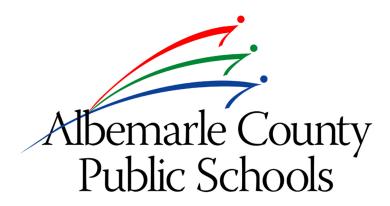
ALBEMARLE HIGH SCHOOL + WESTERN ALBEMARLE HIGH SCHOOL MASTERPLAN

ALBEMARLE COUNTY PUBLIC SCHOOLS

February 23, 2023



#### ACKNOWLEDGEMENTS



## ALBEMARLE COUNTY PUBLIC SCHOOLS

#### <u>Owner</u>

Albemarle County Public Schools 401 McIntire Road Charlottesville, VA 22902

#### Contacts

Lindsay Snoddy Deputy Director of Building Services Icsnoddy@k12albemarle.org

Lisa Walker Project Manager/Planner, Building Services Iwalker2@k12albemarle.org

#### Masterplan Consultant Team

#### Architect

Quinn Evans Architects 1840 W Broad St # 400 Richmond, VA 23220

MEP/FP Engineers MJT Engineers 4323 Cox Road Glen Allen, VA 23060



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### ACPS DESIGN IMPERATIVES FOR HIGH SCHOOL 2022



The High School 2022 initiative identifies eleven design imperatives that align with many of the Educational Effectiveness metrics used in the HBA x FNI study. These design imperatives are used in the analysis of existing spaces and recommendations for future renovations.

#### TRANSPARENCY

Students must see the work and work styles of other students. Contagious Creativity.

SUSTAINABILITY

Environmentally and Economically Sustainable

**FLEXIBILITY** Learning environments can change minute-by-minute, day-by-day, year-by-year.

#### MOBILITY/INTERACTIVITY

Learning, connectivity and presentation capabilities are never tethered to specific spaces.

#### STUDENT-CRAFTED LEARNING ENVIRONMENTS

Learning environment control and design resides with students at every age.

#### MAKING EVERYWHERE

Spaces are not designed for passive and/or one-directional learning.

#### PROJECT/PROBLEM/PASSION-CENTERED LEARNING SPACES

Spaces are not designed to isolate students from ther world or to seperate them from project work possibilities.

#### **CHOICE AND COMFORT**

Every space is created with student choice as a core design principle, and every space allows students to find their comfort zone.

#### **INSIDE/OUTSIDE**

Students move comfortably and casually between indoor and outdoor learning environments.

#### SPACES BUILT FOR STUDENT-LEARNING

All design decsions are evaluated based on student learning needs and child and adolescent brain research, not on adult needs or adult convenience.



#### EDUCATIONAL EFFECTIVENESS METRICS

#### 2017 HBA x FNI STUDY

In the 2017 HBA x FNI study, twenty-six metrics were used to address the quality and appropriateness of ACPS high school educational spaces. Buildings were ranked in each category on a scale of 0 to 5. This report uses those rankings to prioritize future renovations to maximize positive impact to the eduvcational environments.

The chart below is taken from page 4 of Appendix B 'Educational Effectiveness Adequacy Assessment'. Building renovations that can improve these categories are prioritized in the Renovation Masterplan, particularly where they align with the ACPS Design Imperatives identified in the High School 2022 initiative.

		Educational Facilities Effectiveness :: Assessment Summary							
		Scho	ol Division: Albemarle County Public Schools, Virginia						
				Albemarle HS	Monticello HS	Western Albemarle HS	Murray HS		
		1	FLEXIBILITY	2.25	2.75	1.75	2.50		
		2	MAKING EVERYWHERE	0.75	1.25	0.75	1.25		
		3	TRANSPARENCY	0.00	2.75	0.00	0.00		
		4	CHOICE AND COMFORT	3.00	1.75	2.25	3.25		
		5	WATERING HOLE SPACE	1.50	2.25	1.50	1.75		
		6	CAVE SPACE	1.25	4.75	0.50	0.75		
		7	UNIVERSAL DESIGN	1.00	3.50	1.25	1.50		
		8	TECHNOLOGY	3.25	3.50	3.75	2.75		
		9	ACOUSTICS	2.50	2.25	2.50	2.25		
		10	TEACHERS PROFESSIONAL SPACE	1.25	4.50	2.50	1.25		
Legend		11	WELCOMING ENTRY	3.75	4.25	2.75	2.50		
4.00 to 5.00 Excellent	t	12	SHARED LEARNING RESOURCES	3.50	3.75	3.25	2.00		
3.00 to 3.99 Satisfact	ory 🗕	13	STUDENT-CRAFTED LEARNING	0.50	0.75	0.50	2.50		
2.00 to 2.99 Borderlin	ne	14	ARTS STUDIOS	3.25	2.50	2.25	2.00		
1.00 to 1.99 Poor		15	MUSIC AND PERFORMANCE	4.75	3.50	3.25	0.50		
0.00 to 0.99 Inadequ	ate	16	HEALTH & PHYSICAL FITNESS	3.75	3.75	3.25	1.50		
		17	TOILET ROOMS	1.75	3.25	3.00	4.25		
		18	STUDENT DINING	2.00	2.25	1.75	0.50		
		19	SAFE LEARNING SPACES	2.50	4.50	2.75	2.00		
	$\rightarrow$	20	DAYLIGHTING AND ARTIFICIAL LIGHTING QUALITY	2.75	3.25	0.25	2.50		
		21	INSIDE/OUTSIDE CONNECTIONS	3.50	3.75	2.00	2.75		
		22	NATURAL VENTILATION	1.50	1.75	0.75	1.75		
	$\rightarrow$	23	SUSTAINABILITY	0.25	0.50	0.00	0.50		
		24	LOCAL SIGNATURE	1.00	2.00	0.50	1.25		
		25	CONNECTED TO COMMUNITY	2.00	2.25	2.25	2.00		
		26	AESTHETICS	2.00	3.00	1.50	2.25		
			EFEI ASSESSMENT SCORE (out of 130 possible points)	55.50	74.25	46.75	48.00		
			EFEI RATING (5.00 Scale)	2.13	2.86	1.80	1.85		
					-				

#### from ACPS HIGH SCHOOL FACILITY PLANNING STUDY, 2017





Section 2

#### ALBEMARLE HIGH SCHOOL

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### ALBEMARLE HIGH SCHOOL EXECUTIVE SUMMARY

#### Purpose

This report is intended to provide Albemarle County Schools and division leadership with the information needed to determine with confidence the most appropriate course of action for the modernization of Albemarle High School. It summarizes existing conditions, details planning considerations and opportunities that will be the foundation for planning and design efforts of facility modernization. Additional detailed information is provided in the body of the report and the appendices.

#### Overview

First constructed in 1953, the original portion of Albemarle High School has grown through several modernizations and expansions including addition of partial second story and basement levels, to its current size. Most recent district modernization projects build upon ACPS goals for high school choice, academies/centers, flexible learning environments and potential for betterdistributed student capacity system-wide. Enrollment at AHS is expected to increase. As such, expansion areas have been assessed for potential to add learning space capacity, or to redistribute existing capacity and renovate existing internal spaces with best potential for improvement. To ensure its long-term viability and to enhance its role in serving the needs of students today and in the years to come, prioritization of AHS modernization options are included in this plan.

#### Site

In general, this study considers recommendations in the 2022 Lambs Lane Masterplan. Site development scope herein was limited to accessibility and circulation improvements, minor capacity expansion, and potential outdoor classroom locations.

#### Building

The baseline for a modernization project should include building system improvements, healthy interior environments, and universal accessibility. Overall, the building is structurally sound, and the exterior envelope is in good condition for its age. Components such as window/glazing systems are in good condition throughout and some have been replaced in recent years, areas in need of repair or replacement are minor. As noted in the MEP Building Assessment Summaries, some mechanical equipment has been identified as nearing or beyond service life and is scheduled to be upgraded, while some equipment, such as the Auditorium AHU installed in 2015, is newer and in good condition. Some areas of the facility and components are not compliant with current accessibility standards. Fire suppression systems are not present in most areas of the building and are needed to better-equip the facility for long-term flexibility. Patterns of circulation and gathering were assessed for potential improvement to student flow through core community spaces and the Breezeway. Modernization projects identified will bring new life to the educational environments, the facility systems, and improve the quality and safety of AHS overall.

#### Educational Environments

The inventory educational environments spaces across AHS are a mixture of outdated spaces and recent improvements. Several classroom spaces at AHS are adequate in size, yet several core classrooms are somewhat undersized per the Department of Education recommendation of 700sf for Virginia high schools. Some AHS classrooms lack adequate natural light and views. Some programs are remote and could benefit from more flexible, user-defined space and more variation in group meeting and gathering spaces in general. Most unrenovated portions of the school lack this variety of spaces and amenities supportive of ACPS goals, contemporary, learner-centered educational models that include flexible and adaptable environments that support the needs of students and faculty. Physical, pedestrian connections throughout the building could be greatly improved along with future flexibility of the Courtyard, Dining Commons and Media Center. The gyms and auditorium are in good condition yet vary in their capacity to accommodate higher enrollment and associated locker room spaces are in need of interior improvements.

#### Planning Guidelines, Capacity and Enrollment

Virginia Department of Education planning recommendations for newly constructed high schools in Virginia, and existing ACPS high school facilities are used as benchmarks to provide direction in programming the modernization. Recent ACPS studies listed below have also been identified as primary guidelines for future improvement:

Continued next page



#### ALBEMARLE HIGH SCHOOL EXECUTIVE SUMMARY continued

Planning Guidelines, Capacity and Enrollment *Continued* 

- ACPS Strategic Plan (2021)
- High School 2022 Study (date)
- HBAxFNI High School
   Facility Condition Assessment (2017)
- ACPS Building Capacity Methodology
- ACPS Enrollment Projections (date)
- Lambs Lane Masterplan (2022)

Using the division methodology, student capacity at AHS is currently 1,778 and proposed to increase to 1,812. Recommendations in this study consider rising enrollment expected at AHS alongside district goals for high school choice and capacity distribution. A recent enrollment study identified expected growth to 2,175 students by the 2023-24 school year. Core facilities such as food service, athletics, performing and fine arts, and administrative spaces vary in their capacity to accommodate higher enrollment.

#### **Planning Options**

In considering the breadth of these findings, it is the view of the study team that the building could evolve in various ways through thoughtful modernization projects. While the scope of this report is not intended to provide specific design solutions, information provided forms the baseline for evaluating and planning a modernized high school. Planning concepts are based on analysis of VDOE guidelines and size and cost data from renovated high schools constructed within the last five years in Virginia.

#### Building Code Upgrades

In general, expansion of the building's fire sprinkler system will improve flexibility and economic efficiency of future renovation options as the existing facility is consistently adapted to current and future ACPS goals for educational effectiveness and safety. Some options identified require a sprinkler system be installed throughout. Completion of the AHS sprinkler system as a standalone improvement project would mitigate per-project cost to, alternately, adapt each new project to existing fire protection zones. As such, expansion of the existing sprinkler system installation at AHS was identified by the design team as a high priority for the future adaptability of the high school facility overall.

AHS Modernization Projects Identified

- 1. Single-User Restrooms
- 2. Daylighting in Lower Level Classrooms
- 3. Guidance Corridor Modernization
- 4. Guildance Corridor Classroom Relocation
- 5. Arts Wing A.D.A. + Circulation Improvements
- 6. Dining Commons Expansion + Covered Plaza
- 7. Athletics Wing Classroom Addition
- 8. CTE / Makerspace Expansion + Displays
- 9. Level 2 Collaboration Zone + Teacher Space
- 10. Level 2 Classroom Expansion

Each approach includes potential options with unique scope and projection of probable cost. Each includes a wide variety of attributes that could be advantages or disadvantages and should be evaluated further as options are considered. Factors include minimizing disruption of the learning environment during construction, value of the existing amenities (gymnasium, auditorium, dining and accessibility), site constraints and features.

#### Conclusions

Overall, options noted illustrate the most economical plans to modernize the AHS campus and expand the building where needed. It is feasible to create current learning environments within and as additions to this existing building and site. Recommendations anticipate an increase in student choice, mentorship, projects, presentations and offcampus activities. Construction costs vary widely based on many factors. ACPS should prioritize and phase building improvements informed by current construction cost factors. The team prioritized projects that improve community spaces and increase future adaptability of the facility overall. The building and site are in good condition and modernizations that include learning environment improvements and system replacement are achievable.



### ALBEMARLE HIGH SCHOOL BUILDING ASSESSMENT SUMMARY

#### **Building Enclosure**

The exterior of the building consists mainly of brick masonry walls, metal panel cladding, precast concrete panels, aluminum-storefront framed window and door openings, and singleply membrane roofing systems. In general, these materials are in good condition throughout and have been maintained or replaced in recent vears. Exterior Areas in need of improvements include deteriorated sealants and finishes at the Athletics Entrance facing the fields: Wood panel cladding and un-insulated windows at courtyardfacing exterior library wall; the two-story hollowmetal and single-pane glass entrance facing the courtyard from the stairs adjacent to MESA. These improvements will increase longevity of existing materials, improve energy efficiency and reduce maintenance.

Roof systems are in good condition and recent systems have been installed in all building areas.

#### Interior Environments

The character and age of interior spaces is varied across the building due to the number of additions and renovations carried out over the life of the building. Generally, finishes are in good condition and well-maintained, with some exceptions.

#### Instructional Spaces

Typical core subject classrooms are modernized with new LED lighting and heating/cooling systems. Instructional Technology and furniture is up to date.

50% of Science labs are recently renovated to serve modern curriculum needs. The unrenovated labs are in fair condition and very serviceable, but age and wear is apparent.

Special Education Classrooms are in good condition, although some do not have access to daylight.

Fine Arts Classroom spaces are large and include adequate features, storage and gallery spaces. However, more daylight would benefit all spaces. Additionally, some storage areas and darkroom features may not be used currently and could be repurposed. Music Lab spaces appear to be in dated condition and are dark and crowded. Many small storage spaces appear underutilized and not efficient use of space. A re-organization of spaces and a finishes update would benefit the music programs.

The auditorium is slightly under-sized relative to the student population. It is also lacking a direct accessible route to the stage from the seating area. Finishes and lighting are new and in good condition.

Career and Tech Educations spaces well equipped, but lacking in space, daylighting and opportunities to display student work, nurture collaborative experiences and accommodate interdisciplinary work. The Shop/Maker space is undersize and would benefit from a classroom space for students to plan and design projects. The Family and Consumer Science spaces are small and dark w/o daylight and would benefit from equipment updates. All spaces would benefit from better display and a variety of student work spaces.

The main gym is recently renovated and in excellent condition and adequately sized. The auxiliary gym and weight room are in fair condition, but are difficult to access through locker rooms and storage spaces. Re-organization of storage and other anciliary spaces around the auxiliary gym to create easier access, efficient space utilization, transparency and connectivity is recommended.

The character of Corridors around the school are varied. In several locations lockers have been removed and replaced with benches and counters. These improvements should be made throughout the school, most notably in the first floor corridor adjacent to Library and Guidance. Increased transparency from corridors to these spaces would be a benefit. Removing lockers will also create wider corridors, addressing the noted circulation congestion. Opening up stairs will also reduce congestion.

Reference images below



#### ALBEMARLE HIGH SCHOOL BUILDING ASSESSMENT SUMMARY continued

#### Safety and Security

The large number of entrances makes managing security a challenge, however most doors appear to have appropriate hardware to secure the building. The main entrance and vestibule is arranged and secured with electronic hardware according accepted best practices. Increased visibility from the reception desk to the exterior of the building would be beneficial.

Access to modular classrooms poses a security challenge, with students entering and exiting a remote door throughout the day.

#### Accessibility

Nearly all facilities in the building appear to provide basic accessibility per the 2010 ADA Guidelines.

An accessible route to the art and music wing does exist but requires exiting and re-entering the building. Improvements that provide a more equitable route in this area are recommended, and would also create more opportunities to connect the art and music curriculum to the main portions of the school.









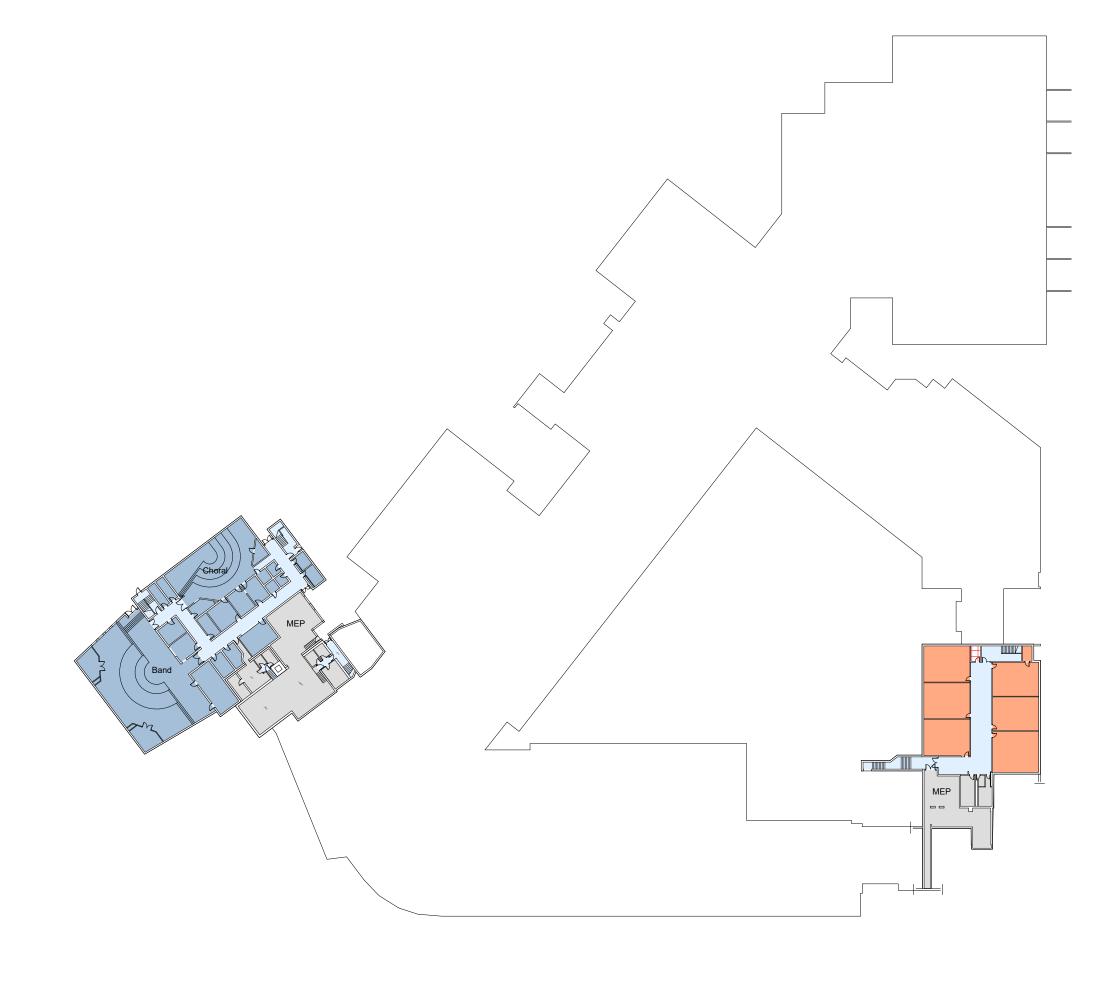






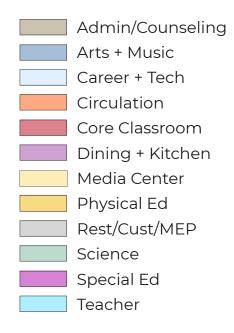
#### LEGEND

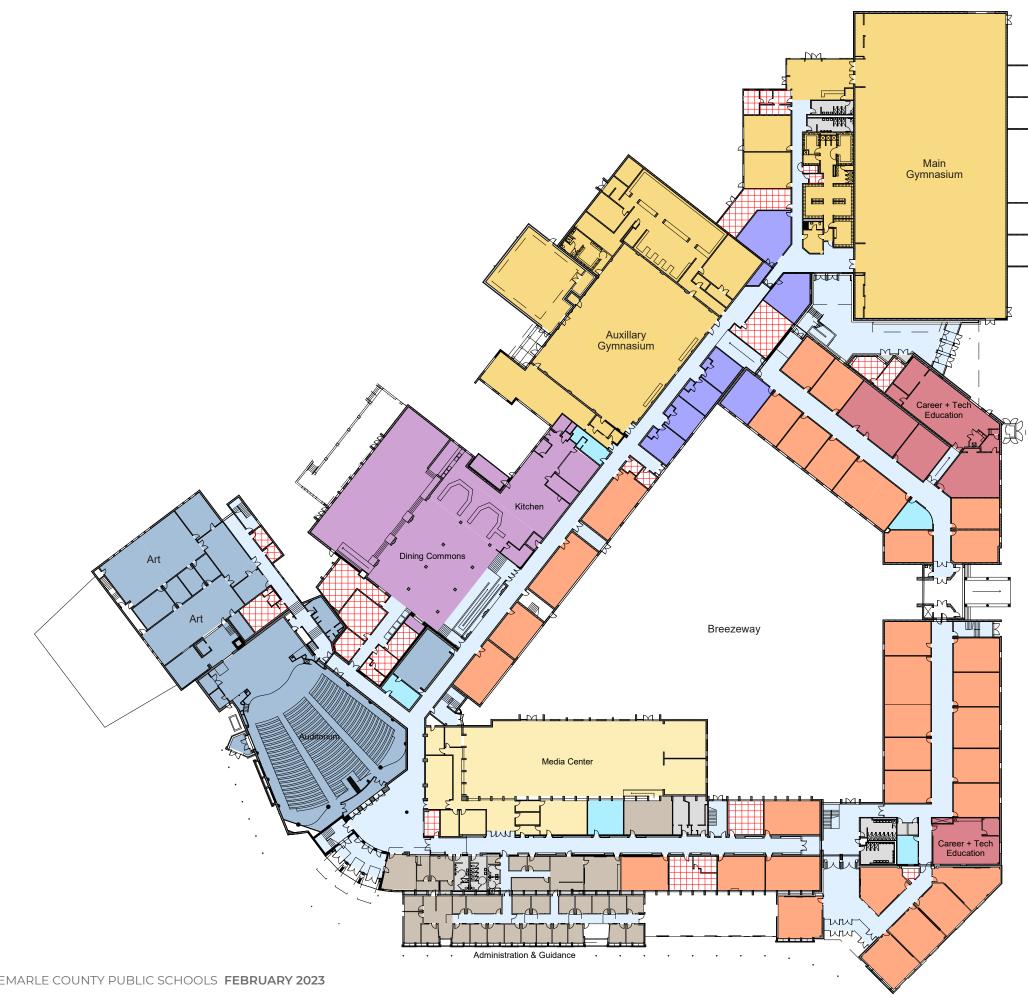










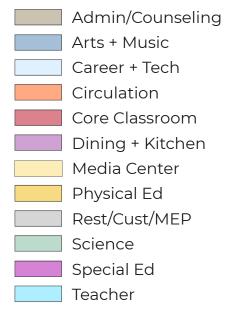








## LEGEND







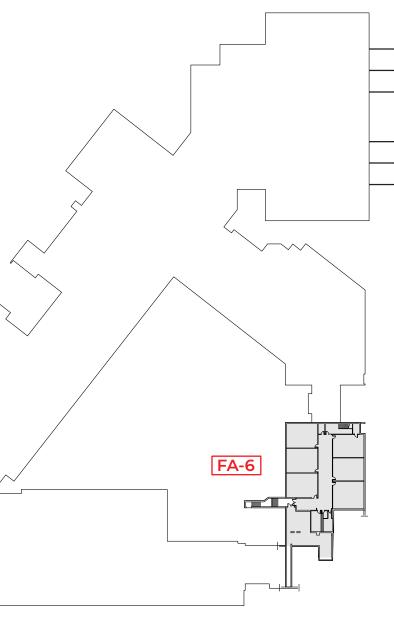
#### **EXISTING BUILDING AREAS**

An assessment of existing building areas will help inform the best approach to modernizaton projects throughout the AHS building. The table below (VCC 506.2) shows the maximum allowable building size within each area, based on automatic sprinkler system and number of stories.

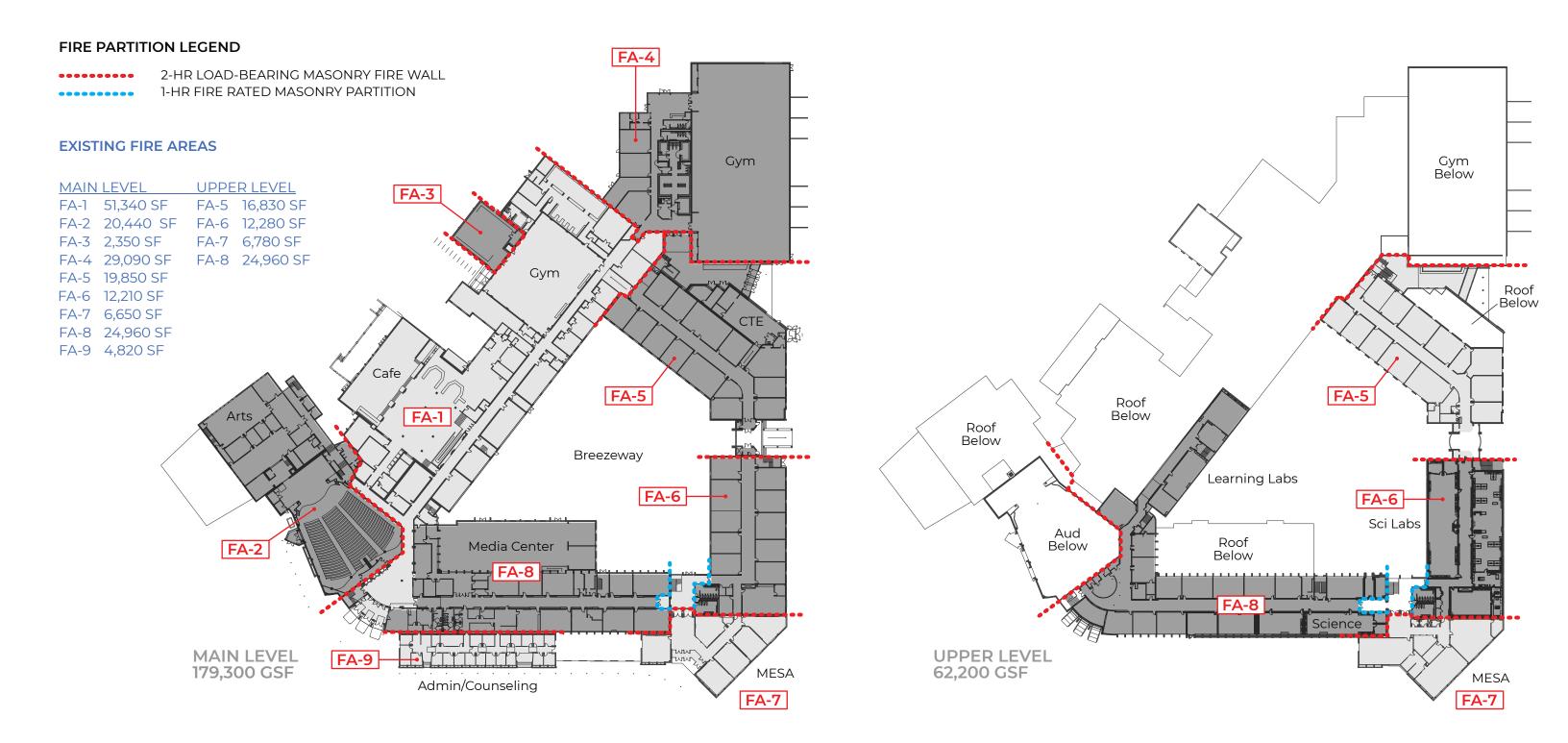
Comparing the existing building areas below, there is a maximum area of 14,500sf without a fire suppression system installed. That limit increases to 43,500sf for a multistory building with sprinklers installed. Several projects within the scope of this study are noted to require expansion of the fire suppression system.

#### **CODE SUMMARY**

OCCUPANCY CONSTRUCTION TYPE MAX ALLOWABLE AREA* BUILDING GROSS SF	EDUCATION TYPE II-B 14,500 SF (NS); 43 OVERALL LOWER LEVEL LEVEL 1 LEVEL 2	<b>3,500 SF (SM)</b> <b>266,920 CSF</b> 25,420 SF 179,300 SF 62,200 SF					[	FA-2			
EXISTING FIRE AREAS	LOWER LEVEL FA-2 16,170 SF FA-6 7,730 SF	MAIN LEVEL         FA-1       51,340 SF         FA-2       20,440 SF         FA-3       2,350 SF         FA-4       29,090 SF         FA-5       19,850 SF         FA-6       12,210 SF         FA-7       6,650 SF         FA-8       24,960 SF         FA-9       4,820 SF	FA-6 12,280 SF FA-7 6,780 SF FA-8 24,960 SF * 2018 IBC TAB	FA-516,830 SFFA-612,280 SFFA-76,780 SFFA-824,960 SF			Performing Arts				
		,	OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	Type I		Type II				
					Α	В	Α	В			
FIRE PARTITION LEGEND		NS	UL	UL	26,500	14,500	LOWER LEVEL				
•••••••• 2-HR LOAD-B		E	<mark>S</mark> 1	UL	UL	106,000	58,000	25,420 GSF			
1-HR FIRE RAT	ED MASONRY PARTI	TION		SM	UL	UL	79,500	43,500			
			E - Education NS - Not Sprinkl	ered	SI - S SM -	ingle-St Multi-St	ory with s ory with s	Sprinkler Sprinkler			







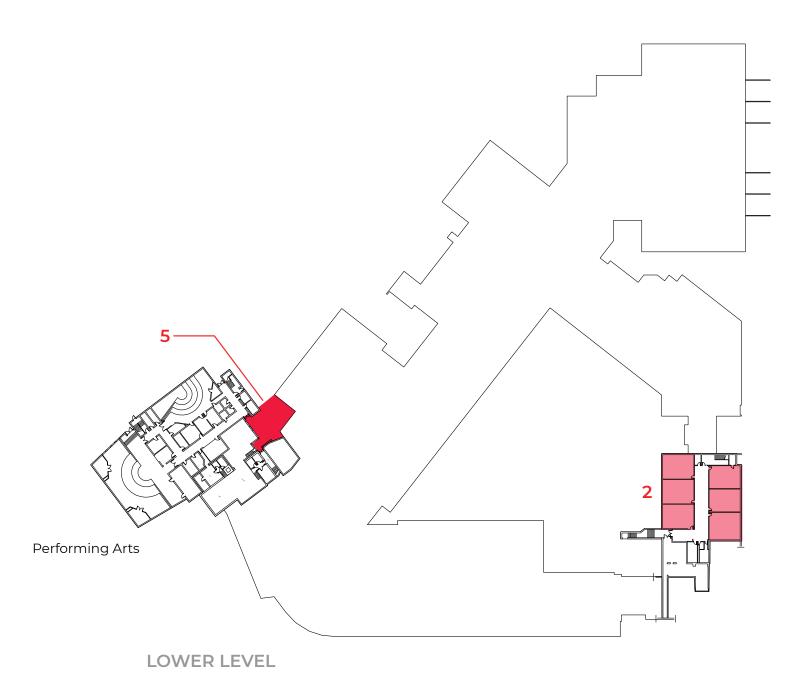


#### **IMPROVEMENT PROJECTS**

- **1** NEW SINGLE-USE RESTROOMS
- 2 DAYLIGHTING IN BASEMENT CLASSROOMS
- **3** GUIDANCE CORRIDOR MODERNIZATION
- 4 GUIDANCE CORRIDOR CLASSROOM RELOCATION
- **5** ARTS WING A.D.A. + CIRCULATION IMPROVEMENTS
- 6 DINING COMMONS EXPANSION + COVERED PLAZA
- 7 ATHLETICS WING CLASSROOM ADDITION
- 8 CTE / MAKER SPACE EXPANSION + DISPLAYS
- 9 LEVEL 2 COLLABORATION ZONE + TEACHER SPACE
- **10** LEVEL 2 CLASSROOM EXPANSION

#### LEGEND

- SUBSTANTIAL RENOVATION
- NEW ADDITION/EXPANSION AREAS
- SITE IMPROVEMENTS





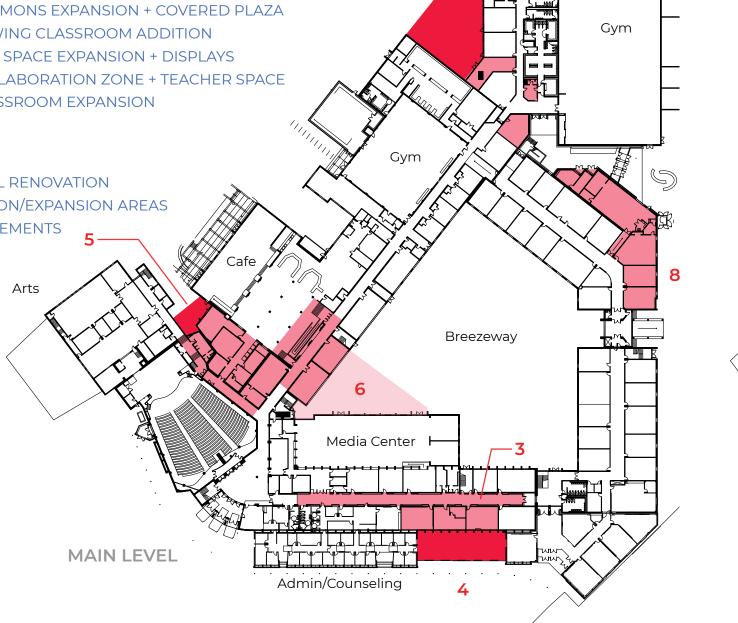
#### **IMPROVEMENT PROJECTS**



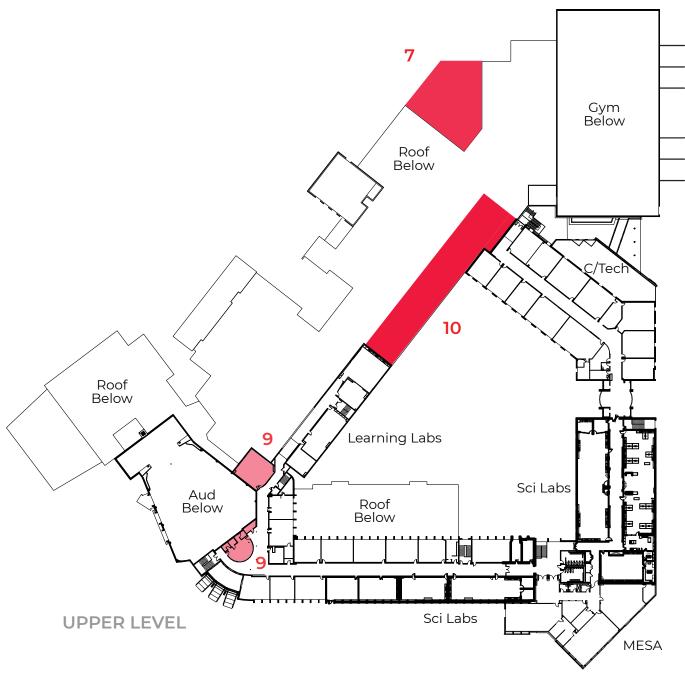
- DAYLIGHTING IN BASEMENT CLASSROOMS 2
- GUIDANCE CORRIDOR MODERNIZATION 3
- **GUIDANCE CORRIDOR CLASSROOM RELOCATION** 4
- ARTS WING A.D.A. + CIRCULATION IMPROVEMENTS 5
- **DINING COMMONS EXPANSION + COVERED PLAZA** 6
- ATHLETICS WING CLASSROOM ADDITION 7
- CTE / MAKER SPACE EXPANSION + DISPLAYS 8
- 9 LEVEL 2 COLLABORATION ZONE + TEACHER SPACE
- LEVEL 2 CLASSROOM EXPANSION 10

#### LEGEND

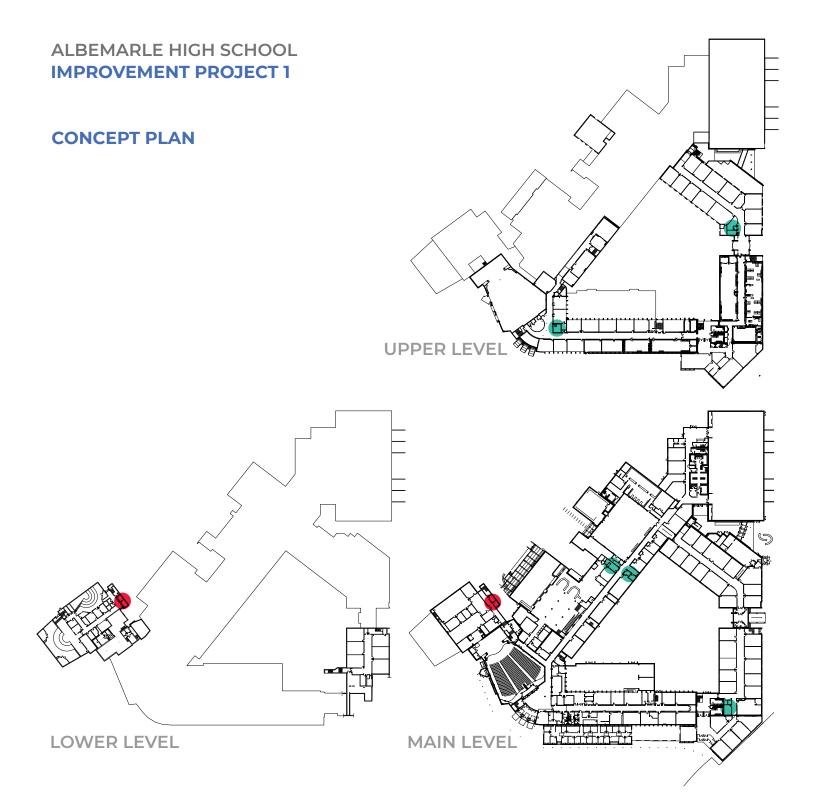
- SUBSTANTIAL RENOVATION
- NEW ADDITION/EXPANSION AREAS
- SITE IMPROVEMENTS



7







## New Single-Use Restroom Locations

#### Program Summary + Conceptual Scope

Renovate existing interior areas to accommodate need for single-occupant restooms evenly distributed throughout the building.

tbd sf Renovation

#### LEGEND

Existing GI Restrooms



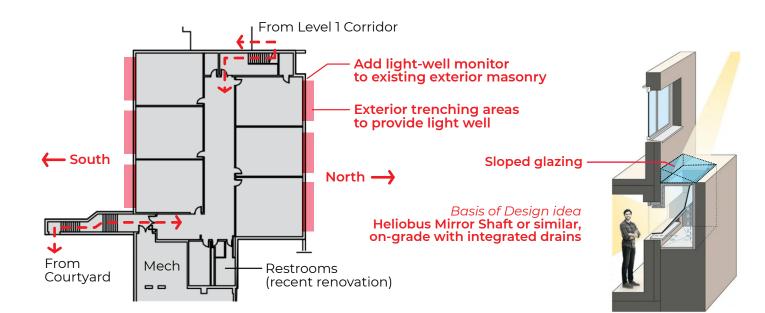


#### **CONCEPT PLAN** LOWER LEVEL

600 sf

600 sf

0



## **Daylighting in Basement Classrooms**

Program Summary + Conceptual Scope Add exterior light well and interior classroom light monitors to provide daylight to (6) below-grade classrooms.

#### LEGEND

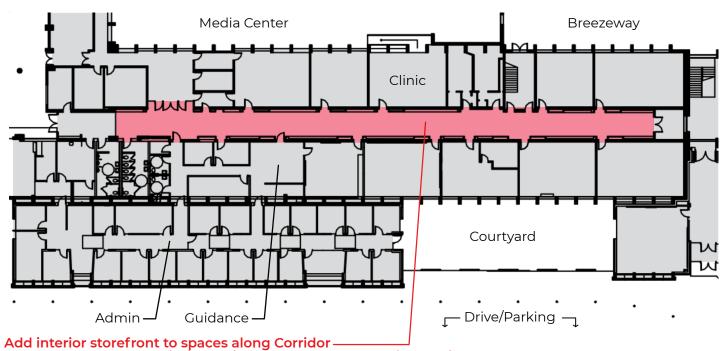
Renovation (exterior masonry penetrations only) Site (~100 sf per installed unit x 6 CRs) Added/Removed Classroom/Teacher Spaces

Substantial Renovation Addition/Expansion Area Site Improvements





CONCEPT PLAN MAIN LEVEL



Remove lockers, add built-in seating, counters and charging stations

## **Guidance Corridor Modernization**

Program Summary + Conceptual Scope

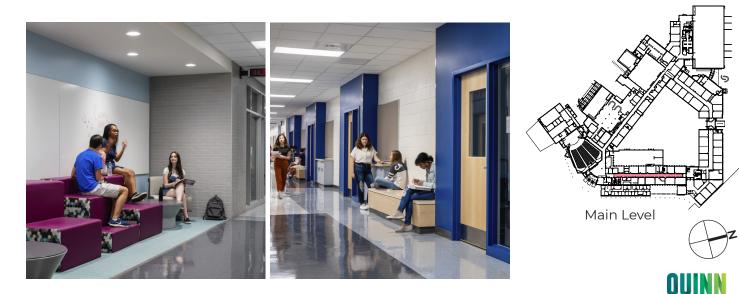
Increase transparency and visibility throughout Level 1 corridor. Remove lockers, replace with benches, counters and charging stations.

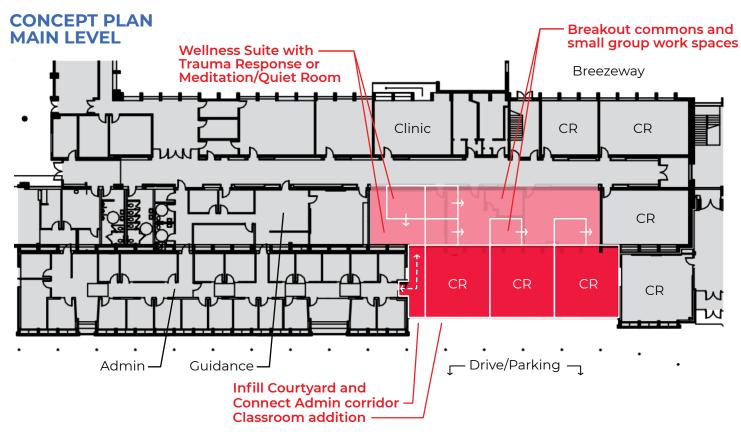
3,000 SF 200 LF 0 Corridor overall (select renovations at locker bays only) Locker area replacement total overall linear feet shown Added/Removed Classroom/Teacher Spaces

### LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements







## **Guidance Corridor Classroom Relocation**

#### Program Summary + Conceptual Scope

Improve L1 academic wing by adding classrooms within existing Courtyard to add valuable breakout rooms, social and small group spaces. A "Wellness Suite" is shown as a private space adjacent to Admin and Counseling.

#### LEGEND

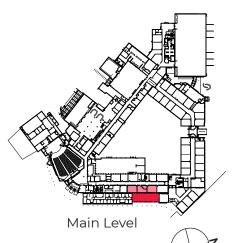
**KEY PLAN** 

Substantial Renovation Addition/Expansion Area Site Improvements



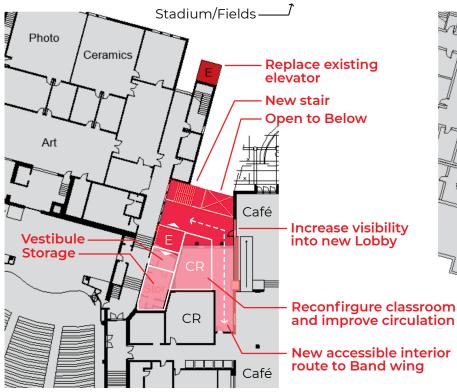
2,400 SF Renovation
2,500 SF Addition/Expansion
3 Relocated Classrooms (average 720 sf)



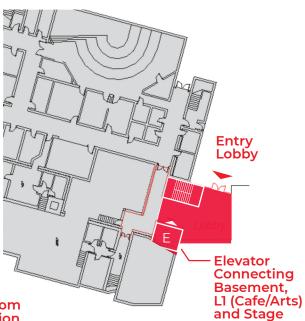




#### **CONCEPT PLAN** MAIN LEVEL



#### LOWER LEVEL



# **Arts Wing ADA + Circulation Improvements**

#### Program Summary + Conceptual Scope

Improve ADA access, vertical circulation and connection to athletics fields. Reconfigure and improve program spaces. Connect Cafe and Auditorium with flexible community space.

#### LEGEND

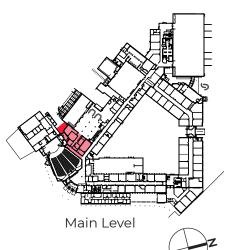
Substantial Renovation Addition/Expansion Area Site Improvements



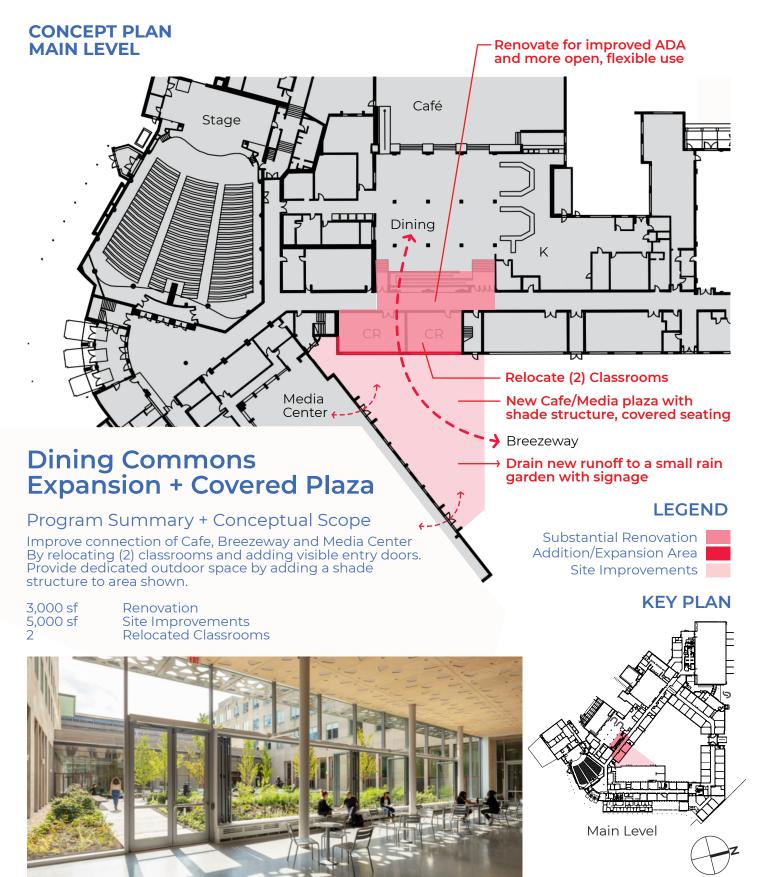
#### Renovation 1,200 sf Addition/Expansion 1,000 sf Added/Removed Classroom/Teacher Spaces 0

# **KEY PLAN**

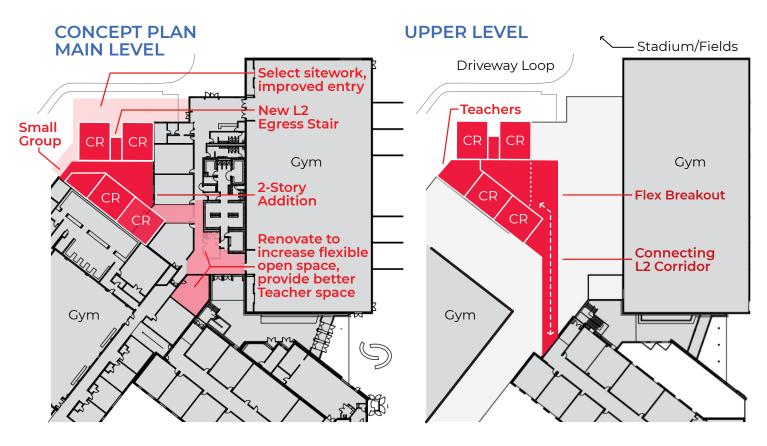








MIT Hayden Library Renovation, KVA



## **Athletics Wing Classroom Addition**

#### Program Summary + Conceptual Scope

Addition/Expansion

Site Improvements

Renovation

6,000 sf

4,200 sf

1,700 sf

7

Added Classrooms area and breakout, improved Athletics circulation, entry and connection to fields.

Added Classroom Spaces (average 720 sf)

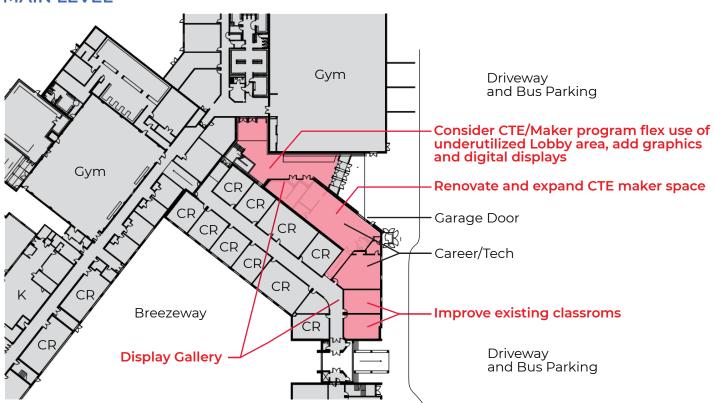
LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements

#### **KEY PLAN**



CONCEPT PLAN MAIN LEVEL



## CTE / Maker Space Expansion + Displays

### LEGEND

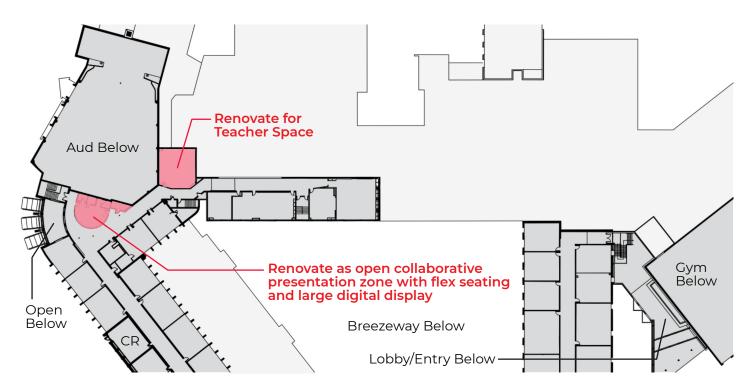
#### Program Summary + Conceptual Scope

Renovate existing spaces to expand maker environment, increase learning-on-display, and AHS/department identity through environmental signage, color and graphics. Re-envision use of existing Lobby as a flex breakout and demonstration area with digital display. Substantial Renovation Addition/Expansion Area Site Improvements

#### **KEY PLAN**



CONCEPT PLAN UPPER LEVEL



## Level 2 Collaboration Zone + Teacher Space

#### Program Summary + Conceptual Scope

**Relocated Teacher Space** 

Renovation

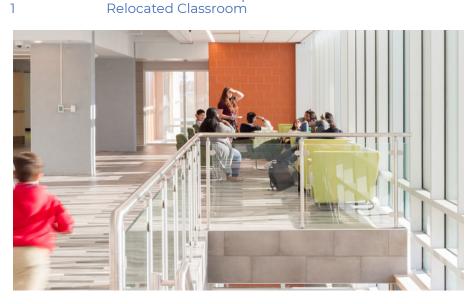
1,500 sf

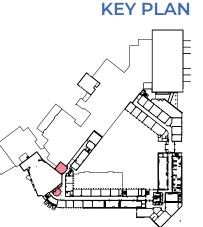
Add classroom capacity and expand student breakout space. Provide improved teacher professional space. Connect Level 2 corridors to improve circulation throughout building.

#### LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements

# a s

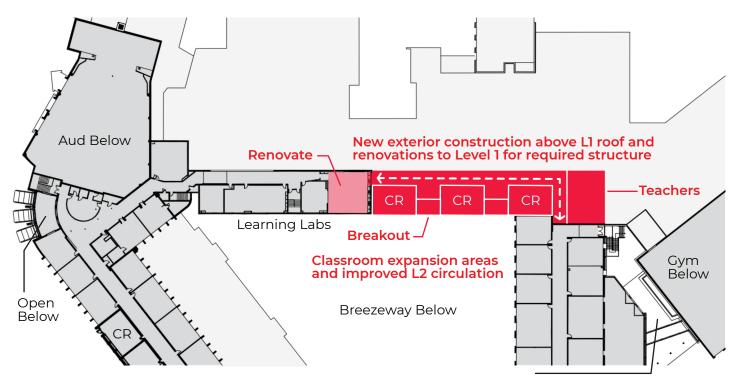




Upper Level



#### CONCEPT PLAN UPPER LEVEL



## Level 2 Classroom Expansion

#### Program Summary + Conceptual Scope

Addition/Expansion

Relocated Teacher Space

Renovation

1,500 sf 9,700 sf

3

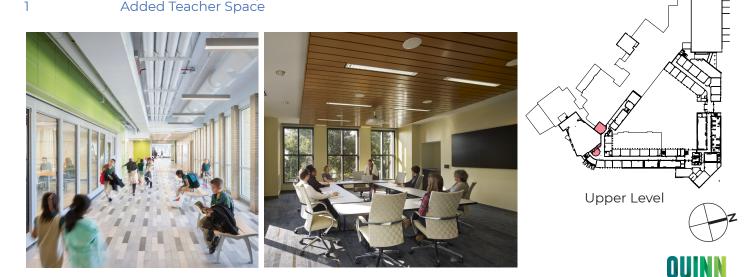
1

Add classroom capacity and expand student breakout space. Provide improved teacher professional space. Connect Level 2 corridors to improve circulation throughout building.

Added Classroom (average 720 sf, incl. 1 relocated CR)

#### LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements



## ALBEMARLE HIGH SCHOOL PROJECTIONS OF PROBABLE COST





		Albemarle High School					Add 20%	5%	6 Escalation per	Es	timated Furniture		5% furniture	
FY	No.	No. Project		ble Project Cost*		(	Contingency**		Year		Cost***	es	calation / year	Furn. Notes
		Breezeway Improvements		101,250.00						\$	20,000.00			\$2k per table/chairs
2023		Counseling Hall Locker Removal		101,250.00							n/a			
2020	1	1 Single-User Restrooms		351,000.00							n/a			
		Science Classroom Partitions	\$	100,000.00							n/a			
		AHS Subtotal	\$	653,500.00		\$	784,200.00		n/a	\$	20,000.00			
		Locker Room Improvements	\$	2,025,000.00							n/a			
2024	10	Level 2 Classroom Expansion/Corridor Connection	\$	3,375,000.00						\$	70,000.00			(3) Classrooms, (2) Breakout Rms, (1) Workrm
	9	Level 2 Collaboration Zone		405,000.00							26,000.00			\$20k for Student Collab, (1)WorkRm
		AHS Subtotal	\$	5,805,000.00		\$	6,966,000.00	\$	7,314,300.00	\$	96,000.00	\$	100,800.00	
		•												
2025		Sprinkler Building	\$	3,000,000.00							n/a			
		Costs Totals	\$	3,000,000.00		\$	3,600,000.00	\$	3,969,000.00					
		•												
2026	3,4	Guidance Corridor Classrooms/Commons Expansion	\$	2,700,000.00						\$	104,000.00			(3) Classrooms, (5) Breakout Rms, \$20 for Commons
	2	Basement daylighting	\$	101,250.00							n/a			
		AHS Subtotal	\$	2,801,250.00		\$	3,361,500.00	\$	3,891,356.44	\$	104,000.00	\$	120,393.00	
	6	Dining Commons Expansion	\$	1,350,000.00						\$	30,000.00			Cafeteria Seating
2027	5	Arts Wing ADA/Circulation Improvements	\$	1,350,000.00						\$	12,000.00			(1) Resource Rm
		Arts Wing Interior Improvements	\$	283,500.00						\$	100,000.00			(5) Rms
	8	CTE Makerspace Expansion	\$	1,687,500.00						\$	80,000.00			(4) Rms
		AHS Subtotal	¢	4,671,000.00		\$	5,605,200.00	\$	6,813,155.63	\$	222,000.00	\$	269,842.39	

(Before Escalation)

(W/ 5% yearly escalation)

(W/ 5% yearly escalation) (Before Escalation)

\*\* 20% Estimating Contingency for Scope Unknowns

\*\*\* Typical Furniture Costs: \$18k/Classroom, \$20k/Art & CTE, \$5k/Breakout Room, \$6k/Teacher Workroom (2023 dollars, other costs indicated above)

#### Additional Projects

FY	No.	Project	Probable Project Cost*	Add 20% Contingency**	5% Escalation per Year	Estimated Furniture Cost	5% furniture escalation / year	Furn. Notes
TBD		Athletics Wing Classroom Expansion (If Student Capacity Increase Req'd)	\$ 101,250.00			\$83,000		(4) Classrooms, (1) Workroom, (1) Breakout
		Total	\$ 101,250.00	\$ 121,500.00	n/a	\$83,000	n/a	

#### ALBEMARLE HIGH SCHOOL APPENDIX



#### **Appendix**

- 1 Existing Building Assessment (2022)
- 2 Existing Roof Comparison Summary
- 3 Mechanical, Electrical, Plumbing + Fire Protection Assessment (2022)
- 4 Student Leadership Workshop (Sept 9, 2022)
- 5 Stakeholder Survey Results (2022)
- 6 Meeting Minutes



#### **Building Assessment Report for Albemarle High School**

AHS-WAHS Masterplan 8/1/2022

## Building Exterior Exterior Walls

Most exterior walls are clad in brick. There is a cornice of metal panel cladding at the top of most exterior walls. In some locations precast concrete panels are used as cladding around windows.

Exterior brick appears to be in reasonably good condition around the building. There may be isolated areas where repointing is necessary. Extensive work has been completed over the last 2-10 years to replace panels and nearly all have been replaced at this time.



Exterior Walls

In many locations the precast concrete panel joints have been repaired or replaced as window replacement and metal panel replacement work was carried out, but a more extensive survey will be required to determine if there is current joint maintenance needed.

## Windows

The building was built and added on to extensively over the course of its life, thus there are a variety of window and glazing types present.

Extensive window replacement has been carried out in many areas of the school. In these areas windows were replaced with aluminum storefront style frames with insulated glazing. There are still areas of the building where older windows are present that should be replaced to provide a more energy efficient and comfortable building envelope.



Exterior Windows

## Roof

A variety of roofing types and ages are present on the building. Except for a small area of metal roofing, all areas are covered in a single-ply membrane roofing, either TPO or EPDM. The two-story portion of the building parallel to Hydraulic Road is the oldest roof, installed in the year 2000. It is an EPDM roof with a 15-year warranty. This roof will likely need replacing within 5-10 years.

All other roof areas can be expected to have a continued lifespan of between 10 and 30 years, depending on installation date.

#### **Building Assessment Report for Albemarle High School**

AHS-WAHS Masterplan 8/1/2022

## **Interior Environments**

#### **Core Classrooms**

Size: Range from +/-650 SF to +/- 800 SF with most around 650 SF.

**Condition:** Finishes are generally in good condition. Lighting has recently been replaced with LED's, Instructional technology is generally current.

**Quality:** Nearly all classrooms benefit from a location on the exterior wall of the building allowing for high-quality daylighting. Recent modernization efforts have provided adequate fresh-air, current finishes, modern technology, and an overall high-quality classroom.

There are several classrooms in the vicinity of the Auxiliary Gym that do not have exterior windows. These classrooms are an opportunity for renovation into spaces less detrimentally affected by lack of daylight.



Existing Classroom Without Daylight

#### **Building Assessment Report for Albemarle High School**

AHS-WAHS Masterplan 8/1/2022

## Science Labs

Size: Varies from +/- 800 SF to +/- 1700 SF

**Condition:** 7 of the 14 Science Labs have been renovated within the last 5 years. An additional 3 Science Labs (MESA) were constructed with the last ten years and in good modern condition. Unrenovated labs are in relatively good condition and are serviceable, but age is apparent.

**Quality:** Newly renovated labs are high quality spaces, representing current pedagogies relative to Project-based learning, team-teaching and combine lab space with collaborative workspace and furniture in one large space.

Un-renovated labs are functional and still very service-able, although could benefit from more flexible furniture.



Science Lab Renovated



Science Labs Unrenovated

## Special Education Classrooms

Size: +/- 600 SF to +/- 975 SF

**Condition:** Finishes are in relatively good condition and kitchen/specialty equipment appears serviceable.

**Quality:** One of the three classrooms is located internally without exterior windows and access to daylighting. This may be desirable for some portions of the student population served by these spaces, but generally is undesirable.



Existing Classroom Without Daylight

## Fine Arts Classrooms

Size: Varies from +/- 1,000 SF to +/- 1,600 SF, along with several smaller gallery and storage spaces.

**Condition:** All art classrooms appear to be in relatively good condition for their age and intended use. Condition of specialty equipment such as darkrooms, kilns, etc is unknown

**Quality:** There are unique features such as glass partitions, tall ceilings, shop/studio-like environment and gallery spaces that benefit the fine arts suite. However, despite being located on exterior walls, windows are limited and light quality and daylighting is compromised. Spaces could benefit from additional access to daylight.

Additionally the fine arts suite is separated from the main circulation paths of the school by an odd arrangement of stairs and changing floor levels, meaning that the work of the fine arts department is not displayed to the broader student population adequately.



Fine Arts Classroom

## **Music Labs**

**Size:** Instrumental Lab: 4,225 SF; Vocal Lab: 1,878 SF, along with several storage rooms, practice rooms and offices.

**Condition:** Conditions vary from room to room, but overall finishes appear to be aged and in need of replacing. Spaces are crowded with equipment real conditions are difficult to assess.

**Quality:** Spaces are large relative to the Virginia DOE guidelines but still appear to be overcrowded and disorganized. It is possible that the many smaller storage and practice spaces are not being utilized effectively or are not arranged in a useful way. Spaces also suffer from a lack of daylighting. Like the Fine Arts Suite, the Performing Arts Suite is separated from the main circulation path of the school creating a separation from the greater student body. Space reconfiguration could benefit the Performing Arts suite by providing more useful space and potentially creating opportunities for music to be on display and accessible to the entire student population.



Music Lab

## Drama Classroom

Size: 816 SF

Condition: The drama room has recently been renovated with new lighting and finishes.

**Quality:** Although the room does not have any exterior windows, this may not adversely affect the space and rather allows for complete transformation of the room, benefiting the drama program. The room is smaller than the 1,000 SF recommended in the Virginia DOE Guidelines.

## Career and Tech Education Classroom/Labs

Size: Varies from +/- 700 SF to +/- 2,000 SF

**Condition:** Finishes and lighting are newer and adequate.

**Quality:** The Shop/Maker Space is setup to function well, with access to the exterior and a separated power tools room, but it is clear the space could be larger to accommodate the needs of the program. Additional storage space would be beneficial as well as larger work areas for student projects. Kitchen/Home Economics: Equipment and casework in this lab appears dated and appropriateness for current curriculum is unknown. Additionally, there are no exterior windows inhibiting daylighting. Classrooms: Better daylighting and larger spaces would benefit the program.

Opportunities to put the work and learning done in these spaces on display to the greater student body would be a benefit to the program and the school.

## **Physical Education & Athletics**

#### Gymnasium

**Size:** 4 courts, 1 competition court with bleachers in open position (seating capacity)

**Condition:** Flooring, bleachers and other equipment was replaced in 2019. These recent renovations can be expected to have a service life of 20 or more years with adequate maintenance.

**Quality:** The gymnasium is of adequate size and condition for a high school of this size.

## Auxiliary Gymnasium

Size: 1 full size court, or 2 smaller courts

**Condition:** Flooring shows evidence of patching, but overall condition and finish appears to be serviceable. Bleachers are of older type, function is unknown.

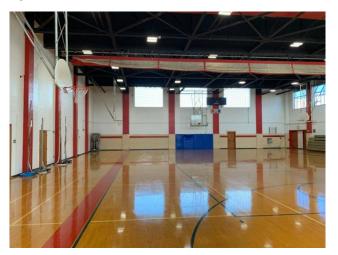
**Quality:** Auxiliary gymnasium appears to have adequate equipment and facilities for Physical Education and sports including facilities for wrestling or other events. Daylighting is good, from a clerestory of windows.

Wrestling Room Size: 2300 SF

**Condition & Quality:** The space is well maintained with new lighting and adequate equipment for wrestling.



Gymnasium



Auxiliary Gym

## Weight Room

Size: 1500 SF

**Condition & Quality:** The space is well maintained with new lighting and adequate equipment. However, it is not easily accessed, with entry only through the Auxiliary Gym or a narrow entry from the corridor past small, ineffective storage rooms. An opportunity exists for improving the focus on health and wellness by improving access to and visibility of the Weight Room.



Weight Room

### **Athletics Entry**

There are two entrances associated with Athletics and the Main Gym, the rear entrance facing the fields, and the bus loop entry. The entrance facing the fields provides access from rear parking lots and consists of as 1200 SF lobby with concessions stand and access to restrooms. The restrooms were renovated in 2019. The concessions stand is large but appears to be cobbled together and its effectiveness is unknown. At the field-facing entrance the building envelope and the entry canopy is constructed of exposed steel, glass block, acrylic panels, and stucco. Some finish materials need restoration. Sealants, paints, grouts, and other materials associated with the glazing and glass block likely need to be replaced.

Some substrates may be compromised or corroded and need replacement. Steel structure passes from the exterior to the interior of the building without a thermal break and creates some inherent moisture problems that may be an ongoing issue in this area. The bus loop entry was constructed in 2009 and consist of a 2200 SF lobby. The size of the lobby is generous, but the space is isolated and not well connected to the field-facing entry, the main gym, or other areas of the school. Currently, the need for Fire Separations limits possibilities for this area, but if an automatic fire suppression system were to be installed in the building, additional opportunities may be possible.



Athletics Entry Exterior



Athletics Entry Interior

8/1/2022

# **Community Spaces**

### Library

Size: 11,135 Gross SF including ancillary spaces, storage rooms, IT space, etc.

**Condition:** The library has been renovated in phases in recent years including new flooring, new paint and wall finishes, and several new smaller break-out and study spaces at the perimeter.

**Quality:** These renovations represent current thinking and pedagogies in library planning and provide useful and appropriate student space. Additional opportunities exist to improve by making the library borders more open and inviting. The library has a border along one corridor, the main lobby and the courtyard, yet only has a true entrance on the corridor. Creating a more inviting entrance from the main lobby would greatly enhance the presence of the library. The courtyard is heavily used by students during lunch periods and for circulation so creating a stronger connection between library and courtyard would also improve access and engagement with students.

### Auditorium

Size: +/- 7,500 SF. Below the Virginia DOE Guideline of 8,500 SF

**Condition:** The auditorium finishes have been replaced recently along with lighting, seating and equipment and are in good condition.

**Quality:** The auditorium is simple and functional with a high-quality appearance, but very undersized for the school population.



Existing Storage



Existing Auditorium & Stage

### Building Assessment Report for Albemarle High School AHS-WAHS Masterplan 8/1/2022

## Cafeteria

**Size:** 8,000 SF; smaller than the Virginia DOE Guidelines recommended size of 8,400 SF for three servings. The cafeteria's usable space is also limited by the steps and additional circulation required by several floor level changes.

**Condition:** Finishes are generally in good condition and lighting is new.

**Quality:** Level changes within the cafeteria reduce the usable space. Currently the school has an open lunch policy allowing students to around the building, in part b/c of the small size of the cafeteria. Opportunities exist to transform the cafeteria into a commons that provides better functionality and versatility.



**Dining Commons** 

## Informal Learning Spaces

In several corridors lockers have been removed to create informal student workspaces with benches and counters. These areas have been successful and more spaces like this would be beneficial to students.

## Circulation

Several specific circulation challenges were noted.

Because the second floor does not create a continuous loop around the building courtyard, travel times to remote parts of the building are long.

Congestion was noted at the open stair adjacent to the MESA wing. This stair is adjacent to another stair which is enclosed (to meet building code) and easily passed by students because it is hidden. If the enclosed stair were opened up to make it more evident and available, congestion between the lower and upper level would be reduced. Opening the enclosed stair will be possible if an automatic fire suppression system were to be installed.



Informal Learning Space



Quinn Evans

Circulation

AHS-WAHS Masterplan 8/1/2022

## Administration

Size: 20 Offices plus reception desk

**Condition:** The main administrative office spaces were built in 2009. They are in good condition and appear to serve the school's needs. Quantity of offices is more than the Virginia DOE guidelines.

**Quality:** Spaces are day-lit well and individual offices and workrooms are generally good quality. The arrangement of the entry vestibule and the connection to the administrative reception space is consistent with current security best practices. However, an opportunity for improvement exists by increasing visibility from the reception desk to the exterior of the building and the approach from the parking lot. Additional visibility would improve safety and security.

## Safety & Security

Like most large high schools there are many entrances at Albemarle High School, making security management a challenge. Management of each entrance is a matter of policy, but building design has an influence on ease of management at each entrance. Generally, it appears that all entrances can be secured individually with appropriate door hardware, although there are several entrances that pose a particular difficulty due to visibility or remoteness. This report identifies several of these more challenging locations, but a more detailed security analysis would be required to make a full report on challenges and opportunities.

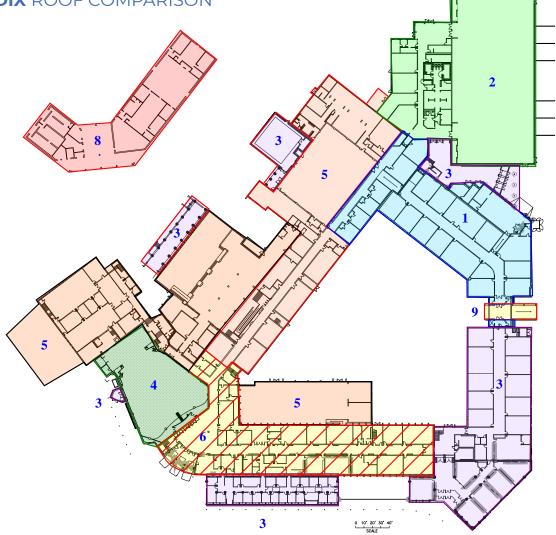
The main entry of the school consists of a security vestibule configuration that channels visitors into the main office to check-in during the school day. This is consistent with current best practices. Door hardware appears to be configured to allow for remote lock/unlock of the doors.

Visibility of the approach to the main entry doors from the parking lot is limited and security could be improved with increased visibility.

Within the music and arts wing there are several entrances that are remote and unmanaged. In the dining commons, there are a series of doors that access an exterior patio adjacent to a driveway. Students can move freely in and out of the building here, a nice asset to the dining commons, but it provides a high level of access to the building that is challenging to manage. Exits from the auxiliary gym, weight room and wrestling room provide access to the building that cannot be always observed.

The building entrances at either side of the main gymnasium are used by students to access the modular classroom building. Students coming and going from the building during the day creates an unmanaged access to the building.

ALBEMARLE HIGH SCHOOL APPENDIX ROOF COMPARISON



### **ROOF INSTALLATION COMPARISON SUMMARY**

	Installed	Туре	Area	Manufacturer	Installer	Warranty
1	2017	EPDM	23,060 SF	CARLISLE	AAR OF NC	20 YR
2	2009	EPDM	29,700 SF	CARLISLE	ROOFING SOLUTIONS	20 YR
3	2009	TPO	32,302 SF	CARLISLE	ROOF SERVICES	20 YR
4	2009	EPDM	10,287 SF	CARLISLE	JD MILES	20 YR
5	2019	EPDM	66,759 SF	FIRESTONE	AIR TECH SOLUTION	20 YR
6	2000	EPDM	22,267 SF	VERISCO	MT MORGAN	15 YR
7	Not used	-	-	-	-	-
8	1993	SHINGLE	13,458 SF	GEORGIA-PACIFIC	LYNCH	Unknown
9	1993	METAL	1,000 SF	Unknown	LYNCH	Unknown



### **Albemarle High School Masterplan Study**

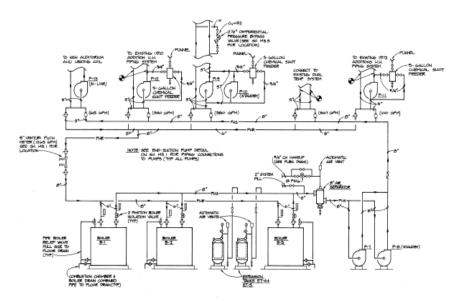
### **HVAC and Plumbing**

Owing to the steady expansion of the high school since its original construction in 1951, the heating, cooling, and ventilation (HVAC) systems have undergone several replacements and upgrades over the years. This section will describe the history of the HVAC systems throughout the life of the building up to present day and will offer an assessment of the condition of HVAC systems and equipment still present in the building. Systems or equipment which could be re-used or salvaged as part of a renovation project will be identified.

#### **Background and Observations**

1. Main Boiler Room Below Stage:

The original building was constructed in 1951. The as-built drawings for the 1951 building were utilized in this study in addition to field observations. From those drawings, it was possible to determine that the first mechanical system present in the building was a steam convector and unit ventilator heating system served by 2 coal fired steam boilers located in the basement below the auditorium's stage. In 1970, the boilers were converted to hot water and a third boiler was added. The original steam and condensate piping that was routed in below the floor slab trenches during the original construction have since been removed or abandoned. These boilers were replaced in 1992 with 3 gas fired water boilers in the same location. Several large areas that were originally served by the central boiler plant are now independent of the central boiler plant. The result is that the current boilers are oversized for the areas still heated by the central boiler plant.



SOLENCE MURE SO

BOILER B-6 PIPING SCHEMATIC (INDIRECT WATER HEATER)

STEAM REPLACEMENT HOT WATER SYSTEM FLOW SCHEMATIC



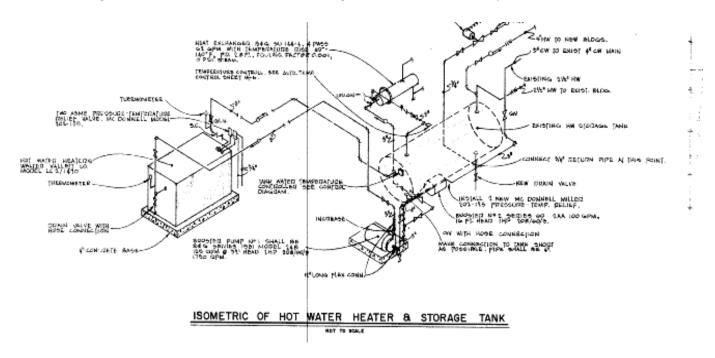
Gas Fired Boilers

Hot Water Circulating Pumps

The 3 gas fired boilers that heat portions of the building are nearing the end of their useful life and are scheduled for replacement. It should be noted that access to the central boiler plant room with respect to replacement of the boilers is very limited. Much smaller modular boilers should be considered when the time comes to replace the boilers in order to avoid the removal of structure to allow access.

Note that the original building was not air conditioned. It was heated and ventilated only.

A fourth gas fired water boiler was installed in 1992 along with a large hot water storage tank that provides domestic hot water to the older areas of the building. The boiler has been abandoned in place and a new, much smaller, water heater was installed around 2013 supplying hot water to the storage tank. In addition, the hot water storage tank is scheduled for replacement.





Abandoned Domestic Water Boiler



Domestic Hot Water Storage Tank



Gas Fired Water Heater (2013)



Domestic Hot Water Circulating Pump

Because there are significant elevation changes within the building's boundary, several sewage lift stations exist to pump sewage to an elevation where the sewage can gravity drain. Two of these lift stations are located in the basement boiler room.



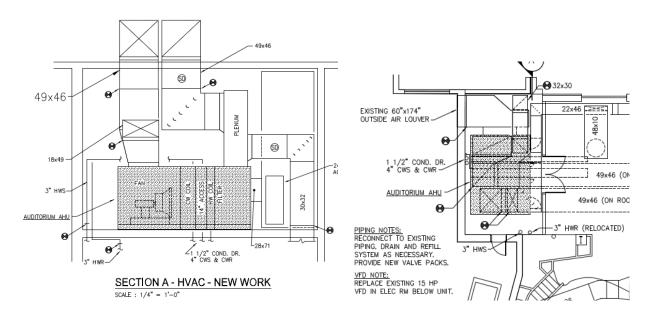
Sewage Lift Station No. 1



Sewage Lift Station No. 2

2. Auditorium:

The Auditorium air handling unit was replaced in 2015 and is in good condition. The unit includes a filter section, hot water coil, chilled water coil and supply fan. The air handling unit is located in a second-floor mechanical space on the stage and is shown in the figure below. This unit should remain in service for another 25 years.



### Administration Area and Lobby

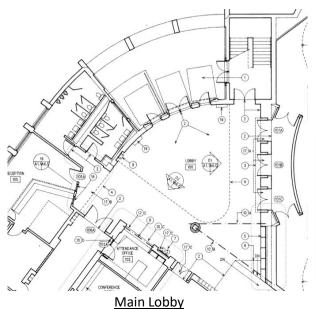
The administration area was renovated in 2009. A variable refrigerant flow and decoupled ventilation HVAC system was installed at that time. The system is in good condition and should remain in service for another 10 years; until 2029.



VRF Condensing Units Serving the Administration Area

1. 1996 Lobby Renovation:

The packaged rooftop heat pump unit serving the main lobby was replaced in 2016 and is in very good condition. This unit should remain in service for the next 10-15 years.

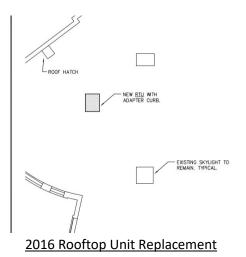




Rooftop Unit in Screened Enclosure



Packaged Rooftop Heat Pump Unit



2. Classrooms Above Administration Area:

The classrooms adjacent to and above the administration area are served by a variable refrigerant flow heat recovery heating and air conditioning system with decoupled ventilation units. This system was installed in 2016 and is in very good condition. This system should serve this area of the building for another 15 years.



Variable Refrigerant Flow Condensing Units



Ventilation Unit OAU No. 1

Ventilation Unit OAU No. 2

### 1972 Media Center

The media center is served by 3 packaged, single zone, rooftop air conditioning units that were installed in 2007. These units are in fair condition and should last another 5 years.



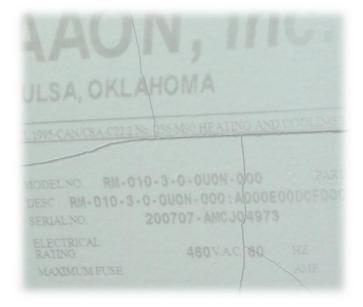
Media Center Rooftop Units (Typical of 3)



Packaged Rooftop Unit (2007)



Packaged Rooftop Unit (2007)



### 2009 MESA Addition

The MESA addition is served by a packaged rooftop variable air volume unit. The unit was installed in 2009 and is in good condition. This unit should continue to serve this area for another 10-15 years. The fume exhaust fans shown in the photo below are in good condition as well and should provide reliable operation for another 10-15 years.



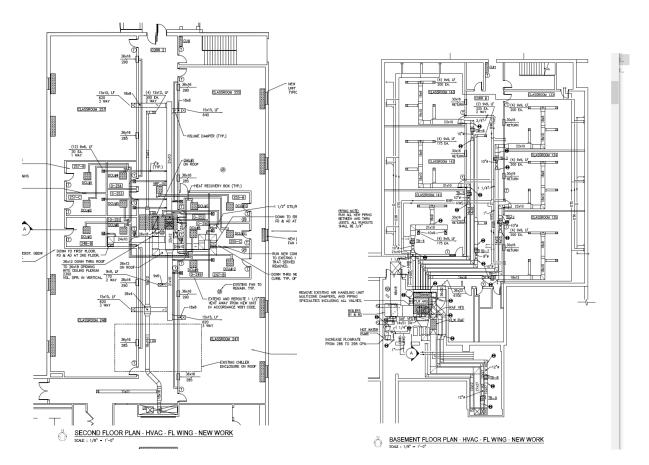
Packaged VAV Rooftop Unit and High Plume Exhaust Fans



Packaged VAV Rooftop Unit

### 1970 Foreign Language Wing (FLW) Addition: Additions and Renovations

This addition and renovation included 6 classrooms in the basement, 10 classrooms on the first floor and 6 classrooms on the second floor. The basement was served by a multizone air handling unit. The 16 classrooms on the first and second floors were connected to a separate boiler plant and water-cooled chiller/cooling tower. A dual temperature loop was extended to the classroom unit ventilators.



In 2017, the unit ventilator was replaced with new dual temperature unit ventilators. A decoupled rooftop ventilation unit was added to serve the entire wing. A small variable refrigerant flow system was provided to serve offices on the second floor. The mutlizone air handling unit was also replaced as part of this project.

These systems are in good condition and should serve the school for another 20 years.



VRF Condensing Unit/Decoupled Ventilation Unit (FLW)



Multizone Air Handling Unit Located in Basement

The air cooled chiller that serves the FLW was installed in 2001 and is in fair condition. The estimated remaining life of this chiller is 5 years. In addition, the boilers that serve this area were installed in 2003 and are in fair condition. These boilers should be replaced within the next 5 years.



Air Cooled Chiller (FLW)



Boilers Located in Basement (2003)



Access to Basement Mechanical Room

### 1992 Classroom Wing

This area of the building is served by four pipe (chilled/hot water) unit ventilators. The system includes an air-cooled chiller installed in 2017 and a boiler installed in 1991 located in a first floor mechanical room. The chiller is in good condition and should last another 15-20 years. The boiler is in fair condition and should last 3-5 more years. Pumps should be replaced when chiller/boiler is replaced. The domestic water heater serving this area is in good condition and should last another 10 years.



Air Cooled Chiller



Chilled Water Pump (1<sup>st</sup> Floor Mech Rm)



Gas Fired Boiler

Hot Water Pump

Domestic Water Heater

### 2009 Infill

There are two packaged rooftop units that serve the infill additions constructed in 2009. These units are in good condition and should remain in service for another 10 years.



Packaged Rooftop Unit



Packaged Rooftop Unit



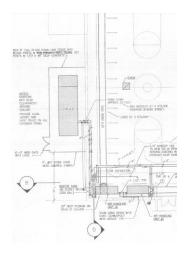
Packaged Rooftop Unit

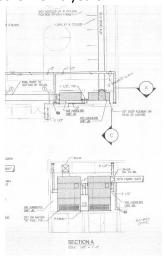


Sprinkler Riser Serving Infill

### 1978 Gymnasium

The Gym is served by 4 vertical chilled/hot water air handling units and an air-cooled chiller with pump module and 2 gas fired condensing boilers. The air handling units, chiller and boilers are approximately 12 years and are in good condition and should last another 15-20 years.







Gas Fired Boilers (2015?)



Hot Water Circulating Pumps (2009)



Domestic Water Heater (2010)



Air Cooled Chiller (2009)



Air Handling Units (Typical of 4) (2009)

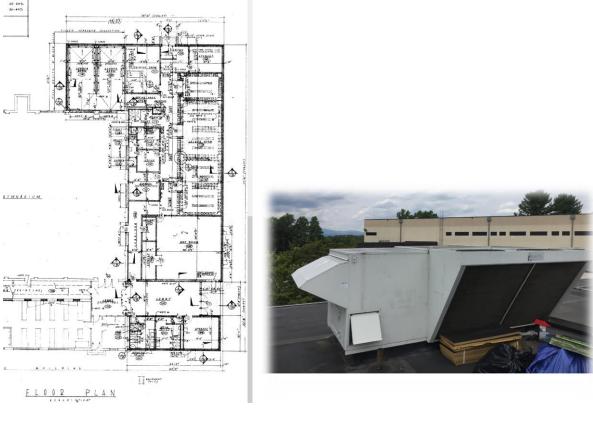


100% Outdoor Air Rooftop Unit (2005)



100% OA Packaged Rooftop Unit (2005)

### 1970 Locker Room Addition



100% OA Packaged Rooftop Unit (2009)



### Original 1951 Gymnasium

The original gymnasium heating and ventilating units were replaced in 2009 with two packaged rooftop air conditioning units with electric heat and hot gas reheat coils for dehumidification. The units are in fair condition and should remain in service another 5-10 years.





Rooftop Air Handling Unit (Typical of 2) (2009)

Rooftop Air Handling Unit (2009)

### 2009 Fitness Room

The fitness room is served by a packaged rooftop 100% outside air ventilation unit with heat recovery energy wheels. The unit was installed in 2009 and is in good condition and should remain in service for another 10 years.



HVAC Rooftop Unit (100% OA)

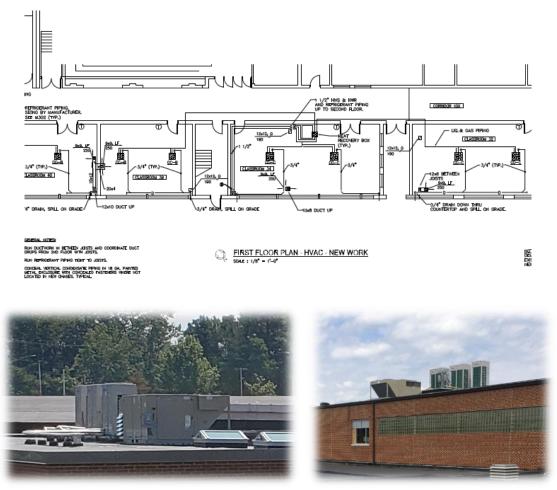
### 2009 Multipurpose Room

The Multipurpose Room is served by a packaged rooftop 100% outside air ventilation unit with heat recovery energy wheels. The unit was installed in 2009 and is in good condition and should remain in service for another 10 years.

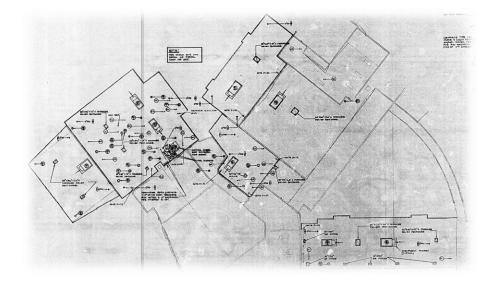


### 1960 2-Story, Seven Classroom Addition

The 3 classrooms on the first floor and 4 classrooms on the second floor were connected to the central steam system and utilized heating and ventilation unit ventilators to condition the classrooms. The unit ventilators were replaced in subsquent years and cooling was added by connecting the unit ventilators to the dual temperature loop. In 2017, the unit ventilator system was replaced with a variable refrigerant flow system with a decoupled ventilation rooftop unit. This system is in good condition and should service the school for another 20 years.



Variable Refrigerant Flow Condensing Units and 100% OA Ventilation Unit (2017)



1. Cafeteria:

The cafeteria is served by two dual temperature air handling units. These units were installed in 2009 and are in fair condition. In addition, a packaged rooftop air conditioning unit serves the teacher's dining room.



Dual Temperature Air Handling Units and Packaged Rooftop Unit (2009)

2. Kitchen:

The kitchen serving line and kitchen are served by two packaged rooftop units installed in 1996. The units have reached the end of their useful life and should be replaced.



Kitchen Serving Line Packaged Rooftop Unit



Kitchen Packaged Rooftop Air Conditioning Unit

3. Band Room:

The band room is served by a dual temperature packaged rooftop air handling unit that was installed in 2009.



Band Room Dual Temperature RTU (2009)

### 4. Fine Arts Wing:

The Fine Arts Classrooms on the second floor are served by two dual temperature air handling units. The units are in fair condition.



Fine Arts Wing Dual Temperature Rooftop Units (2005)

Limited areas of the fine arts wing are served by a dual duct air handling system. The system was installed in 1998 and is in poor condition due to its age. The system should be replaced within the next 5 years. The dual duct air handling unit is located in the main basement boiler room. The dual duct terminal units are located above the ceiling of the spaces served.



Dual Duct Air Handling Unit (1998)

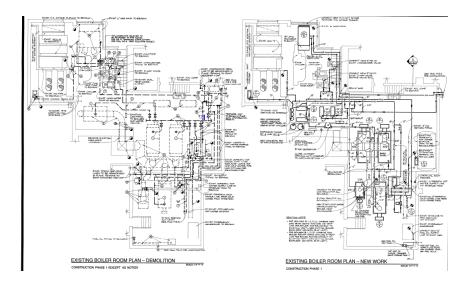
The fine arts wing is served by a cooling tower located on the roof and a water cooled chiller located in the basement's main boiler room. A circulating pump circulates condenser water between the cooling tower and chiller. A dual temperature pump circulates chilled or hot water to the air handling equipment. The tower and chiller have reached the end of their useful life and should be replaced within the next 5 years.



210 Ton Cooling Tower



210 Ton Water Cooled Chiller and Pumps (1998)



### **Miscellaneous HVAC Equipment**

There are several split system air conditioning units serving isolated areas of the building. Their condition ranges from poor to good. Units should be replaced as needed.







### **Automatic Temperature Controls**

The building's automation system has been well maintained and upgraded as necessary. Typically, the upgrades occurred as part of a building addition or renovation. There is a combination of pneumatic and direct digital control systems. Upgrades will continue to occur throughout the life of the building as manufacture upgrades are required or as part of normal maintenance and repair. There are abandoned in place controls that should be removed.







### **Plumbing Fixtures**

The plumbing systems throughout the building are in fair to good condition and have been well maintained. Unless the toilets require reconfiguration to meet ADA Standards or for other reasons, these fixtures should remain in service for another 15-20 years. It should be anticipated that plumbing fixture fittings (faucets and flush valves) may require replacement before the fixture replacement on an as needed basis as part of normal maintenance and repair.



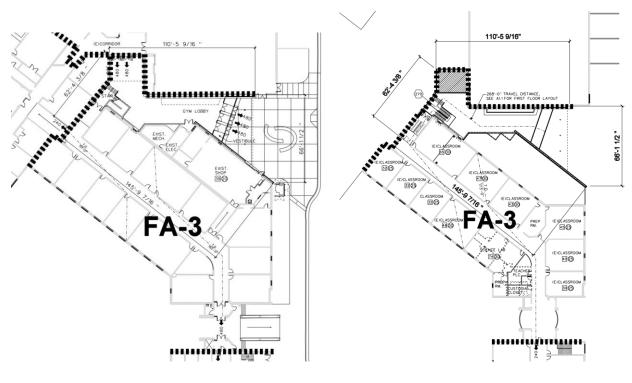






### Fire Sprinkler Systems

As part of the 2009 additions, Fire Area 3, shown in the figure below, was required to be sprinklered.



First Floor

Second Floor



Fire Sprinkler Riser (Fire Area 3)



**Fire Department Connection** 

### **Electrical**

The electrical distribution system for this building consists of two electrical services. The first electrical service is a three section 2,000-amps, 480Y/277volt, 3 phase, 4 wire Main Distribution Switchboard (S1) located in the 1919 classroom addition. The Main Distribution Switchboard (S1) is manufactured by Square D and is fed from a Dominion Virginia Power pad mounted transformer via underground service lateral to a Current Transformer (CT) cabinet integral to the Main MDS. The bus for this MDS is braced for a short circuit current rating of 65,000 AIC. The Main Distribution Switchboard was built in 1991, is in good condition and replacement parts are available.



Main Distribution Switchboard (S1)

The second electrical service is a two section 1,200-amps, 480Y/277volt, 3 phase, 4 wire Main Switchboard (MS) located in the 1972 auditorium addition. The Main Switchboard (MS) is manufactured by Square D and is fed from a Dominion Virginia Power pad mounted transformer via underground service lateral to a Current Transformer (CT) cabinet integral to the main disconnect switch section. The bus for this MDS is braced for a short circuit current rating of 50,000 AIC. The Main Distribution Switchboard was built in 1972, is in poor condition and covered with rust and corrosion. We recommend replacement of this switchboard.



Main Switchboard (MS)

### **Existing Electrical Power Distribution Equipment**

1. Panelboards:

The existing panelboards in this building consist of panelboards manufactured by Square D and Westinghouse companies. The Square D panelboards are in fair to good condition and replacement parts are available. The Westinghouse panelboards are in poor condition and we recommend replacing them. There is a lack of spare circuit breakers in most of the panelboards. We recommend adding new panelboards throughout the building to provide spare capacity for future loads.



Typical Square D and Westinghouse Panelboards

2. Transformers:

The existing dry type transformers in this building consist of the following:

- a. Dry type transformers in the original building are manufactured by Square D. These transformers are original to the building and are in fair to good condition. There are no moving parts in these pieces of equipment to be considered for replacement.
- b. Dry type transformers added during building additions are also manufactured by Square D. These transformers are in good to excellent condition.



Typical Dry Type Transformer

3. Receptacles:

The existing power receptacles in this building consist of the following:

- a. The original duplex receptacles are in fair condition.
- b. Surface mounted receptacles have been added throughout the years to provide power to computer systems. These receptacles are in good to excellent condition.
- c. The roof receptacles that supply power to the code required convenience receptacles are in good condition.



**Typical Receptacle** 

### **Emergency Power**

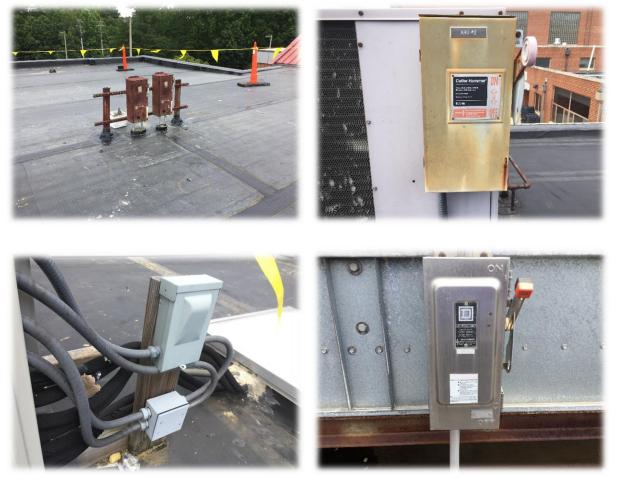
The emergency power to this building is provided via a 100KW 480Y/277volt, 3 phase, 4 wire, emergency generator located adjacent to the 2009 auditorium addition. The Automatic Transfer Switch (ATS) is located in the existing boiler room. The emergency generator is well maintained and appears to be in good condition.



100KW Emergency Generator and Automatic Transfer Switch

### **HVAC Electrical Components**

There are various pieces of electrical equipment serving the HVAC system for this building, all with equally varying degrees of condition. Few roof-mounted disconnect switches are covered with rust and corrosion.



**Disconnect Switches Serving Roof Mounted HVAC Equipment** 

### Lighting System

The interior lighting system for this building consists of recessed and pendant mounted LED type light fixtures. There are few fluorescent light fixtures in the electrical and mechanical rooms. They are scheduled to be changed to LED type light fixtures. All light fixtures appear to be in good condition. All exterior wall-mounted light fixtures have been replaced with new LED type light fixtures.



**Typical Interior Light Fixtures** 

The parking lot lighting system consists of pole mounted Metal Halide type light fixtures. These are the original light fixtures and we recommend replacing them (one for one) with LED type light fixtures.



Typical Existing Exterior Pole Mounted Light Fixtures

### **Emergency Lighting**

The existing exit light fixtures and emergency egress light fixtures are connected to the emergency generator. They all appear to be in good working condition.

### Solara System

The existing solar PV system on the existing 1978 gymnasium roof consists of 360 panels with inverters and a disconnect switch mounted on the exterior gymnasium wall. The system appears to be in good working condition.



Solar PV System on Gymnasium Roof

### **Electrical Auxiliary Systems**

### 1. Fire Alarm System:

The existing fire alarm control panel is FireFinder Series manufactured by Siemens and is in the main office. The addressable fire alarm system is in good condition and all observed areas had sufficient notification devices. The remote graphic annunciator is in the main lobby.



Siemens Fire Alarm System

2. Intercom and Clock System:

The intercom and clock system consist of a Telecor XL series head-end equipment in the main office, intercom speakers throughout the school and Cisco IP telephones instrument. The system was recently upgraded and is in good working condition.







Intercom and Clock System

3. Television System:

The existing television distribution system was recently converted to an IP based television distribution system. The updated system appears to be in good working condition.

4. Video Surveillance System:

The existing video surveillance system was updated to an IP based video surveillance system. The updated system appears to be in good working condition.



Typical Video Surveillance IP Cameras

5. Intrusion Detection System:

The existing intrusion detection system consists of a control panel, keypad, door contacts and motion detectors. The existing system appears to be in good working condition.



Intrusion Detection System

6. Network Infrastructure:

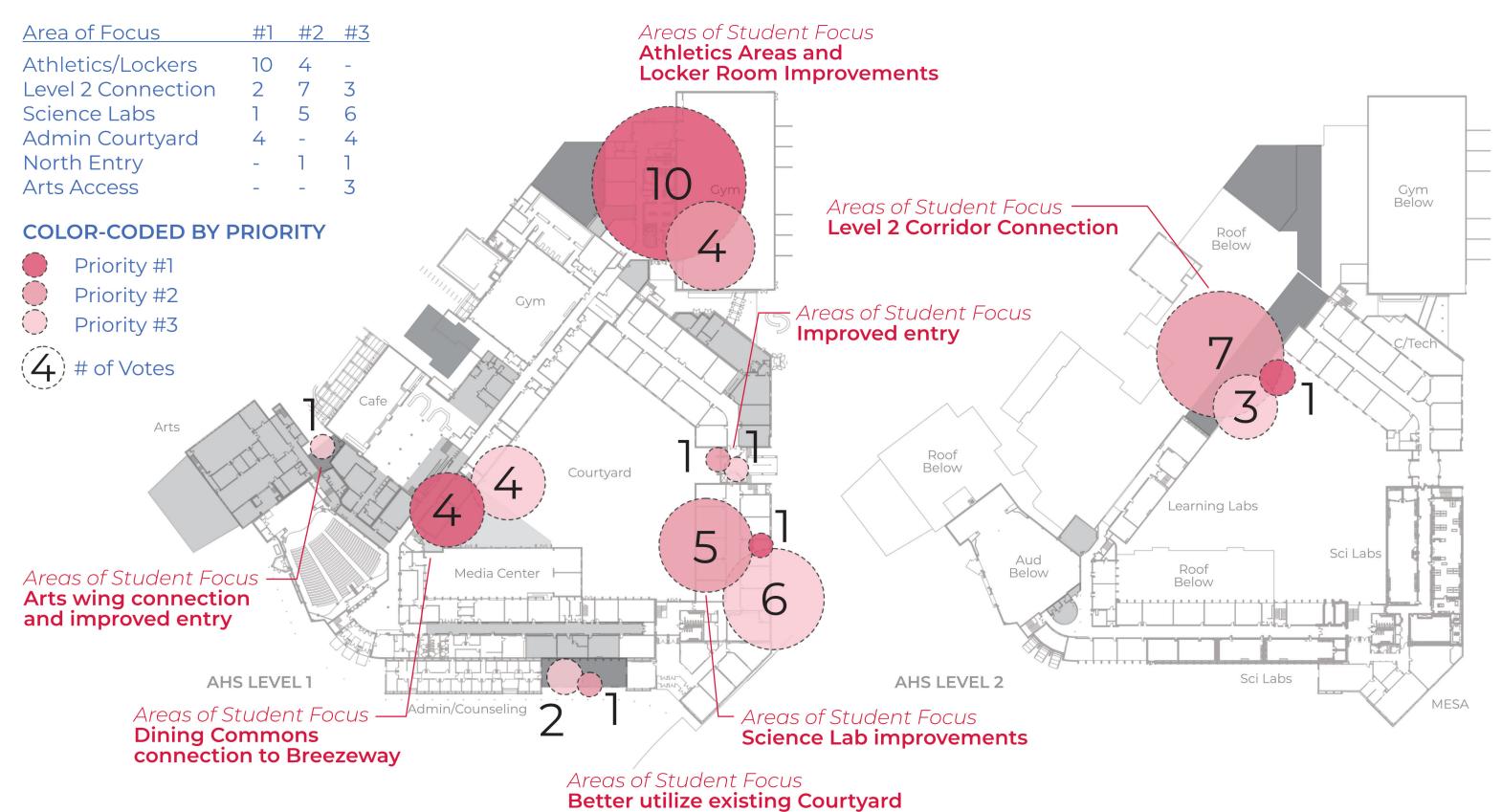
The existing network infrastructure system consists of data outlets, ceiling mounted wireless access points, and data cabling back to data racks and cabinets in Intermediate Distribution Frame "IDF" rooms and Main Distribution Frame "MDF" rooms. All equipment appears to be in good working condition.



Typical Network Equipment

#### **PRIORITIZED VOTING RESULTS**

18 Participants



AHS MASTER PLAN 2022 STUDENT SURVEY

AHS & WAHS RENOVATIONS MASTERPLAN - ALBEMARLE COUNTY PUBLIC SCHOOLS - STUDENT GROUP MEETING SEPTEMBER 9, 2022



#### **AHS Master Plan**

**Staff Survey Results** Spring 2022

#### Q3.How would you rate they physical learning spaces in your school?

3(a) : How would you rate they physical learning spaces in your school?: learning spaces (classrooms, labs) Answer Responses Value % Percentage of total respondents 1 - Worst 0 1 0% 0 2 0% 100.00% 3 - Neutral 1 3 0 4 0% 4 5 - Best 0 5 0% (Did not answer) 0 NULL 0% Weighted Score : 3.00 20% **40**% 60% 80% 100% Total Responses 1

#### Q3.How would you rate they physical learning spaces in your school?

3(b) : How would you rate they physical learning spaces in your school?: common spaces (including bathrooms and lounge areas)

bathloons and lou	nge aleas)			
Answer	Responses	Value	%	Percentage of total respondents
1 - Worst	0	1	0%	
2	1	2	100.00%	
3 - Neutral	0	3	0%	
4	0	4	0%	
5 - Best	0	5	0%	
(Did not answer)	0	NULL	0%	
W	eighted Score	∋:2.00		
Total Responses	1			20% 40% 60% 80% 100%

Q3.How would you rate they physical learning spaces in your school?						
3(c) : How would y	3(c) : How would you rate they physical learning spaces in your school?: outdoor spaces					
Answer	Responses	Value	%	Percentage of total respondents		
1 - Worst	0	1	0%			
2	1	2	100.00%			
3 - Neutral	0	3	0%			
4	0	4	0%			
5 - Best	0	5	0%			
(Did not answer)	0	NULL	0%			
Weighted Score : 2.00						
Total Responses	1			20% 40% 60% 80% 100%		

Q4. What current physical aspects of your school do you feel create an optimal teaching and learning environment? Please explain your answer thoroughly with details.

Outdoor space that is usable as learning space.

Q5. What types of spaces or amenities do you think should be added to your school's physical spaces to create a better teaching environment? Please explain your answer thoroughly with details.

More outdoor learning space, more furnished common learning space for students and teachers.

#### **AHS Master Plan**

Student Survey Responses Spring 2022

Q2.How would you rate your school's physical environment?						
2(a) : How would y	2(a) : How would you rate your school's physical environment?: learning spaces (classrooms, labs)					
Answer Responses Value % Percentage of total respondents						
1 - Worst	0	1	0%			
2	0	2	0%			
3 - Neutral	5	3	100.00%			
4	0	4	0%			
5 - Best	0	5	0%			
Weighted Score : 3.00						
Total Responses	5			20% 40% 60% 80% 100%		

#### Q2.How would you rate your school's physical environment?

2(b) : How would you rate your school's physical environment?: common spaces (including bathrooms and lounge areas)

······				
Answer	Responses	Value	%	Percentage of total respondents
1 - Worst	3	1	50.00%	
2	2	2	33.33%	
3 - Neutral	1	3	16.67%	
4	0	4	0%	
5 - Best	0	5	0%	
W	eighted Score	e : 1.67		
Total Responses	6			20% 40% 60% 80% 100%

2(c) : How would y	ou rate your s	chool's	physical	environment?: outdoor spaces
Answer	Responses	Value	%	Percentage of total respondents
1 - Worst	0	1	0%	
2	1	2	16.67%	
3 - Neutral	3	3	50.00%	
4	2	4	33.33%	
5 - Best	0	5	0%	
Weighted Score : 3.17				
Total Responses	6			20% 40% 60% 80% 100%

Q3. What spaces and programs at your school do you think create the best physical learning environment for you right now? Please explain your answer thoroughly with details.

The library is easy to work in. It's quiet, clean, and it doesn't feel claustrophobic. The Ewing and chemistry lab is good too.

I would be happy to see further bathroom maintenance (I am aware that it is inevitably up to the students and it can go downhill fast, but I would like to see some sort of hallway monitors in place to try and aid this)

E wing and the ESA building are the best physical learning places because they are very open spaces and the windows make them seem larger than they are. The library and auditorium are also very nice spaces, the library usually has relatively few distractions and the auditorium is a big open space that is nice to work in.

The classrooms themselves are overall good, although some things such as heat and the small size can distract from the teaching.

I think that we should have more parking space so that everyone who has a license is able to drive themselves to school, not just the seniors and faculty.

Q4. What types of spaces or programs do you think should be added to your school to create a better physical learning environment? Please explain your answer thoroughly with details.

some of the classrooms are kinda dark because they don't have any windows or the window they do have is smaller than a posterboard.

I think the single-use bathrooms are a nice installment for gender-non-conforming / trans students and would like to see some implementations to further support them. (Again, eventually it comes down to the students, and you can only do so much as administrators. My ideal way to handle this is to allow for even easier and faster anonymous reporting or some sort of student hotline to call to either report issues or to notify staff of anything else).

We should make classrooms more open to the outdoors, this will make classes more inviting and less claustrophobic. There should also be more opportunities for students to go outside and learn.

More gender neutral bathrooms would greatly improve the hostile environment around bathrooms for trans kids, and also just provide more convenience as certain parts of the school have much less access to them than others.

We are seeking feedback on the AHS/WAHS Master Plan. Please submit feedback through this form. <u>Master Plan Link</u>

Please check the box(es) next to the projects that you believe are the highest priority for AHS.
Single Stall/Gender-Inclusive Restrooms
Daylighting in Lower Level Classrooms
Guidance Corridor Modernization
Guidance Corridor Classroom Relocation
Arts Wing ADA + Circulation Improvements
Dining Commons Expansions + Covered Plaza
Athletics Wing Classroom Addition
CTE/Makerspace Expansion + Displays
Level 2 Collaboration Zone + Teacher Space
Level 2 Classroom Expansion

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Single Stall/Gender-Inclusive Restrooms
Corridor Modernization
Student Commons/Gallery Addition
Admin Relocation + Level 2 Improvements
Level 2 Teacher Space Improvements
Outdoor Classrooms
Special Ed Wing Improvements
Exterior Window Replacement
Drama Area Improvements

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Improvement to ALL outdoor athletic facilities at WAHS...they are unsafe for practice or competition and frankly a complete embarrassment to the community.

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Wahs front entrance redo

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Additional classroom space at WAHS. My 11th grade daughter's AP physics class, a very challenging class, is sharing a large science classroom with a History class with a 6-8 foot tall divider between the classrooms which only reaches about a third of the way to the high ceiling. This makes it very difficult for the students in each of these classes to concentrate on their teacher and classroom with all of the noise distraction from the other classroom constantly bothering them.

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Level 2 Collaboration Zone + Teacher Space
Level 2 Classroom Expansion

Please check the box(es) next to projects that you believe are the highest priority for WAHS.
Single Stall/Gender-Inclusive Restrooms
Corridor Modernization
Student Commons/Gallery Addition
Admin Relocation + Level 2 Improvements
Level 2 Teacher Space Improvements
Outdoor Classrooms
Special Ed Wing Improvements
Exterior Window Replacement
Drama Area Improvements

This form was created inside of K12albemarle.org.



Ρ	lease check the box(es) next to the projects that you believe are the highest priority for AHS.
	Single Stall/Gender-Inclusive Restrooms
~	Z Daylighting in Lower Level Classrooms
	Guidance Corridor Modernization
	Guidance Corridor Classroom Relocation
~	Arts Wing ADA + Circulation Improvements
	Dining Commons Expansions + Covered Plaza
	Athletics Wing Classroom Addition
	CTE/Makerspace Expansion + Displays
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WAHS has many classrooms with no natural light. The cafeteria has no natural light and the athletic fields and other facilities are massively behind. Bathrooms and classrooms need major overhauls.

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# Google Forms

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All of these projects sound great! I have heard, as an argument AGAINST single stall/gender inclusive bathrooms, that they should not be in schools because they are just a place where kids go to [insert inappropriate/illegal things here]. I would like the Long Range Planning team to remember, though, that unsafe choices are not a bathroom issue...they are a student behavior issue. Don't restrict access to single stall/gender inclusive bathrooms for the kids who want to use them appropriately, address the problematic behaviors! In other words, don't punish all for the actions of a few. Single stall bathrooms are a safer, more comfortable option for a LOT of kids, not just (but yes, also) gender expansive kids.

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Don't build dual classrooms that don't have proper wall divisions. The accordion walls allow for "flexibility" 1% of the year but cause a high level of distraction the other 99% of the year. E-wing additions need full time walls to separate the classroom spaces. Why should a 9th grade history class have to listen to a physics lesson happening ten feet away.

These additions might have looked cool at High Tech High when you visited, but they don't actually work HERE.

Get teacher input the first time, listen to it, and then act on it. Then you won't need to do a costly renovation later or have poor learning environments for thousands of students because of what a dilettante consultant suggested while looking at a blueprint.

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Please identify any important projects that were not identified by the master plan.

Specifically improving sound interference for shared classrooms without an adequate barrier!!!

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Please identify any important projects that were not identified by the master plan.

The cost page on the PDF is blank, can you please update with current best estimates?

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Please identify any important projects that were not identified by the master plan.

More cafeteria seating options

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September 11, 2019 **MEETING MINUTES PROJECT NAME:** Albemarle High School Western Albemarle High School Masterplan Study **MEETING:** Master Plan Study - Albemarle High School **MEETING DATE:** 09.11.2019 **ATTENANCE:** Darah Bonham, Principal – AHS Kate Howard, Assistant Principal – AHS Craig Smith, Assistant Principal – AHS Joe Letteri, Director of Building Services Lindsay Snoddy, Deputy Director of Building Services David Via, Supervisor Facilities Management Kylan Shirley, Project Manager, Quinn Evans Charles Tilley, Principal, Quinn Evans

The purpose of this meeting is to kick off the **Albemarle High School** master plan and discuss priorities with the school administration, describing the building and impacts of modernization with a focus on programming. The administration and facilities team will also walk through the facility to discuss conditions and opportunities.

#### Albemarle County Public Schools

**Our Vision:** Our learners are engaged in authentic, challenging, and relevant learning experiences, becoming lifelong contributors and leaders in our dynamic and diverse society.

**Our Mission:** Working together as a team, we will end the predictive value of race, class, gender, and special capacities for our children's success through high-quality teaching and learning for all. We seek to build relationships with families and communities to ensure that every student succeeds. We will know every student.

*Our Values: Equity:* We will provide every student with the level of support necessary to thrive. *Excellence:* We will mitigate barriers and provide opportunities for every student to be academically successful. *Family and Community:* We will engage with and share the responsibility for student success with families and community partners. *Wellness:* We will support the physical and emotional health of our students and staff.

#### 1) Enrollment:

- Building Capacity (current) 1,775
- Plan for enrollment between 1800 1900? To be confirmed.
- Current enrollment: 1,901 students in 2018/2019
- Projection shows 1,954 students in 2022/2023
- Learning cottage:
  - Modular unit contains 8 classrooms
  - Would need to build new classrooms to replaced modular unit capacity
- Post High:
  - Severe and Profound facility (house) near Burley.

Page 1 of 5



- For students up to age 22. Federal mandate to serve S&P students up to age 22. Some graduate and go there to receive additional education.
- o Kevin Kirst? Dahra manages their staff.
  - Kate Howard (AP at AHS) manages it.
  - Is there any benefit to have the program at AHS?
    - AHS location could work
    - Use Burley custodial and IT staff
    - AHS has the highest volume of students that go into the program
  - Program has outgrown the current facility. 27 students currently.
  - About half go to work-study programs.
  - Good location in current facility
  - At AHS: 4 classrooms near old gym
- 2) AHS Programs:
  - Team programs:
    - Only exists in 9<sup>th</sup> grade.
    - This year found some hard data that supported students passing math SOL's that hadn't previously.
    - Operating only out of 2018 summer renovation spaces on second floor.
    - Dividable space is very helpful and used.
  - Math Engineering and Science Academy (MESA)
    - o 260 students, typical, 25% MHS or WAHS districted students.
  - Science:
    - Jeff discussed using a few super-labs for all science classes, classes rotate into labs on lab days, otherwise they are in typical classrooms.
    - o Common shared lab would not be factored into seat count in that scenario.
    - Science teachers are only endorsed for one subject, Bio, chem, etc. (silo'd endorsement) and have to teach 6 out of 8.
  - Courses offered at AHS:
    - o AP computer science
    - o Japanese
    - o Vector calculus
    - o **astronomy**
- 3) Spaces:
  - Only spaces in enclosed 'Boxes' counted toward capacity. Breakout spaces not factored into 'seat count'.
  - Breakout spaces within classrooms not factored into 'seat count'
    - 8-10 student sized spaces are best, 1/3 of class size
    - Access to hallway is preferred, better flexibility
  - Why have double-size classrooms:
    - o Collaboration between teachers' benefits students. (professional learning communities)
    - Support for labs.
    - o Less experienced staff benefits from more experienced staff
    - One teacher could take on lecture, other could take on lab.
    - Interdisciplinary projects is the hope.
  - Professional learning spaces
    - Need spaces for teachers to plan most classrooms are booked all periods.
    - Schedules being redesigned to provide time for teacher planning
  - Courtyard is important to school culture and function.



- What are the best rooms in the school:
  - Rooms with natural light. Basement classrooms don't have windows.
  - o Art classrooms (despite issues with circulation to that wing) work well.
  - Band room works well
  - o Basement creates a community, a nook, some level of identity in the large building.
  - MESA has the community feel.
  - Kids need a 'place' that is their community, identity, place, tribe, do better than those that don't.
- Auditorium
  - o underwhelming
  - Plaster failing in some places.
  - Central location for performing arts within county
  - Best auditorium in division is not up to desired standard.
- Cafeteria
  - Undersized.
  - Students eat all over school now
  - Could it be somewhere else in the building?
- 4) Furniture:
  - Year 1 some concern about wheels on chairs, but not anymore.
  - Now concerns are broken wheels.
  - Chair wheels are good. Tables on wheels are not as important.
  - Couch/soft seating: end tables are useless, too small, not stable, get in the way.
  - High Seating: popular, fill up first
  - At WAHS, some teachers traded so that each classroom had all the same furniture item.
- 5) Scheduling:
  - Typically teach 5/8 or 6/8 periods.
  - Like to have all dept teachers have the same free period so they can get together.
  - MESA: teachers do not have a common planning period, but they have a shared office.
- 6) Circulation:
  - Completing the upper floor circle upper levels of AHS do not connect to form a continuous circulation.
  - Stair at MESA is very heavy use. Bottlenecks.
  - Stair at bus loop is heavy use b/c of basement.
  - Stair by TEAM spaces is heavily used as well.
  - Adding fire protection to the building:
    - 1. Several stairwells could be opened up.
    - 2. Open spaces in corridors.
    - 3. Can any fire doors be eliminated??
  - Traffic to modular classroom is through gym lobby, with narrow corridors. Security issues.
- 7) Site topics:
  - Parking: is there enough?
    - All spaces are needed and used.
    - 269 students that have a parking pass.
    - Several students pay the church across the street to park



- Some parking in a lot off of Lambs Lane behind field, 50-60 spots.
- Tennis: all 8 courts get used, but only 6 matches at a time. Spring sport.
- Building Services trailer area?
  - What is the long-term plan for this area?
- Connectivity to Jouett and Greer
  - $\circ$   $\;$  Finally going to be a sidewalk connecting schools
  - Road back to Jouett and Greer is not pretty, the service center is there.
  - o Boys and Girls club is going to be behind Jouett
  - o Gym/recreation facility to be shared between all three schools?
- 8) FUTURE HS Center III (3)
  - Performing arts academy
  - Could it be a new perf. arts center connecting Jouett/Greer and AHS, back behind AHS
  - Challenges with a performing arts center that is not connected
    - o Security
    - o Moving between main school and center during the day
    - Not a big deal relative to sending students off to HS Center II or Center I.
- 9) Athletics Center
  - Could there be a large athletics center shared between Jouett/Greer behind AHS?
  - Could be free up gym space at Jouett.
  - Could be central athletics facility for County.
  - Indoor track facility. Teams practice outdoors then compete at FUMA or liberty.

### **Building Tour and Facility Related Comments:**

Performance Contracting:

- Lighting throughout school. Interior and exterior.
- Plumbing fixtures: lavatories aerators, flush valve replacements.
  - Would like to do a total lavatory (porcelain) replacement (as part of ongoing restroom renovations?)

#### Roofing:

- Nearly all replaced within the last few years.
- Mesa addition not replaced since built
- Early 1950's and 1960's wings to be replaced summer 2020.

#### Elevator:

- Foreign Language wing renovated 2018
- Band wing to be renovated 2020
- Want to add a stretcher-size elevator. Where? Near front of building, stairs next to auditorium.

#### Mechanical

- Foreign Language wing all replaced except for chiller plant which will be replaced in two years
- 91 addition boiler scheduled to be replaced summer 2020. Considering cutting off outdoor air to unit ventilators and adding DOAS.



- Main mechanical room: chillers, hot water storage tank, 3 boilers(one was a backup, now with load reduced only one boiler ever runs)
- Cooling tower on roof behind auditorium, needs replacing soon, mid-90's vintage.
- Cafeteria: fairly new rooftop equipment
- Field house: boiler will be replaced next summer
- VRF systems:
  - As long as install is good, they are very low maintenance.
  - o Lifespan of VRF system is not known yet.

#### Gas:

- 4 or 5 gas regulators around building
- Propane gas at Foreign Language wing for science classrooms

#### Electrical:

• To switch to electric boilers, new switchgear and service would be required.

Plumbing:

- Sewage pump in mechanical room and under sidewalk near band wing (b/c building area is lower than other building areas)
- Cast iron piping in some areas has corroded and been replaced during recent renovation projects.
- Generally, sewer drains toward bus lot and Lambs Road.

Climate Action Plan – Sustainability:

- How could the campus achieve Net Zero?
- Is there a justification for not going all-electric?
- No boilers in a net-zero building mechanical systems would be VRF or Geothermal.
- Solar Panels on gym now. Considering a PPA to add more. Solar provider is 2.5 cents less than Dominion rates.
- Prepare roof to accept solar panels in the future.

QUINN EVANS

14 January 2022

MEETING MINUTES						
PROJECT NAME:	Albemarle High School Western Albemarle High School Masterplan Study					
MEETING:	Master Plan Study – Restart Discussion					
MEETING DATE:	01.14.2022 VIDEO CONFERNCE					
ATTENANCE:	Debbie Collins, Deputy Superintendent Jay Thomas, Director of Secondary Education Jen Sublette, Principal, WAHS Darah Bonham, Principal, AHS Katina Dudley, Lead Instructional Coach Lindsay Snoddy, Director of Building Services Lisa Walker, Project Manager, Building Services Kylan Shirley, Project Manager, Quinn Evans Charles Tilley, Principal, Quinn Evans					

The purpose of this meeting is to discuss the process and direction of restarting the Master Plan for each campus. The design team will review the progress to date and what remains to be completed.

- 1.) Review goals of the study and project status
  - Purpose: The School Board has requested a master plan for Albemarle HS and Western Albemarle HS that identifies the needed future modernization and renovation work at each school that will provide 10 15 years of useful life to the facilities. We are studying the existing conditions and creating a plan that addresses:
    - Instructional needs
    - Safety
    - Technology infrastructure
    - Accessibility
    - Site traffic and parking [in coordination with the Lambs Lane Campus Study]
    - Ongoing maintenance and other considerations

The master plan will include recommendations for potential alternative concept designs incorporating this program within the existing buildings and such additions of new space as may be necessary or desirable. In addition, we will develop opinions of cost that can be used for capital improvement planning.

- **Status:** The planning effort was paused in early 2020 as the pandemic started and has recently been restarted. The
  - Program and Physical Assessments:
    - Interviews with administrative staff and school leadership complete
    - Stakeholder Input need to solicit comments and input
      - Students
      - Staff
      - Parents/Community Members
    - Identify building code, accessibility (ADA), building system requirements needed in process
  - o <u>Conceptual Diagrams</u>: to be completed
    - Diagrammatic concepts for each school with descriptions for proposed changes
    - Possible phasing diagrams for implementation if required.

#### 14 January 2022



- <u>Construction Cost Development</u>: to be completed
  - Cost Estimate for each campus
  - Development of potential schedule

2.) Identify any changes or updates to this master plan process:

- Completed construction/renovation projects at either school since 2019?
  - Need to determine if any capital maintenance work has been completed in 2020 2021 2022
- Changes to enrollment planning/forecasting?
  - Need to verify the desired planning enrollments for both schools
  - 2021/2022
    - WAHS 1,131 [1,200 student capacity]
      - AHS 1,806 [1,785 student capacity]
- Changes to curriculum planning?
  - AHS TEAM Program, MESA
  - WAHS Environmental Science Academy
  - Planning around specific learning communities not necessarily preferred as these things will change over time. Focused on career pathways.
  - Online options could be more available.
- How has virtual learning affected the learning environment moving forward?
  - Virtual/hybrid learning has become more of a fixture in future. More digital bandwidth and locations where students can connect digitally.
  - Collaborative learning student breakouts have not been used as much during the pandemic given the need to spread out.
  - Stress levels during the pandemic with staff and students has identified the need for more focus on health and wellness and wellbeing. Maybe future programs or quiet spaces for staff/student recharge.

#### Albemarle High

School Administration identified the following additional items:

- Students are connected better to each other with a variety of smaller, formal, and informal spaces. Look for opportunities to add these types of space spread throughout the building.
- The main offices should connect better to the main corridor students are not connected with the admin/guidance staff. Open up the office areas more visually to the main corridor.
- Small break out spaces spread throughout the building will provide alternatives for counseling spaces (multi-use).
  - More small meeting spaces are needed with shared access from the corridor or common area not within a larger room. (IEP meetings, student breakouts, accessible from corridors).
- Adding windows and transparency through the building will help with supervision and sightlines as well as an increased sense of openness.
- With the additional students on campus, along with the modular units, the physical building is over capacity, which stretches the core program elements outdoor athletic facilities, gymnasium, cafeteria, media center, auditorium, and arts programs.



#### 14 January 2022

- Modular Classrooms:
  - $\circ$  (2) pods with (8) classrooms each x 1:21 = 336 students (1 modular added summer 2021)
  - Security is an issue with students moving outside the building.
  - Long distance to administration offices.
- 'The Breezeway' (courtyard) continues to be a highly popular student gathering space and serves a vital function of cross circulation through the building.
- More outdoor learning spaces would be a great opportunity.
- A prayer room has been created in one of the former admin conference rooms (many Afghan refugees)
- Foodservice
  - Currently have (4) lunches to spread students out across campus; likely will shift to (2) lunch periods once COVID ends.
  - Breezeway (courtyard) is used constantly even when cold
  - o Small cafeteria is not an issue b/c eating happens in many different areas of the building

#### Western Albemarle High

- The Environmental Science Academy wing classrooms are newest.
- Vehicular circulation issues
  - No 'junior' parking available
  - Only one way in and out of the campus from 250.
  - Difficult for emergency vehicles to access building.
- Space Types
  - o Several large rooms have been added via renovation, adequate numbers now.
  - Existing classrooms are very small and lack windows, which limits teaching/learning methods and variety.
  - Informal spaces like those created where lockers have been removed (benches and counters) are used all the time, and more are needed.
  - No lockers are needed.
  - Large labs and classrooms (partially in the new ESA) are hard to use because they get too loud and large groups sometime need focused instruction while others are in the lab spaces.
  - Operable partitions are an option to create flexible, variable size spaces, but need to be able to create acoustic isolation between rooms.
  - Wellness Space Students are interested in this type of space, there is a mental health and wellness student committee. But there is no space in the building now to create that type of space.
- Small break out spaces spread throughout the building will provide alternatives for counseling spaces (multi-use).
  - More small meeting spaces are needed with shared access from the corridor or common area not within a larger room. (IEP meetings, student breakouts, accessible from corridors).
- Food service
  - No clear path to the exterior
  - o poor connections between indoor/outdoor spaces not outdoor dining.
- Performing Arts
  - Back-of-house spaces do not work, too small and are all used for set-building so no dressing rooms, etc.
  - Auditorium could use a renovation.

Page 3 of 4



14 January 2022

- 3.) Stakeholder input planning
  - The goal is to solicit various perspectives on the conditions of each campus. Input will focus on programs and building related issues that will vary by group. For example...
    - Staff how does the building function relative to your specific program needs?
    - Students identify the things in the physical environment that limit your specific learning style: spaces for small groups, self-directed learning, independent study, spaces for non-traditional course work.
    - Parents and other community members what needs do they see in the existing fcailities and

Stakeholder Engagement

- Feedback methods? What is possible at the moment?
- Current model of virtual engagement is working well and gets more participation than previous inperson meetings.
  - Are there scheduled meetings that we could join for engagement opportunities.
    - Faculty opportunities during faculty meetings
    - Students could easily select certain classes to participate
    - Parents likely needs to be a separate meeting.
- 4.) Next Steps:

•

- Update any changes since 2020
- Stakeholder input meetings and contacts
- Assemble draft of Facilities Planning spreadsheet
- Develop Concepts for each School with budgets

Section 3

### WESTERN ALBEMARLE HIGH SCHOOL

#### Executive Summary

#### **Existing Conditions**

Building Assessment Summary Color Floor Plans by Department Building Code Summary

#### **Project Recommendations**

- 1 New Single-Use Restrooms
- 2 Corridor Modernization
- 3 Student Commons/Gallery Addition
- 4 Admin Relocation + Level 2 Improvements
- 5 Level 2 Teacher Space Improvements
- 6 Level 2 Collaboration Area Renovation
- 7 Outdoor Classrooms
- 8 SPED Wing Improvements
- 9 Select Exterior Window Replacement
- 10 Performing Arts Select Improvements

#### **Projections of Probable Cost**

#### Appendix

- 1 Existing Building Assessment
- 2 Existing Roof Comparison Summary
- 3 Mechanical, Electrical, Plumbing+ Fire Protection Assessment (2022)
- 4 Student Leadership Workshop (Sept 13, 2022)
- 5 Stakeholder Survey Results (2022)
- 6 Meeting Minutes

# WESTERN ALBEMARLE HIGH SCHOOL EXECUTIVE SUMMARY

#### Purpose

This report is intended to provide Albemarle County Schools and division leadership with the information needed to determine with confidence the most appropriate course of action for the modernization of Western Albemarle High School. It summarizes existing conditions, details planning considerations and opportunities that will be the foundation for planning and design efforts of facility modernization. Additional detailed information is provided in the body of the report and the appendices.

#### Overview

Western Albemarle High School was first constructed in 1978 as Westside High School and has received three major expansions. Recent projects have focused primarily on expansion of science programs. Most recent district modernization projects build upon ACPS goals for high school choice, academies/centers, flexible learning environments and potential for betterdistributed student capacity system-wide. Some modernization projects herein require relocation of existing instructional space. As such, expansion areas have been assessed for potential to add learning space capacity, or to redistribute existing capacity and renovate internal spaces with best potential for improvement. To ensure its longterm viability and to enhance its role in serving the needs of studemts, today and in the years to come, prioritization of WAHS modernization options are included within plan.

#### Site

In general, the design team assessed open areas of campus considering existing use and potential for expansion for increased capacity, improved flexibility, quality of existing educational spaces and corridors, improved entry security and site visibility. Accessibility across the WAHS campus generally complies with current ADA guidelines and recent accessibility improvements have been added to the campus.

#### Building

The baseline for a modernization project should include building system improvements, healthy interior environments, and universal accessibility. Overall, the building is structurally sound, and the exterior envelope is in various states with some

elements needing replacement. Windows are mostly original to the building and should be considered for replacement with larger units for improved daylighting. As noted in the MEP Building Assessment Summaries, some mechanical equipment has been identified as nearing or beyond service life and should be scheduled for upgrade, while some equipment, such as the central boiler and some rooftop AHUs, are newer and in good condition. Fire suppression systems are not present in the building and are needed to better-equip the facility for long-term flexibility. Patterns of circulation and gathering were assessed for potential improvement to student flow through core community spaces and along the main ground level corridor. There is an 8-classroom modular building on campus currently in-use. Modernization projects identified will bring new life to the educational environments, the facility systems, and improve the quality and safety of WAHS overall.

#### **Educational Environments**

The inventory educational environments across WAHS are a mixture of outdated spaces and some recent improvements. Many core classrooms are 500-600 square feet; undersized per the Department of Education recommendation of 700sf for Virginia high schools. Many instructional spaces lack adequate natural light and views. Some programs could benefit from more flexible, user-defined space and more variation in group meeting and gathering spaces in general. Most unrenovated portions of the school lack this variety of spaces and amenities supportive of ACPS goals, contemporary, learnercentered educational models that include flexible and adaptable environments that support the needs of students and faculty. The gymnasium, associated health/PE spaces, and auditorium are in good condition yet vary in their capacity to accommodate higher enrollment.

#### Planning Guidelines, Capacity and Enrollment

Virginia Department of Education planning recommendations for newly constructed high schools in Virginia, and existing ACPS high school facilities are used as benchmarks to provide direction in programming the modernization masterplan. Recent ACPS studies listed below have also been identified as primary guidelines for future improvement:

#### Continued next page



## WESTERN ALBEMARLE HIGH SCHOOL EXECUTIVE SUMMARY continued

Planning Guidelines, Capacity and Enrollment *Continued* 

- ACPS Strategic Plan (2021)
- High School 2022 Study
- HBAxFNI High School
   Facility Condition Assessment (2017)
- ACPS Building Capacity Methodology
- ACPS Enrollment Projections

Using the most recent ACPS division methodology, student capacity at WAHS is currently 1,084 and projected to increase to 1,114. Recommendations in this study consider rising enrollment expected at WAHS alongside district goals for high school choice and capacity distribution. A recent enrollment study identified expected growth to 1,280 students by the 2023-24 school year. Core facilities such as food service. athletics, performing and fine arts, and administrative spaces vary in their capacity accommodate higher enrollment. There is an 8classroom modular building on campus currently serving need for additional instructional space. Calculations for future building capacity at WAHS excluded these modulars

#### **Planning Options**

In considering the breadth of these findings, it is the view of the study team that the building could evolve in various ways through thoughtful modernization projects. While the scope of this report is not intended to specific design solutions, information provided forms the baseline for evaluating and planning for a modernized high school. Planning concepts are based on analysis of VDOE guidelines and size and cost data from renovated high schools constructed within the last five years in Virginia.

#### **Building Code Improvements**

In general, consideration of installing a fire sprinkler system will improve flexibility and economic efficiency of future renovation options as the existing facility is consistently adapted to current and future ACPS goals for educational effectiveness and safety. Options identified below were studied for feasibility with or without a fire sprinkler system. Installation of a sprinkler system as a standalone improvement project would mitigate per-project cost to adapt each new project to existing fire protection zones. As such, sprinkler system installation at WAHS was identified by the design team as a high priority for the future adaptability of the overall high school facility.

WAHS Modernization Projects Identified:

- 1. New Single-Use Restrooms
- 2. Corridor Modernization
- 3. Student Commons/Gallery Addition
- 4. Admin Relocation + Level 2 Improvements
- 5. Level 2 Teacher Space Improvements
- 6. Outdoor Classrooms
- 7. SPED Wing Improvements
- 8. Select Exterior Window Replacement

Each approach includes potential options with unique scope and projection of probable cost. Each includes a wide variety of attributes that could be advantages or disadvantages and should be evaluated further as options are considered. Factors include minimizing disruption of the learning environment during construction, value of the existing amenities (gymnasium, auditorium, dining and accessibility), site constraints and features.

#### Conclusions

Overall, options noted illustrate the most economical plans to modernize the WAHS campus and expand the building where needed. It is feasible to create current learning environments within and as additions to this existing building and site. Recommendations anticipate an increase in student choice, mentorship, projects, presentations and offcampus activities. Construction costs vary widely based on many factors. ACPS should prioritize and phase building improvements informed by current construction cost factors. The team prioritized projects that improve community spaces and increase future adaptability of the facility overall. The building and site are in good condition and modernizations that include learning environment improvements and system replacement are achievable.



## WESTERN ALBEMARLE HIGH SCHOOL BUILDING ASSESSMENT SUMMARY

#### **Building Enclosure**

The exterior of the building consists of brick masonry walls, metal panel cladding, aluminum and steel windows and door framing systems, and single-ply membrane roofing systems. Masonry walls are generally in good condition with some isolated areas of mortar joint deterioration that should be corrected. Metal panels are in poor condition and should be replaced. Most windows are original and should be replaced with thermally-broken and insulated glazing systems for improved energy efficiency. Where possible, classroom windows should be enlarged to improve daylighting.

Roof systems were installed in 1997 and are due for a replacement.

#### Interior Environments

The character and age of interior spaces is varied across the building due to the number of additions and renovations carried out over the life of the building. Generally, finishes are in good condition and well-maintained, with some exceptions.

#### Instructional Spaces

Typical core subject classrooms are under-sized and dark due to small exterior windows. Additional light and breakout spaces adjacent to classrooms can alleviate the challenge of small spaces.

All science labs are newly renovated spaces.

Special Education Classrooms are remote from most of the school, inconsistent with current pedagogies. Spaces for Special Ed have not been renovated and could benefit from reorganizing for better efficiency and function.

Fine Arts Classroom spaces are small and lack daylight. Access to exterior spaces would be beneficial, along with more opportunities to display student work.

Music Lab spaces appear to be in dated condition and are dark and crowded. Many small storage spaces appear underutilized and not efficient use of space. A re-organization of spaces and a finishes update would benefit the music programs. The auditorium is adequately sized for the student population, and layout is such that with the addition of operable partitions, it could be divided into smaller lecture halls.

Condition of Career and Tech Educations spaces is varied. Several spaces adjacent to the shop are recently renovated, although storage spaces appear crowded and inefficient. Shop equipment may be dated. Other career and tech and elective spaces, such as photography and drama, are dated and programs would benefit from space and equipment updates. In all space, opportunities to put learning on display and show off student work are missing. Display cases and transparency between instructional space and makerspace and corridors should be added.

#### Physical Education and Athletics

The main gym is recently renovated and in excellent condition and adequately sized. The auxiliary gym and weight room are in good condition. Locker rooms are dated and in poor condition. Renovations to modernize shower, changing and locker facilities would benefit the students.

The character of Corridors around the school are varied. In several locations lockers have been removed and replaced with benches and counters. These improvements should be made throughout the school, most notably throughout the second floor. Removing lockers will also create wider corridors, addressing the noted circulation congestion.

#### Safety and Security

The large number of entrances makes managing security a challenge, however most doors appear to have appropriate hardware to secure the building. The main entrance and vestibule is arranged and secured with electronic hardware according accepted best practices. the exterior of the building would be beneficial.

#### Accessibility

Nearly all facilities in the building appear to provide basic accessibility per the 2010 ADA Guidelines.

Reference images below



## WESTERN ALBEMARLE HIGH SCHOOL BUILDING ASSESSMENT SUMMARY continued















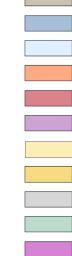




# WESTERN ALBEMARLE HIGH SCHOOL FLOOR PLANS



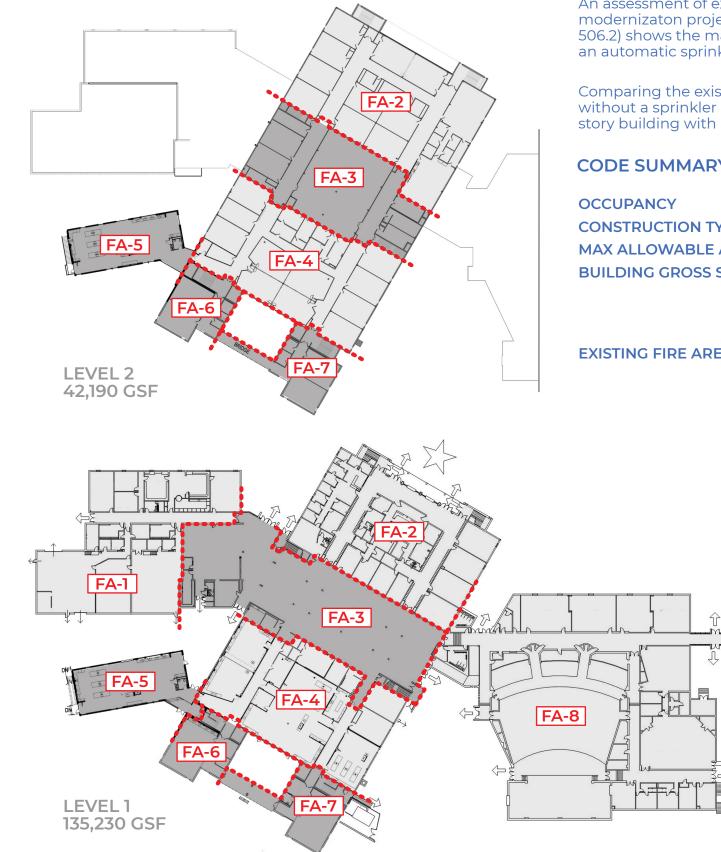
# LEGEND



- Admin/Counseling
- Arts + Music
- Career + Tech
- Circulation
- Core Classroom
- Dining + Kitchen
- Media Center
- Physical Ed
- Rest/Cust/MEP
- Science
- Special Ed
- Teacher



### WESTERN ALBEMARLE HIGH SCHOOL **EXISTING BUILDING AREAS**



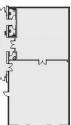
## **EXISTING BUILDING AREAS**

An assessment of existing building areas will help inform the best approach to modernizaton projects throughout the WAHS building. The table below (VCC 506.2) shows the maximum allowable building size within each area, based on an automatic sprinkler system and number of stories.

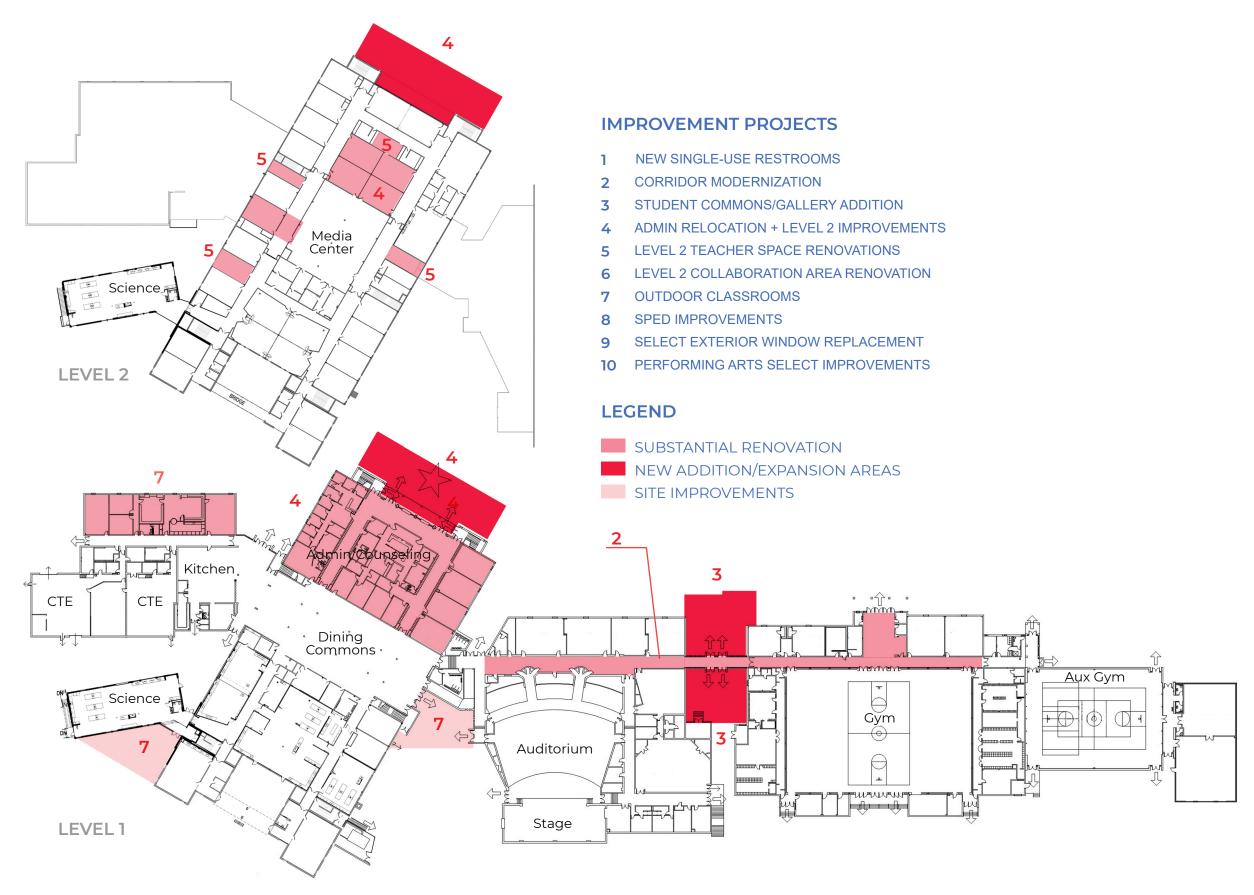
Comparing the existing (FA) areas below, there is a maximum area of 14,500sf without a sprinkler system installed. That limit increases to 43,500sf for a multistory building with automatic sprinkler systems installed.

### **CODE SUMMARY**

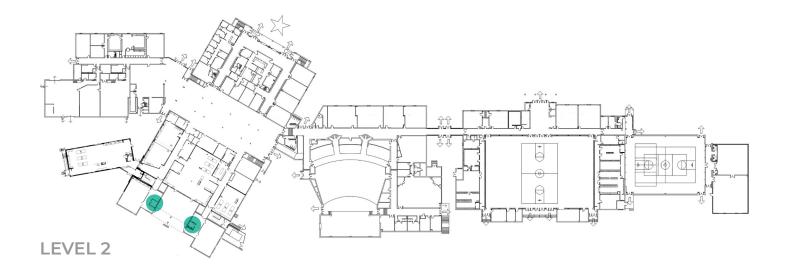
FA-6	OCCUPANCY CONSTRUCTION TYPE MAX ALLOWABLE AREA* BUILDING GROSS SF	LEVEL 1 13	<b>); 43,500</b> <b>77,420 (</b> 35,230 S ¥2,190 SF	<b>GSF</b> SF	* 2018 IBC TAB OCCUPANCY CLASSIFICATION	SEE		ABLE AI	1	De II B
	EXISTING FIRE AREAS	MAIN LEVEL		PPER LEVEL		NS	UL	UL	26,500	14,500
FA-7		FA-1 11,620 SF FA-2 12,250 S		A-2 12,080 SF A-3 8,690 SF	E	S1	UL	UL	106,000	58,000
		FA-3 8,690 SF	F FA	4-4 10,820 SF		SM	UL	UL	79,500	43,500
		FA-4       11,590 SI         FA-5       3,270 SF         FA-6       1,780 SF         FA-7       1,750 SF         FA-8       29,440 S	F FA F FA	A-5 3,270 SF A-6 1,760 SF A-7 2,010 SF	E - Education NS - Not Sprink FIRE PARTITIC			Single-St Multi-St	ory with story with	Sprinkle Sprinkle
The second secon		FA-9 30,020 S						~		
FA-2		FA-10 13,955 S	F			2-HR LOAD-E 1-HR FIRE RA				
FA-3 FA-4 FA-6 FA-7					A-10					

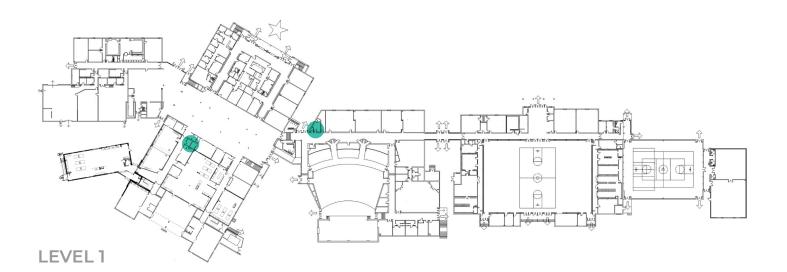












New Single-Use Restroom Locations

### Program Summary + Conceptual Scope Renovate interior areas to accommodate need for single-occupant restooms evenly distributed throughout the building.

tbd sf Renovation

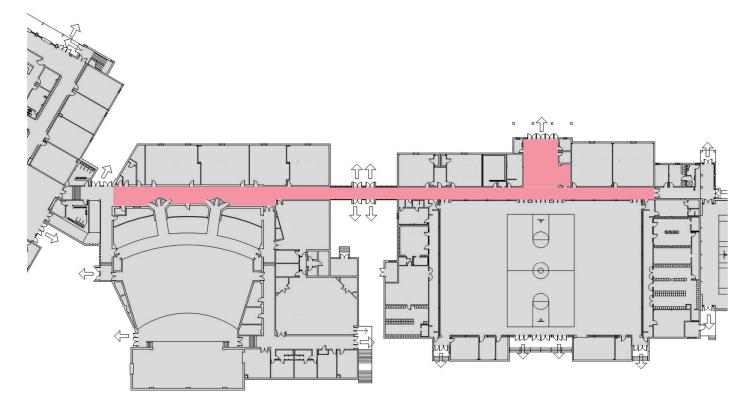
LEGEND

Existing Single Restrooms Proposed GI Restrooms





### CONCEPT PLAN LEVEL 1



# **Corridor Modernization**

3,500 SF

### Program Summary + Conceptual Scope

Increase transparency, improve traffic flow, and visibility throughout Level 1 corridor. Remove lockers, replace with benches, counters and charging stations.

Corridor overall (select renovations at locker bays only)

### LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements

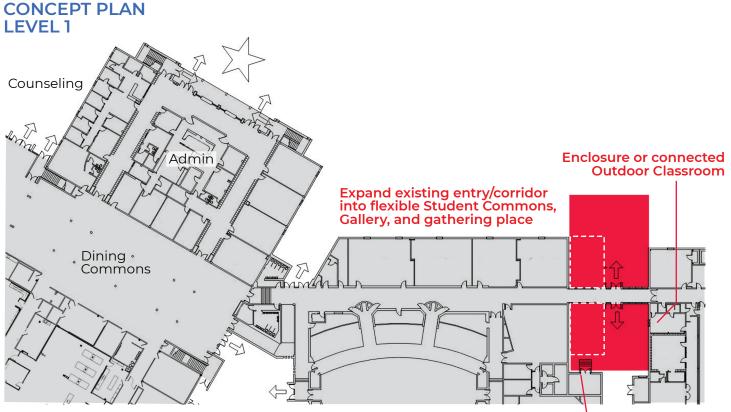








AHS & WAHS RENOVATIONS MASTERPLAN ALBEMARLE COUNTY PUBLIC SCHOOLS FEBRUARY 2023



# **Student Commons/Gallery Addition**

Flex Small Group Work Spaces

# Program Summary + Conceptual Scope

Provide added flexible gathering space and collaborative group work space. Distributed commons designed specifically for flexible use, presentations and events. Collaborative furnishings and digital displays supporting a new social space for student curation, exhibition, presentation, LEGEND gathering and events.

50	00	sf	2
4	,30	0	sf
tk	bd		

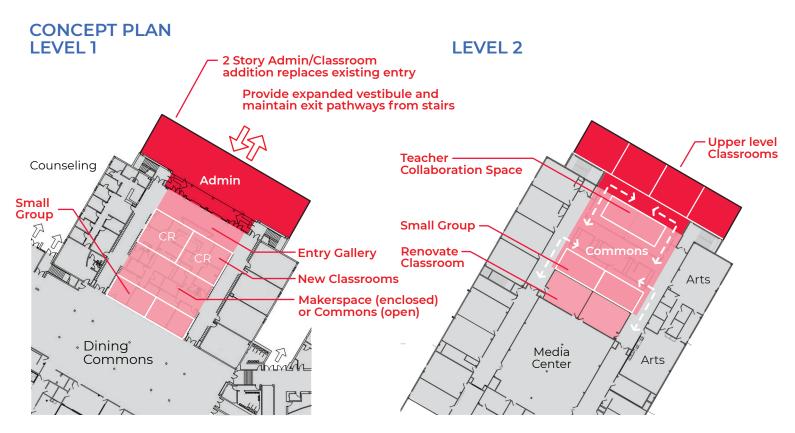
Renovation Addition/Expansion Added/Removed Classroom/Teacher Spaces

Substantial Renovation Addition/Expansion Area









# **Administration Addition + Level 2 Improvements**

### Program Summary + Conceptual Scope

Expand main entry toward street with 1-2 story classroom addition. Stair exit pathways are maintained and renovations to (2) Level 2 CRs require reconfiguration.

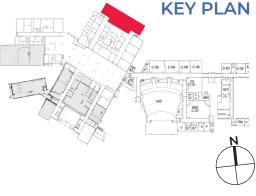
5,000 sf Renovation Addition/Expansion 9,200 sf 8 Added Classrooms (average 720 sf)

### LEGEND



Substantial Renovation Addition/Expansion Area Site Improvements



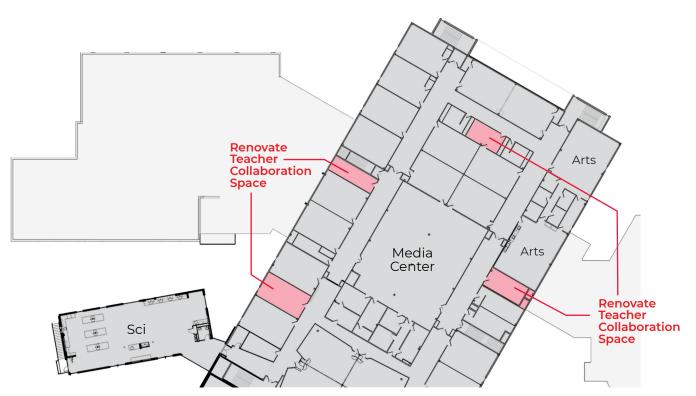




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**CONCEPT PLAN** LEVEL 2

4



# Level 2 Teacher Space Improvements

Program Summary + Conceptual Scope Level 2 Teacher spaces throughout to be renovated.

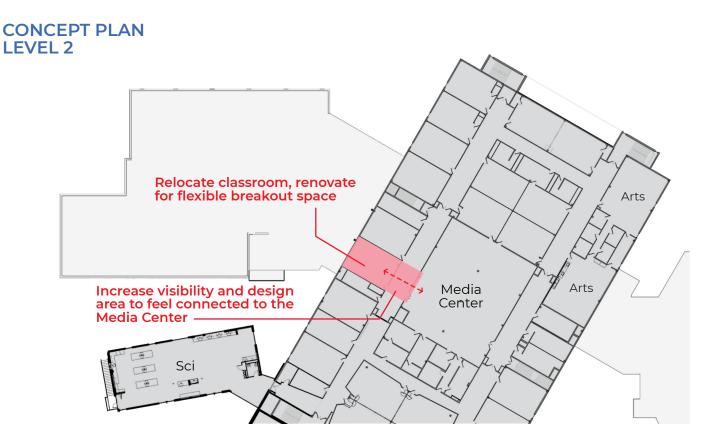
Renovated Teacher Collaboration Space

Substantial Renovation Addition/Expansion Area Site Improvements

LEGEND







# Level 2 Collaboration Area Renovation

### Program Summary + Conceptual Scope

**Relocated Classroom** 

Renovation

650 sf

1

Selective replacement of enclosed classroom with informal open space for flexible use will provide flexible breakout space convenient to the upper level classrooms. Other types of in-demand, flexible small group spaces could be also reimaged within a repurposed classroom alcove.

#### **LEGEND**

**KEY PLAN** 



Substantial Renovation Addition/Expansion Area Site Improvements



AHS & WAHS RENOVATIONS MASTERPLAN ALBEMARLE COUNTY PUBLIC SCHOOLS FEBRUARY 2023



## **Outdoor Classrooms**

### Program Summary + Conceptual Scope

Study availabe site areas to further develop outdoor classroom envirmonments with partial share structure, seating options and plantings.

~2,000 sf

Site Improvements, Average Area



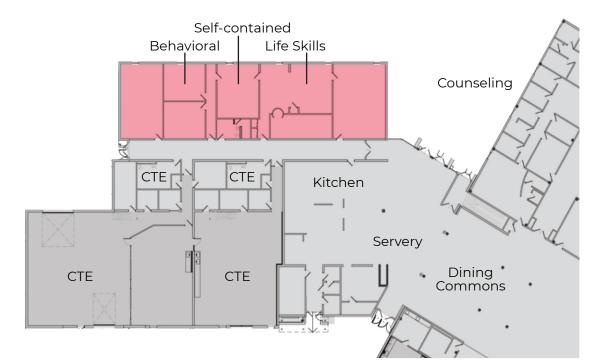
### LEGEND

Substantial Renovation Addition/Expansion Area Site Improvements

# KEY PLAN



CONCEPT PLAN LEVEL 1



## **SPED Wing Select Improvements**

### Program Summary + Conceptual Scope

Improve and modernize existing SPED classroom spaces.

3,700 sf Renovation

### LEGEND



Substantial Renovation Addition/Expansion Area Site Improvements







### **CONCEPT SKETCH**



## Select Exterior Window Replacement + Expansion

### Program Summary + Conceptual Scope

Selective replacement of existing original windows to enlarge glazing area, Improve access to views. Replacement windows to be enlarged from original masonry openings and shading devices added to maximize passive natural lighting.





AHS & WAHS RENOVATIONS MASTERPLAN ALBEMARLE COUNTY PUBLIC SCHOOLS FEBRUARY 2023

CONCEPT PLAN LEVEL 1



## **Performing Arts Select Improvements**

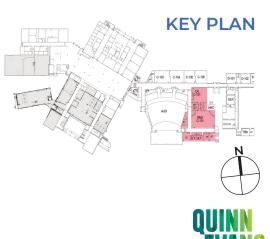
### Program Summary + Conceptual Scope

Improve and modernize existing Drama, Music and support spaces.

6,000 sf Renovation



Substantial Renovation Addition/Expansion Area Site Improvements



### WESTERN ALBEMARLE HIGH SCHOOL PROJECTIONS OF PROBABLE COST





		Western Albemarle High School										
FY	No.	Project	Probable Project Cost*			C	Add 20% Contingency**	5% Escalation per Year		Estimated Furniture Costs	5% Escalation per Year	Furn. Notes
		Large Classroom Partitions	\$	100,000.00						n/a		
2023	2	Corridor Modernization \$ 400,000.00							n/a			
	1	Single-User Restrooms	estrooms \$ 351,000.00							n/a		
		WAHS Subtotal	\$	851,000.00		\$	1,021,200.00		n/a			
		Locker room Improvements	\$	2,025,000.00						n/a		
2024	10	Performing Arts Improvements	\$	1,012,500.00					\$ 40,000.00		\$20k/Rm	
	3	Athletic Wing Student Commons	\$	1,755,000.00					\$ 40,000.00			
	7	Outdoor Classrooms	g Commons Improvements \$ 350,000.00						\$ 20,000.00		\$2k/table - 10 Tables	
		Dining Commons Improvements										
		WAHS Subtotal	\$	5,492,500.00		\$	6,591,000.00	\$	6,920,550.00	\$ 100,000.00	\$ 105,000.00	
2025		Sprinkler Building		1,000,000.00						n/a		
		WAHS Subtotal	\$	1,000,000.00		\$	1,200,000.00	\$	1,323,000.00			
	5	Level 2 Teacher Space Renovations	\$	1,080,000.00						\$ 24,000.00		\$6k/Space
2026	6	Level 2 Collaboration Area Renovation	\$ 350,000.00							\$ 20,000.00		
	7			1,080,000.00						\$ 108,000.00		\$18k/Rm
		WAHS Subtotal	\$	2,510,000.00		\$	3,012,000.00	\$	3,486,766.50	\$ 100,000.00	\$ 115,762.50	
2027	9	Exterior Window Replacement (Selected Areas)	<u>_</u>	000 500 00								
	-	WAHS Subtotal	\$	688,500.00	┢		000 000 00	*	4 004 054 00	N/A		
		WARS Subtotal	\$	688,500.00		\$	826,200.00	Þ	1,004,251.26			

* Project Costs include +/35% increase for Soft Costs	\$	12,650,400.00	\$ 13,755,767.76	\$	200,000.00	\$	220,762.50
** 20% Estimating Contingency for Scope Unknowns	(Be	efore Escalation)	(W/ 5% yearly escalation)	(Befo	re Escalation)	· ·	V/ 5% yearly escalation)

\*\*\* Typical Furniture Costs: \$18k/Classroom, \$20k/Art & CTE, \$5k/Breakout Room, \$6k/Teacher Workroom (2023 dollars, other costs indicated above)

#### Additional Projects

FY	No.	Project	Probable Project Cost*	Add 20% Contingency**	5% Escalation per Year	Estimated Furniture Cost	5% furniture escalation / year	Furn. Notes
TBD		Admin Relocation and Level 2 Improvements (If Student Capacity Increase Req'd)	\$ 7,425,000.00			\$83,000		(4) Classrooms, (1) Workroom, (1) Breakout
		Total	\$ 7,425,000.00	\$ 8,910,000.00	n/a	\$83,000	n/a	

### WESTERN ALBEMARLE HIGH SCHOOL APPENDIX

#### <u>Appendix</u>

- 1 Existing Building Assessment
- 2 Existing Roof Comparison Summary
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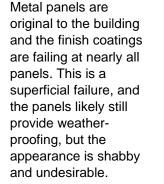
## Building Exterior Exterior Walls

All exterior walls are brick masonry. There is a cornice of metal panel cladding at the top of most exterior walls.

The brick appears to be in very good condition around the building with one notable exception: At the top of walls, where a steel beam is likely located directly to the interior of the brick, one or two horizontal mortar joints are beginning to fail along the length of walls.



Exterior Walls





Exterior Walls

## Windows & Entries

## Windows

Typical windows are original to the era their respective portion of the building was built. Windows in classroom areas are small, limiting daylighting opportunities. Replacing windows with insulated and thermally broken and insulated systems would improve energy efficiency and provide more natural light into spaces.



Exterior Windows

### Entries

The main entry of the school is a newer storefront system with insulated glazing. The gym entrance is a storefront system with insulated glazing.

Doors, entries, and storefronts in most other areas of the building are hollow-metal frames and doors with single-pane glazing. In some cases, nontempered wire glass is present. Replacing these entries with thermally broken and insulated systems will increase energy efficiency and occupant comfort.



Existing Condition

## Roof

Most of the roof is EPDM membrane installed in 1997 with a 20-year warranty. The wrestling and weight rooms are covered by an EPDM membrane installed in 2005 with a 15-year warranty. Additional insulation was added when current EPDM membranes were installed. Roof membrane age is outside the warranty period but is not necessarily in need of replacing.



Existing Roof

## **Interior Environments**

Core Classrooms

Quantity: 37 Size: Most are less than 600 SF

**Condition:** Finishes are generally in good condition. Lighting has recently been replaced with LED's, Instructional technology is generally current.

**Quality:** The small size of the classrooms is a detriment to the learning environment. Most classrooms, despite their location at an exterior wall, are also lacking in natural light because of the small windows. Eight Classrooms on the second floor are interior and do not have windows. Four of them have been renovated with windows to the corridors, solar tubes, and operable partitions, making them much more functional. The remaining four interior classrooms would benefit from similar renovations. All classrooms would benefit from larger windows, more daylighting and better increased transparency to corridors.





Existing Interiors

Building Assessment Report for Western Albemarle High School AHS-WAHS Masterplan 8/1/2022 Science Labs Quantity: 12 Size: Varies

**Condition:** All but two labs have been renovated recently, and finishes, equipment and technology are up to date in good condition.

**Quality:** Newly renovated labs are up to date, represent current pedagogies relative to Project-based learning, team-teaching and large "double-size" labs combining lab space with collaborative workspace and furniture in one large room. Teachers report challenges working in some of the double-size lab spaces because of noise from adjacent classrooms. Curriculum models may not have caught up to the pedagogies that the labs have been designed around.



Science Labs

### **Special Education Classrooms**

Size: Space range from 250 sf to 425 sf

**Condition:** Finishes appear dated, but functional. Some storage spaces appear to be underutilized and could be improved functionally.

**Quality:** It appears that spaces could be reconfigured to better suit the programs. Location of spaces remote from main academic wings of school is not consistent with current integrated models for special education. Program needs and preferences should be analyzed and a new space program for special education spaces could be developed to determine needs.

## Fine Arts Classrooms

Size: 1,000 SF plus storage spaces

**Condition:** Finishes, casework and equipment show age, but appear functional.

**Quality:** Art classrooms suffer from small windows and lack of natural light, like most classrooms. More areas to display student work would benefit the program.

### **Music Labs**

Size: Chorus - 1,300 SF; Band - 2,300 SF

**Condition:** Finishes are dated but in fair condition. Storage spaces are crowded and not used efficiently.

**Quality:** Spaces lack natural light. Small and crowded storage areas could be reorganized for better efficiency. Toilets/changing rooms adjacent to the stage are not appropriately sized for the need and could be reconfigured.

## Drama Classroom

Size: 770 SF

Condition: Fair.



Arts Classroom



Music Lab

**Quality:** Location adjacent to the auditorium is good, but classroom is lacking lighting, platform, and other features to allow for in-room performing and practice.

## Career and Tech Education Classroom/Labs

Size: Varies

**Condition:** Recently renovated spaces are in good condition

Several classroom spaces have been recently renovated and appear to include adequate space and technology for curriculum needs; finishes and lighting are new. Shop space is dated and crowded. Equipment such as welding booths occupy large areas, possibly taking up space that could be used for more current curriculum or modern equipment.

**Quality:** The renovated classroom spaces are designed for collaborative learning; however, spaces are remote and hidden from the corridor



Career/Tech Lab

Quinn Evans

by storage rooms. More transparency and opportunities to display student work would benefit the programs.

Storage spaces seem crowded and could be reorganized for more efficient space use. An analysis of shop equipment and curriculum needs should be carried out to determine if correct equipment is being provided.



Career/Tech Labs

## **Physical Education & Athletics**

### Gymnasium

**Size:** 3 courts, 1 competition court with bleachers in open position

### **Condition:**

Flooring, bleachers and other equipment was replaced in 2019. These recent renovations can be expected to have a service life of 20 or more years with adequate maintenance.

### Quality:

The gymnasium is of adequate size and condition for a high school of this size.

## Auxiliary Gymnasium

Size: 1 full size court, or 2 smaller courts

### **Condition:**

Flooring shows evidence of patching, but overall condition and finish appears to be serviceable. Bleachers are of older type, function is unknown.

#### Quality:

Auxiliary gymnasium appears to have adequate equipment and facilities for Physical Education and sports including facilities for wrestling or other events.



Gymnasium



Auxiliary Gym

Wrestling Room Size: 2,300 SF

**Condition & Quality:** The space is well maintained with new lighting and

## adequate equipment for wrestling.

## Weight Room

Size: 1,540 SF

### Condition & Quality:

The space is well maintained with new lighting and adequate equipment.



Wrestling Room

## Locker Rooms

Size (Girls): 2,060 SF Size (Boys): 2,170 SF

### **Condition and Quality:**

Lockers, benches, and finishes show signs of age and wear.

Showers appear to be underutilized and not easily accessed via an out-of-the-way circulation path. Locker rooms feel dark and unfriendly, shower facilities are likely un-used and not fully operational. Arrangement of spaces makes observation and management difficult for staff and unequitable for students.

Reconfiguration of spaces could provide right-sized, useful, safe, and equitable changing and showering facilities.

## **Community Spaces**

Library Size: 3,950 SF

### Condition:

The library was renovated in 2016 with new finishes, new skylights, and new shelving.

### Quality:

Daylighting is limited due to interior location within building. Transparency and connection to adjacent corridors is good, with many windows and corridors/entrances on two sides of the library.

### Auditorium

Size: 7,900 SF

### Condition:

Finishes are dated, but in good condition. Condition and functionality of stage lighting and sound equipment was not tested and is unknown.

### **Building Assessment Report for Western Albemarle High School**

AHS-WAHS Masterplan 8/1/2022

### Quality:

The auditorium is large and adequately sized for the school. The tiered seating areas in the back provide good visibility and appear to be setup in a way that would allow an operable partition to enclose smaller lecture spaces, although operable partitions are not present. Installing operable partitions could be a way to provide additional instructional spaces within the building.

## **Dining Commons**

Size: 8,060 SF

### Condition:

Fair to good. Interior finishes are drab and could be enhanced to make up for lack of natural light.

### Quality:

Space is large and centrally located, acts as school commons.

## Informal Learning Spaces

In several corridors lockers have been removed in order to create informal student work-spaces with benches and counters. These areas have been successful and more spaces like this would be beneficial.

The open nature of the dining commons allows it to be used as an informal hub and a meeting and gathering space for students.

There are other locations, for instance along the corridor leading between the dining commons, past the auditorium and gymnasium that would benefit from and be an opportunity to create additional informal and collaborative learning spaces. Exterior spaces along this corridor could be enclosed to create additional student commons spaces.

On the second floor, lockers line the corridors and are unlikely fully-utilized. Removal of lockers and replacement with more benches, counters and transparency into certain spaces would be beneficial.



Auditorium



Dining Commons



Informal Learning Space & Circulation

## Circulation

Circulation challenges were noted in stairwells and along the corridor leading between the dining commons, past the auditorium and gymnasium.

Between the dining commons and Athletics Entrance the Corridor is narrow and any wider space is used by students to gather. There are opportunities to widen the corridor and add features to make gathering spaces more useful.

All stairs are 'closed' with doors at top and bottom for firesafety. This prevents a strong spatial connection between the upper and lower level. The school community would benefit from improved connections between levels.

## Administration

Size: 3,900 SF; 5 offices

#### Condition:

Spaces have been partially renovated and are generally in good condition.

### Quality:

Spaces are configured to provide a secure vestibule entry and good visibility of the front yard of the building. Spaces appear to be meeting the needs of the Administration, but a space programming study could be done to better understand the needs of the administration and determine if reorganization would provide better space utilization and function.

## Safety & Security

Like most large high schools there are many entrances at Western Albemarle High School, making security







Circulation Areas

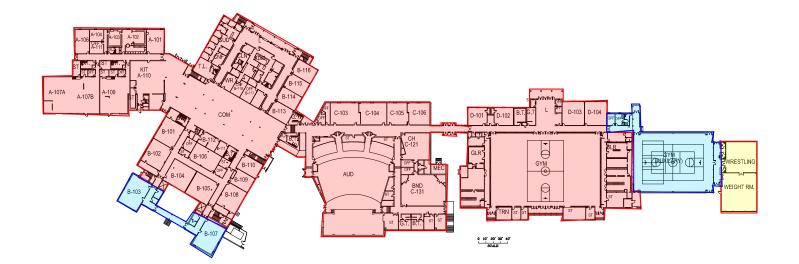
management a challenge. Management of each entrance is a matter of policy, but building design has an influence on ease of management at each entrance. Generally it appears that all entrances can be secured individually with appropriate door hardware. The layout of the school means that most entrances are in generally observable locations, but there are several that are remote and challenging to monitor. A more detailed security analysis would be required to make a full report on challenges and opportunities.

The main entry of the school consists of a security vestibule configuration that channels visitors into the main office to check-in during the school day. This is consistent with current best-practices. Door hardware appears to be configured to allow for remote lock/unlock of the doors. Visibility of the approach to the main entry doors from the parking lot is limited and security could be improved with increased visibility.

Exits from the auxiliary gym, wrestling rooms, locker rooms and adjacent to the music rooms and auditorium provide access to the building that cannot be always observed.

The shop space utilizes overhead doors, which benefit the program, but pose a security challenge because they face wide-open to a public access point.

### WESTERN ALBEMARLE HIGH SCHOOL APPENDIX ROOF COMPARISON



### **ROOF INSTALLATION COMPARISON SUMMARY**

Installed	Туре	Area	Manufacturer	Installer	Warranty
2005	EPDM	5,042 SF	CARLISLE	LYNCH	15 YR
1997	EPDM	15,687 SF	CARLISLE	LYNCH	20 YR
1997	EPDM	123,772 SF	FIRESTONE	SHENCORP	20 YR



### Western Albemarle High School Masterplan Study

#### **HVAC and Plumbing**

Owing to the steady expansion of the high school since its original construction in 1975, the heating, cooling and ventilation (HVAC) systems have undergone several replacements and upgrades over the years. This section will describe the history of the HVAC systems throughout the life of the building up to present day and will offer an assessment of the condition of HVAC systems and equipment still present in the building. Systems or equipment which could be re-used or salvaged as part of a renovation project will be identified.

#### **Background and Observations**

1. Main Boiler Room:

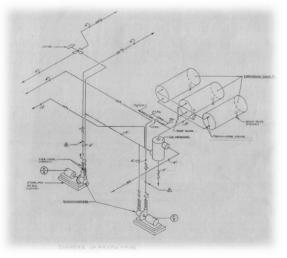
The original building was constructed in 1975. The as-built drawings for the 1975 building were utilized in this study in addition to field observations. From those drawings, it was possible to determine that the first mechanical system present in the building was a four-pipe chilled and hot water system serving fan coils and air handling units. The boilers were originally oil fired. These boilers have since been replaced in 2007 with 2 oil fired water boilers in the same location. The boilers appear to be well maintained and should provide continued service for the next 15 years.



Gas Fired Boilers



Hot Water Circulating Pumps



Hot Water Piping Diagram



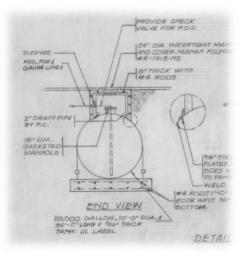
Fuel Oil Pump Serving Boilers





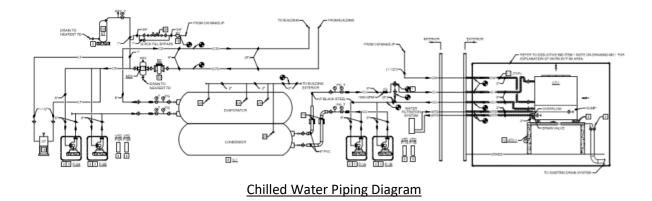
Below Grade Fuel Oil Tank

Fuel Oil Day Tank and Pump Set Serving Water Heaters



Detail of Original Fuel Oil Storage Tank (Replaced in 1993/1994)

The chilled water system consists of a cooling tower, water cooled chiller and associated pumps. The chiller and pumps were replaced in 2019 and are in very good condition. This equipment should provide reliable service to the building for the next 20-25 years. The cooling tower was replaced in 2001 and is still in fair condition. We would anticipate the tower to last another 5 years.





Chilled Water Pumps (2019)



Magnetic Bearing Water Cooled Chiller (2019)

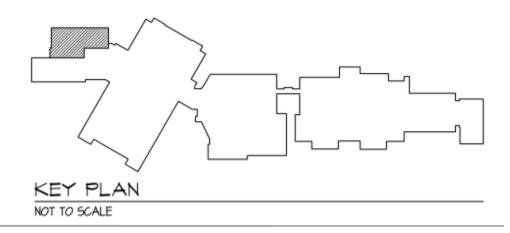


Cooling Tower (2001)



Condenser Water Pumps (2019)

A Wing



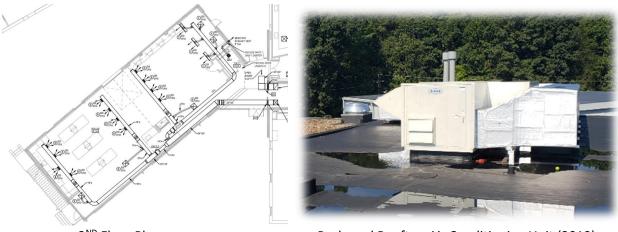
This area of the building is served by packaged rooftop air conditioning units serving single duct shut off variable air volume terminal units with hot water reheat coils. These units were installed in 2007 and are in fair condition. They should remain in service for another 5-10 years.



Packaged Rooftop Air Conditioning Unit (2007) Packaged Rooftop VAV Air Conditioning Unit (2007)

### A Wing Science Addition (2018/2019)

The science wing was constructed in 2019 and is served by a packaged rooftop air conditioning unit serving single duct variable air volume shut off terminal units with hot water reheat. The HVAC equipment serving this area is in excellent condition and should remain in service for another 15-20 years.

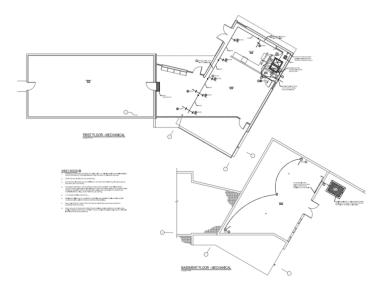


2<sup>ND</sup> Floor Plan

Packaged Rooftop Air Conditioning Unit (2019)

### A Wing Environmental Studies Center (2015)

The environmental studies center is served by a 100% outside air split system air handling unit with remote condensing unit and electric heat. The system was installed in 2015 and is in very good condition. The system should remain in service for another 15 years.



#### **B Wing Administration and Classrooms**

The first floor administration area and second floor classrooms in B Wing are served by a packaged rooftop variable air volume air conditioning unit serving single duct variable air volume terminal units with hot water reheat coils. The rooftop unit and terminal units were replaced in 2002 and are in fair condition. Several of the terminal units were replaced in 2015 to satisfy a reconfiguration of the administration area. The rooftop unit and the original 1975 terminal units should be considered for replacement as soon as possible and within the next 5 years as this equipment is reaching the end of its useful life.



Packaged Rooftop VAV Air Conditioning Unit (2002)

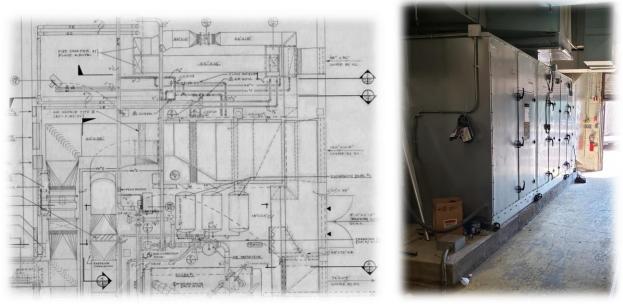
#### **B Wing Cafeteria**

The cafeteria is served by a rooftop air handling unit with chilled and hot water coils. The unit was replaced in 2012 and is in good condition. This unit should remain in service for another 15 years.



#### **B Wing Classrooms**

One half of the first and second floor classrooms in Area B are served by an air handling unit with chilled and hot water coils and serves single duct variable air volume terminal units with hot water reheat coils. The unit is located in the main boiler room. The unit and associated terminal units were replaced in 2012 and are in good condition. This equipment should remain in service for another 20 years.



Air Handling Unit in Basement Mechanical Room

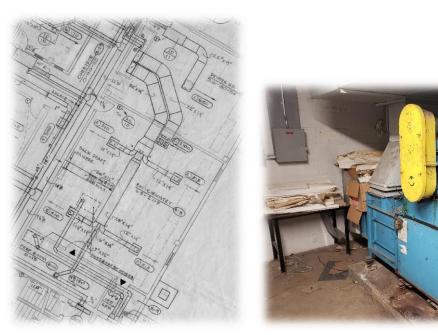
#### **B Wing Classroom Additions (1996)**

The 1996 classroom addition to B Wing is served by 2 packaged variable air volume rooftop air conditioning units serving induction type terminal units with hot water heating coils. This equipment is original to the 1996 construction and should be considered for replacement as soon as possible as the equipment has reached the end of its useful life.



Packaged Rooftop Air Conditioning Unit Serving Hot Water Induction Boxes (Typical of 2) (1996)

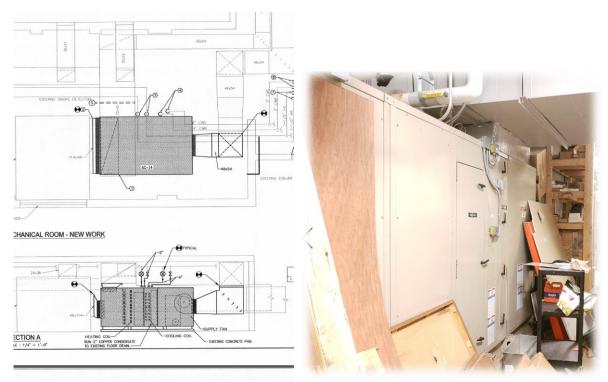
The bio-chemistry lab located in B Wing is served by an air handling unit with chilled and hot water coils. The unit is located in the main boiler room. The unit was installed in 1975 and has reached the end of its useful life and should be replaced as soon as possible.



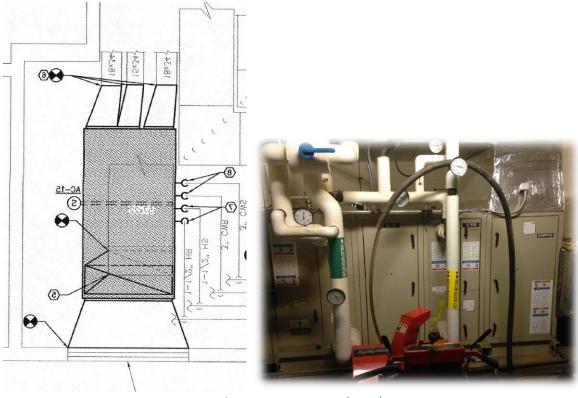
**Bio-Chemistry Lab AHU (1975)** 

#### C Wing Auditorium

The auditorium is served by 2 air handling units. One unit serves the main seating area and the other serves the back of the auditorium seating area. These units have chilled and hot water coils and are constant volume. The units are located in a mechanical room below the stage. The units were replaced in 2012 and are in good condition. The units should remain in service for another 20 years.



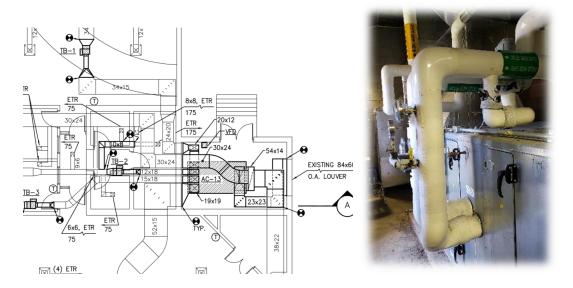
Auditorium AHU AC-14 (2012)



Auditorium AHU AC-15 (2012)

#### C Wing

The band and choral rooms are served by a variable air volume air handling unit with hot and chilled water coils. The unit serves variable air volume terminal units with hot water reheat coils. The equipment was installed in 2013 and is in good condition. This equipment should remain in service for another 20 years.



Band and Chorus VAV Air Handling Unit AC-13 (2013)

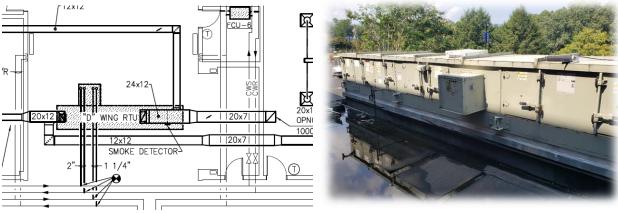
The C Wing classroom areas are served by a rooftop variable air volume air handling unit with hot and chilled water coils. The unit serves variable air volume terminal units with hot water reheat coils. The equipment was installed in 2013 and is in good condition. This equipment should remain in service for another 20 years.



Rooftop Air Handling Unit (2013)

### D Wing

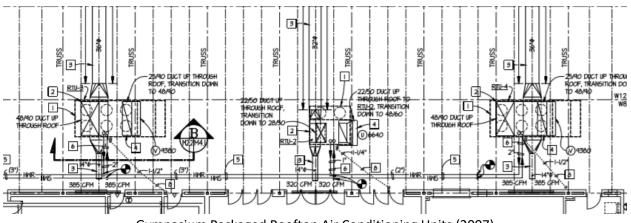
The D Wing classroom areas are served by a rooftop variable air volume air handling unit with hot and chilled water coils. The unit serves variable air volume terminal units with hot water reheat coils. The equipment was installed in 2013 and is in good condition. This equipment should remain in service for another 20 years.



Rooftop Air Handling Unit (2013)

#### Main Gymnasium

The main gymnasium is served by 3 packaged rooftop air conditioning units with DX cooling coils, hot water heating coils and energy recovery wheels. These units were installed in 2007 and are in good condition. These units should remain in service for another 5-8 years.



Gymnasium Packaged Rooftop Air Conditioning Units (2007)



Gymnasium Packaged Rooftop Air Conditioning Units (2007)



Gym Unit RTU-1 (2007)

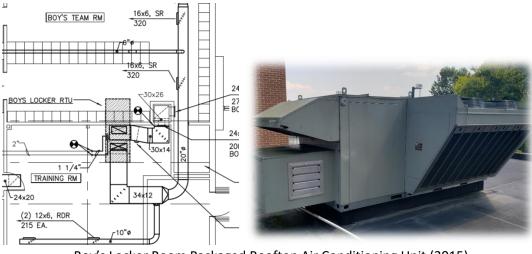
Gym Unit RTU-2 (2007)

#### Locker Rooms (2015)

The locker rooms located in C Wing adjacent to the main gymnasium are served by packaged rooftop air conditioning units with DX cooling coils, hot water heating coils and energy recovery wheels. These units were installed in 2015 and are in good condition. These units should remain in service for another 15 years.



Girl's Locker Room Packaged Rooftop Air Conditioning Unit (2015)

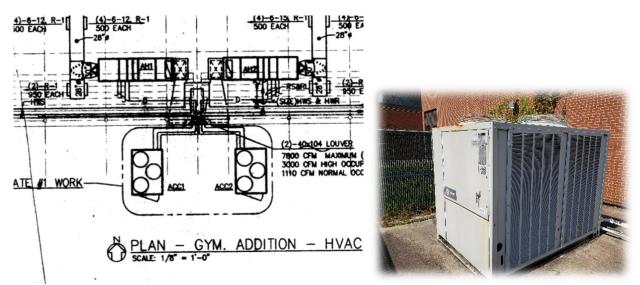


### Boy's Locker Room Packaged Rooftop Air Conditioning Unit (2015)

### E Wing Auxiliary Gymnasium (1996)

The auxiliary gymnasium is served by 2 split system air handling units with remote condensing units. The units are original to the 1996 construction and are in fair to poor condition. The units include DX cooling coils and hot water heating coils.

The units should be considered for replacement as soon as possible. In addition, due to the poor serviceability of the air handling units suspended from the roof structure, these units should be relocated to grade or to the roof.



Condensing Unit (Typical of 2) (1996)



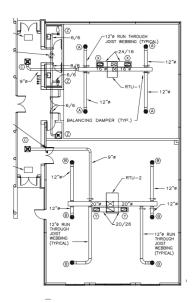
Air Handling Unit (Typical of 2) (1996)



Condensing Unit (Typical of 2) (1996)

### **<u>E Wing Wrestling and Weight Rooms (2005)</u>**

The weight room and wrestling room are served by individual packaged rooftop units with DX cooling coils and electric heating coils. These units are original to the 2005 construction and should be considered for replacement as soon as possible.





#### **Miscellaneous HVAC Equipment**

There are several split system air conditioning units, fan coil units, hot water and electric terminal heating units and exhaust fans serving isolated areas of the building. Their condition ranges from poor to good. Units should be replaced as needed. Most of the exhaust fans appear to be in good condition and may not need replacement for some time.



Fan Coil Unit



Hot Water Wall Convector



Various Exhaust and Make Up Air Fans



Condensing Unit (2007)



Wall Convector



Condensing Unit (2011)

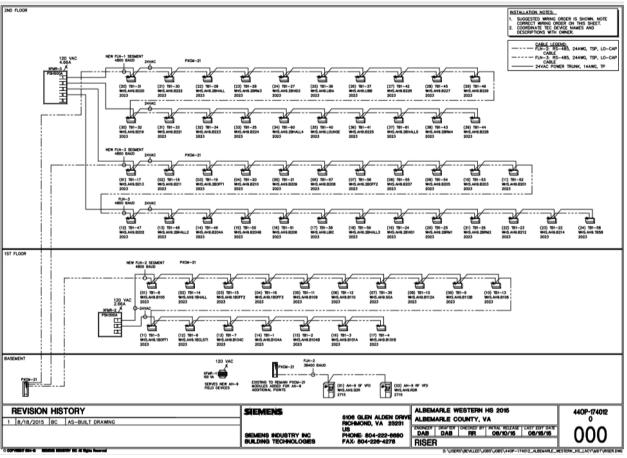


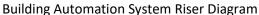
Condensing Unit (2013)

#### **Automatic Temperature Controls**

The building automation system has been well maintained and upgraded as necessary. Typically, the upgrades occurred as part of a building addition or renovation. Upgrades will continue to occur throughout the life of the building as manufacture upgrades are required or as part of normal maintenance and repair. There are abandoned in place controls that should be removed.







#### **Plumbing Fixtures**

The plumbing systems throughout the building are in fair to good condition and have been well maintained. Unless the toilets require reconfiguration to meet ADA Standards or for other reasons, these fixtures should remain in service for another 15-20 years. It should be anticipated that plumbing fixture fittings (faucets and flush valves) may require replacement before fixture replacement on an as needed basis and as part of normal maintenance and repair.











Gang Shower Water Tempering Valve



Gang Showers in Boy's Locker Room



Electric Water Heater (2005)



AO Smith (2019 left and 2007 right)

#### **Backflow Preventer**



**Backflow Preventer in Main Boiler Room** 

#### Sewage Lift Stations





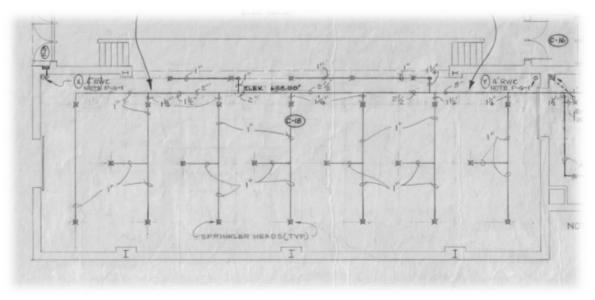
Sewage Lift Station in Main Boiler Room Sewage Lift Station in Mechanical Room Below Stage





Sprinkler System Isolation Valve on Stage

Overhead Sprinklers on Stage



Limited Area Sprinkler System on Stage

### **Electrical**

The electrical distribution system for this building consists of one electrical service. The electrical service is a 6 section 3,000-amps, 480Y/277volt, 3 phase, 4 wire Main Distribution Switchboard (MDS) located in the original building's mechanical room. The Main Distribution Switchboard (MDS) is manufactured by Westinghouse and is fed from a Dominion Virginia Power pad mounted transformer via underground service lateral to a Current Transformer (CT) cabinet integral to the Main MDS. The bus for this MDS is braced for a short circuit current rating of 65,000 AIC. The Main Distribution Switchboard was built in 1976 and is in good condition, but replacement parts are no longer available.



Main Distribution Switchboard (MDS)

### **Existing Electrical Power Distribution Equipment**

1. Panelboards:

The existing panelboards in this building consist of panelboards manufactured by General Electric, Square D, Cutler-Hammer and Westinghouse companies. The Square D and Cutler-Hammer panelboards are in fair to good condition and replacement parts are available. The Westinghouse and General Electric panelboards are in poor condition and we recommend replacing them. There is a lack of spare circuit breakers in most of the panelboards. We recommend adding new panelboards throughout the building to provide spare capacity for future loads.



Typical General Electric Panelboards



**Typical Cutler-Hammer Panelboards** 

2. Transformers:

The existing dry type transformers in this building consist of the following:

- a. Dry type transformers in the original building are manufactured by Westinghouse and General Electric. These transformers are original to the building and are in fair to good condition. There are no moving parts in these pieces of equipment to be considered for replacement.
- b. Dry type transformers added during building additions and installed on the roof are also manufactured by Square D and General Electric. These transformers are in good to excellent condition.



Typical Dry Type Transformer

3. Receptacles:

The existing power receptacles in this building consist of the following:

- a. The original duplex receptacles are in fair condition.
- b. Surface mounted receptacles have been added throughout the years to provide power to computer systems. These receptacles are in good to excellent condition.
- c. The roof receptacles that supply power to the code required convenience receptacles are in good condition.



Typical Receptacle in Classroom and on Mechanical Unit

### **Emergency Power**

The emergency power to this building is provided via a 250KW 480Y/277volt, 3 phase, 4 wire, emergency generator located adjacent to the main mechanical room on the original building. The Automatic Transfer Switch (ATS) is located in the existing mechanical room. The emergency generator is well maintained and appears to be in good condition.



250KW Emergency Generator and Automatic Transfer Switch

#### **HVAC Electrical Components**

There are various pieces of electrical equipment serving the HVAC system for this building, all with equally varying degrees of condition. Few roof-mounted disconnect switches are covered with rust and corrosion.



Disconnect Switches Serving Roof Mounted HVAC Equipment

#### Lighting System

The interior lighting system for this building consists of recessed and pendant mounted LED type light fixtures. There are few fluorescent light fixtures in the electrical and mechanical rooms. They are scheduled to be changed to LED type light fixtures. All light fixtures appear to be in good condition. All exterior wall-mounted light fixtures have been replaced with new LED type light fixtures.



**Typical Interior Light Fixtures** 

The parking lot lighting system consists of pole mounted Metal Halide type light fixtures. These are the original light fixtures and we recommend replacing them (one for one) with LED type light fixtures. Some of the parking lot pole mounted light fixtures are owned and maintained by Dominion Energy.



Typical Exterior Pole Mounted Light Fixtures

## **Emergency Lighting**

The existing exit light fixtures and emergency egress light fixtures are connected to the emergency generator. They all appear to be in good working condition.



#### **Electrical Auxiliary Systems**

1. Fire Alarm System:

The existing fire alarm control panel is FireFinder Series manufactured by Siemens and is in the main office. The addressable fire alarm system is in good condition and all observed areas had sufficient notification devices. The remote graphic annunciator is in the main lobby.



Siemens Fire Alarm System

2. Intercom and Clock System:

The intercom and clock system consist of a Telecor XL series head-end equipment in the main office, intercom speakers throughout the school and Cisco IP telephones instrument. The system was recently upgraded and is in good working condition.







Intercom and Clock System

3. Television System:

The existing television distribution system was recently converted to an IP based television distribution system. The updated system appears to be in good working condition.

4. Video Surveillance System:

The existing video surveillance system was updated to an IP based video surveillance system. The updated system appears to be in good working condition.



Typical Video Surveillance IP Cameras

5. Intrusion Detection System:

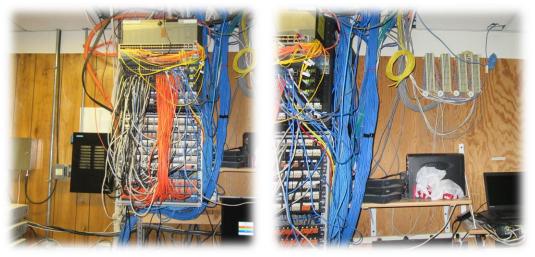
The existing intrusion detection system consists of a control panel, keypad, door contacts and motion detectors. The existing system appears to be in good working condition.



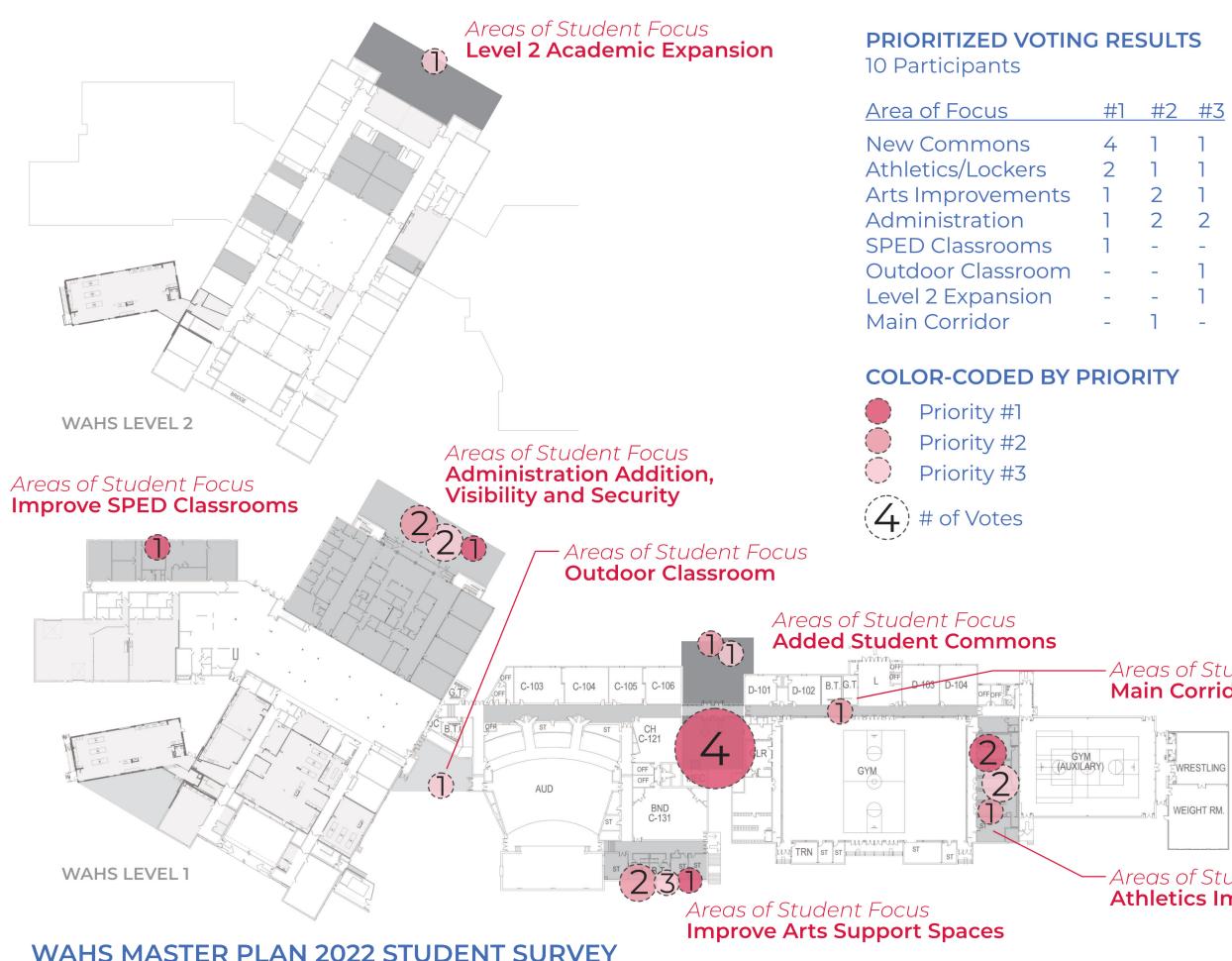
Intrusion Detection System

#### Network Infrastructure

The existing network infrastructure system consists of data outlets, ceiling mounted wireless access points, and data cabling back to data racks and cabinets in Intermediate Distribution Frame "IDF" rooms and Main Distribution Frame "MDF" rooms. All equipment appears to be in good working condition.



Typical Network Equipment



AHS & WAHS RENOVATIONS MASTERPLAN - ALBEMARLE COUNTY PUBLIC SCHOOLS - STUDENT GROUP MEETING SEPTEMBER 13, 2022

<u>‡2</u>	<u>#3</u>
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# Areas of Student Focus Main Corridor Improvements

# Areas of Student Focus **Athletics Improvements**





## WAHS Master Plan

Staff Survey Results Spring 2022

Q3.How would you rate they physical learning spaces in your school?								
3(a) : How would you rate they physical learning spaces in your school?: learning spaces (classrooms, labs)								
Answer	Responses	Value	%	Per	centage	of total r	esponde	ents
1 - Worst	1	1	10.00%					
2	3	2	30.00%					
3 - Neutral	3	3	30.00%					
4	3	4	30.00%					
5 - Best	0	5	0%					
(Did not answer)	0	NULL	0%					
W								
Total Responses 10				20%	40%	<b>60</b> %	80% <sup> </sup>	100%

Q3.How would you rate they physical learning spaces in your school?									
3(b) : How would you rate they physical learning spaces in your school?: common spaces (including bathrooms and lounge areas)									
Answer	Responses	Value	%	Percentage of total respondents					
1 - Worst	2	1	20.00%						
2	4	2	40.00%						
3 - Neutral	3	3	30.00%						
4	1	4	10.00%						
5 - Best	0	5	0%						
(Did not answer)	0	NULL	0%						
Weighted Score : 2.30									
Total Responses	10			20% 40% 60% 80% 100%					

Q3.How would you rate they physical learning spaces in your school?										
3(c) : How would y	3(c) : How would you rate they physical learning spaces in your school?: outdoor spaces									
Answer	Responses	Value	%	Percentage of total respondents						
1 - Worst	1	1	10.00%							
2	2	2	20.00%							
3 - Neutral	5	3	50.00%							
4	2	4	20.00%							
5 - Best	0	5	0%							
(Did not answer)	0	NULL	0%							
W	eighted Score	e : 2.80								
Total Responses	10			20% 40% 60% 80% 100%						

Q4. What current physical aspects of your school do you feel create an optimal teaching and learning environment? Please explain your answer thoroughly with details.

Having a prep room attached to my classroom. Having trails outside to take learning outdoors.

Ability to navigate spacing with open seating plans.

Rooms too small while others are too big. I often have students asking for quite places on thr floor in thr hall. the media center is not open at all times and can not accommodate group work. the absolute worse idea was the rolling chair. i have see more bumper car games with those chair than i want to recap. the cafeteria space will never work again for the number of students. we use classrooms in some of the schools which is very helpful but causes planning per one's to be switched for regular teachers. the eating spaces need to conform to both the new endemic reality of spreading germs (covid is not going away)and sanitation (eating off the ground) having students eat off the ground outside from k-12 is unsatisfactory, and unsanitary. find some type of seating.

Moveable walls to make larger combined spaces (not multiple classes in the same space all the time) Flexibility is key, light/windows, smaller square desks to make many different configurations for groups and individual work

The inclusion of Promethean board in my classroom space allows for integration of technology for my students. Numerous lab sinks and storage spaces for lab materials make organization easy. Another space that I use is much less user friendly and, in fact, makes teaching much more difficult. I am referring to the alleged super-rooms in the Science Department at AHS. The space is not conducive to collaboration or lab exercises.,the space is too large, does not have adequate security measures, and is awkward even in the best of circumstances. The space is loud, and the variety of seating, especially the backless grey stools, is distracting because students play musical chairs by moving preferred seats to their table. This process is related with each class throughout the day. The positioning of the phone jacks in the rooms cause teachers to have to nearly sprint across the room to answer by the fourth ring. The technology boards in the rooms can't be synchronized. Return to 2 rooms pleas

I like the cafeteria being the center of the universe. It does make it a dangerous place for a possible shooting though and I always thought about that the many years that I worked there. I like the small spaces for meeting with small groups or one on one.

Open spaces and latest tech

I love more white boards. Im happy we are getting touch screens the projectors were poorly placed.

Q5. What types of spaces or amenities do you think should be added to your school's physical spaces to create a better teaching environment? Please explain your answer thoroughly with details.

Prep rooms attached. Space for small group work.

Movable walls Ability to have access to many outlets Laptop charging station Taller desk and chairs Desk and chairs that fit all size people

conference rooms for group work as well as larger room with intergrated media that is current. there are not enough charging stations. internet is bad is some classrooms. i run a hot spot off my phone. air circulation is the worse, worse part of the entire environs of all the schools i have substituted in. i worked october 2020 all year both hybrid, in person and zoom. we frozen or died of the heat. the rooms that had temp walls were very bad. the rooms with full glass are difficult to keep the focus of stuents if the halls have chamging of classes.

Removing lockers More rolling white boards Large tables only, large, bean shaped, round or triangle desks that cannot be in various configurations A forum space to have alternative activities

Albemarle HS needs an orchestra room and additional performing arts spaces.

The common restroom spaces need to be redone to create a bank of single stalls with floor-to-ceiling doors. A bank of sinks external to the single stalls should be included. These changes would eliminate vandalism, make students feel safer, and decrease opportunities for nefarious and often illegal activities (drug dealing) to occur. Changing the restrooms would also help students requiring private restrooms due to medical or psychological issues have a secure location during the day.

Windows that open for ventilation. Filtration in larger spaces that is adequate to the task. Windows in every room for outside light. I am extremely angry at how previous renovations were handled at WAHS: 1) the science teachers did NOT want the renovations the way they were done and said so. The County turned 4 classrooms into two (the trilab only hosts two classes at a time, the flex space is rarely used). The wall came down between B 101 and B 102 and had to go back up immediately because kids were throwing things. The noise of ventilation in the trilab makes it hard for me to hear. I'm not hard of hearing but we have teachers and students who are. 2) The greenhouse building was built knowingly too small for lack of money. It needed more than one classroom. 3) The shop door was designed to let the tiny house in. It was built too small (contractor error but the County didn't choose to hold them to account when it was pointed out). How will you earn my trust again?

Touch open door with school ids.

More places to show student work often taping work to walls and or old lockers. Doesn't stay well. Some rooms too small for numbers or students still. And not enough classroom. Faculty rooms may have old equipment unused ir doesn't work and student bathrooms need refreshing and smoke detectors or something. Remove outer doors if inner doors are hidden.

## WAHS Master Plan

Student Survey Results Spring 2022

Q2.How would you rate your school's physical environment?									
2(a) : How would you rate your school's physical environment?: learning spaces (classrooms, labs)									
Answer	Responses	Value	%	Percentage of total respondents					
1 - Worst	0	1	0%						
2	1	2	12.50%						
3 - Neutral	4	3	50.00%						
4	3	4	37.50%						
5 - Best	0	5	0%						
Weighted Score : 3.25									
Total Responses	8			20% 40% 60% 80% 100%					

Q2.How would you rate your school's physical environment?								
2(b) : How would you rate your school's physical environment?: common spaces (including bathrooms and lounge areas)								
Answer	Responses	Value	%	Percentage of total respondents				
1 - Worst	1	1	12.50%					
2	6	2	75.00%					
3 - Neutral	1	3	12.50%					
4	0	4	0%					
5 - Best	0	5	0%					
Weighted Score : 2.00								
Total Responses	8			20% 40% 60% 80% 100%				

Q2.How would you rate your school's physical environment?										
2(c) : How would y	2(c) : How would you rate your school's physical environment?: outdoor spaces									
Answer	Responses	Value	%	Percentage of total respondents						
1 - Worst	1	1	12.50%							
2	1	2	12.50%							
3 - Neutral	3	3	37.50%							
4	1	4	12.50%							
5 - Best	2	5	25.00%							
Weighted Score : 3.25										
Total Responses	8			20% 40% 60% 80% 100%						

Q3. What spaces and programs at your school do you think create the best physical learning environment for you right now? Please explain your answer thoroughly with details.

The ESA program and building is very nice and helpful because it offers a place away from the business of the main school.

Western's "e-wing" has lots of natural light so it is more enjoyable to have a class in a room like that.

the labs

The tables could be falling apart but have a comfortable chair and I would still be happy. Those hard and shiny chairs with the 2 rivets in them have got to go. They pull out hair and make our backs hurt when we are done with school.

library and outside

At the moment there aren't very many spaces that I enjoy learning in. The library is probably the best place in the school for learning.

Q4. What types of spaces or programs do you think should be added to your school to create a better physical learning environment? Please explain your answer thoroughly with details.

maybe more picnic benches and seating areas outside to encourage people to eat outside.

More parking for sophomores

A "program" that could be added is using actual classrooms for study halls instead of the auditorium. The auditorium is not a good place for study hall because it has poor lighting, and no actual desks or tables for students to work at.

more labs

We should try to implement more of the wooden benches which we already have in other hallways. They are so nice during lunch and class. We have plenty of hallways here with lockers that we don't use. The space from taking the unused lockers out could easily get enough space for benches.

More parking and better traffic control. There are a lot of people who have before-school practices and if they don't have parking, they literally can't get to school afterwards. If there was enough parking for at least most juniors to get a spot or even if there was some criteria for which juniors get the leftover parking spots rather than just a raffle, that problem could be solved.

PARKING LOT.

I know it's pretty much impossible but I feel that every classroom should have windows. However, the classrooms that do have windows still lack in natural light. Natural light is crucial to making Western feel more welcoming. Adding more natural light would make classrooms nicer to be in and thus, learn in. There isn't a space to put this but something has to be done about the traffic problems. One lane in and out of Western is not enough. It is dangerous if an emergency vehicle has to get out and can't because of traffic. Another thing that needs to be addressed in the walking situation. The fact that there is no sidewalk to Brownsville market and other places is just embarrassing. Dozens of students walk to Brownsville market every day and they shouldn't have to walk to walk in the grass to get there. Furthermore, not everyone can drive to school. More parking is not the solution. Nobody enjoys the sea of asphalt surrounding Western. Students should be able to walk/cycle home.

## WAHS Master Plan

Parent Survey Responses Spring 2022

## Q2.How would you rate the physical learning spaces at your child(ren)'s school?

2(a) : How would you rate the physical learning spaces at your child(ren)'s school?: learning spaces (classrooms, labs)

Answer	Responses	Value	%	Percentage of total respondents
1 - Worst	0	1	0%	
2	6	2	26.09%	
3 - Neutral	9	3	39.13%	
4	6	4	26.09%	
5 - Best	2	5	8.70%	
W	eighted Score	e : 3.17		
Total Responses	23			20% 40% 60% 80% 100%

Q2.How would you rate the physical learning spaces at your child(ren)'s school?									
2(b) : How would you rate the physical learning spaces at your child(ren)'s school?: common spaces (including bathrooms and lounge areas)									
Answer	Responses	Value	%	Perce	entage	of total re	esponde	nts	
1 - Worst	3	1	13.04%						
2	8	2	34.78%						
3 - Neutral	10	3	43.48%						
4	1	4	4.35%						
5 - Best	1	5	4.35%						
Weighted Score : 2.52									
Total Responses	23			20%	40%	60%	80%	100%	

Q2.How would you rate the physical learning spaces at your child(ren)'s school?									
2(c) : How would you rate the physical learning spaces at your child(ren)'s school?: outdoor spaces									
Answer	Responses	Value	%	Percentage of total respondents					
1 - Worst	0	1	0%						
2	10	2	43.48%						
3 - Neutral	8	3	34.78%						
4	4	4	17.39%						
5 - Best	1	5	4.35%						
Weighted Score : 2.83									
Total Responses	23			20% 40% 60% 80% 100%					

Q3. What do you see as the most significant physical challenges of your child's high school facility? Please explain your answer thoroughly with details.

Parking and traffic! Please expand parking for all students as soon as possible. I believe underclass students at all other county high schools have access to parking, while at Western only seniors have a guaranteed parking place.

Small common areas with long walks to various classrooms which are dark and uninspiring.

Parking, traffic in and out of school property, cafeteria, library and lounge space is limited and outdated

Lack of parking and traffic throughput and also lack of where to put jackets, backpacks, sports equipment

The building is dark due to no natural light. Some classrooms have no windows. Many classroom windows cannot be opened for further air flow, which has been troubling during COVID. Classrooms are small and students are practically sitting on top of each other. The Upstairs B Hall has many ceiling tiles with water stains on them due to leaks and there are mice everywhere, resulting in mice droppings. I am concerned about the health of staff and students who are surrounded by mold, mice droppings, and asbestos.

Parking... it's not fair that a child who is enrolled at WAHS who paid ACPS to take the driving class and has a license cannot drive to school because parking is ridiculous. They earned the privilege it's helps parents with transportation but yet no all licensed drivers can drive to school and WAHS is the only area school with those ridiculous rules

Not enough parking or field space

Parking and access in and out of the school grounds is a significant challenge.

One way in and out for vehicular traffic is a safety issue

Need more parking

Student parking, single point of traffic access/egress, safe and pleasant indoor spaces for gathering and flexible study locations.

I would like to see a high efficiency air filtration system installed and/or a UV-C disinfection system. This will go a long way to helping with COVID and future pandemics.

Lack of space for growing student population. All kids eligible to drive to school should be able to, and it should not be limited based on grade. The whole building (especially inside) is stuffy and outdated except for a few updated spaces. Need tables outside.

There is not enough outdoor seating for students. There is no covered outdoor seating for students

Limited parking

I have no issues.

Distance between classes-> not enough time to buy lunch and eat it Little shaded areas on campus, lite seated space to eat outside

Traffic!

Much of the school is outdated. I would also say that the newer, modern spaces aren't being used as intended. My child is in an honors chemistry classroom (one of the new enlarged science spaces) with 45-50 kids and the students spend at least 80% of their time learning and working on their own online. At least some, if not all, of the videos and presentations they watch aren't even created by my child's teachers. When the teachers actually do teach in person, one teaches, and the other patrols the classroom for misbehaving kids. Is this really what was intended for this classroom? It feels like the kids have double the classroom space, double the class size, but a fraction of the teaching and engaging curriculum they had in the past. I truly wish that the class actually engaged students in the material in an active way rather than leaving them to sit in front of their computers.

The school is very outdated.

Old, outdated classrooms and infrastructure.

Some of the 2018/19 renovated spaces are too big and noisy for my child to be adequately engaged. It would be helpful if new spaces were flexible to meet the needs of ALL students as well as teachers. Reimagine outdoor classrooms that meet the needs of students, teachers and are SAFE spaces for students to learn and grow as well as shrink distractions. The student bathrooms are sometimes locked because of smoking and this needs to be addressed so children can go to the bathroom in a safe and smoke free environment. Bathrooms should take into account gender non conforming students to ensure their safety and wellbeing. Admin and teachers bathrooms and workrooms need to be addressed as well because we want our teachers and admin to feel appreciated and this is a reflection of our values.

Q4. What types of physical spaces or programs would you like to see added to your child's school? Please explain your answer thoroughly with details.

1. PARKING FOR ALL STUDENTS ABLE TO DRIVE TO SCHOOL PLEASE!!! 2. More usable outside space for outside lunches, tents, many more picnic tables, places for classes to meet outside, etc. 3. Update and modernization of indoor spaces, including ideally outdoor facing windows for every classroom and office. 4. Ask the students and teachers what they need, want, and would prioritize.

More outdoor tables so kids aren't eating lunch on the ground, larger common areas for gathering or meeting in small groups

Common Space for students to work independently or with groups that offers space to plug in electronics and fuels their creativity and productivity, a cafeteria that can offer more varied options for breakfast and lunch offerings, more spaces for community use, A POOL!

More traffic lanes in and out of campus

Students need larger classrooms with natural light. Parking is an issue. The fields are an issue and lacrosse and soccer should not have to take turns trying to practice. Due to this, students are at sports practice sometimes until 10:00 pm, which does not allow them to come home and do homework. There needs to be a culinary room for students who are interested in taking this elective.

Solar

Parking parking parking

Renovated bathrooms, better outdoor hangout space, more parking and more sports fields

New and open

Flex use spaces for studying or working with small groups. Fresh air inside, clean and practical spaces for outdoor hanging out or small group work. Better bathrooms including locker rooms w/showers etc for sports.

I would like to see a high efficiency air filtration system installed and/or a UV-C disinfection system. This will go a long way to helping with COVID and future pandemics.

Need better outdoor spaces so kids can take a break and get fresh air between classes. Need more open and bright spaces indoors. The entrance sign needs to be modernized as well as the outside of the school. It's sad that Albemarle has so much more tax revenue than Fluvanna, yet their high school facilities are so much nicer.

Covered, outdoor seating that can be used close to year around.

Surely others have suggested or asked whether space at Henley/Brownsville could be used for WAHS juniors to park. What obstacles might prevent that possibility? How can we overcome them? Thank you

Shade gardens, paths Softball field with improved netting Having boys lacrosse practice, practically on top of area where fans sit is potentially dangerous- need netting or diff orientation of fiel

Outdoor learning areas. Gender-inclusive, single stall bathrooms--more of them, more accessible from all areas of the building. A more inviting, comfortable common area (cafeteria) that could be used as flex space for small group learning and socializing.

I'd like to see physical spaces that are conducive to active, collaborative learning. but, frankly, I don't think the learning spaces are our biggest problem at the high school. While there are some excellent teachers, many are disengaged, unprepared, and unmotivated. I know it's been a tough two years, but I'd like to see the school prioritize improving upon the shortcomings in teaching and spend money in ways that will improve the caliber of teaching. If that can be done alongside space improvement, great! If not, teaching and student engagement with the material is significantly more important to us.

Need lounge areas. Need to give students larger lockers so they can store their coats and not have to tote back packs around all day. Need a modernized cafeteria, and classrooms. The bathrooms are old and outdated. The campus needs to be warm and inviting with outdoor usuable spaces. Parking needs to be redesigned to provide more student and spectator parking. Need better traffic flow into and out of the schools which would help with traffic at the beginning of the school day and at dismissal. The athletic fields need to be upgraded.

Spaces that are quieter - classrooms and common areas. Everything has hard surfaces and is very loud. Single stall private bathrooms. Spaces with more natural light and access to the outdoors. Don't try to solve everything with "flexible" spaces unless you can make the subdivided smaller spaces totally acoustically separate. It's impossible to concentrate when there's another class just beyond the divider. Make wayfinding easier - halls are long and featureless, stairwells are tucked away and hard to find. Classroom numbers aren't obvious until you're already at the classroom (if I'm already there, then I didnt need the sign, I needed it when looking for it.

I have future WAHS students -- children at Henley and Brownsville and have a spouse who works at Monticello HS. To me, WAHS feels dated and unwelcoming. I would like to see a more Monticello-like environment at WAHS. Things that would help the space meet the needs of all children would include: flexible classroom spaces to accommodate both large and small-group teaching practices, gender-inclusive single stall bathrooms, outdoor (shaded) classroom space, quiet space for children with ADHD/anxiety, more natural light, a more inviting cafeteria and common areas, and larger/updated workshops/studios/performance spaces. This school can be a model for what public school education in the western feeder pattern should look like and I am excited about its future potential.

A detailed REFLECTION of what was learned the last time renovations were made in ACPS schools. What do the students say about the 2018/19 renovated spaces? What do the teachers say about the 2018/19 spaces? What do they like? What doesn't work? What did we learn from the modifications? Have adjustments been made to support the needs of students and teachers? Do teachers want to use the rooms that were created? I would like to see beautiful, flexible spaces that meet the needs of the entire student population and that teachers LOVE to teach in and the learning community reflects on the benefits and difficulties of the spaces.

## WAHS Master Plan

Community Survey Results Spring 2022

4(a) : If you attended/worked at Western Albemarle High School, how would you rate the physical learning spaces? If you did not attend/work at AHS, please skip these questions.: learning spaces (classrooms, labs)

Answer	Responses	Value	%	Percentage of total respondents
1 - Worst	0	1	0%	
2	0	2	0%	
3 - Neutral	0	3	0%	
4	0	4	0%	
5 - Best	0	5	0%	
(Did not answer)	3	NULL	100.00%	
	Weighted Sc	ore : 0		
Total Responses	3			20% 40% 60% 80% 100%

4(b) : If you attended/worked at Western Albemarle High School, how would you rate the physical learning spaces? If you did not attend/work at AHS, please skip these questions.: common spaces (including bathrooms and lounge areas)

Answer	Responses	Value	%	Percentage of total respondents		
1 - Worst	0	1	0%			
2	0	2	0%			
3 - Neutral	0	3	0%			
4	0	4	0%			
5 - Best	0	5	0%			
(Did not answer)	3	NULL	100.00%			
	Weighted Sc	ore : 0				
Total Responses	3			20% 40% 60% 80% 100%		

4(c) : If you attended/worked at Western Albemarle High School, how would you rate the physical learning spaces? If you did not attend/work at AHS, please skip these questions.: outdoor spaces						
Answer	Responses	Value	%	Percentage of total respondents		
1 - Worst	0	1	0%			
2	0	2	0%			
3 - Neutral	0	3	0%			
4	0	4	0%			
5 - Best	0	5	0%			
(Did not answer)	3	NULL	100.00%			
Weighted Score : 0						
Total Responses	3			20% 40% 60% 80% 100%		

Q5. What types of programs would you like to see offered in your local high school to best support Albemarle County's economy and workforce? Please explain your answer thoroughly with details.

MESA at WAHS

Internships with a stem focus. Collaboration with UVA.

Internships for SPED students with strong interest/skills in technology

Q6. How could your local high school facility be used to benefit the local community and businesses? Please explain your answer thoroughly with details.

increased use of athletic fields and facilities.

Q7. What do you see as the most significant physical challenges of your local high school facility? Please explain your answer thoroughly with details.

Too small for accurate growth predictions in Crozet

Inadequate ventilation to prevent the spread of covid



September 12, 2019 **MEETING MINUTES PROJECT NAME:** Albemarle High School Western Albemarle High School Masterplan Study **MEETING:** Master Plan Study - Western Albemarle High School **MEETING DATE:** 09.12.2019 Patrick McLaughlin, Interim Principal - WAHS **ATTENANCE:** Tim Driver, Assistant Principal – WAHS Theresa Tyler, Assistant Principal – WAHS William Schaffer, Assistant Principal - WAHS Lindsay Snoddy, Deputy Director of Building Services David Via, Supervisor Facilities Management Kylan Shirley, Project Manager, Quinn Evans Charles Tilley, Principal, Quinn Evans

The purpose of this meeting is to kick off the **Western Albemarle High School** master plan and discuss priorities with the school administration, describing the building and impacts of modernization with a focus on programming. The administration and facilities team will also walk through the facility to discuss conditions and opportunities.

#### Albemarle County Public Schools

**Our Vision:** Our learners are engaged in authentic, challenging, and relevant learning experiences, becoming lifelong contributors and leaders in our dynamic and diverse society.

**Our Mission:** Working together as a team, we will end the predictive value of race, class, gender, and special capacities for our children's success through high-quality teaching and learning for all. We seek to build relationships with families and communities to ensure that every student succeeds. We will know every student.

*Our Values:* > Equity: We will provide every student with the level of support necessary to thrive. > Excellence: We will mitigate barriers and provide opportunities for every student to be academically successful. > Family and Community: We will engage with and share the responsibility for student success with families and community partners. > Wellness: We will support the physical and emotional health of our students and staff.

#### 1) Enrollment:

- Building Capacity (current) 1,200
- Plan for future enrollment between ???? To be confirmed.
- Current enrollment: 1,153 students in 2018/2019
- Projected Enrollment shows 1,250 students in 2022/2023
- Environmental Science Academy has 142 enrolled.
- 2) WAHS Programs:
  - 9th Grade House
    - Designed to be together
    - Environmental Science Academy (ESA)
      - 142 students, typical, 25% MHS or AHS districted students.

Page 1 of 5



- 3) Spaces:
  - Performing Arts spaces need updating Arts programs are growing
    - Back of the house areas are too small no backstage or scene shop.
    - $\circ \quad \text{Need black box theater} \\$
    - Need classroom for drama
  - Need places for students to present their work mock congress, etc.
    - Breakout spaces within classrooms not factored into 'seat count'
      - Would like more of these types of space throughout the building
      - Access to hallway is preferred, better flexibility
  - Average classroom size is too small like the size of Monticello HS classrooms
  - Many are internal and do not have exterior windows / natural lighting
  - Professional learning spaces
    - Need area for private telephone calls
  - Cafeteria
    - Undersized.
      - Students eat all over school now
  - Athletics
    - Need a Field House near campus fields
    - Need a regulation size soccer field
    - Would like to move wrestling and weight room into a field house and convert those spaces to auxiliary gymnasium/classrooms.
    - Baseball team plays across 250 at Henley Middle School
- 4) Scheduling:
  - Typically teach 5/8 or 6/8 periods.
  - Like to have all dept teachers have the same free period so they can get together.
- 5) Circulation/Security:
  - Single corridor east/west can lead to bottlenecks.
    - Adding fire protection to the building:
      - 1. Several stairwells could be opened up.
      - 2. Open spaces in corridors.
      - 3. Can any fire doors be eliminated??
  - Lockdown conditions can be a problem with the number of locations.
  - Security system is old.

#### 6) Site topics:

- Parking:
  - Not enough parking all spaces are needed and used.
  - Main issue is only one road in and out of the campus.
- The parcel in front of the school not owned by the County.
- 7) FUTURE
  - What future programs could be offered at this campus? A question for ACPS leadership.



#### **Building Tour and Facility Related Comments:**

Potential locations for additions:

• Along front of school for biggest 'refresh' impact.

Restrooms:

- A-wing: toilets were combo locker room/toilets. One is converted to special ed.
- Future of toilets: more single occupant, with shared lavatory space.

Mechanical Systems:

- A- Wing(behind kitchen) Classrooms: VAV; A-Wing shops: split systems and some shop area not conditioned. Boilers and system are about 10 years old.
- NO VRF in building
- Kitchen: Dedicated mech system
- Cafeteria and all of second floor of B-wing is on a new Chiller, replaced in 2019.
- Front of B-wing (middle section) has a roof top unit with VAV
- Gym: systems are about 10 years old. Rooftop DX unit.
- Aux gym, wrestling, weight room: newer addition, 10-15 years old, but systems are undersized need replacing.
- Chiller seems to be oversized for areas served, running at 25%. Both compressors only run at 8am at startup on hot days.
- Most of HVAC shuts down around 5:00, most of building not occupied after 5:00.
- Dehumidification issues? No notable issues because of VAV system.
- Any new rooftop issues would want dehumidification capabilities.
- Fuel source: fuel oil. Natural gas not available on site. Natural gas available in area because 2 factories that are no longer operating had natural gas service.
- Fuel oil tank is underground, 14,000 gallons. Feeds the generator. Double-wall fiberglass, installed in late 90's.
- Generator:
  - Runs rooftop air handler.
  - o Some items in kitchen, freezer and cooler.
  - $\circ$  About 5 years old
- No solar at building now.
- Highest energy cost per SF of all schools. Have had energy analysis completed looking for issues with BAS, otherwise.
- BAS:
  - One panel on second floor, rear of building that is 70's vintage.
  - Other panels are current
- Cooling tower: not replaced in 2019. 10 years of life remaining.

Building Envelope:

- Lots of mouse (small holes) issues throughout building
- Exterior metal panels: Building Services would like to replace with something different.

Windows and doors:

- Windows: Original, single pane in almost all buildings.
- Entrance systems: mostly original, new at main entrance.

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#### Roof:

- Full roof replacement scheduled in CIP for 2021.
- Current roof is 2002 vintage, EPDM.

#### Plumbing:

- Water and sewer enter/exit at south side of A-wing.
- No current known issues.
- Pump station replaced recently
- Pumps in basements for sanitary, then gravity-fed toward rt. 250, forced-main toward HMS and a county pump station.
- No known issues with roof drain piping
- Some mastics throughout building are asbestos-containing. Floor ACM removed. May be some behind any remaining chalkboards.
- On county water lines.
- Fire hydrants around building
- Limited area sprinkler systems
  - Stage (needs replacing, leaking)
  - Some storage closets around building have sprinkler heads.
- Water line flow? Adequate flow to building for sprinkler? David thinks flow rate would be dependent on flow in County main, not line between main and building.
- County will have current flow tests for hydrants. Need to get those to TCE.
- Fire pump likely needed due to height of building.

#### Electrical:

- Lighting replaced with LEDs prior to performance contract.
- Fire Alarm:
  - Head-end replaced with recent renovations.
  - Devices throughout building are older.
- Auditorium lighting and sound:
  - Lighting system has issues. Could be original
- Gym sound system. May have been replaced about 10 years ago.
- Network and IT:
  - Fiber hub at WAHS, feed to other nearby schools
  - Cell tower being built at stadium.
  - IT closets?

#### Elevator:

- Elevator at cafeteria replaced in 2018.
- Plans to add another elevator, likely on outside of building.
- Switchgear is original to building. Westinghouse panels, can still get parts for it.
- Power usage data needs to be provided to TCE. 656 Kw is highest demand in the last year.
- Stadium power fed from building
- Softball field has a separate service.
- Many Panels located in hallways.
- Exterior Lighting:
  - Many owned by Dominion, on concrete poles.
  - o Lower stadium lot owned by school, recently replaced LED's



- Stadium lot: Not LED, would like to replaced with LED. Poles are original, lights likely replaced once in life of building. Wood poles.
- Softball lighting: 5 years old.
- Baseball field at HMS: has lights, 20 years old.

#### Security:

- Are there any considerations for Emergency Call Box type systems?
  - Panic buttons are installed in front office, accesses the alarm company.
  - What system would be activated by an emergency call box?
  - WAHS has one SRO. On-site unless in court.
- Is there a desire for a HS to be set up as an emergency shelter?

#### Kitchen:

- Renovated 3-4 years ago.
- Some older equipment still in kitchen but managed through the food service department.

Climate Action Plan - Sustainability:

- How could the campus achieve Net Zero?
- Is there a justification for not going all-electric?
- No boilers in a net-zero building mechanical systems would be VRF or Geothermal.
- Prepare roof to accept solar panels in the future.

April 21, 2022



#### **MEETING MINUTES**

PROJECT NAME:	Albemarle High School Western Albemarle High School Masterplan Study

#### MEETING: Student/Parent Meeting – Western Albemarle High School

The purpose of this meeting is to gather ideas and thoughts about the **Western Albemarle High School** master plan and discuss priorities with the students and parents.

The goal of this Master Plan process is to identify and craft a plan for modernization and renovation improvements that support:

- Instructional Needs
- Safety
- Technology
- Accessibility
- Site Parking
- Ongoing Maintenance or Other Considerations

The following questions were discussed as prompts for students and parents to share their thoughts, concerns, ideas, and dreams for Western Albemarle.

#### **Discussion Questions**

- 1) What spaces and programs do you think create the best physical learning environments for you as a student?
  - Indoor / outdoor spaces with connections
  - Windows and natural light
  - Outdoor spaces casual and formal
  - Hangout spaces inside the building like near the gymnasium
  - Interdisciplinary areas
  - Outdoor spaces with cover true outdoor classroom
  - Spaces for smaller groups
  - Quiet spaces spaces with good acoustics and noise control
  - Flexible sizes of rooms
  - Balance of transparency visible but not totally visible
  - Connectivity (power and technology)
  - Operable windows
  - Spaces for physical activity breaks like Henley MS
  - Display of student work
  - Single use restrooms
  - Flexible furniture
- 2) What do you see as the most significant physical challenges at Western Albemarle High School?
  - Site traffic flow and parking
  - Restrooms more are needed single and gender neutral



April 21, 2022

- Larger elevator to serve emergency stretcher
- Sound system in the gymnasium
- Sizes of projection screens / larger monitors
- 3) Does the physical environment at Western make you feel comfortable, connected, and safe? Why/how
  - Unique lockdown protocols for different space types
  - Pedestrian safety passing across 250 to market and Old Trail
- 4) What types of spaces or programs would you like to see added to Western Albemarle?
  - Outdoor spaces
  - Spaces for mental health focus on lighting, smaller spaces, with views
  - Dance and yoga
  - Meditation / wellness room
  - Renewable energy sources solar as a learning opportunity
  - High-tech studio for content production (video, audio, podcasts, etc)
  - Blending of hybrid/virtual and in person learning spaces

QUINN EVANS

14 January 2022

MEETING MINUTES	
PROJECT NAME:	Albemarle High School Western Albemarle High School Masterplan Study
MEETING:	Master Plan Study – Restart Discussion
MEETING DATE:	01.14.2022 VIDEO CONFERNCE
ATTENANCE:	Debbie Collins, Deputy Superintendent Jay Thomas, Director of Secondary Education Jen Sublette, Principal, WAHS Darah Bonham, Principal, AHS Katina Dudley, Lead Instructional Coach Lindsay Snoddy, Director of Building Services Lisa Walker, Project Manager, Building Services Kylan Shirley, Project Manager, Quinn Evans Charles Tilley, Principal, Quinn Evans

The purpose of this meeting is to discuss the process and direction of restarting the Master Plan for each campus. The design team will review the progress to date and what remains to be completed.

- 1.) Review goals of the study and project status
  - Purpose: The School Board has requested a master plan for Albemarle HS and Western Albemarle HS that identifies the needed future modernization and renovation work at each school that will provide 10 15 years of useful life to the facilities. We are studying the existing conditions and creating a plan that addresses:
    - Instructional needs
    - Safety
    - Technology infrastructure
    - Accessibility
    - Site traffic and parking [in coordination with the Lambs Lane Campus Study]
    - Ongoing maintenance and other considerations

The master plan will include recommendations for potential alternative concept designs incorporating this program within the existing buildings and such additions of new space as may be necessary or desirable. In addition, we will develop opinions of cost that can be used for capital improvement planning.

- **Status:** The planning effort was paused in early 2020 as the pandemic started and has recently been restarted. The
  - Program and Physical Assessments:
    - Interviews with administrative staff and school leadership complete
    - Stakeholder Input need to solicit comments and input
      - Students
      - Staff
      - Parents/Community Members
    - Identify building code, accessibility (ADA), building system requirements needed in process
  - o <u>Conceptual Diagrams</u>: to be completed
    - Diagrammatic concepts for each school with descriptions for proposed changes
    - Possible phasing diagrams for implementation if required.

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- <u>Construction Cost Development</u>: to be completed
  - Cost Estimate for each campus
  - Development of potential schedule

2.) Identify any changes or updates to this master plan process:

- Completed construction/renovation projects at either school since 2019?
  - Need to determine if any capital maintenance work has been completed in 2020 2021 2022
- Changes to enrollment planning/forecasting?
  - Need to verify the desired planning enrollments for both schools
  - 2021/2022
    - WAHS 1,131 [1,200 student capacity]
      - AHS 1,806 [1,785 student capacity]
- Changes to curriculum planning?
  - AHS TEAM Program, MESA
  - WAHS Environmental Science Academy
  - Planning around specific learning communities not necessarily preferred as these things will change over time. Focused on career pathways.
  - Online options could be more available.
- How has virtual learning affected the learning environment moving forward?
  - Virtual/hybrid learning has become more of a fixture in future. More digital bandwidth and locations where students can connect digitally.
  - Collaborative learning student breakouts have not been used as much during the pandemic given the need to spread out.
  - Stress levels during the pandemic with staff and students has identified the need for more focus on health and wellness and wellbeing. Maybe future programs or quiet spaces for staff/student recharge.

#### Albemarle High

School Administration identified the following additional items:

- Students are connected better to each other with a variety of smaller, formal, and informal spaces. Look for opportunities to add these types of space spread throughout the building.
- The main offices should connect better to the main corridor students are not connected with the admin/guidance staff. Open up the office areas more visually to the main corridor.
- Small break out spaces spread throughout the building will provide alternatives for counseling spaces (multi-use).
  - More small meeting spaces are needed with shared access from the corridor or common area not within a larger room. (IEP meetings, student breakouts, accessible from corridors).
- Adding windows and transparency through the building will help with supervision and sightlines as well as an increased sense of openness.
- With the additional students on campus, along with the modular units, the physical building is over capacity, which stretches the core program elements outdoor athletic facilities, gymnasium, cafeteria, media center, auditorium, and arts programs.



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- Modular Classrooms:
  - $\circ$  (2) pods with (8) classrooms each x 1:21 = 336 students (1 modular added summer 2021)
  - Security is an issue with students moving outside the building.
  - Long distance to administration offices.
- 'The Breezeway' (courtyard) continues to be a highly popular student gathering space and serves a vital function of cross circulation through the building.
- More outdoor learning spaces would be a great opportunity.
- A prayer room has been created in one of the former admin conference rooms (many Afghan refugees)
- Foodservice
  - Currently have (4) lunches to spread students out across campus; likely will shift to (2) lunch periods once COVID ends.
  - Breezeway (courtyard) is used constantly even when cold
  - o Small cafeteria is not an issue b/c eating happens in many different areas of the building

#### Western Albemarle High

- The Environmental Science Academy wing classrooms are newest.
- Vehicular circulation issues
  - No 'junior' parking available
  - Only one way in and out of the campus from 250.
  - Difficult for emergency vehicles to access building.
- Space Types
  - o Several large rooms have been added via renovation, adequate numbers now.
  - Existing classrooms are very small and lack windows, which limits teaching/learning methods and variety.
  - Informal spaces like those created where lockers have been removed (benches and counters) are used all the time, and more are needed.
  - No lockers are needed.
  - Large labs and classrooms (partially in the new ESA) are hard to use because they get too loud and large groups sometime need focused instruction while others are in the lab spaces.
  - Operable partitions are an option to create flexible, variable size spaces, but need to be able to create acoustic isolation between rooms.
  - Wellness Space Students are interested in this type of space, there is a mental health and wellness student committee. But there is no space in the building now to create that type of space.
- Small break out spaces spread throughout the building will provide alternatives for counseling spaces (multi-use).
  - More small meeting spaces are needed with shared access from the corridor or common area not within a larger room. (IEP meetings, student breakouts, accessible from corridors).
- Food service
  - No clear path to the exterior
  - o poor connections between indoor/outdoor spaces not outdoor dining.
- Performing Arts
  - Back-of-house spaces do not work, too small and are all used for set-building so no dressing rooms, etc.
  - Auditorium could use a renovation.

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- 3.) Stakeholder input planning
  - The goal is to solicit various perspectives on the conditions of each campus. Input will focus on programs and building related issues that will vary by group. For example...
    - Staff how does the building function relative to your specific program needs?
    - Students identify the things in the physical environment that limit your specific learning style: spaces for small groups, self-directed learning, independent study, spaces for non-traditional course work.
    - Parents and other community members what needs do they see in the existing fcailities and

Stakeholder Engagement

- Feedback methods? What is possible at the moment?
- Current model of virtual engagement is working well and gets more participation than previous inperson meetings.
  - Are there scheduled meetings that we could join for engagement opportunities.
    - Faculty opportunities during faculty meetings
    - Students could easily select certain classes to participate
    - Parents likely needs to be a separate meeting.
- 4.) Next Steps:

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- Update any changes since 2020
- Stakeholder input meetings and contacts
- Assemble draft of Facilities Planning spreadsheet
- Develop Concepts for each School with budgets