

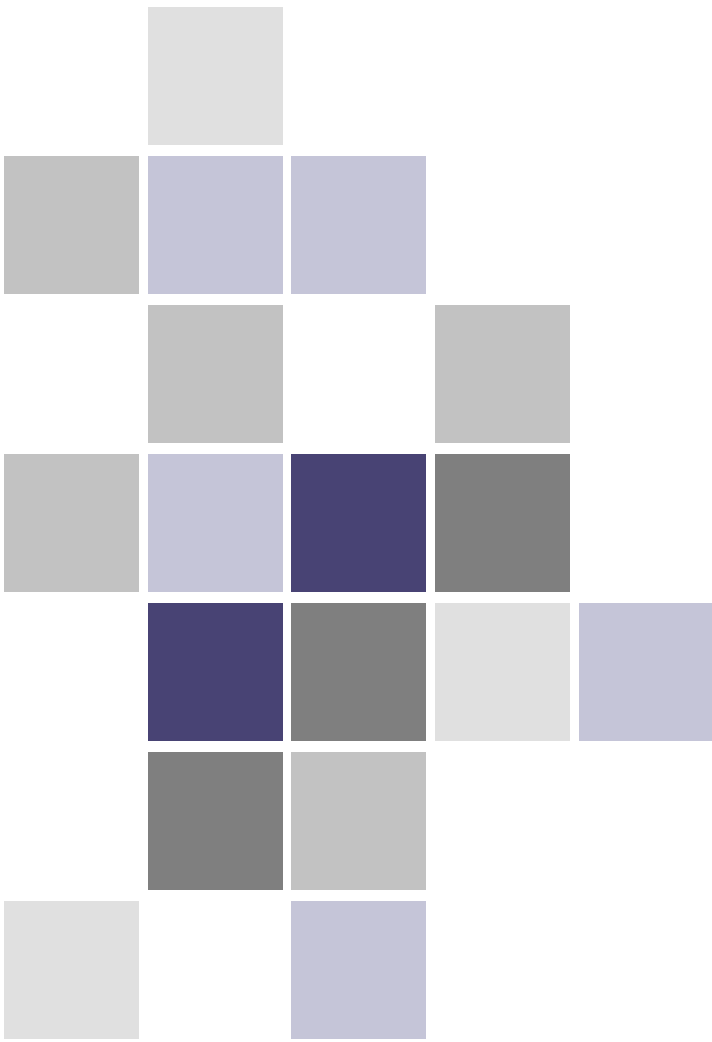


# EDUCATIONAL CLUSTER FACILITY AND GROWTH MANAGEMENT PLAN

## MONTGOMERY COUNTY PUBLIC SCHOOLS

**Draft Final Report**

October 2017



# Montgomery County Public Schools

Educational Cluster Facility and Growth Management Plan

October 2017

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## EXECUTIVE SUMMARY

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Over the last several years, Montgomery County Public Schools (MCPS) has experienced significant and sustained enrollment growth, which has challenged its ability to adapt its facilities fast enough to accommodate the children who enroll in the district. Planning for the growth has proven difficult, and most of the time the district finds itself racing just to keep up. Montgomery County Public Schools needed to develop a unique process to provide planning direction over the longer term. Montgomery County Public Schools hired MGT of America Consulting, LLC (MGT) to propose a process for making facility decisions beyond the district's current six-year Capital Improvements Program.

MGT conducted a series of meetings with various stakeholders to gain an understanding of current processes and procedures and reviewed enrollment and demographic data. The discussions revealed seven main drivers of enrollment in MCPS: the economy, development, employment, the housing market, immigration, household composition, and government policy. MGT used these drivers to develop a series of planning scenarios that will allow MCPS to narrow the list of available Facility Planning Options depending upon whether a cluster is a "High Enrollment Growth", "Moderate/Low Enrollment Growth", "No Enrollment Growth", or "Declining Enrollment" scenario.

The strength of this Scenario Framework comes in its application to each of the MCPS clusters. For this project, MGT applied the Framework to the Bethesda-Chevy Chase and the Walter Johnson clusters. Based on the evaluation of the Planning Drivers, both clusters were determined to be High Enrollment Growth scenarios, which narrowed the list of available Facility Planning Options to: 1) adaptive reuse of non-school facilities, lease space, change use of existing space, and build new building on new site. After compiling lists of available property in each cluster, MGT made the following observations:

- a. Montgomery County Public Schools should determine whether the Adaptive Reuse of Non-School Facilities is an option the Board of Education is willing to pursue.
- b. Montgomery County Public Schools should determine whether Lease Space is an option the Board of Education is willing to pursue.
- c. Montgomery County Public Schools should determine which small schools in the MCPS Former Operating Schools and Current Status List could be demolished to make sites with adequate acreage available for the construction of new, taller buildings.

MGT also made a series of supporting recommendations:

1. Enhance planning coordination with other units of local government in Montgomery County.
2. Enhance and streamline stakeholder engagement in the MCPS facility planning process.
3. Assign each cluster to a scenario to guide future land acquisition decisions.

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## SECTION ONE: INTRODUCTION

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Over the last several years, Montgomery County Public Schools (MCPS) has experienced significant and sustained enrollment growth. The growth in enrollment has challenged the district's ability to create enough space for the children it educates, and planning for the growth has proven difficult. With its proximity to Washington, D.C., its dynamic growth, and its evolving demographics, planning for MCPS' future requires accepting a great deal of uncertainty. The future is always in motion, and nowhere is that more the case than in Montgomery County. To proactively plan for a complex, uncertain future, MCPS needed to develop a unique planning process that looks beyond current planning processes and creatively considers the long list of factors that drive MCPS enrollment.

### FACTORS THAT DRIVE ENROLLMENT IN MCPS

#### ECONOMY

The economy influences MCPS enrollment in several different ways. When the economy is bad, parents are more likely to pull their children out of private school and enroll them in MCPS. Frequently, parents find that they like the education their children receive, and they keep their children in MCPS, even after the economy improves. When the economy is bad, parents may also be forced to relocate outside of MCPS to find work.

A strong economy supports a strong housing market and encourages new development and more redevelopment, which further attracts more residents and likely leads to enrollment growth. A poor economy will discourage new development and depress the local housing market, which, in turn, will put downward pressure on enrollment growth.

Immigration is higher when the U.S. economy is good because jobs attract new residents. However, immigration will be lower when the U.S. economy is bad, leading to fewer students.

#### DEVELOPMENT

Montgomery County and the county's two incorporated municipalities, Rockville and Gaithersburg, prepare master plans which structure the development within the respective jurisdictions. Those master plans and the developments and redevelopments proposed consistent with those master plans take careful note of the impact on schools due to the potential to increase enrollment. Developments that cater to younger families with school-age children will drive enrollment higher. This influence is strongest in areas where the master plans achieve full build-out.

#### EMPLOYMENT

Employment affects MCPS enrollment much like the economy affects MCPS enrollment. When employment drops, residents pull their children out of private schools and look to public schools as a less expensive option. Sometimes, those same residents will leave their children in MCPS, even after re-employed, because they discover that they are happy with the education their children receive in MCPS. On the other hand, an increase in unemployment could also lead to an exodus of families out of the district as parents relocate to find work.

## HOUSING MARKET

A strong housing market suggests that there are lots of choices at affordable prices for buyers and that sellers feel comfortable with the available market prices. With a strong housing market comes the potential for an increase in residents with school-age children. This is particularly the case in areas that cater to couples buying their first home and preparing to start their families. The turnover in the age of a neighborhood from older to younger residents (and vice versa) will impact enrollment, though the impact is capped for the most part by the number of existing homes.

A strong leasing market also affects MCPS enrollment. Property owners will often offer discounted leases to attract new tenants, which leads to a potential shift in population location and density and to potentially a greater number of school-age children who will enroll in MCPS.

## IMMIGRATION

Montgomery County Public Schools is multi-racial, multi-ethnic, and multi-cultural. One parent reports that her son's class had students from nine different countries. Immigration can increase as turmoil and regional strife in various parts of the world push families to come to the United States. Poor economic conditions abroad and a strong U.S. economy with an equally strong job market will motivate people to immigrate to Montgomery County. However, immigration is a major political issue, and federal policies will have an encouraging or inhibiting impact on immigration, depending on the philosophy of policymakers in Washington, D.C.

## HOUSEHOLD COMPOSITION

Montgomery County households are evolving in their composition. Historically, the evolution was primarily neighborhood-wide and based on a shift in age, e.g., older residents moved out and younger families with school-age children took their place. That dynamic is still present, but new dynamics in household composition have emerged. It is increasingly common in Montgomery County for multiple families to share a single household. It is also increasingly common for multi-generational families to share a single household. Economics drives some aspects of these new dynamics as families share the cost of maintaining a household. Culture also drives some aspects of these dynamics as immigrants bring with them the custom of adults caring for aging parents while raising a family of their own all under one roof. Finally, an increasing number of people nationally are living alone. This is occurring across all age groups and for varying reasons, e.g. death of a spouse, divorce, economics, or simply personal choice. If this national trend is realized in Montgomery County, it will potentially reduce the number of students generated by existing housing stock.

## POLICY

Certain policies set by federal, state, or local governments can impact enrollment. For example, compulsory attendance programs will push enrollment higher. A state mandate that schools offer prekindergarten or a federal requirement that special education programs be made available for students over the age of twenty-one would increase MCPS enrollment. Another example is changes in mass transit infrastructure. Local government approval of new mass transit corridors has the potential to increase resident mobility and access to employment, which, in turn, opens up new housing choices for families in MCPS. New housing choices could lead to more school-age children and more MCPS students.

## PROCESS FOR THIS PROJECT

Montgomery County Public Schools hired MGT of America Consulting, LLC (MGT) to develop a Facility and Growth Management Plan that will help the district more effectively anticipate its facility needs over the next thirty-plus years. The goal was to develop a framework for making facility decisions in an uncertain future. This effort was not intended to affect the MCPS Capital Improvements Program (“CIP”) currently under development. That CIP must be ready for approval later this year, so any recommendation coming out of this project selected for implementation by MCPS will affect future CIPs.

This project required MGT to design a unique planning process. MGT typically develops facilities master plans for a ten-year planning horizon. Those plans contain detailed information and recommendations about facility condition, grade level configuration, capacity strategies, and attendance boundaries. This project required a different approach, one grounded in the same understanding of planning dynamics but tailored to produce direction for the longer term rather than detail for the shorter term.

To meet these project objectives, MGT engaged a wide variety of stakeholders, including:

- ◆ Montgomery County Council members
- ◆ MCPS Board of Education members
- ◆ MCPS staff from the Division of Capital Planning, the Division of Construction, the Department of Facilities Management, the Office of the Chief Operating Officer, and the Office of the Superintendent
- ◆ Montgomery County Council central staff
- ◆ Montgomery County Planning Department staff
- ◆ Gaithersburg City Council members
- ◆ Gaithersburg City Manager’s Office and Department of Planning and Code Administration staff

In addition, MGT facilitated two focus group sessions with MCPS Parent-Teacher Association representatives. There were an estimated thirty people in attendance between the two sessions.

MGT also conducted independent research into Montgomery County, its history, its planning processes, and its geography. This level of engagement provided MGT with an in-depth understanding of the factors impacting MCPS, the processes currently in place for facility and land use planning in MCPS, Montgomery County, and the incorporated municipalities, and the challenge MCPS faces as it attempts to plan for an uncertain future. The following sections summarize the current planning processes and recommend a framework for making facility and land use planning decisions in the years beyond any given Capital Improvements Program.

Montgomery County Public Schools also hired MGT to conduct an evaluation of MCPS’ enrollment forecasting methodologies. That part of the project will be complete later this Fall. When complete, the results of that evaluation will be integrated into this report.

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## SECTION TWO: CURRENT PLANNING PROCESSES

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This project reviewed the facility and land use planning processes for MCPS, Montgomery County, and the incorporated municipalities in Montgomery County.

### MCPS FACILITIES PLANNING PROCESS

Every two years, Montgomery County Public Schools prepares and submits to the Montgomery County Council its six-year CIP, which is comprised of three components: county-wide systemic projects, capacity projects, and the renovation/expansion projects, or Rev/Ex where additional space is added to a completely renovated building. The County Council considers amendments to the CIP in the “off year” as well. Two MCPS divisions drive the development of the CIP: the Division of Capital Planning (“Planning”) and the Division of Construction (“Construction”).

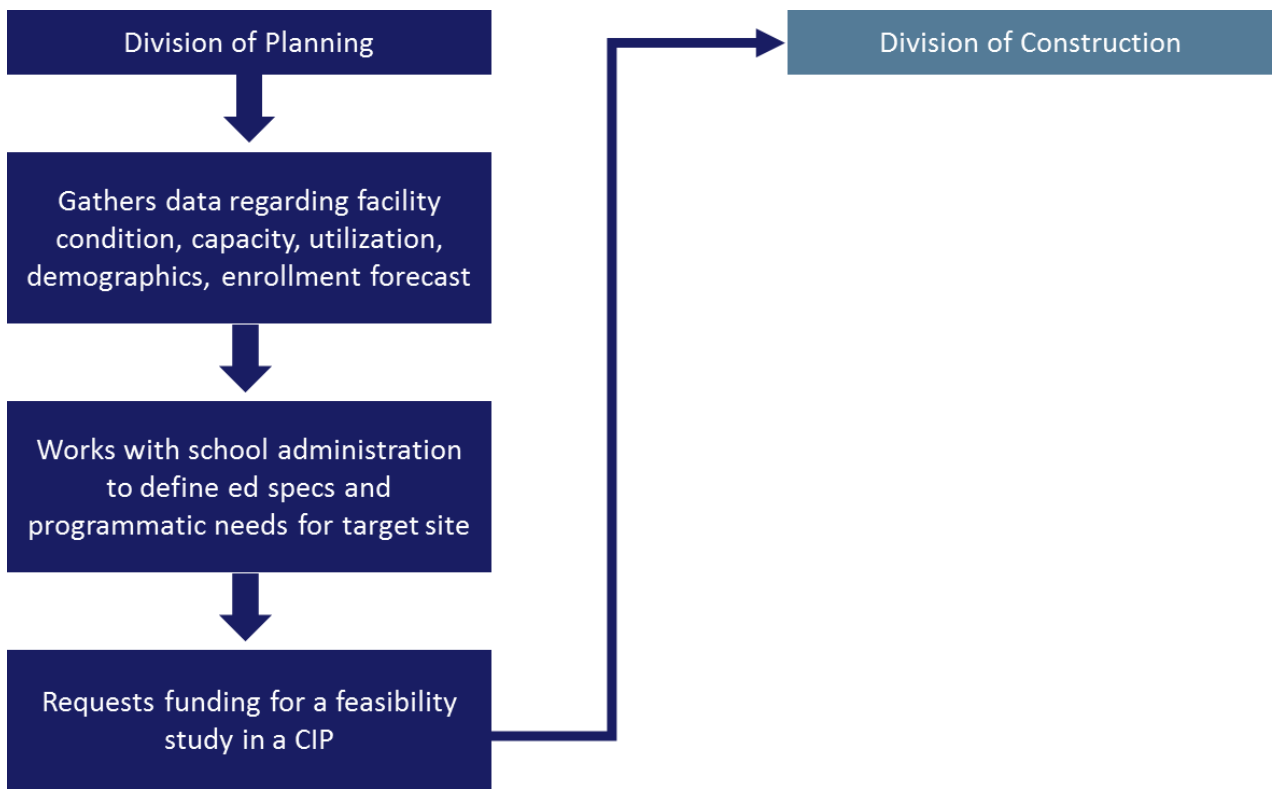
County-wide systemic projects are infrastructure upgrades, e.g. air conditioning upgrades or plumbing pipe replacement. Capacity projects add space to existing facilities in order to accommodate more students or can include new schools. The Rev/Ex program has historically been driven by a list of projects prioritized based on a district-wide condition assessment conducted in the early 1990s and first applied to schools in FY1993. In the 2010-2011 school year, the assessment was updated and additional schools were identified for modernization. School utilization was not part of the list prioritization because enrollment/capacity changes over time and could be addressed separately as part of an addition project. Circumstances have changed, and MCPS is evaluating its current Rev/Ex program to include utilization, as well as other factors into the prioritization along with facility condition. This program change is currently under development.

The facilities process begins with the Division of Capital Planning. Planning collects, manages and analyzes a wide range of facilities data, including facility condition, capacity, utilization, district demographics, and enrollment projections. This data management is essentially an internal Planning activity with some data sharing with the Montgomery County Parks and Planning Department.

When Planning identifies a needed project at a particular school, Planning works with the school’s administration to define the educational specifications and programmatic needs. Once the project educational specifications and program are established, Planning seeks funding approval in a CIP for a feasibility study. Once funding is approved, Planning provides the educational specifications and project program to Construction. **Exhibit 2-1** on the following page illustrates this initial phase of the CIP process.

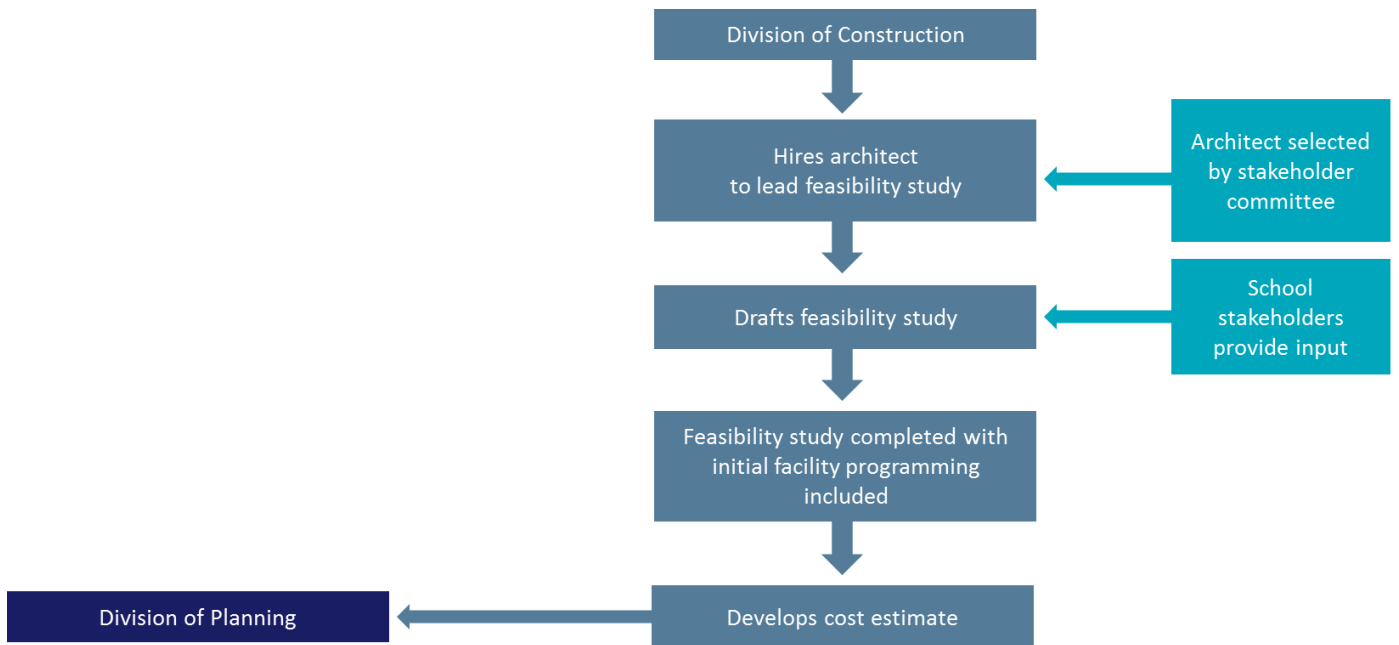


EXHIBIT 2-1  
CIP PLANNING PROCESS – INITIAL PHASE



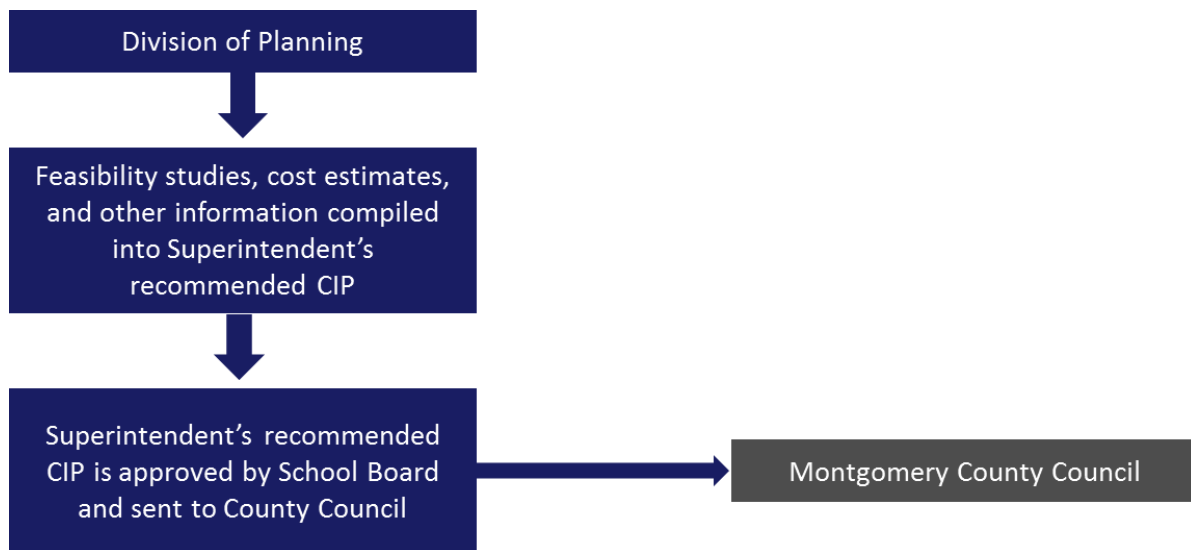
Once funds are approved to conduct a feasibility study, Construction works with a stakeholder committee at the affected school to hire an architect. The stakeholder committee is comprised of the school principal, a school staffer, a parent at the school, and Planning staff. Once hired, the architect leads the feasibility study for the site. The architect works with school stakeholders to evaluate options for the project and arrive at a preferred option. Construction uses the feasibility study to prepare its cost estimate and then forwards the cost estimate to Planning, along with the initial design concepts for the school. **Exhibit 2-2** illustrates the feasibility study and cost estimate phase of the CIP process.

EXHIBIT 2-2  
CIP PLANNING PROCESS – FEASIBILITY STUDY AND COST ESTIMATE PHASE



Following the feasibility and cost estimate preparation, Planning compiles all of the feasibility studies, cost estimates, and other information pertaining to the district plan for the next six years. The other information could include boundary studies that look at the impact of changing attendance zones. All of this information becomes the MCPS Superintendent’s recommended CIP, which is submitted to the MCPS Board of Education for approval. The MCPS Board of Education does not have funding authority, so the Board is approving the elements of the CIP but not its funding. Once the MCPS Board of Education approves the CIP, it is sent to the Montgomery County Executive and Montgomery County Council for funding approval. **Exhibit 2-3** illustrates this final Board of Education approval phase for the MCPS CIP.

EXHIBIT 2-3  
MCPS CIP PLANNING PROCESS – FINAL BOARD OF EDUCATION APPROVAL



**Appendix 1** contains a flowchart illustrating the complete CIP planning process with all of its phases.

## MONTGOMERY COUNTY AND MUNICIPALITY LAND USE PLANNING PROCESSES

There are two planning processes within Montgomery County government that are relevant to this discussion: approval of the MCPS CIP, and land use master planning. Incorporated municipalities have their own master planning processes due to jurisdictional boundaries.

### COUNTY APPROVAL OF THE MCPS CIP

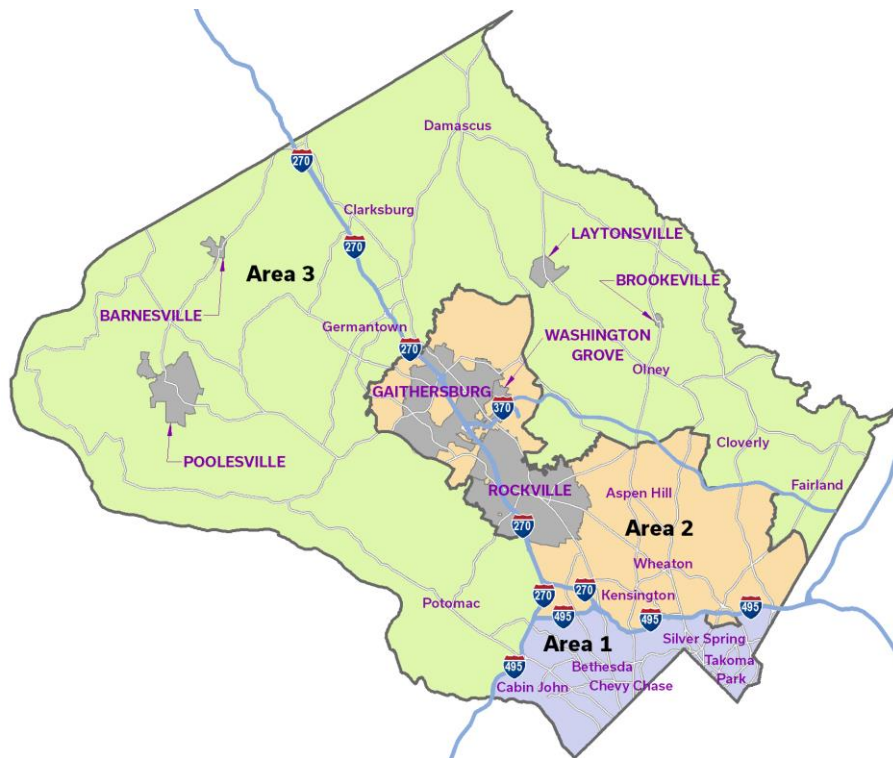
Following MCPS Board of Education approval of the MCPS CIP, the CIP is sent to the Montgomery County Council (“Council”) and the Montgomery County Executive. Before the Council considers the CIP, the Montgomery County Executive and the Council’s central staff review the CIP. The County Executive prepares a recommendation to the Council which combines the MCPS CIP with the budget requests from the other county departments, e.g., the Montgomery Planning Department, the police department, the fire department, etc. The County Executive’s recommendation is not binding on the

Council. Council’s central staff evaluates the County Executive’s recommendation and the CIP, determines the available funding, and works to align the budget requests with the available funding.

**County Land Use Master Planning**

Maryland state statute required Montgomery County to prepare twenty-five-year master plans for development in the county. Accordingly, Montgomery County has designated three areas and forty-eight planning segments that cover each part of the county. Exhibits 2-4 through 2-7 illustrate the three planning areas and forty-eight planning segments, respectively.

EXHIBIT 2-4  
MONTGOMERY COUNTY MASTER PLANNING AREAS



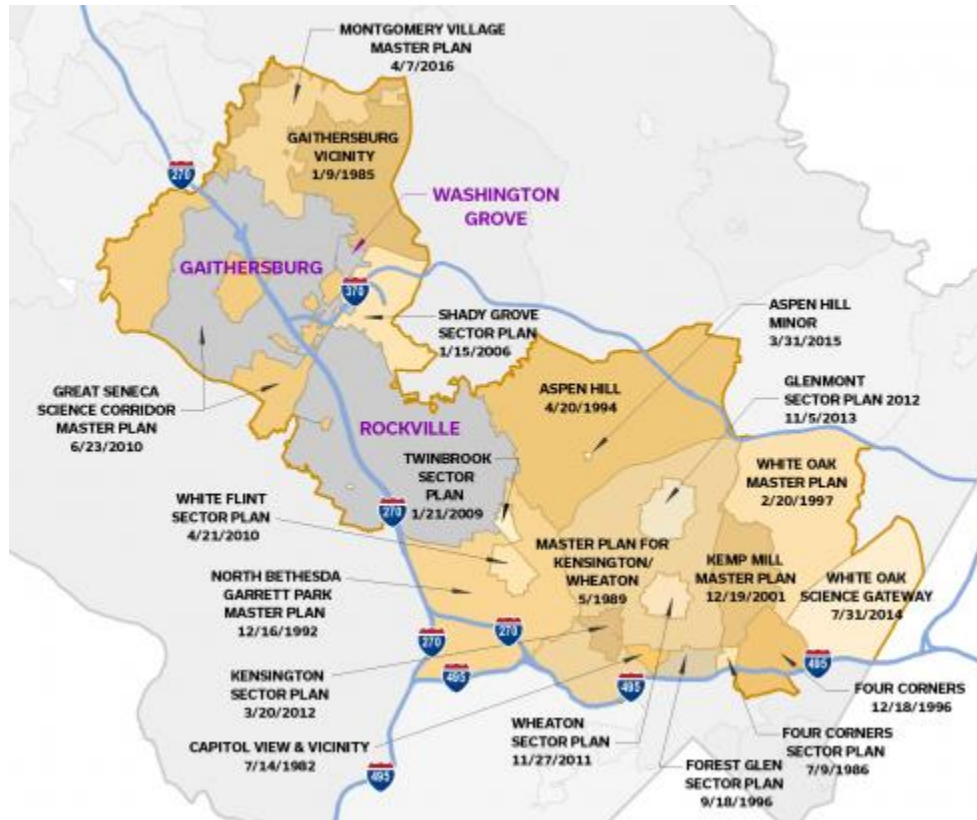
Source: Montgomery County Planning Department, 20017, <http://montgomeryplanning.org/planning/communities/>

EXHIBIT 2-5  
MONTGOMERY COUNTY MASTER PLANNING SEGMENTS – AREA 1



Source: Montgomery County Planning Department, 2017, <http://montgomeryplanning.org/planning/communities/area-1/>

EXHIBIT 2-6  
MONTGOMERY COUNTY MASTER PLANNING SEGMENTS – AREA 2



Source: Montgomery Planning Department, 2017, <http://montgomeryplanning.org/planning/communities/area-2/>



development moratoria. For example, Gaithersburg places a moratorium on new residential development when the students generated from the development will exceed the schools' capacity by 150 percent. A facility payment is required for developments that push school utilization to between 105 percent and 150 percent.

### COMMUNITY FEEDBACK ON FACILITY AND LAND USE PLANNING PROCESSES

The community engagement portion of this study revealed certain themes related to the processes by which MCPS and Montgomery County make facility and land use decisions. The following is a summary of those themes.

1. There is not enough opportunity for the community to provide input into the MCPS process. Too often, it feels like the community is only brought into the process after the decision has already been made.
2. MCPS struggles to get ahead of the growth in enrollment. It seems like the planning paradigms are based on old ways of thinking. New paradigms are needed to proactively plan for the circumstances MCPS will face now and in the future.
3. MCPS needs a way to plan for the years beyond the six-year CIP. The plan needs to be flexible, but it also needs to indicate an overall direction.
4. MCPS planning needs to be better coordinated with the planning activities of other local units of government.



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## SECTION THREE: A SCENARIO PLANNING FRAMEWORK

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### INTRODUCTION

The future is uncertain, and planning for the future is challenging. For perspective, consider that in the 1980s MCPS was closing schools following a drop in enrollment. That sort of reality is a foreign concept in most of MCPS today, but it was a part of MCPS' past and it could be a part of MCPS' future. No one knows with absolute certainty what the future will hold.

Planning for an uncertain future requires a different kind of thinking. MCPS stakeholders have asked for facility plans over the next twenty or thirty years, but that kind of time horizon implicates too many variables in the factors that drive enrollment and the facility decisions necessary to align enrollment with capacity. The solution is not a specific thirty-year plan. The solution is scenario planning.

Scenario planning is a method for imagining possible futures. Imagine a wagon train heading west from Maryland to California. The people planning the trip can make very specific plans for how to travel across Maryland because they know the terrain, the weather, etc., but outside of Maryland planning with specificity becomes difficult. What if the Mississippi River is flooded? How deep is the water? Is there a less flooded area upstream? How far upstream? Is it too far out of the way? Maybe building a raft is better. How big of a raft? How many people per raft? Will the raft use sails or poles for propulsion? How big does the sail need to be? The list of questions is endless. Answering the questions with specificity is unproductive and requires too much unknown information. It is enough to know that if the Mississippi River is flooded, the wagon train will either build a raft or travel upstream to cross where the river is not flooded.

Montgomery County Public Schools faces a similar challenge as it looks out over the next thirty years. Will development continue or will it become stagnant? Will immigration decrease? Will the economy turn sour and lead to high unemployment? Will neighborhoods become older or younger? It is unproductive for MCPS to attempt to answer these questions with specificity for the next three decades. However, MCPS can identify its available options if a certain set of circumstances come to fruition.

MGT recommends MCPS utilize a series of scenarios that paint a picture of potential future circumstances. Rather than create a specific plan, these scenarios are based on a series of components that drive certain facility and land use decisions in MCPS. The scenarios allow MCPS to know their response to an "if/then" question; namely, if this set of circumstances emerges, then here are the planning options available to MCPS. The scenarios will also enable MCPS to determine when and where land acquisition is appropriate in anticipation of a particular scenario emerging.

The scenarios also provide a point in the planning process where planners can pause and confirm that facility decisions reflect other non-facility planning considerations such as equity, educational program delivery, and academic achievement.

## MCPS SCENARIOS

MGT developed four scenarios in concert with MCPS staff:

1. High Enrollment Growth
2. Moderate/Low Enrollment Growth
3. No Enrollment Growth
4. Declining Enrollment

<b>High Enrollment Growth Scenario</b>	
<b>Planning Drivers</b>	
<p><b>Economy:</b> boom</p> <p><b>Development:</b> county master plan achieves full build-out; lots of new housing under construction; lots of redevelopment; low office vacancy</p> <p><b>Employment:</b> low unemployment</p> <p><b>Housing Market:</b> active housing market; increase in home prices</p> <p><b>Immigration:</b> high level of immigration; international events have led to instability abroad; federal policies favor immigration</p> <p><b>Household Composition:</b> multiple generations sharing same home; multiple family sharing same home; neighborhoods are becoming younger and more likely to have school age children</p> <p><b>Policy:</b> new compulsory attendance policies; new public transit increases access to employment</p>	
<b>Resulting Condition</b>	<b>Constraints</b>
<p><b>Enrollment:</b> has increased substantially</p> <p><b>Utilization:</b> schools are significantly over-utilized</p>	<p><b>Available Capacity:</b> no available capacity under current school use model; all schools are over-utilized</p> <p><b>Available Property:</b> no available space at existing sites; no green field space</p>
<b>Facility Planning Options</b>	
<p>Adaptive reuse of non-school facilities</p> <p>Build new building on new site</p> <p>Lease space</p> <p>Change use of existing space</p>	
<b>Scenario Probability:</b> high	
<b>Scenario Update Cycle:</b> annual	

<b>Moderate/Low Enrollment Growth Scenario</b>	
<b>Planning Drivers</b>	
<p><b>Economy:</b> stable, steady economic growth, but not booming</p> <p><b>Development:</b> county master plans building-out at a steady pace, but not exploding; some new housing under construction; redevelopment is happening; fairly low office vacancy</p> <p><b>Employment:</b> fairly low unemployment</p> <p><b>Housing Market:</b> fairly active housing market; home prices are increasing steadily but not rapidly</p> <p><b>Immigration:</b> some increase in immigration; world regions are fairly stable; federal policies are favorable</p> <p><b>Household Composition:</b> neighborhoods are slowly becoming younger and more likely to have school age children</p> <p><b>Policy:</b> some new compulsory attendance policies; possible new public transit increases access to employment</p>	
<b>Resulting Condition</b>	<b>Constraints</b>
<p><b>Enrollment:</b> is increasing but not rapidly</p> <p><b>Utilization:</b> some schools are over-utilized</p>	<p><b>Available Capacity:</b> some available capacity under current school use model</p> <p><b>Available Property:</b> no available space at existing sites; no green field space</p>
<b>Facility Planning Options</b>	
<p>Redistribute student population</p> <p>Change programs</p> <p>Change grade configuration</p> <p>Change use of existing space</p>	<p>Adaptive reuse of non-school facilities</p> <p>Build new building on new site</p> <p>Lease space</p>
<b>Scenario Probability:</b> high	
<b>Scenario Update Cycle:</b> annual	

<b>No Enrollment Growth Scenario</b>	
<b>Planning Drivers</b>	
<p><b>Economy:</b> stagnant</p> <p><b>Development:</b> county master plans are achieving very limited build-out; very limited redevelopment occurring</p> <p><b>Employment:</b> stagnant; new jobs are not getting added</p> <p><b>Housing Market:</b> stagnant; housing prices are flat</p> <p><b>Immigration:</b> in-migration and out-migration are equal; no net immigration</p> <p><b>Household Composition:</b> neighborhoods are not changing</p> <p><b>Policy:</b> no new compulsory attendance policies</p>	
<b>Resulting Condition</b>	<b>Constraints</b>
<p><b>Enrollment:</b> is neither increasing or decreasing appreciably</p> <p><b>Utilization:</b> some school are overutilized while other are underutilized</p>	<p><b>Available Capacity:</b> available capacity under current school use model</p> <p><b>Available Property:</b> some available space at existing sites; some green field space</p>
<b>Facility Planning Options</b>	
<p>Redistribute student population</p> <p>Change programs</p> <p>Change grade configuration</p> <p>Change use of existing space</p>	<p>Add relocatables</p> <p>Build additions to existing buildings</p> <p>Repurpose/reconstruct existing buildings</p> <p>Build new building on new site</p> <p>Lease space</p> <p>Adaptive reuse of non-school facilities</p>
<b>Scenario Probability:</b> moderate	
<b>Scenario Update Cycle:</b> annual	

<b>Declining Enrollment Scenario</b>	
<b>Planning Drivers</b>	
<p><b>Economy:</b> recession</p> <p><b>Development:</b> county master plans are not getting built-out; no redevelopment occurring; high office vacancy</p> <p><b>Employment:</b> rising unemployment</p> <p><b>Housing Market:</b> depressed housing market; limited sales</p> <p><b>Immigration:</b> residents are moving away; federal policies are discouraging immigration; world regions are stable</p> <p><b>Household Composition:</b> neighborhoods are getting older with fewer school-age children</p> <p><b>Policy:</b> reduced compulsory attendance policies; stagnant or stalled infrastructure development</p>	
<b>Resulting Condition</b>	<b>Constraints</b>
<p><b>Enrollment:</b> decreasing, though some new students are gained due to poor economy</p> <p><b>Utilization:</b> schools are underutilized</p>	<p><b>Available Capacity:</b> lots of available capacity under current school use model</p> <p><b>Available Property:</b> some available space at existing sites; some green field space</p>
<b>Facility Planning Options</b>	
<p>Close schools</p> <p>Consolidate schools</p>	
<b>Scenario Probability:</b> low	
<b>Scenario Update Cycle:</b> annual	

Here is how the scenarios work. Each of these scenarios is based on a set of circumstances that lead to a particular impact on enrollment. The factors impacting MCPS, identified in Section One, are the **Planning Drivers** for each of the scenarios. Across the spectrum of the scenarios, the Planning Drivers are adjusted to reflect the kinds of conditions that would contribute to a particular impact on enrollment.

The **Resulting Condition** is the impact on enrollment and school utilization, and it answers the question: are we overutilized or underutilized? The **Constraints** correspond circumstances in the district that limit the Facility Planning Options, e.g., no available capacity across district under current use model, no space at existing sites, etc. The Constraints eliminate choices within the framework and narrow the scope of available options.

The **Facility Planning Options** are the options available to MCPS in response to the conditions resulting from the scenario. The Options are initially determined by the Resulting Condition and shaped by the Constraints, which leaves the available options within the framework.

The **Scenario Probability** assigns a level of likelihood of the scenario coming to fruition. The choices are high, moderate, or low. A numerical probability is not assigned due to the subjective nature of the number. High, moderate, or low assigns a broad probability range but also adds a valuable qualitative assessment of the scenario's inevitability, which will enable MCPS to identify areas in greatest need of attention and planning.

The **Scenario Update Cycle** reflects how dynamic the change is within a planning area. An area with a lot of dynamic change would justify an annual review in order to keep up with the changing dynamics. Conversely, an area without a lot of change might only be reviewed every two or three years.

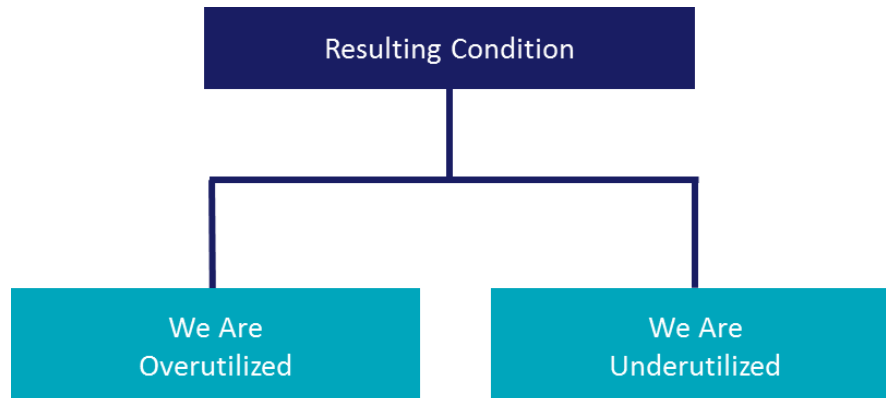
The foregoing information informs the development of data and the characterization of a cluster within a particular scenario. Once that characterization is made, Facility Planning Options can be further reviewed in light of non-facility considerations, including equity, educational program delivery, and academic achievement. The scenarios act as a tool to describe the future landscape, while these non-facility considerations provide the lens through which the landscape is viewed, ensuring that MCPS' core purpose – educating children – is advanced through the identified Facility Planning Options.

## RESULTING CONDITION, CONSTRAINTS, AND OPTIONS – A CAPACITY DISCUSSION

The capacity of a school is a decision, not a definition. In other words, how a building is used determined its capacity. Of course, the laws of physics limit the number of students that can physically be located in a classroom simultaneously, but educational programs are not structured based on the number of students per square foot. Programs choices are based on the type of program delivered in a manner that provides the optimal educational opportunity for children. The size of the classroom, the number of students per classroom, and the kind of equipment in a classroom drive the capacity of that space.

For any scenario, the Resulting Condition answers an initial, basic question: are we overutilized or are not? If the answer is “neither”, then no action is required in the immediate moment. However, if the answer is “overutilized” or “underutilized”, then action should be considered. **Exhibit 3-1** illustrates this simple, initial question.

EXHIBIT 3-1  
SCENARIO PLANNING FRAMEWORK – INITIAL QUESTION



**SIX STRATEGIES FOR ADDRESSING “WE ARE OVERUTILIZED”**

There are only six (6) major strategies available to address issues of a lack of capacity. All other options will fall within these six basic strategies. They are as follows:

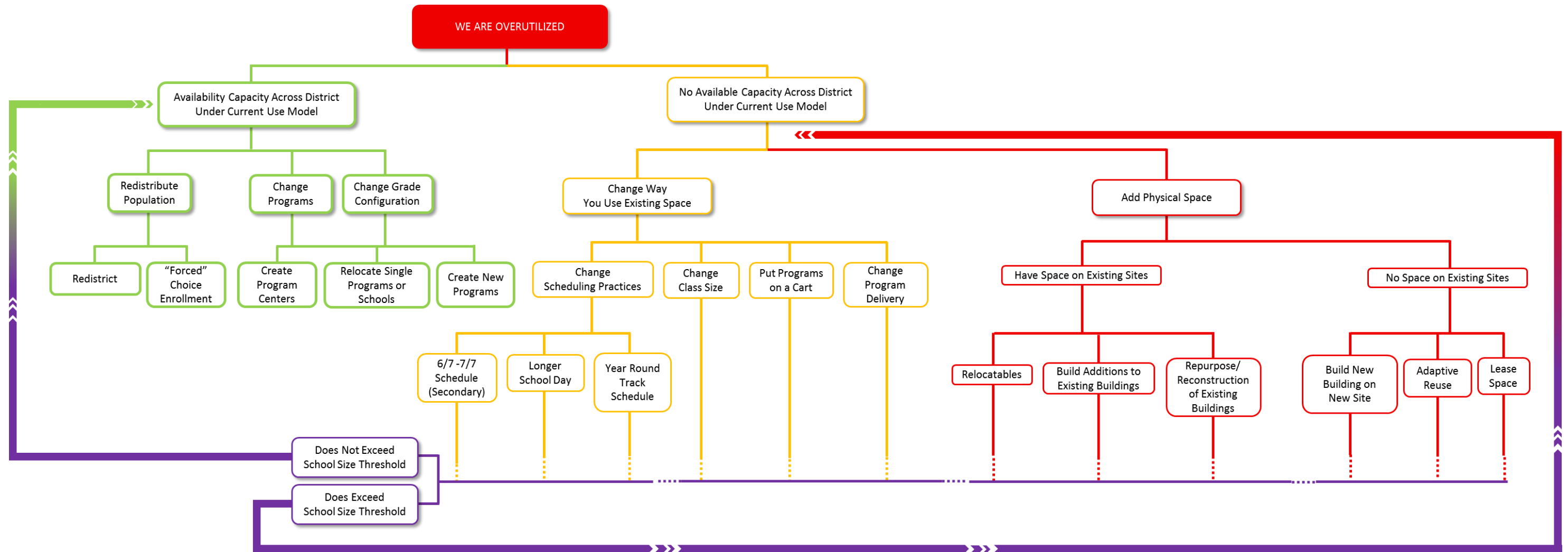
- ◆ Changing the delivery, location, or number of programs.
- ◆ Changing enrollment practices.
- ◆ Adding physical capacity.
- ◆ Changing grade level configuration.
- ◆ Changing the master schedule.
- ◆ Increasing class size.

Deciding the best way to address the district’s crowding issues is complicated and complex. The various components are interconnected, and discussion about solutions easily spirals into a maddening vortex. Classroom counts, scheduling factors, different scheduling philosophies, dollars, and emotions all contribute to the maze the district must navigate to alleviate the crowding. Determining an effective methodology to think about the problem and its potential solutions alone is difficult. Remember, capacity is a decision, not a definition.

The “We Are Overutilized” framework flowchart is laid out on the next page. Following the flowchart is an example of how the framework can be used to analyze a capacity question. An explanation of each option follows the flowchart.



EXHIBIT 3-2  
SCENARIO PLANNING FRAMEWORK – WE ARE OVERUTILIZED



## **CHANGING THE DELIVERY, LOCATION, OR NUMBER OF PROGRAMS**

This strategy involves four possible solutions: 1) relocation of programs/schools or creation of new programs/schools, 2) putting programs on a cart, 3) changing how the program is delivered, and 4) creating program centers.

### **RELOCATION OF PROGRAMS/SCHOOLS OR CREATION OF NEW PROGRAMS/SCHOOLS**

If there is capacity across the district, then relocation of a program or school could serve to address crowding issues. The effect of the relocation of the program would also be the relocation of the students in that program. Crowding would be alleviated without the need to redistrict as well. The same results could be achieved with the creation of a new program/school and locating it in a building with excess capacity.

The unknown of this solution is the lack of a guarantee that enrollment will follow a relocated program or that a new program will attract a sufficient number of students to alleviate crowding at other schools. If families do not follow the programs and leave the overutilized school, then relocating a program or creating a new program results in a lot of effort with very little effect on crowding. In addition, there must be capacity somewhere in the district. Otherwise, there is no space in which to locate a new program or to relocate an existing program.

### **PROGRAMS ON A CART**

In an effort to free up space, many schools use a cart in lieu of a classroom for certain program offerings; including music, foreign language, art and computer lab. As an example, a school that is in need of classroom space may opt to take their art space and make it available as a first-grade classroom and have the art program taught from a cart.

This solution addresses crowding issues at the elementary schools only because these types of spaces do not otherwise create capacity in an elementary school program. Imagine Mrs. Jones' first grade class in room 201. When Mrs. Jones' first graders go to the art room for art class, no one else is using room 201. The art room and room 201 essentially swap positions in the capacity calculation. Compare this to high school where students change rooms each period. Mr. Smith's English students in room 342 in first period may go to art in second period, but another group of students is using room 342 in second period, so putting art on a cart in a high school would not create capacity. The same is true for music, foreign language, and computer labs.

Moving a program to a cart is a significant decision that can affect instruction methodology, limit the ability to offer a varied program, and cause discontent for teachers. A dedicated art room more easily allows for varied art instruction, including three-dimensional art. Foreign language instruction requires space to display examples of the language to aid in proficiency. Computer lab instruction might be the easiest to offer on a cart or integrate into general classroom instruction, but that likely requires the addition of technology infrastructure in each classroom. The impact on instruction quality and methodology must be considered before moving a program to a cart in order to create capacity to alleviate crowding.

## **CHANGE PROGRAM DELIVERY**

Changing how programs are delivered is a tactic for changing the way the district uses existing space, thereby creating new capacity. While any program could warrant reconsidering its delivery methodology, the programs for possible consideration that MGT has seen in other school districts are special education (self-contained and resource), HILT (High Intensity Language Training), and ESOL (English Speaking for Other Languages).

## **CREATE PROGRAM CENTERS**

Creating program centers is a means to shift students from an overutilized school to another or to free up capacity at a school in order to move other students into that space. Pre-kindergarten programs in particular are regular candidates for this solution, where pre-K students are pulled from elementary schools across a district and served in a centralized pre-K center, which frees up elementary classrooms across the district and creates new capacity for grades K-5.

The creation of capacity helps address the district's crowding issues, but consolidation of pre-K would impact parents' routines for dropping off and picking up their children. In addition, a convenient location for a pre-K center could be difficult to find. What is more, some research suggests that getting pre-K students into the environment of "their" elementary school early leads to greater success in elementary school later in the child's career.

## **REDISTRIBUTING THE STUDENT POPULATION**

The redistribution of students can be achieved through two solutions: 1) redistricting, and 2) a "forced" choice enrollment system.

### **REDISTRICTING**

Redistricting is a common and well understood way to redistribute students across a district. School districts across the country regularly engage in redistricting to balance enrollment in schools throughout their district. In fact, some school districts have a policy of redistricting every two years, which allows the redistricting process to become an accepted part of community life.

However, the redistricting process is not without pain, and, quite understandably, families are resistant to changing their child's school. Most districts will allow a student to remain at a school for a period of time, a policy known as grandfathering, to ease the transition associated with moving an attendance boundary.

In the end, this solution is only viable if there is available capacity across district's grade band under a district's current use model. If there is no available capacity across a district, then redistricting is not an option for addressing crowding. In rapidly growing districts, even if redistricting could be done quickly enough to shift students and alleviate crowding, the benefit might only be realized for a brief period of time if rapid growth continues.

## **“FORCED” CHOICE ENROLLMENT SYSTEM**

A “forced” choice enrollment system is another possible way to redistribute students across the district. This solution would make all schools choice-based. In this possible solution, students choose which school they attend based on a preferential scale.

For example, a student would select School A as her first choice. If School A is full, then she would attend her second choice – School B. If both School A and School B are full, then she would attend School C, her third choice. The system could give priority to schools that are closest to a student’s residence. School districts that have a choice enrollment system often allow a student to continue to attend the same school as before the implementation of the choice system pursuant to a grandfathering policy. In addition, choice policies usually provide that once a student attends a particular school, that student always receives priority to attend that school in the future.

Such a choice enrollment system would enable the district to shift students from overutilized schools to schools with available capacity without going through a redistricting process. However, this type of system can be disruptive to the sense of community created by neighborhood schools. If the students in a particular neighborhood all choose to attend different schools, community can be more difficult to develop, and, even if all of those students in that neighborhood rank their priority choices in the same way, there is no guarantee that they will attend the same schools. On the other hand, the sense of community can be created within a school just as it can within a neighborhood.

## **ADDING PHYSICAL SPACE**

Adding physical space is frequently the first solution offered when a school or a grade band becomes overutilized, but additional space can come in a variety of forms. One thing they have in common: they all cost money.

### **BUILDING ADDITIONAL SQUARE FOOTAGE ON EXISTING SITES**

Building additional square footage on existing sites allows a district to add space where capacity is need the most – at the overutilized schools. That means, of course, that there must be extra site area available. In addition, the cost and subsequent debt increase associated with putting additions onto existing buildings must be taken into consideration and may be prohibitive.

If site area is not available at the most overutilized schools, then adding space at the less crowded schools will add capacity to the district, but it will also require shifting students via redistricting, choice enrollment, or relocating programs in order to balance enrollment and maximize the newly created capacity. An appropriately placed addition might create space to allow for a grade configuration change. For example, the district could add space at its middle schools and shift to a PK-4, 5-8 grade configuration. Also, if adding onto overutilized schools will cause the school to exceed the maximum thresholds for school size, then new space will have to be obtained. A subsequent effort to shift enrollment will be necessary to take advantage of the new space.

## **RELOCATABLES**

Relocatables are regularly used by districts across the country to alleviate crowding in their buildings. However, the use of relocatables generates debate among educators as to their efficacy. Some districts have made relocatables a permanent fixture in their facility inventory, going so far as to put

brick fascia and utilities onto and inside of the relocatable. Some districts find relocatables provide an adequate educational environment. Other districts believe that relocatables are more cost efficient than building new structures in some instances and, at the very least, relocatables provide a learning environment that would otherwise not be available to students.

On the other hand, some districts believe relocatables compromise the quality of the programs offered in the structure and should be avoided. Montgomery County Public Schools will need to consciously decide whether relocatables are a suitable long-term solution or simply an effective means to get by in the short-term.

### REPURPOSE/RECONSTRUCTION OF EXISTING BUILDINGS

Repurposing means changing the use of the building. Repurposing might require renovation of the building to make it suitable for the new program or school, but maximizing the district's existing buildings is a preferred strategy. Reconstruction of existing buildings takes advantage of existing sites, but not existing buildings. Both repurposing and reconstruction require capital investment and public approval of debt. The subsequent debt load might be more than the district wants or is even legally capable of acquiring. If these financial hurdles can be overcome, then repurposing and reconstruction are excellent ways to maximize the sites currently owned by the district.<sup>1</sup>

### BUILD NEW BUILDING ON NEW SITE

If no site area is available on MCPS-owned sites, then building a new building on a new site is an option, provided the district can find a new site. Given that much of MCPS is already completely built-out, a new site would most likely involve the demolition on existing buildings to create space for a new building.

### LEASING SPACE

An alternative to building a new building or repurposing/reconstructing an existing building is leasing space. This potential solution might be particularly advantageous as a short-term solution. However, school districts must be mindful of the instructional suitability of this approach and determine if the site location and configuration will support its intended use.

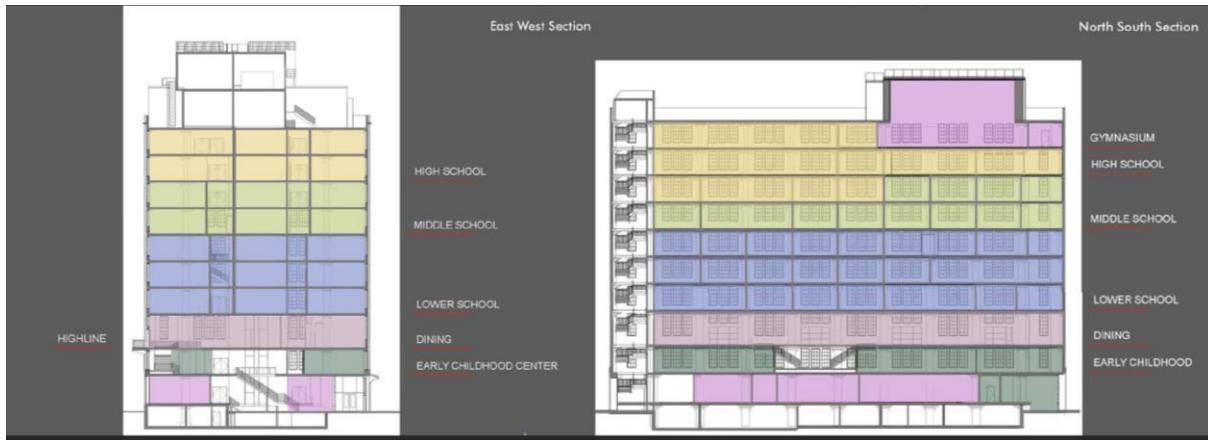
### ADAPTIVE REUSE

Adaptive reuse is the reinvention of non-traditional spaces for educational purposes. For example, the World School is a PK-12 facility located in Manhattan, New York City. Originally built as a warehouse, the facility is ten stories tall and has 215,000 square feet. As **Exhibit 3-3**, on the following page, illustrates, the warehouse has been reinvented as a school. The gymnasium is located on the top floor, along with the high school grade levels. Middle school occupies the next couple of floors down, followed by the lower school grades. The dining facilities are located on the third floor, with early childhood grades and additional support spaces on the first floor.

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<sup>1</sup> MCPS maintains a Former Operating Schools and Current Status list. The list is included in the MCPS FY 2018 Educational Facilities Master Plan and Amendments to the FY 2017-2022 Capital Improvements Program as Appendix X. Throughout this project, MGT heard multiple references to the importance of reusing former MCPS schools. This list is a valuable resource to consider when repurposing or reconstructing existing building is a Facility Planning Option under a planning scenario.

EXHIBIT 3-3  
ADAPTIVE REUSE CASE STUDY – THE WORLD SCHOOL



Source: Perkins Eastman, 2017

A second example is the Citylab High School in Dallas, Texas. The school houses a 9-12 innovation school in a five-story, 120,000 square foot former business building. **Exhibit 3-4** highlights the school's location in Dallas.

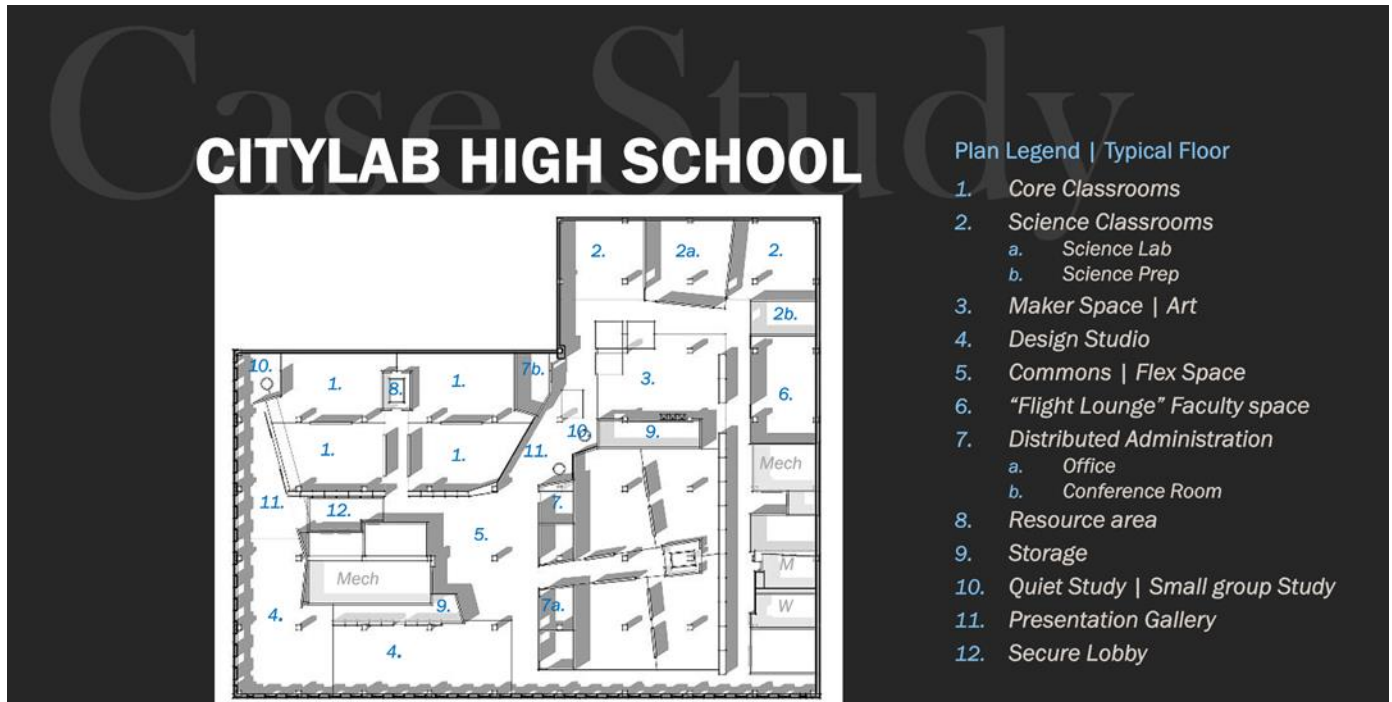
EXHIBIT 3-4  
ADAPTIVE REUSE CASE STUDY – CITYLAB HIGH SCHOOL



Source: Perkins Eastman, 2017

**Exhibit 3-5** shows the layout of a typical floor in the CityLab High School. The floorplan emphasizes open, flexible spaces that complement the underlying educational program concepts.

EXHIBIT 3-5  
ADAPTIVE REUSE CASE STUDY – CITYLAB HIGH SCHOOL



Source: Perkins Eastman, 2017

The adaptive reuse concept applies to both the purchase and the leasing of non-school facilities. For purposes of this Framework, “adaptive reuse” captures the option of purchasing non-school facilities. Leasing space is captured separately to allow for a different discussion. As in the Lease Space option, Adaptive Reuse requires a consideration of the instructional suitability of the space and the relationship with the surrounding land users.

## CHANGING GRADE CONFIGURATION

Changing grade configuration is similar to redistricting as a solution to crowding issues, except that the district would move a grade level rather than a smaller planning unit. The critical question is whether there is sufficient space to move a grade level. **Exhibit 3-6** illustrates a situation in which changing grade configuration from a PK-5, 6-8 to PK-4; 5-8 could alleviate a crowding problem.

EXHIBIT 3-6  
GRADE CONFIGURATION CHANGE EXAMPLE

GRADE	PK-5, 6-8 CONFIGURATION		PK-4, 5-8 CONFIGURATION	
PK	1,000		1,000	
K	1,000		1,000	
1	1,000		1,000	
2	1,000		1,000	
3	1,000		1,000	
4	1,000		1,000	
5	1,000			1,000
6		1,000		1,000
7		1,000		1,000
8		1,000		1,000
TOTAL	7,000	3,000	6,000	4,000
CAPACITY	6,750	4,500	6,750	4,500
UTILIZATION	104%	67%	89%	89%

Source: MGT of America Consulting, LLC, 2017.

The foregoing example is just that – an example – of how a grade configuration change can help alleviate a crowding problem. In this example, elementary utilization went from 104 percent to 89 percent because fifth grade was moved to the middle school buildings. On the receiving end, the middle school utilization went from 67 percent to 89 percent. Both resulting utilizations are within a very comfortable utilization range. In the right circumstances, this solution works well.

## CHANGE SCHEDULING PRACTICES

There are three possible solutions under the strategy of changing scheduling practices. They are: 1) utilizing classrooms during teacher preparation periods, 2) adopting a year-round, track schedule, and 3) stretching the school day.

### UTILIZE CLASSROOMS DURING TEACHER PREPARATION PERIODS

Utilizing classrooms during teacher preparation periods is a potential solution to crowding issues at the middle school and high school levels. Elementary schools are not scheduled by periods, so this solution has no effect on elementary schools.



Typically, middle and high school classrooms are scheduled for classes less than seven periods during the day, even though students may have a seven-period class schedule. The other periods are reserved for teacher preparation or team planning. Moving teacher preparation and team planning to another location in the building makes that teacher’s classroom available for use by another teacher. This solution does not eliminate the teacher’s preparation period or the team planning period. This solution simply means that classrooms are not reserved during particular parts of the day for preparation or planning functions.

This solution does utilize existing classroom space, and teachers can likely relocate their preparation activities more easily than the district can relocate a classroom-worth of students. However, teachers do need space in which to prepare. Science teachers, in particular, need to be able to prepare demonstrations in their classroom. In addition, teachers need a place for private communications with parents, for whom the lack of an ability to communicate with their child’s teacher could be an impediment to being involved with their child’s education. This is particularly the case with parents of students for whom English is not their first language. Finally, the disruption created by not having a dedicated space could lead to decreased teacher productivity. The optimal balance must be struck between maximizing use of existing space and maximizing resources for teacher productivity.

This solution does add capacity to the district. To illustrate how, MGT developed a model of a school district showing the impact on capacity of scheduling classrooms with three different scheduling factors: 5/7<sup>ths</sup> (five periods out of seven each day), 6/7<sup>ths</sup>, and 7/7<sup>ths</sup>. For purposes of this modelling, all other capacity calculation factors are held constant, e.g., students per classroom, number of classrooms, etc. Again, since elementary schools are not scheduled by periods, these potential solutions do not affect the elementary schools. These potential solutions are only available to middle and high schools. **Exhibit 3-7** illustrates this model comparison.

EXHIBIT 3-7  
SCHEDULING FACTOR MODELS COMPARISON

Model	Grade Band	Capacity	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14	14 - 15	15 - 16	16 - 17	17 - 18	18 - 19	19 - 20
5/7ths Scheduling Factor Model	Middle	4,253	92%	102%	104%	108%	110%	114%	117%	116%	113%	110%	109%
	High	5,371	104%	111%	113%	115%	116%	118%	121%	122%	124%	129%	130%
6/7ths Scheduling Factor Model	Middle	5,151	76%	84%	86%	89%	91%	94%	97%	96%	94%	91%	90%
	High	6,506	86%	92%	93%	95%	95%	97%	100%	101%	103%	107%	107%
7/7ths Scheduling Factor Model	Middle	5,990	65%	72%	74%	76%	78%	81%	83%	83%	81%	78%	77%
	High	7,565	74%	79%	80%	81%	82%	84%	86%	87%	88%	92%	92%

Source: MGT, 2017.

## ADOPT A YEAR-ROUND TRACK SCHEDULE

At first glance, it may not be obvious how a year-round schedule can add capacity to a school, but it is possible. Here is how it works.

Take an elementary school with 400 students in a building with a capacity of 400, making the building 100 percent utilized. Now, assign 100 students – one-fourth of the student enrollment – to one of four “tracks.” Then, when the school’s schedule is established, three of those tracks are always in school for a nine-week session. The fourth track of students is on a three-week break. As a result, only 300 students are in the building at any given time, thereby reducing the utilization percentage from 100 percent to 75 percent. **Exhibit 3-8** illustrates this example.

EXHIBIT 3-8  
YEAR-ROUND SCHEDULE – FOUR TRACK EXAMPLE

Track A	100		100	100
Track B	100	100		100
Track C	100	100	100	
Track D		100	100	100
Total Students in School =	300	300	300	300
Capacity Under =	400	400	400	400
<b>Utilization =</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>

Source: MGT, 2017.

This same concept can also be setup in a three-track system wherein two-thirds of the students are in a nine-week session and one-third is on a three-week break at any given time.

This potential solution has significant downsides. It is dramatically different from what students and parents are accustomed. This type of schedule breaks up the traditional summer break, which would impact family vacations and summer camp schedules. This schedule also changes the work year for teachers. Further complicating matters is the application of this schedule to a family with children in multiple schools and the question of how the children in a single family get on the same track schedule. There is also the impact on Summer School instruction to consider. Clearly, this solution would be a dramatic shift in thinking and practice for the district.

On the other hand, this solution does address a district’s crowding issues without building additional space. The district could establish a priority system so that children in different schools from the same family could be placed on the same track. Families would be able to take extended vacations at different times in the year, rather than just in the summer, as would teachers. And, surely organizations that offer summer camps would find ways to offer programs to students when they have their breaks.

This potential solution is an addition to the long-running conversation about addressing capacity issues. While a significant departure from the traditional school calendar, this solution does offer an ability to address crowding at a lower cost and with less change in the use of the buildings.

## STRETCH THE SCHOOL DAY

Stretching the school day is a potential solution that increases the use of existing space and reduces the need to build additional space, at least in the short term. This solution applies to middle and high schools. Here is how it could work.

Consider an example of a high school with an eight-period day (seven class periods and one lunch period for each student). This high school has a capacity of 1,600 students, and sixteen hundred students are enrolled, making it 100 percent utilized. Through an eight -period schedule, 1,600 students fill the classrooms in any given period, except for lunch. **Exhibit 3-9** illustrates this 8-period day scenario.

EXHIBIT 3-9  
EIGHT PERIOD SCHEDULE EXAMPLE

PERIOD	STUDENTS	CAPACITY	UTILIZATION
1	1,600	1,600	100%
2	1,600	1,600	100%
3	1,600	1,600	100%
4	800	1,600	LUNCH
5	800	1,600	LUNCH
6	1,600	1,600	100%
7	1,600	1,600	100%
8	1,600	1,600	100%

Source: MGT, 2017.

As **Exhibit 3-9** indicates, the example assumes two lunch periods and that one-half of the student enrollment eats at one of the two lunch periods. In this eight-period schedule, 11,200 student-seats-per-day are spread over the eight periods, and the building is overutilized.

Now consider a ten-period schedule for the same 1,600 capacity high school with 1,600 students enrolled. The 11,200 student-seats-per-day are now spread over ten periods (eight class periods and two lunch periods). The result is 1,200 students fill the classrooms in any given period, except for lunch, and the building is now 75 percent utilized. **Exhibit 3-10** on the following page illustrates this ten-period schedule example.

**EXHIBIT 3-10**  
**TEN-PERIOD SCHEDULE EXAMPLE**

PERIOD	STUDENTS	CAPACITY	UTILIZATION
1	1,200	1,600	75%
2	1,200	1,600	75%
3	1,200	1,600	75%
4	1,200	1,600	75%
5	800	1,600	LUNCH
6	800	1,600	LUNCH
7	1,200	1,600	75%
8	1,200	1,600	75%
9	1,200	1,600	75%
10	1,200	1,600	75%

Source: MGT, 2017.

This solution is a departure from the traditional school day and would require an adjustment by families and teachers alike. It may still leave a period of time in the middle of the day when the building is more heavily utilized depending upon how cleanly the schedule can be setup. Participation in extra-curricular activities would be impacted for those students who were unable to schedule early or late classes away from activity schedules.

However, this solution does allow a district to address its crowding without adding space. This type of schedule might provide beneficial flexibility for high school students who need to work in the afternoons or who want to spend more time at a resource center in the middle of the day. Scheduling lunch periods could get tricky, but the trickiness could be offset by open-campus policies that allow lunch time to flex with a particular student's schedule.

## **INCREASE CLASS SIZE**

Increasing class size is another possible solution that readily comes to mind when a district is experiencing crowding issues. The question is, how large is too large?

Increasing class size can help the district address its crowding issues, but, if the increase is significant, the change could impact the quality of education in the district. Larger classes mean less individual attention for students, so the district needs to consider how big is too big.

## TWO STRATEGIES FOR ADDRESSING “WE ARE UNDERUTILIZED”

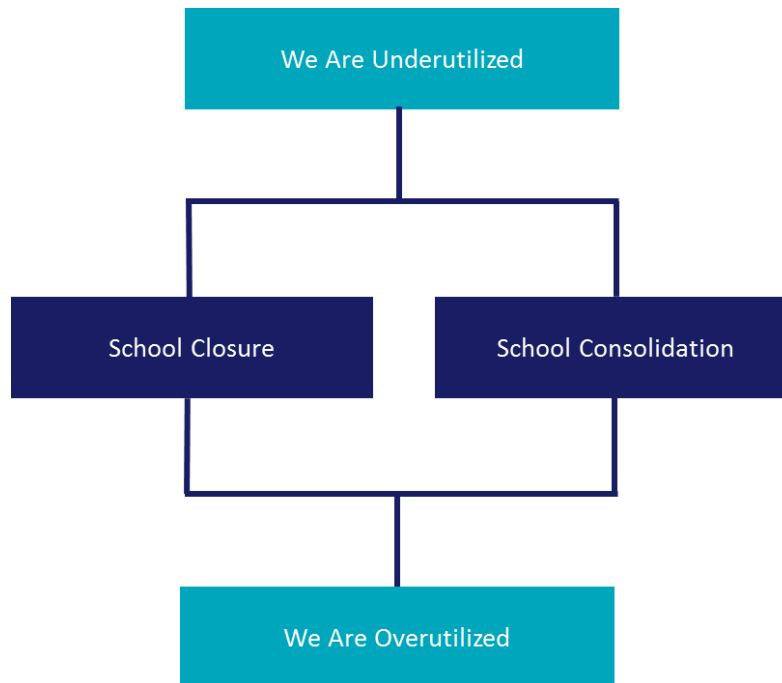
If the Resulting Condition is “We are Underutilized”, then two choices are available to the district:

- ◆ School closure
- ◆ School consolidation

Neither of these options are easy. Districts that pursue either one face backlash from the community. Yet, these options are responsible choices when a district has too much space. Responsible stewardship of public resources sometimes requires that districts close or consolidate schools.

Note that either one of these “We are Underutilized” options, if pursued, likely puts the district in a position where at least some redistribution of students is needed, either through redistricting, grade level configuration changes, or program relocation in order to rebalance the distribution of enrollment. School closure or consolidation could put other schools into a “We are Underutilized” condition. If that is the case, then the “We are Underutilized” flowchart comes into play. **Exhibit 3-11** illustrates this interaction.

EXHIBIT 3-11  
SCENARIO PLANNING FRAMEWORK – WE ARE UNDERUTILIZED



### ADDITIONAL COMMENTS REGARDING SCENARIO PLANNING FRAMEWORK

1. The framework might seem to suggest an “either/or” choice between the various solutions. In fact, the optimal solution might be a combination of solutions. In addition, the framework is intended to help the district take some potential solutions off the table so as to narrow the discussion toward a decision.
2. Some solutions might require some level of grandfathering to ease implementation (e.g., redistricting).
3. Ninety-five percent is an appropriate threshold for determining when the “We are Overutilized” point is met when the district’s enrollment is increasing. If enrollment were declining or a significant “enrollment bubble” were moving through the district, a different threshold would be more appropriate. However, since enrollment is expected to continue to increase, a 95 percent threshold is appropriate at this time.
4. The “We are Overutilized” step in the Framework could apply to both a grade band across the district and an individual school.

## **SECTION FOUR: APPLICATION TO BETHESDA-CHEVY CHASE AND WALTER JOHNSON CLUSTERS**

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The strength of the Framework comes in its application to each of the MCPS clusters. For this project, MCPS asked MGT to apply the Framework to the Bethesda-Chevy Chase and the Walter Johnson clusters. MGT worked with planners from MCPS and the Montgomery County Planning Department to explore the Planning Driver trends in these two clusters. Based on the characterization drawn from discussion with planners, MGT identified the available Facility Planning Options. The following sections detail the application of the Framework to the Bethesda-Chevy Chase and the Walter Johnson clusters.

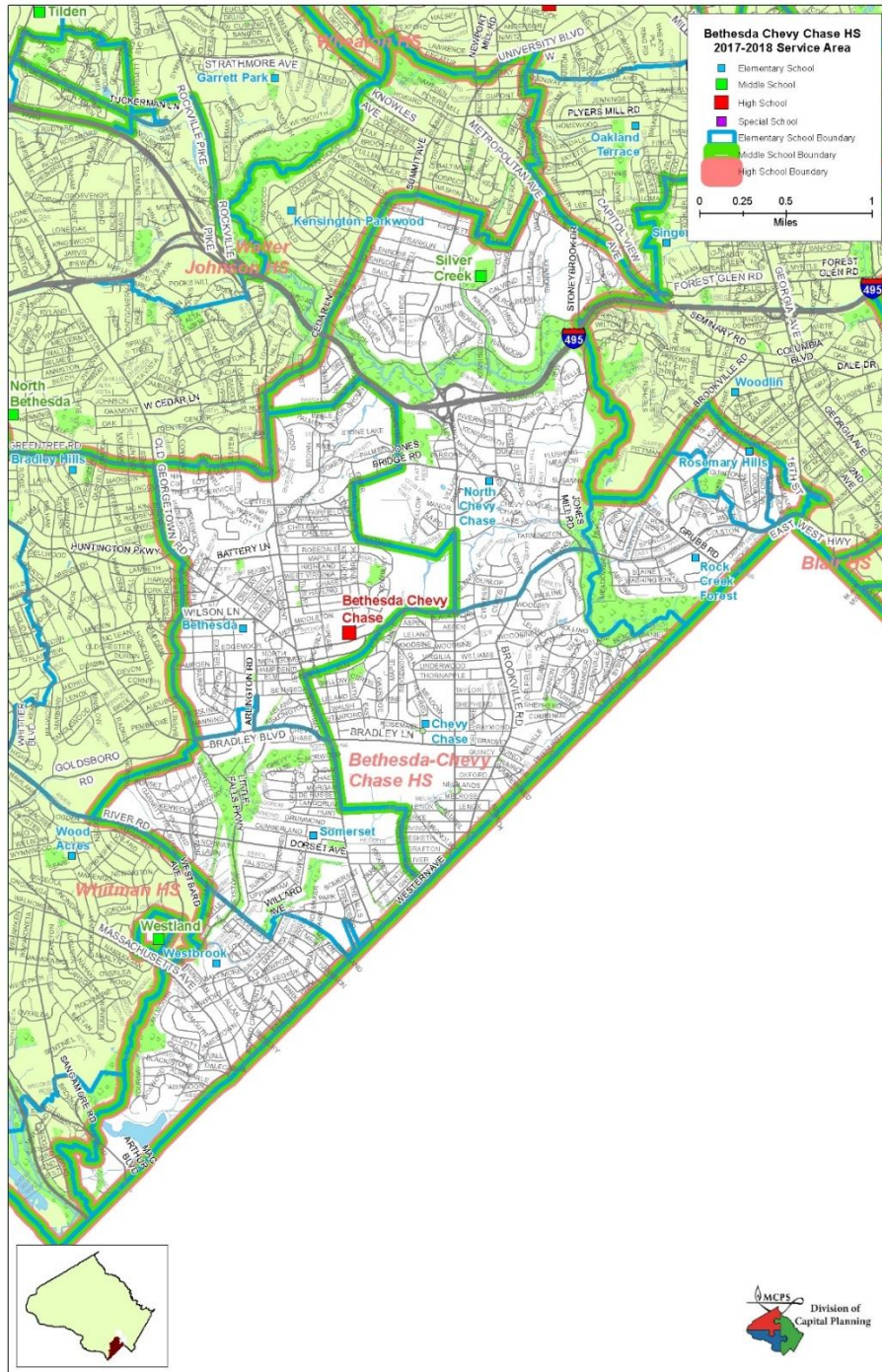
MGT gathered available data to provide the basis for the application of the Framework. That data is contained in Appendices 2 and 3 of this report. However, note that this data is all historical, while the Framework calls for assumptions about future conditions in the clusters. Accordingly, the data should be viewed with an eye toward implications for future conditions, rather than quantitative support for conclusions drawn. MGT teamed with MCPS and Montgomery County planners to review the historical data, to discuss the data's implications for the future, and to draw on the planners' experience in order to gain an understanding of the planning drivers' dynamics in each cluster.

Appendix 4 provides additional discussion about considerations for adaptive reuse of non-school facilities and leasing space.

## BETHESDA-CHEVY CHASE CLUSTER

The Bethesda-Chevy Chase cluster is located in the southern part of the district. The following **Exhibit 4-1** is a map illustrating the location of the cluster.

EXHIBIT 4-1  
MAP OF BETHESDA-CHEVY CHASE CLUSTER



Source: Montgomery County Public School, 2017.



Bethesda-Chevy Chase Cluster High Enrollment Growth Scenario	
<b>Planning Drivers<sup>2</sup></b>	
<p><b>Economy:</b> vibrant; incentives available to attract investment; Marriott HQ is relocating to cluster.</p> <p><b>Development:</b> office growth is coming; developers are seeking approval of projects following the approval of Bethesda Downtown Plan; there are pockets of growth; master plans are pushing for diverse development; approved plans project additional 4,292 elementary students, 2,108 middle school students, and 2,866 high school students if the plans achieve full build out over next 20 years.</p> <p><b>Employment:</b> low unemployment in Chevy Chase; Bethesda is split among clusters; unemployment is anticipated to remain low; cluster is on the higher end of socio-economic spectrum.</p> <p><b>Housing Market:</b> 90% of owner occupied homes are valued at \$.5 Million or more in Bethesda and Chevy Chase.</p> <p><b>Immigration:</b> will continue to attract immigrants to available jobs; percentage of foreign born population is increasing; becoming more racially diverse, though still predominately white; proximity to Washington, D.C. drives turnover in cluster following administration changes.</p> <p><b>Household Composition:</b> multi-family high rises will be built next; new housing likely to attract retirees with no children or young couples; growing families will leave new housing to find more space in single family homes, so multi-family developments may generate fewer students than size of development would suggest; cluster neighborhoods may be ready to turnover in age and become younger as older residents move out, though data suggests current population average age will increase.</p> <p><b>Policy:</b> Purple Line is scheduled for completion in 2022; Purple Line will allow for higher residential density, but student generation impact of Purple Line was already factored into the approved Master Plans along the Purple Line; Purple Line’s impact will be more economic than to increase enrollment; there is a push for more affordable housing in cluster; planners favor this area for more growth, but space is in sufficient.</p>	
<b>Resulting Condition</b>	<b>Constraints<sup>3</sup></b>
<p><b>Enrollment:</b> has increased substantially</p> <p><b>Utilization:</b> schools are significantly over-utilized</p>	<p><b>Available Capacity:</b> no available capacity under current school use model; all schools are over-utilized</p> <p><b>Available Property:</b> no available space at existing sites; no green field space</p>
<b>Facility Planning Options</b>	
<p>Adaptive reuse of non-school facilities</p> <p>Lease space</p>	<p>Change use of existing space</p> <p>Build new building on new site</p>
<b>Scenario Probability:</b> high	
<b>Scenario Update Cycle:</b> annual	

<sup>2</sup> Appendix 2 contains available historical data underlying the Planning Driver descriptions for Bethesda-Chevy Chase.

<sup>3</sup> Under the Scenario Framework, these Constraints are descriptions of future conditions based on today’s assumptions.

## BETHESDA-CHEVY CHASE CLUSTER FACILITY PLANNING OPTIONS

### ADAPTIVE REUSE OF NON-SCHOOL FACILITIES

There are no non-school facilities for sale in the Bethesda-Chevy Chase cluster of a size suitable for adaptive reuse.

### LEASE SPACE

There is limited space available for leasing in Bethesda-Chevy Chase. The following chart identifies the properties with available square feet of at least 60,000 square feet. In both cases, the buildings would be shared with multiple co-tenants and are likely unsuitable for school programs.

Bethesda-Chevy Chase Cluster - Property Available for Lease				
Property	Building Type	Stories	Square Feet Available	Parking Ratio
1	Class A Office	12	Entire 4th Floor - 31,292 Entire 5th Floor - 31,292	1.51/1,000 SF
2	Class A Office	11	5th Floor - 14,526 5th Floor - 8,675 5th Floor - 4,881 6th Floor - 14,439 6th Floor - 13,681 7th Floor - 14,013	2.00/1,000 SF

Source: JLL, 2017.

### CHANGE USE OF EXISTING SPACE

Montgomery County Public Schools' Former Operating Schools and Current Status List identifies two schools in Bethesda-Chevy Chase that are currently not in use as a school. The existing square feet at either facility is likely too small for most programs, particularly when middle school utilization is the dominant challenge, but the existing acreage might support a taller building with a smaller footprint and fewer site amenities, e.g., athletic fields, which would allow MCPS to demolish the existing building and build a new school.

Bethesda-Chevy Chase - Closed Schools in Public Ownership				
Closed School	Building Status	Number of Classrooms	Acres	Square Feet
Lynnbrook ES	Partially Occupied	15	4.21	35,000
Rollingwood ES	In Use	12 classrooms; 2 portables	4.07	26,624

Source: Montgomery County Public Schools, 2017.

The clusters adjacent to Bethesda-Chevy Chase also contain closed school buildings that could be repurposed or reopened as a school, which would enable MCPS to address over-utilization of schools in Bethesda-Chevy Chase by redistricting. Montgomery County Public Schools plans to put reopen Tilden as a middle school in 2020. If middle school capacity continues to be the main challenge, the other existing facilities in adjacent clusters are too small for a middle school program. However, there are

sites with sufficient acreage to consider demolishing an existing school and building a new, taller building but with a smaller footprint.

Bethesda-Chevy Chase - Closed Schools in Public Ownership in Adjacent Clusters					
Cluster	Closed School	Building Status	Number of Classrooms	Acres	Square Feet
DCC - Blair	Parkside ES	In Use	8	11.61	26,369
D-CC - Einstein	Forest Grove ES	In Use	14	6.17	38,000
D-CC - Einstein	Macdonald Knolls ES	In Use	15	8.06	28,000
D-CC - Einstein	Woodside ES	In-Use	23	2.70	36,614
DCC- Kennedy	Sandlebrook ES		29		42,274
DCC- Kennedy	Spring Mill ES	In Use	14	7.69	29,300
DCC - Wheaton	Bushey Drive ES	In Use	16	6.07	
DCC - Wheaton	Rocking Horse Road ES	In Use	28	8.25	57,639
Walter Johnson	Alta Vista ES	In Use	14	3.53	15,000
Walter Johnson	Ayrlawn ES	In Use	11	3.08	28,000
Walter Johnson	Grosvenor Center	In Use	16 classrooms; 18 portables	10.21	36,770
Walter Johnson	Kensington ES	In Use	19	4.54	45,206
Walter Johnson	Montrose ES	In Use	16	7.50	34,243
Walter Johnson	Tilden Center	Partially Occupied	34	19.70	140,000
Whitman	Clara Barton ES	In Use	12	4.00	26,084
Whitman	Brookmont ES	In Use	22	5.65	36,000
Whitman	Concord ES	In Use	12	3.45	26,444
Whitman	Fernwood ES	In Use	18	6.15	32,000
Whitman	Radnor ES	Vacant (Holding Facility)	20 Classrooms; 27 portables	9.03	36,663

Source: Montgomery County Public Schools, 2017.

## BUILD NEW BUILDING ON NEW SITE

There are currently no plans to build a new school on a new site within the Bethesda-Chevy Chase cluster boundaries. However, there is dedicated land in the adjacent Walter Johnson cluster on which a new school could be built.

Bethesda-Chevy Chase - Future School Sites in Public Ownership in Adjacent Clusters			
Cluster	School	Building Status	Acres
WALTER JOHNSON	WHITE FLINT ES	Future	TBD

Source: Montgomery County Public Schools, 2017.

There is no adequately sized vacant land for sale in the Bethesda-Chevy Chase cluster.

## BETHESDA-CHEVY CHASE CLUSTER FACILITY PLANNING OPTIONS OBSERVATIONS

1. In the shorter term, MCPS will need to continue to identify opportunities to add space to existing facilities, but the High Enrollment Growth Scenario suggests that addressing growth in this cluster over the longer term will require looking at the Facility Planning Options identified here. The option to Build Additions at Existing Sites will be inadequate to address enrollment growth in this cluster over the longer term.
2. The anticipated high enrollment growth and the overall lack of available property in this cluster suggest that MCPS should determine the preferred approach to three considerations.
  - a. **Montgomery County Public Schools should determine whether the Adaptive Reuse of Non-School Facilities is an option the Board of Education is willing to pursue.** If it is, then MCPS should work with the Montgomery County Council to develop a process for evaluating and bidding on property when it becomes available in the marketplace. With real estate in short supply, demand will be high when new property becomes available for purchase. Montgomery County and MCPS will need to be prepared to move quickly to identify desirable property and to prepare a competitive bid to purchase the property.
  - b. **Montgomery County Public Schools should determine whether Lease Space is an option the Board of Education is willing to pursue.** If it is, then MCPS should develop a set of criteria for evaluating space available for leasing. Timing here is critical. A developer purchases a building with the intent to lease it as soon as possible. Montgomery County Public Schools will need to be prepared to move quickly in evaluating potential lease space. A delay in evaluation could bring MCPS to the process after the developer has invested capital and renovated the facility for non-school purposes. If that is the case, the opportunity for MCPS will be lost or become more expensive to reverse.
  - c. **Montgomery County Public Schools should determine which small schools in the MCPS Former Operating Schools and Current Status List could be demolished to make sites with adequate acreage available for the construction of new, taller buildings.** This includes sites in clusters adjacent to Bethesda-Chevy Chase, which would require the additional step of redistricting attendance boundaries to maximize the use of added capacity.

## ADDITIONAL COMMENTS ON APPLICATION OF SCENARIO FRAMEWORK TO BETHESDA-CHEVY CHASE

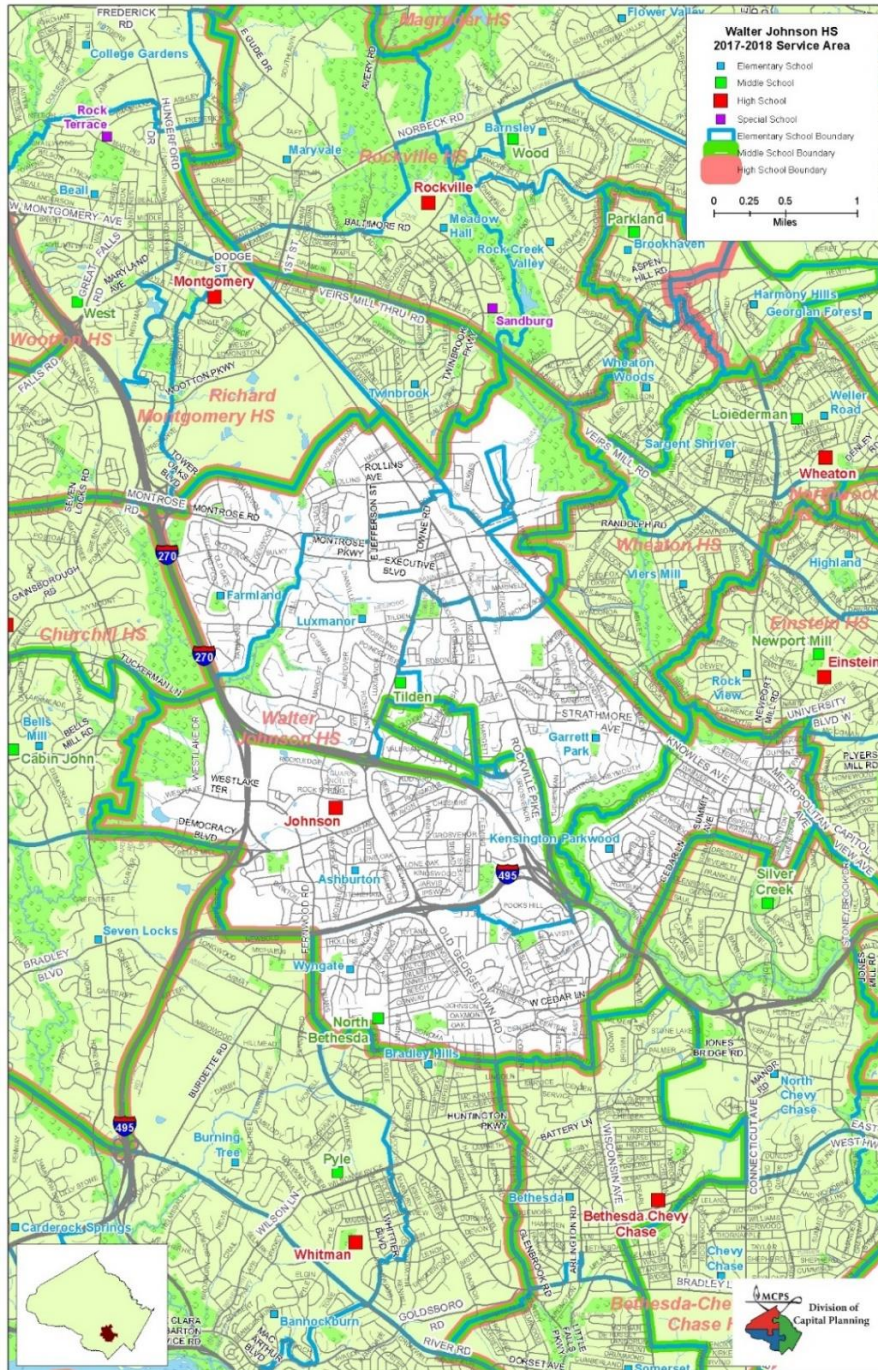
1. School utilization in Bethesda-Chevy Chase is expected to be between 80% and 100% at elementary schools and high schools. The over-utilization is found in the middle schools, where utilizations are projected to be at or near 160% through 2022.
2. If enrollment growth materializes as anticipated by this Scenario, Bethesda-Chevy Chase is a cluster that will need allocation of resources in the foreseeable future to ensure equity, educational program delivery, and academic achievement. Over-utilized schools can inhibit educational program delivery and academic achievement. This cluster is where growth is anticipated, which will necessitate investment in order to continue to provide a quality educational environment for the cluster's children.
3. The results of MGT's enrollment forecast methodology evaluation will need to be integrated into the application of the Framework to the Bethesda-Chevy Chase cluster.



## WALTER JOHNSON CLUSTER

The Walter Johnson cluster is located in the mid-southern part of the district. The following Exhibit 4-2 is a map illustrating the location of the cluster.

EXHIBIT 4-2  
MAP OF WALTER JOHNSON CLUSTER



Source: Montgomery County Public School, 2017

<b>Walter Johnson Cluster High Enrollment Growth Scenario</b>	
<b>Planning Drivers<sup>4</sup></b>	
<p><b>Economy:</b> vibrant; development more likely to drive housing than economy.</p> <p><b>Development:</b> lots of development potential, especially in the White Flint Master Plan areas but White Flint has been slow to develop; if master plans achieve full build out in next 20-30 years, development may generate 5,951 elementary, 2,873 middle, and 3,785 high school students.</p> <p><b>Employment:</b> unemployment has gone up between 2010 and 2015 in Garrett Park and North Bethesda; more toward middle of socio-economic spectrum, but median income is still high; southern part more toward higher end of socio-economic spectrum; eastern part is lower income; Rockville Pike is a socio-economic dividing line.</p> <p><b>Housing Market:</b> affordable; developers buying smaller homes, demolishing them, and building bigger houses on same lot; housing along the rail line is affordable; in Garrett Park 70% of homes are \$500k - \$999k; in North Bethesda 30% of homes are \$300k - \$499k and 45% are \$500k - \$999k.</p> <p><b>Immigration:</b> will continue to attract immigrants to available jobs, though not an area high in immigration; percentage of foreign born population is increasing; becoming more racially diverse, though still predominately white; proximity to Washington, D.C. drives turnover in cluster following administration changes; more racial diversity than income diversity.</p> <p><b>Household Composition:</b> housing is turning over as younger families move in; experiencing higher student generation rates than other areas of the county; Garrett Park population age structure suggests that cluster will get older and have fewer child-bearing age residents, while North Bethesda will have more child-bearing age residents.</p> <p><b>Policy:</b> planners desire to focus housing and redevelopment around transportation hubs.</p>	
<b>Resulting Condition</b>	<b>Constraints<sup>5</sup></b>
<p><b>Enrollment:</b> has increased substantially</p> <p><b>Utilization:</b> schools are significantly over-utilized</p>	<p><b>Available Capacity:</b> no available capacity under current school use model; all schools are over-utilized</p> <p><b>Available Property:</b> no available space at existing sites; no green field space</p>
<b>Facility Planning Options</b>	
<p>Adaptive reuse of non-school facilities</p> <p>Lease space</p> <p>Change use of existing space</p> <p>Build new building on new site</p>	
<p><b>Scenario Probability:</b> high</p>	
<p><b>Scenario Update Cycle:</b> annual</p>	

<sup>4</sup> Appendix 3 contains available historical data underlying the Planning Driver descriptions for Walter Johnson.

<sup>5</sup> Under the Scenario Framework, these Constraints are descriptions of future conditions based on today's assumptions.

## WALTER JOHNSON CLUSTER FACILITY PLANNING OPTIONS

### **ADAPTIVE REUSE OF NON-SCHOOL FACILITIES**

There are no non-school facilities for sale in the Walter Johnson cluster of a size suitable for adaptive reuse.

### **LEASE SPACE**

There is considerable space with total square feet greater than 60,000 available for lease in the Walter Johnson cluster. Four buildings are entirely vacant and could have sufficient space for a middle school or high school program. However, those buildings are taller than four stories, which will require additional investigation to determine whether floors five and above are suitable for educational use.<sup>6</sup> The other nine buildings would involve shared use with multiple co-tenants, a dynamic MCPS will need to consider when determining whether to take advantage of available space on the first four floors of buildings.

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<sup>6</sup> See Appendix 4 commentary on building height considerations and educational use.



Walter Johnson Cluster - Property Available for Lease				
Property	Building Type	Stories	Square Feet Available	Parking Ratio
1	Class A Office	7	Entire 5th Floor - 20,284 Entire 6th Floor - 20,824 Entire 7th Floor - 20,824	3.10/1,000 SF
2	Class A Office	8	Entire Building - 217,733	3.20/1,000 SF
3	Class A Office	8	Entire Building - 155,721	3.50/1,000 SF
4	Class B Office	6	Lower Level - 16,000 1st Floor - 18,878 Entire 2nd Floor - 27,761 Entire 3rd Floor - 27,761 Entire 4th Floor - 27,761	2.50/1,000 SF
5	Class A Office	3	Entire 1st Floor - 13,278 2nd Floor - 30,535 3rd Floor - 46,216	1.00/1,000 SF
6	Class B Office	7	Entire 2nd Floor - 28,212 Entire 3rd Floor - 28,214 Entire 4th Floor - 28,214 Entire 5th Floor - 28,214	3.50/1,000 SF
7	Class A Office	7	Entire Building - 180,393	3.33/1,000 SF
8	Class A Office	6	Entire Building - 150,787	3.00/1,000 SF
9	Class A Office	8	Entire 2nd Floor - 25,519 Entire 3rd Floor - 27,184 Entire 5th Floor - 8,819	3.40/1,000 SF
10	Class A Office	8	Entire 2nd Floor - 29,740 Entire 3rd Floor - 31,581 Entire 4th Floor - 22,664	3.40/1,000 SF
11	Class A Office	15	3rd Floor - 8,905 3rd Floor - 8,124 Entire 4th Floor - 23,538 5th Floor - 7,335 5th Floor - 4,211 Entire 6th Floor - 23,538	2.50/1,000 SF
12	Class A Office	9	1st Floor - 11,000 Entire 2nd Floor - 23,628 Entire 3rd Floor - 23,628 Entire 4th Floor - 23,628 Entire 5th Floor - 23,628	3.28/1,000 SF
13	Class A Office	6	Entire 5th Floor - 31,476 Entire 6th Floor - 31,624	3.00/1,000 SF

Source: JLL, 2017.

## CHANGE USE OF EXISTING SPACE

The MCPS Former Operating Schools and Current Status List identifies six facilities in the Walter Johnson cluster that could be reopened as a school. Montgomery County Public Schools plans to reopen Tilden as a middle school in 2020. The existing square footage of the remaining buildings is small. Existing acreage at Montrose and Grosvenor could allow for a new, taller building, if the existing facility were demolished.

Walter Johnson - Closed Schools in Public Ownership					
Cluster	Closed School	Building Status	Number of Classrooms	Acres	Square Feet
Walter Johnson	Alta Vista ES	In Use	14	3.53	15,000
Walter Johnson	Ayrlawn ES	In Use	11	3.08	28,000
Walter Johnson	Grosvenor Center	In Use	16 classrooms; 18 portables	10.21	36,770
Walter Johnson	Kensington ES	In Use	19	4.54	45,206
Walter Johnson	Montrose ES	In Use	16	7.50	34,243
Walter Johnson	Tilden Center	Partially Occupied	34	19.70	140,000

Source: Montgomery County Public Schools, 2017.

There is a significant number of closed schools in adjacent clusters, though those buildings are all under 60,000 square feet. Small buildings with large acreage could be demolished to make room for a new, taller building with a smaller footprint, thereby taking advantage of existing land. If this option were selected, MCPS would then alleviate over-utilization in Walter Johnson by redistricting attendance zones to take advantage of the newly created capacity.

SECTION FOUR: APPLICATION TO BETHESDA-CHEVY CHASE AND WALTER JOHNSON CLUSTERS

Walter Johnson - Closed Schools in Public Ownership in Adjacent Clusters					
Cluster	Closed School	Building Status	Number of Classrooms	Acres	Square Feet
B-CC	Lynnbrook ES	Partially Occupied	15	4.21	35,000
B-CC	Rollingwood ES	In Use	12 classrooms; 2 portables	4.07	26,624
Churchill	Georgetown Hill ES	In Use	28	10.35	50,000
Churchill	Tuckerman ES	In Use	24	9.13	47,965
DCC - Blair	Parkside ES	In Use	8	11.61	26,369
D-CC - Einstein	Forest Grove ES	In Use	14	6.17	38,000
D-CC - Einstein	Macdonald Knolls ES	In Use	15	8.06	28,000
D-CC - Einstein	Woodside ES	In-Use	23	2.70	36,614
DCC- Kennedy	Sandlebrook ES		29		42,274
DCC- Kennedy	Spring Mill ES	In Use	14	7.69	29,300
DCC - Wheaton	Bushey Drive ES	In Use	16	6.07	
DCC - Wheaton	Rocking Horse Road ES	In Use	28	8.25	57,639
Richard Montgomery	Woodley Gardens ES		16		31,767
Rockville	Aspen Hill ES	In Use	24	6.00	50,000
Rockville	English Manor ES	Partially Occupied	28	8.25	50,000
Rockville	Lone Oak ES	In Use	28	7.09	40,000
Rockville	North Lake ES	In Use Holding Facility)	22 classrooms; 17 portables	9.66	40,378
Rockville	Broome JS	Partially Occupied	45	19.49	135,210
Whitman	Clara Barton ES	In Use	12	4.00	26,084
Whitman	Brookmont ES	In Use	22	5.65	36,000
Whitman	Concord ES	In Use	12	3.45	26,444
Whitman	Fernwood ES	In Use	18	6.15	32,000
Whitman	Radnor ES	Vacant (Holding Facility)	20 Classrooms; 27 portables	9.03	36,663

Source: Montgomery County Public Schools, 2017.

**BUILD NEW BUILDING ON NEW SITE**

There is a new elementary school planned for the White Flint area.

<b>Walter Johnson - Future School Sites in Public Ownership</b>			
<b>Cluster</b>	<b>School</b>	<b>Building Status</b>	<b>Acres</b>
WALTER JOHNSON	WHITE FLINT ES	Future	TBD

Source: Montgomery County Public Schools, 2017.

There are new elementary and middle school building planner for adjacent clusters. These new facilities could provide opportunities to alleviate over-utilization in Walter Johnson through redistricting.

<b>Walter Johnson - Future School Sites in Public Ownership in Adjacent Clusters</b>			
<b>Cluster</b>	<b>School</b>	<b>Building Status</b>	<b>Acres</b>
CHURCHILL	BRICKYARD MS	Future	20
CHURCHILL	KENDALE ES	Future	10.54
MONTGOMERY	FALLSGROVE ES	Future	TBD
MONTGOMERY	KING FARM ES	Future	TBD

Source: Montgomery County Public Schools, 2017.

There is no adequately sized vacant land for sale in the Walter Johnson cluster.

## WALTER JOHNSON CLUSTER FACILITY PLANNING OPTIONS OBSERVATIONS

1. In the shorter term, MCPS will need to continue to identify opportunities to add space to existing facilities, but the High Enrollment Growth Scenario suggests that addressing growth in this cluster over the longer term will require looking at the Facility Planning Options identified here. The option to Build Additions at Existing Sites will be inadequate to address enrollment growth in this cluster over the longer term.
2. The anticipated high enrollment growth and the overall lack of available property in this cluster suggest that MCPS should determine the preferred approach to three considerations.
  - a. **Montgomery County Public Schools should determine whether the Adaptive Reuse of Non-School Facilities is an option the Board of Education is willing to pursue.** If it is, then MCPS should work with the Montgomery County Council to develop a process for evaluating and bidding on property when it becomes available in the marketplace. With real estate in short supply, demand will be high when new property becomes available for purchase. Montgomery County and MCPS will need to be prepared to move quickly to identify desirable property and to prepare a competitive bid to purchase the property.
  - b. **Montgomery County Public Schools should determine whether Lease Space is an option the Board of Education is willing to pursue.** If it is, then MCPS should develop a set of criteria for evaluating space available for leasing. Timing here is critical. A developer purchases a building with the intent to lease it as soon as possible. Montgomery County Public Schools will need to be prepared to move quickly in evaluating potential lease space. A delay in evaluation could bring MCPS to the process after the developer has invested capital and renovated the facility for non-school purposes. If that is the case, the opportunity for MCPS will be lost or become more expensive to reverse.
  - c. **Montgomery County Public Schools should determine which small schools in the MCPS Former Operating Schools and Current Status List could be demolished to make sites with adequate acreage available for the construction of new, taller buildings.** This includes sites in clusters adjacent to Walter Johnson, which would require the additional step of redistricting attendance boundaries to maximize the use of added capacity.

## ADDITIONAL COMMENTS ON THE APPLICATION OF SCENARIO FRAMEWORK TO WALTER JOHNSON CLUSTER

1. School utilization in the Walter Johnson cluster is anticipated to be above 100% for high schools through 2022. Elementary schools and middle schools are currently over-utilized, but planned projects will bring those schools within the 80% to 100% utilization range over the next five years.
2. If enrollment growth materializes as anticipated, Walter Johnson will be a cluster in need of investment in order to maintain equity, academic achievement, and effective educational program delivery.
3. The results of MGT's enrollment forecast methodology evaluation will need to be integrated into the application of the Framework to the Walter Johnson cluster.

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## SECTION FIVE: COMMENDATIONS AND SUPPORTING RECOMMENDATIONS

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In support of the recommended scenario planning process, MGT offers the following commendations and supporting recommendations.

### COMMENDATION 1:

**Montgomery County Public Schools' Capital Improvements Program is an impressive document. It is comprehensive and reflects a deep understanding of the data and dynamic trends within Montgomery County.**

### SUPPORTING RECOMMENDATION 1:

**Enhance planning coordination with other units of local government by:**

- 1. Aligning MCPS facility planning horizon with Montgomery County master plans.** Montgomery County Public Schools' CIP is a six-year plan, but Montgomery County and the incorporated municipalities draw up their master plans for twenty-five years. The CIP provides MCPS with the short-term facility planning mechanism. The scenario planning framework recommended in this report provides MCPS with the mechanism for aligning its planning horizon with the twenty-five-year timeframe used by other units of local government in Montgomery County.

### SUPPORTING RECOMMENDATION 2:

**Enhance and streamline stakeholder engagement in the MCPS facility planning process by:**

- 1. Integrating stakeholder input earlier in the MCPS facility planning process.** Stakeholders, particularly parents, believe that MCPS does not provide them with an opportunity to offer input until after a decision is made. Whether this is in fact the case or not, the perception leads to frustration. Enhancing stakeholders' roles earlier in the process would help stakeholders feel more engaged and have more ownership over the final decision.
- 2. Designating a specific staff member to facilitate stakeholder engagement.** Facilitating an enhanced stakeholder engagement process is a full-time job in a district like MCPS. The issues facing MCPS are complicated and stakeholder interests are complex. The entire process could benefit from designating a specific staff member as a full-time process facilitator. This person would also be charged with developing a communication plan that keeps stakeholders informed of the planning process and the options under consideration. These responsibilities could be assigned to an existing staff member or could be assigned to a new staff member hired specifically for this purpose.
- 3. Considering ending the practice of a stakeholder committee selecting an architect for facility feasibility studies.** This is a matter of streamlining stakeholder engagement in the facility planning process. The Division of Construction has the expertise to prepare feasibility studies, and it would save time in the overall process to put that expertise to work on feasibility studies. Reportedly, the process of selecting an architect with a stakeholder committee often takes longer than the preparation of the feasibility study itself, and Construction has conducted more feasibility studies in house in recent years. Of course,

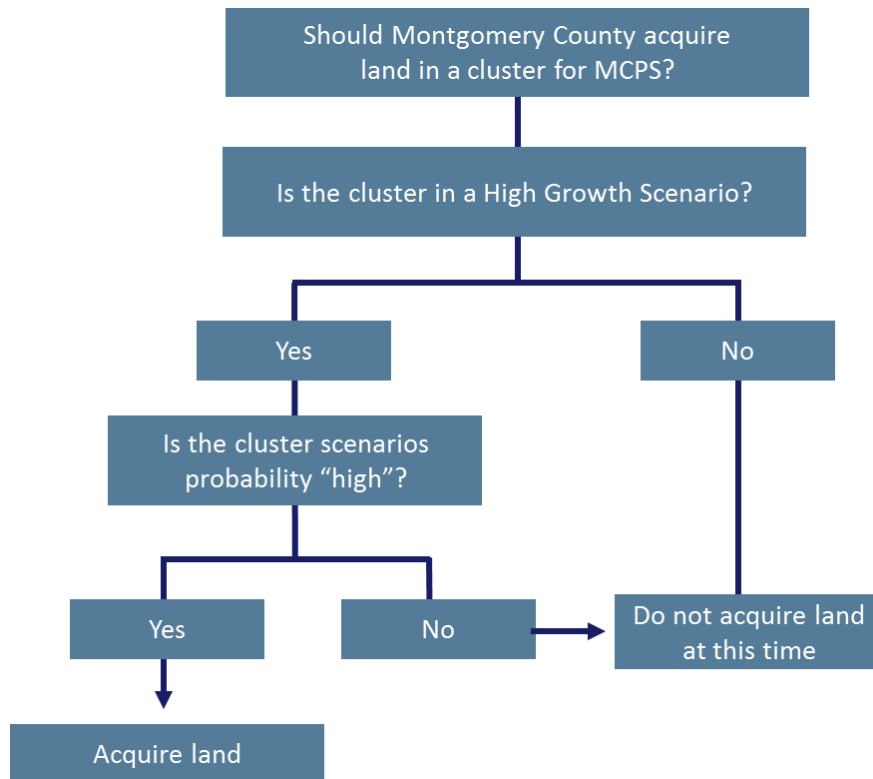
there may be projects that are complex enough that it would be prudent to have outside assistance, but, for the most part, it appears that Construction could handle more responsibilities for preparing feasibility studies, which would reduce the overall length of time it takes to prepare feasibility studies.

**SUPPORTING RECOMMENDATION 3:**

**Assign each cluster to a scenario to guide future decisions about land acquisition.**

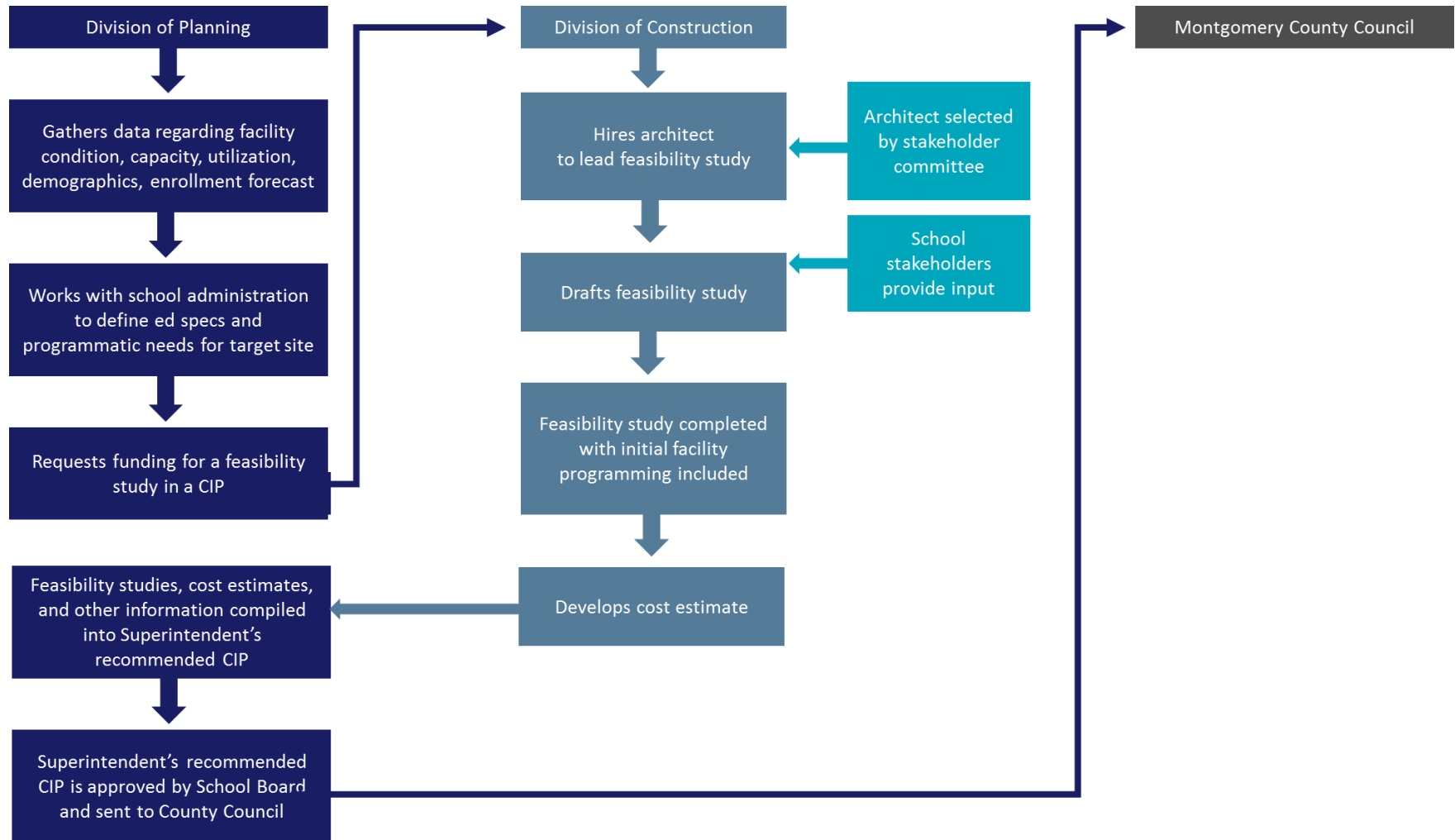
This supporting recommendation is not intended to suggest that each scenario should be tailored to fit each cluster perfectly. Rather, the prevailing trends and characteristics within a cluster would lead to an assessment that a particular cluster is “High Growth”, while another cluster might be “No Growth.” This assignment would allow MCPS to draw general conclusions about the trends and future facility planning options, thereby also enabling MCPS to identify those clusters where land acquisition would be more advantageous (e.g., “High Growth” areas) versus those areas where land acquisition is not needed because the future need for space is not evident. The scenario probability should be adjusted to be applicable to the assigned cluster, as should the scenario update cycle.

The following flowchart illustrates how the scenarios can assist in land acquisition decisions.



## APPENDIX I: COMPLETE MCPS CIP PLANNING FLOWCHART

The following flowchart connects each of the MCPS CIP planning phase flowcharts into a single chart.



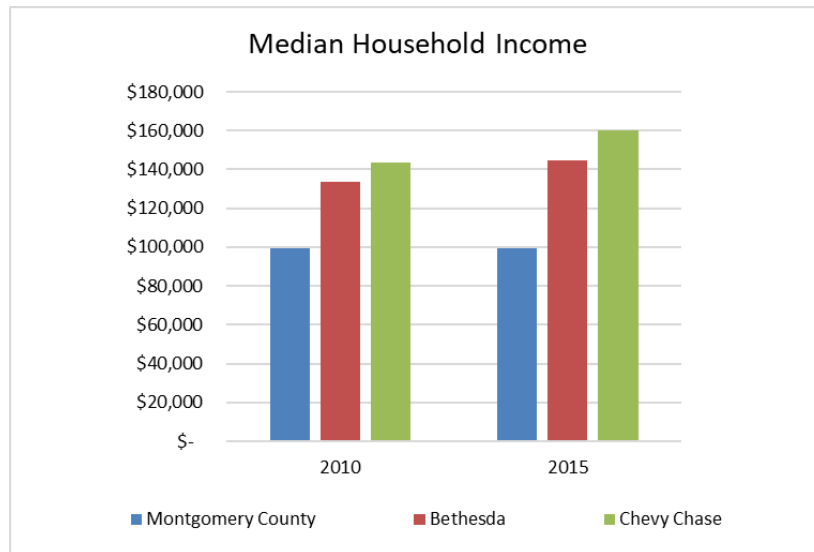


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## APPENDIX 2: BETHESDA-CHEVY CHASE DATA AND CHARTS

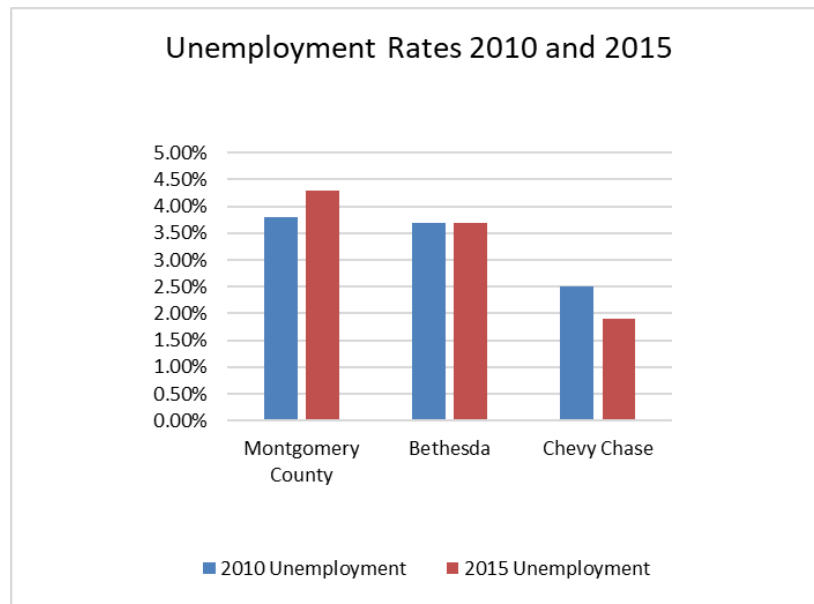
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1. Bethesda and Chevy-Chase are higher on the socio-economic spectrum.



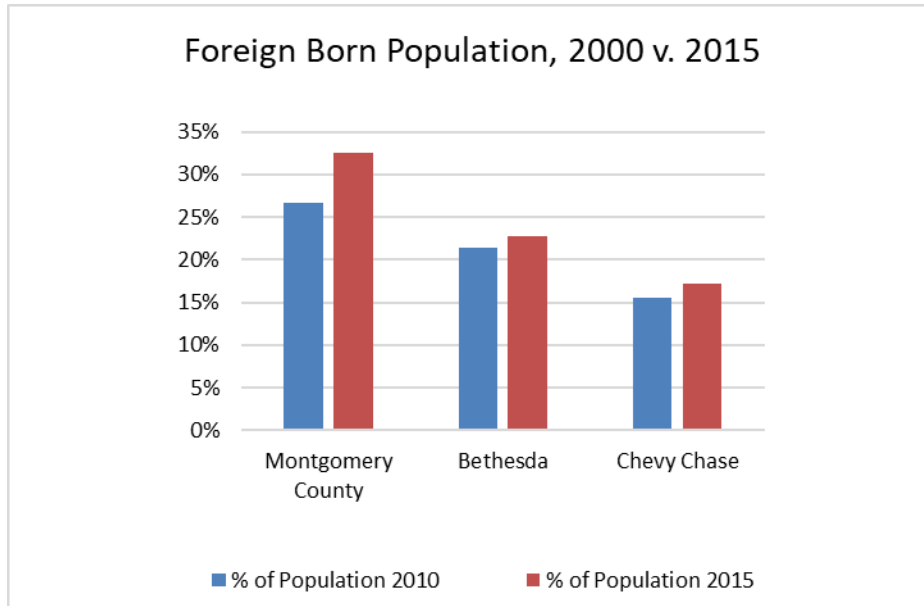
Source: U.S. Census Bureau, 2017.

2. Bethesda and Chevy Chase have low unemployment.



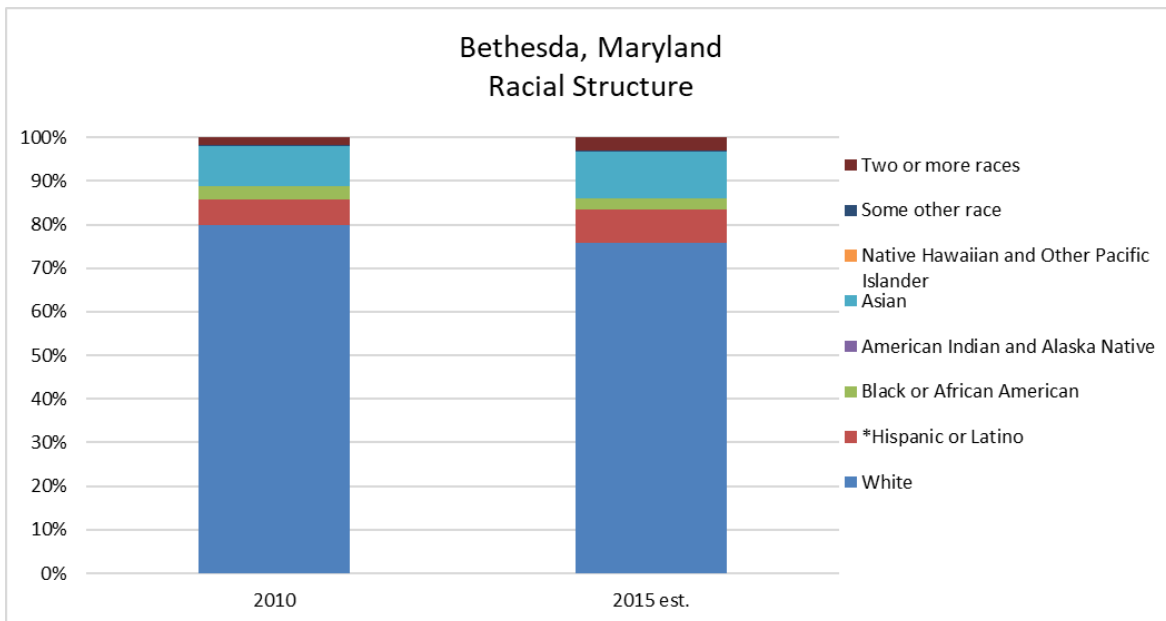
Source: U.S. Census Bureau, 2017.

3. The percentage of the Bethesda and Chevy Chase population that is foreign born is increasing.

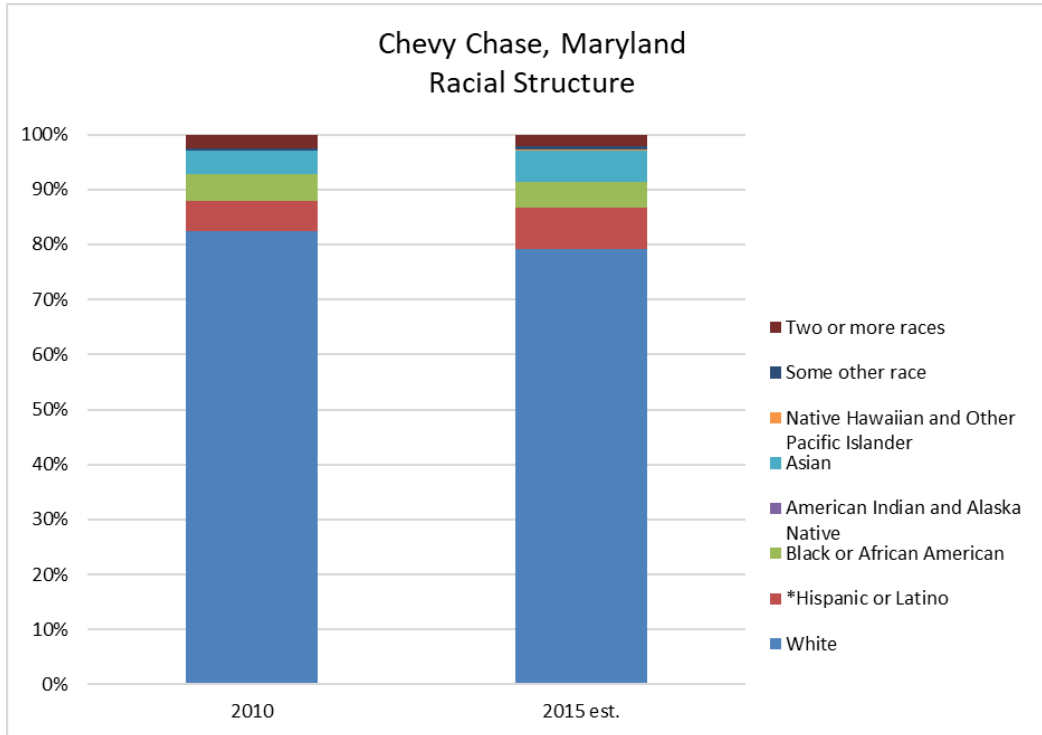


Source: U.S. Census Bureau, 2017.

4. Bethesda and Chevy Chase have become more racially diverse but continue to be predominately white.

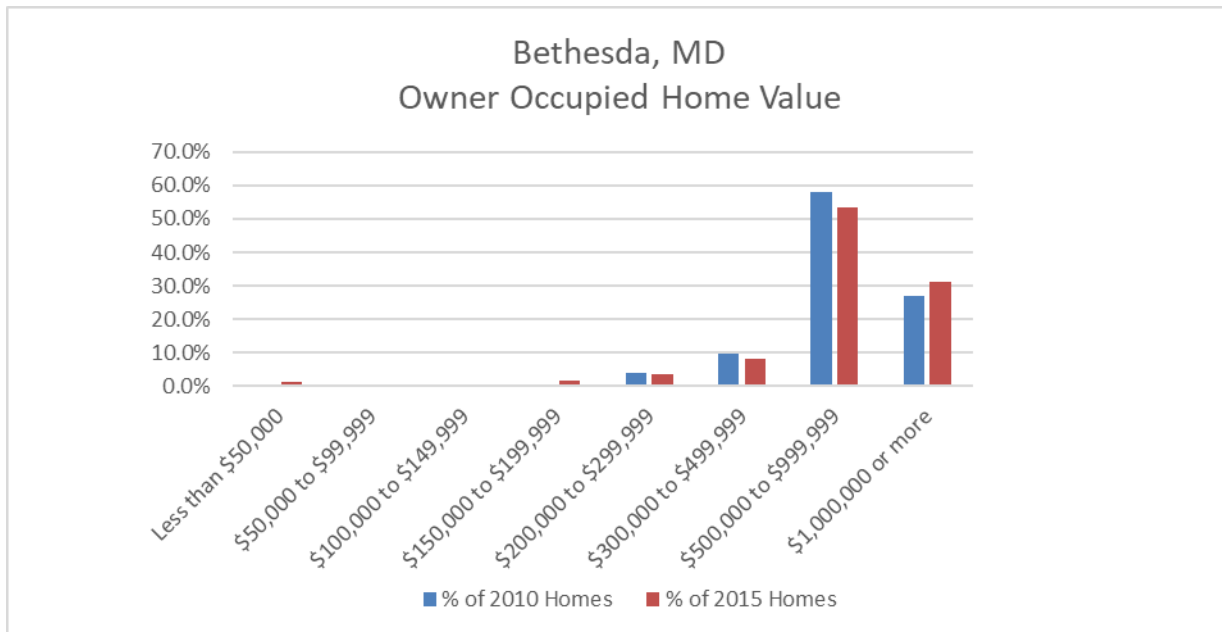


Source: U.S. Census Bureau, 2017.

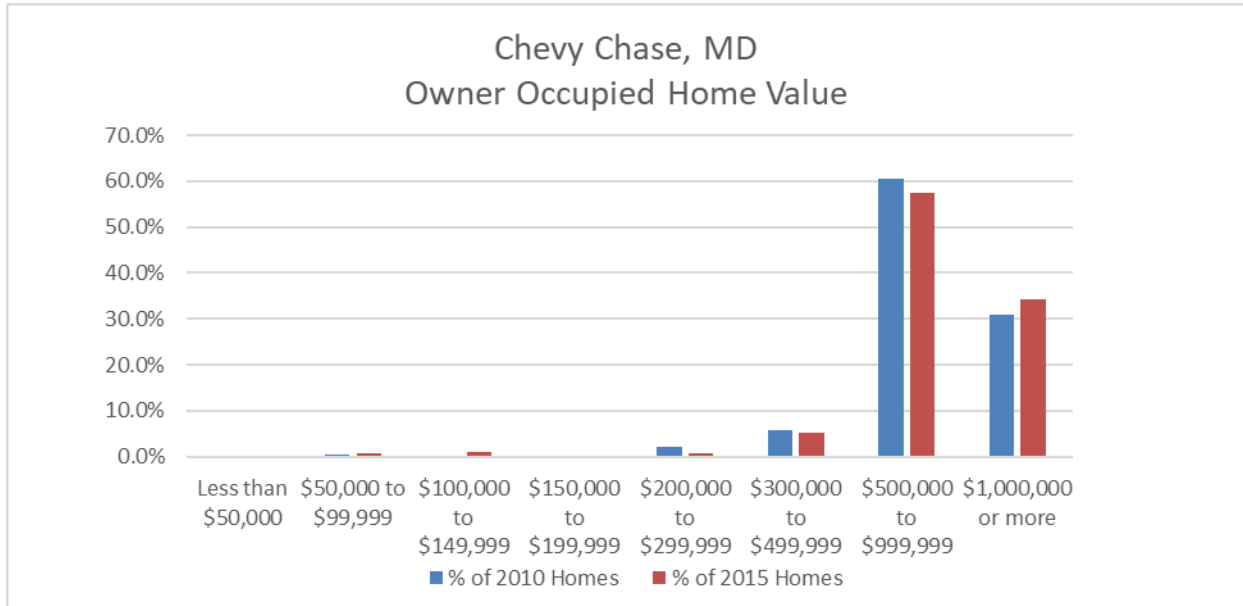


Source: U.S. Census Bureau, 2017

- Ninety percent of owner occupied homes in Bethesda and Chevy Chase are valued at \$500,000 or more.

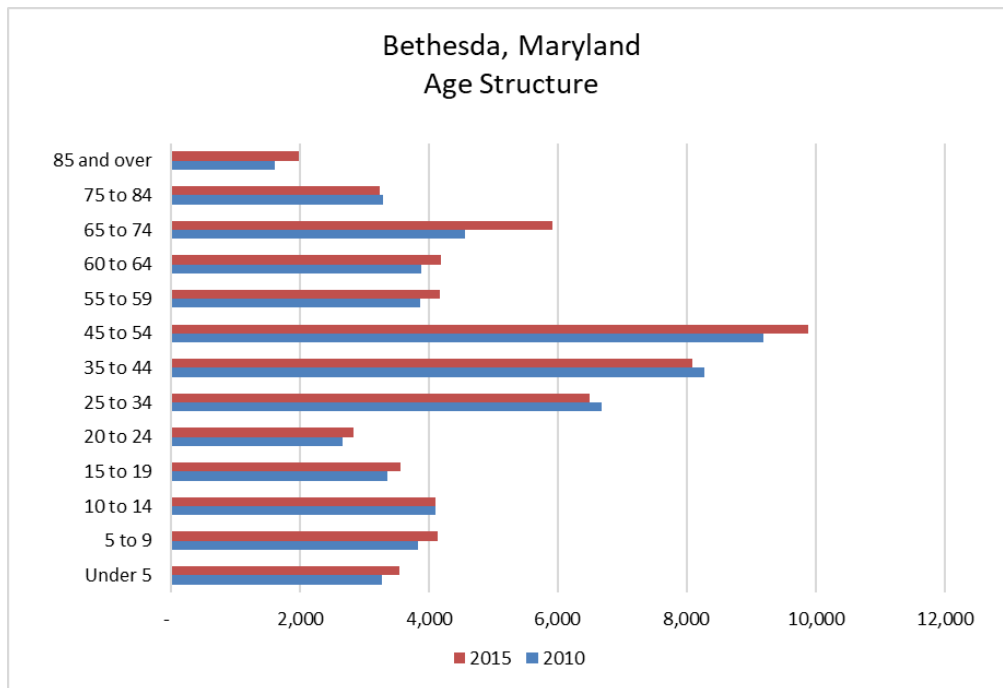


Source: U.S. Census Bureau, 2017.

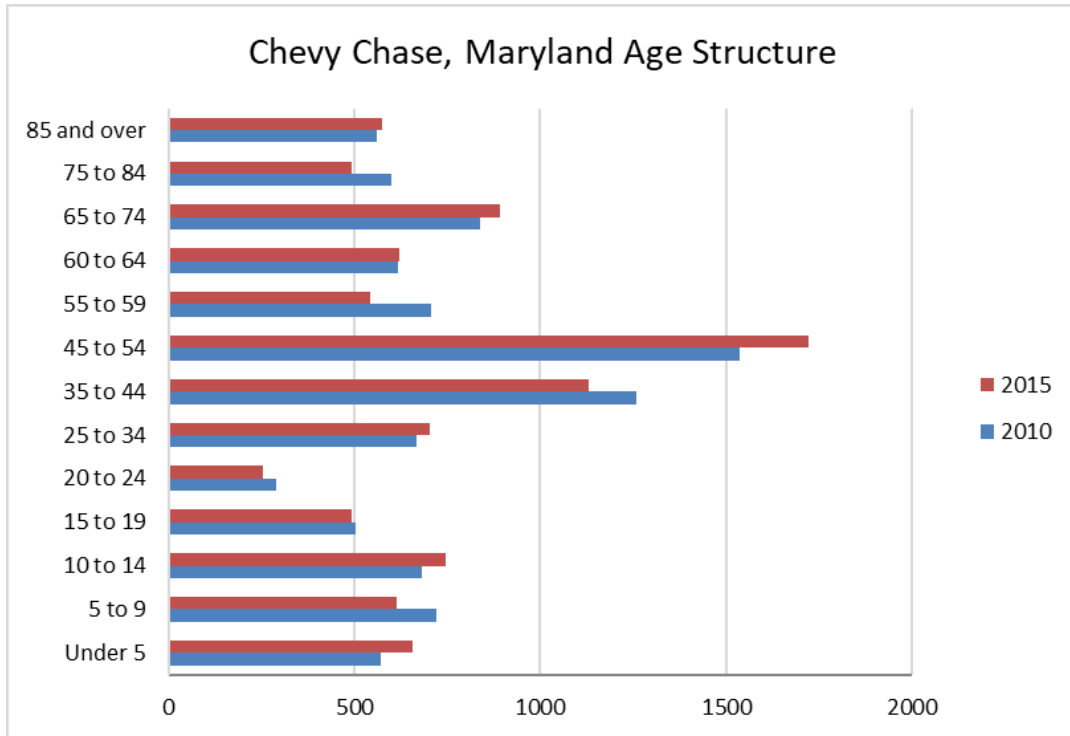


Source: U.S. Census Bureau, 2017.

- 6. The age structure of the current population in Bethesda and Chevy Chase suggests that there will be fewer child-bearing age residents in the future.



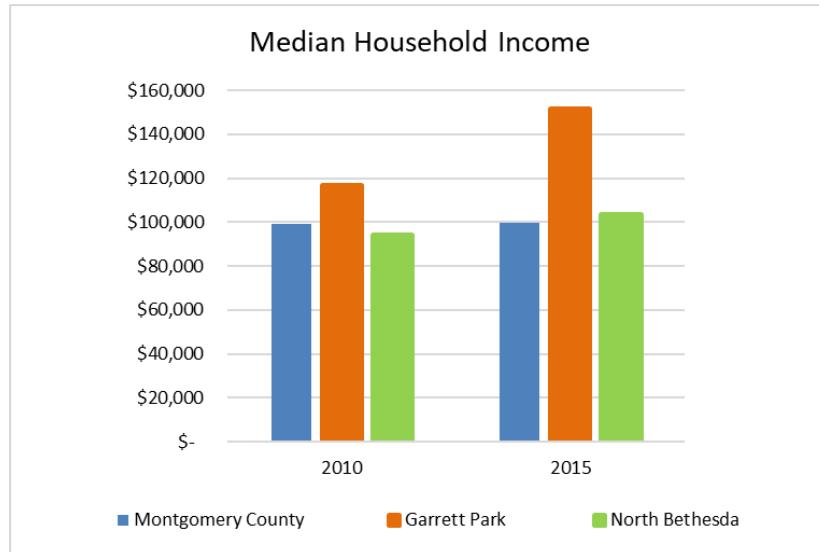
Source: U.S. Census Bureau, 2017.



Source: U.S. Census Bureau, 2017.

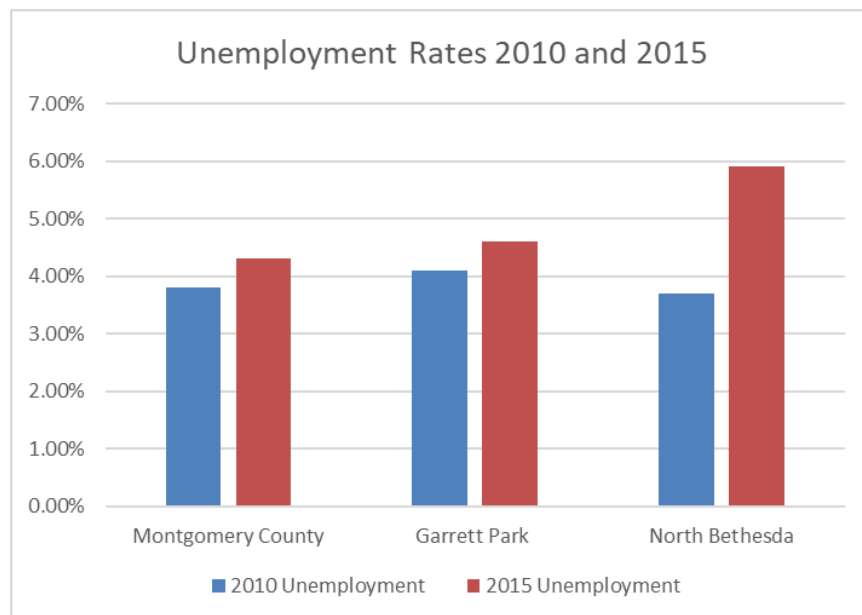
## APPENDIX 3: WALTER JOHNSON DATA AND CHARTS

1. Median household income in Garrett Park and North Bethesda is high but more toward the middle of the socio-economic spectrum.



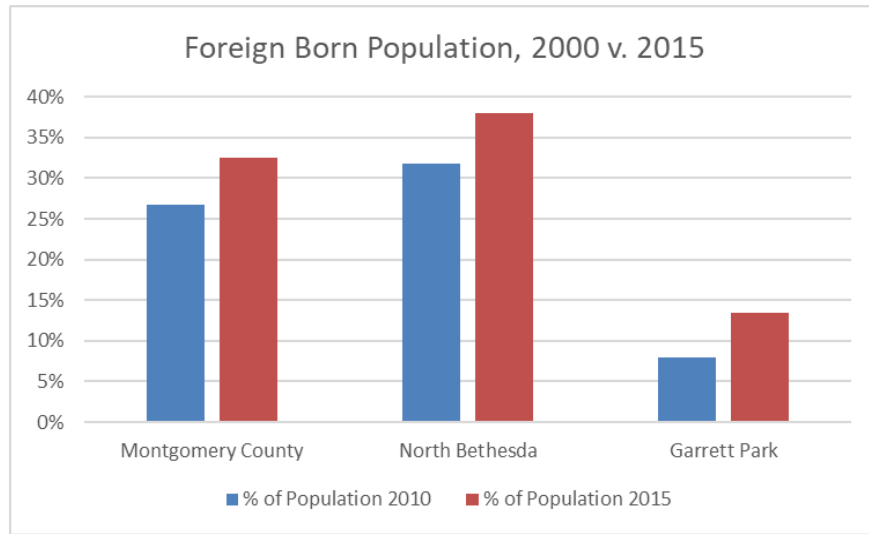
Source: U.S. Census Bureau, 2017.

2. Unemployment has been going up in both Garrett Park and North Bethesda.



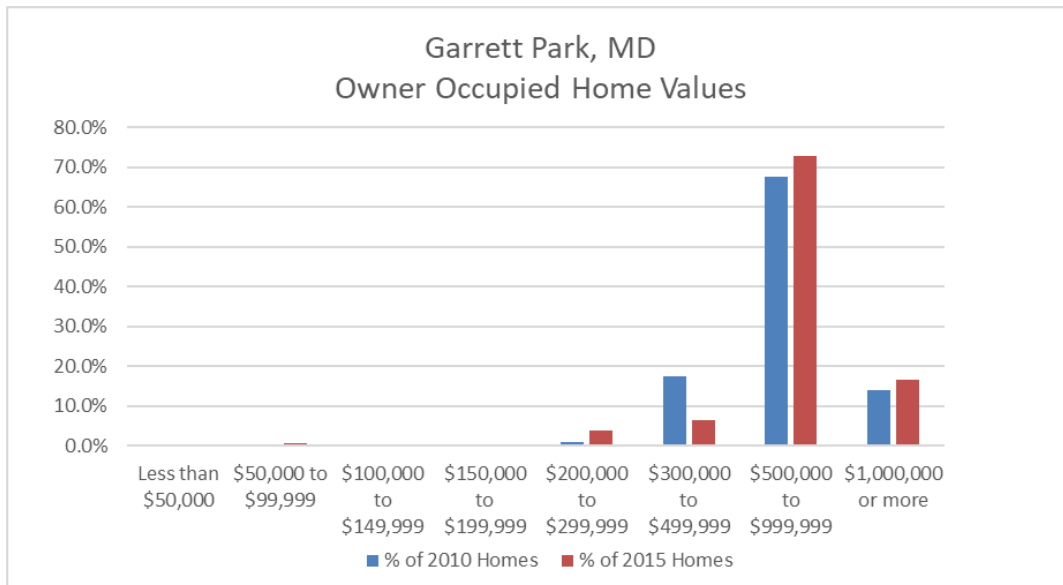
Source: U.S. Census Bureau, 2017.

3. The percentage of the Garrett Park and the North Bethesda populations that are foreign born is increasing.



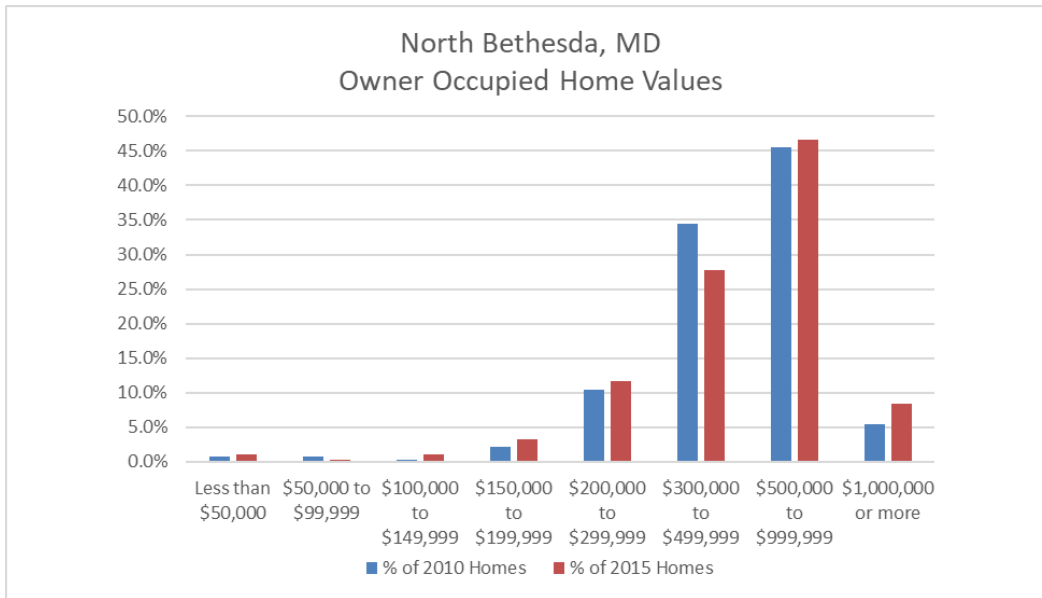
Source: U.S. Census Bureau, 2017.

4. Seventy percent of owner occupied homes in Garrett Park are valued between \$500,000 and \$999,999.



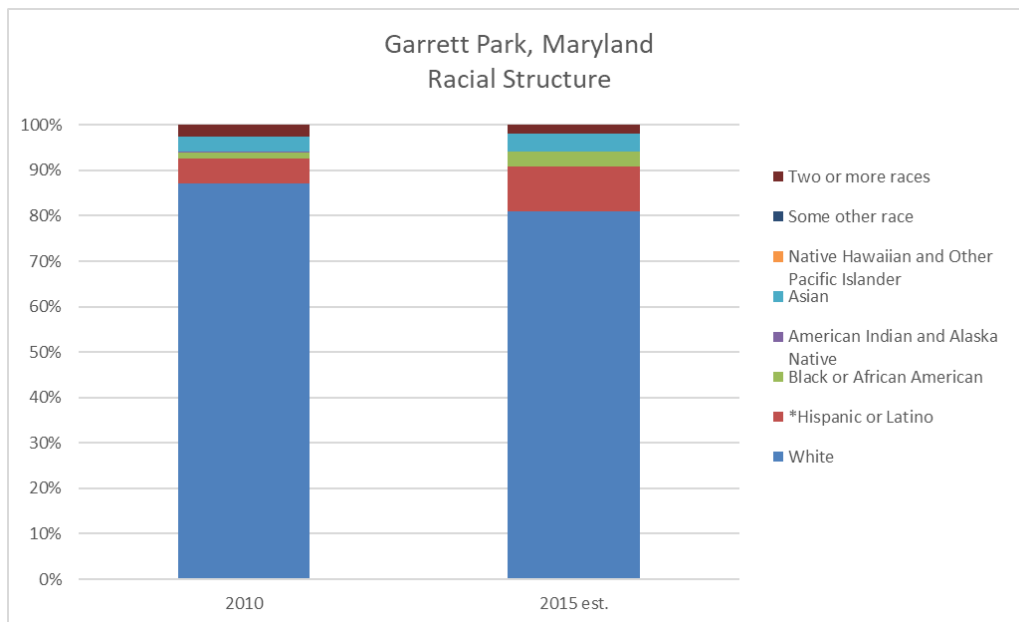
Source: U.S. Census Bureau, 2017.

5. Thirty-five percent of owner occupied homes in North Bethesda are valued between \$300,000 and \$499,999, while 45% are between \$500,000 and \$999,999.



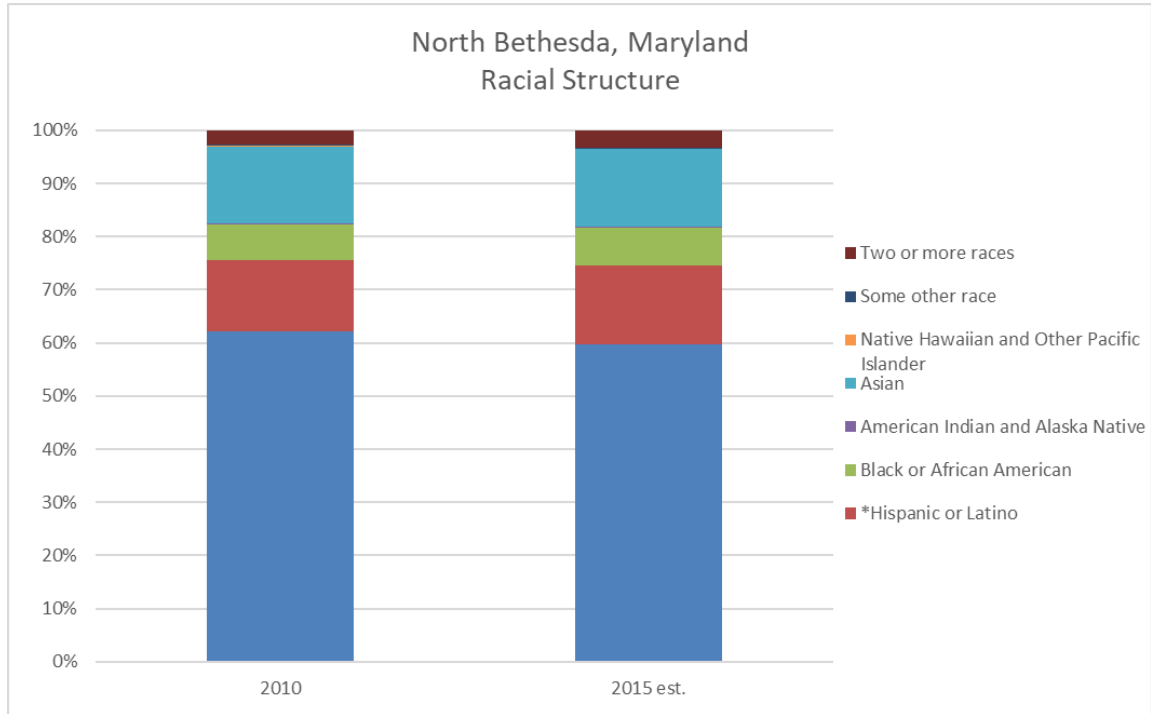
Source: U.S. Census Bureau, 2017.

6. Garrett Park and North Bethesda are becoming more racially diverse, but both are still predominately white.



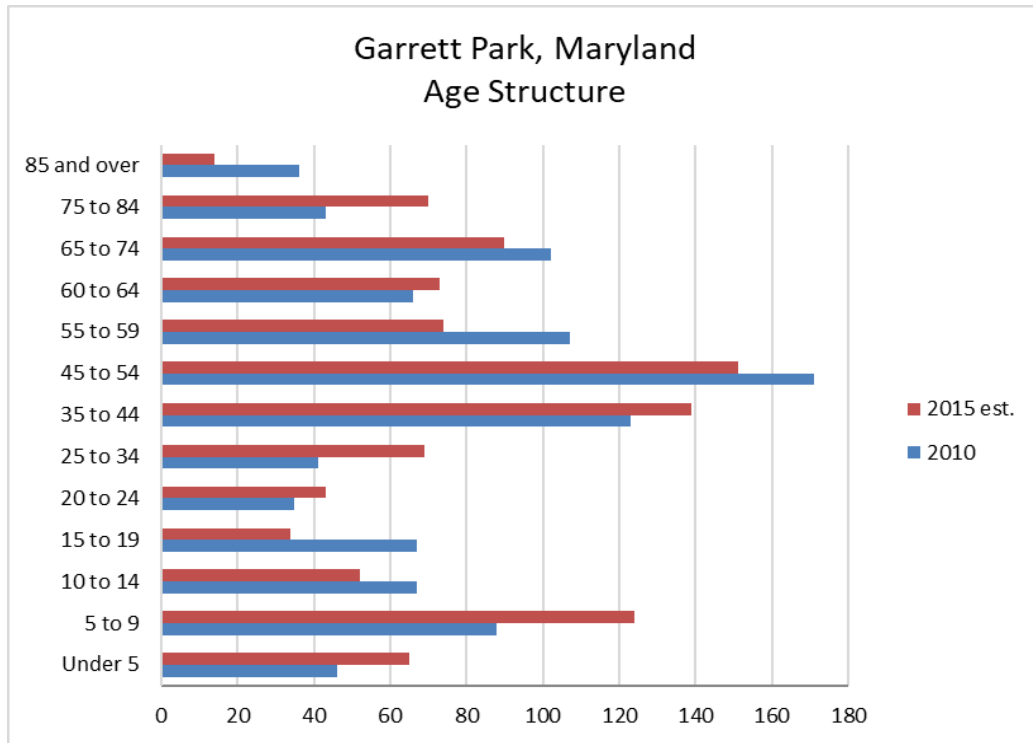
Source: U.S. Census Bureau, 2017.



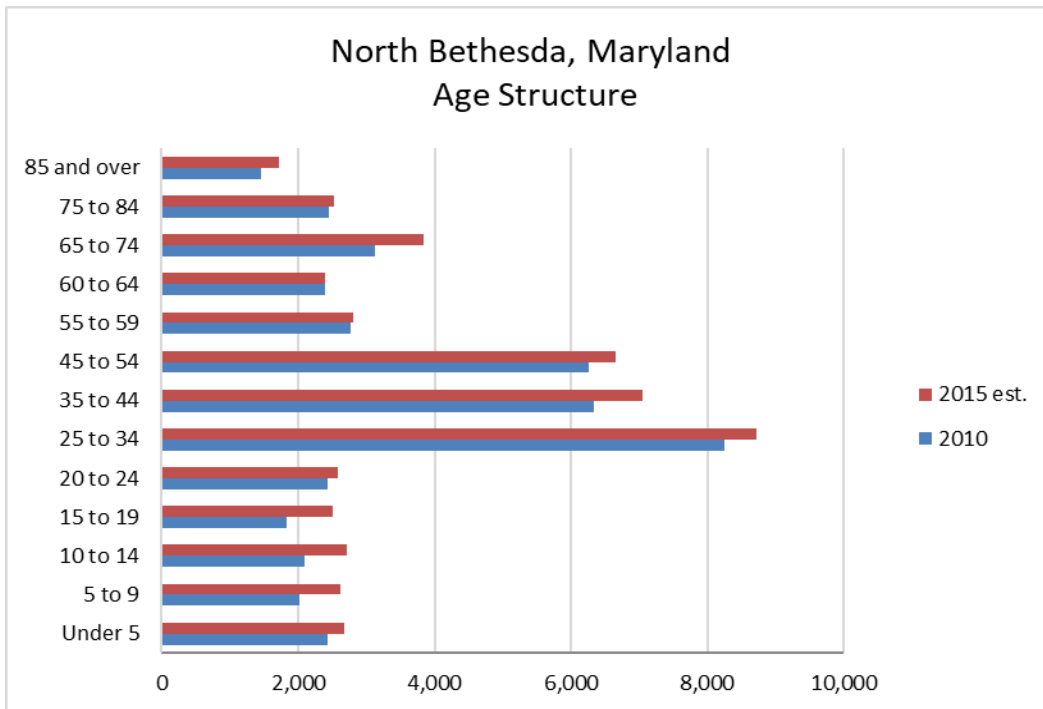


Source: U.S. Census Bureau, 2017.

7. Garrett Park’s age structure suggests there will be fewer child-bearing age residents in the future, while North Bethesda’s age structure indicates there will be more child-bearing age residents in the future.



Source: U.S. Census Bureau, 2017.



Source: U.S. Census Bureau, 2017.

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## APPENDIX 4: CONSIDERATIONS FOR ADAPTIVE REUSE OF NON-SCHOOL FACILITIES AND LEASE SPACE FACILITY PLANNING OPTIONS

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Montgomery County Public Schools  
Adaptive Reuse Evaluation Framework

Prepared by Perkins Eastman<sup>7</sup>

Adaptive reuse of commercial buildings is an increasingly well-accepted strategy for accommodating a variety of educational program space. Among other advantages, the conversion of under-performing properties originally constructed for office or retail use, takes advantage of the embodied investments in utilities and transportation infrastructure already in place to serve those facilities. This often allows schools to occupy the space more quickly and respond to demographic surges more flexibly.

Increasing public acceptance of this strategy may reflect a growing recognition of the success of unconventional pedagogies, and a corresponding comfort with educational innovation. Nonetheless, the suitability of this approach in a specific circumstance depends on a number of factors, including location, site configuration, building conditions, and intended use.

Irrespective of program, specific factors to consider when evaluating a commercial property include the following:

- ◆ Security: how much control the school will have over visitors to the property
- ◆ Security: common use of vertical circulation, particularly during change of class periods
- ◆ Safety: arrival and departure from the site – once students are off campus
- ◆ Convenience: stacking and loading for buses and cars relative to other property tenants.
- ◆ Convenience: intensity of loading (particularly for food service) may be greater for a school
- ◆ Convenience: staff access to parking and visitor parking proximity to entrance
- ◆ Flexibility: structural modifications or expansions to suit program uses or population surges
- ◆ Flexibility: interior column spacing allows unobstructed sightlines for instructional spaces
- ◆ Code requirements: Education (E) uses have different requirements than commercial (B-Business, or M-Mercantile) uses and the differences can have significant impact on the adaptability of a structure:
  - Type IA (non-combustible) construction, allows almost unlimited occupancy. However, any lesser construction type will limit the number of stories and floor area that can be occupied for educational uses. Four-story or lower buildings are more adaptable.

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<sup>7</sup> Perkins Eastman is a global architecture firm with 1,000 employees working out of 15 interdisciplinary offices around the world, including 8 in the United States. MGT engaged Perkins Eastman to provide a more in-depth perspective of adaptive reuse and space leasing considerations for PK-12 schools. For more information about Perkins Eastman, visit [www.perkinseastman.com](http://www.perkinseastman.com).

- The number of users on any floor is assumed to be higher in an E use than a B use. As a result, egress capacity of stairs and corridors needs to be higher, and the number of bathroom fixtures is typically greater.
- Mechanical systems may need to accommodate more air changes per hour (ACH) for an E use, which may exceed the capacity of existing (particularly longer serving) systems.
- ♦ Wellness: every learning space should have access to daylight and views, which can best be accomplished when the depth of the floor plate is around 36-42 feet (28-30 feet room, plus 8-12 feet corridor to each side of the core.) High-bay retail spaces with abundant skylights are a suitable alternative.
- ♦ Social Wellness: Every school should provide student gathering and hang-out spaces, both indoor and outdoor, where essential socialization and peer-to-peer learning can flourish.

The best adaptations of commercial space to schools will not only accommodate the program, but will provide a complete student experience – from a feeling of safety to a feeling of belonging. Students shouldn't view the unique character of adapted buildings as an obstacle, but as an inviting, intriguing and challenging environment.