



ACPS PK-8

Alternative Analysis

Vision: empowering all students to thrive in a diverse and ever-changing world

Mission: ensure success by inspiring students and addressing barriers to learning

Core Values:

WELCOMING

EQUITY-FOCUSED

EMPOWERING

INNOVATIVE

RESULTS-DRIVEN

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Overview

In this report, seven alternative models were analyzed to support ACPS middle school students.

Each model is structured in the following way:

- Overview
- Key Findings
- Human Impact
- Programmatic Impact
- Facilities, Operational, & Capital Impact
- Implementation Timeline

Executive Summary

The purpose of this summary is to provide analysis that supports the comparison of models across common variables in human, programmatic, facilities, operational, and capital impact. Each analysis is further explored in more detail in the *Key Findings* section of each model. Further in-depth analysis and narrative can be found within the *Human, Programmatic, Facilities, operational, and capital Impact* sections of each model.

Overview of 7 models

Model 1: Patrick Henry & Jefferson-Houston remain K-8s, with improvements

Model 2: Patrick Henry & Jefferson-Houston become K-5s; 6-8 students go to George Washington or Francis C. Hammond

Model 3: Patrick Henry & Jefferson-Houston become K-5s; a new middle school is opened at 1703 Beauregard St.

Model 4: Patrick Henry & Jefferson-Houston become middle schools; their K-5 students go to existing K-5 schools

Model 5: One K-8 becomes a 6-8 middle school, the other a K-5 elementary school

Model 6: Patrick Henry & Jefferson-Houston remain K-8s, an existing ACPS elementary schools becomes a K-8, 1703 Beauregard St. is a new middle school

Model 7: Patrick Henry & Jefferson-Houston remain K-8s, an existing ACPS elementary school becomes a K-8, a new middle school is constructed, and 1703 Beauregard St. becomes available to expand K-5 capacity

High-level Comparison of the 7 Models

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Human Impact							
Are enough student seats available?	No	No	No	No	No	Yes	Yes
Is additional teaching staff needed?	No	No	No	No	No	Yes	Yes
Are family needs addressed?	Somewhat	Somewhat	Somewhat	Somewhat	Somewhat	Yes	Yes
Programmatic Impact							
Aligned to ACPS priorities?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operational, Facilities, & Capital Impact							
Is additional operational staff needed?	No	No	Yes	Possibly	Possibly	Yes	Yes
Additional capital costs to remodel?	No	Possibly	Yes	Possibly	Possibly	Yes	Yes
Is new construction needed?	No	No	Yes	No	No	Yes	Yes

Detailed Comparison of the 7 Models

How many students are currently enrolled in ACPS as compared to 2027 projections?

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Elementary (PK-5)	8,295	8,148	**-147**
Middle (6-8)	3,247	3,520	**+273**
Total	**11,542**	**11,668**	**+126**

Source: December 6, 2023 CIP Budget Presentation to the Board

How many seats would be available in each model?

Feasibility was assessed by comparing projected 2027 enrollment to the available student seats. This assumes maximal capacity: all seats are occupied every class period.

	# of Seats vs. Projected 2027 Enrollment		Feasibility
	PK-5	6-8	
Model 1	+248 extra seats PK-5	-531 seats 6-8	
Model 2	+691 extra seats PK-5	-974 seats 6-8	
Model 3	+691 extra seats PK-5	-549 seats 6-8	
Model 4	-897 seats PK-5	+614 extra seats 6-8	
Model 5	-163 seats PK-5	-338 seats 6-8	
Model 6	+48 extra seats PK-5	+469 extra seats 6-8	
Model 7	+473 extra seats PK-5	+669 extra seats 6-8	

**Detailed explanations are included in each model later in this report*

How would staffing be impacted by each model based on the priorities observed during focus groups and surveys with ACPS teachers and leaders?

	1	2	3	4	5	6	7
Maximizes certified and noncertified staff resources							
Opportunity to engage in aligned middle school professional learning							
Opportunity for teachers to work in a grade-level team							
Opportunity for a common middle school schedule							

**Detailed explanations are included in each model later in this report*

How many additional full-time equivalency (FTE) would be needed based on 2027 projected enrollment?

	Current FTE	Model FTE	# New Positions
Model 1	1,228.01	1,227.66	**-0.35**
Model 2	1,228.01	1,209.29	**-18.72**
Model 3	1,228.01	1,209.29	**-18.72**
Model 4	1,228.01	1,209.35	**-18.67**
Model 5	1,228.01	1,209.33	**-18.69**
Model 6	1,228.01	1,243.05	**15.04**
Model 7	1,228.01	1,243.05	**15.04**

**Detailed explanations are included in each model later in this report*

What would the approximate annual salary cost for staff?

An FTE represents a variety of positions at a range of salaries.

	Current Salaries	Model 2027 Projected Salaries	% Change in Salary
Model 1	$104,857,279.05	$105,098,910.25	**0.23%**
Model 2	$104,857,279.05	$103,628,811.25	**-1.17%**
Model 3	$104,857,279.05	$103,628,811.25	**-1.17%**
Model 4	$104,857,279.05	$98,786,207.89	**-5.79%**
Model 5	$104,857,279.05	$103,643,724.22	**-1.16%**
Model 6	$104,857,279.05	$106,365,601.78	**1.44%**
Model 7	$104,857,279.05	$106,365,601.78	**1.44%**

**Detailed explanations are included in each model later in this report*

***Salaries do not include benefits*

How would families be impacted by each model based on the priorities observed during focus groups and surveys?

	1	2	3	4	5	6	7
Increases home proximity to school in a feeder pattern model							
School choices for current K-8 families							
Single school site for current K-8 families							

**Detailed explanations are included in each model later in this report*

How would programs and student experience be impacted by each model based on the priorities observed during focus groups and surveys with ACPS leaders and teachers?

	1	2	3	4	5	6	7
Consistent K-5 and 6-8 configuration in all feeder patterns							
Aligns to the high school academy model							
Supports implementation of a Profile of an ACPS Learner							
Parity of middle school offerings across the district							
Opportunity for small learning communities							
Middle school teams structure							
Opportunity for learner-centered programming for all middle schoolers							
Consistent middle school schedule across the district							
Alleviate elementary and middle school projected overutilization							
Opportunities for K-8 multi-age activities							
Opportunity to preserve the IB Middle Years Program							

**Detailed explanations are included in each model later in this report*

How would recurring facilities, operations, and capital costs be impacted by each model?

	1	2	3	4	5	6	7
Operating Staff*	Minimal/ no change	Minimal/ no change Additional security at FH and GW	$473,900 Security officers	Minimal/ no change Security officer	Minimal/ no change	$749,410	$1,243,043
Routine & Preventative Maintenance	Minimal/ no change	Minimal/ no change	$165,000	Minimal/ no change	Minimal/ no change	$317,242	$261,032
Utility Costs	Minimal/ no change	Minimal/ no change	$176,000	Minimal/ no change	Minimal/ no change	$553,874	$488,540

**Operating staff includes custodial, cafeteria, and security staff*

How would one-time facilities, operations, and capital costs be impacted by each model?

	1	2	3	4	5	6	7
Capital Costs	Program Needs Dependent	$250,000 to $500,000	$10,000,000	$250,000 to $500,000	$250,000 to $500,000	$26,102,042	$86,264,900
Security Costs	Minimal/ no change	Minimal/ no change	Fencing, single entry point	Minimal/ no change	Office, fencing, entry vestibule	Included in construction	Included in construction
Technology	Minimal/ no change	Minimal/ no change	$340,500	Minimal/ no change	Minimal/ no change	Included in construction costs	Included in construction costs

Methodology

The Learner-Centered Collaborative, in partnership with Left Bank Consulting, Eric Hall & Associates, and Socol Moran Partners took a multi-prong approach to analyze alternatives to the K-8 model in ACPS.

ACPS Student, Staff, and Family Input

The team conducted a comprehensive community input process by triangulating data collected through multiple methods, including surveys, focus groups, forums, and classroom visits between May and June of 2024.

The student and staff surveys were launched on June 7th and included responses from 1,437 students across various grades—current ACPS 6th to 8th graders, Jefferson-Houston and Patrick Henry 4th and 5th graders, and Minnie Howard 9th graders. Additionally, 167 ACPS staff members and 297 ACPS guardians of students at Patrick Henry and Jefferson-Houston as well as guardians of current or recent middle school students at George Washington Middle School and Francis C. Hammond Middle School participated in the survey. Survey results can be found here.

The team conducted a series of focus groups to gather qualitative data, holding sessions in person on May 21-22 and virtually on May 30 and June 3, 2024. These focus groups included diverse participant groups: 60 students, 37 teachers, over 50 family members, and 7 school leadership members. Additionally, the team visited classrooms during the May 21-22 in-person sessions to gain a better sense of the learning experience across the four buildings that offer 6th-8th grade in ACPS. This combination of in-person and virtual formats, along with direct classroom observations, allowed for broad and flexible participation, ensuring a wide range of perspectives and experiences were captured, enriching the overall understanding of the educational environment and stakeholder needs.

The team also explored the ACPS Equity Climate Survey. Participants included students, teachers, and parents from the Patrick Henry campus (n=342) and from the Jefferson-Houston campus (n=260). While the results were studied over the course of four years from 2020-2021 to 2023-2024, the n counts for each school represent the most recent year.

ACPS Human Impact

The capacity analysis was based on the recommended capacity calculations from the Guidelines for School Facilities in Virginia's Public Schools, published by the Virginia Department of Education, Office of Support Services, dated December 15, 2020 (Guidelines). Additionally, at the middle school level, ACPS operates with a grade-level, multi-team structure. In this environment, interdisciplinary teams—comprising teachers from English, Social Studies, Math, and Science—collectively educate the same group of students, typically numbering between 100 and 110. Therefore, the room count, room use, and capacity is considered as it relates to this education model.

We need to qualify the findings and data analysis in this report are based on the available data resources provided by ACPS to date. The timeline was extended based on when the team received the data, some of which is still pending.

For the purposes of analysis, the consultants used the following capacity definitions:

Maximal capacity *is equal to the number of students a school could support at any time if all seats were occupied for each period every day.*

Functional capacity *is equal to the percentage of utilization of school space by the total number of students who can effectively function in that space for the specific age group served by the school. The industry standard for school space utilization is typically 90% for elementary schools and 80-85% for middle and high schools of the maximum capacity. ACPS has set an internal ideal utilization standard of 90-110% of maximum capacity to assess whether schools are below or above an ideal utilization of school space, regardless of school level.*

For the purposes of this report, the maximal capacity of Patrick Henry and Jefferson-Houston is used as the target enrollment to alleviate overutilization at George Washington and Francis C. Hammond, both of which exceeded the targeted 600-900 student middle school capacity recommended by the VDOE. Both Patrick Henry and Jefferson-Houston maximal and functional capacities are within that 600-900 student range. We prioritized reducing student enrollment closer to functional capacity in George Washington and Francis C. Hammond.

Districts (often by Board policy) use maximum and functional capacity percentages in consideration of solutions to overutilization in schools. School size research and the Virginia Department of Education both recommend a maximum capacity of ~900 students in a middle school. In particular, recent research by Alghamdi and Kawai, suggests that "thresholds were 801 students for school size and 27 students for class size .... the estimates for school size agree with earlier suggestions using quadratic models suggesting that between 600 and 900 students is the optimal school size (Lee and Smith, 1997) and also the work of Andrews et al. (2002) who reported dysfunctional schools when exceeding 1,000 students."

Functional and maximal capacity are used throughout this report to provide context for assessment of each model and recommendations to 1) address overutilization in schools and 2) implement coherent, learner-centered programs consistent with the Division's Vision, Mission, Strategic Goals, and Portrait of a Learner outcomes. School division staff develop multiple data sets over the course of a school year relevant to information about enrollment, class size, budget, etc. In this report, the two sources of consistent data about maximal capacity, utilization of student "seats", and enrollment are taken from from two sources:

In the calculation of human implications, the team received a variety of enrollment, capacity, and staffing inputs with different timestamps. For consistency, the following sources of truth were used in all calculations:

- Enrollment: Sept 30, 2023 school quality profile website
- Capacity: Dec 6, 2023 ACPS presentation to the board except for model 6
    - Capacity
        - In this report, functional capacity has been used to communicate the number of "students" who can comfortably learn in different environments in available seats or space.
        - Maximal or 100% utilization of capacity is used to communicate that every seat and space is being used every period of the school day.
        - When a school is utilized at 100% of capacity, every room has a class in it every period, every auxiliary space such as a gym, art room, or cafeteria is used all day, and even playing fields and playgrounds are used every period of the day.
        - The impact of enrollment to or beyond maximal capacity can be moderated if flex spaces have been built into a school design and/or

temporary space such as mobile classrooms have been made available.
    - ACPS defines 90-110% utilization of maximal capacity as ideal
    - The Industry-standard norm: 85-90% utilization of maximal capacity as functional.
- Projected enrollment
    - Current enrollment per school was provided by ACPS
    - Projected enrollments were provided for elementary- and middle school-levels, not per school
    - Projected enrollments per school were calculated by identifying the % change between current enrollment and projected 2027 enrollment.

	Current Enrollment	Projected 2027 Enrollment	% change
Elementary	8,295	8,148	98.23%
Middle	3,247	3,520	108.41%
K-8/Total	11,542	11,668	101.09%

The corresponding percent change was then applied to each school's current enrollment based on the future structure - elementary, middle, or K-8 - in each model to determine projected enrollment.

- Staffing FTE and Estimated Salary
    - Current FTE and salary per school was provided by ACPS
    - Using current actual FTE and salaries, a staffing ratio and average salary per student was calculated per level: elementary, middle, and K-8. For middle school and K-8, this ratio is the averages of current FTE and salary per student at each school. For elementary, ACPS recommended Polk be used as a baseline.

	Average Staff/Student Ratio	Average Salary/Student
Elementary	0.10	$8,479.31
Middle	0.11	$9,817.29
K-8	0.12	$9,754.78

These ratios were then applied to each school's projected enrollment based on the future structure - elementary, middle, or K-8 - in each model.

Operational, Facilities, and Capital Impact

Operational Staffing Sources:

- APPA- Leadership in Educational Facilities standard custodial, grounds, maintenance staffing formulas
- Council of Greater City Schools: Averages calculated from participating school districts from the following categories:
    - Custodial square feet or cleaning space per custodian
    - Nutrition Services: Meals per labor hour
    - Staffing Guidelines for On-Site Production, Pannell-Martin 1999: Nutritional Services cafeteria staffing calculations based on meals per labor hour

Utility and Work Order Average Costs were calculated using district data from Jefferson-Houston, Patrick Henry, Francis C. Hammond and George Washington, broken down into cost per square foot and cost per student, then averaged to calculate potential future costs

Capital costs for new construction were calculated using national averages verified through RS Means for Alexandria, VA and national information from Erickson Hall Construction, San Diego, California based on national average modernization (remodeling) square foot costs for educational facilities.

Undetermined Factors

Across all models, several variables were unknown either due to lack of data, conflicting data, or due to pre-requisite decisions (such as the redefinition of feeder patterns).

👩🏾‍🎓 Student Impact

- Academic achievement
    - The action research student achievement data available in this report are mixed for ACPS K-8s and 6-8 schools, which should drive deeper focus on why.
    - K-8 students reported experiencing learner-centered instructional experiences more often than ACPS students in 6-8 schools. Their experience in a 6-8 model may be less learner-centered.
- Which students would be impacted.
    - Further research and analysis will be required as part of the upcoming policy-determined needs assessment relevant to school attendance zones and projected capacity issues.
- The demographic mix of a new middle school
    - Without additional information about the elementary schools that would be in a feeder pattern, demographic makeup of schools in this report will not be available until the next phase of an upcoming Board-directed redistricting process is complete
- Transportation distance to/from school

👩🏽‍🏫 Staffing Impact

- Impacted Staff
    - The impact on staff in each school model is undetermined because the number of elementary and middle school staff who will be needed is dependent upon variables such as student enrollment, staff attrition, staff licensure, and SOQ and ACPS staff ratio requirements.
    - If ACPS defines school staffing ratios (non certified: office staff, teaching assistants, security staff, cafeteria staff) and student-teacher ratios, and positions that can be shared across schools, this variable can be more precisely predicted.
    - Special Education and EL teacher impact cannot be determined until revised school attendance zones are defined.
- Title I impact
    - If certificated staff reassignments occur, fully licensed staff will need to be assigned to Title I schools to ensure compliance with Federal Rules and Regulations for utilizing the funding. It is not yet possible to predict which staff would be affected.
    - Title I funding could be reduced or increased depending on changes in demographics by receiving additional students due to attendance zone changes. It is not possible to estimate those impacts until after new feeder patterns are established.

👪 Family Impact

- The specific families that will be impacted, which prevents analysis on:
    - Impact of city transportation options for families without vehicles to participate in school activities
    - Impact on home proximity to school
    - Impact on parent engagement due to travel time/distance
- However, an analysis of each model has determined that while specific families cannot be identified, some families will be impacted by reassignment of students to different schools than the one they attend. This has both benefit and cost implications for the degree to which families can participate in in-school and after-school activities and events, transportation travel times, and proximity to school. The selection of a specific model also can impact family perception of relationships, experiences, and environments available to children as a result of school size, class size, and choices of learner-centered opportunities.
- Staffing costs do not estimate increases in salary.

Operational, Facilities, and Capital Impact

- Capital costs for transforming Patrick Henry and Jefferson-Houston across Models 1-5
    - These costs depend on the future use of the current middle school classrooms, which include science labs, food labs, CTE spaces, performing arts areas, and world language resources. These spaces may or may not require repurposing based on the planned future programming.
    - Additional information, including costs for contract services, site blueprints, etc, was requested but not provided, which limited the analysis.
- Impact on transportation costs cannot be calculated until new feeder patterns are defined.

Model 1

Model 1 provides an opportunity for reimagining the K-8 program to create a K-8 student-centered learning model that is unique and not tied to the traditional K-5 or 6-8 models in the division. A thorough review and analysis of current student achievement data, school culture and climate, family engagement, and professional support structures is essential to building a comprehensive action plan to innovate the K-8 school model with distinguishing features that makes the K-8 model a different choice for families across the Alexandria City Public Schools communities. Key to this and other models is development of learner-centered experiences, relationships, and environments that support equity-driven programmatic decisions consistent with the Vision, Mission, and Strategic Goals of the division.

Model 1 Key Findings

How many seats would be available based on both maximal and functional capacity for this model?

Projected 2027 Enrollment	Capacity	Model Impact
8,148 *All ACPS PK-5*	8,396 seats *All ACPS PK-5 maximal*	**+248 extra seats** ***PK-5 maximal***
	7,556 seats *All ACPS PK-5 functional*	**-592 seats** ***PK-5 functional***
3,520 *All ACPS 6-8*	2,989 seats *6-8 maximal*	**-531 seats** ***6-8 maximal***
	2,451 seats *6-8 functional*	**-979 seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.

How many additional full-time equivalency (FTES) would be needed?

Current FTE	Projected 2027 FTE	Gain/Loss
1,228.01	1,227.66	**-0.35**

What is the approximate annual salary cost for staff?

Current Salary	Projected 2027 Salary	Gain/Loss
$104,857,279.05	$105,098,910.25	**$241,631.20**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes there is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	None
Facilities Costs	None
Capital Costs	None

Model 1 Overview

Patrick Henry Background

Patrick Henry K-8 is located in a diverse community consisting of a mix of private houses, medium-rise, and low-rise apartments with limited commercial zones. The area, surrounded by parks, away from major highways and railroad tracks, and near higher-end grocery shopping and the city's new Central Library. Patrick Henry K-8 School is located in the west end of the city of Alexandria, seven miles from the nation's capital. Patrick Henry is on a fifteen-acre site in a valley that was once woodlands. A new state-of-the-art school facility opened in January 2019 while the school simultaneously transitioned from an elementary program to a K-8 program. The Patrick Henry Recreation Center adjoins the school. The new Patrick Henry K-8 School replaces the former Patrick Henry Elementary School that opened in September of 1953. The school serves as a community hub for activities and sporting events.

According to the VDOE School Quality Profile, this K-8 is a Title I school that serves a high-needs student population, with economically disadvantaged students making up 85.1% of the student body and 56.7% being English Language Learners. The school's demographic profile is diverse, with 33.4% Black, 26.7% Hispanic, 11.7% Asian/Native Hawaiian (the highest percentage in schools with the middle grades), and 20.1% White students. Patrick Henry also appears to lose students in the transition to the middle grades. In 2023-2024 105 students attended fifth grade there, but sixth grade only enrolled 78.

Parents in the Patrick Henry attendance zone can choose the full 9 year Patrick Henry experience or shift to Francis C. Hammond Middle School after 5th grade.

Jefferson-Houston Background

The Jefferson-Houston K-8 school is located in a historically economically disadvantaged neighborhood with small homes and sub-median cost, low-rise apartments. However, the attendance area includes the heart of Old Town Alexandria, and the school itself is adjacent to many of the city's luxury hotels. This offers the opportunity to attract more middle-grade learners and alter the demographic mix that is currently 81.4% economically disadvantaged. That proximity does create gentrification pressures in the community, and it is important to note that early gentrifiers rarely have children in their households. Old Town parents may often choose non-public education options and

anecdotally seem to prefer Mount Vernon Community School for their K-5 children. This is despite Jefferson-Houston being within a mile of the center of Old Town, while Mount Vernon is almost 2.5 miles away. Parents of middle school-aged students in the attendance zone can choose the full nine-year experience or transition after fifth grade to George Washington Middle School.

According to the VDOE School Quality Profile, Jefferson-Housto, is 48.1% African-American, the highest percentage of Black students of any school in the division. It has the lowest percentage of Hispanic/Latino students (19.6%) of the schools serving the middle grades. The Asian/Native Hawaiian population comprimes 2.5%, with 3.6% of students reported as multiple races. 24.7% of the student body is white.

Note: figures are for the entire school, the middle grades are not separated in published statistics.

Jefferson-Houston K-8 serves a population that is 81.4% economically disadvantaged. The percentage of English Language Learners at Jefferson-Houston (22%) is the smallest of any of the schools with grades 6-8, but the percentage of Special Needs learners is the highest at 20.8%, triple the percentage at the division's other K-8 school, Patrick Henry, K-8

Model 1 Human Impact

👩🏾‍🎓 Student Impact

Patrick Henry is over its maximal capacity of 854 having served over 1,000 students in 2023-24. Jefferson-Houston, with a population of 591 K-8 students, has room to alleviate some of the overutilization of other middle-grade environments. Its capacity of 734 provides room for growth, with room for over 100 additional students in grades 6-8. This excess capacity is created by an apparent loss of students between the fifth and sixth grades. For example, in 2022-2023 there were 106 fifth-graders and just 90 sixth-graders in 2023-24.

Model 1 Current Capacity and Enrollment Table 1

	Maximal Capacity	Current Enrollment
Patrick Henry K-8	854 *225 6-8*	1,058 *37 PK, 788 K-5, 233 6-8*
Jefferson-Houston K-8	734 MS *218 6-8*	591 *63 PK, 367 ES, 161 MS*
George Washington Middle	1,150	1,360
Francis C. Hammond Middle	1,396	1,511

Red denotes cases when maximal capacity is exceeded

Source: ACPS Class Rosters, SQP September 30, 2023 enrollment data

In this model, no movement of students, staff, or families would be required, although the district may still pursue measures to address overutilization. The following table explores the difference between current and projected enrollment in 2027.

Model 1 Current and Projected Enrollment Table 2

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry K-8	1,021	1,032	**11**
Jefferson-Houston K-8	528	534	**6**
George Washington Middle	1,360	1,474	**114**
Francis Hammond Middle	1,511	1,638	**127**
ACPS K-5 Elementary Schools	7,122	6,990	**-120**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

👩🏻‍🏫 Staffing Impact

In this model, no movement of staff would be required. The following table highlights the anticipated FTE per school based on projected enrollment in 2027.

Model 1 Current and Projected Staffing Table 3

	Current FTE	Projected 2027 FTE*	Gain/Loss
Patrick Henry K-8	93.48	118.92	**25.45**
Jefferson-Houston K-8	85.00	61.50	**-23.50**
George Washington Middle	149.00	156.05	**7.05**
Francis Hammond Middle	154.88	173.38	**18.50**
ACPS K-5 Elementary Schools	745.66	717.82	**-27.85**
Total	**1,228.01**	**1,227.66**	**-0.35**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

While there is a slight reduction in FTE, the total number of middle school teachers rises. Middle school teachers have a higher salary/pupil ratio than elementary teachers. This results in a small increase in projected salaries.

Model 1 Current and Projected Salary Costs Table 4

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry K-8	7,923,315.00	$10,068,354.06	**$2,145,039.06**
Jefferson-Houston K-8	7,186,836.00	$5,206,749.21	**-$1,980,086.79**
George Washington Middle	13,692,357.00	$14,474,080.09	**$781,723.09**
Francis Hammond Middle	14,493,087.00	$16,081,128.68	**$1,588,041.68**
ACPS K-5 Elementary Schools	61,561,684.05	$59,268,598.22	**-$2,293,085.84**
Total	**$104,857,279.05**	**$105,098,910.25**	**$241,631.20**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

👨‍👩‍👧‍👦 Family Impact

In this model, no movement of families would be required.

Model 1 Programmatic Impact

Middle School Curriculum and Instructional Programming

Core Curricula Findings

The core curriculum for 6th, 7th, and 8th grade appears to be consistent for all students enrolled in those grade levels, regardless of configuration. However, there is a potential impact on student achievement and future opportunities as the result of leveling students into either honors or standard coursework (especially in schools with more significant numbers of students in demographics that are historically underserved.) This could be a source of current academic gaps in the K-8 sequence, regardless of school configuration, consistent with research on the impact on student learning when courses are leveled in middle and high school and some to many students participate in a less challenging

curriculum and instructional program. Most importantly, "tracking" students into leveled coursework in either the K-8 or 6-8 grades sets up tracking at the high school level and consigns students to coursework that may not support their pursuit of higher education and workforce opportunities.

- The complexity and vertical focus of Honors level core curriculum appears to be more consistent with effective middle school programming that engages, challenges, and interests adolescents to achieve at higher levels than the standard level curriculum.
- The focus on interdisciplinary connections is inconsistent across the published middle school curricular descriptors. For example, in standard ELA 7, the website descriptor states, "as often as possible, literature study explores and capitalizes on natural and thematic connections to other areas of study (such as Social Studies, Science, and Fine Arts) but this is the only place in the ELA standard and Honors curriculum that interdisciplinary connections are mentioned.
- While both Math 7 and Honors Math 7 are designed to prepare students for Algebra, this statement in the Honors Math 7 descriptor is not in Math 7, "study includes authentic application and deeper problem solving of the Math 7 standards of learning with the intent to prepare the learner for the more abstract concepts of algebra and geometry.

CTE, World Languages, Physical Education, and Arts Findings

Although core, arts, world languages, and CTE curricula are offered to all division students, the programs are not always taught in all schools that serve 6th, 7th, and 8th graders. Based on data from courses actually taught in each school, likely explanations of why courses are offered through the Program of Studies but not taught in every middle school grade (6-8 and K-8 schools) include:

1) Overall 6-8 enrollment at Jefferson-Houston and Patrick Henry is too low to support enough students to teach the class.
   Example: IB Spanish is taught exclusively in Jefferson-Houston and Spanish at Patrick Henry. The K-8 schools both have low 6-8 enrollments that preclude the schools from having enough students enrolled to teach the other languages taught at George Washington and Francis C. Hammond. Finding certified world language teachers to work in the K-8 schools would likely be difficult because enrollment does not warrant full time teachers.

2) Interest is too low for a course to register enough students to teach it.
Example: Speech and drama are not taught at Jefferson-Houston and Patrick Henry.

3) Lack of certified faculty to teach a specific course
Example: Teachers endorsed to teach Algebra I, Geometry, and Algebra II are in high demand across the nation. Courses offered in mathematics are often dependent upon finding certified teachers. Algebra II is offered only at George Washington.

4) Numbers of students who need intervention or special education services may decrease numbers of students who have time in their schedule for exploratory or elective courses
Example: Arts and CTE electives are not taught in some schools because of low enrollment. *Make It Your Business,* a course of high interest to students, is taught at Patrick Henry, George Washington, and Francis C. Hammond but not at Jefferson-Houston.

5) Courses for programs such as AVID or Spanish IB require that students decrease the number of choice exploratories or electives available in their daily schedules.
Example: In an eight-period block schedule, middle school students typically take the four core courses (ELA, math, Science, and History/Social Studies), physical education/health, a world language, and 2 exploratories or electives. Any division- or school-required courses or support services will typically reduce the opportunity to access CTE and Arts courses.

6) Faculty may teach certain courses because of their certifications and/or interests in offering a particular opportunity in their school.
Example: Cross-fit training and dance are offered at the two K-8 schools but not at the two comprehensive 6-8 schools.

Program and Organizational Action Findings

The strength of the K-8 schools lies in the community culture that supports strong relationships, small learning communities, and safe, welcoming environments. These are assets that should be core to the functional processes and structures of every school community. K-8 schools provide unique opportunities to create a culture of learning in which staff can pay attention to individual children and their families, craft personalized and engaging learning experiences, move all students to high levels of achievement and accomplishment, and diminish the impact of traditional transition challenges from grade to grade and across elementary and middle levels.

Model 1 Recommendations:

While the community culture created in the two K-8 schools fits the asset profile of K-8 research, the achievement of students does not represent the same strengths that K-8 research predicts.

Source: ACPS PreK-8 Model Benefits, Challenges, & Comparative Analysis

Based on the mixed achievement and school culture profile of the two K-8 schools and the overall low SOL achievement of division students against Virginia peer groups, it appears that the strengths of faculty to build a strong student relational culture has not been extended to student learning culture. Rather than demolish the K-8 configuration, the consulting team recommends that the division develop an internal action plan that specifies strategies to:

- build a strong learning vision, align internal policies, support professional learning expectations, and assure implementation of effective practices that differentiates the K-8 learner-centered model from the traditional K-5 and 6-8 schools by creating a unique integrated curriculum that is vertically aligned, making multiage opportunities central to project- and place-based learning, In this model the K-8 programming will be unique from the 6-8 comprehensive program but will align with the high school academy model.
- create a unique K-8 model that, by design, should preserve the positive community culture and create a culture of high achievement and learner-centered accomplishment within both schools.

To accomplish both programmatic and organizational innovations essential to becoming high performing K-8 schools consistent with findings in K-8 research, these focus questions should be included in creation of an internal action plan to define what makes a K-8 configuration in ACPS a unique and desired opportunity and choice for families.

1) How might a vertically aligned, interdisciplinary, theme-based K-8 curricula such as but not limited to Montessori-type programming, STEAM, Visual Performing Arts, etc. increase both students' accomplishments and achievement?
2) Is the IB program continuing to be viable as an opportunity? Why/why not?
3) What is the current research on what makes K-8s work effectively in terms of community, culture, and student achievement?

4) What is the staff's assessment of the current and desired state of community, culture, and student achievement at both K-8s?
5) How might the development of vertically aligned, multiage programs specifically differentiate the K-8 schools from K-5 and 6-8?
6) How can the development and use of a Profile of a Learner Model help staff over time to sustain alignment of curriculum, assessment, and instructional practices with desired learner experiences and achievement expectations in K-8 schools?
7) How might the addition of microschool opportunities at Beauregard St 1703 campus (or elsewhere in the city) as part of a full K-8 suite of opportunities add value to address capacity needs and even smaller community support for students?

Model 1 Facilities & Operational Impact

In this model, no facilities, operations, or capital impacts would be required.

Model 1 Implementation Timeline

Model 1 Implementation Timeline Table 5

	Year 1	Year 2	Year 3	Year 4	Year 5
Align on the 6-8 Framework: Identify the whole-learner outcomes and desired instructional model in alignment with the ACHS Academies model	■				
Create the Blueprint: Define the necessary key shifts to implement the outcomes and instructional model & associated timelines	■				
Audit policies, curriculum, resources, and structures to ensure alignment with the instructional model	■	■			
Implement the Blueprint		■	■	■	■
Offer iterative professional development cycles to teachers and leaders to support the change management process of implementing the instructional model		■	■	■	■

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Model 2

In this model, Patrick Henry K-8 and Jefferson-Houston K-8 are converted to K-5 schools. All middle grade (6-8) students go to Francis C. Hammond and George Washington Middle Schools. The model is analyzed to better understand the human, programmatic, operational, and capital impacts.

Model 2 Key Findings

How many seats would be available based on both maximal and functional capacity for this model?

	Projected 2027 Enrollment	Capacity	Model Impact
Elementary Impact	8,148 *All ACPS PK-5*	8,839 seats *All ACPS PK-5 maximal* 7,955 seats *All ACPS PK-5 functional*	**+691 extra seats** ***PK-5 maximal*** **-193 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	2,546 seats *6-8 maximal* 2,164 seats *6-8 functional*	**-974 seats** ***6-8 maximal*** **-1,356 seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.

How many additional full-time equivalency (FTES) would be needed?

Current FTE	Projected 2027 FTE	Gain/Loss
1,228.01	1,209.29	**-18.72**

What would be the approximate annual salary cost for staff?

Current Salary	Projected 2027 Salary	Gain/Loss
$104,857,279.05	$103,628,811.25	**-$1,228,467.81**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes there is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	Additional cafeteria staff at both the elementary and middle school levels. Possible additional custodial staff at the elementary level.
Facilities Costs	No change
Capital Costs	Possible: convert specialized use spaces (CTE) into general ed classrooms

Model 2 Human Impact

👩🏾‍🎓 Student Impact

Anticipated positive student impacts:

- Consistent K-5 and 6-8 configuration
    - According to Jefferson-Houston and Patrick Henry 6-8 students in focus groups and surveys, they want a more authentic middle school experience, as well as access to additional electives and sports. Shifting to a new middle school model provides both of these

Anticipated negative student impacts:

- No opportunity for small learning communities
    - Patrick Henry and Jefferson-Houston focus group insights supported educational research that K-8 schools offered a level of relationship support and the ease of transition from fifth to sixth grade that is not supported in insights from the comprehensive middle schools.
    - K-8 students, teachers, and families saw value in their small learning community, which would be hard to replicate in this model
- Fewer learner-centered experiences
    - K-8 students reported experiencing learner-centered instructional experiences more often than ACPS students in 6-8 schools. Their experience in a 6-8 model may be less learner-centered
- Decreased student satisfaction
    - K-8 students reported higher levels of overall satisfaction with their experience in ACPS than students in a 6-8 middle school. This model may lead to lower satisfaction levels.
- Increased middle school overutilization
    - Middle school enrollments would not drop below 1,000 students
    - Fails to anticipate 40% increase in 10-14 age cohort predicted by census.
    - Increases size of school for existing K-8 middle school students
- Eliminates opportunities for K-8 multi-age activities
- Eliminates K-8 choice for families

Model 2 consolidates all middle school students from the two K-8 schools into the two large middle schools, George Washington and Francis C. Hammond, both of which are

over capacity. The elementary students in the K-8 schools would be reassigned to schools in their residential attendance zone. Model 2 will impact students as all 6-8 grade students in the K-8s will move to the large comprehensive middle schools. Elementary students may remain on the former K-8 campuses if they are in grades K-5 and are in the feeder pattern for the reconfigured Patrick Henry and Jefferson-Houston Elementary Schools. The following table explores the difference between current and projected enrollment in 2027.

Model 2 Current and Projected Enrollment Table 1

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry Elementary	1,021	1,032	**11**
Jefferson-Houston Elementary	528	534	**6**
George Washington Middle	1,360	1,635	**275**
Francis Hammond Middle	1,511	1,871	**360**
Other ACPS K-5 Elementary Schools	7,122	6,596	**-526**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

In Model 2, the existing two middle schools would need to absorb approximately 400 students from Jefferson-Houston and Patrick Henry K-8 schools. Francis C. Hammond and George Washington Middle Schools are currently overcapacity, and this model would double overcapacity from ~400 to ~635 students, pushing already large middle schools well above school size recommendations from the Virginia Department of Education and as evidenced in research on the impact of school size on school climate and student achievement.

Increasing the K-5 capacity in the division by approximately ~400 seats offers ACPS the potential to somewhat limit further overutilization at the elementary level. Overutilization of schools merits attention at every level because of clear research that overutilization impacts both social-emotional wellness and academic achievement in schools (see appendix).

Implementation of Model 2 will sustain the current and projected 2027 overcapacity of George Washington and Francis C. Hammond Middle Schools, exacerbating the middle school capacity resultant overutilization problem since approximately 400 middle school students from the K-8 schools would be moved to the two comprehensive middle schools.

Converting Patrick Henry (current capacity 734) and Jefferson-Houston (current capacity 854) to K-5 schools means that 1,588 total elementary seats will be available in those schools. Of those available seats, approximately 1,188 are currently occupied by elementary students and ~400 are currently occupied by middle school students. Thus, ~400 new elementary seats would be made available in Model 2 to address elementary capacity needs. However, the elementary school capacity needs are far less of an issue than those of the middle schools per Alexandria City Public Schools data.

Analysis of data presented as part of the CIP budget presentation in December 2023 resulted in these findings:

1) Elementary school utilization will range between 98.81 and 92.66% from FY2025 through FY2029. In FY2030, school utilization is expected to drop and remain below 90% through FY2034.
2) Middle school utilization will remain above 100% capacity from FY2025 through FY2034. Utilization of middle school capacity is 112.45% in FY2025, rises to 117.77% in FY2027 and then slowly decreases to 101.4% by FY2034.

Model 2 provides some limited additional seat capacity to elementary schools but will result in utilization well above both maximal and functional capacity of the two middle schools which already both exceed more than 100% utilization of maximal capacity in FY2024.

While exploring this model, the consulting team identified an opportunity to balance enrollments to reduce overutilization. If ACPS set student enrollment to 734 students at Jefferson-Houston, and 854 students at Patrick Henry, this would alleviate the overutilization at Patrick Henry. Additional adjustments to feeder patterns would be necessary to accomplish this balancing, and these adjustments do not alleviate the overutilization at George Washington or Francis C. Hammond. The table below explores what this could look like.

Model 2 Alternative Projected Enrollment Table 2

In this alternative, projected enrollment per school is calculated based on 2027 projections *and* school capacity. Movement of feeder patterns would be required.

	Current Enrollment	Projected 2027 Enrollment
Patrick Henry	1,021	854
Jefferson-Houston	528	734
George Washington	1,360	1,635
Francis Hammond	1,511	1,871
ACPS K-5 Elementary Schools	7,122	6,574
Total	**11,542**	**11,668**

Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

An anticipated impact of this alternative approach is that Patrick Henry would have a lower density of students in the school, providing the school community with more accessibility to space and programming consistent with an equitable, learner-centered experience.

👩🏻‍🏫 Staffing Impact

Anticipated positive staffing impacts:

- Maximizes certified and noncertified staff resource
    - economy of scale; elective teachers can be shared across middle schools
- Opportunity to engage in aligned professional learning with all middle school staff
- Opportunity for teachers to work in a team
- Opportunity for a common middle school schedule
    - makes staff and student transfers easier and more predictable

Anticipated negative staffing impacts:

- Does not maintain small K-8 environment
    - K-8 staff reported their small, familial environment as a primary strength that led to high satisfaction and strong relationships. This may be difficult to replicate when middle school teachers in K-8 schools are transferred to 6-8 schools, as Francis C. Hammond and George Washington staff did not report similar findings.
    - K-8 middle school teachers may not desire to work in a 6-8 middle school

- Access to certified and noncertified staff
    - Consolidation into 2 schools may result in some positions, classified and professional, being eliminated
    - If teachers lack professional licenses to teach in middle school, they may need to move to elementary schools
    - Staff who specifically are working in K-8s because of their commitment to the program may not want to work in either a K-5 or 6-8 environment.

The information in the tables below is based on the projected enrollment, needed staff, and average costs for positions staffed in Jefferson-Houston and Patrick Henry K-8s if configured into elementary schools. Information is also included in tables for George Washington and Francis C. Hammond based on increased enrollment resulting from the assignment of middle school students currently in the K-8s.

Model 2 Current and Projected Staffing Table 2

	Current FTE	Projected 2027 FTE	Gain/Loss
Patrick Henry Elementary	93.48	106.00	**12.52**
Jefferson-Houston Elementary	85.00	54.81	**-30.19**
George Washington Middle	149.00	173.09	**24.09**
Francis Hammond MIddle	154.88	198.04	**43.16**
Other ACPS K-5 Elementary Schools	745.66	677	**-68.31**
Total	**1,228.01**	**1,209.29**	**-18.72**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

Model 2 Current and Projected Salary Costs Table 2

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry Elementary	7,923,315.00	$8,751,888.69	**$828,573.69**
Jefferson-Houston Elementary	7,186,836.00	$4,525,952.23	**-$2,660,883.77**
George Washington Middle	13,692,357.00	$16,054,664.02	**$2,362,307.02**
Francis Hammond MIddle	14,493,087.00	$18,368,557.61	**$3,875,470.61**
Other ACPS K-5 Elementary Schools	61,561,684.05	55,927,749	**-$5,633,935.36**
Total	**$104,857,279.05**	**$103,628,811.25**	**-$1,228,467.81**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

👨‍👩‍👧 Family Impact

Anticipated positive family impacts:

- After-school program access
    - Opportunity for before- and after-school programming for middle schoolers that aligns with daylight work schedules

Anticipated negative family impacts:

- Eliminates K-8 choice for families
- Multiple schedules
    - Challenge coordinating schedules and transportation if their children are now attending different schools.

Creating two middle schools could have significant implications for families, particularly those with multiple children in different educational levels. It is not possible to give an exact count of impacted families without development of a plan that shows options for moving some students into the two comprehensive middle schools. Approximately 400 middle school students would move from Jefferson-Houston and Patrick Henry into George Washington and Francis C. Hammond. It is anticipated that elementary students enrolled in Jefferson-Houston and Patrick Henry would remain in those schools, but approximately 400 elementary students could be assigned to Jefferson-Houston and Patrick Henry to address overutilization in other elementary schools. Depending upon selected strategies for moving students, some families might find the distance reduced to and from their child's assigned schools and others may find that they have farther to travel. Changes in a student's assignment to a school could impact family relationships and connections to school, especially for families that are challenged by socio-economic factors that impact their capability to routinely engage with the school staff and participate in activities.

Model 2 Programmatic Impact

Model 2 provides the opportunity to:

- scale programs in two middle schools across all 6-7-8 grades, increasing access and opportunity for all middle school students
- develop and support theme-based small learning communities aligned with the high school academy model
- align middle school staff across instructional programs to maximize efficient deployment of staff, and
- implement coherent, consistent instructional programs, regardless of the school in which students are enrolled
- Increase the numbers of middle school students enrolled in the only two available middle schools which means that student access to extracurricular clubs and sports activities, specialty programs, and after-school programming will be limited by the number of available seats.

Model 2 also eliminates some of the positive outcomes pinpointed by students, staff, and parents of being in the K-8 model as well as likely eliminates the IB program.

Model 2 Facilities & Operational Impact

Operating Staff: Salaries for custodians and cafeteria staff are direct costs to the individual school. Maintenance workers and IT support salaries tend to be shared costs between all locations and include materials in the form of work order costs. The estimated costs for Patrick Henry, Jefferson-Houston, George Washington and Francis C. Hammond would remain largely the same.

Custodial staffing levels are typically calculated based on the square footage of cleanable space per custodian*. For nutrition services personnel, placement and evaluation often rely on the Meals per Labor Hour (MPLH) productivity scales**. Variations in staffing may occur if additional cafeteria employees are needed to support a full elementary school or to accommodate increased student numbers at the middle school level. Similarly, an extra day custodian might be required to act as a porter during daily operations, especially with a larger middle school student population.

*Source: APPA-Leadership in Educational Facilities Book of Knowledge
**Source: Staffing Guidelines for On-Site Production, Pannell-Martin 1999

Routine and Preventative Maintenance: Work order costs would continue as they would for all four facilities. The work order costs would likely continue to increase over time in alignment with the age of the buildings.

Utility costs: The utility costs would remain largely unchanged. The only foreseeable increases could potentially come from currently unoccupied spaces becoming occupied, requiring additional HVAC and lighting usage.

Capital costs associated with transforming both Patrick Henry and Jefferson-Houston would be dependent on the intended future uses of the current middle school classrooms. These classrooms include science labs, food labs, CTE dedicated spaces, performing arts and world language resources that may or may not need to be repurposed based on the intended future programming. In addition, each facility would need furnishings and fixtures right sized for the appropriate grade levels and the addition of play structures to support the increased student population. Without actual site plans and planned configuration of the adjusted rooms, we cannot determine the actual estimated cost of this transition. However, for purposes of this report, we are using an estimated allowance of $25,000 per transformed classroom for updated flexible furnishings and minor finish work.

Model 2 Implementation Timeline

Model 2 Implementation Timeline Table 6

	Year 1	Year 2	Year 3	Year 4	Year 5
Construction on Patrick Henry and Jefferson-Houston (remain operational if work is not done over summer)					

Model 3

This model explores the pros and cons of opening a new 6-8th grade middle school at 1703 Beauregard Street and returning both Jefferson-Houston and Patrick Henry campuses to K-5 elementary schools. The 1703 Beauregard site is not a viable option to address middle school overutilization, because it would result in no meaningful gain of middle school seats.

Key Model 3 Findings

How many seats would be available based on both maximal and functional capacity for this model?

	Projected 2027 Enrollment	Capacity	Model Impact
Elementary Impact	8,148 *All ACPS PK-5*	8,839 seats *All ACPS PK-5 maximal* 7,955 seats *All ACPS PK-5 functional*	**+691 extra seats** ***PK-5 maximal*** **-193 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	2,971 seats *All ACPS 6-8 maximal* 2,525 seats *All ACPS 6-8 functional*	**-549 seats** ***6-8 maximal*** **-995 seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.

How many additional full-time equivalency (FTES) would be needed?

Current FTES	Future FTES	# New Positions
1,228.01	1,209.29	**-18.72**

What would be the approximate annual salary cost for staff?

Current Salary	Future Salary	Gain/Loss
$104,857,279.05	$103,628,811.25	**-$1,228,467.81**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes their is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	Additional custodial, cafeteria and security staff, work orders, utility costs at 1703 Beauregard St
Facilities Costs	No change
Capital Costs	Construction on 1703 Beauregard Street site

Model 3 Overview

The conversion of the two K-8 schools into elementary schools would have some impact on elementary capacity by slightly increasing the overall available elementary seats across the division. After reassignment of the middle school students enrolled in the K-8s, the overall elementary capacity across the division would minimally increase approximately 400 seats as a result of converting the two K-8s into elementary schools. The two large middle schools, George Washington and Francis C. Hammond, would remain overcapacity. To address some of the overutilization at the existing two 6-8 middle schools, the capacity of a new middle school would need to be closer to 900, not 425 students.

There are nine ACPS elementary schools at or above the 90% utilization industry standard (functional capacity) based on the CIP budget presentation in December 2023. Three elementary schools are above 85% and approaching 90% of functional capacity, and six are deemed over 100% utilization (well over functional capacity). Only six elementary schools are operating under 90% of functional capacity.

ACPS uses a utilization standard of 90 -110% of capacity. In this utilization standard for ACPS, 5 ACPS elementary schools are under-utilized, 3 are in the target utilization, 5 are over the ACPS utilization standard.
Source: CIP Budget Presentation Dec 6, 2023

Using either the consultant Industry standard modeling for functional capacity(90% of available seats) or the ACPS utilization (90-110% of available seats) as the target, the overall utilization of elementary seats, current or projected, hovers around 100%. Reconfiguring Jefferson-Houston and Patrick Henry K-8s as elementary schools results in a net gain of approximately 400 additional elementary school seats in those schools as a result of moving students in grades 6,7, and 8 out of the K-8 schools. The two middle schools both are utilized well above maximal and functional capacity as defined by the consultants and ACPS.

Model 3 does not substantively impact additional seats for elementary nor middle school students.

Model 3 Human Impact

👩🏾‍🎓 Student Impact

Anticipated positive student impacts:

- Consistent K-5 and 6-8 configuration
    - According to Jefferson-Houston and Patrick Henry 6-8 students in focus groups and surveys, they want a more authentic middle school experience, as well as access to additional electives and sports. Shifting to a new middle school model provides both of these
- Opportunity for small learning communities
    - Patrick Henry and Jefferson-Houston focus group insights supported educational research that K-8 schools offered a level of relationship support and the ease of transition from fifth to sixth grade that is not supported in insights from the comprehensive middle schools. A small 3rd middle school likely would continue to offer this.
    - K-8 students, teachers, and families saw value in their small learning community

Anticipated negative student impacts:

- Reduces available middle school seats by 150.
- Current middle school overutilization
    - Middle school enrollments would not drop below 1,000 students
    - Fails to anticipate 40% increase in 10-14 age cohort predicted by census.
- Eliminates opportunities for K-8 multi-age activities
- Eliminates K-8 choice for families

Capacity at 1703 Beauregard St is projected at 425 6th-8th grade seats, which would result in a ***reduction in the total available middle school seats to the division***.

Model 3 Current and Future Capacity Table 1

	Current 6-8 Maximal Capacity	Projected Maximal 6-8 Capacity in this Model
Patrick Henry	225	0
Jefferson-Houston	218	0
1703 Beauregard Middle	0	425
Total	443	425
Estimated impact on middle school seats		**-18**

Currently in the K-8 middle school grades, 225 middle school seats are at Patrick Henry and 218 are at Jefferson-Houston for a total of 443 available seats. Opening a middle school at 1703 Beauregard and configuring Patrick Henry and Jefferson-Houston as elementary schools does not meaningfully address the capacity challenges at both George Washington and Francis. C. Hammond middle schools.

If a new middle school is opened at a projected maximum capacity of 425, some students would need to move within or across attendance zones to more adequately fill seats across the three middle schools. This would also necessitate reassignment of middle school staff from the K-8 configurations. It is uncertain whether any other staff would need to be reassigned in this model based on licensure of teachers who provide services across the current K-8 continuum.

Moving Jefferson-Houston and Patrick Henry K-8s to elementary schools would slightly increase the overall available seats for elementary schools and potentially relieve some overutilization of elementary schools that are above capacity.

Model 3 Current and Projected Enrollment Table 2

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry Elementary	1,021	1,032	11
Jefferson-Houston Elementary	528	534	6
George Washington Middle	1,360	1,474	114
Francis Hammond Middle	1,511	1,607	96
Other ACPS K-5 Elementary Schools	7,122	6,596	-526
1703 Beauregard Middle	0	425	425
Total	**11,542**	**11,668**	126

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

Opening a new middle school and configuring the K-8 schools as elementary schools would mean that middle students would need to move to different schools than they are zoned to attend.

It is not yet clear which attendance zones would be impacted by reassignment of students to the 1703 Beauregard St. middle school and to Jefferson-Houston and Patrick Henry Elementary Schools. The following elementary schools are geographically closest to the proposed new middle school. Given the current enrollment of approximately 400 students in grades 6-8 in the two K-8 schools, the proposed 1703 Boulevard middle school with a capacity of 425 would not address the overutilization at the current middle schools.

Model 3 Current Elementary Enrollment Table 3

Elementary school	Current middle school	Elementary School Enrollment	% Economically Disadvantaged
Ferdinand T Day	Francis C. Hammond	621	84.2%
John Adams*	Francis C. Hammond	746	82%
William Ramsey	Francis C. Hammond	654	82%
James Polk *	Francis C. Hammond	833	84%
Douglas MacArthur	George Washington	642	44%

Source: Virginia School Quality Profiles and Cropper Map
Source: CIP Budget Presentation to the Board, December 6, 2023
**red denotes elementary schools already above maximal capacity.*

As movement of students may need to be considered, it should be noted that the difference between the percentage of economically disadvantaged students across these schools could result in improved or worsened levels as feeder pattern boundaries could shift. It also should be noted that Polk and Adams Elementaries are already over 100% of maximal capacity (all seats available).

👩🏻‍🏫 Staffing Impact

Anticipated positive staffing impacts:

- Maximizes certified and noncertified staff resource
    - economy of scale in that elective teachers can be shared across 3 middle schools
    - Allows sharing of part-time staff across schools with a more equitable schedule
- Opportunity to engage in aligned professional learning with all middle school staff
- Opportunity for teachers to work in a team
- Opportunity for a common middle school schedule
    - makes staff and student transfers an easier and more predictable adjustment

Anticipated negative staffing impacts:

- Does not maintain small K-8 environment
    - K-8 staff reported their small, familial environment as a primary strength that led to high satisfaction and strong relationships. This may be difficult to replicate when middle school teachers in K-8 schools are transferred to 1703 Beauregard, as Francis C. Hammond and George Washington staff did not report similar findings.
- Access to certified and noncertified staff
    - Consolidation into 3 schools may result in some positions, classified and professional, being eliminated
    - If teachers lack professional licenses to teach in middle school, they may need to move to elementary schools
    - Staff who specifically are working in K-8s because of their commitment to the program may not want to work in either a K-5 or 6-8 environment.

Model 3 Current and Projected Staffing Table 4

	Current FTE	Projected 2027 FTE*	Gain/Loss
Patrick Henry Elementary	93.48	106.00	**12.52**
Jefferson-Houston Elementary	85.00	54.81	**-30.19**
George Washington Middle	149.00	156.05	**7.05**
Francis Hammond Middle	154.88	170.09	**15.22**
Other ACPS K-5 Elementary Schools	745.66	677	**-68.31**
1703 Beauregard Middle	0	44.98	**44.98**
Total	**1,228.01**	**1,209.29**	**-18.72**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

Model 3 Current and Projected Salary Costs Table 5

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry Elementary	$7,923,315.00	$8,751,888.69	**$828,573.69**
Jefferson-Houston Elementary	$7,186,836.00	$4,525,952.23	**-$2,660,883.77**
George Washington Middle	$13,692,357.00	$14,474,080.09	**$781,723.09**
Francis Hammond Middle	$14,493,087.00	$15,776,792.65	**$1,283,705.65**
Other ACPS K-5 Elementary Schools	$61,561,684.05	55,927,749	**-$5,633,935.36**
1703 Beauregard Middle	$0.00	4,172,348.90	**$4,172,348.90**
Total	**$104,857,279.05**	**$103,628,811.25**	**-$1,228,467.81**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

The cost of personnel may be greater per pupil for the new 1703 Beauregard St middle school than at the two comprehensive middle schools because of required middle school positions regardless of school size. For example, positions such as nurse, principal, registrar, psychologist and others are staffed at 1.00 FTE/school (not based on a student to position ratio). Some positions are required by Virginia SOQ, others are specific to ACPS.

👪 Family Impact

Anticipated positive family impacts:

- Increases home proximity to school in a feeder pattern model
- After-school program access
    - Opportunity for before- and after-school programming for middle schoolers that aligns with daylight work schedules

Anticipated negative family impacts:

- Eliminates K-8 choice for families
- Multiple schedules
    - Challenge coordinating schedules and transportation if their children are now attending different schools.

Opening a third middle school and returning the two K-8 schools to an elementary model could have significant implications for families, particularly those with multiple children in different educational stages. Until decisions are made relevant to current capacity issues and/or about the use of the existing building at 1703 Beauregard Street versus new construction are made, it is not possible to give an exact count of impacted families. All of the Patrick Henry and Jefferson-Houston K-8 middle schoolers would be moved to George Washington, Francis C. Hammond or the proposed 1703 Beauregard St. middle schools. It is anticipated that K-5 students in the existing K-8 schools would remain in those schools unless reconfiguration of elementary school zones occurs in the future.

Model 3 Programmatic Impact

Anticipated positive programmatic impacts:

- Parity of middle school offerings
    - Choices from an expanded range of electives, enrichment, and co/extra-curricular activities
    - Consistency across core courses
    - Enables consistent resource access libraries and learning technologies
- Team structure
    - All ACPS 6th-8th graders could be grouped into interdisciplinary teams supported by teachers working in a consistent grade-level team structure.
    - Teacher teams could analyze student data, and provide consistent access to multi-tiered intervention support.
- High quality learner-centered programming
    - Middle school teachers would be able to determine the best practices and programs available in each current 6-7-8 configuration and use that information to determine consistent instructional programming responsive to student needs
- Consistent middle school schedule
    - One schedule that allows schools to share program staff when needed, offer a chance for students to enroll in virtual classes across schools, and create flex time for project-based learning, interdisciplinary programs, and team-based small learning communities.

Anticipated negative programmatic impacts:

- Elimination of the IB Middle Years Program
    - This offering is popular amongst Jefferson-Houston families and staff
- Given the size of the middle school, there are offerings such as the International Academy, that would not have adequate student enrollment to support the program.

Model 3 provides an opportunity to scale programs across 6-7-8 grades, aligning middle school staff with instructional programs in three schools and providing coherent, consistent instructional programs, regardless of the school in which students are enrolled. The three middle school programs could align with the high school small learning community and Academy model offering the staff and community the opportunity to

create theme-based curricula taught in small learning community teams grounded in PBL, SEL, and inquiry student experiences.

With a capacity of only 425 middle school students at the 1703 Beauregard site, the same issues of offering programs with parity to the two large middle schools would remain as in the K-8 considerations. Programs are based on the availability of students to participate and smaller numbers of students impact the potential to offer a full range of music, arts, and CTE courses in a small middle school. It also impacts core program availability such as world languages, algebra, and geometry. The impact of program availability in a small middle school is balanced with the small learning community assets cited by staff, parents, and students about the K-8 configuration such as connected relationships with a peer group and teachers as well as the potential access to community resources and opportunities such as field and place-based experiences that are more difficult to organize and schedule in large schools.

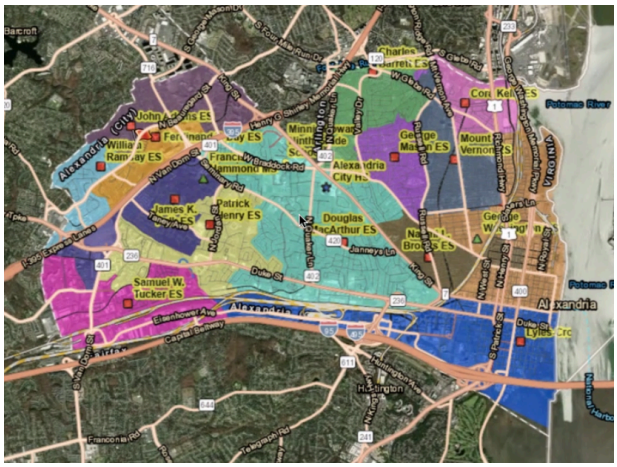
Model 3 Facilities & Operational Impact

ACPS owns the building at **1703 Beauregard Street.** It is currently a swing space to house students and staff while new schools are being built. The Goddard School, a private preschool, occupies part of the first floor. While not in violation of VA Guidelines for School Facilities, the 1703 Beauregard Street site does not meet state recommendations.

> "When permanent additions are made to an existing school facility, it is recommended that the minimum usable area of the site be in reasonable compliance with the recommendations for new school sites." Source (p 26)

Examples of site constraints:

- VA recommends a 15 acres minimum for middle schools of 600-900 students; this site (the block: 1703 Beauregard St and the Parking Lot, and Inova Imaging Center) has approximately 4.84 acres.
  Source (p 24)
- The maximum capacity is 625 students, which would only net 50 additional middle school seats
  Source Superintendent's Capital Improvement Plan
    - Recommendation: A new middle school should accommodate up to 900 students to provide minimal relief to the existing 2 middle schools' overutilization.
- There are currently no sports facilities on campus. This does not meet the VA recommendation for adequate site acreage to meet the needs of the outdoor physical education program
  Source (p 24)
- The logistics of operating a middle school in a 6-story building is challenging, particularly during class changes
- The location is not centrally located in the district, it would not be easily accessible to those on the west side of ACPS



Source

The operating costs of a new middle school vary greatly depending on if the new school is located in an existing facility such as 1703 N. Beauregard St., or in the construction of a new facility. For either option, operating costs for a middle school consists of the following:

Operating Staff: Salaries for custodians and cafeteria staff are direct costs to the individual school. Maintenance workers and IT support salaries tend to be shared costs between all locations and include materials in the form of work order costs. The total estimated cost for operating staff 1703 Beauregard would be approx. $473,900.

Routine and Preventative Maintenance: Older facilities will have higher costs over the next 10 years. Based on ACPS average annual work order costs at existing facilities, the estimated cost would be approx. $165,000

Utility costs: VDOE Guidelines for School Facilities recommend public school buildings that are designed, constructed, maintained, and operated at Net Zero Energy Consumption. This is easier to achieve in a new facility rather than a repurposed facility. Based on ACPS average annual utility costs at existing facilities, the estimated cost would be approx $176,000 without Net Zero Energy upgrades.

School Site Considerations: In accordance with VDOE Guidelines for School Facilities, the selected site should contain adequate site acreage. The location of the buildings and athletic fields should take into consideration parking, circulation, bus drop-off, and security for after-hour athletic events. When selecting a site, consider the following factors: location, zoning, transportation, utility access, wetlands, stormwater run-off control, enrollment, safety and security of students. The playfield and court area recommendations for a 600-899 middle school facility is at minimum 4.59 acres. There

are existing play courts on the top level of the parking garage on site, however access to the area is connected with 1701 Beauregard, and escorting students from 1703 Beauregard to the site would be challenging. These requirements are achievable with new construction. The above criteria would not be achievable on the 1703 N. Beauregard existing school site as the entire site is less than 5 acres.

Technology: Needs to meet or exceed requirements for 21st Century Learning. This is easier to achieve in a new facility as retrofit of technology and supporting electrical components can be costly. The cost to upgrade existing electrical and technology infrastructure (not including technology devices such as smartboards, projection, etc) would be approx. $340,500

Furniture, Branding, Logos, Uniforms, etc: The costs related to flexible furniture and rebranding would be very similar in new construction as it would be with repurposing an existing facility.

Capital Costs: To leverage the existing building at 1703 Beauregard Street, if light modernization were required it would cost on average $250 per square foot and heavy modernization (includes electrical, lighting, HVAC, all finishes and fixtures) costs on average $425 per square foot. According to property records, the facility was constructed in 1999 and the square footage is 82,849 sq. ft., however, the approx. 12,000 is leased space equaling net space of approx. 70,849 sq ft.

Given that the building is currently being used as a charter school and considering its age, it is assumed that light modernization would be appropriate. If this work is to be carried out on approximately 70% of the total square footage, the estimated cost to repurpose the facility as a fully operational middle school would be around $14,000,000.
Source: Ruhnau Clarke Architects (RCA), January 2024

In addition to cost considerations, functionality and logistical aspects of the proposed site at 1703 Beauregard are crucial. The site must accommodate several essential components:

- **Athletic and Physical Education Spaces**: These include an indoor gymnasium, locker rooms, and storage facilities, as well as outdoor play courts and fields. However, as previously noted in this report, the latter cannot be accommodated within the existing 4.59-acre space.

- **Career and Technical Education (CTE) Programming**: According to the Virginia Educational Facility Specification (VEFS), the recommended CTE facilities for middle school students include:
    - Agriculture Education: 1,400-1,800 sq ft, equipped with appropriate lighting and water access.
    - Business and Information Technology: 1,000-1,400 sq ft, fitted with necessary electrical and technological connections.
    - Family and Consumer Services: 1,400-1,800 sq ft, featuring facilities and equipment suitable for Home Economics-style learning environments.
    - Technology Education: 1,400-1,800 sq ft, with proper electrical and technological infrastructure.
- **Music Rooms**: The band/orchestra room should provide at least 20 square feet per member of the largest group and maintain a minimum ceiling height of 12 feet 6 inches. It should also include secure storage of at least 250 sq ft.
- **Visual Arts**: The art room should allow at least 45 square feet per student, excluding areas for storage and kiln operation. An additional secure storage area of 400 sq ft is necessary, with lockable spaces for supplies and equipment. Display boards for two-dimensional works and shelving for three-dimensional pieces are essential, with kilns housed in rooms with suitable fire walls and direct exhaust ventilation outside.
- **Auditorium**: This space should offer fixed seating to accommodate one-third of the student body, with safe access for parents and visitors during performances. Ideally, this facility could be shared with the gymnasium or cafeteria.
- **Cafeteria and Kitchen**: This area should provide 11-14 sq ft per student and include adequate space, utilities, fire suppression systems, storage, and a loading dock to support nutritional services.

The specific cost to retrofit these facilities would be dependent on the layout and current use of space within 1703 Beauregard, which could alter the estimated cost consideration.
Source: Guidelines for School Facilities In Virginia's Public Schools, dated December 15, 2020

Model 3 Implementation Timeline

While this model is not recommended due to feasibility, this implementation timeline has been estimated with the provided information.

Model 3 Implementation Timeline Table 6

	Year 1	Year 2	Year 3	Year 4	Year 5
Define plans for constructions and student and staff reassignment					
Construction on 1703 Beauregard St.					
Transition feeder patterns					
Grand opening of 1703 Beauregard St as a middle school & Jefferson-Houston and Patrick Henry as K-5 elementary schools					

Model 4

In this model, Patrick Henry and Jefferson-Houston K-8s become 6-8th grade middle schools. K-8 elementary-aged students would attend the appropriate elementary school in their school assignment zone. In this report, the model is analyzed to better understand the human, programmatic, operational, and capital impacts.

Key Model 4 Findings

Student impact

How many seats would be available based on both maximal and functional capacity for this model?

	Projected 2027 Enrollment	Capacity	Model Impact*
Elementary Impact	8,148 *All ACPS PK-5*	7,251 seats *PK-5 maximal* 6,526 seats *PK-5 functional*	**-897 seats** ***PK-5 maximal*** **-1,622 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	4,134 seats *6-8 maximal* 3,514 *6-8 functional*	**614 extra seats** ***6-8 maximal*** **-6 seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.
*The elementary seats would be absorbed by existing elementary schools

How many additional full-time equivalency (FTES) would be needed?

Current FTES	Future FTES	# New Positions
1,228.01	1,209.35	**-18.67**

What would be the approximate annual salary cost for staff?

Current Salary	Future Salary	Gain/Loss
$104,857,279.05	$98,786,207.89	**-$6,071,071.17**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes their is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	Additional cafeteria staff and potential custodial staff at elementary schools who absorb K-5 students from Patrick Henry and Jefferson-Houston
Facilities Costs	No change
Capital Costs	Construction to reconfigure CTE and special-use rooms, adjust fixture heights, and purchase new furniture. Additional space for expanded CTE programming.

Model 4 Overview

This model is based on an 854 student maximal capacity for the proposed Patrick Houston Middle School and a 734 student maximal capacity for the proposed Jefferson-Houston Middle School.

Model 4 increases the division's maximal capacity for middle grades 6th-8th while reducing the populations of the existing middle schools to a range of 920-1,117. This model offers the opportunity to revamp all 6-8 programming into themed, small learning communities that would both align with the development of ACHS Academies while easing the transition from fifth to sixth grade. The 4,134 maximal capacity available in middle grades will meet expected population growth through 2034, and George Washington and Francis C. Hammond Middle Schools enrollment could both temporarily rise to 1,000-1,132 during periods of large cohorts (see Table 2, note***). Because Model 4 generates additional middle school capacity, this model may also allow adaptive re-use of some space at Francis C. Hammond, which might serve as early childhood learning spaces, division offices, or the alternative high school.

Reconfiguring the two K–8 schools into middle schools provides an immediate maximal capacity of 4,134 seats and a functional capacity of 3,308 (.8 multiplier) with excess maximal capacity at George Washington and Francis C. Hammond, enabling the division to address short-term enrollment growth as the division approaches the most significant utilization challenge that will occur in 2027 when middle schools are projected to be 117.77% over capacity. Trend data predict highest school populations in 2027, though housing development throughout the city may alter current expectations.

Source https://educationnorthwest.org/sites/default/files/SizeClimateandPerformance.pdf

Under this plan, the existing 12 ACPS elementary schools would absorb approximately 1,200 elementary students from Jefferson-Houston and Patrick Henry. However, currently there are only 253 open seats available to stay "at capacity." Many K-5 schools are over capacity (a total of 515 students), severely limiting student movement to achieve an elementary system without overutilization.

Source: CIP budget presentation December 2023 - slide 8: Projected enrolment in 2027

In summary, this model offers a solution to the current overcapacity at George Washington and Francis C. Hammond Middle Schools. Converting Patrick Henry (current capacity 854) and Jefferson-Houston (current capacity 734) will add ~1,200 seats for the middle grades but will reduce ~ 1200 elementary seats for the division's K-5 schools, requiring significant student reassignment and exacerbate overutilization at K-5 schools that are already - as a group - overutilized. (see Table 3) Since George Mason and Cora Kelly Elementary schools are scheduled to increase capacity by a total of ~600 seats in 2028 and 2032 that may alleviate some of the elementary school over utilization issues that currently and are projected to exist into the future. In this report, enrollment projections used are for 2027 which is the greatest level of over utilization of middle seats from 2024-2034.

Analysis of data presented as part of the CIP budget presentation in December 2023 resulted in these findings which are important to consider in Model 4:

1) Elementary school utilization will range between 98.81 and 92.66% from FY2025 through FY2029. In FY2030, school utilization is expected to drop and remain below 90% through FY2034.
2) Middle school utilization will remain above 100% capacity from FY2025 through FY2034. Utilization of middle school capacity is 112.45% in FY2025, rises to 117.77% in FY2027 and then slowly decreases to 101.4% by FY2034.

Model 4 addresses middle school overutilization identified in the Capital Improvement Budget presentation. Model 4 provides additional seat capacity to middle schools but will increase capacity issues in elementary schools. Six elementary schools already exceed more than 100% utilization in FY2024 (reported on December 6, 2023 in the CIP Budget presentation to the Board.) In the analysis of projected utilization trend data through 2034, elementary capacity has been less of a critical need than middle school overcapacity, but Model 4 will make overutilization of elementary schools more of a challenge than it currently is. Approximately 1,200 elementary school students in the K-8 schools would be reassigned to other attendance zones.

Model 4 Human Impact

👩🏾‍🎓 Student Impact

Anticipated positive student impacts:

- Consistent K-5 and 6-8 configuration
    - According to Jefferson-Houston and Patrick Henry 6-8 students in focus groups and surveys, they want a more authentic middle school experience, as well as access to additional electives and sports. Shifting to a new middle school model provides both of these
- Current middle school overutilization
    - Middle school enrollments would drop below 1,000 students
    - Anticipates a 40% increase in the 10-14 age cohort predicted by the census.
- Opportunity for small learning communities
    - Spreading all 6-8 students across four campuses could results in:
        - Strong student-teacher relationships
            - Patrick Henry and Jefferson-Houston focus group insights supported educational research that K-8 schools offered a level of relationship support and the ease of transition from fifth to sixth grade that is not supported in insights from the comprehensive middle schools.
            - K-8 students, teachers, and families saw value in their small learning community
        - Increased learner-centered experiences
            - K-8 students reported experiencing learner-centered instructional experiences more often than ACPS students in 6-8 schools. It is possible this model would lead to small learning communities, which could lead to more learner-centered experiences
        - Increased student satisfaction
            - K-8 students reported higher levels of overall satisfaction with their experience in ACPS than students in a 6-8 middle school. It is possible this model would lead to small learning communities, which could lead to higher satisfaction.

Anticipated negative student impacts:

- Creates overutilization of elementary schools
- Eliminates opportunities for K-8 multi-age activities
- Eliminates K-8 choice for families
- Elementary student transitions
    - K-5 students in the K-8s will move to elementary schools in the transition, impacting their transportation, before and after-school schedules, and school community relationships with peers and siblings

If the model were implemented with existing feeder patterns, projected enrollment would be as follows in the table below.

Model 4 Current and Projected Enrollment Table 1

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry Middle	1,021	1,032	**11**
Jefferson-Houston Middle	528	534	**6**
George Washington Middle	1,360	1,107	**-253**
Francis Hammond Middle	1,511	850	**-661**
ACPS K-5 Elementary Schools	7,122	8,145	**1,023**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

The maximal capacity of middle school seats in this option is 4,134. The recommended functional capacity is 3,308. However, in 2027 the projected enrollment is expected to be 3,520, exceeding functional capacity by ~212 students. The maximal capacity provides space for the two large middle schools to absorb these additional students and still remain close to functional capacity. Adding 80 students to George Washington would bring enrollment to 1,000 and adding 120 students to Francis C Hammond would bring enrollment to 1,132. The two smaller middle schools would already be at maximal capacity. While this model addresses middle school overutilization, it creates a seat shortage in elementary schools. Elementary capacity in Model 4 is reduced from 8,396 to 7,251, which will not meet the projected 2027 enrollment needs.

Model 4 Elementary Impact Table 2

Projected 2027 PK-5 Enrollment	Model 4 Maximal PK-5 Capacity	# of Seats
8,148	7,251	**-897 PK-5 seats**

In reviewing this model, the consulting team identified an opportunity to balance enrollments to reduce overutilization. This model offers the opportunity to create small middle school learning communities across ACPS by modifying existing feeder patterns. If ACPS set student enrollment close to the functional capacity (.8 utilization of seats) at or just above 900 students in the current George Washington and Francis C. Hammond middle schools, 734 students at Jefferson-Houston, and 854 students at Patrick Henry, this would create smaller middle school communities more aligned with generally accepted best practices for this age group as found in research and in guidance from the Virginia Department of Education. The table below explores what this could look like.

Model 4 Alternative Projected Enrollment Table 3

In this alternative, projected enrollment per school is calculated based on 2027 projections *and* school capacity. Movement of students and feeder patterns would be required.

	Current Enrollment	Projected 2027 Enrollment	Target Capacity
Patrick Henry Middle	1,021	854	854
Jefferson-Houston Middle	528	734	734
George Washington Middle	1,360	920	920
Francis Hammond Middle	1,511	1,018	1,117
ACPS K-5 Elementary Schools	7,122	8,142	7,192
Total	**11,542**	**11,668**	

Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

The reduction of middle school students at George Washington and Francis C. Hammond will mean reassignment of an estimated 800-950 6th-8th grade students. An estimated 1,155 elementary school students enrolled in the current K-8 schools would also need to move schools. If attendance areas are redefined, students may have the opportunity to be "grandfathered in" their current school for a limited time. An assessment of renovation and modernization needs is recommended to occur in Jefferson-Houston and Patrick Henry to support middle school programmatic offerings, classroom settings, and auxiliary spaces.

As reassignment of students in Model 4 is considered, it should be noted that the difference between the percentage of economically disadvantaged students across these schools could provide an opportunity to analyze and balance demographics as feeder pattern boundaries may shift for elementary schools.

Source: https://files.eric.ed.gov/fulltext/ED562415.pdf

Source: https://cra.gmu.edu/wp-content/uploads/2024/02/Potomac-Yard-Entertainment-District-Housing-Impacts.pdf

Source: https://townhall.virginia.gov/L/GetFile.cfm?File=C:%5CTownHall%5Cdocroot%5CGuidanceDocs_Proposed%5C201%5CGDoc_DOE_4731_20210208.pdf

👩🏾‍🏫 Staffing Impact

Anticipated positive staffing impacts:

- Opportunity to maintain small K-8 environment
    - K-8 staff reported their small, familial environment as a primary strength that led to high satisfaction and strong relationships. In this model, all middle schools have the opportunity to create smaller learning communities within the 6-8 structure.
- Maximizes certified and noncertified staff resource
    - economy of scale; elective teachers can be shared across 3 middle schools
    - Allows sharing of part-time staff across schools with an equitable schedule
- Opportunity to engage in aligned professional learning with all middle school staff
- Opportunity for teachers to work in a team
- Opportunity for a common middle school schedule
    - makes staff and student transfers easier and more predictable

Anticipated negative staffing impacts:

- Access to certified and noncertified staff
    - Consolidation into 4 schools may result in some positions, classified and professional, being eliminated
    - If teachers lack professional licenses to teach in middle school, they may need to move to elementary schools
    - Staff who specifically are working in K-8s because of their commitment to the program may not want to work in either a K-5 or 6-8 environment.

Model 4 Current and Projected Staffing Table 4

	Current FTE	Projected 2027 FTE	Gain/Loss
Patrick Henry Middle	93.48	109.25	**15.77**
Jefferson-Houston MIddle	85.00	56.50	**-28.50**
George Washington Middle	149.00	117.20	**-31.80**
Francis Hammond Middle	154.88	89.97	**-64.90**
ACPS K-5 Elementary Schools	745.66	836	**90.77**
Total	**1,228.01**	**1,209.35**	**-18.67**

Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.

Model 4 Current and Projected Salary Costs Table 5

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry Middle	$7,923,315.00	$10,132,877.23	**$2,209,562.23**
Jefferson-Houston MIddle	$7,186,836.00	$5,240,116.72	**-$1,946,719.28**
George Washington Middle	$13,692,357.00	$10,871,134.09	**-$2,821,222.91**
Francis Hammond Middle	$14,493,087.00	$8,345,102.95	**-$6,147,984.05**
ACPS K-5 Elementary Schools	$61,561,684.05	$64,196,976.89	**$2,635,292.83**
Total	**$104,857,279.05**	**$98,786,207.89**	**-$6,071,071.17**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

This model will necessitate movement of both staff and students from the two large middle schools to the newly created Jefferson-Houston and Patrick Henry Middle Schools. This will trigger reassignment of teacher FTES from the large middle schools to the two new middle schools. In addition, the potential to develop small learning communities and theme-based schools that align with the high school model would impact all middle school teachers. Elementary teachers working in the K-8s would be required to move to other schools unless endorsed to teach in middle school.

👪 Family Impact

Anticipated positive family impacts:

- Reduces overutilization at ACPS middle schools
- Increases home proximity to school in a feeder pattern model
- After-school program access
    - Opportunity for before- and after-school programming for middle schoolers that aligns with daylight work schedules

Anticipated negative family impacts:

- Eliminates K-8 choice for families
- Multiple schedules
    - Challenge coordinating schedules and transportation if their children are now attending different schools.

The impact on families of this model is significant, particularly those with multiple children in different educational stages. Parents would lose a choice option for young people who might feel better supported in a K-8 environment. Both parents and students at Jefferson-Houston and Patrick Henry indicated that they liked their school.

If the functional capacity goal for Model 4 is used based on Virginia Department of Education school facilities recommendations and school size research, then approximately 800 -1000 students would move from George Washington and Francis C. Hammond Middle Schools into Jefferson-Houston and Patrick Henry Middle Schools. Model 4 also would impact families of elementary school students enrolled at Jefferson-Houston and Patrick Henry K-8 schools since these students would be assigned to attend elementary schools in their assigned attendance zones. Depending upon selected strategies for moving students, some families might find the distance reduced to and from their child's assigned middle schools.

Changes in attendance areas may cause friction, but the drop in overutilization at Francis C. Hammond and George Washington Middle Schools has the capacity to change both student and parent perspectives about large middle schools.. If small learning communities are adopted in all 4 schools, matching the developing high school program, improved community perceptions may increase the cohort survival rate.

Model 4 Programmatic Impact

Anticipated positive programmatic impacts:

- Parity of middle school offerings
    - Choices from an expanded range of electives, enrichment, and co/extra-curricular activities across all 4 middle schools
    - Consistency across core courses
    - Enables consistent resource access libraries and learning technologies
- Team structure
    - All ACPS 6th-8th graders could be grouped into interdisciplinary teams supported by teachers working in a consistent grade-level team structure.
    - Teacher teams could analyze student data, and provide consistent access to multi-tiered intervention support.
- High quality learner-centered programming
    - Middle school teachers would be able to determine the best practices and programs available in each current 6-7-8 configuration and use that information to determine consistent instructional programming responsive to student needs
- Consistent middle school schedule
    - One schedule that allows schools to share program staff when needed, offer a chance for students to enroll in virtual classes across schools, and create flex time for project-based learning, interdisciplinary programs, and team-based small learning communities.

Anticipated negative programmatic impacts:

- Elimination of the IB Middle Years Program
    - This offering is popular amongst Jefferson-Houston families and staff

If two additional 6-8 middle schools are opened on the current Jefferson-Houston and Patrick Henry K-8 schools, the model will provide the opportunity to scale programs across 6-7-8 grades, align all middle staff with instructional programs in four schools and implement coherent, consistent instructional programs, regardless of the school in which students are enrolled. It also eliminates some of the positive outcomes pinpointed by students, staff, and parents of being in the K-8 model.

The development of four middle schools in Model 4 offers an ideal opportunity to reduce the numbers of students attending the two large middle schools. It also provides an opportunity to create theme-based, small learning communities in the middle schools to align with the new high school model. Reduction of school size creates the opportunity for more personalized learning experiences and relationships with teachers and peer groups. It also provides an opportunity to ensure that middle schools have more comparable demographics and parity of access to programs. Research on size of school does point to increased achievement of students in schools that ideally serve no more than 600-900 students. In this model three of the four middle schools are below or close to a 900 student functional capacity and one is over by ~200 students.

Model 4 Facilities & Operational Impact

Operating Staff: Salaries for custodians and cafeteria staff are direct costs to the individual school. Maintenance workers and IT support salaries tend to be shared costs between all locations and include materials in the form of work order costs. The estimated costs for Patrick Henry and Jefferson-Houston would remain largely the same as middle schools. One consideration would be the cost of adding custodial or nutrition services staff to the elementary schools who would absorb the reallocated K-5 students.

Routine and Preventative Maintenance: Work order costs would continue as they would with both facilities operating as K-8. The work order costs would likely continue to increase over time in alignment with the age of the buildings.

Utility costs: The utility costs would remain largely unchanged, with Jefferson-Houston operating at approx $200K and Patrick Henry operating at $250K annually. The average utility costs between both facilities is about $2.08 per sq ft.

Security: There would be potential increased costs for security personnel and associated equipment needed to secure a middle school.

Capital Costs: The capital costs associated with transforming Patrick Henry and Jefferson-Houston into middle schools primarily involve updates to accommodate the specific needs of middle school students. This would include adjusting the size and height of fixtures, acquiring new furniture, and reconfiguring rooms to support Career and Technical Education (CTE) programs typical of middle schools. Currently, as K-8 facilities,

both locations include spaces for art, science, music, and limited CTE offerings for middle school students. To fully transition to a middle school, additional spaces will be required for expanded CTE programming, as well as extra offices for Instructional Resource personnel. However, for purposes of this report, we are using an estimated allowance of $25,000 per transformed classroom for updated flexible furnishings and minor finish work.

Model 4 Implementation Timeline

In this model, there is an opportunity to "grandfather" students enrolled in George Washington or Francis C. Hammond who would be reallocated to the new Jefferson-Houston or Patrick Henry middle schools. Should those students wish to remain at their current middle school, a 2-year grandfather window is proposed to ensure they can complete their middle school experience at their desired school. After this window, all students would enroll at their local middle school.

Model 4 Implementation Timeline Table 7

	Year 1	Year 2	Year 3	Year 4	Year 5
Define plans for constructions and student and staff reassignment	■				
Create grandfathering policy for George Washington and Francis C. Hammond	■				
Transition Patrick Henry and Jefferson-Houston elementary students to existing ACPS elementary schools		■			
Construction on Patrick Henry and Jefferson-Houston as middle schools		■			
Grand opening of Jeferson-Houston and Patrick Henry middle schools			■		
Grandfather window for existing students in George Washington or Francis C. Hammond			■	■	
Full transition complete					■

Model 5

In reconfiguring Patrick Henry K-8 as a middle school, Model 5 will somewhat address overutilization at the largest middle school, Francis C. Hammond, both in terms of location as well as providing the largest maximal capacity of the two K-8 schools. Jefferson-Houston K-8 would become a K-5 school in this model with a goal of reducing overutilization in elementary schools in proximity that are currently overutilized in both functional and maximal capacity.

Model 5 Key Findings

Student impact

How many seats would be available based on both maximal and functional capacity?

	Projected 2027 Enrollment	Capacity	Model Impact
Elementary Impact	8,148 *All ACPS PK-5*	7,985 seats *PK-5 maximal* 7,187 seats *PK-5 functional*	**-163 seats** ***PK-5 maximal*** **-962 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	3,182 seats *6-8 maximal* 2,705 *6-8 functional*	**-338 seats** ***6-8 maximal*** **-815 seats** ***6-8 functional***

How many additional full-time equivalency (FTES) would be needed?

Current FTES	Future FTES	# New Positions
1,228.01	1,209.35	**-18.67**

What would be the approximate annual salary cost for staff?

Current Salary	Future Salary	Gain/Loss
$104,857,279.05	$98,786,207.89	**-$6,071,071.17**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes their is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	Potential additional day custodian, only if needed
Facilities Costs	$447,000
Capital Costs	$500,000

Model 5 Human Impact

👩🏾‍🎓 Student Impact

Anticipated positive student impacts:

- Consistent K-5 and 6-8 configuration
    - According to Jefferson-Houston and Patrick Henry 6-8 students in focus groups and surveys, they want a more authentic middle school experience, as well as access to additional electives and sports. Shifting to a new middle school model provides both of these
- Parity of middle school offerings
    - Choices from an expanded range of electives, enrichment, and co/extra-curricular activities across all 4 middle schools
- Opportunity for small learning communities
    - Spreading all 6-8 students across three campuses could results in:
        - Strong student-teacher relationships
            - Patrick Henry and Jefferson-Houston focus group insights supported educational research that K-8 schools offered a level of relationship support and the ease of transition from fifth to sixth grade that is not supported in insights from the comprehensive middle schools
            - K-8 students, teachers, and families saw value in their small learning community
        - Increased learner-centered experiences
            - K-8 students reported experiencing learner-centered instructional experiences more often than ACPS students in 6-8 schools. It is possible this model would lead to small learning communities, which could lead to more learner-centered experiences
        - Increased student satisfaction
            - K-8 students reported higher levels of overall satisfaction with their experience in ACPS than students in a 6-8 middle school. It is possible this model would lead to small learning communities, which could lead to higher satisfaction

Anticipated negative student impacts:

- Current middle school overutilization
    - Middle school enrollments would not drop below 1,000 students
    - Fails to anticipate 40% increase in 10-14 age cohort predicted by census.
- Eliminates opportunities for K-8 multi-age activities
- Elementary student transitions
    - K-5 students in the K-8s will move to elementary schools in the transition, impacting their transportation, before and after-school schedules, and school community relationships with peers and siblings

Model 5 Current and Projected Enrollment Table 1

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry Middle	1,021	1,032	**11**
Jefferson-Houston Elementary	528	534	**6**
George Washington Middle	1,360	1,635	**275**
Francis Hammond Middle	1,511	850	**-661**
Other ACPS K-5 Elementary Schools	7,122	7,617	**495**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

The two middle schools are projected to reach their greatest number of students in 2027, 3,520, approximately 250 students more than in FY2024 as reported in the CIP Budget presentation to the Board on December 6, 2023. Francis C. Hammond Middle enrolled 1,511 and George Washington Middle School enrolled 1,360 students as of September 30, 2023 as reported in the School Quality Profile report to the Virginia Department of Education. Both schools are over 100% utilization of maximal capacity but are within the ideal utilization range of 90-110% of maximal capacity as determined by ACPS formula. By 2027, ACPS staff predict that middle school seats will be over utilized at 117.77% of maximal capacity.

If ACPS set student enrollment close to the functional capacity (.8 utilization of seats) at or just above 900 students in the current George Washington and Francis C. Hammond middle schools, and 854 students at Patrick Henry, this would create smaller middle

school communities more aligned with generally accepted best practices for this age group as found in research and in guidance from the Virginia Department of Education.

In this case, some students would need to move within or across attendance zones to more adequately fill seats across the three middle schools and in the reconfigured elementary school. The reconfiguration of Jefferson-Houston K-8 into an elementary school provides only limited additional elementary capacity in its attendance zone, while the approximately 600 elementary students enrolled at Patrick Henry K-8 would need to be reassigned to other elementary schools in the city. This would also necessitate reassignment of middle and elementary school staff from the K-8 configurations.

Maximal capacity of the reconfigured Patrick Henry K-8 into future Patrick Henry Middle School is projected to remain at 854, but will result in an increase of ~400 total available middle school seats to the division. Similarly, capacity of the reconfigured Jefferson-Houston K-8 into the future Jefferson-Houston Elementary School is projected to result in a decrease of ~400 available elementary school seats to the division. Model 5 minimally addresses the over capacity challenges at both George Washington and Francis. C. Hammond middle schools and adds to the potential over capacity issues in some elementary schools, dependent upon realignment of attendance zones for the division.

Some students attending the K-8 schools would be reassigned based upon their grade level in the reconfigured Jefferson-Houston Elementary and Patrick Henry Middle schools. This model also eliminates the choice of the K-8 configuration, which according to survey results, does have value to those who choose that option. Students who participated in the IB programs would no longer have access to that course opportunity. Some students from middle and elementary elementary schools would move to the newly configured schools, potentially resulting in loss of peer groups and potential increased travel time to and from school.

In Model 5:

1) Middle school maximal capacity is increased by ~600 middle school seats at Patrick Henry, but approximately 786 elementary students will need to be reassigned to other elementary schools.

2) Elementary school maximal capacity is increased by ~200 at Jefferson-Houston, but approximately 161 middle school students will need to be reassigned to other middle schools.
3) The net gain in division middle school maximal capacity is approximately ~425 seats and the net loss of division elementary maximal capacity is approximately 400 seats.

👩🏻‍🏫 Staffing Impact

Staffing impacts would be felt in 4 ways:

- At Patrick Henry: hiring additional middle school staff
- At George Washington and Francis C. Hammond: reallocating some middle school staff to Patrick Henry
- At Jefferson-Houston: reallocating Patrick Henry elementary staff and/or hiring additional elementary staff
- At local elementary schools: reallocating Patrick Henry elementary staff elsewhere in the district

Anticipated positive staffing impacts:

- Maximizes certified and noncertified staff resource
    - economy of scale in that elective teachers can be shared across 3 middle schools
    - Allows sharing of part-time staff across schools with a more equitable schedule
- Opportunity to engage in aligned professional learning with all middle school staff
- Opportunity for teachers to work in a team
- Opportunity for a common middle school schedule
    - makes staff and student transfers an easier and more predictable adjustment

Anticipated negative staffing impacts:

- Does not maintain small K-8 environment
    - K-8 staff reported their small, familial environment as a primary strength that led to high satisfaction and strong relationships. This may be difficult to replicate when middle school teachers in K-8 schools are transferred to 1703

Beauregard, as Francis C. Hammond and George Washington staff did not report similar findings.

- Access to certified and noncertified staff
    - Consolidation into 4 schools may result in some positions, classified and professional, being eliminated
    - If teachers lack professional licenses to teach in middle school, they may need to move to elementary schools
    - Staff who specifically are working in K-8s because of their commitment to the program may not want to work in either a K-5 or 6-8 environment.

Model 5 Current and Projected Staffing Table 3

	Current FTE	Projected 2027 FTE	Gain/Loss
Patrick Henry Middle	93.48	109.25	**15.77**
Jefferson-Houston Elementary	85.00	54.81	**-30.19**
George Washington Middle	149.00	173.09	**24.09**
Francis Hammond Middle	154.88	89.97	**-64.90**
Other ACPS K-5 Elementary Schools	745.66	782	**36.54**
Total	**1,228.01**	**1,209.33**	**-18.69**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

Model 5 Current and Projected Salary Costs Table 4

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry Middle	$7,923,315.00	$10,132,877.23	**$2,209,562.23**
Jefferson-Houston Elementary	$7,186,836.00	$4,525,952.23	**-$2,660,883.77**
George Washington Middle	$13,692,357.00	$16,054,664.02	**$2,362,307.02**
Francis Hammond Middle	$14,493,087.00	$8,345,102.95	**-$6,147,984.05**
Other ACPS K-5 Elementary Schools	$61,561,684.05	$64,585,127.79	**$3,023,443.73**
Total	**$104,857,279.05**	**$103,643,724.22**	**-$1,213,554.83**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

👪 Family Impact

Anticipated positive family impacts:

- Increases home proximity to school in a feeder pattern model
- After-school program access
    - Opportunity for before- and after-school programming for middle schoolers that aligns with daylight work schedules

Anticipated negative family impacts:

- Eliminates K-8 choice for families
- Multiple schedules
    - Challenge coordinating schedules and transportation if their children are now attending different schools.

The impact on families of this model is significant. Parents would lose a choice option for young people who might feel better supported in a K-8 environment (both parents and students at Jefferson-Houston and Patrick Henry indicated that they liked their school). The reconfiguration of the two K-8 schools will result in reassignment of current elementary families at Patrick Henry K-8 and current middle school families at Jefferson-Houston K-8. Model 5 may somewhat lessen overutilization at Francis C. Hammond and George Washington Middle Schools but may increase overutilization in elementary schools, some of which already are over utilized. These changes in school assignment may result in some elementary families being assigned to schools farther away from their homes and that can create challenges in before- and after-school care, transportation, participation in school events, and engagement with teachers.

If small learning communities are adopted in all 3 middle schools (matching the developing high school program) this offers the opportunity to build more personalized family relationships, improve home-school communication and engagement in school events, and improve attention to student achievement.

The loss of the K-8 school option will impact families that have valued having siblings in one school with all of the benefits of being able to work with one school staff over nine years, to build deep relationships with other families, and the opportunity for children to be in a small school community as middle schoolers.

Model 5 Programmatic Impact

Anticipated positive programmatic impacts:

- Parity of middle school offerings
    - Choices from an expanded range of electives, enrichment, and co/extra-curricular activities across all three middle schools
    - Consistency across core courses
    - Enables consistent resource access libraries and learning technologies
- Team structure
    - All ACPS 6th-8th graders could be grouped into interdisciplinary teams supported by teachers working in a consistent grade-level team structure.
    - Teacher teams could analyze student data, and provide consistent access to multi-tiered intervention support.
- High quality learner-centered programming
    - Middle school teachers would be able to determine the best practices and programs available in each current 6-7-8 configuration and use that information to determine consistent instructional programming responsive to student needs
- Consistent middle school schedule
    - One schedule that allows schools to share program staff when needed, offer a chance for students to enroll in virtual classes across schools, and create flex time for project-based learning, interdisciplinary programs, and team-based small learning communities.

Anticipated negative programmatic impacts:

- Elimination of the IB Middle Years Program
    - This offering is popular amongst Jefferson-Houston families and staff

If an additional 6-8 middle school is opened using the current Patrick Henry K-8 school, Model 5 will provide the opportunity to scale programs across 6-7-8 grades, align all middle staff with instructional programs in three middle schools and implement coherent, consistent instructional programs, regardless of the school in which students are enrolled. It also eliminates some of the positive outcomes pinpointed by students, staff, and parents of being in the K-8 model but does increase overutilization of some elementary schools.

The development of three middle schools in Model 5 offers an opportunity to somewhat reduce the numbers of students attending the two large middle schools. It also provides an opportunity to create theme-based, small learning communities in all three middle schools to align with the new high school model. Reduction of school size creates the opportunity for more personalized learning experiences and relationships with teachers and peer groups. It also provides an opportunity to ensure that middle schools have more comparable demographics and parity of access to programs. Research on size of school does point to increased achievement of students in schools that ideally serve no more than 600-900 students. In this model one of the three middle schools is below a 900 student maximal capacity, but the two large middle schools are both still ~400 students above the upper end of the VDOE and evidence-based recommended middle school enrollment.

Model 5 Facilities & Operational Impact

Operating Staff: Salaries for custodians and cafeteria staff are direct costs to the individual school. Maintenance workers and IT support salaries tend to be shared costs between all locations and include materials in the form of work order costs. The estimated costs for Patrick Henry and Jefferson-Houston would remain largely the same. Custodial staffing levels are typically calculated based on the square footage of cleanable space per custodian.* For nutrition services personnel, placement and evaluation often rely on the Meals per Labor Hour (MPLH) productivity scales.** Variations in staffing may occur if additional cafeteria employees are needed to support a full elementary school or to accommodate increased student numbers at the middle school level. Similarly, an extra day custodian might be required to act as a porter during daily operations, especially with a larger student population.

*Source: APPA-Leadership in Educational Facilities Book of Knowledge

**Source: Staffing Guidelines for On-Site Production, Pannell-Martin 1999

Routine and Preventative Maintenance: Work order costs would continue as they would with both facilities operating as K-8. The work order costs would likely continue to increase over time in alignment with the age of the buildings.

Utility costs: The utility costs would remain largely unchanged, with Jefferson-Houston operating at approx $193,000 and Patrick Henry operating at $254,000 annually. The average utility costs between both facilities is about $2.08 per sq ft.

Security: Additional equipment would be required for a full middle school model, rather than a K-8. The improvements would include security offices, potentially additional fencing and entry vestibule improvements.

Patrick Henry Capital Costs: The capital costs associated with transforming Patrick Henry into a middle school primarily involve updates to accommodate the specific needs of middle school students. This would include adjusting the size and height of fixtures, acquiring new furniture, and reconfiguring rooms to support Career and Technical Education (CTE) programs typical of middle schools. Currently, as a K-8 facility, Patrick Henry includes spaces for art, science, music, and limited CTE offerings for middle school students. To fully transition to a middle school, additional spaces will be required for expanded CTE programming, as well as extra offices for Instructional Resource personnel.

Jefferson-Houston Capital Costs: There would be less capital expenditures with transforming Jefferson-Houston to an elementary school. Classroom reconfiguration

would be limited to the previous upper grade level rooms and mostly include furniture changes and some fixture adjustments depending on the grade levels to be assigned.

For purposes of this report, we are using an estimated allowance of $25,000 per transformed classroom for updated flexible furnishings and minor finish work. There is potential transformation of 10 classrooms for each location based on site maps provided by ACPS, therefore the total estimated potential modernization cost of $500,000.

Model 5 Implementation Timeline

Model 5 Implementation Timeline Table 7

	Year 1	Year 2	Year 3	Year 4	Year 5
Construction done over summer Assuming no Grand					
Create grandfathering policy for George Washington and Francis C. Hammond					
Grand opening of Patrick Henry Middle school					
Grandfather window for existing students in George Washington or Francis C. Hammond					

Model 6

Model 6 creates three 6-8/K-8 Feeder Patterns. Patrick Henry and Jefferson-Houston remain K-8s, and existing ACPS elementary schools becomes a K-8, and 1703 Beauregard becomes an 800 capacity middle school.

Model 6 Key Findings

How many student seats would be available?

	Projected 2027 Enrollment	Capacity	Model Impact
Elementary Impact	8,148 *All ACPS PK-5*	8,196 seats *PK-5 maximal* 7,376 seats *PK-5 functional*	**48 extra seats** ***PK-5 maximal*** **-772 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	3,989 seats *6-8 maximal* 3,391 seats *6-8 functional*	**469 extra seats** ***6-8 maximal*** **-129 seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.

How many additional full-time equivalency (FTES) would be needed?

Current FTES	Future FTES	Gain/Loss
1,228.01	1,243.05	**15.04**

What would be the approximate annual salary cost for staff?

Current Salary	Future Salary	Gain/Loss
$104,857,279.05	$106,365,601.78	**$1,508,322.73**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Green denotes their is qualitative and quantitative evidence to support alignment with the Division's Vision, Mission, and Strategic Goals

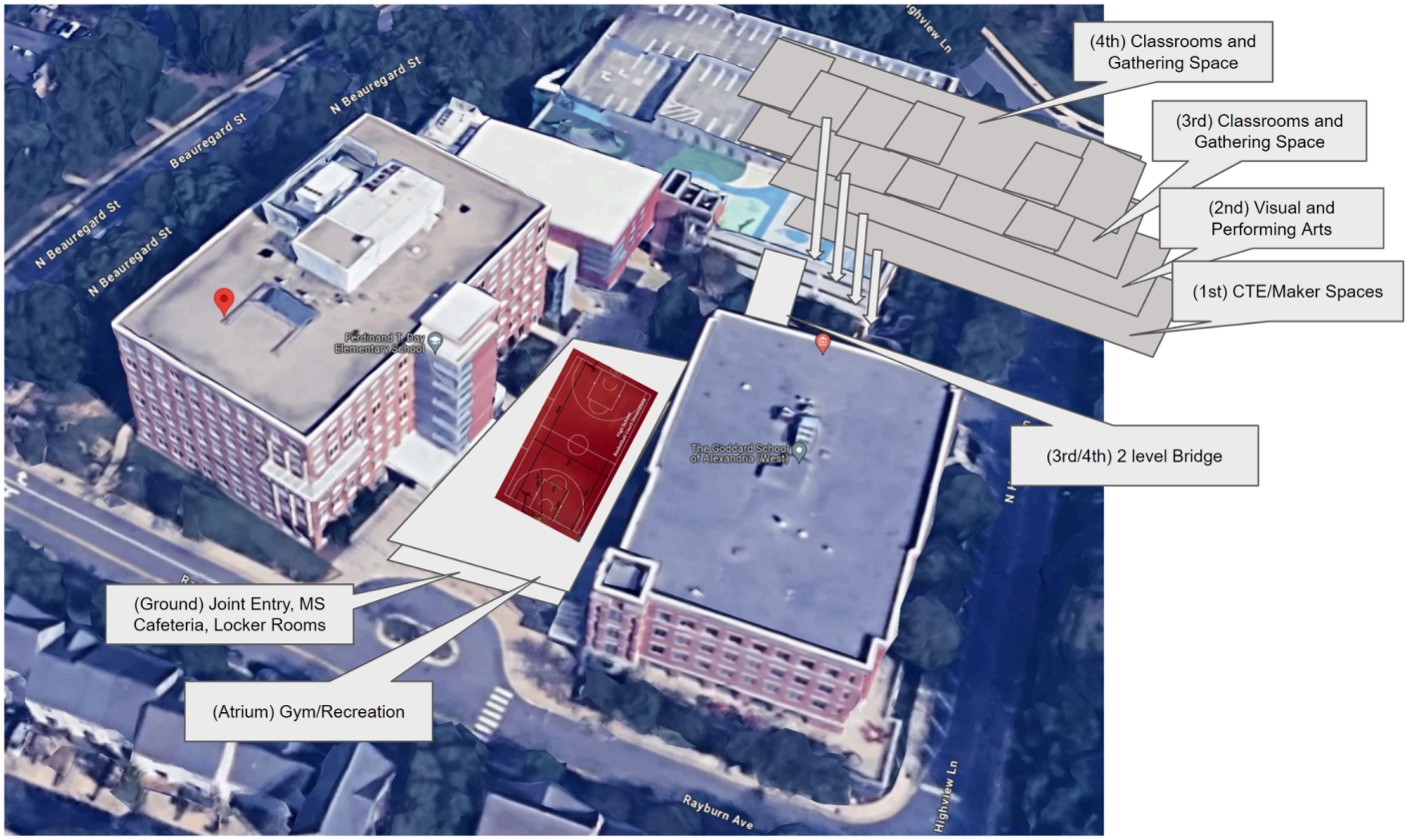
Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	$749,410
Facilities Costs	$871,216
Capital Costs	$26,102,042

Model 6 Overview

In Model 6, 1703 Beauregard is expanded, using space between the 1701 and 1703 buildings and one-third of the parking garage below the upper deck, becoming an 800-student capacity middle school. An atrium addition between the buildings creates a shared secure entry and gym/recreation space for Ferdinand T. Day and the new middle school.

An atrium connecting the two buildings would offer Gym/Indoor Recreation space above a shared secure entry, a cafeteria, and locker rooms. A bridge linking the third and fourth floors of 1703 would span the driveway and allow utilization of 12,800 square foot areas on every floor of the garage below the top deck (51,200 square feet total). The adaptive re-use of the parking structure models an environmental commitment while saving construction time and costs. (see https://images.app.goo.gl/NPqbBFTG1CsbDvoK6 https://www.lhparch.com/new-rochelle-library)



This third middle school combines with the commitment to making individually appropriate choices, now offered through the Academies of Alexandria City High School,

being extended to all division learners. Parents can opt for the middle school design of sixth through eighth grades functioning in separate environments, or they can choose the traditional—and strongly supported by research—K-8 program that offers adolescent responsibility for the younger and more vulnerable, and allows students to go through their K-12 career making only a single building switch.

Model 6 offers a clear, coherent learning focus that differentiates K-8s from common contemporary school structures but which fit on a continuum of choice options already available in Alexandria City Public Schools.

In this model, each of the three feeder patterns would offer families the choice of both K-8 and K-5/6-8 configurations. An existing ACPS Elementary School would become a third K-8 school, and all three K-8s would be themed, for example, with one based on Montessori concepts, one STEAM-dedicated, and one Performing Arts-dedicated.

Patrick Henry, Jefferson-Houston, and an additional K-8 school are reimagined as research-based school communities that serve learners through a unique K-8 interdisciplinary curricula supported by a vertically-aligned multiage organizational structure. Middle school K-8 and 6-8 programs will support PBL-driven small learning communities aligned with the high school's academy model curricula.

In 2027, middle school enrollment is expected to be 3,520 students per CIP projections. Model 6 will create a baseline middle school functional capacity of 3,480, though George Washington and Francis C. Hammond could each accommodate an additional 100 students until the enrollment bubble moves through middle school. George Washington and Francis C. Hammond middle schools would enroll 920 and 1,117 students respectively.

The division's elementary capacity would decrease by 200 K-5 seats lost at an existing, yet-to-be determined ACPS elementary school. The increase in middle school seats would more than address the trend data of middle school overutilization that is projected through 2034 and that was shared with the Board in the December 6, 2023, CIP Budget presentation.

Model 6 would allow significant repurposing of space in George Washington and Francis C. Hammond that could be used for division offices, Chance for Change, and other programs. It would, however, eliminate the division's swing space.

1. Create three middle school feeder patterns, each with one middle school and one themed K-8 school.
    a. Jefferson-Houston and Patrick Henry remain K-8 schools with a total capacity of 1,588. (854 PH and 734 JH - 443 in 6-8 total)
    b. A yet-to-be determined ACPS elementary school becomes K-8 school (200 6-8 capacity, 500 Pk-5 capacity)
    c. George Washington and Francis C. Hammond remain middle schools with a functional capacity of 920-1,117 students (2,037 total)
2. Convert and expand 1703 Boulevard into a new middle school (capacity 800) students on a shared block with a Ferdinand Day K-5 school in 1701 Beauregard.
3. Construct a two-level atrium connecting the two Beauregard schools, with an expanded middle school cafeteria, a conjoined secure entry, and locker rooms at the street level, with a 30-foot-high glass roofed gym and recreation space above.
    a. Ground Floor: 13,000 sq ft:
        i. 2,000 sq ft entry and offices
        ii. 5,000 sq ft Cafeteria
        iii. 4,000 sq ft Locker Rooms
        iv. 2,000 sq ft restrooms and circulation
    b. Atrium Floor 11,500 sq ft:
        i. 4,000 sq ft Basketball Court area
        ii. 4,000 sq ft additional fitness areas (turf area, fitness zone, aerobic zone)
        iii. 2,000 sq ft restrooms and circulation
        iv. (plus) 1,500 sq ft open above entry
    c. Bridge/Garage (additional facilities proposed here would open up 6 rooms in existing building and allow significant expansion of the library)
        i. Two-story bridge connecting third and fourth floors of 1703 with third and fourth levels of garage.
        ii. One-third of the the four levels of the garage (closest to the school) would be converted to learning spaces. (12,800 square feet each).
            1. First Level: CTE and Maker Spaces (Mechatronics, Tool Crib, Culinary Learning Center, Workspace). Easily accessible to the public through garage.
            2. Second Level: Visual and Performing Arts Spaces (Visual Arts, Vocal and Instrumental Music, Dance, Theater). Easily accessible to the public through the garage.

3. Third Level:
    a. 4 Classrooms 1,000 sq ft (4,000)
       Classrooms should have glass garage doors to allow flexibility and bring natural light into the interior
    b. 2 Classrooms 1,200 sq ft (2,400)
       Classrooms should have glass garage doors to allow flexibility and bring natural light into the interior
    c. 8 Student single restrooms 480 sq ft (10x6 with sink and toilet))
    d. Teacher office/Staff restroom 800 sq ft
    e. Circulation and Gathering Space 5,120 sq ft
4. Fourth Level:
    a. 4 Classrooms 1,000 sq ft (4,000)
       Classrooms should have glass garage doors to allow flexibility and bring natural light into the interior
    b. 2 Classrooms 1,200 sq ft (2,400)
       Classrooms should have glass garage doors to allow flexibility and bring natural light into the interior
    c. 8 Student single restrooms 480 sq ft (10x6 with sink and toilet)
    d. Teacher office/Staff restroom 800 sq ft
    e. Circulation and Gathering Space 5,120 sq ft

iii. Part of the top level of the garage would need a level structure to create outdoor space for middle school activities

iv. New constructed spaces would allow existing spaces in 1703 currently designed for Cafeteria and Fitness to become classrooms or collaborative learning spaces. In addition, the library could be expanded to adjacent areas or expanded in a distributed way

4. Upon the expiration of the current first-floor lease at 1703 Beauregard, the school could expand or a micro-school could be developed
5. Parent K-8 options expand offering programs substantively different in scope than traditional K-5 and 6-8 programs
6. This model allows significant reuse of space in George Washington and Francis C. Hammond that could be used for division offices, Chance for Change, etc.
7. Model 6 is less disruptive to students and families across the entire division than other models, except Model 1 which does not address capacity needs at all

8. Construction is primarily based in existing structures

Model 6 Human Impact

👩🏾‍🎓 Student Impact

Model 6 is designed to alleviate the impact of overutilized schools. In their current state the 6-8 middle schools, Patrick Henry K-8, and some elementary schools are currently over functional capacity and, in many cases, even well beyond maximal capacity. When schools exceed the industry standard functional capacity (.9 for elementary schools and .8-.85 for secondary schools of maximal capacity), then students and staff are living in overutilized school environments. See appendix for research on student impacts of overutilization.

Model 6 Current and Projected Enrollment Table 1

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry K-8	1,021	1,032	**11**
Jefferson-Houston K-8	528	534	**6**
George Washington Middle	1,360	994	**-366**
Francis Hammond Middle	1,511	1,158	**-353**
Reimagined K-8 School	700	700	**0**
ACPS K-5 Elementary Schools	6,422	6,450	**28**
1703 Beauregard Middle	0	800	**800**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

In reviewing this model, the consulting team identified an opportunity to balance enrollments to reduce overutilization. In this model, there is an opportunity to set student enrollment close to the functional capacity (80-85% utilization of seats) at George Washington and Francis C. Hammond Middle Schools and at full maximal capacity (100% utilization of seats) for the three K-8 Schools. Because the maximal capacity of the three proposed K-8s is within the 600-900 maximal middle school capacity range, all offer flexible learning spaces, and are aligned with generally accepted best school design practices for this age group as found in research and in guidance from the Virginia

Department of Education, these three schools are viewed as capable of comfortably supporting enrollment at maximal capacity. (See Table 2). The addition of the proposed 1703 Beauregard Middle School and the reconfiguration of an existing elementary school as a K-8 school brings functional capacity for middle school student seats to 3,480, just 40 middle school fewer seats than needed in 2027 (3,520 enrollment projected), the high point of middle school enrollment over the next ten years. The projected enrollment for 2027 is also well below the maximal capacity of the middle schools and K-8 schools. According to the CIP data presented on December 6, 2023, to the School Board, it is estimated that by 2027, the division will be at the highest utilization of middle school capacity during the 2024-2034 CIP planning schedule. Model 6 places elementary school grades K-5 just under maximal capacity in 2027. The table below explores what this could look like.

Model 6 Current and Alternative Middle School Projected Enrollment Table 2
In this alternative, projected enrollment per school is calculated based on 2027 projections *and* school capacity.

	Current Enrollment	Alternative Projected 2027 Enrollment	Target Capacity
Patrick Henry K-8	1,021	854	854
Jefferson-Houston K-8	528	734	734
George Washington Middle	1,360	920	920
Francis Hammond Middle	1,511	1,117	1,117
Reimagined K-8 School	700	700	700
ACPS K-5 Elementary Schools	6,422	6,543	7,192
1703 Beauregard Middle	0	800	640
Total	**11,542**	**11,668**	**12,157**

Source: CIP Budget Presentation to the Board on Dec 6, 2023

This alternative keeps enrollment under 100% maximal capacity use along the CIP projection from 2024-2034. Additional students above functional middle school capacity in 2027 can be absorbed to George Washington and Francis C Hammond middle schools since the three smaller K-8 schools are already at maximal capacity.

The movement of students is made less intrusive at the middle school level because one-third of the school population changes every year. However, student mobility research indicates that moving to a new school is most impactful on students put at risk

in middle schools. In Model 6, approximately 1,000 students (670 rising 7th and 8th-grade students and 330 rising 6th-grade students) would move from George Washington and Francis C. Hammond middle schools to the new 1703 Beauregard St middle school and to a reimagined K-8 in an existing ACPS elementary school. Elementary students enrolled at Patrick Henry K-8, which enrolled 1,058 students (September 30, 2023 VDOE SQP data) over the 854 student maximal capacity, would move to elementary schools with available space.

Changes in a student's assignment to a school could impact family relationships and connections to school, especially for families that are challenged by socio-economic factors that impact their capability to routinely engage with the school staff and participate in activities. However, this model decreases the enrollment in the two large middle schools and will reduce overutilization which can be a key root cause of academic and social-emotional issues that impact students and their families. The enrollment decrease also provides more opportunities for staff to build stronger relationships with families.

This model also provides a continuum of high-quality instructional programs of choice throughout the division so that no matter where a student attends school. Parents have different perspectives on what their children need to be successful in school. Comprehensive middle schools and elementary schools provide a range of programmatic opportunities, particularly in middle school. K-8 schools offer smaller, more personalized communities and opportunities that are more focused on vertical themes across K-8. Key in Model 6 is attention within each school to building out a learning focus on programs and experiences grounded in the Vision, Mission, and Portrait of a Learner for ACPS and engaging families in helping the school to build out rich learning experiences.

In the systemic implementation of Model 6, parents should find that every school, no matter what geographic location or demographic profile, offers their children a high-quality education that aligns with the small learning community model now in place at Alexandria City High School.

👩🏻‍🏫 Staffing Impact

Model 6 Current and Projected Staffing Table 3

	Current FTE	Projected 2027 FTE	Gain/Loss
Patrick Henry	93.475	118.92	**25.45**
Jefferson-Houston	85	61.50	**-23.50**
George Washington	149	105.23	**-43.77**
Francis Hammond	154.875	122.56	**-32.32**
Reimagined K-8 School	80.2	80.65	**0.45**
ACPS K-5 Elementary Schools	665.46	670	**4.05**
1703 Beauregard		84.67	**84.67**
Total	**1,228.01**	**1,243.05**	**15.04**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

Model 6 Current and Projected Salary Costs Table 4

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry	$7,923,315.00	$10,068,354.06	**$2,145,039.06**
Jefferson-Houston	$7,186,836.00	$5,206,749.21	**-$1,980,086.79**
George Washington	$13,692,357.00	$9,760,575.96	**-$3,931,781.04**
Francis Hammond	$14,493,087.00	$11,367,624.56	**-$3,125,462.44**
Reimagined K-8 School	$6,615,732.53	$6,828,344.54	**$212,612.01**
ACPS K-5 Elementary Schools	$54,945,951.52	$55,280,120.22	**$334,168.70**
1703 Beauregard	0	$7,853,833.23	**$7,853,833.23**
Total	**$104,857,279.05**	**$106,365,601.78**	**$1,508,322.73**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

The potential impact of Model 6 on staff includes being reassigned to a different school based on division needs or licensure requirements, possibly having some positions eliminated because of program consolidation, and travel time being increased or decreased depending upon school assignment. In particular, reassignment of staff to the new middle school and new K-8 school would need to occur.

Staff also would need to be actively engaged in creating a unique curriculum specific to K-8 schools as well as working to define a vertical thematic focus such as STEAM, Montessori-like, or Performing Arts. Staff in middle schools would engage in work to build out programs aligned with high school academies and integrated Project-based Learning.

Family Impact

Model 6 proposes the reorganization of feeder patterns, each anchored by several elementary schools, one K-8, and one middle school - all of which feed into the newly reimagined connected high school model. In this model a new middle school is developed on the 1703 Beauregard St site, an existing elementary school is reconfigured into a K-8 school, and Patrick Henry and Jefferson-Houston K-8s remain in place along with Francis C. Hammond and George Washington Middle Schools.

The two large comprehensive middle schools' enrollments decrease in Model 6. Students from the 6-8 middle schools would move to the new 800 student middle school in 1703 Beauregard St and the reconfigured K-8 with 200 middle school seats. Because the over-capacity Patrick Henry K-8 currently has ~1,058 students, it will be necessary for ~200 elementary students to move to schools with available seats as well. Approximately ~500 middle school students would move from George Washington and Francis C. Hammond to the new middle school and the new K-8 school. Depending upon selected strategies for moving students, some families might find the distance reduced to and from their child's assigned schools and others may find that they have farther to travel.

Changes in a student's assignment to a school could impact family relationships and connections to school, especially for families that are challenged by socio-economic factors that impact their capability to routinely engage with the school staff and participate in activities. However, this model decreases the enrollment in the two large middle schools and will reduce overutilization which can be a key root cause of academic and social-emotional issues that impact students and their families. The enrollment decrease also provides more opportunity for staff to build stronger relationships with families.

This model also provides a continuum of high-quality instructional programs of choice throughout the division so that no matter where a student attends school. Parents have different perspectives on what their children need to be successful in school. Comprehensive middle schools and elementary schools provide a range of programmatic opportunities, particularly in middle school. K-8 schools offer smaller, more personalized communities and opportunities that are more focused on vertical themes across K-8. Key in Model 6 is attention within each school to building out a learning focus on programs and experiences that is grounded in the Vision, Mission, and Portrait of a Learner for ACPS and engaging families in helping the school to build out rich learning experiences.

In the systemic implementation of Model 6, parents should find that no matter what school, in any geographic location, with any demographic, their children receive a high quality education in feeder pattern schools that align with the small learning community model now in place at the high school.

Model 6 Programmatic Impact

Anticipated positive programmatic impacts:

- Team structure
    - ACPS 6th-8th graders at the 3 middle schools could be grouped into interdisciplinary teams supported by teachers working in a consistent grade-level team structure.
    - Teacher teams could analyze student data, and provide consistent access to multi-tiered intervention support.
- Brings the instructional focus of the division to personalized, project-based, learner centered experiences in all schools
    - Aligns to the high school academies model
- Opportunity to engage in aligned professional learning with all middle school staff
- Consistent middle school schedule in 3 middle schools
    - One schedule that allows schools to share program staff when needed, offer a chance for students to enroll in virtual classes across schools, and create flex time for project-based learning, interdisciplinary programs, and team-based small learning communities.
- Preservation of the opportunity for the IB Middle Years Program
    - This offering is popular amongst Jefferson-Houston families and staff

Anticipated negative programmatic impacts:

- Imparity of middle school offerings
    - Students in K-8s will still have fewer choices from a range of electives, enrichment, and co/extra-curricular activities
    - K-8s may have inconsistent resource access libraries and learning technologies

Model 6 provides the opportunity to:

- scale consistent and comprehensive electives and core programs in middle schools, increasing access and opportunity for all middle school students to access strong CTE, visual and performing arts, health and wellness, and core classes.
- develop and support theme-based small K-8 learning communities that are vertically aligned, multiage, and focused on interdisciplinary curricula that are more

narrow in scope than the comprehensive middle schools but offer a more personalized program for students.

- align elementary, middle, and K-8 school staff across instructional programs to maximize efficient deployment of staff
- provide elementary and middle school seats to keep the division at or under maximum capacity through 2034 which reduces overutilization and offers all students the chance to work in a smaller school environment responsive to their social-emotional and academic needs.
- retain the positive outcomes pinpointed by students, staff, and parents of being in the K-8 model
- allow the division to fully review and align the continuum of program choices available to parents and students

Model 6 Facilities & Operational Impact

Operating Staff: To determine the number of custodial staff required for the entire facility, we used the national average square footage of cleaning space per custodian as reported by the Council of the Great City Schools (CGCS) in their *Measuring for Results* report from October 2023. This calculation is based on data from the 2021-2022 school year, which indicates an average of 26,557 square feet per custodian. The total square footage of 1701 and 1703 Beauregard St., including the proposed additions (excluding the space in 1703 leased to The Goddard School of Alexandria), amounts to 248,035 square feet. Therefore the proposed custodial staffing would be 9.5 FTEs for the entire facility. The district would retain the existing custodial at Ferdinand T. Day (1701 Beauregard St.) at approximately 3.5 FTEs, therefore an additional 6 FTEs would need to be added at an approximate annual cost of about $450,310. The cost of the additional custodial equipment and supply would be about $39,100.

The cafeteria between the two facilities would be centrally located and the existing cafeteria staff from Ferdinand T. Day would be retained. There would be a need for approximately 1.5 additional FTEs to staff Nutrition Services within the newly combined school.

With a facility of this size, additional School Resource Officers (SRO) will be needed for onsite monitoring of students, especially at the middle school level. The approximate cost of a School Resource Officer with burden is $65,000. It is not known if there are existing SROs at Ferdinand T. Day that will carry over to the new facility, but the annual salary cost or 4 SROs would be about $260,000

Routine and Preventative Maintenance: The methodology used to predict the annual maintenance (work order) costs is based on an average per square foot work order cost calculated from the existing two K-8 facilities (Jefferson-Houston and Patrick Henry) and the existing two middle schools (Francis C. Hammond and George Washington), which amounts to $1.22 per square foot. Applied to the proposed facility in Model 6, this equates to an approximate annual maintenance cost of $317,242. Please note that this cost per square foot is applied to the entire facility including the Goddard School leased space as the District is responsible for the upkeep of the entire building. Additionally, this cost may vary depending on the age of systems, such as HVAC or roofing. Additionally, the initial years of opening a renovated facility often incur higher work order costs as teachers and staff settle into the facility and request personal improvements to their spaces

Utility costs: The methodology used to predict the annual utility costs is based on an average per square foot utility cost calculated from the existing two K-8 facilities (Jefferson-Houston and Patrick Henry) and the existing two middle schools (Francis C. Hammond and George Washington), which amounts to $2.13 per square foot. Applied to the proposed facility in Model 6, this equates to an approximate annual utility cost of $553,874. Please note that this cost per square foot is applied to the entire facility including the Goddard School leased space and it is assumed the District is responsible for the utility cost of the entire building.

Security*: The proposed addition to the facility would include a single entry point for both buildings, which will streamline the secure entry of students, visitors and staff.

Capital Costs:** The approximate budgetary cost for the construction and renovation required for Model 6 is $26,102,042. This estimate includes about 20% in soft costs (such as construction management and design support) and an allowance of $2.5M for furnishings, landscape improvements to existing property and minor improvements and adjustments to the existing spaces within 1701 and 1703 Beauregard St not included in the construction costs. This cost is contingent on a full engineering and design for the proposed construction and assumes both existing buildings are currently built out with classrooms and spaces as shown on the site plans provided by ACPS.

*Sources: MOU Between The Alexandria City School Board And The Alexandria Police Department, July 2023 and ACPS 2024-2025 Support Salary Schedule
**RS Means construction costs for Alexandria, VA; site plans for 1701 and 1703 Beauregard St. provided by ACPS, and school construction costs per square foot provided by Erickson Hall Construction, San Diego, Calif.

Model 6 Implementation Timeline

Model 6 Implementation Timeline Table 8

	Year 1	Year 2	Year 3	Year 4	Year 5
Locating and setting up swing space for existing Ferdinand T. Day students.					
Engineering and design					
Relocating students to swing space					
Construction of addition					
Opening and first school year					

Model 7

Model 7 creates three 6-8/K-8 Feeder Patterns. Patrick Henry and Jefferson-Houston remain K-8s, an existing ACPS elementary school becomes a K-8, a new middle school is constructed, and 1703 Beauregard becomes available to expand K-5 capacity.

Model 7 Key Findings

How many student seats would be available?

	Projected 2027 Enrollment	Capacity	Model Impact
Elementary Impact	8,148 *All ACPS PK-5*	8,621 seats *PK-5 maximal* 7,394 seats *PK-5 functional*	**473 extra seats** ***PK-5 maximal*** **-389 seats** ***PK-5 functional***
Middle Impact	3,520 *All ACPS 6-8*	4,189 seats *6-8 maximal* 3,560 *6-8 functional*	**669 extra seats** ***6-8 maximal*** **41 extra seats** ***6-8 functional***

The model impact shows the number of seats needed to accommodate the projected 2027 enrollment.

How many additional full-time equivalency (FTES) would be needed?

Current FTES	Future FTES	Gain/Loss
1,228.01	1,243.05	**15.04**

What would be the approximate annual salary cost for staff?

Current Salary	Future Salary	Gain/Loss
$104,857,279.05	$106,365,601.78	**$1,508,322.73**

How would families be impacted?

Increases home proximity to school in a feeder pattern model	
School choices for current K-8 families	
Single school site for current K-8 families	

How would programs and student experience be impacted?

Consistent K-5 and 6-8 configuration	
Aligns to the high school academy model	
Supports implementation of a Profile of an ACPS Learner	
Parity of middle school offerings	
Opportunity for small learning communities	
Middle school teams structure	
Opportunity for learner-centered programming for all middle schoolers	
Consistent middle school schedule	
Alleviate elementary and middle school overutilization	
Opportunities for K-8 multi-age activities	
Preservation of the IB MYP	

Would there be additional facilities, operational, and capital costs?

	Potential Cost
Operational Costs	$1,324,443
Facilities Costs	$749,572
Capital Costs	$119,560,400

Model 7 Overview

In Model 7, a completely new 1,100-seat maximal capacity student middle school is constructed on a new site, creating three feeder patterns. Jefferson-Houston and Patrick Henry will be joined by another existing ACPS elementary school as K-8 schools, offering families in each feeder pattern the choice of K-8 and K-5/6-8 configurations. The three K-8 schools would be themed, with one based in Montessori concepts, one STEAM-dedicated, and one Performing Arts-dedicated research-based multiage program. 1703 Beauregard St is opened as an additional elementary school.

George Washington and Francis C. Hammond middle schools would have "functional" capacity caps of 920 and 1,117 students respectively. The new middle school would have a functional capacity of 900 seats. The new elementary school would have a functional and maximal capacity of 450.

In this scenario, schools with 900 or less students will have enrollments equivalent to their maximal capacity. The older middle schools, George Washington and Francis C. Hammond both exceed 900 students, and student enrollment is projected to not exceed their functional capacity. The VDOE facilities recommendations, along with research, point to a cap of 900 on middle schools and 600 on elementary schools.

This model creates a maximal capacity of 4,189 total middle school seats (includes K-8 and 6-8 seats). There will be 200 fewer elementary seats at the elementary school that is reimagined as a K-8. If the division utilizes 1703 Beauregard as a full-time elementary school, K-5 capacity would increase by 250, effectively solving the K-5 capacity issues through at least 2030. Every parent would have a choice of grade configuration, with increased choice through a robust K-8 themed school alternative in the three middle school feeder patterns.

This third middle school combines with the commitment to making individually appropriate choices, now offered through the Academies of Alexandria City High School, being extended to all division learners. Parents can opt for the middle school design of sixth through eighth grades functioning in separate environments, or they can choose the traditional—research-supported—K-8 program that smaller environments, offers adolescent responsibility for younger children, whose presence "temper[s] a lot of the more robust adolescent issues,"

https://sedl.org/pubs/sedl-letter/v20n01/k-8_schools.html while allowing students to go through their K-12 career making only a single achievement-disrupting building switch.

Model 7 offers a clear, coherent learning focus that differentiates K-8s from common contemporary school structures but which fit on a continuum of choice options already available in Alexandria City Public Schools.

In this model, each of the three feeder patterns would offer families the choice of both K-8 and K-5/6-8 configurations. An existing ACPS elementary school would become a third K-8 school, and all three K-8s would be themed, for example, with one based on Montessori concepts, one STEAM-dedicated, and one Performing Arts-dedicated.

Patrick Henry, Jefferson-Houston, and the new K-8 would be reimagined as research-based school communities that serve learners through a unique K-8 interdisciplinary curricula supported by a vertically-aligned multiage organizational structure. Middle school programs will support PBL-driven small learning communities aligned with the high school's academy model curricula.

1. Model 7 creates three middle school feeder patterns, each with a 900 or 1,000 student middle school and a themed K-8 school.
    a. Jefferson-Houston and Patrick Henry remain K-8 schools with a total maximal capacity of ~1,600 seats (854 PH and 734 JH with ~443 total middle school seats)
    b. An existing ACPS elementary school becomes a K-8 school with a maximal capacity of 700
    c. George Washington and Francis C. Hammond remain middle schools with functional capacities of 920-1,117 students respectively (2,037 total)
    d. A new middle school is built in the city (total functional capacity of ~900 student seats and a maximal capacity of 1100 student seats)
2. 1703 Boulevard is converted into a new K-5 school (total maximal capacity of 450 students)
3. This model would allow significant reuse of space in George Washington and Francis C. Hammond that could be used for division offices, Chance for Change, and other programs. It would, however, if 1703 Beauregard St becomes a full-time elementary, eliminate the division's swing space.

At least one example of an available parcel of land within the City of Alexandria meets the Virginia Department of Education site-size recommendations: 201 Clermont Avenue.

Model 7 Human Impact

👩🏾‍🎓 Student Impact

Anticipated positive student impacts:

- Consistent K-5 and 6-8 configuration across all feeder patterns
    - According to Jefferson-Houston and Patrick Henry 6-8 students in focus groups and surveys, they want a more authentic middle school experience, as well as access to additional electives and sports. Shifting to a new middle school model provides both of these
- Opportunity for small learning communities
    - Patrick Henry and Jefferson-Houston focus group insights supported educational research that K-8 schools offered a level of relationship support and the ease of transition from fifth to sixth grade that is not supported in insights from the comprehensive middle schools. A small 3rd middle school likely would continue to offer this.
    - K-8 students, teachers, and families saw value in their small learning community
- Addresses current middle school overutilization
    - Brings middle school enrollments to ~1000 or fewer students
- Preserves opportunities for K-8 multi-age activities
- Preserves K-8 choice for students
- Provides access to a continuum of elementary-student focused comprehensive, differentiated instructional programs
- Brings the instructional focus of the division on personalized, project-based, learner centered experiences to all schools

Anticipated negative student impacts:

- Will result in reassignment of elementary students from Patrick Henry, and middle school students from George Washington and Francis C. Hammond.

Like Model 6, Model 7 is designed to alleviate the impact of overutilized schools. In their current state the 6-8 middle schools, Patrick Henry K-8, and some elementary schools are

currently over maximal capacity and, in many cases, even well beyond functional capacity. When schools exceed the industry standard functional capacity (.9 for elementary schools and .8-.85 for secondary schools of maximal capacity) then students and staff are living in overutilized school environments. Model 7 also adds seats to elementary capacity which also provides the opportunity to reduce overutilization in elementary schools as well. The impact of overutilized schools is felt academically and social-emotionally by students. See appendix for research on student impacts of overutilization.

Model 7 Current and Projected Enrollment Table 1

	Current Enrollment	Projected 2027 Enrollment	Gain/Loss
Patrick Henry K-8	1,021	1,032	**11**
Jefferson-Houston K-8	528	534	**6**
George Washington Middle	1,360	894	**-466**
Francis Hammond Middle	1,511	1,058	**-453**
Reimagined K-8 School	700	700	**0**
ACPS K-5 Elementary Schools	6,422	6,025	**-397**
1703 Beauregard Elementary	0	425	**425**
New Middle School	0	1,000	**1,000**
Total	**11,542**	**11,668**	**126**

Red highlight denotes cases when maximal capacity would be exceeded based on projected enrollment
Sources: SQP September 30, 2023 enrollment data & CIP Budget Presentation Dec 6, 2023

In reviewing this model, the consulting team identified an opportunity to balance enrollments to reduce overutilization. If the division set student enrollment close to the functional capacity (80-85% utilization of seats) at the current George Washington and Francis C. Hammond Middle Schools and at full maximal capacity (100% utilizations) for Jefferson-Houston and Patrick Henry Middle Schools. The maximal capacity of the two K-8s is within the 600-900 maximal middle school capacity range aligned with generally accepted best practices for this age group as found in research and in guidance from the Virginia Department of Education. (See Table 3). The addition of a new middle school with a 900 seat capacity and the reconfiguration of an existing elementary school as a K-8 school brings maximal capacity for middle school student seats to 4,224, more middle seats than needed in 2027 (3,520 enrollment projected), the high point of middle school enrollment over the next ten years.

According to the CIP data presented on December 6, 2023 to the School Board, it is estimated that by 2027, the division will enroll about 3,520 students in middle school grades alone. This will be the highest utilization of middle school capacity from 2024-2034. In Model 7, up to 1,000 middle students could move schools to fill the new 1703 Beauregard St Middle School and the reconfigured K-8 school based on the projected enrollment in 2027. Jefferson-Houston K-8 also has room to add more middle school students. Model 7 places grades 6, 7, and 8 student enrollment (middle schools and K-8) under functional capacity in 2027. Model 7 places elementary school grades K-5 just under maximal capacity in 2027. The table below explores what this could look like.

Model 7 Current and Alternative Middle School Projected Enrollment Table 2

In this alternative, projected enrollment per school is calculated based on 2027 projections *and* school capacity.

	Current Enrollment	Alternative Projected 2027 Enrollment	Target Capacity
Patrick Henry K-8	1,021	854	854
Jefferson-Houston K-8	528	634	734
George Washington Middle	1,360	894	920
Francis Hammond Middle	1,511	1,058	1,117
Reimagined K-8 School	700	700	700
ACPS K-5 Elementary Schools	6,422	6,134	7,192
1703 Beauregard Elementary	0	425	425
New Middle School	0	900	900
Total	**11,542**	**11,599**	**12,842**

Movement of students is made less intrusive at the middle school level because one-third of a school population changes every year. However, student mobility research indicates that moving to a new school is most impactful on students put at risk in middle schools. In Model 7 approximately 800 students would move from Francis C. Hammond and George Washington to the new 1703 Beauregard St Middle School and to a newly reimagined K-8 (formerly an existing ACPS elementary school). Any enrolled elementary students at Patrick Henry K-8 (which served 1,058 students September 30, 2023 VDOE SQP data) over the 854 student maximal capacity would move to elementary schools with available space.

👩‍🏫 Staffing Impact

Anticipated positive staffing impacts:

- Maximizes certified and noncertified staff resource
    - economy of scale in that elective teachers can be shared across 3 middle schools
- Opportunity to engage in aligned professional learning with all middle school staff
- Opportunity for teachers to work in a team
- Opportunity for a common middle school schedule within the 3 6-8 middle schools
    - makes staff and student transfers an easier and more predictable adjustment
- Differentiates the middle school teaching experience from the K-8 experience giving teachers a distinct choice in teaching opportunity in either K-8 or 6-8
- Provides teachers planning space in classrooms, better aligns student lunch blocks with daily schedule

Anticipated negative staffing impacts:

- Staff transitions
    - Some staff will be transferred to the new middle school and the K-8 model at an existing elementary school

The information in the tables below is based on the projected capacity, needed staff, and average costs for positions staffed in ACPS K-8s. Information is also included in tables for George Washington and Francis C. Hammond Middle Schools as well as the new middle school and an elementary school at 1703 Beauregard St. The following information provides an approximate comparison of staffing costs for Model 7.

Model 7 Current and Projected Staffing Table 3

	Current FTE	Projected 2027 FTE	Gain/Loss
Patrick Henry K-8	93.475	118.92	**25.45**
Jefferson-Houston K-8	85	61.50	**-23.50**
George Washington Middle	149	94.65	**-54.35**
Francis Hammond Middle	154.875	111.97	**-42.90**
Reimagined K-8 School	80.2	80.65	**0.45**
ACPS K-5 Elementary Schools	665.46	625.87	**-39.60**
1703 Beauregard Elementary	0	43.65	**43.65**
New Middle School	0	105.84	**105.84**
Total	**1,228.01**	**1,243.05**	**15.04**

**Operational staff including security guards, cafeteria workers and custodians are not included in this table. Staffing and salary data were provided by ACPS HR for each school.*

Model 7 Current and Projected Salary Costs Table 4

	Current Salary	Projected 2027 Salary*	Gain/Loss
Patrick Henry K-8	$7,923,315.00	$10,068,354.06	**$2,145,039.06**
Jefferson-Houston K-8	$7,186,836.00	$5,206,749.21	**-$1,980,086.79**
George Washington Middle	$13,692,357.00	$8,778,846.81	**-$4,913,510.19**
Francis Hammond Middle	$14,493,087.00	$10,385,895.41	**-$4,107,191.59**
Reimagined K-8 School	$6,615,732.53	$6,828,344.54	**$212,612.01**
ACPS K-5 Elementary Schools	$54,945,951.52	$51,676,411.98	**-$3,269,539.54**
1703 Beauregard Elementary	$0.00	$3,603,708.24	**$3,603,708.24**
New Middle School	$0.00	$9,817,291.54	**$9,817,291.54**
Total	**$104,857,279.05**	**$106,365,601.78**	**$1,508,322.73**

**Salaries do not include benefits. Current student to salary ratios were used to calculate projected 2027 salary costs but do not account for any future salary increases. Other expenses would include stipends for teacher sponsorship of school student activities, teaching an additional period, teacher leadership roles, etc. There is no information available about stipends for elementary school educators.*

Source: ACPS Average Compensation , Council of Greater City Schools https://www.cgcs.org/Page/866

The potential impact of Model 7 on staff include being reassigned to a different school based on division needs or licensure requirements, possibly having some positions eliminated because of program consolidation, and travel time being increased or

decreased depending upon school assignment. In particular, reassignment of staff to the new middle school and new K-8 school would need to occur.

Staff also would need to be actively engaged in creating a unique curriculum specific to K-8 schools as well as working to define a vertical thematic focus such as STEAM, Montessori-like, or Performing Arts. Staff in middle schools would engage in work to build out programs aligned with high school academies and integrated Project-based Learning.

👪 Family Impact

Anticipated positive family impacts:

- Preserves K-8 choice for families
- Preserves option for a single K-8 schedule
    - Prevents the coordinating of schedules and transportation if their children are attending different schools.
- Increases home proximity to school in a feeder pattern model
- After-school program access
    - Opportunity for before- and after-school programming for middle schoolers that aligns with daylight work schedules

Anticipated negative family impacts:

- None

Model 7 proposes the reorganization of feeder patterns, each anchored by one K-8, one middle school, and several K-5 schools, all of which feed into the newly reimagined connected high school model. In this model, a new middle school is developed on a new school site in the city, possibly along the city's southern tier. An existing ACPS elementary school is reconfigured into a K-8 school, and Patrick Henry and Jefferson-Houston K-8s remain in place along with Francis C. Hammond and George Washington Middle Schools. A new elementary school is located at 1703 Beauregard St.

The two large comprehensive middle schools enrollments decrease in Model 7, and ~720 rising 7th and 8th grade students from George Washington and Francis C. Hammond middle schools (along with 380 rising 6th grade students) would move to the new 900-student middle school and the reconfigured elementary into a K-8 with 200 middle school seats. Because the over-capacity Patrick Henry K-8 currently has ~1058 students,

it will be necessary for ~200 elementary students to move to schools with available seats as well. The proposed new elementary school at 1703 Boulevard St provides a potential place where elementary students from the Patrick Henry attendance area could move. Depending upon selected strategies for moving students, some families might find the distance reduced to and from their child's assigned schools, and others may find that they have farther to travel.

Changes in a student's assignment to a school could impact family relationships and connections to school, especially for families that are challenged by socio-economic factors that impact their capability to routinely engage with the school staff and participate in activities. However, this model decreases the enrollment in the two large middle schools and will reduce overutilization which can be a key root cause of academic and social-emotional issues that impact students and their families. The enrollment decrease also provides more opportunities for staff to build stronger relationships with families.

This model also provides a continuum of high-quality instructional programs of choice throughout the division so that no matter where a student attends school. Parents have different perspectives on what their children need to be successful in school. Comprehensive middle schools and elementary schools provide a range of programmatic opportunities, particularly in middle school. K-8 schools offer smaller, more personalized communities and opportunities that are more focused on vertical themes across K-8. Key in Model 7 is attention within each school to building out a learning focus on programs and experiences grounded in the Vision, Mission, and Portrait of a Learner for ACPS and engaging families in helping the school to build out rich learning experiences.

In the systemic implementation of Model 7, parents should find that every school, no matter what geographic location or demographic profile, offers their children a high-quality education that aligns with the small learning community model now in place at the high school.

Model 7 Programmatic Impact

Anticipated positive programmatic impacts:

- Team structure
    - ACPS 6th-8th graders at the 3 middle schools could be grouped into interdisciplinary teams supported by teachers working in a consistent grade-level team structure.
    - Teacher teams could analyze student data, and provide consistent access to multi-tiered intervention support.
- Brings the instructional focus of the division to personalized, project-based, learner centered experiences in all schools
    - Aligns to the high school academies model
- Opportunity to engage in aligned professional learning with all middle school staff
- Consistent middle school schedule in 3 middle schools
    - One schedule that allows schools to share program staff when needed, offer a chance for students to enroll in virtual classes across schools, and create flex time for project-based learning, interdisciplinary programs, and team-based small learning communities.
- Preservation of the opportunity for the IB Middle Years Program
    - This offering is popular amongst Jefferson-Houston families and staff

Anticipated negative programmatic impacts:

- Imparity of middle school offerings
    - Students in K-8s will still have fewer choices from a range of electives, enrichment, and co/extra-curricular activities
    - K-8s may have inconsistent resource access libraries and learning technologies

Model 7 provides the opportunity to:

- scale consistent and comprehensive electives and core programs in middle schools, increasing access and opportunity for all middle school students to access strong CTE, visual and performing arts, health and wellness, and core classes.
- develop and support theme-based small K-8 learning communities that are vertically aligned, multiage, and focused on interdisciplinary curricula that are more

narrow in scope than the comprehensive middle schools but offer a more personalized program for students.
- align elementary, middle, and K-8 school staff across instructional programs to maximize efficient deployment of staff
- provides elementary and middle school seats to keep the division at or under maximum capacity through 2034 which reduces overutilization and offers all students the chance to work in a smaller school environment responsive to their social-emotional and academic needs.
- retains the positive outcomes pinpointed by students, staff, and parents of being in the K-8 model.
- allows the division to fully review and align the continuum of program choices available to parents and students to the Vision, Mission, and Goals in the Strategic Plan as well as the Division's Portrait of a Learner.

Model 7 Facilities & Operational Impact

Operating Staff: To determine the number of custodial staff required for the entire facility, we used the national average square footage of cleaning space per custodian as reported by the Council of the Great City Schools (CGCS) in their *Measuring for Results* report from October 2023. This calculation is based on data from the 2021-2022 school year, which indicates an average of 26,557 square feet per custodian.

- ***New Construction*:** For the purposes of this report, the new construction middle school would be about 155,000 sq ft to accommodate 1,100 students. Therefore, the new middle school would require about 6 Custodial FTEs at a potential cost of $450,310. The cost of the additional custodial equipment and supply would be about $42,300.
- ***1703 Beauregard*:** The custodial FTE requirement would be about 4.5 FTEs at an approximate cost of $337,733 with a supply cost of about $39,100.

The approximate cost of a School Resource Officer (SRO) with burden is about $65,000.

- ***New Construction*:** School Resource Officers (SRO) needed for onsite monitoring of students is generally higher at the middle school level. Therefore, a proposed 5 FTEs will be needed for the location as well as support from the Alexandria Police

Department per the Memorandum of Understanding (MOU) between the Department and ACPS. The cost would be about $325,000.

- ***1703 Beauregard:*** The number of SROs needed at the elementary level tends to be lower than the middle school level. It is not known if there are existing SROs that will carry over to the new facility, but the annual salary cost for 2 SROs would be about $130,000.

Routine and Preventative Maintenance: The methodology used to predict the annual maintenance (work order) costs for the existing facility is based on an average per square foot work order cost, calculated from the existing two K-8 facilities (Jefferson-Houston and Patrick Henry) and the two middle schools (Francis C. Hammond and George Washington).

- **New Construction:** Maintenance costs at a new facility are expected to be lower in the first five years. Therefore, using the lowest per square foot cost among the aforementioned schools, $0.72 per square foot, the estimated annual cost would be approximately $90,721.
- **1703 Beauregard:** Based on the average work order cost per square foot from the existing facilities, which is $1.22 per square foot, the annual maintenance cost is projected to be approximately $170,311.

Please note that this cost per square foot is applied to the entire facility including the Goddard School leased space as the District is responsible for the upkeep of the entire building. Additionally, this cost may vary depending on the age of systems, such as HVAC or roofing. Additionally, the initial years of opening a new or renovated facility there is potential for additional work order costs as teachers and staff settle into the facility and request personal improvements to their spaces.

Utility costs: The methodology used to predict the annual utility costs is based on an average per square foot utility cost calculated from the existing two K-8 facilities (Jefferson-Houston and Patrick Henry) and the existing two middle schools (Francis C. Hammond and George Washington), which amounts to $2.13 per square foot. However, new design and construction will include energy efficiencies that may not be included in

existing facilities. Therefore, for the new facility, the lowest per square foot utility cost between the existing facilities at $1.42 was applied.

- ***New Construction:*** The potential annual utility costs (post construction) would be approximately $220,190. This could vary depending on potential efficiencies achieved from Green school design principles.
- ***1703 Beauregard:*** The approximate annual utility cost for the existing location would be about $268,350. Please note that this cost per square foot is applied to the entire facility including the Goddard School leased space and it is assumed the District is responsible for the utility cost of the entire building.

Security*: The proposed new construction would include a single entry point and modern technology which will streamline the secure entry of students, visitors and staff. Additionally, the existing design for 1703 Beauregard has a secure single entry vestibule built in.

Capital Costs:** The typical cost is approximately $651 per square foot, which includes site acquisition, site development and 30% in "soft costs," which is additional costs outside of construction costs associated with new school construction. The total cost for constructing a new middle school will be assessed at a later time.
Source: Erickson-Hall Construction, *School Construction Costs.* November 2023

To leverage the existing building at 1703 Beauregard Street, it is assumed that heavy modernization is required (includes electrical, lighting, HVAC, all finishes and fixtures. The average cost of such a build out and modernization is about $425 per square foot. According to property records, the facility was constructed in 1999 and the square footage is 82,849 sq. ft., however, the approx. 12,000 is leased space equaling net space of approx. 70,849 sq ft.

Given that the building is currently being used as a charter school and considering its age, it is assumed that light modernization would be appropriate. If this work is to be carried out on approximately 70% of the total square footage, the estimated cost to repurpose the facility as a fully operational middle school would be around $14,000,000.
Source: Ruhnau Clarke Architects (RCA), January 2024

However, it is important to note that the specific cost to retrofit these facilities would be dependent on the layout and current use of space within 1703 Beauregard, which could alter the estimated cost consideration.

*Sources: MOU Between The Alexandria City School Board And The Alexandria Police Department, July 2023 and ACPS 2024-2025 Support Salary Schedule
**RS Means construction costs for Alexandria, VA; site plans for 1701 and 1703 Beauregard St. provided by ACPS, and school construction costs per square foot provided by Erickson Hall Construction, San Diego, Calif.

Potential Cost Impacts Table 8

Item	New Construction Middle School	Remodel 1703 N. Beauregard St. Facility as Elementary School
Facility	New Construction to include site acquisition and development approx. $72M	Build-out and minor modernization to include upgrades to support Elementary School activities approx $14M
Furniture	New Flexible furniture throughout	New Flexible furniture throughout
Custodial	Hire and Train Staffing, Initial year could potential costs $500,000	Hire and Train Staffing, Initial year could potential costs $500,000
Utilities	Potential lower utility costs due to modern efficiencies	Approx $268,350 annually. Net zero per VDOE requirements may not be achievable.
Technology	Higher up front costs to equip facility, potential lower long run costs	Lower up front costs using existing infrastructure, potential higher long run costs to keep up with 21st Century Learning objectives (example: electrical outlet upgrades, network upgrades, access point upgrades, etc)
Sports & Extracurricular	New sports equipment, uniforms, branding	Minimal changes

Model 7 Implementation Timeline

Model 7 Implementation Timeline Table 9

	Year 1	Year 2	Year 3	Year 4	Year 5
Site acquisition + engineering and design					
Redefine feeder patterns					
Renovations on 1703 Beauregard					
Construction of new middle school					
Open 1703 Beauregard as a swing space					
Opening and first school year					

Appendix

Research on Middle Schools versus K-8 Schools

When comparing middle schools and K-8 schools, there are distinct advantages to each model, which cater to different educational philosophies and community needs.

Advantages of Middle Schools Over K-8 Schools

1. Developmentally Appropriate Environment:
    - Middle schools are specifically designed to address the developmental needs of adolescents, offering a structured transition from elementary to high school.
    - According to research, middle schools often have specialized curricula and teaching strategies that cater to the social, emotional, and cognitive changes occurring in early adolescence (National Middle School Association, 2010).
2. Specialized Instruction and Resources:
    - Middle schools can provide a wider range of subject-specific teachers and resources. For instance, students can have different teachers for math, science, language arts, and social studies, which allows for more specialized instruction and expertise in each subject area (Parker et al., 2013).
3. Increased Focus on Transition:
    - The middle school model often places a greater emphasis on helping students transition from elementary school to high school. This includes guidance on academic planning, social skills development, and career exploration (Bowers, 2010).
4. Extracurricular Opportunities:
    - Middle schools frequently offer a variety of extracurricular activities that might not be available in K-8 settings. These activities can enhance students' social skills, leadership abilities, and overall engagement in school (Eccles & Barber, 1999).

Advantages of K-8 Schools Over Middle Schools

1. Continuity and Stability:
    - K-8 schools provide a continuous learning environment for students from kindergarten through eighth grade. This stability can foster stronger relationships between students and teachers, and promote a sense of community (Kerr, 2003).
2. Reduction in Transition Stress:

- By avoiding the middle school transition, K-8 schools can reduce the stress and academic disruptions associated with moving to a new school. Students remain in a familiar environment, which can be particularly beneficial during the formative years (Pate-Bain, 2006).

3. Stronger School Community:
    - The K-8 model can foster a more cohesive school community, as older students often serve as role models and mentors for younger students. This can create a more supportive and nurturing environment (Martin & Marsh, 2008).
4. Academic Achievement:
    - Some studies suggest that K-8 schools may contribute to better academic outcomes, especially in terms of standardized test scores and student performance. The continuity of the K-8 environment can contribute to these gains (Gorard, 2010).
5. Holistic Development:
    - K-8 schools often emphasize holistic development, focusing on academic, social, and emotional growth in a continuous setting. This approach can benefit students by addressing their needs over a longer period without the disruption of changing schools (Lacour & Tissington, 2011).

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Both models have their strengths and can be effective depending on the specific needs and contexts of the students and communities they serve.

Research on Student Impacts of Overutilization

The impact of overutilized schools is felt academically and social-emotionally by students.

The following are researched examples of how Overutilization impacts students in schools:

1) Students are packed into classrooms as class sizes rise (see ACPS class size data) and teachers are less able to develop relationships with students as well as attend to individual learning needs.
2) Cafeteria lunch schedules may start as early as 10 am and run into the midafternoon to accommodate serving all students, some at less than optimal lunch times.
3) Auxiliary spaces from playgrounds to libraries may not be available with parity of access and scheduling to accommodate all students with equity.
4) Some teachers may have floating schedules(teacher with a cart model) from room to room versus their own classroom which impacts expectations for engaging learner experience. .
5) Some teachers may never be able to utilize their classrooms to set up engaging activities/labs during planning blocks because every classroom must be scheduled for use by a class every period.
6) Discipline issues may be more prevalent in crowded hallways, bathrooms, and other informal spaces.
7) Schools that exceed 900-1000 students decrease student accessibility to extracurricular and co-curricular programs and activities because of limitations on the number of students who can reasonably be involved in any chosen activity. (Review of Empirical Evidence about School Size Effects: A Policy Perspective. Leithwood and Jantzi 2007 Extra-curricular participation is strongly correlated with

academic success, especially for marginalized populations. (Impacting student motivation: Reasons for not eliminating extracurricular activities. Shaffer, 2019)

Source: https://www.nsba.org/ASBJ/2021/august/safe-and-healthy-buildings
Source:https://www.christopheradignam.com/wp-content/uploads/2021/10/Impacting-Student-Motivation-Reasons-for-Not-Eliminating-Extracurricular-Activities.pdf)
Source:https://www.sd68.bc.ca/Documents/10-Year%20Enhanced%20Facilities%20Plan/ResearchOnEffects-School%20Size.pdf)

Background and Research on Maximal and Functional Capacity

Maximum capacity looks at how many students a space could support at any time if all seats were occupied for each period every day. Maximum capacity is often unrealistic due to scheduling issues related to room and staff availability.

Therefore, architects and planners apply a utilization factor to the maximum capacity that better predicts the total number of students that *function* for the specific age group the building serves. Our typical factor is 90% for elementary schools and 80% for middle and high schools. The resulting number is the functional capacity.

Source: https://eua.com/insights/why-k-12-school-capacity-matters/
Source:https://spaces4learning.com/articles/2012/07/01/whats-a-schools-functional-capacity.aspx
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Source:
https://www.linkedin.com/pulse/why-does-school-capacity-matter-anyone-bueller-eric-dufek/
Source: https://files.eric.ed.gov/fulltext/ED604388.pdf