508	84.2	510	84.6	508	84.2	497	82.4	494	81.9	500	82.9	498	82.6	493	81.8	490	81.3
Waverly ES		788	788	788	801	101.6	793	100.6	792	100.5	793	100.6	802	101.8	814	103.3	822	104.3	844	107.1	854	108.4	867	110.0	866	109.9	859	109.0
West Friendship ES		414	414	414	377	91.1	377	91.1	377	91.1	390	94.2	388	93.7	376	90.8	378	91.3	379	91.5	379	91.5	384	92.8	385	93.0	392	94.7
Worthington ES		443	443	443	386	87.1	365	82.4	354	79.9	349	78.8	360	81.3	385	86.9	405	91.4	425	95.9	434	98.0	435	98.2	425	95.9	419	94.6
Countywide Totals		25070	25070	25070	24567	98.0	24892	99.3	25019	99.8	25082	100.0	25166	97.3	25128	97.2	25096	97.1	25114	94.9	25126	95.0	25187	95.2	25095	94.8	24983	94.4

'A' includes additions as proposed for FY 2024 CIP for grades K-5

'NS' New School proposed for FY 2024 Capital Budget

'R' Replacement School proposed for FY 2024 Capital Budget

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

This post-measures chart does not include impacts from any boundary scenario. This chart is only showing the impact of capacity changes from programmatic changes and proposed capital plans. Impacts on capacity utilization from boundary scenarios are found in the appendix along with the associated map and other resulting data.

Middle Schools Needs and Strategies

Middle School Needs and Strategies: For School Year 2022-2023, thirteen out of twenty middle schools will be utilized at a rate of 100 percent or less. Burleigh Manor MS, Dunloggin MS, Hammond MS, Patapsco MS, and Patuxent Valley MS are projected to be utilized between 100 percent and 110 percent. Two schools, Mount View MS and Thomas Viaduct MS will be over 110 percent utilization according to projections. Glenwood MS, Lake Elkhorn MS, and Wilde Lake MS are expected to be utilized at or below 90 percent for School Year 2022-2023 and several years beyond. The most recent capacity investment at this level, Thomas Viaduct MS, is now one of the most crowded middle schools. Planned additions at Dunloggin MS and Oakland Mills MS will provide needed seats to accommodate projected enrollment. Additional capacity projects recommended for the Southeast and Northern areas will provide needed seats to maintain countywide utilization under 100 percent through 2031.

Thomas Viaduct MS opened in 2014, and the June 2014 Feasibility Study presented a projection showing capacity utilization exceeding 130 percent within ten years. The updated projection shows expected capacity utilization of 113 percent for School Year 2022-2023, increasing to 128 percent in School Year 2031-2032. This region of the county was designated by Plan Howard 2030 as an area of focused growth as former industrial properties convert to residential and mixed-use neighborhoods. For School Year 2022-2023 Thomas Viaduct MS will have four relocatable classrooms providing interim capacity. Construction of two classrooms within the former activity room will add approximately 40 seats of permanent capacity. This school will need approximately 200 seats to maintain 100 percent utilization or less through 2031. The planned renovation and addition at Oakland Mills MS is the nearest capacity project that can provide crowding relief to Thomas Viaduct MS. A focused boundary review would be required to utilize the estimated 292 additional seats being added to Oakland Mills MS to provide relief to Thomas Viaduct MS. It is recommended that the Oakland Mills MS project be moved up to 2024, as this is one of the most urgent capacity needs.

Middle schools serving the Ellicott City and West Friendship areas are projected for a combined 107 percent utilization for School Year 2022-2023, increasing to 111 percent in 2031. Since estimated middle school student yields from new construction are lower than those for elementary students, the impact of development in this area has taken longer to materialize. Dunloggin MS and Patapsco MS are projected to be utilized over 100 percent, with Mount View MS estimated at over 113 percent in eight of the next ten years. Neighborhoods in this area will continue to be attractive to families, with enrollment growth expected at the feeder elementary schools (Waverly ES, St. Johns Lane ES, Veterans ES) through the next ten years. All schools in this grouping have relocatable classrooms, with new units placed at Mount View MS and Burleigh Manor MS in recent years. It is estimated this combination of schools will require an additional 300 seats to maintain 100 percent or lower capacity utilization through 2031. Approximately 233 seats will be added through the renovation and addition project at Dunloggin MS, slated to be completed in 2027. It is recommended to move this project up to 2025, as this is one of the most urgent capacity needs following projects currently underway. Additional capacity will be added through the capital project at Patapsco MS, currently planned for post-2031 in the Board Requested Long-Range Master Plan (LRMP). Previous reports estimated an additional 195 seats through this project, which is adequate. It is recommended that this project be moved up in the LRMP to 2029, as projections show this continued enrollment growth through the ten year period at Dunloggin MS and Patapsco MS. Relocatable classrooms will be used to provide interim

Middle Schools Needs and Strategies

School Year 2022/23 (Spring 2022 Projection)

	Lowest	*<90%*	*90-100%*	*100-110%*	*>110%*	*Highest*
MS	85%	4	9	5	2	114%

capacity.

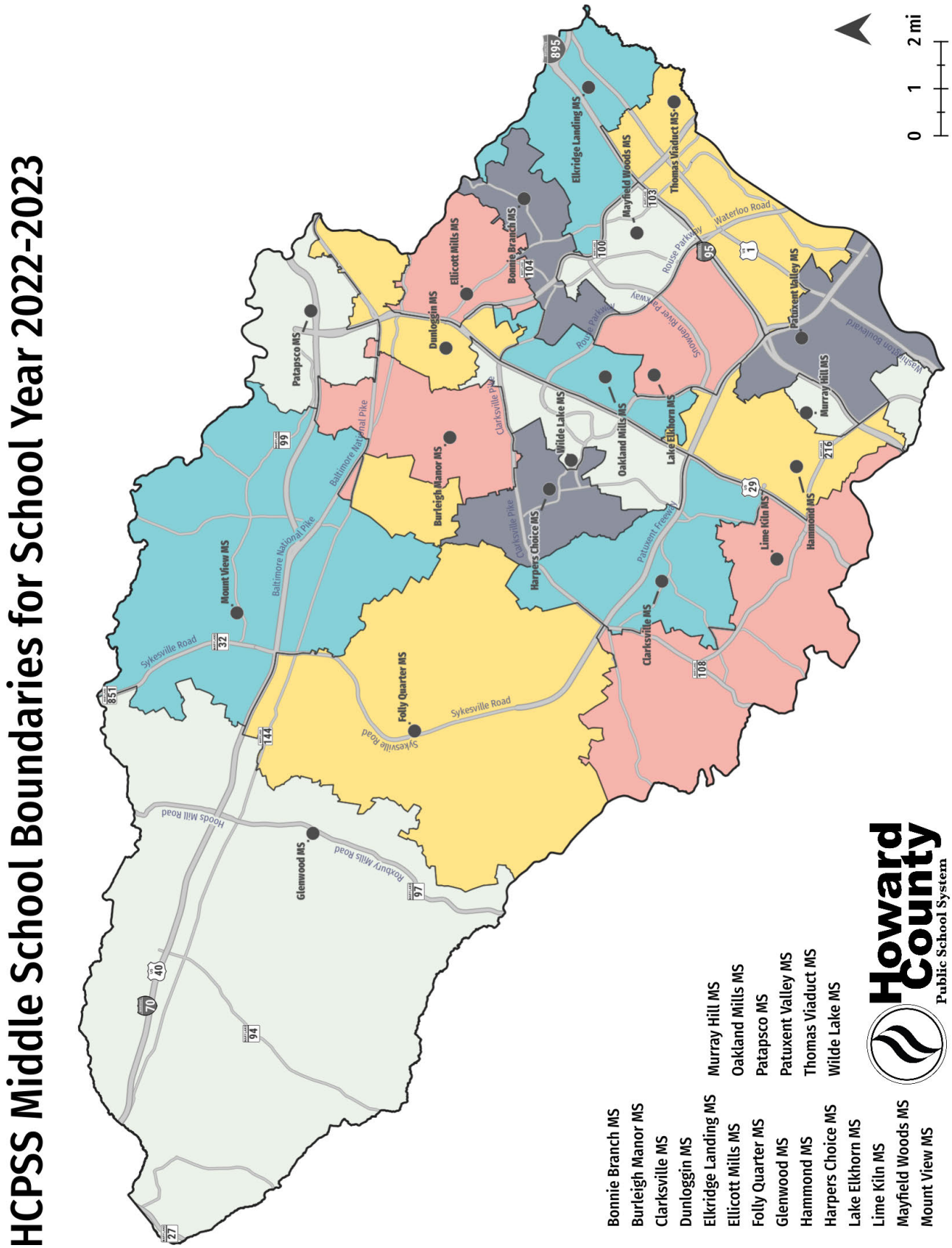
Middle schools in the southeast are projected to reach 99 percent capacity utilization in School Year 2022-2023. With large residential developments in the Forest Ridge ES and Hammond ES attendance areas, the impacts will be felt at the middle school level as well. Hammond MS and Patuxent Valley MS will be utilized over 100 percent for School Year 2022-2023, with Murray Hill MS approaching 100 percent by 2027. Updated projections show this group will increase enrollment through 2031, reaching 112 percent capacity utilization in 2031. Patuxent Valley MS was the most recently renovated school in this group, with approximately 100 seats added in 2014. Murray Hill MS and Hammond MS have six and three relocatable classrooms, respectively. This grouping of middle schools will need approximately 250 additional seats to maintain 100 percent capacity utilization through 2031. The recommendation is to consider options for additions to middle schools in this region for the latter part of this decade. Specifically, Murray Hill MS and Hammond MS should be considered, with seats needed no later than 2028. These schools will be monitored closely and considered for placement of relocatable classrooms on an annual basis.

Middle School Summary

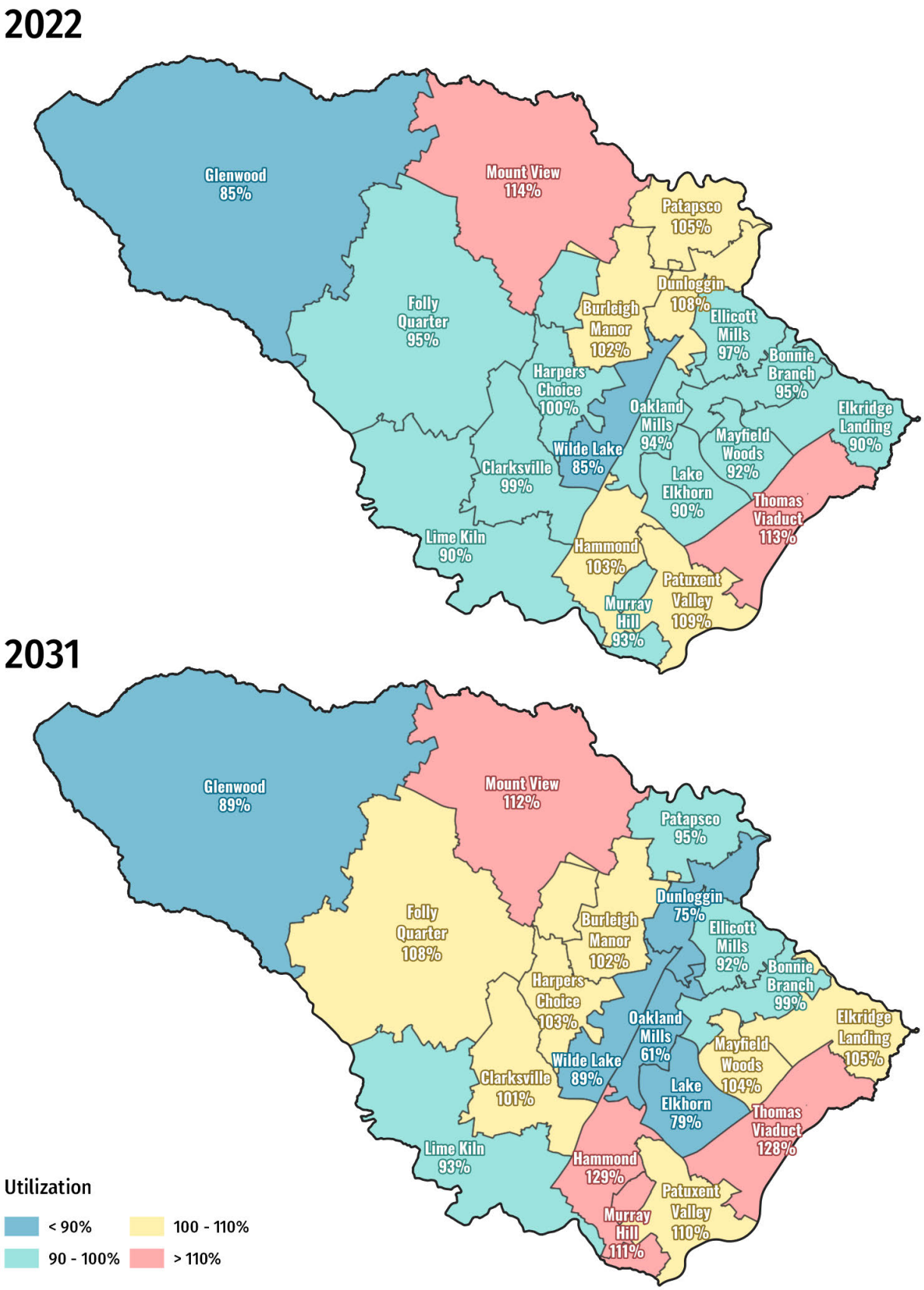
Schools	Projected SY2022-23 Utilization	Projected SY2031-32 Utilization	Approx. seats needed for 100% through 2031	Strategies
Thomas Viaduct MS	113	128	200	Relocatables; Community Room conversion; OMMS addition
Burleigh Manor MS, Dunloggin MS, Mount View MS, Patapsco MS,	107	111	300	Relocatables; DMS and PMS additions
Hammond MS, Murray Hill MS, Patuxent Valley MS	99	112	250	Relocatables; SE MS addition; K-8 renovation

All utilizations and estimated seat counts are from HCPSS 2022 enrollment projection presented in this report. These projections are updated every year, requiring re-evaluation of needs and strategies. This is a summary, other factors may be considered in developing strategies for addressing crowded schools.

Middle Schools - School Year 2022-2023 Boundaries



Middle Schools Utilization Map



2031 utilization map includes proposed additions to existing schools, as recommended in the strategies, but does not include new schools or potential future boundary changes.

Middle Schools - Pre-Measures Chart

Pre-Measures

MIDDLE SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Board of Education's Requested FY 2023 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, Board of Education's FY 2023 requested capacities, and Board Approved School Boundaries for School Year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Bonnie Branch MS		701	701	701	668	95.3	671	95.7	697	99.4	693	98.9	702	100.1	696	99.3	699	99.7	708	101.0	697	99.4	692	98.7	688	98.1	710	101.3
Burleigh Manor MS		779	779	779	791	101.5	744	95.5	756	97.0	746	95.8	781	100.3	794	101.9	810	104.0	810	104.0	799	102.6	796	102.2	800	102.7	799	102.6
Clarksville MS		643	643	643	637	99.1	629	97.8	656	102.0	667	103.7	672	104.5	648	100.8	656	102.0	658	102.3	671	104.4	648	100.8	627	97.5	629	97.8
Dunloggin MS	A	565	565	565	609	107.8	608	107.6	584	103.4	582	103.0	582	103.0	586	73.4	588	73.7	585	73.3	595	74.6	597	74.8	603	75.6	602	75.4
Elkridge Landing MS		779	779	779	698	89.6	711	91.3	759	97.4	784	100.6	794	101.9	796	102.2	788	101.2	818	105.0	817	104.9	815	104.6	803	103.1	795	102.1
Ellicott Mills MS		701	701	701	681	97.1	683	97.4	658	93.9	662	94.4	641	91.4	635	90.6	632	90.2	640	91.3	642	91.6	642	91.6	652	93.0	673	96.0
Folly Quarter MS		662	662	662	646	97.6	657	99.2	669	101.1	687	103.8	723	109.2	734	110.9	741	111.9	723	109.2	714	107.9	715	108.0	716	108.2	702	106.0
Glenwood MS		545	545	545	463	85.0	459	84.2	467	85.7	477	87.5	467	85.7	459	84.2	443	81.3	460	84.4	458	84.0	483	88.6	489	89.7	499	91.6
Hammond MS		604	604	604	624	103.3	684	113.2	743	123.0	771	127.6	778	128.8	806	133.4	798	132.1	810	134.1	785	130.0	782	129.5	797	132.0	823	136.3
Harpers Choice MS		506	506	506	504	99.6	510	100.8	536	105.9	532	105.1	514	101.6	524	103.6	525	103.8	544	107.5	523	103.4	520	102.8	512	101.2	519	102.6
Lake Elkhorn MS		643	643	643	579	90.0	542	84.3	525	81.6	516	80.2	525	81.6	527	82.0	537	83.5	540	84.0	532	82.7	506	78.7	501	77.9	497	77.3
Lime Kiln MS		721	721	721	648	89.9	665	92.2	702	97.4	722	100.1	763	105.8	789	109.4	776	107.6	737	102.2	720	99.9	671	93.1	663	92.0	640	88.8
Mayfield Woods MS		798	798	798	736	92.2	744	93.2	806	101.0	837	104.9	856	107.3	857	107.4	865	108.4	853	106.9	840	105.3	831	104.1	839	105.1	824	103.3
Mount View MS		798	798	798	907	113.7	912	114.3	900	112.8	862	108.0	871	109.1	878	110.0	890	111.5	894	112.0	890	111.5	890	111.5	899	112.7	907	113.7
Murray Hill MS		662	662	662	618	93.4	629	95.0	653	98.6	661	99.8	654	98.8	696	105.1	754	113.9	775	117.1	757	114.4	735	111.0	726	109.7	736	111.2
Oakland Mills MS	A	506	506	506	474	93.7	485	95.8	493	97.4	484	95.7	492	97.2	493	61.8	513	64.3	519	65.0	511	64.0	490	61.4	488	61.2	485	60.8
Patapsco MS		643	643	643	677	105.3	668	103.9	701	109.0	735	114.3	777	120.8	788	122.6	794	123.5	813	126.4	810	126.0	797	124.0	790	122.9	787	122.4
Patuxent Valley MS		760	760	760	828	108.9	805	105.9	801	105.4	826	108.7	827	108.8	858	112.9	822	108.2	848	111.6	838	110.3	834	109.7	849	111.7	881	115.9
Thomas Viaduct MS		740	740	740	836	113.0	842	113.8	807	109.1	790	106.8	834	112.7	882	119.2	938	126.8	925	125.0	948	128.1	947	128.0	945	127.7	905	122.3
Wilde Lake MS		740	740	740	629	85.0	622	84.1	630	85.1	607	82.0	608	82.2	596	80.5	631	85.3	643	86.9	656	88.6	659	89.1	665	89.9	686	92.7
Countywide Totals		13496	13496	13496	13253	98.2	13270	98.3	13543	100.3	13641	101.1	13861	102.7	14042	100.1	14200	101.3	14303	102.0	14203	101.3	14050	100.2	14052	100.2	14099	100.6

'A' includes additions as reflected in FY 2023 CIP for grades 6-8

Post-Measures

MIDDLE SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Proposed FY 2024 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, potential FY 2024 requested capacities and Board of Education approved school boundaries for school year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Bonnie Branch MS		701	701	701	668	95.3	671	95.7	697	99.4	693	98.9	702	100.1	696	99.3	699	99.7	708	101.0	697	99.4	692	98.7	688	98.1	710	101.3
Burleigh Manor MS		779	779	779	791	101.5	744	95.5	756	97.0	746	95.8	781	100.3	794	101.9	810	104.0	810	104.0	799	102.6	796	102.2	800	102.7	799	102.6
Clarksville MS		643	643	643	637	99.1	629	97.8	656	102.0	667	103.7	672	104.5	648	100.8	656	102.0	658	102.3	671	104.4	648	100.8	627	97.5	629	97.8
Dunloggin MS	A	565	565	565	609	107.8	608	107.6	584	103.4	582	72.9	582	72.9	586	73.4	588	73.7	585	73.3	595	74.6	597	74.8	603	75.6	602	75.4
Elkridge Landing MS		779	779	779	698	89.6	711	91.3	759	97.4	784	100.6	794	101.9	796	102.2	788	101.2	818	105.0	817	104.9	815	104.6	803	103.1	795	102.1
Ellicott Mills MS		701	701	701	681	97.1	683	97.4	658	93.9	662	94.4	641	91.4	635	90.6	632	90.2	640	91.3	642	91.6	642	91.6	652	93.0	673	96.0
Folly Quarter MS		682	662	662	646	94.7	657	99.2	669	101.1	687	103.8	723	109.2	734	110.9	741	111.9	723	109.2	714	107.9	715	108.0	716	108.2	702	106.0
Glenwood MS		545	545	545	463	85.0	459	84.2	467	85.7	477	87.5	467	85.7	459	84.2	443	81.3	460	84.4	458	84.0	483	88.6	489	89.7	499	91.6
Hammond MS		604	604	604	624	103.3	684	113.2	743	123.0	771	127.6	778	128.8	806	133.4	798	132.1	810	134.1	785	130.0	782	129.5	797	132.0	823	136.3
Harpers Choice MS		506	506	506	504	99.6	510	100.8	536	105.9	532	105.1	514	101.6	524	103.6	525	103.8	544	107.5	523	103.4	520	102.8	512	101.2	519	102.6
Lake Elkhorn MS		643	643	643	579	90.0	542	84.3	525	81.6	516	80.2	525	81.6	527	82.0	537	83.5	540	84.0	532	82.7	506	78.7	501	77.9	497	77.3
Lime Kiln MS		721	721	721	648	89.9	665	92.2	702	97.4	722	100.1	763	105.8	789	109.4	776	107.6	737	102.2	720	99.9	671	93.1	663	92.0	640	88.8
Mayfield Woods MS		798	798	798	736	92.2	744	93.2	806	101.0	837	104.9	856	107.3	857	107.4	865	108.4	853	106.9	840	105.3	831	104.1	839	105.1	824	103.3
Mount View MS		798	798	798	907	113.7	912	114.3	900	112.8	862	108.0	871	109.1	878	110.0	890	111.5	894	112.0	890	111.5	890	111.5	899	112.7	907	113.7
Murray Hill MS		662	662	662	618	93.4	629	95.0	653	98.6	661	99.8	654	98.8	696	105.1	754	113.9	775	117.1	757	114.4	735	111.0	726	109.7	736	111.2
Oakland Mills MS	A	506	506	798	474	93.7	485	95.8	493	61.8	484	60.7	492	61.7	493	61.8	513	64.3	519	65.0	511	64.0	490	61.4	488	61.2	485	60.8
Patapsco MS	A	643	643	643	677	105.3	668	103.9	701	109.0	735	114.3	777	120.8	788	122.6	794	94.9	813	97.1	810	96.8	797	95.2	790	94.4	787	94.0
Patuxent Valley MS		760	760	760	828	108.9	805	105.9	801	105.4	826	108.7	827	108.8	858	112.9	822	108.2	848	111.6	838	110.3	834	109.7	849	111.7	881	115.9
Thomas Viaduct MS		740	740	740	836	113.0	842	113.8	807	109.1	790	106.8	834	112.7	882	119.2	938	126.8	925	125.0	948	128.1	947	128.0	945	127.7	905	122.3
Wilde Lake MS		740	740	740	629	85.0	622	84.1	630	85.1	607	82.0	608	82.2	596	80.5	631	85.3	643	86.9	656	88.6	659	89.1	665	89.9	686	92.7
Countywide Totals		13516	13496	13788	13253	98.1	13270	98.3	13543	98.2	13641	97.3	13861	98.9	14042	100.1	14200	99.9	14303	100.6	14203	99.9	14050	98.8	14052	98.9	14099	99.2

'A' includes additions as proposed for FY 2024 CIP for grades 6-8

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

This post-measures chart does not include impacts from any boundary scenario. This chart is only showing the impact of capacity changes from programmatic changes and proposed capital plans. Impacts on capacity utilization from boundary scenarios are found in the appendix along with the associated map and other resulting data.

High Schools Needs and Strategies

High School Needs and Strategies: In School Year 2022-2023, most high schools will remain within an acceptable target utilization range per Board Policy 6010 School Attendance Areas; however, there are five schools that are projected to be above 110 percent capacity utilization. These are Hammond HS, Howard HS, Long Reach HS, Mt Hebron HS, and Reservoir HS. The opening of New HS #13 and Hammond HS renovation/addition are planned to accommodate enrollment growth in the Route 1 area. Two schools, Glenelg HS and River Hill HS are projected to be utilized between 90-100 percent. The remaining five high schools will be utilized between 100-110 percent.

The fastest-growing area of the County is served by five high schools: Hammond HS, Howard HS, Long Reach HS, Oakland Mills, and Reservoir HS. This area of the county, anchored by the Route 1 Corridor, has seen tremendous residential development over the last fifteen years due to rezoning, orientation to transit, and proximity to major commuter routes and employment. This grouping of schools is projected to be utilized at approximately 113 percent for School Year 2022-2023, needing approximately 1,650 seats to maintain 100 percent utilization through 2030. Recent capital investment has added over 1,400 seats at the elementary level, and over 800 seats at the middle level. The most recent high school investment near this area was an addition to Howard HS completed in 2007. Boundary adjustments adopted in 2019 for implementation in School Year 2020-2021 reduced crowding at Hammond HS, Howard HS, and Long Reach HS by better utilizing Oakland Mills HS and other schools to the west. The School Year 2023-2024 completion of New HS #13 and 200 seat addition at Hammond HS will provide needed capacity to balance this region through 2030. Boundary adjustments will be needed to make the most of these added seats, balancing relief from crowding with all considerations in Policy 6010. This boundary review will be completed in 2022, with boundary adjustments adopted in November of 2022.

Mt Hebron HS will be utilized at 116 percent for School Year 2022-2023 increasing to over 130 percent by 2030. An additional 400 seats will be needed to maintain 100 percent utilization through 2030. Enrollment growth has been steady at Mt Hebron HS, with the most recent renovation and addition completed in 2011. Five relocatable classrooms have been placed at Mt Hebron HS, with reevaluation for placement of additional units on an annual basis. Boundary review with the opening of New HS #13 may extend to Mt Hebron HS, providing some relief. An addition at Centennial HS is recommended for 2027 will provide another opportunity for relief through targeted boundary adjustment.

Marriotts Ridge HS and Centennial HS serve neighborhoods in the Ellicott City and West Friendship areas. Boundary adjustments implemented in School Year 2020-2021 provided some relief from crowding at schools to the east using available capacity at Marriotts Ridge HS. For School Year 2022-2023, projections show 103 percent utilization at these two schools combined. Enrollment growth, primarily at Marriotts Ridge HS is driving an increase to 111 percent utilization at this grouping of schools. Approximately 325 seats will be needed to maintain 100 percent utilization at these schools through 2031. Centennial HS currently has nine relocatable classrooms to provide interim capacity. A 340-seat addition to Centennial HS is proposed for 2027. Focused boundary review could leverage these seats to provide needed capacity for projected enrollment growth. Additionally, the proposed 400 seat addition at Oakland Mills HS for 2031 could provide relief for any remaining crowding

High Schools Needs and Strategies

School Year 2022/23 (Spring 2022 Projection)

	Lowest	*<90%*	*90-100%*	*100-110%*	*>110%*	*Highest*
HS	95%	0	2	5	5	124%

beyond the planned near term projects through focused boundary review

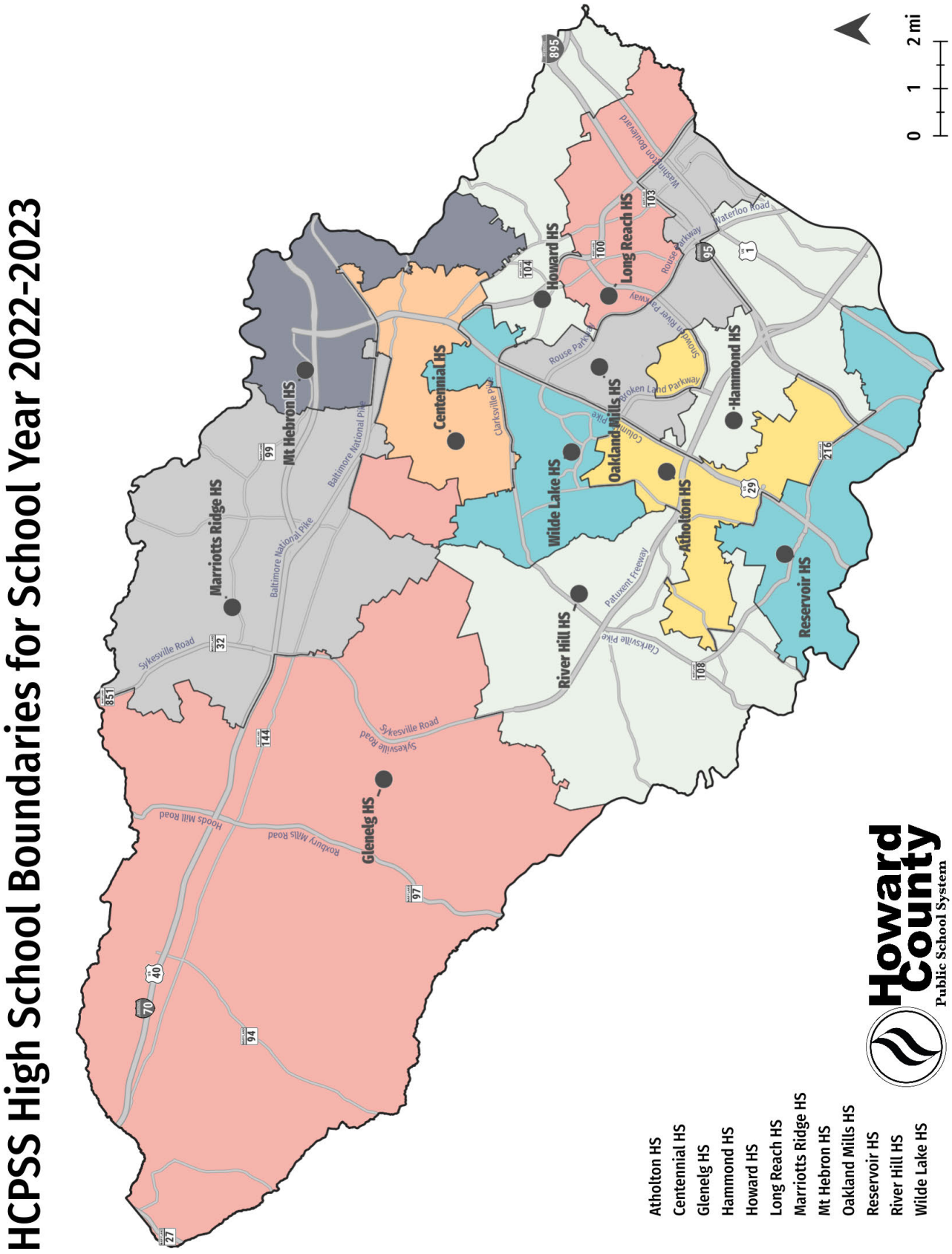
At this time, enrollment projections do not validate the need to begin planning for a fourteenth high school before 2031. With the rate of enrollment growth expected to be slower, as discussed earlier in this report, strategically placed additions may provide adequate capacity for enrollment within the ten to fifteen-year timeframe. Projections are updated annually and long-range planning will be adjusted as needed.

High School Summary

Schools	Projected SY2022-23 Utilization	Projected SY2031-32 Utilization	Approx. seats needed for 100% through 2031	Strategies
Hammond HS, Long Reach HS, Oakland Mills HS, Reservoir HS, Howard HS	113	123	1600	Relocatables; HS #13; HaHS addition; OMHS addition in LRMP
Mt Hebron HS	116	133	400	Relocatables; HS #13 boundary review; CHS addition
Centennial HS, Marriotts Ridge HS	108	117	325	Relocatables; CHS addition

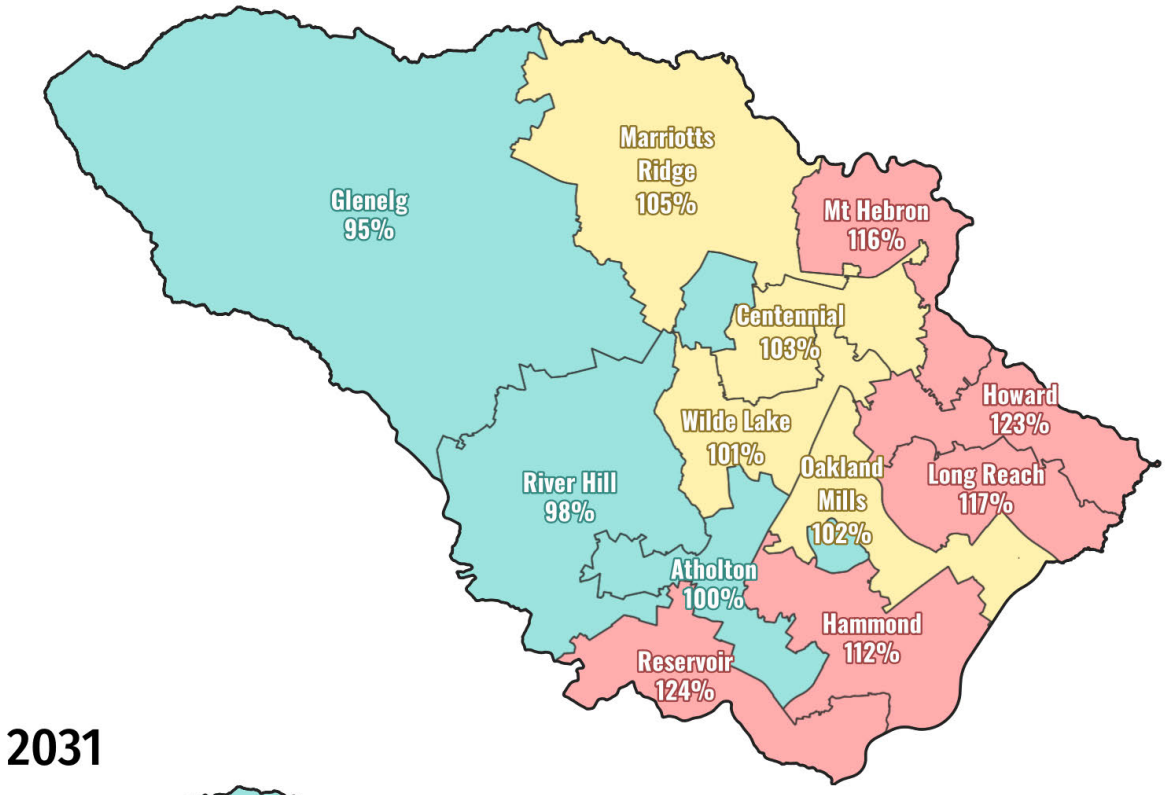
All utilizations and estimated seat counts are from HCPSS 2022 enrollment projection presented in this report. These projections are updated every year, requiring re-evaluation of needs and strategies. This is a summary, other factors may be considered in developing strategies for addressing crowded schools.

High Schools - School Year 2022-2023 Boundaries

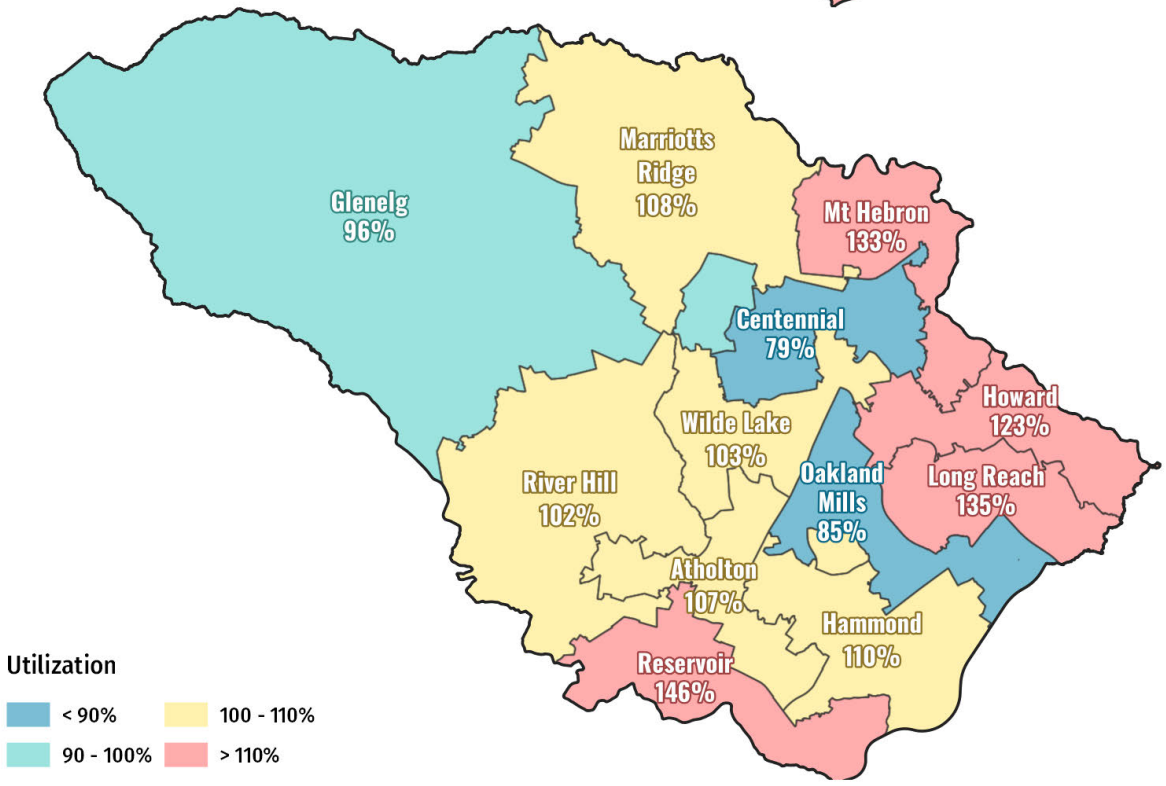


High Schools Utilization Map

2022



2031



2031 utilization map includes proposed additions to existing schools, as recommended in the strategies, but does not include new schools or potential future boundary changes.

High Schools - Pre-Measures Chart

Pre-Measures

HIGH SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Board of Education's Requested FY 2023 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, Board of Education's FY 2023 requested capacities, and Board Approved School Boundaries for School Year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Atholton HS		1440	1440	1440	1535	106.6	1574	109.3	1574	109.3	1578	109.6	1557	108.1	1557	108.1	1584	110.0	1598	111.0	1612	111.9	1643	114.1	1665	115.6	1657	115.1
Centennial HS	A	1360	1360	1360	1406	103.4	1400	102.9	1404	103.2	1409	103.6	1363	100.2	1340	98.5	1321	97.1	1322	97.2	1331	97.9	1338	78.7	1345	79.1	1349	79.4
Glenelg HS		1420	1420	1420	1342	94.5	1358	95.6	1369	96.4	1340	94.4	1308	92.1	1342	94.5	1349	95.0	1369	96.4	1392	98.0	1369	96.4	1369	96.4	1374	96.8
Hammond HS	A	1220	1420	1420	1364	111.8	1419	99.9	1510	106.3	1551	109.2	1546	108.9	1552	109.3	1597	112.5	1590	112.0	1636	115.2	1666	117.3	1660	116.9	1680	118.3
Howard HS		1400	1400	1400	1715	122.5	1694	121.0	1670	119.3	1642	117.3	1627	116.2	1673	119.5	1702	121.6	1711	122.2	1741	124.4	1727	123.4	1739	124.2	1740	124.3
Long Reach HS		1488	1488	1488	1735	116.6	1775	119.3	1780	119.6	1808	121.5	1800	121.0	1865	125.3	1898	127.6	1948	130.9	2012	135.2	2008	134.9	2025	136.1	2043	137.3
Marriotts Ridge HS		1615	1615	1615	1693	104.8	1692	104.8	1712	106.0	1754	108.6	1748	108.2	1761	109.0	1732	107.2	1701	105.3	1741	107.8	1744	108.0	1758	108.9	1765	109.3
Mt Hebron HS		1400	1400	1400	1621	115.8	1661	118.6	1707	121.9	1725	123.2	1710	122.1	1737	124.1	1766	126.1	1790	127.9	1839	131.4	1863	133.1	1867	133.4	1885	134.6
New HS #13	NS	0	1658	1658																								
New HS #14	NS	0	0	0																								
Oakland Mills HS		1400	1400	1400	1431	102.2	1450	103.6	1484	106.0	1475	105.4	1463	104.5	1475	105.4	1446	103.3	1470	105.0	1511	107.9	1536	109.7	1572	112.3	1577	112.6
Reservoir HS		1551	1551	1551	1924	124.0	1960	126.4	1945	125.4	1970	127.0	2002	129.1	2010	129.6	2123	136.9	2148	138.5	2199	141.8	2264	146.0	2251	145.1	2242	144.6
River Hill HS		1488	1488	1488	1457	97.9	1481	99.5	1455	97.8	1437	96.6	1424	95.7	1438	96.6	1477	99.3	1510	101.5	1517	101.9	1525	102.5	1523	102.4	1499	100.7
Wilde Lake HS		1424	1424	1424	1434	100.7	1461	102.6	1422	99.9	1457	102.3	1478	103.8	1471	103.3	1472	103.4	1463	102.7	1467	103.0	1467	103.0	1502	105.5	1507	105.8
Countywide Totals		17206	19064	19064	18657	108.4	18925	99.3	19032	99.8	19146	100.4	19026	99.8	19221	100.8	19467	102.1	19620	102.9	19998	104.9	20150	103.8	20276	104.5	20318	104.7

'A' includes additions as reflected in FY 2023 CIP for grades 9-12

'NS' New School proposed in FY 2023 Capital Budget

Post-Measures

HIGH SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Proposed FY 2024 Capital Budget Projects - Not Test for APFO

Chart reflects May 2022 Projections, potential FY 2024 requested capacities and Board of Education approved school boundaries for school year 2020-21.

		Capacity			2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34	
School		**2022**	**2023**	**2024**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**	**Proj**	**% Util.**
Atholton HS		1530	1530	1530	1535	100.3	1574	102.9	1574	102.9	1578	103.1	1557	101.8	1557	101.8	1584	103.5	1598	104.4	1612	105.4	1643	107.4	1665	108.8	1657	108.3
Centennial HS	A	1360	1360	1360	1406	103.4	1400	102.9	1404	103.2	1409	103.6	1363	100.2	1340	78.8	1321	77.7	1322	77.8	1331	78.3	1338	78.7	1345	79.1	1349	79.4
Glenelg HS		1420	1420	1420	1342	94.5	1358	95.6	1369	96.4	1340	94.4	1308	92.1	1342	94.5	1349	95.0	1369	96.4	1392	98.0	1369	96.4	1369	96.4	1374	96.8
Hammond HS	A	1220	1509	1509	1364	111.8	1419	94.0	1510	100.1	1551	102.8	1546	102.5	1552	102.8	1597	105.8	1590	105.4	1636	108.4	1666	110.4	1660	110.0	1680	111.3
Howard HS		1400	1400	1400	1715	122.5	1694	121.0	1670	119.3	1642	117.3	1627	116.2	1673	119.5	1702	121.6	1711	122.2	1741	124.4	1727	123.4	1739	124.2	1740	124.3
Long Reach HS		1488	1488	1488	1735	116.6	1775	119.3	1780	119.6	1808	121.5	1800	121.0	1865	125.3	1898	127.6	1948	130.9	2012	135.2	2008	134.9	2025	136.1	2043	137.3
Marriotts Ridge HS		1615	1615	1615	1693	104.8	1692	104.8	1712	106.0	1754	108.6	1748	108.2	1761	109.0	1732	107.2	1701	105.3	1741	107.8	1744	108.0	1758	108.9	1765	109.3
Mt Hebron HS		1400	1400	1400	1621	115.8	1661	118.6	1707	121.9	1725	123.2	1710	122.1	1737	124.1	1766	126.1	1790	127.9	1839	131.4	1863	133.1	1867	133.4	1885	134.6
New HS #13	NS	0	1658	1658																								
Oakland Mills HS	A	1400	1400	1400	1431	102.2	1450	103.6	1484	106.0	1475	105.4	1463	104.5	1475	105.4	1446	103.3	1470	105.0	1511	107.9	1536	85.3	1572	87.3	1577	87.6
Reservoir HS		1551	1551	1551	1924	124.0	1960	126.4	1945	125.4	1970	127.0	2002	129.1	2010	129.6	2123	136.9	2148	138.5	2199	141.8	2264	146.0	2251	145.1	2242	144.6
River Hill HS		1488	1488	1488	1457	97.9	1481	99.5	1455	97.8	1437	96.6	1424	95.7	1438	96.6	1477	99.3	1510	101.5	1517	101.9	1525	102.5	1523	102.4	1499	100.7
Wilde Lake HS		1424	1424	1424	1434	100.7	1461	102.6	1422	99.9	1457	102.3	1478	103.8	1471	103.3	1472	103.4	1463	102.7	1467	103.0	1467	103.0	1502	105.5	1507	105.8
Countywide Totals		17296	19243	19243	18657	107.9	18925	98.3	19032	98.9	19146	99.5	19026	98.9	19221	98.2	19467	99.4	19620	100.2	19998	102.1	20150	100.8	20276	101.5	20318	101.7

'NS' New School proposed for FY 2024 Capital Budget

This post-measures chart does not include impacts from any boundary scenario. This chart is only showing the impact of capacity changes from programmatic changes and proposed capital plans. Impacts on capacity utilization from boundary scenarios are found in the appendix along with the associated map and other resulting data.

Section 4

Foreseeable Attendance Area Adjustments

This report includes considerations for review of boundary adjustments for School Year 2023-2024.

June 2022

Foreseeable Attendance Area Adjustments Summary

Boundary Study and Foreseeable Attendance Area Adjustments
The Board of Education completed a comprehensive review of school boundaries in 2019, implementing many adjustments for School Year 2020-2021. These boundary adjustments resulted in a better distribution of over- and under-utilized schools.

On January 22, 2022, the Board directed the Superintendent to initiate the boundary review process outlined in Policy 6010 to create a boundary for New HS #13 and make associated adjustments. The direction allows for a focused effort on the boundary adjustments relevant to opening the new high school for School Year 2023-2024. Office of School Planning staff have been coordinating with other HCPSS offices and our Planning Consultant, Cooperative Strategies, Inc. to prepare and develop boundary options for the new school.

New HS #13 is under construction on a property near the intersection of MD32, I-95, US1 and Mission Rd. This location is within the current attendance area of Hammond HS. Beyond impacts to Hammond HS, adjustments will be made to other nearby high schools' boundaries in order to populate the new school. Additional adjustments will need to be made to maximize the impact of these new seats on high schools in the eastern part of the county. Adjustments will also be likely at the middle school level to minimize impacts on the feeder patterns.

This is not an elementary, countywide, or comprehensive boundary review.

Appendix A presents boundary plan options developed by our consultant. All of these plans represent ways to balance the criteria in Policy 6010 while adhering to the scope identified by the Board. These options include ideas from options presented to and by the Board in 2019 and the analysis and expertise of our consultant. One of the overarching themes was to maximize benefits relative to the Policy 6010 criteria while minimizing the number of students reassigned.

Additionally, Appendix B contains a sampling of the boundary plan optimization scenarios run by the Office of School Planning using the iRedistrict boundary analysis tool with the same data used to develop the consultant scenarios. Ultimately, this method didn't result in any useable plans but did seed some ideas used in the plans presented in Appendix A. Boundary plan creation relies on the expertise and experience of planners, supplemented by analysis and computer modeling. Community input garnered from an online survey and three in-person community engagement sessions provided stakeholder input.

Data

Demographic Data Reporting: The data used in the following considerations are shown as percentages and are calculated using official School Year 2021-2022 enrollment data. Geographic assignment is used, and records are aggregated by current and proposed attendance areas. These numbers are for planning purposes, and may not exactly match other reported numbers due to differences in timing and methodology. In adherence with the Family Educational Rights and Privacy Act of 1974 (FERPA), which restricts access to student records, values <=5% have been replaced with "<=5%" and values >=95% have been replaced with ">=95%".

Student Economically Disadvantaged Data: According to the Every Student Succeeds Act (ESSA) of 2018, students are identified as eligible for Economically Disadvantaged status based on Direct Certification. Students receive direct certification with family participation in SNAP or TANF, or if the student is a foster child, experiencing homelessness, migrant youth, or in Head Start. Previously, student socioeconomics were measured using participation in FARMs (Free And Reduced priced Meal services). For the School Year 2023-2024 boundary review, the Direct Certification data will be used instead of FARMs data due to reliability and data privacy concerns with the FARMS data. The data shows the percentage of population direct certified students living in each school's attendance area before and after the proposed attendance area adjustment plan.

Testing:
Testing data for Elementary and Middle Schools is comprised of fall 2021 MAP test-takers in grades 1-8. Students took an abridged version in the fall of 2021, with scoring compared to grade-level benchmarks for proficiency evaluation. MAP is an individualized, adaptive assessment so there are no universal proficiency standards. Testing data for high schools is comprised of fall 2021 test-takers in grades 9-11 with a PSAT score. Students were marked proficient based on the criteria below.

Grade	English Assessment	English Prof Level	Math Assessment	Math Prof Level
1-8	MAP ELA	Met/not met	MAP Math	Met/not met
9	PSAT 8/9	410	PSAT 8/9	450
10	PSAT NMSQT	430	PSAT NMSQT	480
11	PSAT NMSQT	460	PSAT NMSQT	510

English for Speakers of Other Languages (ESOL):
The data shows the percentage of students receiving English Second Language support living in each schools' attendance area before and after each boundary option.

Race:
The data shows the percent of students by race/ethnicity living in each schools' attendance area before and after the each boundary option.

Some options may indicate no change of demographic data for one or more of the schools. A school's geography may not be impacted by the scenario's boundary changes, or the boundary change minimally affects the specific measure so the resulting percentage remains the same.

Data

School facilities: A recently adopted policy update requires school facility assessments to be considered in the evaluation of boundary scenarios. Local assessments are ongoing, with needed repairs and upgrades planned and budgeted accordingly. State assessments are completed on an annual basis, with a selection of schools evaluated each year. All HCPSS schools have received a rating of "Adequate" or higher within the last 6 years. All school facilities in the HCPSS are adequate for the capacities calculated and presented in this report.

There are no deficiencies existing that would indicate the need to lower capacities.

Feasibility Study:
An Annual Review of Long-Term Capital Planning and Attendance Area Adjustment Options

Section 5

Appendices

June 2022

Appendix A – Feasibility Study Scenarios

Feasibility Study High School Boundary Scenarios – Introduction

In the spring of 2022, Cooperative Strategies and the HCPSS Office of School Planning developed 4 Scenarios for high school boundaries related to the opening of New HS #13 for SY 2023-24 and related boundary changes required to backfill enrollment and align feeds. These scenarios were developed to solicit feedback from the community that the Superintendent will consider as he develops his recommendation.

There are some minor changes at the middle school level, primarily focused on correcting small percentage High from Middle school feeds that may have resulted from the high school reassignments. The proposed level of impact is less than half of the impact of the 2019 process before any possible exemptions are granted in this process. The majority of the students impacted are moving to the new high school.

Feasibility Study High School Boundary Scenarios – Comparison of Scenarios to Policy

The table below provides a comparison of key metrics for each of the scenarios relative to decision principles outlined in Policy 6010. Metrics that align more closely with policy parameters are shaded in blue, and metrics that align less closely are shaded in red. Decision principles in Policy 6010 are not weighted or prioritized.

Decision Principle	Metrics Used	Status Quo		Scenario A		Scenario B		Scenario C		Scenario D	
Facility Utilization. Where reasonable, school attendance area utilization should stay within the capacity utilization range of 90-100% for as long a period of time as possible through the consideration of:											
		#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %
Efficient use of available capacity.	# of schools over 100% capacity for the 2023-24 school year	9	112%	7	105%	6	104%	7	105%	6	104%
	# of schools under 90% capacity for the 2023-24 school year	0		2	83%	1	83%	3	87%	0	
Long-range enrollment projections, capital plans and capacity needs of school infrastructures (e.g., cafeterias, restrooms and other shared core facilities).	# of schools over 100% capacity for the 2028-29 school year	9	116%	7	108%	8	104%	6	108%	7	105%
	# of schools under 90% capacity for the 2028-29 school year	0		3	83%	1	78%	2	81%	1	78%
The number of students that walk or receive bus service and the distance and time bused students travel.	Average Distance from Assigned High School (in miles)	2.19		2.16		2.16		2.23		2.11	
Community Stability. Where reasonable, school attendance areas should promote a sense of community in both the geographic place (e.g., neighborhood or place in which a student lives) and the promotion of a student from each school level through the consideration of:											
		#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %
Feeds that encourage keeping students together from one school to the next. For example, avoiding feeds of less than 15% at the receiving school.	# of low % feeds	8	10%	4	9%	5	10%	2	8%	5	10%
Maintaining contiguous communities or neighborhoods.	# of non-contiguous areas (islands)	2		2		2		1		4	
Demographic Characteristics of Student Population. Where reasonable, school attendance areas should promote the creation of a diverse and inclusive student body at both the sending and receiving schools through the consideration of:											
		#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %	#	Avg. %
Socioeconomic composition of each school's student population. (HS Average Direct Certification is 10.6%)	# of schools moving toward districtwide average			2	0.8%	2	2.1%	3	1.7%	3	0.9%
	# of schools moving away from districtwide average			4	-1.2%	4	-1.7%	3	-1.7%	2	-2.7%
	HS 13 direct certification percentage			13%		17%		21%		16%	
Number of students reassigned, taking into account the correlation between the number of students reassigned, the outcomes of other standards achieved in Section III.B. and the length of time those results are expected to be maintained.	Projected Number of Students Reassigned in SY 2023-24 (9-12)			2,791		3,136		2,825		2,476	
	Projected Number of Students Reassigned in SY 2023-24 (6-8)			86		95		95		46	

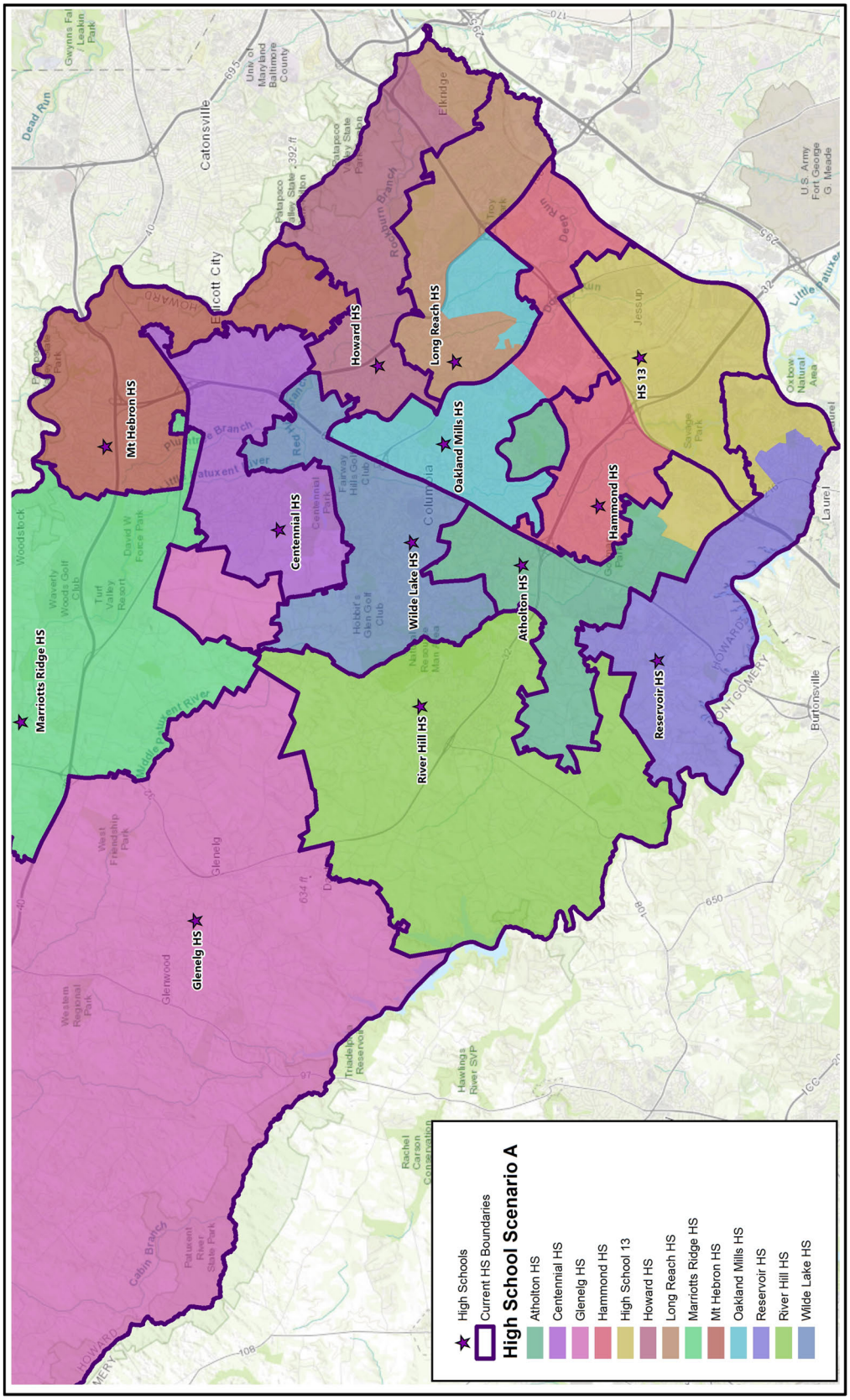
High School Scenario A – Summary & Planning Unit Moves

Scenario A creates a boundary for New HS #13 that extends to the south and the west, and with the exception of Mt Hebron HS, brings all high schools under 110% through SY 2028-29. This plan reassigns approximately 2,800 projected (SY 2023-24) high school students, of which more than half are assigned to the new high school. The New HS #13 boundary directly relieves Hammond HS, Atholton HS, and Reservoir HS, with the largest portion coming from Hammond. The available capacity at Hammond HS is used to receive students from Oakland Mills HS, with Oakland Mills then receiving students from Long Reach HS. This frees up capacity at Long Reach HS to receive students in the Elkridge area from Howard HS. Approximately 86 projected (SY 2023-24) middle school students are reassigned from Mayfield Woods MS to Lake Elkhorn MS in this scenario.

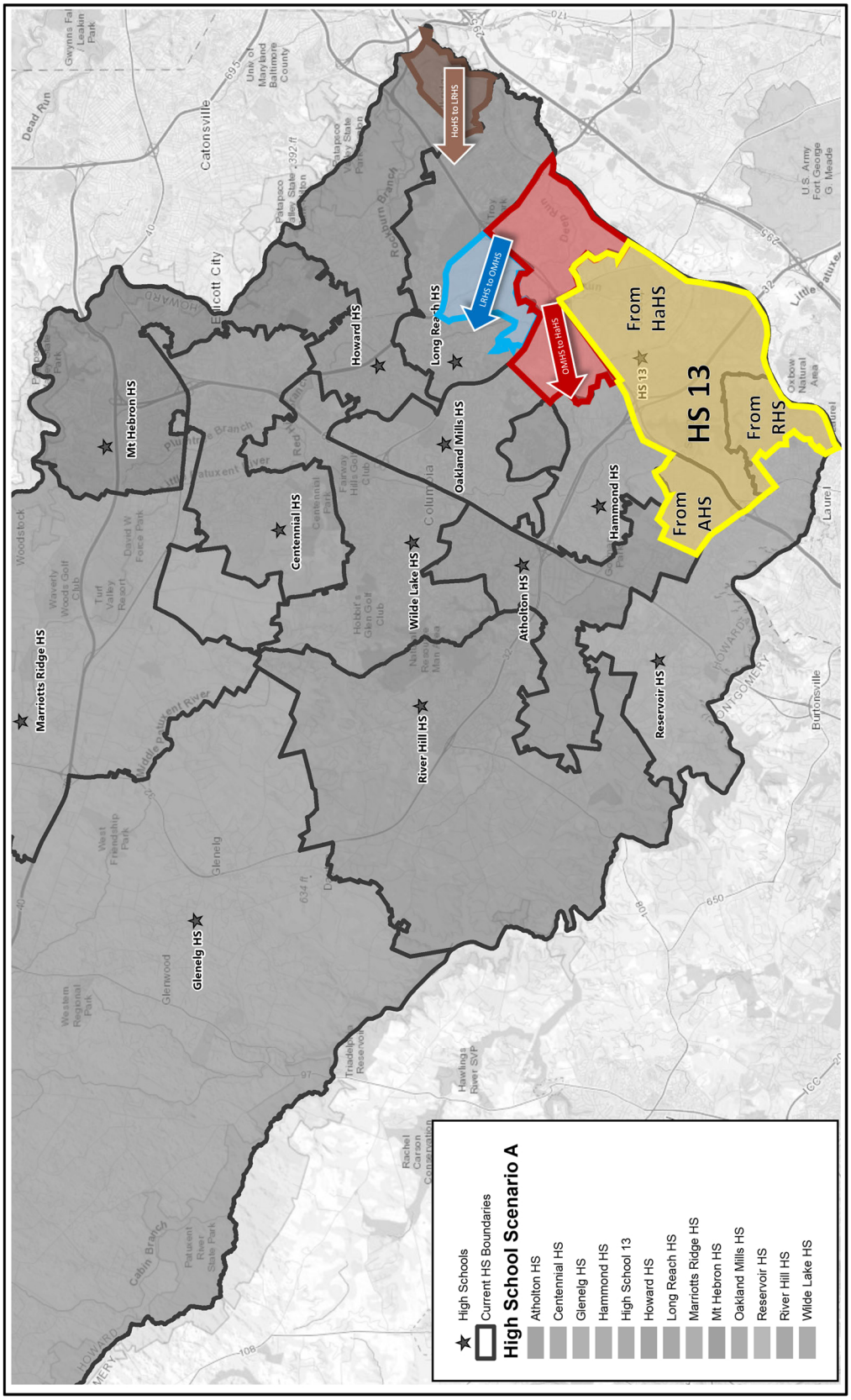
Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Mayfield Woods MS	Lake Elkhorn MS	86	81, 2081

Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Atholton HS	HS 13	295	5, 6, 1005, 1006, 2005, 2010
Hammond HS	HS 13	699	4, 21, 22, 23, 24, 25, 26, 27, 30, 32, 272, 1004, 1022, 1023, 1025, 1026, 1027, 1030, 1032, 1047, 1272, 2022, 2023, 2030, 3023
Howard HS	Long Reach HS	253	38, 39, 40, 124, 300, 1039, 1040, 1124, 1300, 2040
Long Reach HS	Oakland Mills HS	516	77, 78, 80, 82, 298, 1077, 1080, 1081, 1298, 2077, 2082
Oakland Mills HS	Hammond HS	522	33, 35, 45, 81, 266, 1033, 1035, 1082, 1266, 2035, 2081, 3035, 4035
Reservoir HS	HS 13	506	1, 12, 46, 47, 116, 260, 267, 1001, 1046, 1116, 1260, 2046, 2047, 3046, 3047, 4047

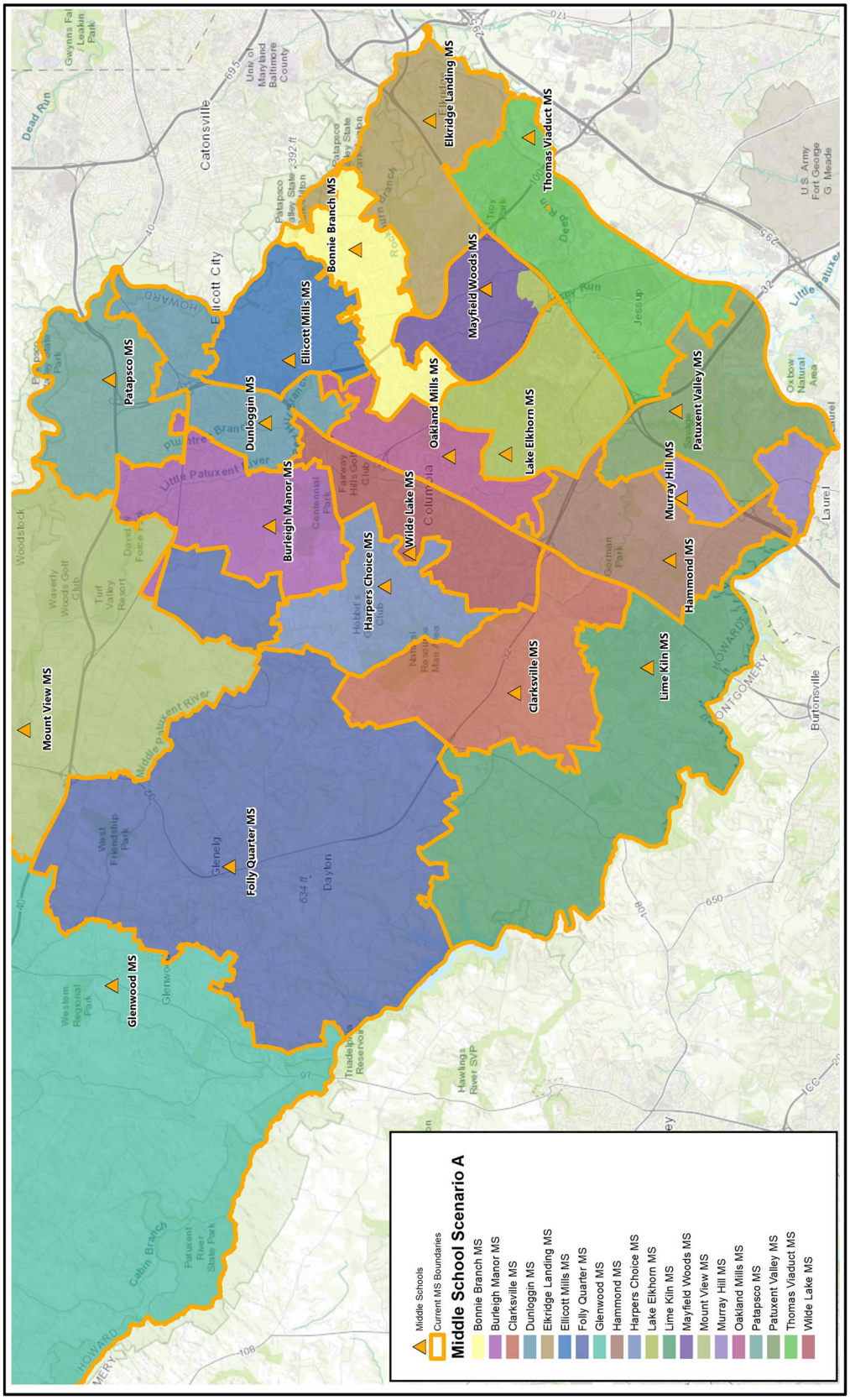
High School Scenario A – High School Maps



High School Scenario A – High School Maps



High School Scenario A – Middle School Maps



High School Scenario A – Middle School Maps

High School Scenario A – Projected High School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Atholton HS	11.4%	13.4%	1279	83.6%	1278	83.5%	1280	83.7%	1262	82.5%
Centennial HS	4.8%	4.8%	1400	102.9%	1404	103.2%	1409	103.6%	1363	100.2%
Glenelg HS	2.3%	2.3%	1358	95.6%	1369	96.4%	1340	94.4%	1308	92.1%
Hammond HS	19.4%	20.3%	1241	82.3%	1300	86.2%	1318	87.4%	1312	86.9%
Howard HS	9.8%	9.6%	1441	102.9%	1421	101.5%	1397	99.8%	1385	98.9%
Long Reach HS	15.3%	15.1%	1512	101.6%	1512	101.6%	1528	102.7%	1520	102.1%
Marriotts Ridge HS	3.5%	3.5%	1692	104.8%	1712	106.0%	1754	108.6%	1748	108.2%
Mt Hebron HS	5.0%	5.0%	1661	118.6%	1707	121.9%	1725	123.2%	1710	122.1%
Oakland Mills HS	20.0%	18.5%	1444	103.1%	1466	104.7%	1467	104.8%	1457	104.1%
Reservoir HS	10.1%	8.4%	1454	93.8%	1441	92.9%	1458	94.0%	1480	95.4%
River Hill HS	1.3%	1.3%	1481	99.5%	1455	97.8%	1437	96.6%	1424	95.7%
Wilde Lake HS	25.1%	25.1%	1461	102.6%	1422	99.9%	1457	102.3%	1478	103.8%
High School 13	-	13.2%	1500	90.5%	1544	93.1%	1575	95.0%	1580	95.3%
Countywide Total	10.6%		18925	98.3%	19032	98.9%	19146	99.5%	19026	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Atholton HS	1261	82.5%	1283	83.8%	1293	84.5%	1302	85.1%	1327	86.7%	1345	87.9%
Centennial HS	1340	78.8%	1321	77.7%	1322	77.8%	1331	78.3%	1338	78.7%	1345	79.1%
Glenelg HS	1342	94.5%	1349	95.0%	1369	96.4%	1392	98.0%	1369	96.4%	1369	96.4%
Hammond HS	1319	87.4%	1332	88.3%	1338	88.6%	1377	91.2%	1401	92.8%	1412	93.6%
Howard HS	1424	101.7%	1449	103.5%	1456	104.0%	1482	105.9%	1470	105.0%	1480	105.7%
Long Reach HS	1573	105.7%	1601	107.6%	1638	110.1%	1687	113.4%	1683	113.1%	1697	114.1%
Marriotts Ridge HS	1761	109.0%	1732	107.2%	1701	105.3%	1741	107.8%	1744	108.0%	1758	108.9%
Mt Hebron HS	1737	124.1%	1766	126.1%	1790	127.9%	1839	131.4%	1863	133.1%	1867	133.4%
Oakland Mills HS	1483	105.9%	1474	105.3%	1503	107.3%	1546	110.5%	1561	86.7%	1589	88.3%
Reservoir HS	1484	95.7%	1565	100.9%	1581	102.0%	1617	104.2%	1664	107.3%	1654	106.6%
River Hill HS	1438	96.6%	1477	99.3%	1510	101.5%	1517	101.9%	1525	102.5%	1523	102.4%
Wilde Lake HS	1471	103.3%	1472	103.4%	1463	102.7%	1467	103.0%	1467	103.0%	1502	105.5%
High School 13	1588	95.8%	1647	99.4%	1656	99.9%	1699	102.5%	1739	104.9%	1736	104.7%
Countywide Total	19221	98.2%	19467	99.4%	19620	100.2%	19998	102.1%	20150	100.8%	20276	101.5%

High School Scenario A – Projected Middle School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Bonnie Branch MS	9.4%	9.4%	671	95.7%	697	99.4%	693	98.9%	702	100.1%
Burleigh Manor MS	5.9%	5.9%	744	95.5%	756	97.0%	746	95.8%	781	100.3%
Clarksville MS	1.5%	1.5%	629	97.8%	656	102.0%	667	103.7%	672	104.5%
Dunloggin MS	10.0%	10.0%	608	107.6%	584	103.4%	582	72.9%	582	72.9%
Elkridge Landing MS	14.4%	14.4%	711	91.3%	759	97.4%	784	100.6%	794	101.9%
Ellicott Mills MS	6.5%	6.5%	683	97.4%	658	93.9%	662	94.4%	641	91.4%
Folly Quarter MS	1.1%	1.1%	657	99.2%	669	101.1%	687	103.8%	723	109.2%
Glenwood MS	5.2%	5.2%	459	84.2%	467	85.7%	477	87.5%	467	85.7%
Hammond MS	7.4%	7.4%	684	113.2%	743	123.0%	771	127.6%	778	128.8%
Harpers Choice MS	31.7%	31.7%	510	100.8%	536	105.9%	532	105.1%	514	101.6%
Lake Elkhorn MS	32.4%	31.9%	628	97.7%	618	96.1%	613	95.3%	624	97.0%
Lime Kiln MS	2.5%	2.5%	665	92.2%	702	97.4%	722	100.1%	763	105.8%
Mayfield Woods MS	18.3%	17.1%	658	82.5%	713	89.3%	740	92.8%	757	94.9%
Mount View MS	1.6%	1.6%	912	114.3%	900	112.8%	862	108.0%	871	109.1%
Murray Hill MS	15.5%	15.5%	629	95.0%	653	98.6%	661	99.8%	654	98.8%
Oakland Mills MS	26.3%	26.3%	485	95.8%	493	61.8%	484	60.7%	492	61.7%
Patapsco MS	5.6%	5.6%	668	103.9%	701	109.0%	735	114.3%	777	120.8%
Patuxent Valley MS	22.1%	22.1%	805	105.9%	801	105.4%	826	108.7%	827	108.8%
Thomas Viaduct MS	20.0%	20.0%	842	113.8%	807	109.1%	790	106.8%	834	112.7%
Wilde Lake MS	26.2%	26.2%	622	84.1%	630	85.1%	607	82.0%	608	82.2%
Countywide Total	12.9%		13270	98.3%	13543	98.2%	13641	97.3%	13861	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Bonnie Branch MS	696	99.3%	699	99.7%	708	101.0%	697	99.4%	692	98.7%	688	98.1%
Burleigh Manor MS	794	101.9%	810	104.0%	810	104.0%	799	102.6%	796	102.2%	800	102.7%
Clarksville MS	648	100.8%	656	102.0%	658	102.3%	671	104.4%	648	100.8%	627	97.5%
Dunloggin MS	586	73.4%	588	73.7%	585	73.3%	595	74.6%	597	74.8%	603	75.6%
Elkridge Landing MS	796	102.2%	788	101.2%	818	105.0%	817	104.9%	815	104.6%	803	103.1%
Ellicott Mills MS	635	90.6%	632	90.2%	640	91.3%	642	91.6%	642	91.6%	652	93.0%
Folly Quarter MS	734	110.9%	741	111.9%	723	109.2%	714	107.9%	715	108.0%	716	108.2%
Glenwood MS	459	84.2%	443	81.3%	460	84.4%	458	84.0%	483	88.6%	489	89.7%
Hammond MS	806	133.4%	798	132.1%	810	134.1%	785	130.0%	780	129.1%	795	131.6%
Harpers Choice MS	524	103.6%	525	103.8%	544	107.5%	523	103.4%	520	102.8%	512	101.2%
Lake Elkhorn MS	626	97.4%	637	99.1%	639	99.3%	629	97.8%	602	93.6%	598	93.0%
Lime Kiln MS	789	109.4%	776	107.6%	737	102.2%	720	99.9%	671	93.1%	663	92.0%
Mayfield Woods MS	758	95.0%	765	95.9%	754	94.5%	743	93.1%	735	92.1%	742	93.0%
Mount View MS	878	110.0%	890	111.5%	894	112.0%	890	111.5%	890	111.5%	899	112.7%
Murray Hill MS	696	105.1%	754	113.9%	775	117.1%	757	114.4%	735	111.0%	726	109.7%
Oakland Mills MS	493	61.8%	513	64.3%	519	65.0%	511	64.0%	490	61.4%	488	61.2%
Patapsco MS	788	122.6%	794	94.9%	813	97.1%	810	96.8%	797	95.2%	790	94.4%
Patuxent Valley MS	858	112.9%	822	108.2%	848	111.6%	838	110.3%	834	109.7%	849	111.7%
Thomas Viaduct MS	882	119.2%	938	126.8%	925	125.0%	948	128.1%	947	128.0%	945	127.7%
Wilde Lake MS	596	80.5%	631	85.3%	643	86.9%	656	88.6%	659	89.1%	665	89.9%
Countywide Total	14042	100.1%	14200	99.9%	14303	100.6%	14203	99.9%	14048	98.8%	14050	98.8%

High School Scenario A – High from Middle Feed Percentages

Calculated using SY21-22 enrollment, not projected enrollment

Existing Feeder <15% Improved

Existing Feeder <15%

New Feeder <15%

High from Middle Feed Percentage	Atholton HS	Centennial HS	Glenelg HS	Hammond HS	Howard HS	Long Reach HS	Marriotts Ridge HS	Mt Hebron HS	Oakland Mills HS	Reservoir HS	River Hill HS	Wilde Lake HS	High School 13
Bonnie Branch MS	0%	0%	0%	0%	58%	16%	0%	0%	0%	0%	0%	0%	0%
Burleigh Manor MS	0%	40%	0%	0%	0%	0%	28%	5%	0%	0%	0%	0%	0%
Clarksville MS	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%
Dunloggin MS	0%	32%	0%	0%	0%	0%	0%	15%	0%	0%	0%	10%	0%
Elkridge Landing MS	0%	0%	0%	0%	23%	40%	0%	0%	0%	0%	0%	0%	0%
Ellicott Mills MS	0%	28%	0%	0%	14%	0%	0%	24%	0%	0%	0%	0%	0%
Folly Quarter MS	0%	0%	47%	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%
Glenwood MS	0%	0%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hammond MS	21%	0%	0%	22%	0%	0%	0%	0%	0%	19%	0%	0%	0%
Harpers Choice MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	0%
Lake Elkhorn MS	25%	0%	0%	29%	0%	0%	0%	0%	23%	0%	0%	0%	0%
Lime Kiln MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	25%	0%	0%
Mayfield Woods MS	0%	0%	0%	0%	0%	22%	0%	0%	35%	0%	0%	0%	0%
Mount View MS	0%	0%	0%	0%	0%	0%	72%	0%	0%	0%	0%	0%	0%
Murray Hill MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	0%	20%
Oakland Mills MS	0%	0%	0%	0%	5%	0%	0%	0%	41%	0%	0%	0%	0%
Patapsco MS	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%	0%	0%	0%
Patuxent Valley MS	0%	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	60%
Thomas Viaduct MS	0%	0%	0%	31%	0%	23%	0%	0%	0%	0%	0%	0%	20%
Wilde Lake MS	38%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	0%

High School Scenario A – Race Percentages

High School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Atholton HS	<=5%	<=5%	18%	14%	34%	33%	<=5%	<=5%	12%	13%	7%	7%	29%	32%
Centennial HS	<=5%	<=5%	39%	39%	11%	11%	<=5%	<=5%	7%	7%	<=5%	<=5%	39%	39%
Glenelg HS	<=5%	<=5%	18%	18%	<=5%	<=5%	<=5%	<=5%	6%	6%	<=5%	<=5%	67%	67%
Hammond HS	<=5%	<=5%	12%	10%	38%	48%	<=5%	<=5%	18%	13%	7%	7%	25%	21%
Howard HS	<=5%	<=5%	19%	20%	25%	24%	<=5%	<=5%	8%	8%	7%	7%	41%	40%
Long Reach HS	<=5%	<=5%	12%	13%	31%	33%	<=5%	<=5%	26%	20%	<=5%	5%	26%	29%
Marriotts Ridge HS	<=5%	<=5%	42%	42%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	38%	38%
Mt Hebron HS	<=5%	<=5%	34%	34%	11%	11%	<=5%	<=5%	9%	9%	<=5%	<=5%	42%	42%
Oakland Mills HS	<=5%	<=5%	9%	9%	43%	33%	<=5%	<=5%	22%	28%	7%	7%	18%	24%
Reservoir HS	<=5%	<=5%	17%	18%	35%	31%	<=5%	<=5%	19%	18%	<=5%	5%	23%	27%
River Hill HS	<=5%	<=5%	38%	38%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	43%	43%
Wilde Lake HS	<=5%	<=5%	7%	7%	46%	46%	<=5%	<=5%	15%	15%	8%	8%	24%	24%
High School 13	-	<=5%	-	19%	-	38%	-	<=5%	-	21%	-	<=5%	-	17%
Countywide Average	<=5%		22%		25%		<=5%		13%		6%		34%	

Middle School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Bonnie Branch MS	<=5%	<=5%	18%	18%	20%	20%	<=5%	<=5%	15%	15%	8%	8%	39%	39%
Burleigh Manor MS	<=5%	<=5%	46%	46%	11%	11%	<=5%	<=5%	<=5%	<=5%	5%	5%	33%	33%
Clarksville MS	<=5%	<=5%	47%	47%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	34%	34%
Dunloggin MS	<=5%	<=5%	34%	34%	21%	21%	<=5%	<=5%	8%	8%	<=5%	<=5%	31%	31%
Elkridge Landing MS	<=5%	<=5%	20%	20%	28%	28%	<=5%	<=5%	7%	7%	7%	7%	39%	39%
Ellicott Mills MS	<=5%	<=5%	38%	38%	16%	16%	<=5%	<=5%	<=5%	<=5%	7%	7%	35%	35%
Folly Quarter MS	<=5%	<=5%	33%	33%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	47%	47%
Glenwood MS	<=5%	<=5%	9%	9%	<=5%	<=5%	<=5%	<=5%	8%	8%	7%	7%	71%	71%
Hammond MS	<=5%	<=5%	14%	14%	26%	26%	<=5%	<=5%	12%	12%	8%	8%	39%	39%
Harpers Choice MS	<=5%	<=5%	7%	7%	48%	48%	<=5%	<=5%	18%	18%	9%	9%	18%	18%
Lake Elkhorn MS	<=5%	<=5%	8%	9%	54%	50%	<=5%	<=5%	17%	20%	7%	6%	14%	15%
Lime Kiln MS	<=5%	<=5%	28%	28%	15%	15%	<=5%	<=5%	<=5%	<=5%	10%	10%	41%	41%
Mayfield Woods MS	<=5%	<=5%	15%	15%	27%	27%	<=5%	<=5%	29%	28%	6%	7%	22%	23%
Mount View MS	<=5%	<=5%	46%	46%	6%	6%	<=5%	<=5%	<=5%	<=5%	5%	5%	39%	39%
Murray Hill MS	<=5%	<=5%	19%	19%	43%	43%	<=5%	<=5%	21%	21%	5%	5%	12%	12%
Oakland Mills MS	<=5%	<=5%	8%	8%	35%	35%	<=5%	<=5%	27%	27%	8%	8%	23%	23%
Patapsco MS	<=5%	<=5%	34%	34%	13%	13%	<=5%	<=5%	11%	11%	<=5%	<=5%	39%	39%
Patuxent Valley MS	<=5%	<=5%	14%	14%	44%	44%	<=5%	<=5%	21%	21%	5%	5%	16%	16%
Thomas Viaduct MS	<=5%	<=5%	15%	15%	47%	47%	<=5%	<=5%	20%	20%	6%	6%	12%	12%
Wilde Lake MS	<=5%	<=5%	7%	7%	44%	44%	<=5%	<=5%	12%	12%	9%	9%	28%	28%
Countywide Average	<=5%		24%		26%		<=5%		12%		6%		31%	

High School Scenario A – ESOL Percentages

High School	% ESOL Participation	
	Base	Proposed
Atholton HS	<=5%	<=5%
Centennial HS	<=5%	<=5%
Glenelg HS	<=5%	<=5%
Hammond HS	6%	<=5%
Howard HS	<=5%	<=5%
Long Reach HS	10%	9%
Marriotts Ridge HS	<=5%	<=5%
Mt Hebron HS	<=5%	<=5%
Oakland Mills HS	6%	8%
Reservoir HS	5%	<=5%
River Hill HS	<=5%	<=5%
Wilde Lake HS	5%	5%
High School 13	-	7%
Countywide Average	<=5%	

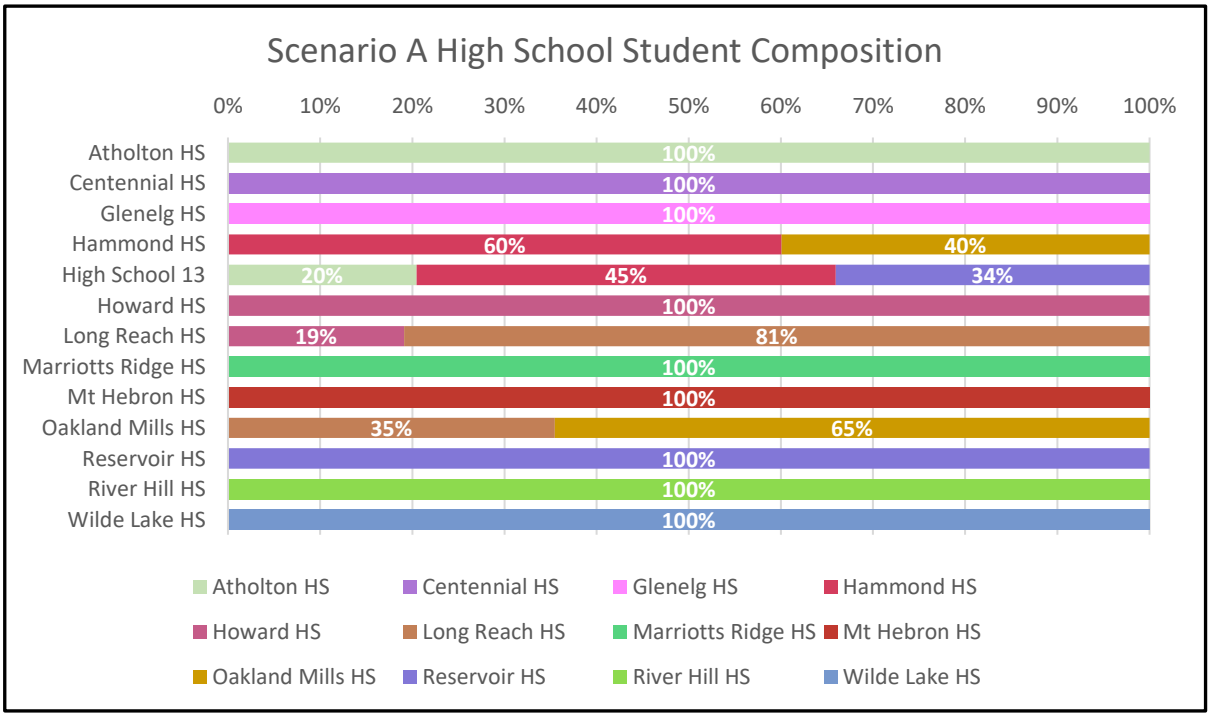
Middle School	% ESOL Participation	
	Base	Proposed
Bonnie Branch MS	8%	8%
Burleigh Manor MS	<=5%	<=5%
Clarksville MS	<=5%	<=5%
Dunloggin MS	<=5%	<=5%
Elkridge Landing MS	<=5%	<=5%
Ellicott Mills MS	<=5%	<=5%
Folly Quarter MS	<=5%	<=5%
Glenwood MS	<=5%	<=5%
Hammond MS	<=5%	<=5%
Harpers Choice MS	8%	8%
Lake Elkhorn MS	<=5%	<=5%
Lime Kiln MS	<=5%	<=5%
Mayfield Woods MS	10%	10%
Mount View MS	<=5%	<=5%
Murray Hill MS	10%	10%
Oakland Mills MS	9%	9%
Patapsco MS	7%	7%
Patuxent Valley MS	9%	9%
Thomas Viaduct MS	8%	8%
Wilde Lake MS	<=5%	<=5%
Countywide Average	<=5%	

High School Scenario A – Test Percentages

High School	PSAT-Read		PSAT-Math	
	Base	Proposed	Base	Proposed
Atholton HS	74%	73%	50%	49%
Centennial HS	85%	85%	68%	68%
Glenelg HS	84%	84%	65%	65%
Hammond HS	56%	55%	30%	31%
Howard HS	69%	70%	48%	49%
Long Reach HS	50%	53%	29%	31%
Marriotts Ridge HS	85%	85%	69%	69%
Mt Hebron HS	77%	77%	60%	60%
Oakland Mills HS	48%	48%	28%	28%
Reservoir HS	64%	67%	40%	43%
River Hill HS	89%	89%	75%	75%
Wilde Lake HS	55%	55%	35%	35%
High School 13	-	58%	-	33%
System-wide Total	70%		50%	

Middle School	PARCC-Read		PARCC-Math	
	Base	Proposed	Base	Proposed
Bonnie Branch MS	46%	46%	22%	22%
Burleigh Manor MS	62%	62%	35%	35%
Clarksville MS	68%	68%	43%	43%
Dunloggin MS	53%	53%	26%	26%
Elkridge Landing MS	42%	42%	18%	18%
Ellicott Mills MS	51%	51%	33%	33%
Folly Quarter MS	66%	66%	44%	44%
Glenwood MS	54%	54%	23%	23%
Hammond MS	40%	40%	20%	20%
Harpers Choice MS	25%	25%	7%	7%
Lake Elkhorn MS	24%	25%	6%	6%
Lime Kiln MS	56%	56%	31%	31%
Mayfield Woods MS	32%	32%	10%	10%
Mount View MS	63%	63%	40%	40%
Murray Hill MS	29%	29%	9%	9%
Oakland Mills MS	34%	34%	13%	13%
Patapsco MS	46%	46%	24%	24%
Patuxent Valley MS	27%	27%	7%	7%
Thomas Viaduct MS	27%	27%	10%	10%
Wilde Lake MS	39%	39%	14%	14%
System-wide Total	44%		21%	

High School Scenario A – High School Student Composition



High School Scenario A – Travel Distance

Average Travel Distance Using Roads in Miles from Planning Unit Centroids (Weighted by 2023-24 HS Students)

Distance	Current	Scenario A	Change
Atholton HS	2.2	2.1	Decrease
Centennial HS	2.1	2.1	Unchanged
Glenelg HS	3.4	3.4	Unchanged
Hammond HS	1.5	2.3	Increase
Howard HS	1.8	1.5	Decrease
Long Reach HS	1.4	1.7	Increase
Marriotts Ridge HS	3.8	3.8	Unchanged
Mt Hebron HS	2.4	2.4	Unchanged
Oakland Mills HS	1.8	1.1	Decrease
Reservoir HS	2.3	1.6	Decrease
River Hill HS	1.8	1.8	Unchanged
Wilde Lake HS	1.6	1.6	Unchanged
High School 13	0.0	2.4	New
Districtwide Average	**2.19**	**2.16**	**Decrease**

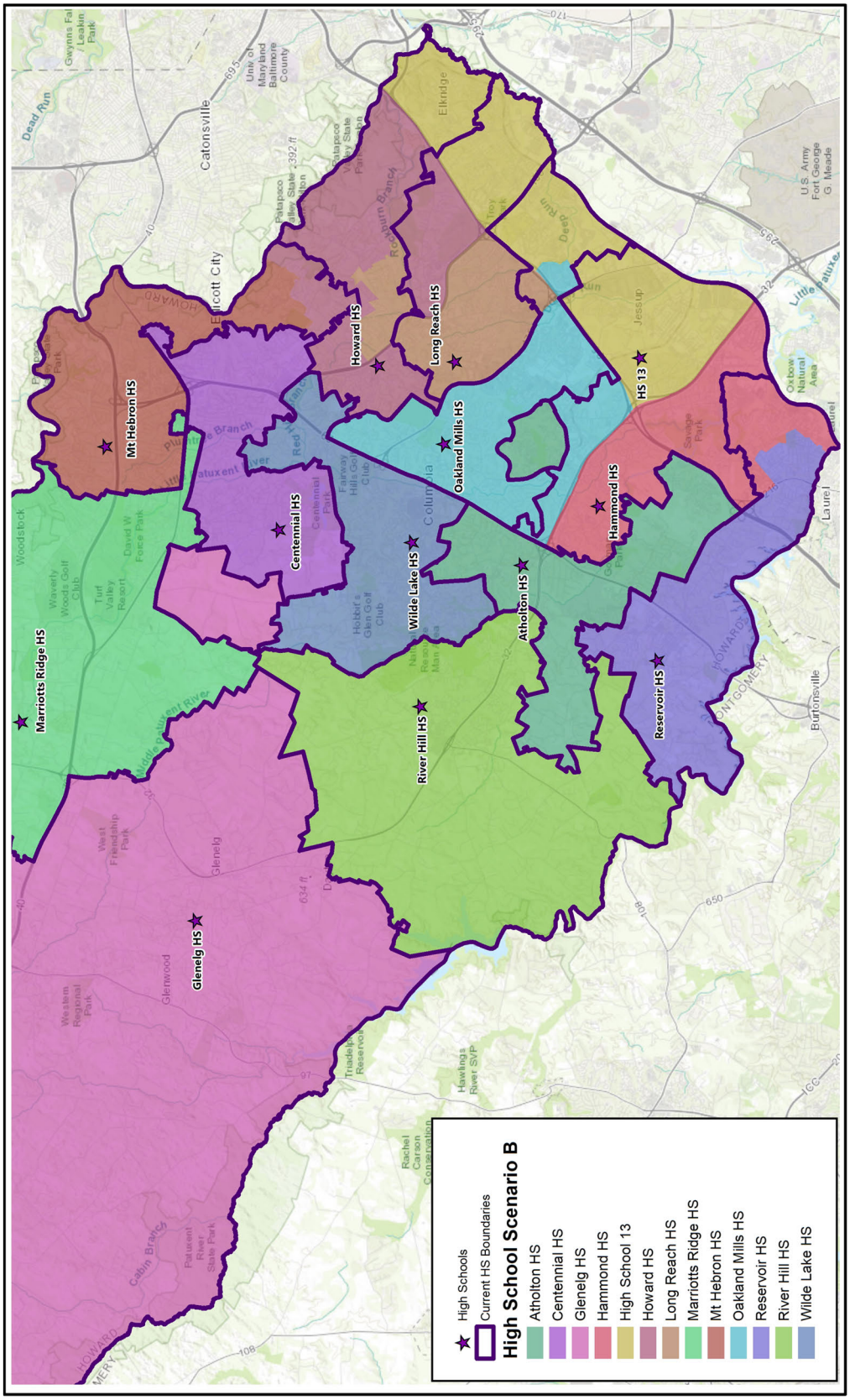
High School Scenario B – Summary & Planning Unit Moves

Scenario B creates a boundary for New HS #13 that extends from Highway 32 all the way north to the county line and brings all high schools under 110% through SY 2026-27. This plan reassigns approximately 3,100 projected (SY 2023-24) high school students, of which just under half are assigned to the new high school. The New HS #13 boundary directly relieves Hammond HS, Oakland Mills HS, Long Reach HS, and Howard HS, with the largest portion coming from Hammond. Hammond HS also sends students to Oakland Mills HS. The available capacity at Hammond HS is used to receive students from Reservoir HS. Long Reach HS and Howard HS swap areas. The available capacity at Howard HS is used to receive students from Mt Hebron HS. Approximately 95 projected (SY 2023-24) middle school students are reassigned from Hammond MS to Oakland Mills MS and from Oakland Mills MS to Ellicott Mills MS in this scenario.

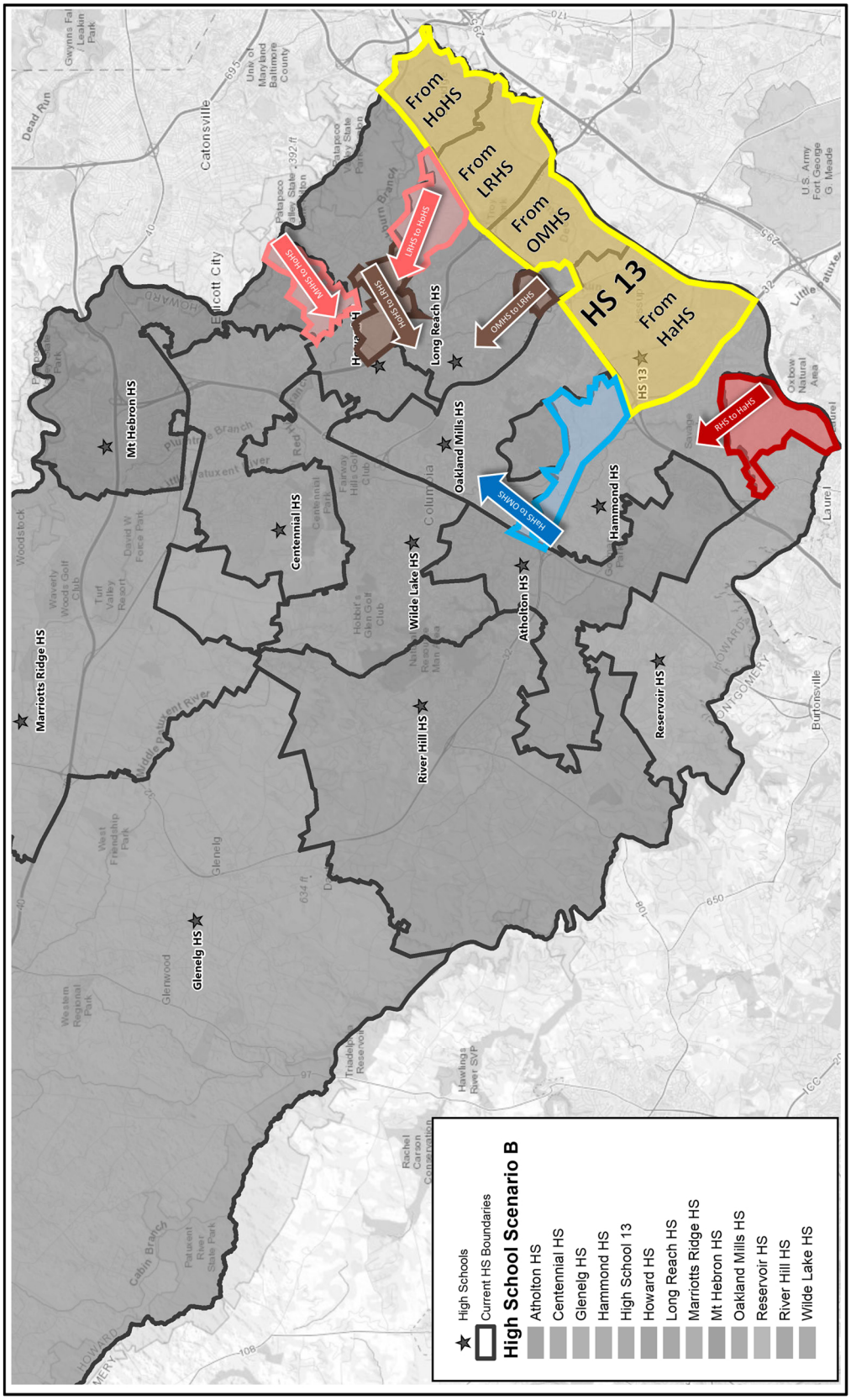
Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Hammond MS	Oakland Mills MS	49	57, 1057, 2057
Oakland Mills MS	Ellicott Mills MS	46	67, 311

Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Hammond HS	HS 13	389	24, 25, 26, 27, 30, 32, 1025, 1026, 1027, 1030, 1032, 2030
Hammond HS	Oakland Mills HS	290	48, 49, 50, 57, 1048, 1050, 1057, 2050, 2057, 3048
Howard HS	HS 13	532	38, 39, 40, 41, 42, 104, 300, 1039, 1040, 1041, 1042, 1124, 1300, 2040, 2041, 2042, 3041, 3042, 4041, 4042
Howard HS	Long Reach HS	238	84, 85, 95, 1085, 1095, 2074, 2085, 2095, 3085
Long Reach HS	HS 13	477	36, 37, 43, 1036, 1037, 1038, 1043, 2036, 2037, 2038, 2043
Long Reach HS	Howard HS	228	44, 83, 86, 87, 299, 1083, 1086, 1087, 1299, 2087, 3087, 4087
Mt Hebron HS	Howard HS	185	93, 94, 1093, 1094, 1310, 2093, 3093, 4093
Oakland Mills HS	HS 13	181	35, 1035, 2035, 3035
Oakland Mills HS	Long Reach HS	111	81, 2081
Reservoir HS	Hammond HS	506	1, 12, 46, 47, 116, 260, 267, 1001, 1046, 1116, 1260, 2046, 2047, 3046, 3047,

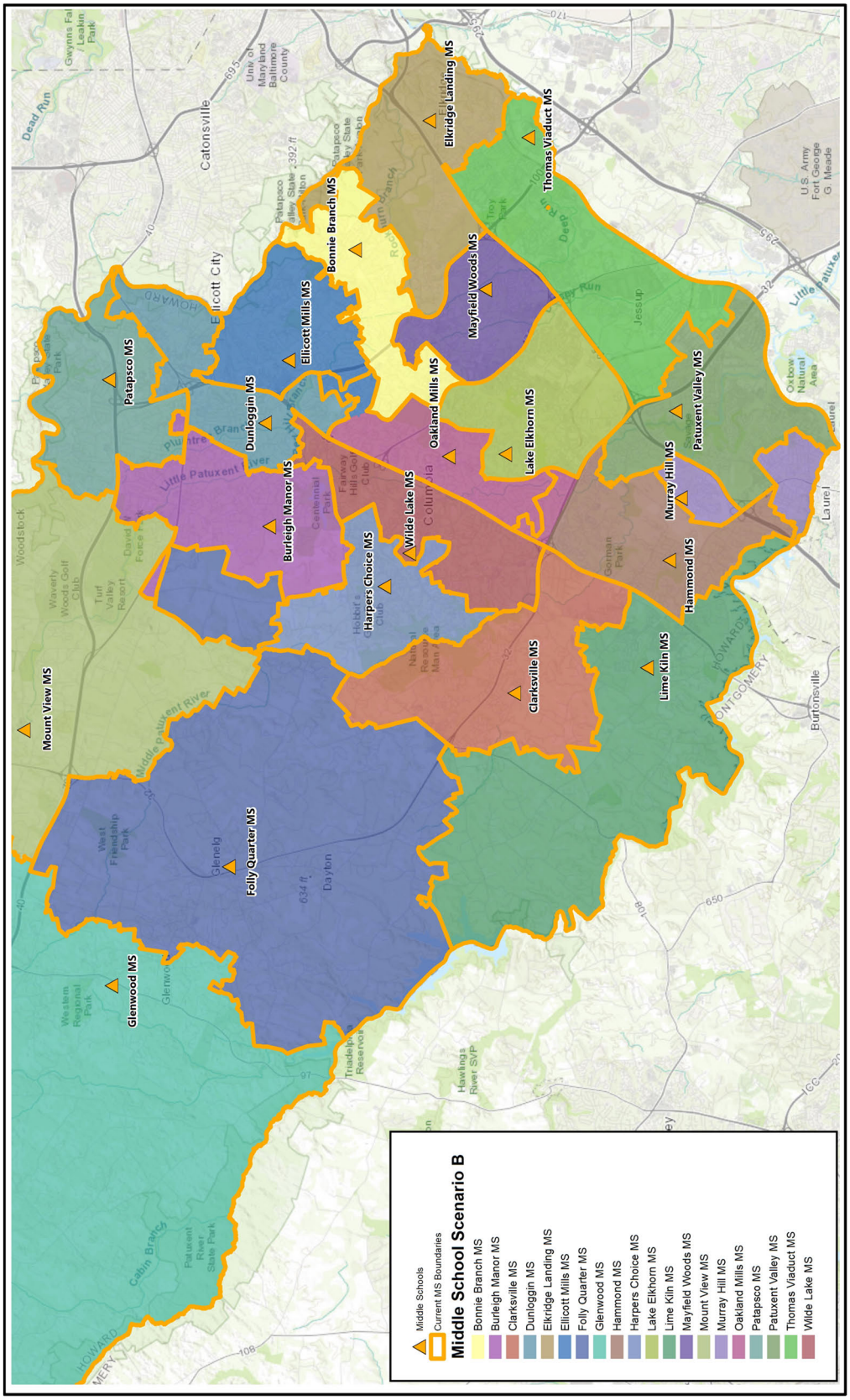
High School Scenario B – High School Maps



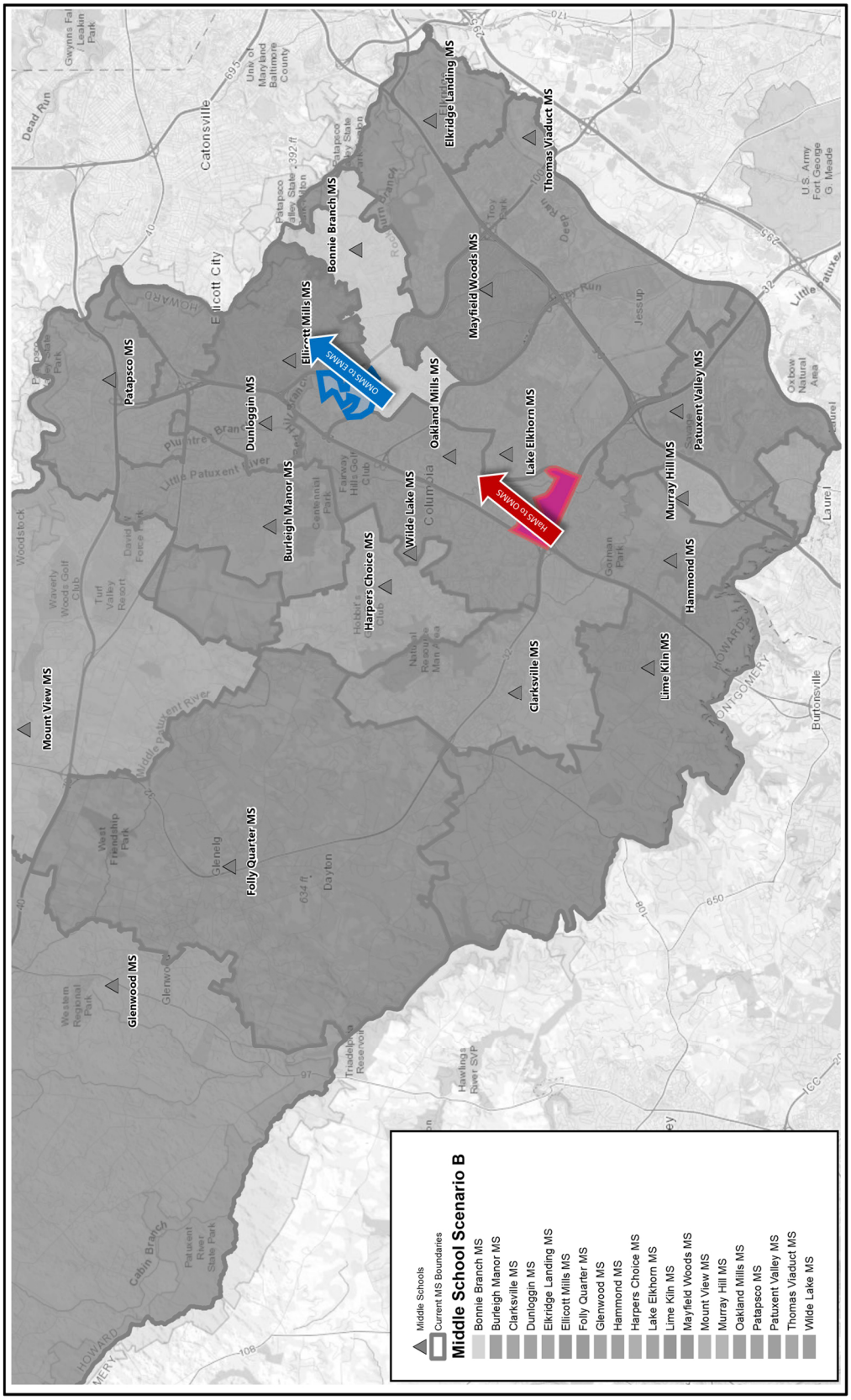
High School Scenario B – High School Maps



High School Scenario B – Middle School Maps



High School Scenario B – Middle School Maps



High School Scenario B – Projected High School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Atholton HS	11.4%	11.4%	1574	102.9%	1574	102.9%	1578	103.1%	1557	101.8%
Centennial HS	4.8%	4.8%	1400	102.9%	1404	103.2%	1409	103.6%	1363	100.2%
Glenelg HS	2.3%	2.3%	1358	95.6%	1369	96.4%	1340	94.4%	1308	92.1%
Hammond HS	19.4%	15.8%	1246	82.6%	1291	85.6%	1321	87.5%	1329	88.1%
Howard HS	9.8%	6.6%	1336	95.4%	1328	94.9%	1318	94.1%	1306	93.3%
Long Reach HS	15.3%	15.8%	1420	95.4%	1422	95.5%	1434	96.3%	1426	95.8%
Marriotts Ridge HS	3.5%	3.5%	1692	104.8%	1712	106.0%	1754	108.6%	1748	108.2%
Mt Hebron HS	5.0%	5.5%	1476	105.4%	1517	108.4%	1533	109.5%	1520	108.6%
Oakland Mills HS	20.0%	21.3%	1448	103.4%	1493	106.6%	1493	106.6%	1482	105.9%
Reservoir HS	10.1%	8.4%	1454	93.8%	1441	92.9%	1458	94.0%	1480	95.4%
River Hill HS	1.3%	1.3%	1481	99.5%	1455	97.8%	1437	96.6%	1424	95.7%
Wilde Lake HS	25.1%	25.1%	1461	102.6%	1422	99.9%	1457	102.3%	1478	103.8%
High School 13	-	16.6%	1579	95.2%	1604	96.7%	1615	97.4%	1606	96.9%
Countywide Total	10.6%		18925	98.3%	19032	98.9%	19146	99.5%	19026	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Atholton HS	1557	101.8%	1584	103.5%	1598	104.4%	1612	105.4%	1643	107.4%	1665	108.8%
Centennial HS	1340	78.8%	1321	77.7%	1322	77.8%	1331	78.3%	1338	78.7%	1345	79.1%
Glenelg HS	1342	94.5%	1349	95.0%	1369	96.4%	1392	98.0%	1369	96.4%	1369	96.4%
Hammond HS	1336	88.5%	1391	92.2%	1396	92.5%	1435	95.1%	1469	97.3%	1464	97.0%
Howard HS	1341	95.8%	1365	97.5%	1379	98.5%	1409	100.7%	1404	100.3%	1413	100.9%
Long Reach HS	1473	99.0%	1494	100.4%	1527	102.6%	1572	105.7%	1569	105.5%	1584	106.4%
Marriotts Ridge HS	1761	109.0%	1732	107.2%	1701	105.3%	1741	107.8%	1744	108.0%	1758	108.9%
Mt Hebron HS	1544	110.3%	1570	112.1%	1591	113.7%	1635	116.8%	1656	118.3%	1660	118.6%
Oakland Mills HS	1493	106.6%	1478	105.6%	1495	106.8%	1536	109.7%	1562	86.8%	1589	88.3%
Reservoir HS	1484	95.7%	1565	100.9%	1581	102.0%	1617	104.2%	1664	107.3%	1654	106.6%
River Hill HS	1438	96.6%	1477	99.3%	1510	101.5%	1517	101.9%	1525	102.5%	1523	102.4%
Wilde Lake HS	1471	103.3%	1472	103.4%	1463	102.7%	1467	103.0%	1467	103.0%	1502	105.5%
High School 13	1642	99.0%	1670	100.7%	1689	101.8%	1734	104.6%	1740	104.9%	1752	105.6%
Countywide Total	19221	98.2%	19467	99.4%	19620	100.2%	19998	102.1%	20150	100.8%	20276	101.5%

High School Scenario B – Projected Middle School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Bonnie Branch MS	9.4%	9.4%	671	95.7%	697	99.4%	693	98.9%	702	100.1%
Burleigh Manor MS	5.9%	5.9%	744	95.5%	756	97.0%	746	95.8%	781	100.3%
Clarksville MS	1.5%	1.5%	629	97.8%	656	102.0%	667	103.7%	672	104.5%
Dunloggin MS	10.0%	10.0%	608	107.6%	584	103.4%	582	72.9%	582	72.9%
Elkridge Landing MS	14.4%	14.4%	711	91.3%	759	97.4%	784	100.6%	794	101.9%
Ellicott Mills MS	6.5%	6.7%	729	104.0%	705	100.6%	708	101.0%	688	98.1%
Folly Quarter MS	1.1%	1.1%	657	99.2%	669	101.1%	687	103.8%	723	109.2%
Glenwood MS	5.2%	5.2%	459	84.2%	467	85.7%	477	87.5%	467	85.7%
Hammond MS	7.4%	7.8%	635	105.1%	689	114.2%	716	118.5%	722	119.6%
Harpers Choice MS	31.7%	31.7%	510	100.8%	536	105.9%	532	105.1%	514	101.6%
Lake Elkhorn MS	32.4%	32.4%	542	84.3%	525	81.6%	516	80.2%	525	81.6%
Lime Kiln MS	2.5%	2.5%	665	92.2%	702	97.4%	722	100.1%	763	105.8%
Mayfield Woods MS	18.3%	18.3%	744	93.2%	806	101.0%	837	104.9%	856	107.3%
Mount View MS	1.6%	1.6%	912	114.3%	900	112.8%	862	108.0%	871	109.1%
Murray Hill MS	15.5%	15.5%	629	95.0%	653	98.6%	661	99.8%	654	98.8%
Oakland Mills MS	26.3%	26.0%	488	96.5%	500	62.6%	493	61.8%	501	62.7%
Patapsco MS	5.6%	5.6%	668	103.9%	701	109.0%	735	114.3%	777	120.8%
Patuxent Valley MS	22.1%	22.1%	805	105.9%	801	105.4%	826	108.7%	827	108.8%
Thomas Viaduct MS	20.0%	20.0%	842	113.8%	807	109.1%	790	106.8%	834	112.7%
Wilde Lake MS	26.2%	26.2%	622	84.1%	630	85.1%	607	82.0%	608	82.2%
Countywide Total	12.9%		13270	98.3%	13543	98.2%	13641	97.3%	13861	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Bonnie Branch MS	696	99.3%	699	99.7%	708	101.0%	697	99.4%	692	98.7%	688	98.1%
Burleigh Manor MS	794	101.9%	810	104.0%	810	104.0%	799	102.6%	796	102.2%	800	102.7%
Clarksville MS	648	100.8%	656	102.0%	658	102.3%	671	104.4%	648	100.8%	627	97.5%
Dunloggin MS	586	73.4%	588	73.7%	585	73.3%	595	74.6%	597	74.8%	603	75.6%
Elkridge Landing MS	796	102.2%	788	101.2%	818	105.0%	817	104.9%	815	104.6%	803	103.1%
Ellicott Mills MS	682	97.3%	681	97.1%	689	98.4%	691	98.5%	689	98.2%	698	99.6%
Folly Quarter MS	734	110.9%	741	111.9%	723	109.2%	714	107.9%	715	108.0%	716	108.2%
Glenwood MS	459	84.2%	443	81.3%	460	84.4%	458	84.0%	483	88.6%	489	89.7%
Hammond MS	749	123.9%	741	122.8%	753	124.7%	730	120.9%	725	120.1%	740	122.5%
Harpers Choice MS	524	103.6%	525	103.8%	544	107.5%	523	103.4%	520	102.8%	512	101.2%
Lake Elkhorn MS	527	82.0%	537	83.5%	540	84.0%	532	82.7%	506	78.7%	501	77.9%
Lime Kiln MS	789	109.4%	776	107.6%	737	102.2%	720	99.9%	671	93.1%	663	92.0%
Mayfield Woods MS	857	107.4%	865	108.4%	853	106.9%	840	105.3%	831	104.1%	839	105.1%
Mount View MS	878	110.0%	890	111.5%	894	112.0%	890	111.5%	890	111.5%	899	112.7%
Murray Hill MS	696	105.1%	754	113.9%	775	117.1%	757	114.4%	735	111.0%	726	109.7%
Oakland Mills MS	503	63.1%	521	65.2%	527	66.0%	517	64.8%	498	62.4%	497	62.3%
Patapsco MS	788	122.6%	794	94.9%	813	97.1%	810	96.8%	797	95.2%	790	94.4%
Patuxent Valley MS	858	112.9%	822	108.2%	848	111.6%	838	110.3%	834	109.7%	849	111.7%
Thomas Viaduct MS	882	119.2%	938	126.8%	925	125.0%	948	128.1%	947	128.0%	945	127.7%
Wilde Lake MS	596	80.5%	631	85.3%	643	86.9%	656	88.6%	659	89.1%	665	89.9%
Countywide Total	14042	100.1%	14200	99.9%	14303	100.6%	14203	99.9%	14048	98.8%	14050	98.8%

High School Scenario B – High from Middle Feed Percentages

Calculated using SY21-22 enrollment, not projected enrollment

Existing Feeder <15% Improved

Existing Feeder <15%

New Feeder <15%

High from Middle Feed Percentage	Atholton HS	Centennial HS	Glenelg HS	Hammond HS	Howard HS	Long Reach HS	Marriotts Ridge HS	Mt Hebron HS	Oakland Mills HS	Reservoir HS	River Hill HS	Wilde Lake HS	High School 13
Bonnie Branch MS	0%	0%	0%	0%	46%	34%	0%	0%	0%	0%	0%	0%	0%
Burleigh Manor MS	0%	40%	0%	0%	0%	0%	28%	6%	0%	0%	0%	0%	0%
Clarksville MS	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%
Dunloggin MS	0%	32%	0%	0%	0%	0%	0%	17%	0%	0%	0%	10%	0%
Elkridge Landing MS	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	43%
Ellicott Mills MS	0%	28%	0%	0%	34%	0%	0%	14%	0%	0%	0%	0%	0%
Folly Quarter MS	0%	0%	47%	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%
Glenwood MS	0%	0%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hammond MS	17%	0%	0%	18%	0%	0%	0%	0%	0%	19%	0%	0%	0%
Harpers Choice MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	0%
Lake Elkhorn MS	20%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Lime Kiln MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	25%	0%	0%
Mayfield Woods MS	0%	0%	0%	0%	0%	66%	0%	0%	0%	0%	0%	0%	0%
Mount View MS	0%	0%	0%	0%	0%	0%	72%	0%	0%	0%	0%	0%	0%
Murray Hill MS	19%	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	0%	0%
Oakland Mills MS	0%	0%	0%	0%	0%	0%	0%	0%	45%	0%	0%	0%	0%
Patapsco MS	0%	0%	0%	0%	0%	0%	0%	63%	0%	0%	0%	0%	0%
Patuxent Valley MS	0%	0%	0%	82%	0%	0%	0%	0%	0%	0%	0%	0%	5%
Thomas Viaduct MS	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	51%
Wilde Lake MS	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	0%

High School Scenario B – Race Percentages

High School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Atholton HS	<=5%	<=5%	18%	18%	34%	34%	<=5%	<=5%	12%	12%	7%	7%	29%	29%
Centennial HS	<=5%	<=5%	39%	39%	11%	11%	<=5%	<=5%	7%	7%	<=5%	<=5%	39%	39%
Glenelg HS	<=5%	<=5%	18%	18%	<=5%	<=5%	<=5%	<=5%	6%	6%	<=5%	<=5%	67%	67%
Hammond HS	<=5%	<=5%	12%	12%	38%	41%	<=5%	<=5%	18%	17%	7%	7%	25%	23%
Howard HS	<=5%	<=5%	19%	20%	25%	21%	<=5%	<=5%	8%	8%	7%	7%	41%	44%
Long Reach HS	<=5%	<=5%	12%	12%	31%	28%	<=5%	<=5%	26%	27%	<=5%	<=5%	26%	27%
Marriotts Ridge HS	<=5%	<=5%	42%	42%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	38%	38%
Mt Hebron HS	<=5%	<=5%	34%	36%	11%	12%	<=5%	<=5%	9%	9%	<=5%	<=5%	42%	40%
Oakland Mills HS	<=5%	<=5%	9%	8%	43%	44%	<=5%	<=5%	22%	21%	7%	8%	18%	19%
Reservoir HS	<=5%	<=5%	17%	18%	35%	31%	<=5%	<=5%	19%	18%	<=5%	5%	23%	27%
River Hill HS	<=5%	<=5%	38%	38%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	43%	43%
Wilde Lake HS	<=5%	<=5%	7%	7%	46%	46%	<=5%	<=5%	15%	15%	8%	8%	24%	24%
High School 13	-	<=5%	-	16%	-	35%	-	<=5%	-	18%	-	<=5%	-	26%
Countywide Average	<=5%		22%		25%		<=5%		13%		6%		34%	

Middle School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Bonnie Branch MS	<=5%	<=5%	18%	18%	20%	20%	<=5%	<=5%	15%	15%	8%	8%	39%	39%
Burleigh Manor MS	<=5%	<=5%	46%	46%	11%	11%	<=5%	<=5%	<=5%	<=5%	5%	5%	33%	33%
Clarksville MS	<=5%	<=5%	47%	47%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	34%	34%
Dunloggin MS	<=5%	<=5%	34%	34%	21%	21%	<=5%	<=5%	8%	8%	<=5%	<=5%	31%	31%
Elkridge Landing MS	<=5%	<=5%	20%	20%	28%	28%	<=5%	<=5%	7%	7%	7%	7%	39%	39%
Ellicott Mills MS	<=5%	<=5%	38%	38%	16%	17%	<=5%	<=5%	<=5%	<=5%	7%	7%	35%	33%
Folly Quarter MS	<=5%	<=5%	33%	33%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	47%	47%
Glenwood MS	<=5%	<=5%	9%	9%	<=5%	<=5%	<=5%	<=5%	8%	8%	7%	7%	71%	71%
Hammond MS	<=5%	<=5%	14%	14%	26%	27%	<=5%	<=5%	12%	11%	8%	8%	39%	39%
Harpers Choice MS	<=5%	<=5%	7%	7%	48%	48%	<=5%	<=5%	18%	18%	9%	9%	18%	18%
Lake Elkhorn MS	<=5%	<=5%	8%	8%	54%	54%	<=5%	<=5%	17%	17%	7%	7%	14%	14%
Lime Kiln MS	<=5%	<=5%	28%	28%	15%	15%	<=5%	<=5%	<=5%	<=5%	10%	10%	41%	41%
Mayfield Woods MS	<=5%	<=5%	15%	15%	27%	27%	<=5%	<=5%	29%	29%	6%	6%	22%	22%
Mount View MS	<=5%	<=5%	46%	46%	6%	6%	<=5%	<=5%	<=5%	<=5%	5%	5%	39%	39%
Murray Hill MS	<=5%	<=5%	19%	19%	43%	43%	<=5%	<=5%	21%	21%	5%	5%	12%	12%
Oakland Mills MS	<=5%	<=5%	8%	5%	35%	34%	<=5%	<=5%	27%	27%	8%	8%	23%	26%
Patapsco MS	<=5%	<=5%	34%	34%	13%	13%	<=5%	<=5%	11%	11%	<=5%	<=5%	39%	39%
Patuxent Valley MS	<=5%	<=5%	14%	14%	44%	44%	<=5%	<=5%	21%	21%	5%	5%	16%	16%
Thomas Viaduct MS	<=5%	<=5%	15%	15%	47%	47%	<=5%	<=5%	20%	20%	6%	6%	12%	12%
Wilde Lake MS	<=5%	<=5%	7%	7%	44%	44%	<=5%	<=5%	12%	12%	9%	9%	28%	28%
Countywide Average	<=5%		24%		26%		<=5%		12%		6%		31%	

High School Scenario B – ESOL Percentages

High School	% ESOL Participation	
	Base	Proposed
Atholton HS	<=5%	<=5%
Centennial HS	<=5%	<=5%
Glenelg HS	<=5%	<=5%
Hammond HS	6%	6%
Howard HS	<=5%	<=5%
Long Reach HS	10%	11%
Marriotts Ridge HS	<=5%	<=5%
Mt Hebron HS	<=5%	<=5%
Oakland Mills HS	6%	6%
Reservoir HS	5%	<=5%
River Hill HS	<=5%	<=5%
Wilde Lake HS	5%	5%
High School 13	-	6%
Countywide Average	<=5%	

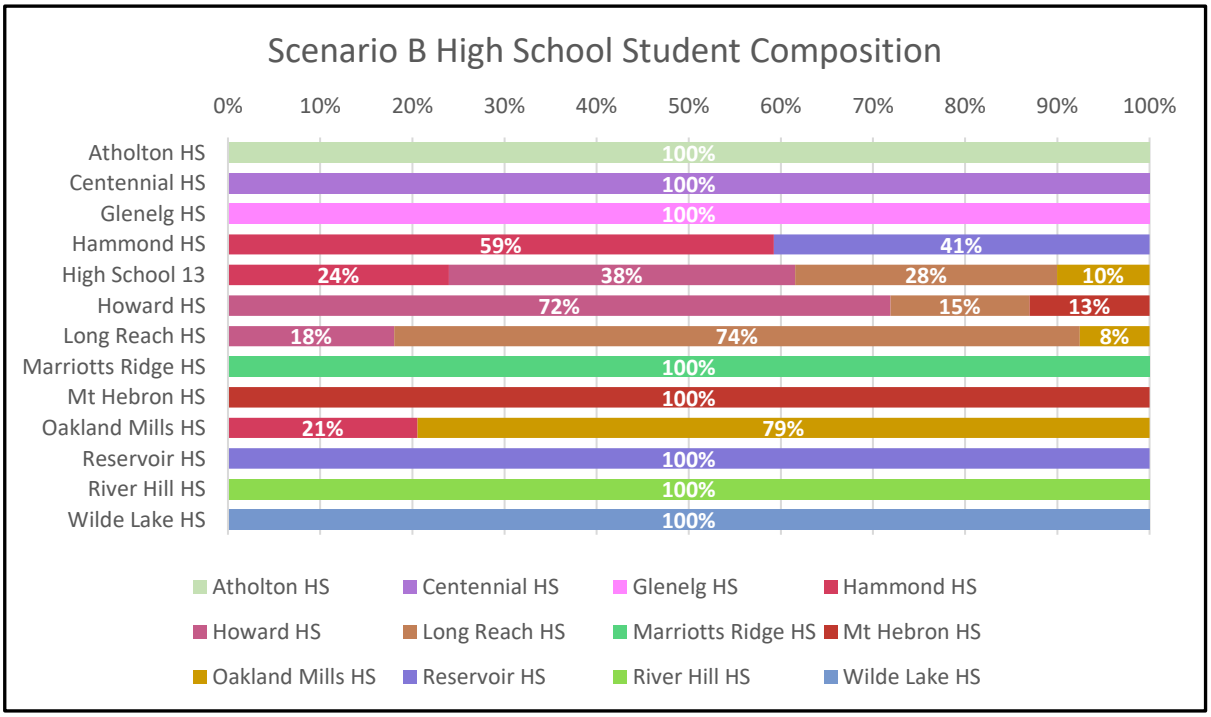
Middle School	% ESOL Participation	
	Base	Proposed
Bonnie Branch MS	8%	8%
Burleigh Manor MS	<=5%	<=5%
Clarksville MS	<=5%	<=5%
Dunloggin MS	<=5%	<=5%
Elkridge Landing MS	<=5%	<=5%
Ellicott Mills MS	<=5%	<=5%
Folly Quarter MS	<=5%	<=5%
Glenwood MS	<=5%	<=5%
Hammond MS	<=5%	<=5%
Harpers Choice MS	8%	8%
Lake Elkhorn MS	<=5%	<=5%
Lime Kiln MS	<=5%	<=5%
Mayfield Woods MS	10%	10%
Mount View MS	<=5%	<=5%
Murray Hill MS	10%	10%
Oakland Mills MS	9%	10%
Patapsco MS	7%	7%
Patuxent Valley MS	9%	9%
Thomas Viaduct MS	8%	8%
Wilde Lake MS	<=5%	<=5%
Countywide Average	<=5%	

High School Scenario B – Test Percentages

High School	PSAT-Read		PSAT-Math	
	Base	Proposed	Base	Proposed
Atholton HS	74%	74%	50%	50%
Centennial HS	85%	85%	68%	68%
Glenelg HS	84%	84%	65%	65%
Hammond HS	56%	58%	30%	33%
Howard HS	69%	72%	48%	53%
Long Reach HS	50%	50%	29%	31%
Marriotts Ridge HS	85%	85%	69%	69%
Mt Hebron HS	77%	76%	60%	60%
Oakland Mills HS	48%	50%	28%	27%
Reservoir HS	64%	67%	40%	43%
River Hill HS	89%	89%	75%	75%
Wilde Lake HS	55%	55%	35%	35%
High School 13	-	54%	-	29%
System-wide Total	70%		50%	

Middle School	PARCC-Read		PARCC-Math	
	Base	Proposed	Base	Proposed
Bonnie Branch MS	46%	46%	22%	22%
Burleigh Manor MS	62%	62%	35%	35%
Clarksville MS	68%	68%	43%	43%
Dunloggin MS	53%	53%	26%	26%
Elkridge Landing MS	42%	42%	18%	18%
Ellicott Mills MS	51%	51%	33%	31%
Folly Quarter MS	66%	66%	44%	44%
Glenwood MS	54%	54%	23%	23%
Hammond MS	40%	38%	20%	18%
Harpers Choice MS	25%	25%	7%	7%
Lake Elkhorn MS	24%	24%	6%	6%
Lime Kiln MS	56%	56%	31%	31%
Mayfield Woods MS	32%	32%	10%	10%
Mount View MS	63%	63%	40%	40%
Murray Hill MS	29%	29%	9%	9%
Oakland Mills MS	34%	35%	13%	14%
Patapsco MS	46%	46%	24%	24%
Patuxent Valley MS	27%	27%	7%	7%
Thomas Viaduct MS	27%	27%	10%	10%
Wilde Lake MS	39%	39%	14%	14%
System-wide Total	44%		21%	

High School Scenario B – High School Student Composition



High School Scenario B – Travel Distance

Distance	Current	Scenario B	Change
Atholton HS	2.2	2.2	Unchanged
Centennial HS	2.1	2.1	Unchanged
Glenelg HS	3.4	3.4	Unchanged
Hammond HS	1.5	2.4	Increase
Howard HS	1.8	1.4	Decrease
Long Reach HS	1.4	1.3	Decrease
Marriotts Ridge HS	3.8	3.8	Unchanged
Mt Hebron HS	2.4	2.5	Increase
Oakland Mills HS	1.8	2.0	Increase
Reservoir HS	2.3	1.6	Decrease
River Hill HS	1.8	1.8	Unchanged
Wilde Lake HS	1.6	1.6	Unchanged
High School 13	0.0	1.7	New
Districtwide Average	**2.19**	**2.16**	**Decrease**

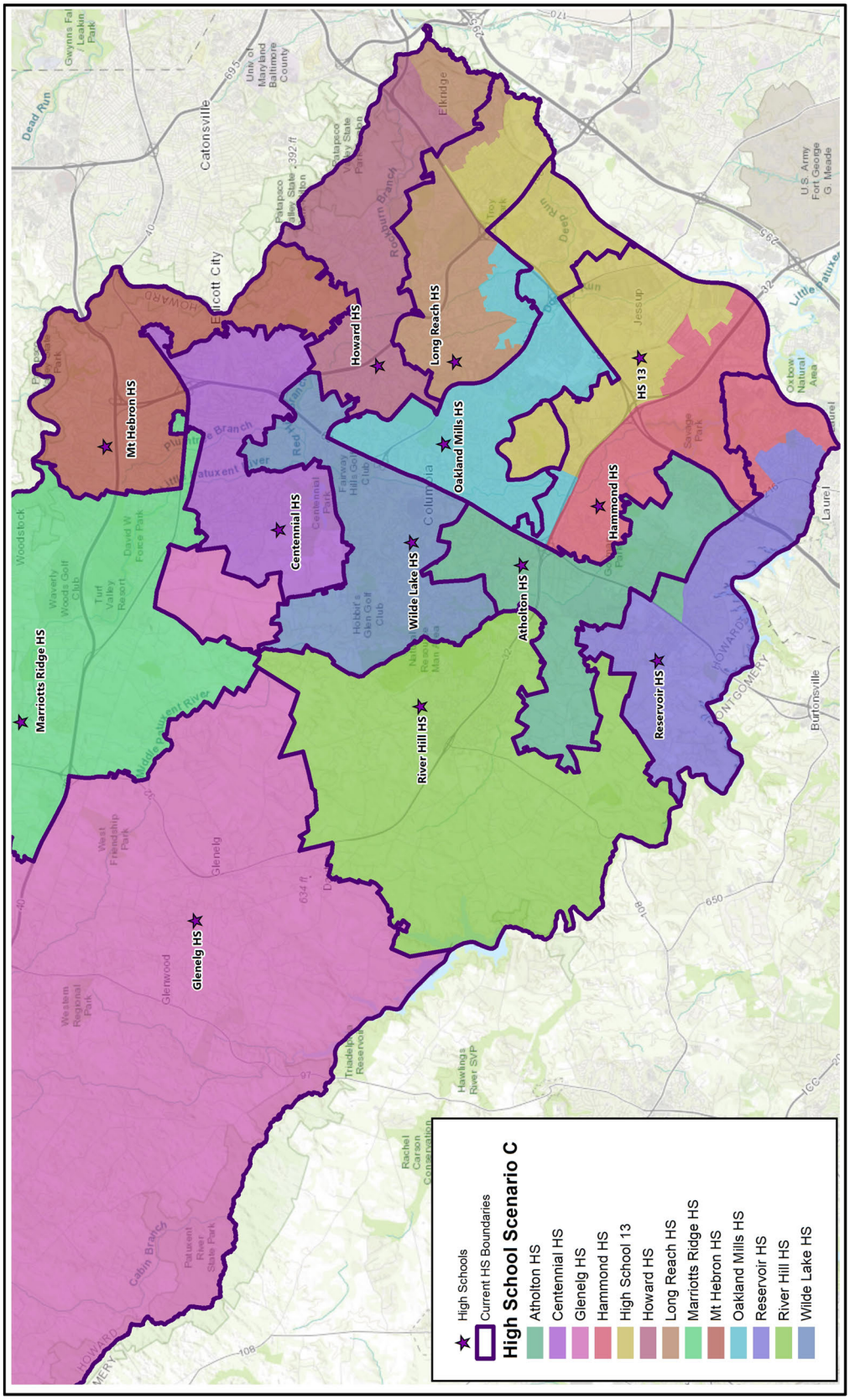
High School Scenario C – Summary and Planning Unit Moves

Scenario C creates a boundary for New HS #13 that extends to the north and the west, and with the exception of Mt Hebron HS, brings all high schools under 110% through SY 2029-30. This plan reassigns approximately 2,800 projected (SY 2023-24) high school students, of which more than half are assigned to the new high school. The New HS #13 boundary directly relieves Hammond HS, Atholton HS, Oakland Mills HS, and Long Reach HS, with the largest portion coming from Hammond. The available capacity at Hammond HS is used to receive students from Reservoir HS. Atholton HS receives students from Reservoir HS. Oakland Mills HS receives students from Hammond HS and Long Reach HS. The available capacity at Long Reach HS is used to receive students in the Elkridge area from Howard HS. Approximately 95 projected (SY 2023-24) middle school students are reassigned from Hammond MS to Oakland Mills MS and from Oakland Mills MS to Ellicott Mills MS in this scenario.

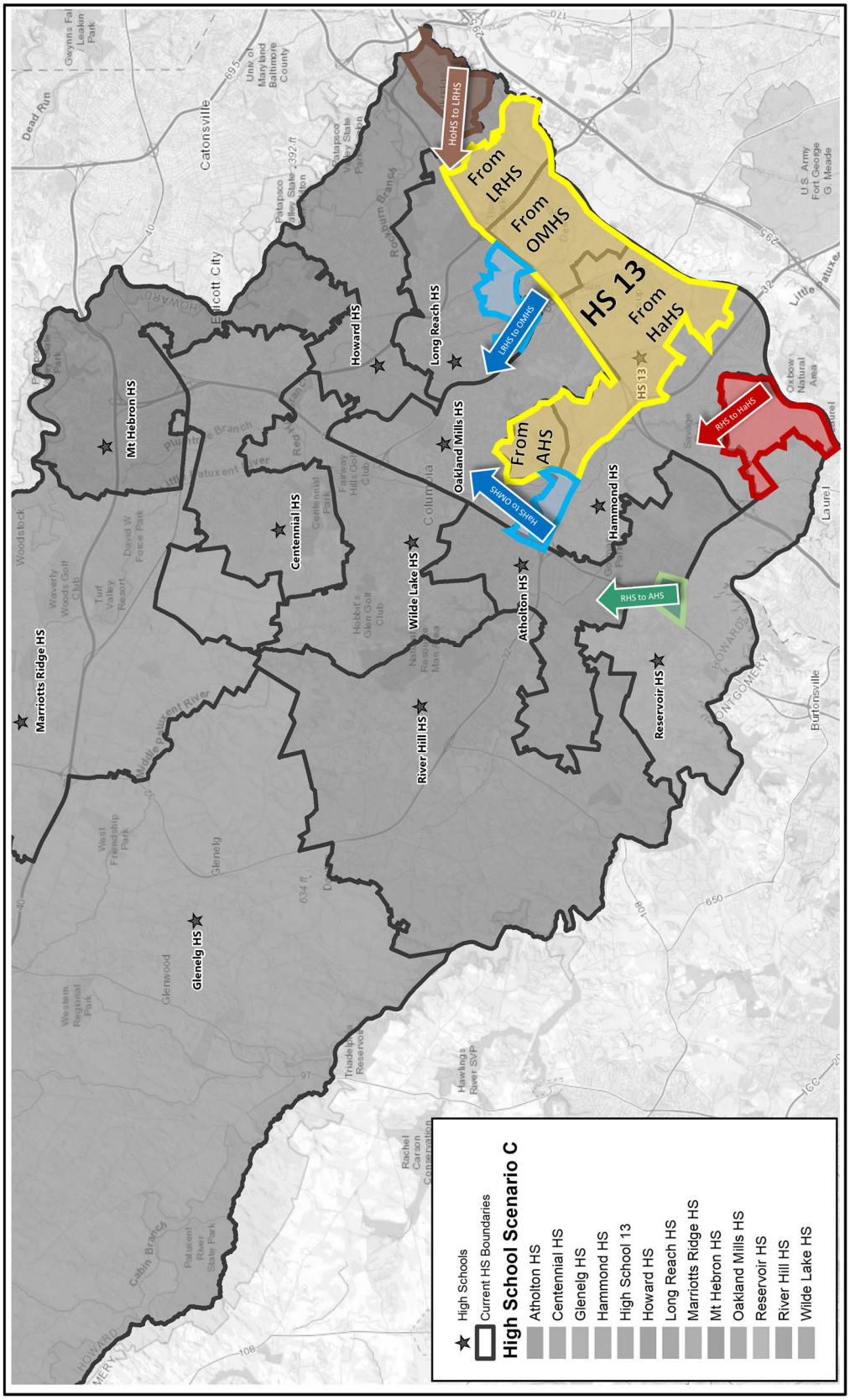
Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Hammond MS	Oakland Mills MS	49	57, 1057, 2057
Oakland Mills MS	Ellicott Mills MS	46	67, 311

Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Atholton HS	HS 13	340	51, 52, 54, 58, 279, 1051, 1054, 1058, 2051, 2054, 3139
Hammond HS	HS 13	533	26, 27, 30, 32, 48, 49, 50, 1026, 1027, 1032, 1048, 1050, 2030, 2050, 3048
Hammond HS	Oakland Mills HS	51	57, 1057, 2057
Howard HS	Long Reach HS	253	38, 39, 40, 124, 300, 1039, 1040, 1124, 1300, 2040
Long Reach HS	HS 13	382	36, 37, 1036, 1037, 2036, 2037, 2043
Long Reach HS	Oakland Mills HS	310	78, 80, 82, 1080, 1081
Oakland Mills HS	HS 13	407	33, 35, 266, 1033, 1035, 1082, 1266, 2035, 3035, 4035
Reservoir HS	Atholton HS	43	9, 1009
Reservoir HS	Hammond HS	506	1, 12, 46, 47116, 260, 267, 1001, 1046, 1116, 1260, 2046, 2047, 3046, 3047, 4047

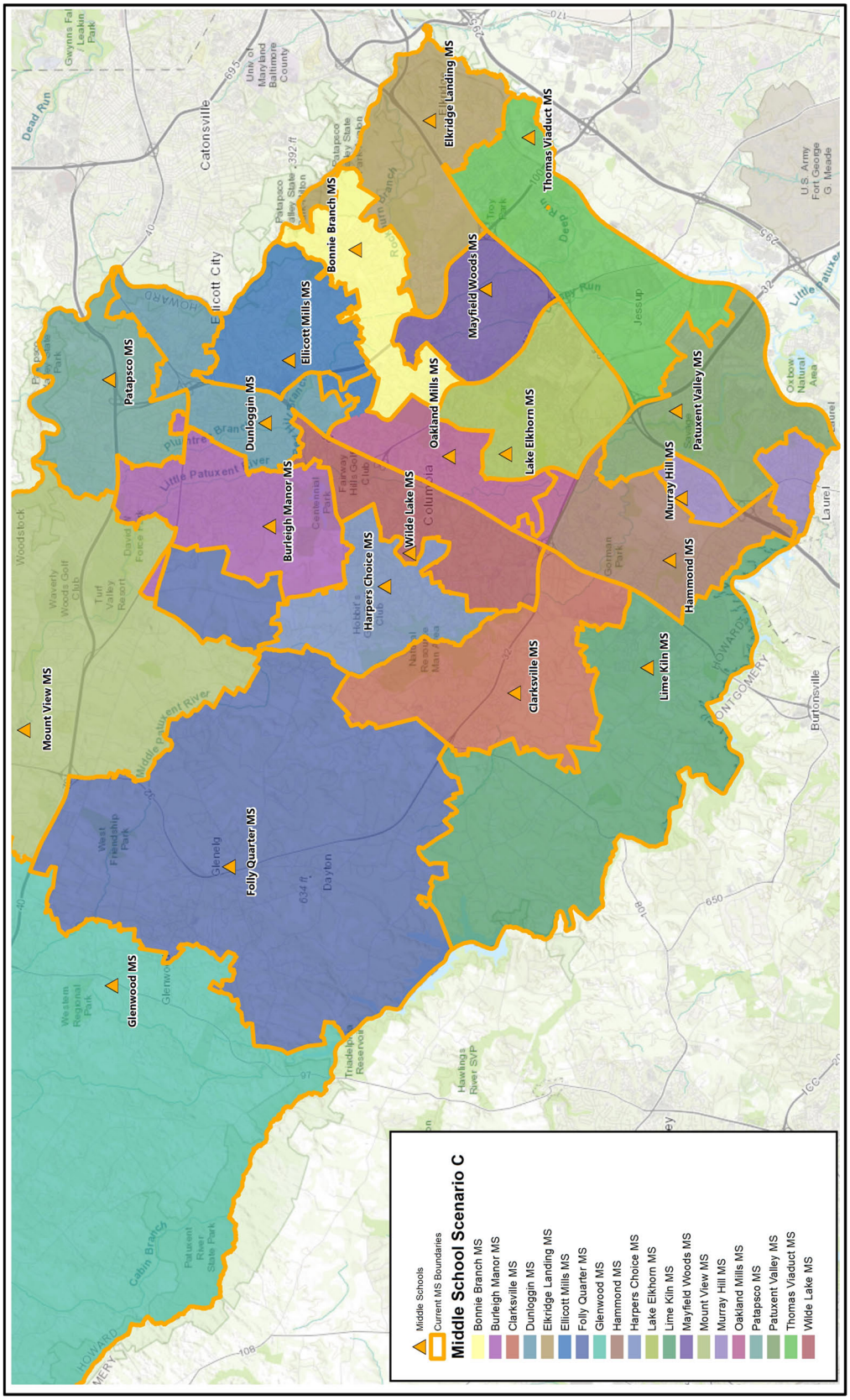
High School Scenario C – High School Maps



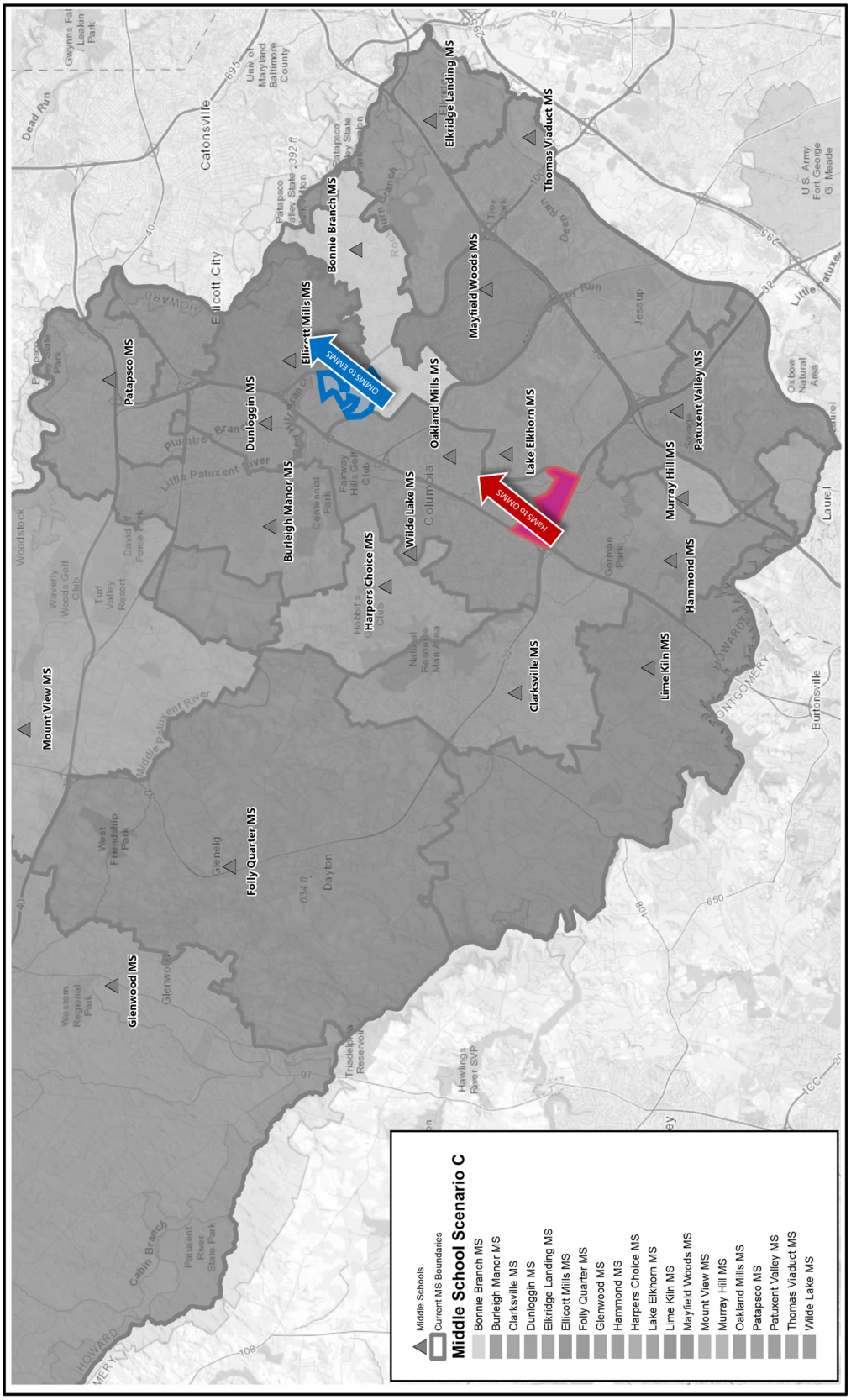
High School Scenario C – High School Maps



High School Scenario C – Middle School Maps



High School Scenario C – Middle School Maps



High School Scenario C – Projected High School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Atholton HS	11.4%	8.0%	1277	83.5%	1277	83.5%	1281	83.7%	1265	82.7%
Centennial HS	4.8%	4.8%	1400	102.9%	1404	103.2%	1409	103.6%	1363	100.2%
Glenelg HS	2.3%	2.3%	1358	95.6%	1369	96.4%	1340	94.4%	1308	92.1%
Hammond HS	19.4%	15.7%	1341	88.8%	1392	92.2%	1425	94.4%	1432	94.9%
Howard HS	9.8%	9.6%	1441	102.9%	1421	101.5%	1397	99.8%	1385	98.9%
Long Reach HS	15.3%	14.5%	1335	89.7%	1334	89.7%	1346	90.5%	1339	90.0%
Marriotts Ridge HS	3.5%	3.5%	1692	104.8%	1712	106.0%	1754	108.6%	1748	108.2%
Mt Hebron HS	5.0%	5.0%	1661	118.6%	1707	121.9%	1725	123.2%	1710	122.1%
Oakland Mills HS	20.0%	19.4%	1404	100.3%	1432	102.3%	1430	102.2%	1420	101.4%
Reservoir HS	10.1%	8.5%	1411	91.0%	1399	90.2%	1415	91.2%	1436	92.6%
River Hill HS	1.3%	1.3%	1481	99.5%	1455	97.8%	1437	96.6%	1424	95.7%
Wilde Lake HS	25.1%	25.1%	1461	102.6%	1422	99.9%	1457	102.3%	1478	103.8%
High School 13	-	20.7%	1662	100.3%	1709	103.0%	1730	104.3%	1719	103.7%
Countywide Total	10.6%		18925	98.3%	19032	98.9%	19146	99.5%	19026	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Atholton HS	1266	82.7%	1290	84.3%	1302	85.1%	1314	85.9%	1340	87.6%	1357	88.7%
Centennial HS	1340	78.8%	1321	77.7%	1322	77.8%	1331	78.3%	1338	78.7%	1345	79.1%
Glenelg HS	1342	94.5%	1349	95.0%	1369	96.4%	1392	98.0%	1369	96.4%	1369	96.4%
Hammond HS	1439	95.4%	1497	99.2%	1502	99.5%	1544	102.3%	1580	104.7%	1574	104.3%
Howard HS	1424	101.7%	1449	103.5%	1456	104.0%	1482	105.9%	1470	105.0%	1480	105.7%
Long Reach HS	1385	93.0%	1409	94.7%	1441	96.8%	1484	99.7%	1480	99.5%	1492	100.3%
Marriotts Ridge HS	1761	109.0%	1732	107.2%	1701	105.3%	1741	107.8%	1744	108.0%	1758	108.9%
Mt Hebron HS	1737	124.1%	1766	126.1%	1790	127.9%	1839	131.4%	1863	133.1%	1867	133.4%
Oakland Mills HS	1440	102.8%	1426	101.8%	1450	103.6%	1492	106.6%	1510	83.9%	1538	85.5%
Reservoir HS	1440	92.8%	1519	97.9%	1535	98.9%	1569	101.2%	1615	104.1%	1605	103.5%
River Hill HS	1438	96.6%	1477	99.3%	1510	101.5%	1517	101.9%	1525	102.5%	1523	102.4%
Wilde Lake HS	1471	103.3%	1472	103.4%	1463	102.7%	1467	103.0%	1467	103.0%	1502	105.5%
High School 13	1739	104.9%	1761	106.2%	1779	107.3%	1825	110.1%	1849	111.5%	1865	112.5%
Countywide Total	19221	98.2%	19467	99.4%	19620	100.2%	19998	102.1%	20150	100.8%	20276	101.5%

High School Scenario C – Projected Middle School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Bonnie Branch MS	9.4%	9.4%	671	95.7%	697	99.4%	693	98.9%	702	100.1%
Burleigh Manor MS	5.9%	5.9%	744	95.5%	756	97.0%	746	95.8%	781	100.3%
Clarksville MS	1.5%	1.5%	629	97.8%	656	102.0%	667	103.7%	672	104.5%
Dunloggin MS	10.0%	10.0%	608	107.6%	584	103.4%	582	72.9%	582	72.9%
Elkridge Landing MS	14.4%	14.4%	711	91.3%	759	97.4%	784	100.6%	794	101.9%
Ellicott Mills MS	6.5%	6.7%	729	104.0%	705	100.6%	708	101.0%	688	98.1%
Folly Quarter MS	1.1%	1.1%	657	99.2%	669	101.1%	687	103.8%	723	109.2%
Glenwood MS	5.2%	5.2%	459	84.2%	467	85.7%	477	87.5%	467	85.7%
Hammond MS	7.4%	7.8%	635	105.1%	689	114.2%	716	118.5%	722	119.6%
Harpers Choice MS	31.7%	31.7%	510	100.8%	536	105.9%	532	105.1%	514	101.6%
Lake Elkhorn MS	32.4%	32.4%	542	84.3%	525	81.6%	516	80.2%	525	81.6%
Lime Kiln MS	2.5%	2.5%	665	92.2%	702	97.4%	722	100.1%	763	105.8%
Mayfield Woods MS	18.3%	18.3%	744	93.2%	806	101.0%	837	104.9%	856	107.3%
Mount View MS	1.6%	1.6%	912	114.3%	900	112.8%	862	108.0%	871	109.1%
Murray Hill MS	15.5%	15.5%	629	95.0%	653	98.6%	661	99.8%	654	98.8%
Oakland Mills MS	26.3%	26.0%	488	96.5%	500	62.6%	493	61.8%	501	62.7%
Patapsco MS	5.6%	5.6%	668	103.9%	701	109.0%	735	114.3%	777	120.8%
Patuxent Valley MS	22.1%	22.1%	805	105.9%	801	105.4%	826	108.7%	827	108.8%
Thomas Viaduct MS	20.0%	20.0%	842	113.8%	807	109.1%	790	106.8%	834	112.7%
Wilde Lake MS	26.2%	26.2%	622	84.1%	630	85.1%	607	82.0%	608	82.2%
Countywide Total	12.9%		13270	98.3%	13543	98.2%	13641	97.3%	13861	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Bonnie Branch MS	696	99.3%	699	99.7%	708	101.0%	697	99.4%	692	98.7%	688	98.1%
Burleigh Manor MS	794	101.9%	810	104.0%	810	104.0%	799	102.6%	796	102.2%	800	102.7%
Clarksville MS	648	100.8%	656	102.0%	658	102.3%	671	104.4%	648	100.8%	627	97.5%
Dunloggin MS	586	73.4%	588	73.7%	585	73.3%	595	74.6%	597	74.8%	603	75.6%
Elkridge Landing MS	796	102.2%	788	101.2%	818	105.0%	817	104.9%	815	104.6%	803	103.1%
Ellicott Mills MS	682	97.3%	681	97.1%	689	98.4%	691	98.5%	689	98.2%	698	99.6%
Folly Quarter MS	734	110.9%	741	111.9%	723	109.2%	714	107.9%	715	108.0%	716	108.2%
Glenwood MS	459	84.2%	443	81.3%	460	84.4%	458	84.0%	483	88.6%	489	89.7%
Hammond MS	749	123.9%	741	122.8%	753	124.7%	730	120.9%	725	120.1%	740	122.5%
Harpers Choice MS	524	103.6%	525	103.8%	544	107.5%	523	103.4%	520	102.8%	512	101.2%
Lake Elkhorn MS	527	82.0%	537	83.5%	540	84.0%	532	82.7%	506	78.7%	501	77.9%
Lime Kiln MS	789	109.4%	776	107.6%	737	102.2%	720	99.9%	671	93.1%	663	92.0%
Mayfield Woods MS	857	107.4%	865	108.4%	853	106.9%	840	105.3%	831	104.1%	839	105.1%
Mount View MS	878	110.0%	890	111.5%	894	112.0%	890	111.5%	890	111.5%	899	112.7%
Murray Hill MS	696	105.1%	754	113.9%	775	117.1%	757	114.4%	735	111.0%	726	109.7%
Oakland Mills MS	503	63.1%	521	65.2%	527	66.0%	517	64.8%	498	62.4%	497	62.3%
Patapsco MS	788	122.6%	794	94.9%	813	97.1%	810	96.8%	797	95.2%	790	94.4%
Patuxent Valley MS	858	112.9%	822	108.2%	848	111.6%	838	110.3%	834	109.7%	849	111.7%
Thomas Viaduct MS	882	119.2%	938	126.8%	925	125.0%	948	128.1%	947	128.0%	945	127.7%
Wilde Lake MS	596	80.5%	631	85.3%	643	86.9%	656	88.6%	659	89.1%	665	89.9%
Countywide Total	14042	100.1%	14200	99.9%	14303	100.6%	14203	99.9%	14048	98.8%	14050	98.8%

High School Scenario C – High from Middle Feed Percentages

Calculated using SY21-22 enrollment, not projected enrollment

Existing Feeder <15% Improved

Existing Feeder <15%

New Feeder <15%

High from Middle Feed Percentage	Atholton HS	Centennial HS	Glenelg HS	Hammond HS	Howard HS	Long Reach HS	Marriotts Ridge HS	Mt Hebron HS	Oakland Mills HS	Reservoir HS	River Hill HS	Wilde Lake HS	High School 13
Bonnie Branch MS	0%	0%	0%	0%	58%	17%	0%	0%	0%	0%	0%	0%	0%
Burleigh Manor MS	0%	40%	0%	0%	0%	0%	28%	5%	0%	0%	0%	0%	0%
Clarksville MS	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%
Dunloggin MS	0%	32%	0%	0%	0%	0%	0%	15%	0%	0%	0%	10%	0%
Elkridge Landing MS	0%	0%	0%	0%	23%	44%	0%	0%	0%	0%	0%	0%	0%
Ellicott Mills MS	0%	28%	0%	0%	19%	0%	0%	24%	0%	0%	0%	0%	0%
Folly Quarter MS	0%	0%	47%	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%
Glenwood MS	0%	0%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hammond MS	23%	0%	0%	17%	0%	0%	0%	0%	0%	16%	0%	0%	0%
Harpers Choice MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	0%
Lake Elkhorn MS	0%	0%	0%	0%	0%	0%	0%	0%	24%	0%	0%	0%	36%
Lime Kiln MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	36%	25%	0%	0%
Mayfield Woods MS	0%	0%	0%	0%	0%	39%	0%	0%	29%	0%	0%	0%	0%
Mount View MS	0%	0%	0%	0%	0%	0%	72%	0%	0%	0%	0%	0%	0%
Murray Hill MS	24%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%	0%	0%
Oakland Mills MS	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	0%	0%	0%
Patapsco MS	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%	0%	0%	0%
Patuxent Valley MS	0%	0%	0%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Thomas Viaduct MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	64%
Wilde Lake MS	37%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	0%

High School Scenario C – Race Percentages

High School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Atholton HS	<=5%	<=5%	18%	20%	34%	30%	<=5%	<=5%	12%	10%	7%	6%	29%	33%
Centennial HS	<=5%	<=5%	39%	39%	11%	11%	<=5%	<=5%	7%	7%	<=5%	<=5%	39%	39%
Glenelg HS	<=5%	<=5%	18%	18%	<=5%	<=5%	<=5%	<=5%	6%	6%	<=5%	<=5%	67%	67%
Hammond HS	<=5%	<=5%	12%	13%	38%	41%	<=5%	<=5%	18%	17%	7%	6%	25%	23%
Howard HS	<=5%	<=5%	19%	20%	25%	24%	<=5%	<=5%	8%	8%	7%	7%	41%	40%
Long Reach HS	<=5%	<=5%	12%	14%	31%	30%	<=5%	<=5%	26%	17%	<=5%	6%	26%	33%
Marriotts Ridge HS	<=5%	<=5%	42%	42%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	38%	38%
Mt Hebron HS	<=5%	<=5%	34%	34%	11%	11%	<=5%	<=5%	9%	9%	<=5%	<=5%	42%	42%
Oakland Mills HS	<=5%	<=5%	9%	8%	43%	32%	<=5%	<=5%	22%	30%	7%	7%	18%	23%
Reservoir HS	<=5%	<=5%	17%	18%	35%	31%	<=5%	<=5%	19%	19%	<=5%	5%	23%	27%
River Hill HS	<=5%	<=5%	38%	38%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	43%	43%
Wilde Lake HS	<=5%	<=5%	7%	7%	46%	46%	<=5%	<=5%	15%	15%	8%	8%	24%	24%
High School 13	-	<=5%	-	12%	-	49%	-	<=5%	-	21%	-	5%	-	13%
Countywide Average	<=5%		22%		25%		<=5%		13%		6%		34%	

Middle School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Bonnie Branch MS	<=5%	<=5%	18%	18%	20%	20%	<=5%	<=5%	15%	15%	8%	8%	39%	39%
Burleigh Manor MS	<=5%	<=5%	46%	46%	11%	11%	<=5%	<=5%	<=5%	<=5%	5%	5%	33%	33%
Clarksville MS	<=5%	<=5%	47%	47%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	34%	34%
Dunloggin MS	<=5%	<=5%	34%	34%	21%	21%	<=5%	<=5%	8%	8%	<=5%	<=5%	31%	31%
Elkridge Landing MS	<=5%	<=5%	20%	20%	28%	28%	<=5%	<=5%	7%	7%	7%	7%	39%	39%
Ellicott Mills MS	<=5%	<=5%	38%	38%	16%	17%	<=5%	<=5%	<=5%	<=5%	7%	7%	35%	33%
Folly Quarter MS	<=5%	<=5%	33%	33%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	47%	47%
Glenwood MS	<=5%	<=5%	9%	9%	<=5%	<=5%	<=5%	<=5%	8%	8%	7%	7%	71%	71%
Hammond MS	<=5%	<=5%	14%	14%	26%	27%	<=5%	<=5%	12%	11%	8%	8%	39%	39%
Harpers Choice MS	<=5%	<=5%	7%	7%	48%	48%	<=5%	<=5%	18%	18%	9%	9%	18%	18%
Lake Elkhorn MS	<=5%	<=5%	8%	8%	54%	54%	<=5%	<=5%	17%	17%	7%	7%	14%	14%
Lime Kiln MS	<=5%	<=5%	28%	28%	15%	15%	<=5%	<=5%	<=5%	<=5%	10%	10%	41%	41%
Mayfield Woods MS	<=5%	<=5%	15%	15%	27%	27%	<=5%	<=5%	29%	29%	6%	6%	22%	22%
Mount View MS	<=5%	<=5%	46%	46%	6%	6%	<=5%	<=5%	<=5%	<=5%	5%	5%	39%	39%
Murray Hill MS	<=5%	<=5%	19%	19%	43%	43%	<=5%	<=5%	21%	21%	5%	5%	12%	12%
Oakland Mills MS	<=5%	<=5%	8%	5%	35%	34%	<=5%	<=5%	27%	27%	8%	8%	23%	26%
Patapsco MS	<=5%	<=5%	34%	34%	13%	13%	<=5%	<=5%	11%	11%	<=5%	<=5%	39%	39%
Patuxent Valley MS	<=5%	<=5%	14%	14%	44%	44%	<=5%	<=5%	21%	21%	5%	5%	16%	16%
Thomas Viaduct MS	<=5%	<=5%	15%	15%	47%	47%	<=5%	<=5%	20%	20%	6%	6%	12%	12%
Wilde Lake MS	<=5%	<=5%	7%	7%	44%	44%	<=5%	<=5%	12%	12%	9%	9%	28%	28%
Countywide Average	<=5%		24%		26%		<=5%		12%		6%		31%	

High School Scenario C – ESOL Percentages

High School	% ESOL Participation	
	Base	Proposed
Atholton HS	<=5%	<=5%
Centennial HS	<=5%	<=5%
Glenelg HS	<=5%	<=5%
Hammond HS	6%	6%
Howard HS	<=5%	<=5%
Long Reach HS	10%	7%
Marriotts Ridge HS	<=5%	<=5%
Mt Hebron HS	<=5%	<=5%
Oakland Mills HS	6%	9%
Reservoir HS	5%	<=5%
River Hill HS	<=5%	<=5%
Wilde Lake HS	5%	5%
High School 13	-	7%
Countywide Average	<=5%	

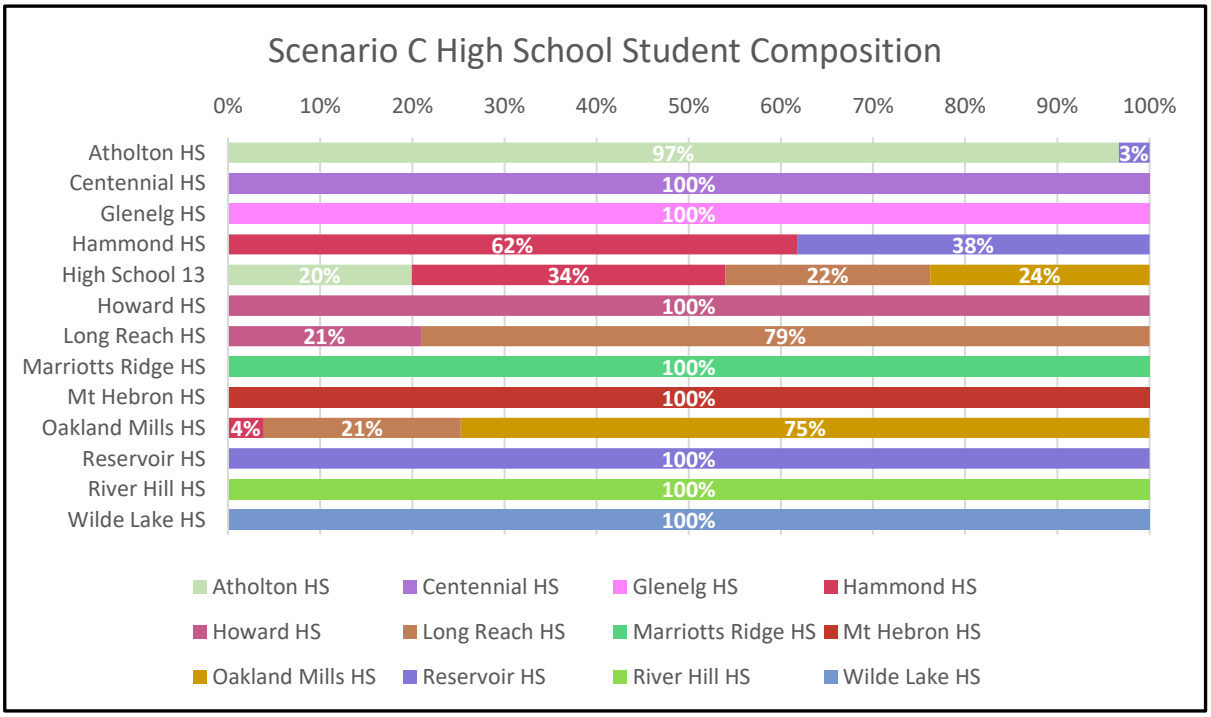
Middle School	% ESOL Participation	
	Base	Proposed
Bonnie Branch MS	8%	8%
Burleigh Manor MS	<=5%	<=5%
Clarksville MS	<=5%	<=5%
Dunloggin MS	<=5%	<=5%
Elkridge Landing MS	<=5%	<=5%
Ellicott Mills MS	<=5%	<=5%
Folly Quarter MS	<=5%	<=5%
Glenwood MS	<=5%	<=5%
Hammond MS	<=5%	<=5%
Harpers Choice MS	8%	8%
Lake Elkhorn MS	<=5%	<=5%
Lime Kiln MS	<=5%	<=5%
Mayfield Woods MS	10%	10%
Mount View MS	<=5%	<=5%
Murray Hill MS	10%	10%
Oakland Mills MS	9%	10%
Patapsco MS	7%	7%
Patuxent Valley MS	9%	9%
Thomas Viaduct MS	8%	8%
Wilde Lake MS	<=5%	<=5%
Countywide Average	<=5%	

High School Scenario C – Test Percentages

High School	PSAT-Read		PSAT-Math	
	Base	Proposed	Base	Proposed
Atholton HS	74%	78%	50%	54%
Centennial HS	85%	85%	68%	68%
Glenelg HS	84%	84%	65%	65%
Hammond HS	56%	58%	30%	33%
Howard HS	69%	70%	48%	49%
Long Reach HS	50%	57%	29%	34%
Marriotts Ridge HS	85%	85%	69%	69%
Mt Hebron HS	77%	77%	60%	60%
Oakland Mills HS	48%	47%	28%	28%
Reservoir HS	64%	66%	40%	43%
River Hill HS	89%	89%	75%	75%
Wilde Lake HS	55%	55%	35%	35%
High School 13	-	49%	-	24%
System-wide Total	70%		50%	

Middle School	PARCC-Read		PARCC-Math	
	Base	Proposed	Base	Proposed
Bonnie Branch MS	46%	46%	22%	22%
Burleigh Manor MS	62%	62%	35%	35%
Clarksville MS	68%	68%	43%	43%
Dunloggin MS	53%	53%	26%	26%
Elkridge Landing MS	42%	42%	18%	18%
Ellicott Mills MS	51%	51%	33%	31%
Folly Quarter MS	66%	66%	44%	44%
Glenwood MS	54%	54%	23%	23%
Hammond MS	40%	38%	20%	18%
Harpers Choice MS	25%	25%	7%	7%
Lake Elkhorn MS	24%	24%	6%	6%
Lime Kiln MS	56%	56%	31%	31%
Mayfield Woods MS	32%	32%	10%	10%
Mount View MS	63%	63%	40%	40%
Murray Hill MS	29%	29%	9%	9%
Oakland Mills MS	34%	35%	13%	14%
Patapsco MS	46%	46%	24%	24%
Patuxent Valley MS	27%	27%	7%	7%
Thomas Viaduct MS	27%	27%	10%	10%
Wilde Lake MS	39%	39%	14%	14%
System-wide Total	44%		21%	

High School Scenario C – High School Student Composition



High School Scenario C – Travel Distance

Distance	Current	Scenario C	Change
Atholton HS	2.2	2.3	Increase
Centennial HS	2.1	2.1	Unchanged
Glenelg HS	3.4	3.4	Unchanged
Hammond HS	1.5	2.5	Increase
Howard HS	1.8	1.5	Decrease
Long Reach HS	1.4	1.7	Increase
Marriotts Ridge HS	3.8	3.8	Unchanged
Mt Hebron HS	2.4	2.4	Unchanged
Oakland Mills HS	1.8	1.2	Decrease
Reservoir HS	2.3	1.6	Decrease
River Hill HS	1.8	1.8	Unchanged
Wilde Lake HS	1.6	1.6	Unchanged
High School 13	0.0	2.7	New
Districtwide Average	**2.19**	**2.23**	**Increase**

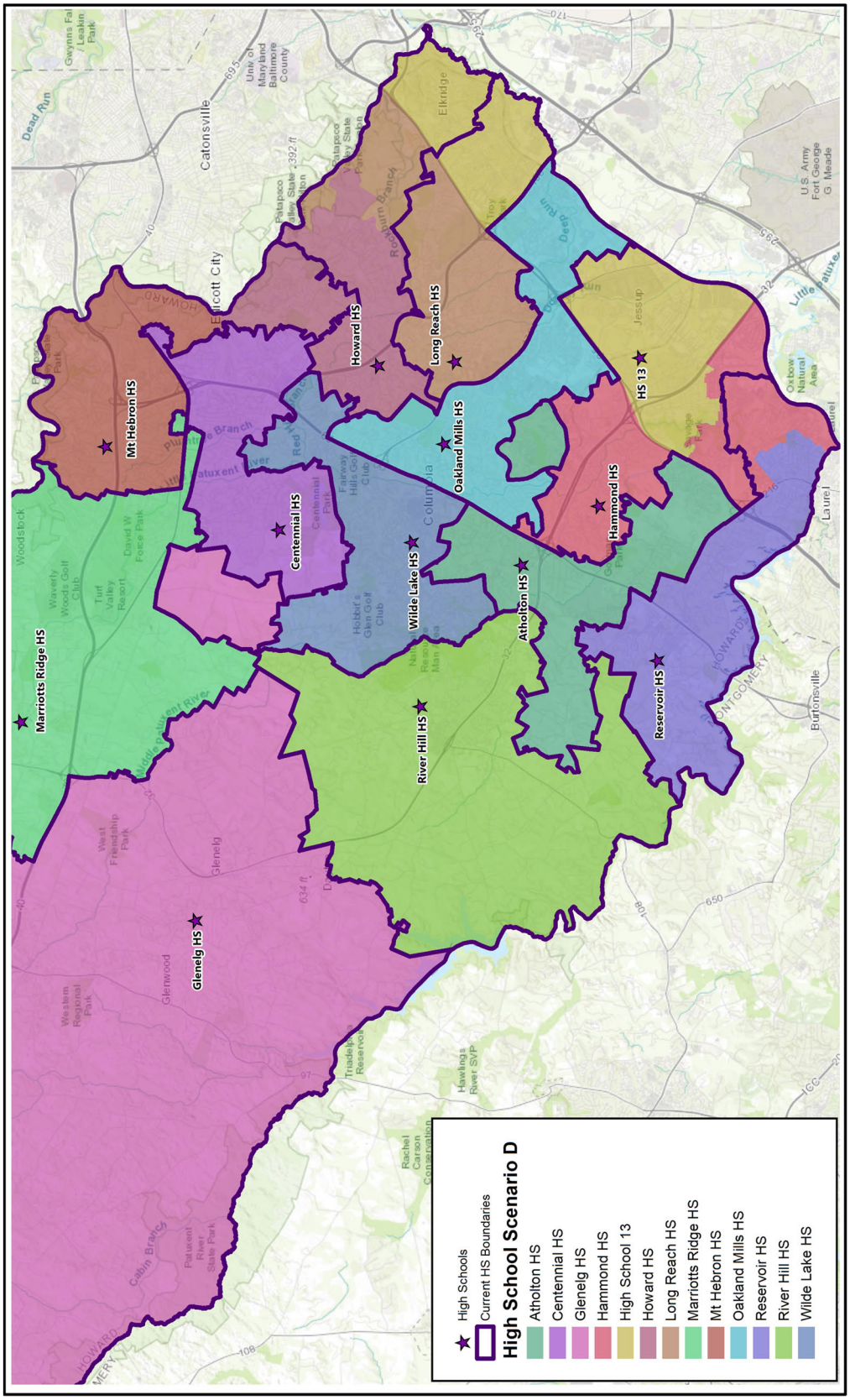
High School Scenario D – Summary and Planning Unit Moves

Scenario D creates a boundary for New HS #13 that extends north to the county line in a non-contiguous manner and brings all high schools under 110% through SY 2029-30. This plan reassigns approximately 2,500 projected (SY 2023-24) high school students, of which more than 60% are assigned to the new high school. The New HS #13 boundary directly relieves Hammond HS, Long Reach HS, and Howard HS, with the largest portion coming from Howard. The available capacity at Hammond HS is used to receive students from Reservoir HS. Long Reach HS receives students from Howard HS. The available capacity at Howard HS is used to receive students from Mt Hebron HS. Approximately 46 projected (SY 2023-24) middle school students are reassigned from Oakland Mills MS to Ellicott Mills MS in this scenario.

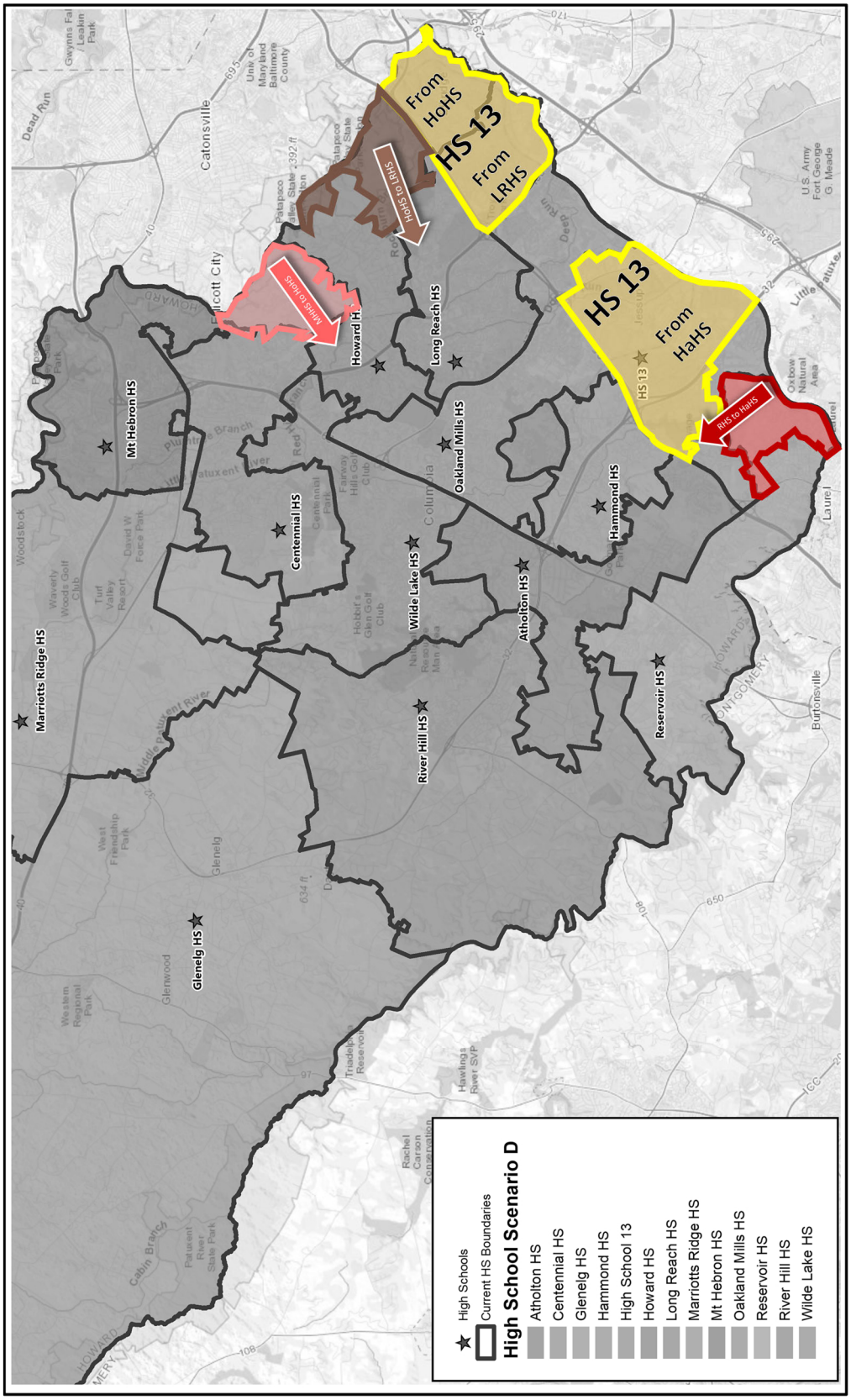
Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Oakland Mills MS	Ellicott Mills MS	46	67, 311

Sending School	Receiving School	Appx. # of Students	Planning Units Reassigned
Hammond HS	HS 13	505	21, 22, 23, 24, 25, 26, 27, 30, 32, 1022, 1025, 1026, 1027, 1030, 1032, 2022, 2023, 2030
Howard HS	HS 13	532	38, 39, 40, 41, 42, 124, 300, 1039, 1040, 1041, 1042, 1124, 1300, 2040, 2041, 2042, 3041, 3042, 4041, 4042
Howard HS	Long Reach HS	66	92, 1091, 2091, 5041
Long Reach HS	HS 13	477	36, 37, 43, 1036, 1037, 1038, 1043, 2036, 2037, 2038, 2043
Mt Hebron HS	Howard HS	391	93, 94, 99, 217, 309, 310, 1093, 1094, 1309, 1310, 2093, 2099, 2310, 3093, 4093
Reservoir HS	Hammond HS	506	1, 12, 46, 47, 116, 260, 267, 1001, 1046, 1116, 1260, 2046, 2047, 3046, 3047, 4047

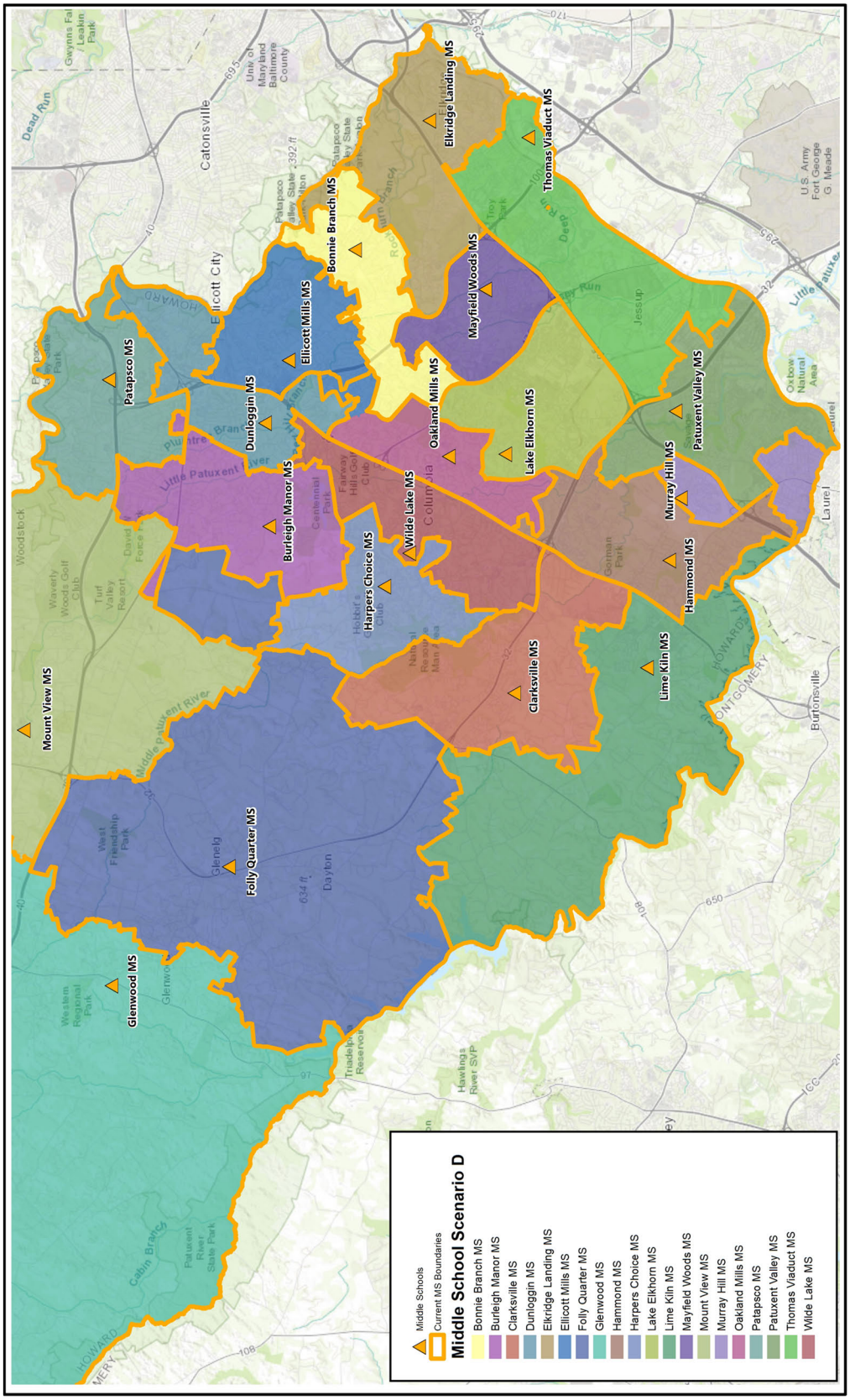
High School Scenario D – High School Maps



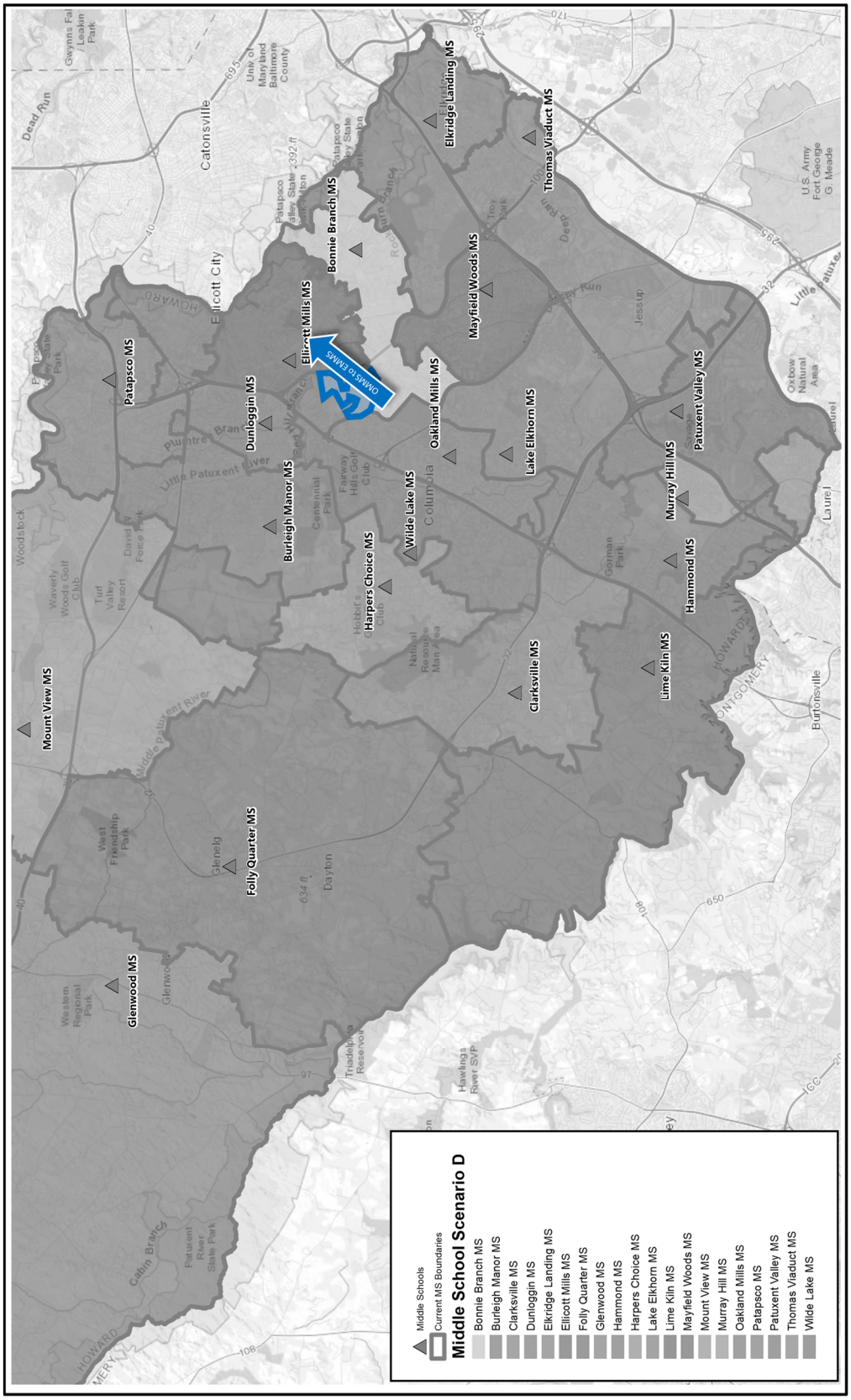
High School Scenario D – High School Maps



High School Scenario D – Middle School Maps



High School Scenario D – Middle School Maps



High School Scenario D – Projected High School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Atholton HS	11.4%	11.4%	1574	102.9%	1574	102.9%	1578	103.1%	1557	101.8%
Centennial HS	4.8%	4.8%	1400	102.9%	1404	103.2%	1409	103.6%	1363	100.2%
Glenelg HS	2.3%	2.3%	1358	95.6%	1369	96.4%	1340	94.4%	1308	92.1%
Hammond HS	19.4%	18.4%	1419	94.1%	1476	97.8%	1511	100.1%	1518	100.6%
Howard HS	9.8%	6.0%	1486	106.2%	1482	105.8%	1469	104.9%	1457	104.1%
Long Reach HS	15.3%	14.7%	1365	91.7%	1366	91.8%	1385	93.1%	1378	92.6%
Marriotts Ridge HS	3.5%	3.5%	1692	104.8%	1712	106.0%	1754	108.6%	1748	108.2%
Mt Hebron HS	5.0%	6.0%	1270	90.7%	1305	93.2%	1318	94.1%	1305	93.2%
Oakland Mills HS	20.0%	20.0%	1450	103.6%	1484	106.0%	1475	105.4%	1463	104.5%
Reservoir HS	10.1%	8.4%	1454	93.8%	1441	92.9%	1458	94.0%	1480	95.4%
River Hill HS	1.3%	1.3%	1481	99.5%	1455	97.8%	1437	96.6%	1424	95.7%
Wilde Lake HS	25.1%	25.1%	1461	102.6%	1422	99.9%	1457	102.3%	1478	103.8%
High School 13	-	16.2%	1514	91.3%	1542	93.0%	1556	93.9%	1548	93.4%
Countywide Total	10.6%		18925	98.3%	19032	98.9%	19146	99.5%	19026	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Atholton HS	1557	101.8%	1584	103.5%	1598	104.4%	1612	105.4%	1643	107.4%	1665	108.8%
Centennial HS	1340	78.8%	1321	77.7%	1322	77.8%	1331	78.3%	1338	78.7%	1345	79.1%
Glenelg HS	1342	94.5%	1349	95.0%	1369	96.4%	1392	98.0%	1369	96.4%	1369	96.4%
Hammond HS	1525	101.1%	1586	105.1%	1590	105.4%	1635	108.4%	1672	110.8%	1666	110.4%
Howard HS	1495	106.8%	1521	108.6%	1532	109.5%	1564	111.7%	1560	111.4%	1569	112.0%
Long Reach HS	1427	95.9%	1452	97.6%	1488	100.0%	1536	103.2%	1533	103.0%	1546	103.9%
Marriotts Ridge HS	1761	109.0%	1732	107.2%	1701	105.3%	1741	107.8%	1744	108.0%	1758	108.9%
Mt Hebron HS	1324	94.6%	1346	96.1%	1364	97.4%	1401	100.1%	1419	101.4%	1422	101.6%
Oakland Mills HS	1475	105.4%	1446	103.3%	1470	105.0%	1511	107.9%	1536	85.3%	1572	87.3%
Reservoir HS	1484	95.7%	1565	100.9%	1581	102.0%	1617	104.2%	1664	107.3%	1654	106.6%
River Hill HS	1438	96.6%	1477	99.3%	1510	101.5%	1517	101.9%	1525	102.5%	1523	102.4%
Wilde Lake HS	1471	103.3%	1472	103.4%	1463	102.7%	1467	103.0%	1467	103.0%	1502	105.5%
High School 13	1583	95.5%	1617	97.5%	1631	98.4%	1674	101.0%	1679	101.3%	1685	101.6%
Countywide Total	19221	98.2%	19467	99.4%	19620	100.2%	19998	102.1%	20150	100.8%	20276	101.5%

High School Scenario D – Projected Middle School Enrollment, Utilization, and Direct Certification

School	Current % Direct Certification	Proposed % Direct Certification	Enroll 23-24	Utilization 23-24	Enroll 24-25	Utilization 24-25	Enroll 25-26	Utilization 25-26	Enroll 26-27	Utilization 26-27
Bonnie Branch MS	9.4%	9.4%	671	95.7%	697	99.4%	693	98.9%	702	100.1%
Burleigh Manor MS	5.9%	5.9%	744	95.5%	756	97.0%	746	95.8%	781	100.3%
Clarksville MS	1.5%	1.5%	629	97.8%	656	102.0%	667	103.7%	672	104.5%
Dunloggin MS	10.0%	10.0%	608	107.6%	584	103.4%	582	72.9%	582	72.9%
Elkridge Landing MS	14.4%	14.4%	711	91.3%	759	97.4%	784	100.6%	794	101.9%
Ellicott Mills MS	6.5%	6.7%	729	104.0%	705	100.6%	708	101.0%	688	98.1%
Folly Quarter MS	1.1%	1.1%	657	99.2%	669	101.1%	687	103.8%	723	109.2%
Glenwood MS	5.2%	5.2%	459	84.2%	467	85.7%	477	87.5%	467	85.7%
Hammond MS	7.4%	7.4%	684	113.2%	743	123.0%	771	127.6%	778	128.8%
Harpers Choice MS	31.7%	31.7%	510	100.8%	536	105.9%	532	105.1%	514	101.6%
Lake Elkhorn MS	32.4%	32.4%	542	84.3%	525	81.6%	516	80.2%	525	81.6%
Lime Kiln MS	2.5%	2.5%	665	92.2%	702	97.4%	722	100.1%	763	105.8%
Mayfield Woods MS	18.3%	18.3%	744	93.2%	806	101.0%	837	104.9%	856	107.3%
Mount View MS	1.6%	1.6%	912	114.3%	900	112.8%	862	108.0%	871	109.1%
Murray Hill MS	15.5%	15.5%	629	95.0%	653	98.6%	661	99.8%	654	98.8%
Oakland Mills MS	26.3%	28.0%	439	86.7%	446	55.9%	438	54.9%	445	55.8%
Patapsco MS	5.6%	5.6%	668	103.9%	701	109.0%	735	114.3%	777	120.8%
Patuxent Valley MS	22.1%	22.1%	805	105.9%	801	105.4%	826	108.7%	827	108.8%
Thomas Viaduct MS	20.0%	20.0%	842	113.8%	807	109.1%	790	106.8%	834	112.7%
Wilde Lake MS	26.2%	26.2%	622	84.1%	630	85.1%	607	82.0%	608	82.2%
Countywide Total	12.9%		13270	98.3%	13543	98.2%	13641	97.3%	13861	98.9%

School	Enroll 27-28	Utilization 27-28	Enroll 28-29	Utilization 28-29	Enroll 29-30	Utilization 29-30	Enroll 30-31	Utilization 30-31	Enroll 31-32	Utilization 31-32	Enroll 32-33	Utilization 32-33
Bonnie Branch MS	696	99.3%	699	99.7%	708	101.0%	697	99.4%	692	98.7%	688	98.1%
Burleigh Manor MS	794	101.9%	810	104.0%	810	104.0%	799	102.6%	796	102.2%	800	102.7%
Clarksville MS	648	100.8%	656	102.0%	658	102.3%	671	104.4%	648	100.8%	627	97.5%
Dunloggin MS	586	73.4%	588	73.7%	585	73.3%	595	74.6%	597	74.8%	603	75.6%
Elkridge Landing MS	796	102.2%	788	101.2%	818	105.0%	817	104.9%	815	104.6%	803	103.1%
Ellicott Mills MS	682	97.3%	681	97.1%	689	98.4%	691	98.5%	689	98.2%	698	99.6%
Folly Quarter MS	734	110.9%	741	111.9%	723	109.2%	714	107.9%	715	108.0%	716	108.2%
Glenwood MS	459	84.2%	443	81.3%	460	84.4%	458	84.0%	483	88.6%	489	89.7%
Hammond MS	806	133.4%	798	132.1%	810	134.1%	785	130.0%	780	129.1%	795	131.6%
Harpers Choice MS	524	103.6%	525	103.8%	544	107.5%	523	103.4%	520	102.8%	512	101.2%
Lake Elkhorn MS	527	82.0%	537	83.5%	540	84.0%	532	82.7%	506	78.7%	501	77.9%
Lime Kiln MS	789	109.4%	776	107.6%	737	102.2%	720	99.9%	671	93.1%	663	92.0%
Mayfield Woods MS	857	107.4%	865	108.4%	853	106.9%	840	105.3%	831	104.1%	839	105.1%
Mount View MS	878	110.0%	890	111.5%	894	112.0%	890	111.5%	890	111.5%	899	112.7%
Murray Hill MS	696	105.1%	754	113.9%	775	117.1%	757	114.4%	735	111.0%	726	109.7%
Oakland Mills MS	446	55.9%	464	58.2%	470	58.8%	462	57.9%	443	55.6%	442	55.3%
Patapsco MS	788	122.6%	794	94.9%	813	97.1%	810	96.8%	797	95.2%	790	94.4%
Patuxent Valley MS	858	112.9%	822	108.2%	848	111.6%	838	110.3%	834	109.7%	849	111.7%
Thomas Viaduct MS	882	119.2%	938	126.8%	925	125.0%	948	128.1%	947	128.0%	945	127.7%
Wilde Lake MS	596	80.5%	631	85.3%	643	86.9%	656	88.6%	659	89.1%	665	89.9%
Countywide Total	14042	100.1%	14200	99.9%	14303	100.6%	14203	99.9%	14048	98.8%	14050	98.8%

High School Scenario D – High from Middle Feed Percentages

High from Middle Feed Percentage	Atholton HS	Centennial HS	Glenelg HS	Hammond HS	Howard HS	Long Reach HS	Marriotts Ridge HS	Mt Hebron HS	Oakland Mills HS	Reservoir HS	River Hill HS	Wilde Lake HS	High School 13
Bonnie Branch MS	0%	0%	0%	0%	56%	17%	0%	0%	0%	0%	0%	0%	0%
Burleigh Manor MS	0%	40%	0%	0%	0%	0%	28%	7%	0%	0%	0%	0%	0%
Clarksville MS	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	56%	0%	0%
Dunloggin MS	0%	32%	0%	0%	0%	0%	0%	20%	0%	0%	0%	10%	0%
Elkridge Landing MS	0%	0%	0%	0%	0%	22%	0%	0%	0%	0%	0%	0%	44%
Ellicott Mills MS	0%	28%	0%	0%	44%	0%	0%	0%	0%	0%	0%	0%	0%
Folly Quarter MS	0%	0%	47%	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%
Glenwood MS	0%	0%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hammond MS	17%	0%	0%	19%	0%	0%	0%	0%	0%	19%	0%	0%	0%
Harpers Choice MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	0%
Lake Elkhorn MS	20%	0%	0%	17%	0%	0%	0%	0%	24%	0%	0%	0%	0%
Lime Kiln MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	25%	0%	0%
Mayfield Woods MS	0%	0%	0%	0%	0%	61%	0%	0%	8%	0%	0%	0%	0%
Mount View MS	0%	0%	0%	0%	0%	0%	72%	0%	0%	0%	0%	0%	0%
Murray Hill MS	19%	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	0%	0%
Oakland Mills MS	0%	0%	0%	0%	0%	0%	0%	0%	42%	0%	0%	0%	0%
Patapsco MS	0%	0%	0%	0%	0%	0%	0%	73%	0%	0%	0%	0%	0%
Patuxent Valley MS	0%	0%	0%	63%	0%	0%	0%	0%	0%	0%	0%	0%	13%
Thomas Viaduct MS	0%	0%	0%	0%	0%	0%	0%	0%	26%	0%	0%	0%	42%
Wilde Lake MS	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	0%

High School Scenario D – Race Percentages

High School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Atholton HS	<=5%	<=5%	18%	18%	34%	34%	<=5%	<=5%	12%	12%	7%	7%	29%	29%
Centennial HS	<=5%	<=5%	39%	39%	11%	11%	<=5%	<=5%	7%	7%	<=5%	<=5%	39%	39%
Glenelg HS	<=5%	<=5%	18%	18%	<=5%	<=5%	<=5%	<=5%	6%	6%	<=5%	<=5%	67%	67%
Hammond HS	<=5%	<=5%	12%	12%	38%	44%	<=5%	<=5%	18%	16%	7%	7%	25%	21%
Howard HS	<=5%	<=5%	19%	23%	25%	19%	<=5%	<=5%	8%	7%	7%	6%	41%	43%
Long Reach HS	<=5%	<=5%	12%	13%	31%	28%	<=5%	<=5%	26%	26%	<=5%	5%	26%	28%
Marriotts Ridge HS	<=5%	<=5%	42%	42%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	38%	38%
Mt Hebron HS	<=5%	<=5%	34%	34%	11%	12%	<=5%	<=5%	9%	10%	<=5%	<=5%	42%	40%
Oakland Mills HS	<=5%	<=5%	9%	9%	43%	43%	<=5%	<=5%	22%	22%	7%	7%	18%	18%
Reservoir HS	<=5%	<=5%	17%	18%	35%	31%	<=5%	<=5%	19%	18%	<=5%	5%	23%	27%
River Hill HS	<=5%	<=5%	38%	38%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	43%	43%
Wilde Lake HS	<=5%	<=5%	7%	7%	46%	46%	<=5%	<=5%	15%	15%	8%	8%	24%	24%
High School 13	-	<=5%	-	15%	-	32%	-	<=5%	-	19%	-	<=5%	-	28%
Countywide Average	<=5%		22%		25%		<=5%		13%		6%		34%	

Middle School	American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific		Hispanic		Two or More		White	
	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed	Base	Proposed
Bonnie Branch MS	<=5%	<=5%	18%	18%	20%	20%	<=5%	<=5%	15%	15%	8%	8%	39%	39%
Burleigh Manor MS	<=5%	<=5%	46%	46%	11%	11%	<=5%	<=5%	<=5%	<=5%	5%	5%	33%	33%
Clarksville MS	<=5%	<=5%	47%	47%	11%	11%	<=5%	<=5%	<=5%	<=5%	<=5%	<=5%	34%	34%
Dunloggin MS	<=5%	<=5%	34%	34%	21%	21%	<=5%	<=5%	8%	8%	<=5%	<=5%	31%	31%
Elkridge Landing MS	<=5%	<=5%	20%	20%	28%	28%	<=5%	<=5%	7%	7%	7%	7%	39%	39%
Ellicott Mills MS	<=5%	<=5%	38%	38%	16%	17%	<=5%	<=5%	<=5%	<=5%	7%	7%	35%	33%
Folly Quarter MS	<=5%	<=5%	33%	33%	9%	9%	<=5%	<=5%	<=5%	<=5%	6%	6%	47%	47%
Glenwood MS	<=5%	<=5%	9%	9%	<=5%	<=5%	<=5%	<=5%	8%	8%	7%	7%	71%	71%
Hammond MS	<=5%	<=5%	14%	14%	26%	26%	<=5%	<=5%	12%	12%	8%	8%	39%	39%
Harpers Choice MS	<=5%	<=5%	7%	7%	48%	48%	<=5%	<=5%	18%	18%	9%	9%	18%	18%
Lake Elkhorn MS	<=5%	<=5%	8%	8%	54%	54%	<=5%	<=5%	17%	17%	7%	7%	14%	14%
Lime Kiln MS	<=5%	<=5%	28%	28%	15%	15%	<=5%	<=5%	<=5%	<=5%	10%	10%	41%	41%
Mayfield Woods MS	<=5%	<=5%	15%	15%	27%	27%	<=5%	<=5%	29%	29%	6%	6%	22%	22%
Mount View MS	<=5%	<=5%	46%	46%	6%	6%	<=5%	<=5%	<=5%	<=5%	5%	5%	39%	39%
Murray Hill MS	<=5%	<=5%	19%	19%	43%	43%	<=5%	<=5%	21%	21%	5%	5%	12%	12%
Oakland Mills MS	<=5%	<=5%	8%	5%	35%	36%	<=5%	<=5%	27%	28%	8%	7%	23%	24%
Patapsco MS	<=5%	<=5%	34%	34%	13%	13%	<=5%	<=5%	11%	11%	<=5%	<=5%	39%	39%
Patuxent Valley MS	<=5%	<=5%	14%	14%	44%	44%	<=5%	<=5%	21%	21%	5%	5%	16%	16%
Thomas Viaduct MS	<=5%	<=5%	15%	15%	47%	47%	<=5%	<=5%	20%	20%	6%	6%	12%	12%
Wilde Lake MS	<=5%	<=5%	7%	7%	44%	44%	<=5%	<=5%	12%	12%	9%	9%	28%	28%
Countywide Average	<=5%		24%		26%		<=5%		12%		6%		31%	

High School Scenario D – ESOL Percentages

High School	% ESOL Participation	
	Base	Proposed
Atholton HS	<=5%	<=5%
Centennial HS	<=5%	<=5%
Glenelg HS	<=5%	<=5%
Hammond HS	6%	<=5%
Howard HS	<=5%	<=5%
Long Reach HS	10%	10%
Marriotts Ridge HS	<=5%	<=5%
Mt Hebron HS	<=5%	6%
Oakland Mills HS	6%	6%
Reservoir HS	5%	<=5%
River Hill HS	<=5%	<=5%
Wilde Lake HS	5%	5%
High School 13	-	7%
Countywide Average	<=5%	

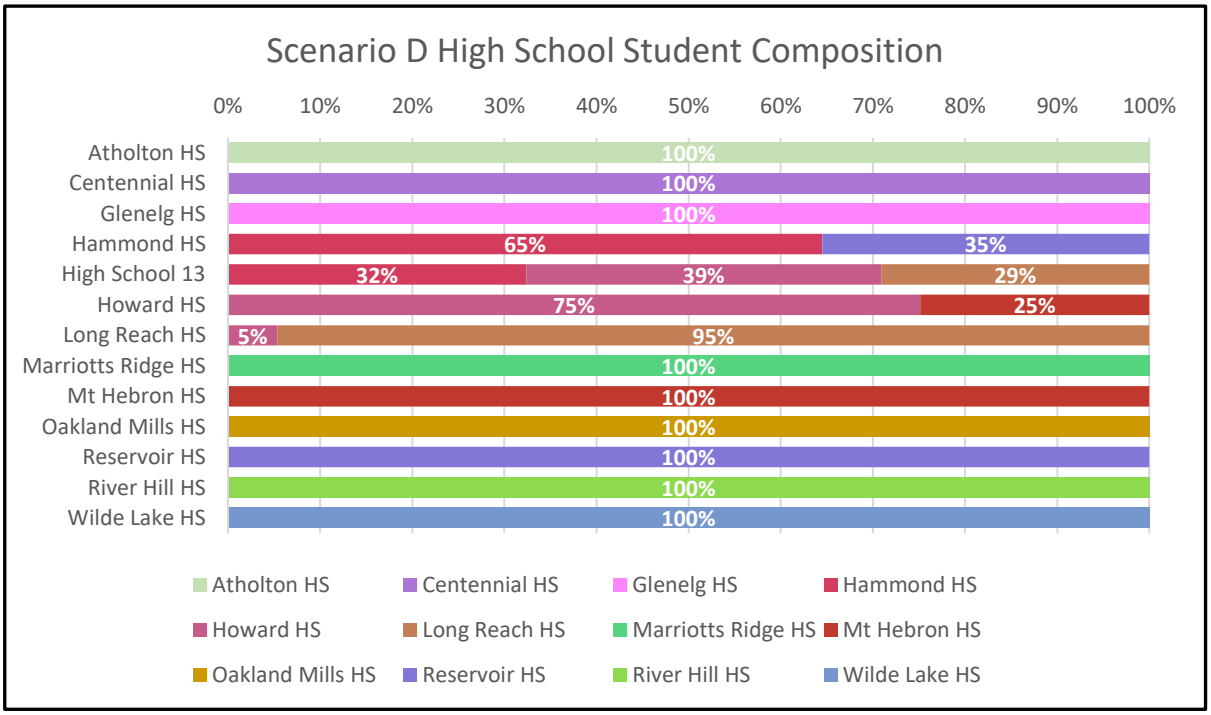
Middle School	% ESOL Participation	
	Base	Proposed
Bonnie Branch MS	8%	8%
Burleigh Manor MS	<=5%	<=5%
Clarksville MS	<=5%	<=5%
Dunloggin MS	<=5%	<=5%
Elkridge Landing MS	<=5%	<=5%
Ellicott Mills MS	<=5%	<=5%
Folly Quarter MS	<=5%	<=5%
Glenwood MS	<=5%	<=5%
Hammond MS	<=5%	<=5%
Harpers Choice MS	8%	8%
Lake Elkhorn MS	<=5%	<=5%
Lime Kiln MS	<=5%	<=5%
Mayfield Woods MS	10%	10%
Mount View MS	<=5%	<=5%
Murray Hill MS	10%	10%
Oakland Mills MS	9%	10%
Patapsco MS	7%	7%
Patuxent Valley MS	9%	9%
Thomas Viaduct MS	8%	8%
Wilde Lake MS	<=5%	<=5%
Countywide Average	<=5%	

High School Scenario D – Test Percentages

High School	PSAT-Read		PSAT-Math	
	Base	Proposed	Base	Proposed
Atholton HS	74%	74%	50%	50%
Centennial HS	85%	85%	68%	68%
Glenelg HS	84%	84%	65%	65%
Hammond HS	56%	58%	30%	32%
Howard HS	69%	75%	48%	56%
Long Reach HS	50%	52%	29%	33%
Marriotts Ridge HS	85%	85%	69%	69%
Mt Hebron HS	77%	75%	60%	58%
Oakland Mills HS	48%	48%	28%	28%
Reservoir HS	64%	67%	40%	43%
River Hill HS	89%	89%	75%	75%
Wilde Lake HS	55%	55%	35%	35%
High School 13	-	54%	-	29%
System-wide Total	70%		50%	

Middle School	PARCC-Read		PARCC-Math	
	Base	Proposed	Base	Proposed
Bonnie Branch MS	46%	46%	22%	22%
Burleigh Manor MS	62%	62%	35%	35%
Clarksville MS	68%	68%	43%	43%
Dunloggin MS	53%	53%	26%	26%
Elkridge Landing MS	42%	42%	18%	18%
Ellicott Mills MS	51%	51%	33%	31%
Folly Quarter MS	66%	66%	44%	44%
Glenwood MS	54%	54%	23%	23%
Hammond MS	40%	40%	20%	20%
Harpers Choice MS	25%	25%	7%	7%
Lake Elkhorn MS	24%	24%	6%	6%
Lime Kiln MS	56%	56%	31%	31%
Mayfield Woods MS	32%	32%	10%	10%
Mount View MS	63%	63%	40%	40%
Murray Hill MS	29%	29%	9%	9%
Oakland Mills MS	34%	32%	13%	12%
Patapsco MS	46%	46%	24%	24%
Patuxent Valley MS	27%	27%	7%	7%
Thomas Viaduct MS	27%	27%	10%	10%
Wilde Lake MS	39%	39%	14%	14%
System-wide Total	44%		21%	

High School Scenario D – High School Student Composition



High School Scenario D – Travel Distance

Average Travel Distance Using Roads in Miles from Planning Unit Centroids (Weighted by 2023-24 HS Students)

Distance	Current	Scenario D	Change
Atholton HS	2.2	2.2	Unchanged
Centennial HS	2.1	2.1	Unchanged
Glenelg HS	3.4	3.4	Unchanged
Hammond HS	1.5	2.2	Increase
Howard HS	1.8	1.8	Increase
Long Reach HS	1.4	1.2	Decrease
Marriotts Ridge HS	3.8	3.8	Unchanged
Mt Hebron HS	2.4	1.6	Decrease
Oakland Mills HS	1.8	1.8	Unchanged
Reservoir HS	2.3	1.6	Decrease
River Hill HS	1.8	1.8	Unchanged
Wilde Lake HS	1.6	1.6	Unchanged
High School 13	0.0	1.9	New
Districtwide Average	**2.19**	**2.11**	**Decrease**

Redistricting Input Survey in Preparation for the Opening of New High School 13

Introduction

HCPSS Office of School Planning and Cooperative Strategies (Boundary Consultant) hosted an online survey which was made available to community members from March 8 through May 2, 2022. Over this period of time, 3,509 participants completed the survey.

The survey was intended to collect feedback on the redistricting process in general as well as parameters identified in Board Policy 6010.

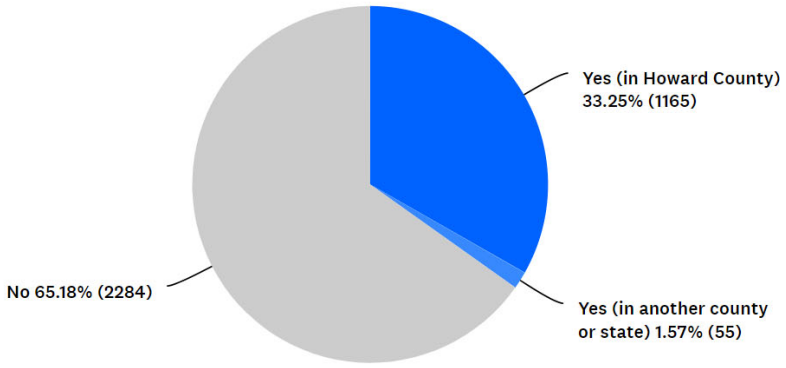
This also gives staff, consultants, and the Board information that can be used to improve this and future processes as well as an idea of how community members may react to future boundary plans.

Feedback on Previous Processes

33 % (1,165) of the respondents indicated that they had been impacted in a previous HCPSS boundary process. When asked to provide feedback about previous processes, the overall feedback was generally negative with frequent comments about last-minute decisions and an over-emphasis on socio-economic equity. Many of the respondents that did not indicate that they had been impacted in previous processes, shared similar sentiment.

Have you been reassigned in a previous boundary change process?

Answered: 3,504 Skipped: 28



ANSWER CHOICES	RESPONSES	
Yes (in Howard County)	33.25%	1,165
Yes (in another county or state)	1.57%	55
No	65.18%	2,284
TOTAL		3,504

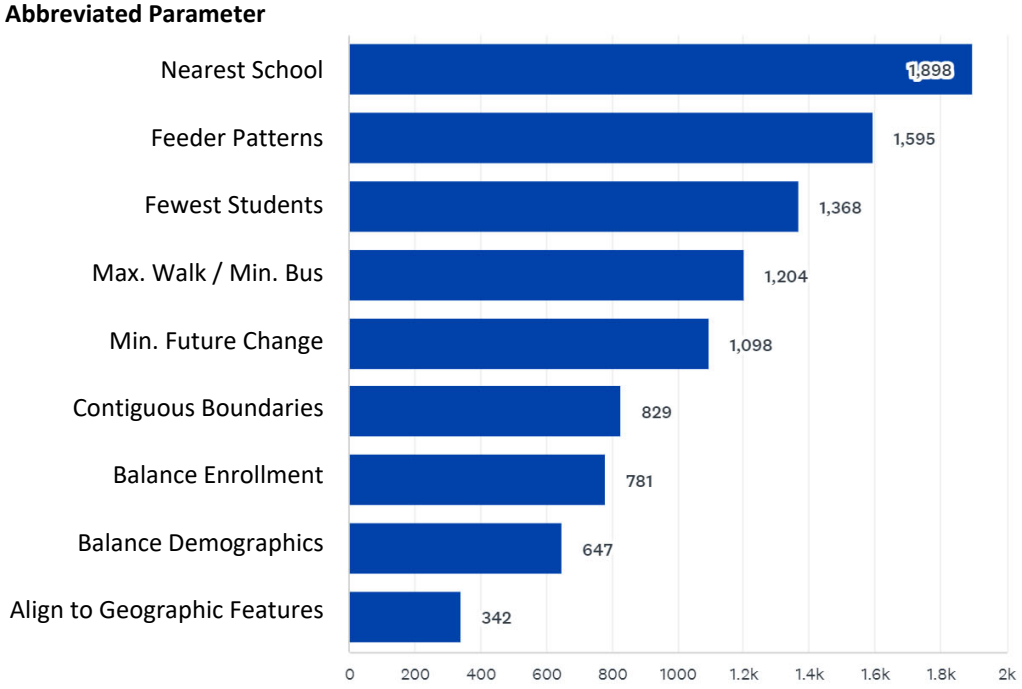
Priorities

Respondents were asked to select their top 4 factors to be considered in the development of redistricting scenarios. These factors were developed based on decision principles from Policy 6010.

The top four factors indicated by the respondents focused on assigning students to their nearest schools, aligning feeds, impacting the fewest number of students, and maximizing walkability & minimizing busing.

Please select the top four (4) factors that are most important to you.

Answered: 2,655 Skipped: 877



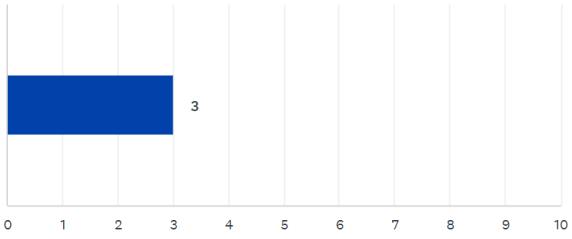
ANSWER CHOICES	RESPONSES	
Attempt to create boundaries that assign students to their nearest school.	71.49%	1,898
Attempt to create boundaries that align feeder patterns (example: one elementary school feeds into one middle school).	60.08%	1,595
Attempt to modify boundaries in a way that impacts the fewest number of students as possible.	51.53%	1,368
Attempt to create boundaries that maximize walkability and minimize busing.	45.35%	1,204
Attempt to create boundaries that prepare the District to grow with minimal future boundary changes.	41.36%	1,098
Attempt to create boundaries that are contiguous (one piece, without detached portions).	31.22%	829
Attempt to create boundaries that balance enrollment among schools equitably.	29.42%	781
Attempt to create boundaries that reflect the demographics (socio-economics and diversity) of the District as a whole.	24.37%	647
Attempt to align boundaries to existing geographic features (rivers, roads, railroads, existing boundaries).	12.88%	342
Total Respondents: 2,655		

Trade-Offs

Given that several of the factors are naturally opposed, respondents were asked to indicate their preference on a scale between two opposing factors.

Nearest school vs. Balance of capacity utilization and demographics

Answered: 2,590 Skipped: 942



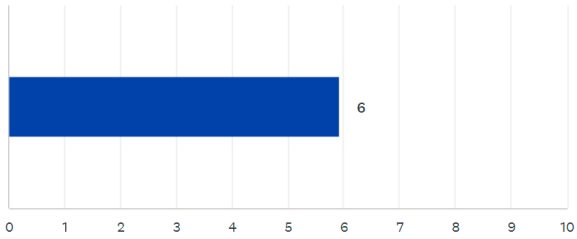
Nearest School **Balance Utilization and Demographics**

BASIC STATISTICS				
MINIMUM	MAXIMUM	MEDIAN	MEAN	STANDARD DEVIATION
0.00	10.00	2.00	3.02	2.98

The chart above illustrates the trade-off between assigning students to their nearest school and balancing utilization and demographics. The overall average of 3.02 indicates that the respondents favored closest school assignments.

Reassign fewer students for a shorter term solution vs. more students for a longer term solution

Answered: 2,566 Skipped: 966



Fewer Students / Shorter Term **More Students / Longer Term**

BASIC STATISTICS				
MINIMUM	MAXIMUM	MEDIAN	MEAN	STANDARD DEVIATION
0.00	10.00	7.00	5.92	3.26

The chart above illustrates the trade-off between assigning fewer students for a shorter-term solution vs. more students for a longer-term solution. The overall average of 5.92 indicates that the respondents slightly favored moving more students for a longer-term solution. It should be noted that this is somewhat contradictory to the third highest rank factor for moving as fewest number of students as possible.

Demographics

I am (please select all that apply):

Answered: 2,558 Skipped: 974

ANSWER CHOICES		RESPONSES	
The parent/guardian of a current HCPSS student		57.70%	1,476
The parent/guardian of a child less than 5 years old		10.32%	264
The parent/guardian of a private or parochial school student		2.66%	68
A current HCPSS student		35.03%	896
A current HCPSS staff member		8.17%	209
Do not have children in HCPSS		2.70%	69
Other (please specify)	Responses	3.56%	91
Total Respondents: 2,558			

I am affiliated with the following schools (please select all that apply):

Answered: 2,558 Skipped: 974

ANSWER CHOICES	RESPONSES	
Applied Research Laboratory (9-12)	0.90%	23
Atholton ES	3.64%	93
Atholton HS	8.48%	217
Bellows Spring ES	1.45%	37
Bollman Bridge ES	1.68%	43
Bonnie Branch MS	4.65%	119
Bryant Woods ES	0.82%	21
Burleigh Manor MS	4.38%	112
Bushy Park ES	1.21%	31
Cedar Lane (PK-12)	0.43%	11
Centennial HS	5.32%	136
Centennial Lane ES	2.54%	65
Clarksville ES	1.95%	50
Clarksville MS	6.96%	178
Clemens Crossing ES	1.52%	39
Cradlerock ES	0.86%	22
Dayton Oaks ES	2.15%	55
Deep Run ES	1.29%	33
Ducketts Lane ES	1.41%	36
Dunloggin MS	2.93%	75

I am affiliated with the following schools (please select all that apply):

Answered: 2,558 Skipped: 974

ANSWER CHOICES	RESPONSES	
Elkridge ES	2.54%	65
Elkridge Landing MS	3.87%	99
Ellicott Mills MS	3.64%	93
Folly Quarter MS	3.95%	101
Forest Ridge ES	2.62%	67
Fulton ES	8.17%	209
Glenelg HS	4.26%	109
Glenwood MS	1.06%	27
Gorman Crossing ES	2.81%	72
Guilford ES	1.72%	44
Hammond ES	3.05%	78
Hammond HS	5.36%	137
Hammond MS	4.57%	117
Hanover Hills ES	1.02%	26
Harper's Choice MS	1.02%	26
Hollifield Station ES	0.98%	25
Homewood (6-12)	0.51%	13
Howard HS	7.15%	183
Ilchester ES	3.01%	77
Jeffers Hill ES	0.55%	14
Lake Elkhorn MS	1.92%	49
Laurel Woods ES	1.02%	26
Lime Kiln MS	6.88%	176
Lisbon ES	0.47%	12
Long Reach HS	5.94%	152
Longfellow ES	0.51%	13
Manor Woods ES	1.88%	48
Marriotts Ridge HS	4.85%	124
Mayfield Woods MS	2.89%	74
Mount View MS	3.17%	81
Mt. Hebron HS	5.24%	134
Murray Hill MS	3.60%	92
Northfield ES	2.50%	64
Oakland Mills HS	4.57%	117
Oakland Mills MS	2.07%	53

I am affiliated with the following schools (please select all that apply):

Answered: 2,558 Skipped: 974

ANSWER CHOICES		RESPONSES	
Patapsco MS		1.84%	47
Patuxent Valley MS		4.03%	103
Phelps Luck ES		1.25%	32
Pointers Run ES		6.02%	154
Reservoir HS		8.95%	229
River Hill HS		7.11%	182
Rockburn ES		1.95%	50
Running Brook ES		0.63%	16
St. John's Lane ES		1.60%	41
Stevens Forest ES		0.74%	19
Swansfield ES		1.33%	34
Talbott Springs ES		1.13%	29
Thomas Viaduct MS		3.24%	83
Thunder Hill ES		1.17%	30
Triadelphia Ridge ES		2.19%	56
Veterans ES		2.15%	55
Waterloo ES		2.19%	56
Waverly ES		1.45%	37
West Friendship ES		0.78%	20
Wilde Lake HS		3.09%	79
Wilde Lake MS		2.23%	57
Worthington ES		1.29%	33
Other (please specify)	Responses	1.84%	47
Total Respondents: 2,558			

Appendix B - Analytically Optimized Boundary Scenarios

Mathematical Optimization

In response to the desire within the school community for data-driven attendance area adjustment solutions, the Office of School Planning employed the use of iRedistrict, a mathematical optimization software developed by researchers at the University of South Carolina, to inform the selected attendance area adjustment scenarios contained in this planning document. iRedistrict was originally developed with electoral redistricting in mind, with a goal of measuring (and potentially avoiding) political "gerrymandering", a process by which districts are molded with the intent of benefiting a particular political party by ensuring district-level majorities, or condensing opposition to as few districts as possible, often at the expense of perceived community boundaries.

Mathematical optimization is a process that develops, tests, and ranks potential attendance area scenarios based on a set of input factors and weights. The software can take a set of input criteria including distance, existing boundaries, and demographic characteristics and develop scenarios in a way that equalizes population and demographic diversity while also considering travel distance and geographic contiguity.

Attendance area adjustment processes at HCPSS have traditionally been performed manually using the analytical team's best judgment and a guess-and-check method to test scenarios and rank potential results. While software tools cannot completely replace human analysts with local knowledge, mathematical optimization has the potential to identify solutions that may have otherwise been missed.

The software produces solutions that equalize capacity utilization for the first year tested (School Year 2023-2024) while maintaining geographic contiguity as well as measuring "compactness". Compactness, simply put, is a measurement of the sprawl of a geographic area. In their extremes, a compact district generally is circular in shape, while a non-compact district is more linear. Figures B-1.1 and B-1.2 use potential district boundaries for Wilde Lake HS to illustrate the difference between compact and non-compact districts. Figure B-1.1 shows an extremely compact district boundary, while Figure B-1.2 shows a non-compact one.

All scenario modeling uses established planning unit boundaries as the building blocks for new plans.

Figure B-1.1

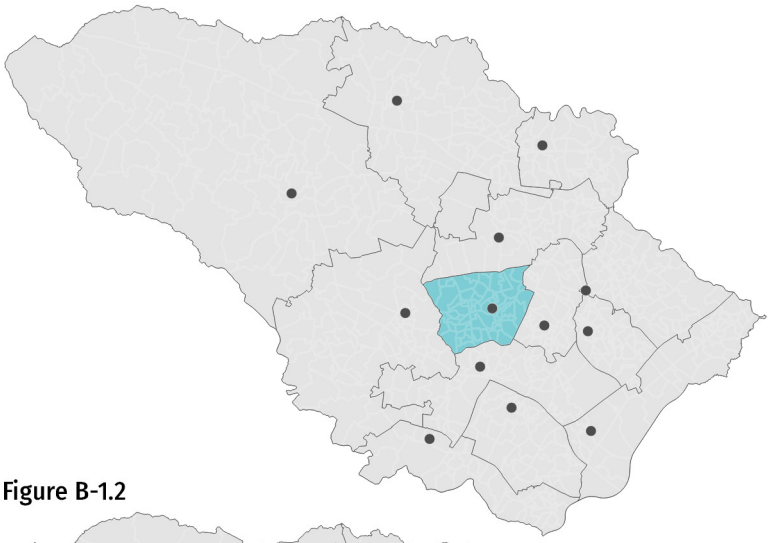
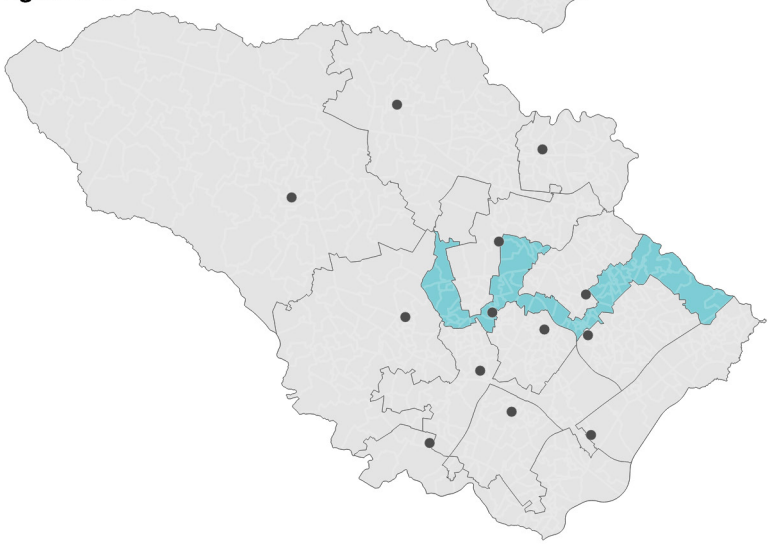


Figure B-1.2



Based on knowledge of the attendance area adjustment process as well as community feedback, the primary measurable factors the Office of School Planning optimized for were distance to school, limiting changes to existing boundaries, non-separation of walk zone boundaries, middle school feeds with a focus on avoiding small feeds (less than 15 percent of a high school's population feeding from a particular middle school), socio-economic and racial diversity, and long-term (10 years) projected utilization. Socio-economic and racial diversity were measured using non-white population, ESOL students, direct certification (determined by household participation in SNAP, TANF, and other welfare programs), and standardized test scores.

It's important to understand that optimization of multiple variables will involve compromises between factors. For example, the most equitable plan may disrupt walk zones, or create serpentine district boundaries; the plan with the lowest impact on existing school boundaries may create overcrowding at some schools within a few years. To demonstrate this, several scenarios optimized for one single factor are included below. In order to limit unnecessary student impact, the software was restricted from modifying planning units currently assigned to Glenelg HS, Marriotts Ridge HS, and River Hill HS.

Figure B-2

School	22-23 Util	28-29 Util	33-34 Util	Direct Certs	Non-White	Test Markers Met	ESOL Pop
Atholton	100.3%	103.5%	108.3%	11.4%	29%	62.1%	2.6%
Centennial	103.4%	77.7%	79.4%	4.8%	38.8%	76.7%	2.5%
Glenelg	94.5%	95%	96.8%	2.3%	66.7%	74.65%	0.6%
Hammond	90.4%	105.8%	111.3%	19.4%	24.6%	43.1%	5.5%
Howard	122.5%	121.6%	124.3%	9.8%	40.7%	58.5%	2.2%
Long Reach	116.6%	127.6%	137.3%	15.3%	26.1%	39.65%	10.2%
Marriotts Ridge	104.8%	107.2%	109.3%	3.5%	38.3%	77.05%	1.8%
Mt Hebron	115.8%	126.1%	134.6%	5%	42.2%	68.7%	4.3%
Oakland Mills	102.2%	103.3%	87.6%	20%	18%	37.75%	6.2%
Reservoir	124%	136.9%	144.6%	10.1%	23.1%	51.9%	5.3%
River Hill	97.9%	99.3%	100.7%	1.3%	43.4%	81.95%	1.1%
Wilde Lake	100.7%	103.4%	105.8%	25.1%	24.1%	44.85%	5.3%

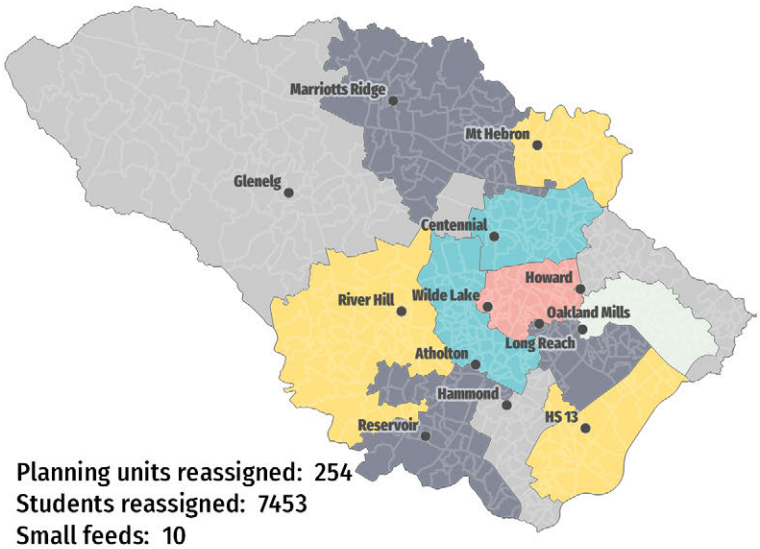
Schools 110% Utilization or greater within 5 Years: 4

Schools 110% Utilization or greater within 10 Years: 5

Feeds of less than 15% of a middle school's population: 3

Figure B-2 is an assessment of baseline high school conditions if New HS #13 is not opened. This table is intended to give context to population projections, demographic characteristics, and compactness ratings in the optimizations displayed in this appendix. Compactness is measured using the Polsby-Popper method. All scores are values between 0 and 1 with 0 being the least compact and 1 the most.

Figure B-3

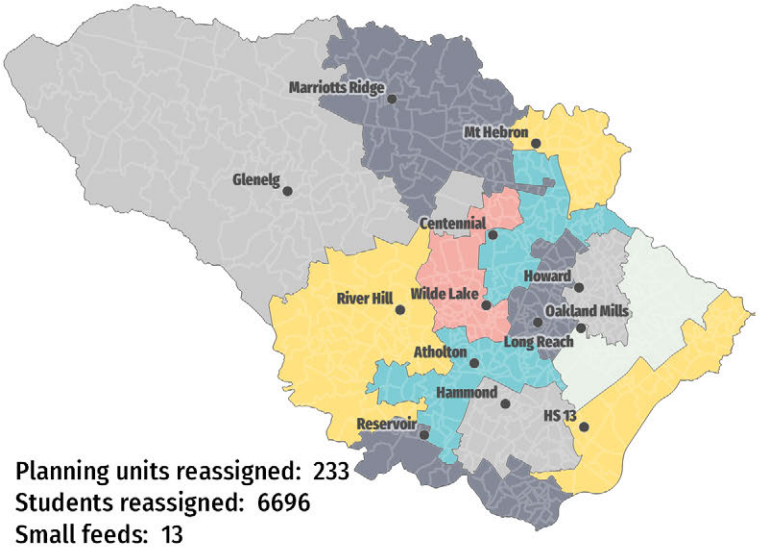


Planning units reassigned: 254
Students reassigned: 7453
Small feeds: 10

School	23-24 Util	28-29 Util	33-34 Util	Compactness
Atholton	98.3%	98.8%	102.6%	0.31
Centennial	96.1%	73.3%	74.8%	0.44
Glenelg	95.6%	95%	96.8%	0.26
Hammond	97.8%	105.5%	111.8%	0.27
High School 13	97.9%	106.1%	112.5%	0.39
Howard	97.7%	100%	104.3%	0.17
Long Reach	98.2%	102.7%	108.4%	0.34
Marriotts Ridge	104.8%	107.2%	109.3%	0.25
Mt Hebron	98.2%	103.1%	109.7%	0.42
Oakland Mills	98.3%	102.4%	85.8%	0.42
Reservoir	97.7%	103.1%	108.1%	0.18
River Hill	99.5%	99.3%	100.7%	0.23
Wilde Lake	97.6%	98.1%	102.3%	0.51

Figure B-3 is an attendance area scenario optimized for students to attend their nearest school within capacity. This is only one of many potential solutions and its ranking may be only marginally better than other results. In this result school attendance areas are relatively compact, but the number of planning units and students reassigned is extremely high and there are projected to be two schools at 110 percent or greater utilization within ten years of New HS #13's opening. There are also ten resulting small feeds, which is quite high compared to the three small feeds of current conditions.

Figure B-4

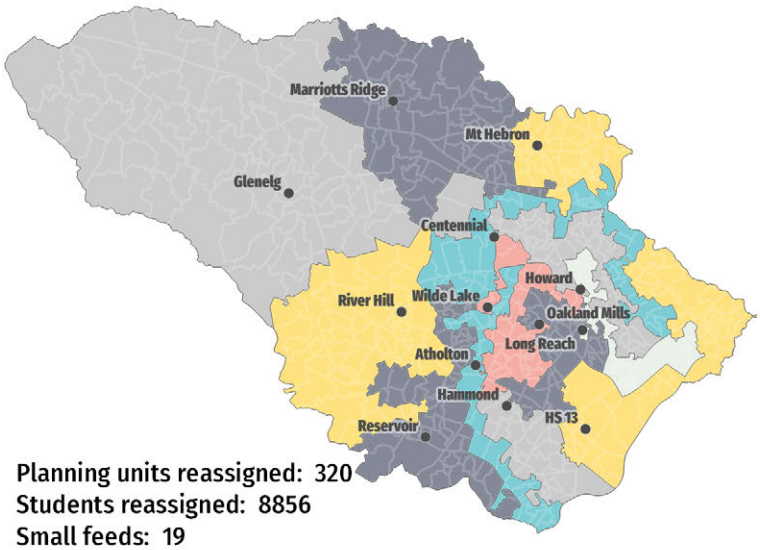


Planning units reassigned: 233
Students reassigned: 6696
Small feeds: 13

School	23-24 Util	28-29 Util	33-34 Util	Direct Certs
Atholton	97.8%	100.7%	105.6%	10.6%
Centennial	98.1%	78.2%	81%	9.9%
Glenelg	95.6%	95%	96.8%	2.3%
Hammond	98.5%	107.1%	112.8%	14.4%
High School 13	98.4%	103.3%	109.6%	12.8%
Howard	98.3%	101.8%	106.8%	10.6%
Long Reach	98.1%	102.1%	108.3%	9.1%
Marriotts Ridge	104.8%	107.2%	109.3%	3.5%
Mt Hebron	98.2%	101%	106.5%	6.7%
Oakland Mills	95.6%	96%	79.6%	16.7%
Reservoir	98.4%	106.6%	112.7%	9.5%
River Hill	99.5%	99.3%	100.7%	1.3%
Wilde Lake	96.1%	95.1%	97.6%	19.6%

Figure B-4 has boundaries optimized for FARM direct certification. In this scenario, district boundaries are less compact than Figure B-3,the number of students reassigned is still high, and there will again be two schools at 110 percent or greater utilization within ten years. Additionally, many school walk zones have been disrupted and there are 13 small feeds.

Figure B-5



Planning units reassigned: 320
Students reassigned: 8856
Small feeds: 19

School	23-24 Util	28-29 Util	33-34 Util	Compactness
Atholton	96.7%	101.1%	106.3%	0.05
Centennial	100%	80.3%	83.4%	0.05
Glenelg	95.6%	95%	96.8%	0.26
Hammond	94.2%	101.9%	107.1%	0.2
High School 13	97.3%	102.1%	106.7%	0.15
Howard	99.6%	100.1%	104.3%	0.07
Long Reach	98.3%	101.2%	107.7%	0.09
Marriotts Ridge	104.8%	107.2%	109.3%	0.25
Mt Hebron	97.5%	102.1%	108.5%	0.25
Oakland Mills	97.9%	102%	85.1%	0.11
Reservoir	97%	101.4%	105.9%	0.1
River Hill	99.5%	99.3%	100.7%	0.23
Wilde Lake	99.9%	100.3%	104.9%	0.08

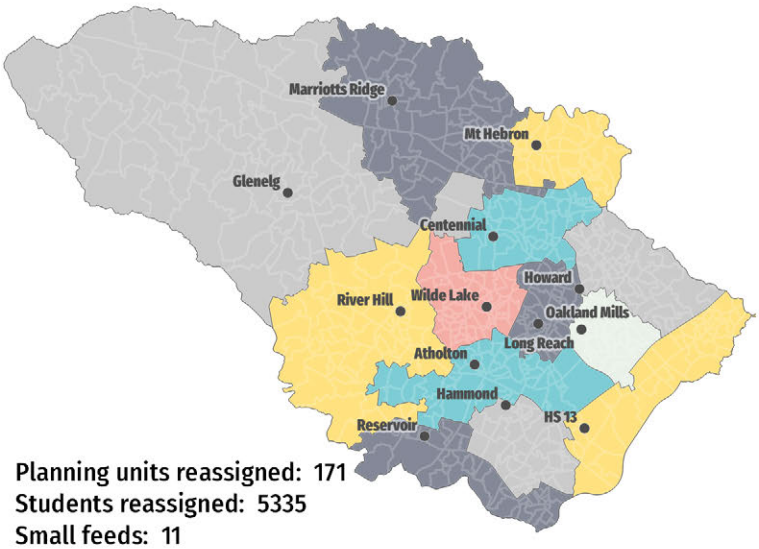
Figure B-5 is optimized based on long-term enrollment projections. This example looks perhaps the most outlandish of all the optimized scenarios because the extreme lack of compactness. This plan ensures that no school will be at or above 110 percent utilization by School Year 2033-2034, but it majorly disrupts existing communities and school travel distance. The 19 small middle-to-high school feeds is extraordinarily high. This plan will affect more students than any of the others considered.

Community feedback was also an important consideration as attendance area scenarios were developed. Figure B-6 displays these factors as well as their relative priority as voted on by HCPSS parents and students. These priorities were converted to factor-weights for the scenario in Figure B-7. This is a more viable option than some other optimizations shown above, but there are still a large number of students impacted and five schools are above or approaching critical utilization levels.

Figure B-6

Criteria		Priority
Distance to school		1
Minimizing change to exisiting boundaries		2
Keeping middle school populations together		3
Walkability		4
Long-term solution		5
Diversity	FARM Direct Certification	6
	ESOL students	
	Test scores	

Figure B-7

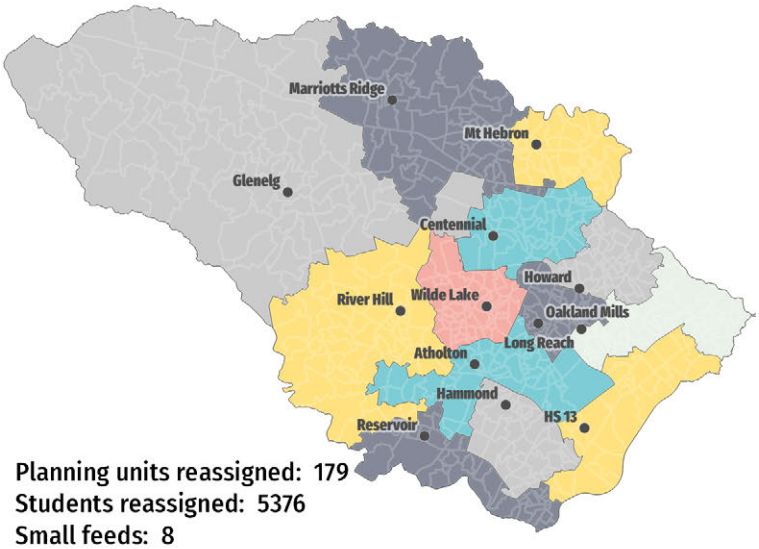


Planning units reassigned: 171
Students reassigned: 5335
Small feeds: 11

School	23-24 Util	28-29 Util	33-34 Util	Compactness
Atholton	97.8%	101.9%	106.9%	0.2
Centennial	97.7%	74.7%	76.3%	0.37
Glenelg	95.6%	95%	96.8%	0.26
Hammond	97.4%	104.9%	110.5%	0.49
High School 13	97.6%	102.9%	108.8%	0.29
Howard	97.4%	99.4%	103.6%	0.41
Long Reach	98.3%	103.3%	111.1%	0.48
Marriotts Ridge	104.8%	107.2%	109.3%	0.25
Mt Hebron	98.2%	103.1%	109.7%	0.42
Oakland Mills	98.1%	98.1%	81.2%	0.47
Reservoir	97.9%	106.2%	112.3%	0.24
River Hill	99.5%	99.3%	100.7%	0.23
Wilde Lake	97.5%	98.1%	100.8%	0.41

Figure B-8 attempts to equally balance all of the criteria studied (distance, walk zones, minimizing change to existing boundaries, middle school feed rates, long-term projection, and diversity. The number of students affected is lower than some of the previous examples, but still quite high compared to the options included in Appendix A which stay in the 2,000 – 4,000 range. Utilization will be critical at three schools by School Year 2033-2034.

Figure B-8



Planning units reassigned: 179
Students reassigned: 5376
Small feeds: 8

School	23-24 Util	28-29 Util	33-34 Util	Compactness
Atholton	97.9%	100.8%	106.1%	0.18
Centennial	97.5%	74.4%	76%	0.38
Glenelg	95.6%	95%	96.8%	0.26
Hammond	97.4%	105.3%	110.9%	0.51
High School 13	97.7%	103.7%	111.3%	0.29
Howard	97.4%	99.1%	102.8%	0.37
Long Reach	98.1%	102.1%	107.7%	0.24
Marriotts Ridge	104.8%	107.2%	109.3%	0.25
Mt Hebron	98.2%	103.1%	109.7%	0.42
Oakland Mills	98.2%	99.6%	82.7%	0.48
Reservoir	97.8%	106.2%	112.3%	0.2
River Hill	99.5%	99.3%	100.7%	0.23
Wilde Lake	97.7%	98.4%	101.1%	0.44

Findings:

This being the first year for HCPSS using mathematical optimization in attendance area adjustment efforts, planning staff don't necessarily have a full picture of how to leverage the technology, nor whether there are other tools that could be incorporated into the planning process. We expect the role of mathematical optimization via iRedistrict, or other software packages to only grow in future years. That said, there were some limitations to our analysis this year. iRedistrict at present attempts to balance all variables that are fed into it, but there is no option to specifically limit the number of students impacted. Using existing boundaries as barriers can partially address the consideartion of number of students reassigned. The numbers provided in the diagrams of this appendix were calculated post-optimization. Another limitation is the ability to set threshold limits. A prime example of where this would be useful is in measuring middle school feed rates. We don't necessarily want to balance all middle school feed rates among all schools. We are more interested in restricting the proposed solutions to have no feed rates below 15 percent. The final key limitation is that iRedistrict can only operate on one school level at a time. The scenarios presented in "Appendix A" have a small amount of middle school reassignments to ensure a better feeder pattern. iRedistrict can only use existing middle school assignments as they are, so adjustments to feeds can only happen at the high school level.

Upon review of the optimized scenarios, we found that they are a very useful tool in uncovering potential boundary adjustments, but no scenarios from the program were ready to be recommended as complete scenarios without review and refinement by planning staff. All plans had minor elements that needed to be tweaked. For example, a scenario could be excellent in nearly all criteria but have a 1 percent middle school feed. That 1 percent feed prevents the plan from being viable, but human adjustment can resolve these problems.

Appendix C - Policy 6010
School Attendance Areas

Howard County Public School System
Board of Education

POLICY 6010
SCHOOL ATTENDANCE AREAS

Effective: February 10, 2022

Policy Outline

I. Policy Value Statement

The Board of Education of Howard County, with the advice of the Superintendent, establishes school attendance areas to provide quality, equitable educational opportunities to all students while balancing the capacity utilization of all schools. The Board recognizes that school openings, closings, additions, program changes, population growth and other demographic changes may require adjustments to school attendance areas. The Board also recognizes the value of diverse and inclusive school populations when establishing attendance areas. The Board believes that analyses and recommendations from the Superintendent/designee, as well as public advice and comment, are integral to its deliberations and decisions related to school attendance areas.

II. Purpose

The purpose of this policy is to define the conditions and process by which school attendance area adjustments will be developed and adopted.

III. Standards

A. The Board will consider school attendance area adjustments whenever one or more of the following conditions exist:

1. A new school or addition is scheduled to open.

2. An existing permanent school facility is significantly damaged, deemed no longer to be usable, or otherwise scheduled to close.

3. School attendance area projections are outside the capacity utilization range of 90-110% and available capacity exists.

4. The program capacity of a school building is altered by the Board of Education.

5. A unique circumstance arising from internal or external contributing factors that prompts adjustments to promote efficiencies, provide for the welfare of students, or adapt for shifts in program delivery.

B. The Board, Superintendent/designee and the Attendance Area Committee (AAC), if convened, will consider the impact of the following factors during the review or development of any school attendance area adjustment plan. While each of these factors will be considered, it may not be feasible to reconcile each and every attendance area adjustment with each and every factor.

Attendance area adjustment plans are to be evaluated analytically, based on the factors identified below.

1. Facility Utilization. Where reasonable, school attendance area utilization should stay within the capacity utilization range of 90-100% for as long a period of time as possible through the consideration of:

   a. Efficient use of available capacity.

   b. Long-range enrollment projections, capital plans and capacity needs of school infrastructures (e.g., cafeterias, restrooms and other shared core facilities).

   c. Fiscal responsibility through optimized use of capital and operating costs.

   d. The number of students that walk or receive bus service and the distance and time bused students travel.

   e. Location of regional programs, with the goal of achieving an equitable distribution of regional programs across the county.

   f. The condition of school facilities based on state and local assessments of school facilities.

2. Community Stability. Where reasonable, school attendance areas should promote a sense of community in both the geographic place (e.g., neighborhood or place in which a student lives) and the promotion of a student from each school level through the consideration of:

   a. Feeds that encourage keeping students together from one school to the next. For example, avoiding feeds of less than 15% at the receiving school.

   b. Maintaining contiguous communities or neighborhoods.

c. Limiting frequency with which any one geographic area is reassigned, by trying to avoid reassigning cohorts more than once within a school level.

3. Demographic Characteristics of Student Population. Where reasonable, school attendance areas should promote the creation of a diverse and inclusive student body at both the sending and receiving schools through the consideration of:

a. The racial/ethnic composition of the student population.

b. Socioeconomic composition of each school's student population.

c. Academic performance of students in both the sending and receiving schools.

d. Distribution of English language learners.

e. Number of students reassigned, taking into account the correlation between the number of students reassigned, the outcomes of other standards achieved in Section III.B. and the length of time those results are expected to be maintained.

f. Other reliable demographic indicators.

C. Board of Education's Deliberations

1. The Superintendent/designee will submit projections, capacity concerns and strategies to the Board for discussion.

2. If attendance area adjustments are considered under Section III.A., the Board will notify the public of its decision for the Superintendent to proceed [or not to proceed] with the attendance area review process.

3. The Board of Education must comply with reporting requirements of Education Article Section 4-140, including:

a. Reporting on the program capacity of each permanent school facility;

b. If student enrollment at a permanent school facility is not within 10% of target utilization, reporting on a plan to adjust student enrollment to meet target utilization, which can include needs and strategies that may involve operating and capital budgets, as well as programmatic proposals; and

c. If student enrollment at a permanent school facility is not within 20% of target utilization, assessing the need for a boundary review process.

If a boundary review process is not initiated, reporting must include an explanation of the reason a boundary review process was not appropriate, and

a plan to adjust student enrollment to meet target utilization, which can include needs and strategies that may involve operating and capital budgets, as well as programmatic proposals.

4. The Superintendent will submit to the Board the Superintendent's Proposed Attendance Area Adjustment Plan, which includes data on each of the factors in Section III.B. to the extent reliable measures can be obtained.

5. The Board, in accordance with Policy 2040 Public Participation in Meetings of the Board, will provide opportunities to receive testimony, including but not limited to public hearings, regarding the Superintendent's Proposed Attendance Area Adjustment Plan.

6. The Board may direct the Superintendent to provide additional information related to the Superintendent's Proposed Attendance Area Adjustment Plan and/or ask that alternative scenarios be developed by the Superintendent/designee. Alternative scenarios may also be developed by individual Board members for consideration by the Board. When practical, these alternative scenarios are to be made public at least 48 hours prior to a public hearing.

7. Attendance area adjustments will not affect rising twelfth grade students unless Section III.A.2. prompts attendance area adjustment review. The Board may consider exemptions for students to continue attending schools in an area that is proposed for attendance area adjustments including, but not limited to:

    a. Rising fifth, eighth, and eleventh grade students.
    b. Students who have been reassigned once already at their school level or once within the last five years provided that they remained registered at the same address during that time.
    c. Students who have an Individualized Education Program (IEP) or 504 plan.
    d. Students who have at least one parent who is currently active duty military personnel.

8. The Board reserves the right to consider or to modify the Superintendent's Proposed Attendance Area Adjustment Plan or any alternative scenarios submitted during the Board's deliberations.

9. The Board may vote to approve a Board Preliminary Attendance Area Adjustment Plan in accordance with Education Article Section 4-109-1.
    a. When a geographic area that was not proposed for reassignment:

        i. in the Superintendent's Proposed Attendance Area Adjustment Plan or
        ii. in a Board-approved Preliminary Attendance Area Adjustment Plan that has been previously subject to a public hearing

Is proposed for reassignment in a Board-approved Preliminary Attendance Area Adjustment Plan, the proposal is considered to "differ" from Section III.C.9.a.i. and Section III.C.9.a.ii. Therefore, the Board will allow public hearing testimony by one or more members of only those households that were not previously the subject of any reassignment under the Superintendent's Proposed Attendance Area Adjustment Plan or any prior Board-approved Preliminary Attendance Area Adjustment Plan that has been previously subject to a public hearing.

NOTE: Once a geographic area is proposed to be reassigned in the Superintendent's Proposed Attendance Area Adjustment Plan or a Board-approved Preliminary Attendance Area Adjustment Plan and an opportunity for public hearing testimony has been provided, alternative assignment(s) for the same geographic area are not included in the definition of "differ" and an additional public hearing testimony is not required to satisfy Education Article Section 4-109-1.

b. Following public testimony as provided in Section III.C.9.a., if the Board approves a Preliminary Attendance Area Adjustment Plan that differs from the Superintendent's Proposed Attendance Area Adjustment Plan and any prior Board-approved Preliminary Attendance Area Adjustment Plan for which there has been the opportunity for public testimony the procedures in this section will continue.

10. In a public meeting, the Board will take final action to adopt the Superintendent's Proposed Attendance Area Adjustment Plan or a Board-approved Preliminary Attendance Area Adjustment Plan, which becomes the Board's Final Attendance Area Adjustment Plan.

D. Community Input

1. After the Board initiates the attendance area review process, the Superintendent may form an AAC in accordance with the Implementation Procedures of this policy for the purpose of advising the Superintendent during the planning phase of the attendance area adjustment process. In the case of an extended emergency situation, the Superintendent/designee will propose an attendance area adjustment plan.

2. Students, parents, staff, and community members may provide feedback to inform the Superintendent/designee during development of an attendance area adjustment plan proposal to the Board, including the submission of alternative school attendance area adjustment scenarios.

3. Student, parent, staff, and community member feedback will be sought in a variety of methods in a consistent way from each potentially impacted attendance area at the elementary, middle, and high school levels, as well as countywide community

feedback. Feedback will be available to the public in an aggregated, not identifiable fashion.

4. The Board will provide opportunities for public testimony in accordance with Policy 2040 Public Participation in Meetings of the Board as part of the Board work sessions/review process. Students, parents, staff, and community members may provide testimony to the Board during their deliberations, including the submission of alternative school attendance area adjustment scenarios.

E. The Board may alter these provisions, upon a majority vote of the Board, when an extended emergency as defined by Policy 3010 Emergency Preparedness and Response occurs or when other extraordinary circumstances warrant such an alternation.

IV. Responsibilities

A. The Superintendent/designee will prepare and provide enrollment projections and attendance area considerations on an annual basis to the Board.

B. The Board will determine whether any conditions exist that prompt the consideration of school attendance area adjustments and, when applicable initiate the attendance area review process. The Board of Education will define the proposed scope and identify which standards noted in Section III.A. of this policy prompted this attendance area review for the upcoming process.

C. The Superintendent/designee will seek student, parent, staff, and community feedback on the attendance area adjustment considerations and provide opportunities for differing viewpoints to be expressed.

D. The Superintendent/designee will take summary notes of the AAC meeting(s) and make these summary notes available to the public.

E. The Board will hold public hearings, work sessions, and adopt the Board's Final Attendance Area Adjustment Plan in public meetings.

F. The Superintendent/designee will communicate the Board's action on the Board's Final Attendance Area Adjustment Plan to the principals, PTA presidents and SGA presidents of each affected school, the president of the PTA Council of Howard County and the chairman of the Community Advisory Council to the Board.

G. Principals will communicate attendance area adjustments to the parents of students in areas affected by the Board's action.

V. Delegation of Authority

The Superintendent is authorized to develop appropriate procedures to implement this policy.

VI. Definitions

Within the context of this policy, the following definitions apply:

A. Attendance Area Adjustment Plan – An idea or suggestion that changes the geographical school assignment(s) for one or more area(s) of the County including the Superintendent's Proposed Attendance Area Adjustment Plan; any scenario or alternative developed by a Board member; Superintendent/designee or community member; a Board-approved Preliminary Attendance Area Adjustment Plan; an alternative Board-approved Preliminary Attendance Area Adjustment Plan; or Board's Final Attendance Area Adjustment Plan.

B. Attendance Area Committee (AAC) – Committee composed of community members appointed by the Superintendent to provide feedback to the Superintendent on attendance area adjustment considerations.

C. Board's Final Attendance Area Adjustment Plan – A final attendance area adjustment plan adopted by the Board.

D. Board's-approved Preliminary Attendance Area Adjustment Plan – An attendance area adjustment plan approved by the Board that differs from the Superintendent's Proposed Attendance Area Adjustment Plan.

E. Capacity Utilization – The comparison of a permanent school facility's program capacity and its enrollment or projected future enrollment.

F. Equitable – Just or fair access, opportunities, and supports needed to help students reach their full potential by removing barriers to success that individuals face. It does not mean equal or everyone having the same things.

G. Extended Emergency – A severe or long-term emergency that affects an individual school, multiple schools, or the entire school system.

H. Feed – The percentage of students, based on geographical assignments, in an upper level school that come from a school of the lower organizational level.

I. Inclusive – Providing opportunities to ensure that all individuals can be engaged participants in the learning environment and community. All students, families and employees feel valued, respected, appreciated and involved. Individuals see their unique identities reflected in all facets of education including staffing, curriculum, instruction, and activities.

J. Long-Range Enrollment – Each school's student population projections for the upcoming 10 years.

K. Parent – Any one of the following, recognized as the adult(s) legally responsible for the student:

1. Biological Parent – A natural parent whose parental rights have not been terminated.

2. Adoptive Parent – A person who has legally adopted the student and whose parental rights have not been terminated.

3. Custodian – A person or agency appointed by the court as the legal custodian of the student and granted parental rights and responsibilities.

4. Guardian – A person who has been placed by the court in charge of the affairs of the student and granted parental rights and responsibilities.

5. Caregiver – An adult resident of Howard County who exercises care, custody, or control over the student but who is neither the biological parent nor legal guardian, as long as the person satisfies the requirements of the Education Article, §7-101 (c) (Informal Kinship Care) or has been issued a U.S. Department of Health and Human Service's Office of Refugee Resettlement (ORR) Verification of Release form entering into a custodial arrangement with the federal government.

6. Foster Parent – An adult approved to care for a child who has been placed in their home by a state agency or a licensed child placement agency as provided by the Family Law Article, §5-507.

L. Permanent School Facility – School building that is constructed with brick, concrete and steel, with a wooden or fabricated steel frame; a lasting structure designed and intended for support, enclosure, shelter or protection of people and for the delivery of instruction. Excluded from this definition are relocatables which are temporary and can be moved to alternative locations.

M. Program Capacity – The number of students that can be reasonably accommodated in a school, based on the permanent school facility (relocatables are excluded) and the educational program offered (pre-kindergarten regional programs are excluded). Program capacity is calculated based on the Board's approved local methodology:

1. Elementary schools: the product of the Board-approved student-to-teacher ratio and the number of teaching stations identified in the capital budget.

2. Middle schools: 95% of the product of the Board-approved student-to-teacher ratio and the number of teaching stations identified in the capital budget.

3. High schools: 80% or 85% of the product of the Board-approved student-to-teacher ratio and the number of teaching stations in the capital budget.

N. Projections – Estimated student enrollment for future school years.

O. Regional Program – A countywide educational program located at one or more, but not all schools that is designed to provide a particular type of educational leadership or intervention to students. Regional programs may include, but are not limited to Regional Academic Life Skills, Preschool Program, including Parent-Assisted Learning at Schools, Pre-Kindergarten, Elementary School Model Full-day Pre-Kindergarten, Early Beginnings, Regional Emotional Disabilities, Multiple Intensive Needs Classroom, Junior Reserve Officer Training Course (JROTC) and Elementary School Primary Learner Program.

P. Relocatables – Prefabricated, stand-alone buildings providing temporary capacity for a school and that are excluded from program capacity.

Q. Scenario – Any draft attendance area adjustment plan that is developed by individuals, Board members, staff members, or community members.

R. School Attendance Area – Geographic area from which a school's students are drawn.

S. Superintendent's Proposed Attendance Area Adjustment Plan – The attendance area adjustment plan submitted by the Superintendent/designee to the Board. The plan may include more than one recommendation.

T. Target Utilization – Capacity utilization of permanent school facilities between 90% and 100%, when feasible.

U. Teaching Stations – Rooms that are at least 660 square feet in size and are or could be used for delivery of the educational program. Rooms that are excluded include, but are not limited to, rooms assigned to administrative purposes, regional programs, prekindergarten, special education, cooperative use areas, and elementary related arts.

VII. References

A. Legal

The Annotated Code of Maryland, Education Article, Section 4-109, Establishment of Public School
Maryland House Bill 1142 Education Article, Section 4-109.1
Maryland House Bill 1190 Education Article, Section 4-140

B. Other Board Policies

Policy 1080 Educational Equity
Policy 2040 Public Participation in Meetings of the Board
Policy 2050 Advisory Committees to Staff and Schools
Policy 3010 Emergency Preparedness and Response
Policy 5200 Student Transportation
Policy 6000 Site Selection and Acquisition

Policy 6020 School Planning/School Construction Programs
Policy 6070 Discontinuation of School Use
Policy 9000 Student Residency, Eligibility, Enrollment, and Assignment

C. Relevant Data Sources

D. Other

VIII. History[1]

ADOPTED: April 15, 2004
REVIEWED: July 1, 2015
MODIFIED: November 29, 2018
February 28, 2019
February 10, 2022
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April 16, 2009
January 26, 2017
December 16, 2021
EFFECTIVE: February 10, 2022

[1] Key: ***Adopted***-Original date the Board took action to approve a policy; ***Reviewed***-The date the status of a policy was assessed by the Superintendent's Standing Policy Group; ***Modified***-The date the Board took action to alter a policy that based on the recommendation of the Superintendent/designee did not require a comprehensive examination; ***Revised***-The date the Board took action on a policy that based on the recommendation of the Superintendent/designee needed a comprehensive examination; ***Effective***-The date a policy is implemented throughout the HCPSS, typically July 1 following Board action.

POLICY 6010-IP
IMPLEMENTATION PROCEDURES

SCHOOL ATTENDANCE AREAS

Effective: February 10, 2022

I. Development and Consideration of School Attendance Area Adjustment Plans

The long-range school facilities planning process is conducted on an annual basis according to the county's and state's capital budget process. The timing, sequence, and/or steps may be adjusted based on budgetary and operational needs, to account for holidays and other considerations. The development and consideration of school attendance area adjustment plans will take place in the following manner:

Determine Proposed Scope:

A. Calendar Year 1 – June-December
Duration of this step is 1-2 months and it occurs between 21-27 months before implementation of attendance area adjustment.

After the presentation of the student enrollment projections, recommendations for attendance area changes or after any approval of changes in the attendance areas, the Superintendent and the Board of Education will consult with each other to define the proposed scope (i.e. open a new school only or comprehensive plan for all three levels) of the upcoming year's attendance area adjustments and develop a communication plan. The proposed scope may be adjusted during the review and approval process. The Board will notify the public of its decision for the Superintendent to proceed or not to proceed with the attendance area review process and identify the reasons that the attendance area review has been initiated.

Review and Approval Process:

B. Calendar Year 2 – January/February
Duration of this step is 2 months and it begins 20 months before implementation of attendance area adjustment.

The Office of School Planning will facilitate meetings to inform the public of the attendance area review process and obtain public comment regarding attendance area adjustments. The Office of School Planning will solicit public input in a variety of methods in a consistent way from each potentially impacted attendance area, as well as countywide community feedback, about matters related to development of the Superintendent's Proposed Attendance Area Adjustment Plan. The procedure and requirements to submit community member input will be identified and disclosed to the public.

C. Calendar Year 2 – March-May
Duration of this step is 2 months and begins 18 months before implementation of attendance area adjustment.

The Office of School Planning may solicit and interview candidates for the potential Attendance Area Committee (AAC) and nominate candidates for appointment by the Superintendent.

The Office of School Planning will provide the Superintendent with enrollment projections by school annually. The Office of School Planning updates of scenario testing data and tool(s), report(s) and associated data will be made available to the Board and public.

D. Calendar Year 2 – June/July
Duration of this step is 2 months and it begins 15 months before implementation of attendance area adjustment.

If an AAC is created, the Office of School Planning oversees the committee and employees will provide training to the AAC. Training will include, but is not limited to the following:

1. Review of Policy 6010 and its standards used to establish an attendance area adjustment plan.

2. Review the AAC's responsibilities in the attendance area adjustment plan process.

With assistance from the Office of School Planning, the AAC will review any attendance area adjustment considerations, and make a committee recommendation to the Superintendent to assist the Superintendent in developing a recommendation to the Board.

E. Calendar Year 2 – June/July
Duration of this step is 1 month and occurs between 14-15 months before implementation of attendance area adjustment.

The Superintendent/designee presents projections, attendance area considerations and planning issues to the Board and community members.

F. Calendar Year 2 – July/August
Duration of this step is 2 months and it begins 14 months before implementation of attendance area adjustment.

The Office of School Planning will advise the Superintendent on capacity needs for the upcoming budget process during capital budget preparations.

After receipt of input from the AAC, if convened, and the public, the Superintendent's Proposed Attendance Area Adjustment Plan will be presented to the Board. Submitted input will be shared with the Board of Education and public.

G. Calendar Year 2 – August-October
Duration of this step is 3 months and it begins 13 months before implementation of attendance area adjustment.

The Board holds public hearing(s), work session(s), and then may instruct staff to develop alternative scenarios or alterations to existing attendance area adjustment plans for the Board to review.

H. Calendar Year 2 – October-November
Duration of this step is 1-2 months and it begins 11 months before implementation of attendance area adjustment.

The Board may develop a Board-approved Preliminary Attendance Area Adjustment Plan. If the Board proposes a plan by vote that differs from the Superintendent's Proposed Attendance Area Adjustment Plan, a public hearing will be held. Proposed plans will be made public prior to a public hearing.

I. Calendar Year 2 – November
Duration of this step is 1 month and it occurs 10 months before implementation of attendance area adjustment.

Adoption of Board's Final Attendance Area Adjustment Plan.

J. Calendar Year 2 – December
Duration of this step is 1 or more month(s) and it begins 9 months before implementation of attendance area adjustment.

The Superintendent/designee and Board will assess the attendance area adjustment process. Modifications to this process will be made, as needed, prior to the beginning of the next attendance area adjustment.

Implementation

K. Calendar Year 2 – December-Year 3 – January
Duration of this step is 2 or more months and it begins 9 months before implementation of attendance area adjustment.

After the Board has made any final decision(s) regarding attendance area adjustments, the approved attendance area maps are developed, the school locator is updated, and transportation routes are updated. The Superintendent will communicate the Board's action to the principals, PTA presidents and SGA presidents of each affected school, the president of the PTA Council of Howard

County and the chairman of the Community Advisory Council to the Board. The Superintendent/designee will assist school-based administrators and employees with articulating students affected by attendance area adjustments. Principals will communicate attendance area adjustments to the parents of students in areas affected by the Board's action. The Superintendent/designee will direct principals receiving new students to provide multiple opportunities for individualized support for students who are being reassigned. Specific transition steps or a transition plan will be offered for students and families that are being reassigned.

L. Calendar Year 3 – January/February
Duration of this step is 2 months and it begins 8 months before implementation of attendance area adjustment.

Capital/Operating Budgets reviewed by the Board of Education.

M. Calendar Year 3 – May
This step occurs 4 months before implementation of attendance area adjustment.

Capital/Operating Budgets approved by County Council and Board of Education.

N. Calendar Year 3 – September
Implementation of new attendance areas is effective.

II. Attendance Area Committee Make-up and Responsibilities

A. The AAC shall consist of 10 to 15 members. Consideration will be given to providing diverse representation. Representation may include, but is not limited to the following:

1. At least one member from the Howard County Association of Student Councils.

2. At least one member from each of the HCPSS planning regions.

3. At least three, but no more than eight at-large community members, with consideration toward identifying members of the community based on the attendance area/planning region(s) that may be affected by attendance area adjustments.

4. Of those AAC members selected, no more than six members will have been members of a previous AAC.

5. Members may not serve on more than two consecutive AACs.

B. The AAC, after receiving training, will work in collaboration with the Office of School Planning employees and the Superintendent/designee to provide feedback

on attendance area considerations. The basis for the review will be enrollment projections and the Policy 6010 Standards set forth in Section III.B.

III. Appeals

A. The Board's Final Attendance Area Adjustment Plan may be appealed to the State Board of Education.

In accordance with the Code of Maryland Regulations (COMAR) 13A.01.05.02, an appeal of the Board's decision may be filed with the Maryland State Board of Education within 30 calendar days of the Board of Education meeting at which final action was taken.

B. The appeal must be in writing and filed with the Maryland State Board of Education, 200 West Baltimore Street, Baltimore, MD 21201 in one of the following ways:

1. Delivered to the State Board within 30 calendar days of the Board's action.

2. Deposited in the United States mail as registered or certified mail or Express Mail within 30 calendar days of the Board's action.

3. Deposited with a delivery service, such as FedEx, UPS, or DHL, that provides verifiable tracking of the item from the point of origin, within 30 calendar days of the Board's action.

C. Parents of students being reassigned based on attendance area adjustments may request a waiver through the student reassignment process, not appeals to the State Board of Education. The State Board of Education does not accept appeals of individual student assignment requests that have not first been decided by the local Board of Education through the local process.

IV. Definitions

Within the context of these implementation procedures, the following definition applies:

Planning Region – A geographic area of Howard County made up of one or more schools used by the Howard County Public School System (HCPSS) Office of School Planning for long-range planning purposes.

V. Monitoring

Policy 6010 implementation procedures will be overseen by the Division of Operations.

VI. History[1]

ADOPTED: April 28, 2005
REVIEWED: July 1, 2015
MODIFIED: November 29, 2018
February 28, 2019
February 10, 2022
REVISED: January 26, 2017
December 16, 2021
EFFECTIVE: February 10, 2022

[1] Key: ***Adopted***-Original date the Board took action to approve a policy; ***Reviewed***-The date the status of a policy was assessed by the Superintendent's Standing Policy Group; ***Modified***-The date the Board took action to alter a policy that based on the recommendation of the Superintendent/designee did not require a comprehensive examination; ***Revised***-The date the Board took action on a that policy based on the recommendation of the Superintendent/designee needed a comprehensive examination; ***Effective***-The date a policy is implemented throughout the HCPSS, typically July 1 following Board action.

Appendix D -
Enrollment Projections Analysis

ENROLLMENT PROJECTIONS ANALYSIS

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

JUNE 1, 2022

COOPERATIVE STRATEGIES

ASSESS • PLAN • FUND • BUILD

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ACKNOWLEDGMENTS

On behalf of Cooperative Strategies, we would like to extend our appreciation to the Howard County Public School System [HCPSS] and the Office of School Planning [OSP] for the opportunity to assist them in developing this Enrollment Projections Analysis. As a planning team, we hope that this document will serve the Howard County Public School System for years to come.

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EXECUTIVE SUMMARY

Cooperative Strategies was contracted by the Howard County Public School System [HCPSS] to provide an evaluation of the enrollment projection methodologies and processes currently in place in the School System. Cooperative Strategies reviewed the most recent enrollment projections developed by HCPSS for 2022, including the datasets used to produce them. In addition, we met with the Maryland Department of Planning to review and understand their enrollment projections and methodology to compare to the HCPSS enrollment projections.

Findings:

Cooperative Strategies has reviewed the HCPSS enrollment projections and methodology in 2013, 2015, 2019, and again in 2022. The 2013, 2015, and 2019 enrollment projections had a high level of projection accuracy and we recommended the School System continue to use that methodology to develop enrollment projections.

HCPSS primarily uses the cohort-survival methodology while incorporating components for housing, preschool-aged students, and out-of-district students. The housing component accounts for apartment turnover, re-sales of existing homes, and first-time sales of newly constructed housing units. The preschool component accounts for preschool-aged students moving into previously constructed housing units. The out-of-district component accounts for students who live outside the school attendance boundary being studied. HCPSS provides a description of their methodology and accompanying graphic on their website (this can also be found in Appendix B of this report).

The data used by HCPSS to develop enrollment projections are in line with recommended national best practices. Data from outside sources are updated as datasets become available, ensuring the enrollment projections are consistently based on the best data available at the time the enrollment projections are developed.

HCPSS has applied the same approach in 2022, as they had in 2013, 2015, and 2019, with consideration given to the impact of the COVID-19 pandemic on enrollment in the 2020-21 and 2021-22 school years. The pandemic introduced an unforeseen level of volatility in HCPSS enrollment as well as K-12 enrollment nationwide. While the methodology used by HCPSS is still a reliable approach, trends such as live births, enrollment, housing, etc. will need to be closely monitored over the next few years as new trends are established.

Recommendation:

Although the current methodology and data used by HCPSS are sound and provide reasonably accurate results, we recommend the School System consider incorporating clear documentation within their enrollment projections platform to clearly identify input and output tables. In addition, user and technical manuals would be highly beneficial, especially in the event of staffing turnover on either the part of HCPSS OSP staff, or the manager of the enrollment projections platform.

HCPSS ENROLLMENT PROJECTION METHODOLOGY

The Howard County Public School System enrollment projection model is based on a modified cohort survival method, using the September 30 student headcounts. However, students who can be attributed to housing transactions such as apartment turnover, re-sales of existing homes, first-time sales of newly-constructed homes, as well as out-of-district and preschool students who have moved into existing homes have been removed from the total population that is projected through the cohort survival method and projected separately based on different methodologies appropriate to each category. The description of the methodology provided by HCPSS, which is available on their website, can be found in Appendix B of this report.

Enrollment projections are produced by school, by grade. These projections are then summed to determine a System-wide enrollment projection. This allows for consideration to be given to trends specific to school boundaries such as live birth counts, programmatic changes, and housing development.

HCPSS has access to data not typically available to most school systems throughout the country. The wealth of this information greatly enhances the enrollment projections produced by HCPSS.

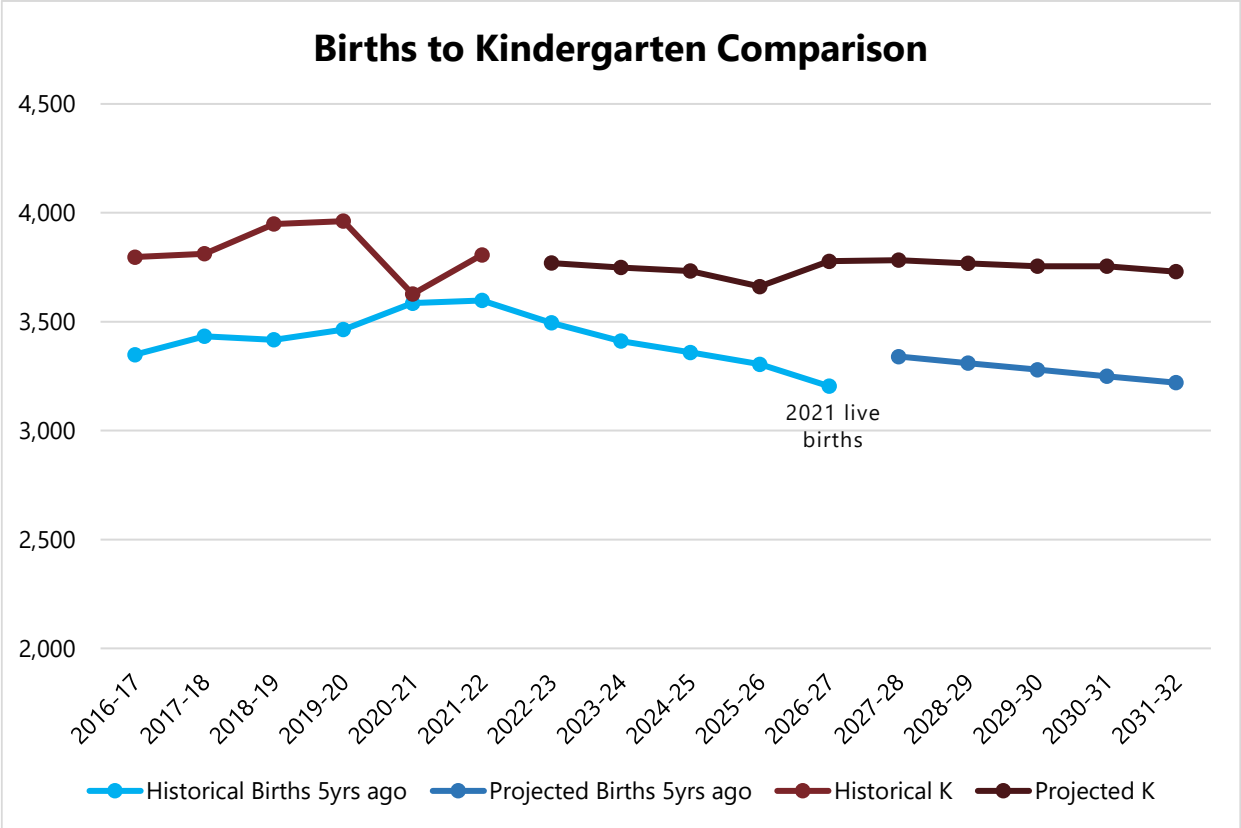
- Geocoded live birth counts aggregated to elementary boundaries provided by the Maryland Department of Health and Mental Hygiene
- Projected County-wide live birth counts from Maryland Department of Planning in five-year increments
- Existing and projected housing units, by type of unit (single-family, detached; single-family, attached; apartment; mobile home; and unknown), by boundary
- Student yields from re-sales of existing homes as well as new housing units constructed over the past ten years by type of unit
- Feed rates - Historical and projected percentage of students feeding from one school to another (i.e., elementary to middle school or middle school to high school)

RESIDENT LIVE BIRTH DATA

HCPSS utilizes historical resident live birth counts (through 2021) from the Maryland Department of Health and Mental Hygiene and projected resident live birth counts from the Maryland Department of Planning. The graph below illustrates the relationship between kindergarten enrollment and resident live birth counts 5 years earlier. Kindergarten enrollment in 2020-21 should be considered an anomaly. This data provides a helpful overall trend. Large bubbles in birth counts, either up or down, can also be planned for or anticipated by the School System.

It should be noted that while the graph below illustrates the relationship between kindergarten enrollment and resident live birth counts, the projected kindergarten enrollment developed by HCPSS also factors in other variables such as housing, preschool-aged students, and out-of-district students as described earlier in this report.

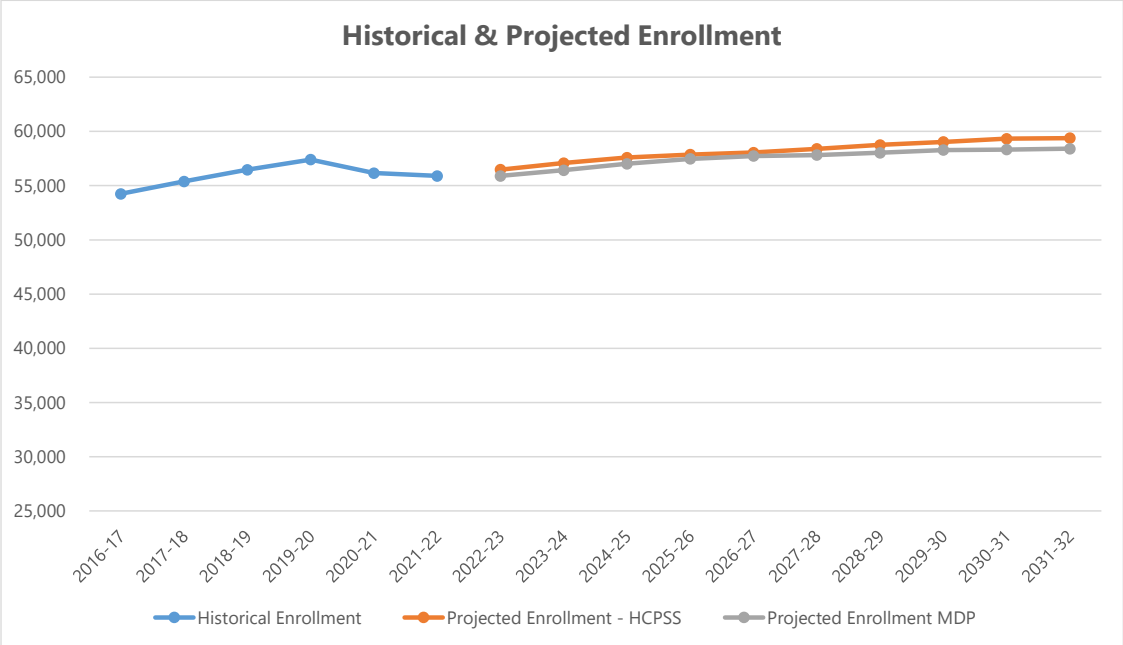
Projected live birth counts from MDP are updated annually and it is important the HCPSS continuously monitor changes in projected live birth counts as they have a direct impact on projected kindergarten in years 5+ of the enrollment projections.



ENROLLMENT PROJECTION COMPARISON

On April 1, 2022, Cooperative Strategies met with Alfred Sundara from the Maryland Department of Planning [MDP], with HCPSS OSP staff to discuss the methodology and data used by MDP in the development of enrollment projections for HCPSS.

It should be noted that while the enrollment projections developed by HCPSS and MDP are within 2 percent, they differ in some significant ways. First, the enrollment projections developed by HCPSS are done at the school level and rolled up to the System-wide level. The enrollment projections done by MDP are produced at the system-wide level and are not broken down by school. This is important to note as larger sample sizes typically yield more accurate results than smaller sample sizes. Second, HCPSS uses a modified cohort-survival method to project enrollment, as described earlier in this report. MDP uses a more traditional cohort-survival method, or grade succession method. Finally, it is important to recognize the purposes of the enrollment projections. HCPSS utilizes enrollment projections for boundary and school-level facility planning and budgeting. The MDP enrollment projections are used primarily for state-level budget planning. The purpose of the enrollment projections drives the methodology used to develop the enrollment projections and the level of detail the enrollment projections require.



ENROLLMENT PROJECTIONS BY PLANNING UNIT

The Howard County Public School System develops enrollment projections by school, by grade. In years that boundaries may be adjusted, the Office of School Planning staff breaks down the school-level enrollment projections to a planning unit level. The breakdown is determined based on current and planned housing data. A planning unit is a geographic area used as a planning tool for boundary review and adjustments. This is done in an effort to produce the most accurate enrollment projection for the school attendance area while still providing a projection by planning unit, when needed, for potential boundary adjustments.

Some common questions that are asked include:

- "Why does School Planning project student enrollment by school attendance area, rather than planning unit?"
- "If data is available by planning unit, why not project by planning unit?"
- "Isn't a projection by planning unit more accurate?"

It is important to remember that enrollment projections developed based on larger sample sizes will typically yield more accurate results than a smaller sample size. HCPSS has 710 total planning units compared to 42 total elementary schools. As we saw earlier in this report when comparing the accuracy of the enrollment projections developed by HCPSS by school to those developed by MDP at the System-wide level, the MDP enrollment projections based on a larger sample size was more accurate than the rollup of school level projections to the System-wide level. It is likely that enrollment projections developed by planning unit will be less accurate at the school and System-wide level when rolled up.

Recommendation:

Based on the multiple purposes of the enrollment projections, the data considered in the breakdown of the school-level to planning unit level enrollment projections, and the methodology used to develop the enrollment projections by school, it is our opinion that the enrollment projections should continue to be developed at the school-level and broken down, when needed, to the planning unit-level.

An important consideration when reporting information regarding historical and projected enrollment especially at the planning unit level (due to the smaller sample size), is that HCPSS adheres to the Family Educational Rights and Privacy Act of 1974 [FERPA], which restricts access to student records. Values less than or equal to 5% have been replaced with "<=5%" and values greater than or equal to 95% have been replaced with ">=95%". Additionally, student counts less than 10 or any numbers that allow that information to be derived are also redacted. With this in mind, we do not recommend publishing planning unit level data in the enrollment projections reporting.

RECOMMENDATIONS

The current methodology and data used by HCPSS are sound and provide reasonably accurate results. Previous enrollment projections analyses done by Cooperative Strategies recommended the School System update their FoxPro based software due to the fact that FoxPro was no longer supported by Microsoft and has compatibility issues with current Windows operating systems. In addition, the HCPSS employee who developed the FoxPro based software had retired from the School System. Since the 2019 enrollment projections analysis, HCPSS has moved their enrollment projections data management platform to a PostgreSQL database, which is not dependent on FoxPro.

The following are recommendations for HCPSS to continue improving the accuracy and documentation of their enrollment projections:

- Continue to use the current methodology and datasets to project enrollment for facilities and boundary planning, as well as other operational planning efforts.
- Closely monitoring live births, enrollment, housing, etc. over the next few years as new trends are established.
- Incorporate clear documentation within their enrollment projection platforms to clearly identify input and output tables.
- Develop and maintain up-to-date user and technical manuals. This would be highly beneficial, especially in the event of staffing turnover on either the part of HCPSS OSP staff, or the manager of the enrollment projections platform.
- The enrollment projections should continue to be developed at the school-level and broken down, only when needed, to the planning unit level.
- The HCPSS OSP has a good working relationship with the Maryland Department of Planning which should be maintained.

CONCLUSION

Cooperative Strategies is pleased to have had the opportunity to provide the Howard County Public School System with this enrollment projections analysis. We hope this document will provide the necessary information to make informed decisions about the future of the Howard County Public School System.

APPENDIX A
MDP ENROLLMENT PROJECTIONS ACCEPTANCE

May 18, 2022

Dr. Michael Martirano
Superintendent
Howard County Public Schools
10910 Route 108
Ellicott City, MD 21042

Dear Dr. Martirano:

Thank you for submitting your 2021 Actual Enrollment and enrollment projections for 2022-2031.

We have compared your data to the school enrollment projections generated by our department and have found the difference to be less than five percent for the years 2022 – 2031. Therefore, you may use the local projections as you prepare your 2022 Educational Facilities Master Plan (EFMP) and 2023 Capital Improvement Program (CIP) submissions.

Please make sure that the 2021 actual enrollment on your calculation worksheet is consistent with the official actual enrollment generated by the Maryland State Department of Education. The Maryland Department of Planning recognizes the Maryland State Department of Education's K-12 enrollment figure as the official actual enrollment for 2021.

We look forward to receiving your EFMP in July. A copy of this letter and its attachment should be included in the plan. If you have any questions, please me email me at michael.bayer1@maryland.gov.

Sincerely,

Michael Bayer, AICP
Manager of Infrastructure and Development

cc: Robert Gorrell, Public School Construction Program, Executive Director
Alfred Sundara, AICP, Manager, Projections and State Data Center
Daniel Lubeley, HCPS
Betsy Zentz, HCPS

Jurisdiction	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Howard	**56,004**	**56,477**	**57,087**	**57,594**	**57,869**	**58,053**	**58,391**	**58,763**	**59,037**	**59,327**	**59,387**
Planning	56,004	56,420	57,020	57,470	57,730	57,820	58,030	58,290	58,330	58,410	58,250
Diff	0	57	67	124	139	233	361	473	707	917	1,137
% Diff	0.00%	0.10%	0.12%	0.22%	0.24%	0.40%	0.62%	0.81%	1.21%	1.57%	1.95%

APPENDIX B
HCPSS ENROLLMENT PROJECTION METHODOLOGY

HCPSS Enrollment Projection Methodology

The Office of School Planning (OSP) produces an updated enrollment projection every year, compiling updated data including projected housing construction, historical and projected births, housing resales, and student population characteristics. The data are provided by Howard County Department of Planning and Zoning (DPZ), MD Department of Health and Mental Hygiene (DHMH), MD Department of Planning (MDP), and HCPSS Student Information System.

Since Howard County is rapidly growing, OSP supplements the industry-standard cohort survival method by incorporating student yield rates for housing transactions that could generate new students. At each step in our process, the goal is to use historical data to select the rate that performs best at predicting the future, while considering local knowledge, development and planning trends, and historical accuracy. Our system includes tools to help determine which data points have historically been the best indicators of future enrollment.

In 2013 and 2015, Dejong-Richter (now known as Cooperative Strategies) reviewed the OSP's projection methodology. This review concluded that OSP enrollment projection methods are valid, producing accurate results compared to other methods and surrounding districts. These findings were presented to the Board of Education.

The modified cohort survival method used by OSP begins with prior year official enrollment (green box). Moving up the diagram, factors are added starting with the non-housing factors (cohort survival), then the housing factors and out of district, leading to a projection for September 30th of the following year and beyond. Middle and High School projections are developed in the same fashion, substituting rising 6th and 9th grade cohorts for K, and excluding Pre-K move-ins.

What is it?		How is it calculated?
Official K-12 enrollment counts submitted to MD Dept. of Education	Prior Year Official Sept. 30th Enrollment	ACTUAL COUNT OF STUDENTS ENROLLED (AND VERIFIED) IN AN ATTENDANCE AREA ON SEPTEMBER 30 OF EACH SCHOOL YEAR.
A count of births by ES attendance area (mother's address at time of birth is used) received from DHMH, compared to Kindergarten (K) enrollment (five years later) to generate an annual birth to K "survival rate." This calculation excludes students who are associated with newly constructed homes, re-sales of existing homes, or apartment turnover. Five years of annual rates are evaluated to predict a future rate.	Birth to Kindergarten Matriculation	BIRTHS FROM 5 YRS AGO / NON-HOUSING K= SURVIVAL RATE SELECTED RATE X FUTURE BIRTHS = FUTURE K NON-HOUSING
Rate of a cohort's "survival" to the next grade. This calculation excludes students who are associated with newly constructed homes, re-sales of existing homes, or apartment turnover. For example, calculates how many 3rd graders came from previous year's 2nd graders. Rates from previous five years are updated annually and used to inform rate for future cohort survival.	Cohort Survival (non-housing)	ENROLLMENT FOR ANY GRADE / PRIOR GRADE ENROLLMENT FROM PRIOR YEAR EACH GRADE'S SELECTED RATE X PROJECTED ENROLLMENT FOR THAT GRADE = COHORT SIZE IN NEXT GRADE FOR NEXT YEAR
Rate of students yielded from apartment turnover. Five years of historical rates are updated each year to reflect students arriving at each school due to change in apartment address. Land use data for each address is from DPZ parcel database and MDP assessment data.	Apartment Turnover Yield	# OF ARRIVALS FROM APTS / # OF APTS IN THAT YEAR = YIELD RATE SELECTED YIELD RATE X # APARTMENTS IN EACH FUTURE YEAR = PROJECTED STUDENT YIELD
Rate of students yielded from resales of existing homes. Five years of historical rates are updated each year to reflect students arriving at each school whose address matches a record found in the MDP sales database.	Resale Yield	# OF ARRIVALS FROM RESALES / # OF HOMES IN THAT YEAR = YIELD RATE SELECTED YIELD RATE X # OF HOMES IN EACH FUTURE YEAR = PROJECTED STUDENT YIELD
Rate of students yielded from homes built within the last 4 years, who moved in as pre-school-aged. Five years of historical rates updated each year to reflect K students arriving at each school whose address matches a building permit from the last four years.	Pre-K move-ins	# OF ARRIVALS FROM NEW HOMES (IN LAST 4 YRS) / # OF NEW HOMES IN LAST 4 YRS = YIELD RATE SELECTED YIELD RATE X # NEW, <4YR OLD HOMES IN EACH FUTURE YEAR = PROJECTED STUDENT YIELD
Rate of students yielded from new residential units in each year. Five years of historical rates are updated each year to reflect students arriving at each school whose address matches a building permit from the previous year. Spearate rates are calculated for Single family detatched, townhomes, and multi-family unit types using building permit data from DPZ. Projection of future units also from DPZ, Research Division.	New Construction Yield	# OF ARRIVALS FROM NEW HOMES / # OF NEW HOMES = YIELD RATE (CALCULATED FOR EACH UNIT TYPE AT EACH SCHOOL) SELECTED YIELD RATE X # PROJECTED UNITS IN EACH FUTURE YEAR = PROJECTED STUDENT YIELD
Count for # of students who attend a school other than that assigned by their address. Each year, a five-year average for each school is calculated and applied to that schools geographic projection, resulting in an enrollment projection.	Out of District	# OF STUDENTS WHO LIVE HERE BUT ATTEND ELSEWHERE + # THAT LIVE ELSEWHERE AND ATTEND HERE = OOD COUNT 5 YEAR HISTORICAL AVG IS ADDED TO GEOGRAPHIC PROJECTION
	Future Year Projected Sept. 30th Enrollment	

July 13, 2018