COLD SPRING ELEMENTARY SCHOOL FEASIBILITY STUDY

AUGUST 8, 2025

PREPARED FOR
MONTGOMERY COUNTY PUBLIC SCHOOLS

PREPARED BY
GWWO ARCHITECTS
1215 EAST FORT AVENUE, SUITE 24
BALTIMORE, MARYLAND 21230

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PROJECT INFORMATION

Cold Spring Elementary School

9201 Falls Chapel Way
Potomac, Maryland 20854

Montgomery County Board of Education

Ms. Julie Yang	President
Ms. Grace Rivera-Oven	Vice President
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Mr. Thomas W. Taylor	Superintendent of Schools
Mrs. Julie A. Morris	Director, Division of Design and Construction
Mr. Daniel D. Lee	Project Manager, Division of Design and Construction
Ms. Robin O'Hara	Senior Facilities Planner, Office of Facilities Management

INTRODUCTION

This feasibility study for Cold Spring Elementary School was conducted for Montgomery County Public Schools (MCPS) by the architectural firm of GWWO Architects. The work was performed under the direction of the MCPS Department of Facilities Management, Division of Construction.

Feasibility Study Participants

The following feasibility study participants reviewed, revised, and approved the design concepts for Cold Spring Elementary School. Meetings occurred on May 12 & 28, 2025; June 9 & 16, 2025 and July 7, 2025. The proposed designs are a result of the group's suggestions, guidance, and recommendations during the process.

Division of Design and Construction, MCPS

Julie Morris	Director
Daniel Lee	Project Manager

Office of Facilities Management, MCPS

Robin O'Hara	Senior Facilities Planner

Cold Spring Elementary School

Natalie Hambrecht	Principal
Victoria Clark	Assistant School Admin
Shari Bergel	Art/Staff
Kelly Hueting	Teacher
Alex Hohenhaus	Teacher
Sabrina Goldberg	ELD/Staff
Marie C. Anastasi	Health/Staff
Amber Dickens	Teacher
Andrea Shin	Teacher
Cindy Spring	Teacher
Nichole Sugar	Teacher
Kira Mikkelsen Gessner	Teacher
Paige Lewis	PE/Staff
Meg Vaughan	Reading Specialist
Christine Little	Media Specialist
Marisa Marinos	PTA President
Edward Kim	Parent
Nonye Uzoma	Parent
Sara Wanner	Parent
Reggie Harris	Parent
Lydie Harris	Parent
Melanie Olds	Parent
Brooke Rickett	PTA/Parent
Rachel Azoff	Parent
Norean Qadir	PTA/Parent
Sara Mandelbaum	Parent
Avery Sudow	Parent
Noah Sudow	Parent
Adam Goldberg	Parent
Francesca Civano	Parent
Giovanni Dimilia	Parent
Nicholas Frederico	Parent
Irene Oyvin	Neighbor
Igor Livshin	Neighbor
Sarah Stone	Parent
Harrison Guthorn	Parent
Sylvia Soltis	Parent
Aniket Dutta	Parent
Patricia Kment	Parent
Barbara Hsieh	Parent
Ewa Zambrano	Parent

Academy Child Development Center

Lesley Walsh	Academy Staff
Dori Elin	Academy Staff
Toni Brown	Academy Staff

Montgomery County Parks & Planning

Joshua Penn	Planner
Nkosi Yearwood	Planner
Florence Dwyer	Planner
Molly Stamets	Planner

Design Team

Paul Hume	GWWO Architects
Barbara Willey	GWWO Architects
Gretchen Wagner	GWWO Architects
Sean Lindaman	Clark Azar & Associates

EXECUTIVE SUMMARY

Purpose

The purpose of this Feasibility Study is to develop options for renovation, expansion or replacement of Cold Spring Elementary School. The study will show how these options accommodate the educational specification requirements for Cold Spring Elementary School, determine constructability, and develop cost estimates. When completed, the facility will accommodate 465 students with a core capacity of 640 students. Due to site challenges, each option assumes that students will be relocated to a holding school while the building is undergoing modernization, expansion or replacement.

History

The existing Cold Spring Elementary School is located at 9201 Falls Chapel Way, Potomac, Maryland 20854. The school was originally built in 1972 with open-concept learning environments within a split-level building. Some classroom areas were subsequently divided into individual classrooms, and an 8,000 square foot Gymnasium addition was completed in 2013. One portable classroom is currently located behind the gymnasium addition and serves as the instrumental music classroom. Another portable classroom houses the Academy Child Development Center located at the south-east corner of the site.

The school's current enrollment is 360 students. The new State-Rated Capacity is projected to be 465 with a core capacity of 640 students. The area of the existing building is approximately 53,294 GSF. The site is 12.38 acres and slopes from the south, where the existing building is located, down to the play fields on the north side of the site.

Methodology

The site has been evaluated by a design team of architects and engineering consultants to determine the feasibility of existing building renewal, partial demolition and construction of additions, as well as full building replacement. Each option was developed using the educational specifications, sustainable design considerations including Green Globes and solar ready design features, and Crime Prevention Through Environmental Design (CPTED). Equipped with an understanding of the site challenges and the educational specifications developed by MCPS, the design team was tasked with creating several options for review by staff and community at a series of public meetings. After each meeting, the options were further refined based on the comments received.

This study is based on the following:

- Public meetings with the feasibility study participants and MCPS staff.
- Review meeting with MCPS and Maryland-National Capital Park and Planning Commission (M-NCPPC)
- Analysis of the existing facility, and site limitations.
- Review of the existing condition documents provided by MCPS.
- Review of the educational specifications provided by MCPS.
- Research and site visits conducted by the design team.

Overview

The existing Cold Spring Elementary School currently serves 360 students in kindergarten through fifth grades. The building is a one-story, split-level structure with exits to grade at all levels. There are ramps and stairs throughout the building that mitigate the steep grade changes from the south to the north sides of the site. The eastern portion of the school is the original 1972 structure and to the west is the 2013 Gymnasium addition with corridors that connect to the original building and enclose a larger courtyard.

The existing exterior walls are masonry with brick veneer, primarily uninsulated, with small windows providing minimal natural daylight. There is a sloping asphalt shingle roofing system on the 1972 building, with a built-up roofing and a vegetated tray system on the Gymnasium addition. Both roofing systems are showing signs of degradation. The structural system is a combination of load bearing masonry walls, steel framing, steel roof joists, and concrete slabs-on-grade. The existing heating, ventilation and air-conditioning systems are beyond their expected lifespan.

The school building spans from the topmost level of the site, which also accommodates the portable classroom and adjacent daycare, to the mid-level of the site with access to site circulation and paved play area. There is a 42-foot difference between the highest and lowest elevations of the site. In comparison to the Main Entry elevation on the north side of the school, the site slopes up about 9’ towards the south.

The bus loop shares a driveway with car traffic, building services, the staff parking lot, as well as visitor parking—all accessed off of Falls Chapel Way. The convergence of traffic within this loop causes backups during arrival and dismissal.

Four options were developed as approaches to the feasibility study and they vary in their scale of intervention. Option 1 is a “Renewal” scope wherein the existing building footprint is maintained with a renovation of all square footage of the building. No additions are considered within this approach. Option 2 pursues a “Renewal and Additions” approach, demolishing 10% of the building and constructing four additions, all one-story. Option 3 is a two-story “Gymnasium Renewal and Addition” approach that keeps the existing Gymnasium and demolishes the remaining 90% of the building to be replaced. Option 4 is a two-story “Replacement” of the existing school, in the same location as the existing building. The options are described and illustrated on the following pages.

Option 1 - Renewal

Option 1 maintains the existing building footprint. The building is renovated in full, including improvements to the exterior envelope. The portable classroom southwest of the building is removed, as the instrumental music classroom is incorporated into the existing square footage during the renovation. Site circulation is revised to address safety concerns and separate buses and cars. The adjacent Academy Child Development Center and play areas all remain undisturbed. Option 1 improves educational adjacencies, but does not satisfy all spatial requirements of the educational specification. All systems, finishes and equipment will meet MCPS standards.

OPTION 1	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*0 SF*
Addition:	*0 SF*
Renovation:	*53,294 SF*
Total:	**53,294 SF**

Figure 1: Option 1 site plan (GWWO, 2025).

Option 2 - Renewal & Additions

Option 2 proposes the demolition of 10% of the existing building where the administration and kindergarten classrooms are currently located, renovates the remaining square footage, and constructs four additions on the north, east, and west facades to meet the educational specification requirements. The existing administration suite and kindergarten classrooms are replaced by the north addition. The two eastern additions incorporate a new pre-kindergarten program and an art and music wing. Additional mechanical space is added with the west addition to provide a direct connection to potential geothermal fields on site. Both the portable classroom and the Academy Child Development Center are removed and relocated, respectively. Site circulation is improved by separating cars and buses, adding more parking and queuing space for cars. All systems, finishes and equipment will meet MCPS standards.

OPTION 2	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*6,326 SF*
Addition:	*17,371 SF*
Renovation:	*46,968 SF*
Total:	**64,339 SF**

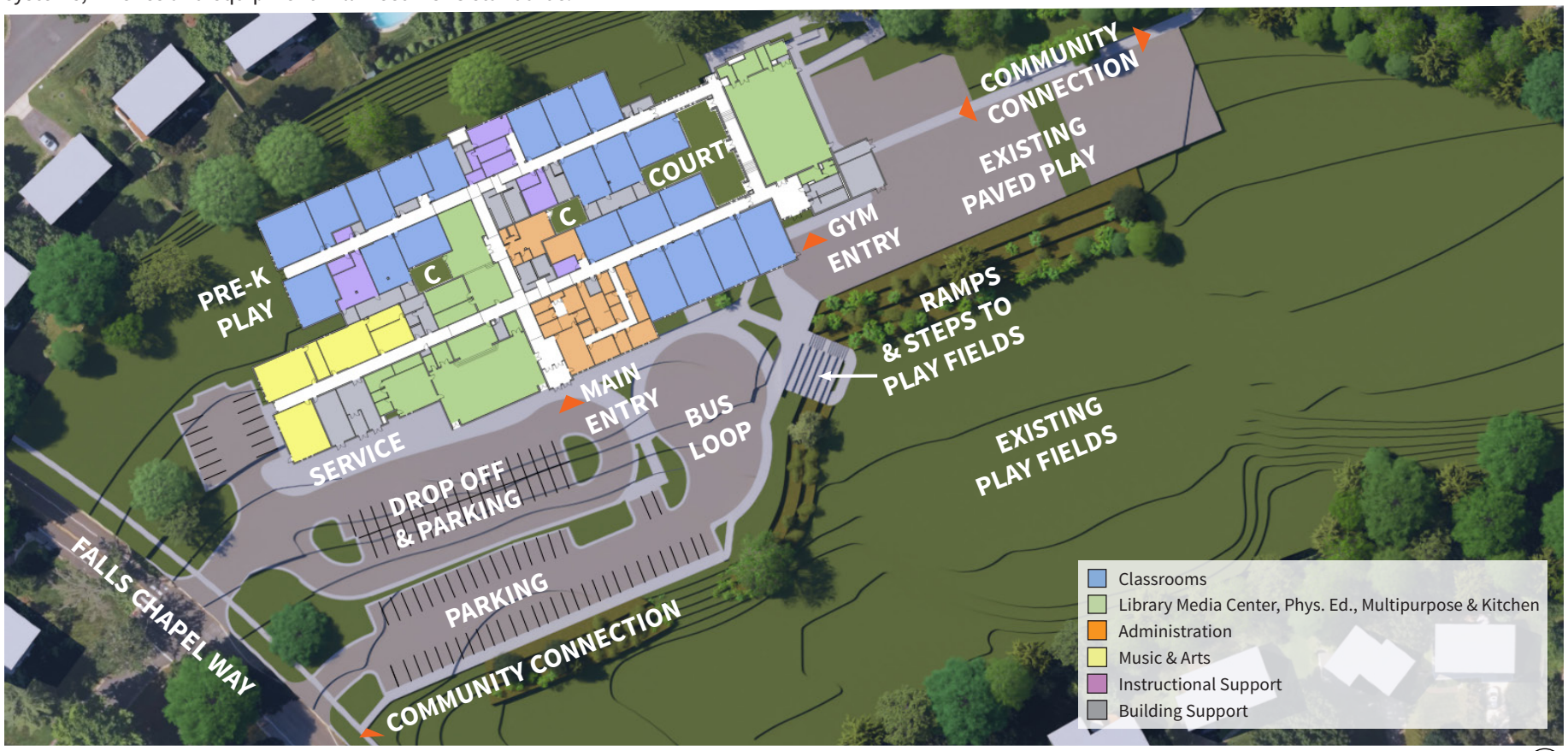


Figure 2: Option 2 site plan (GWWO, 2025).

Option 3 - Gymnasium Renewal & Addition

Option 3 proposes the renovation of the existing Gymnasium and the demolition of the remaining 90% of the building for replacement with a two-story structure. This option relocates the main entrance to increase visibility for visitors. The service area is relocated to the southeast corner of the building, away from pedestrian circulation paths, and screened from the neighbors. Pre-kindergarten and kindergarten classrooms have adjacency to the student drop-off. The new building footprint also incorporates two courtyards for outdoor learning. Site circulation is reconfigured to separate buses and cars, adds parking spaces, and creates a dedicated service drive. Existing play areas remain as-is. All systems, finishes and equipment will meet MCPS standards.

OPTION 3	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*46,883 SF*
Addition:	*61,245 SF*
Renovation:	*6,461 SF*
Total:	**67,706 SF**

Figure 3: Option 3 site plan (GWWO, 2025).

Option 4 - Replacement

Option 4 proposes the demolition and full replacement of Cold Spring Elementary School. The new building footprint is slightly smaller due to its compact, two-story approach, which provides more space for direct access to pre-kindergarten and new paved play areas to the west. Similar to Option 3, Option 4 repositions the Main Entry to face Falls Chapel Way and improves drop-off and pick-up safety with site circulation improvements. The service area is also moved to the southeast corner in this option, with drive access from the bus loop. Option 4 includes one large courtyard that is accessible on all sides for multiple program uses. Existing play fields remain untouched. All systems, finishes and equipment will meet MCPS standards.

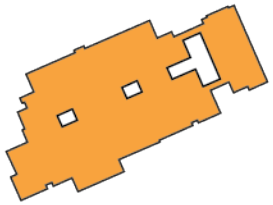
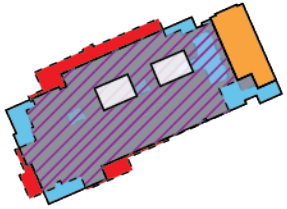
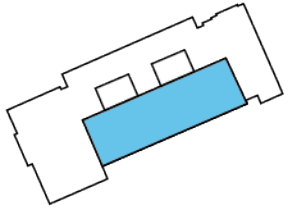
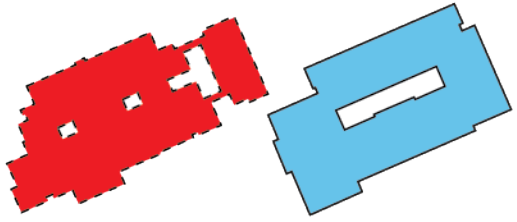
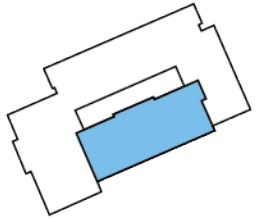
OPTION 4	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*53,294 SF*
New:	*66,640 SF*
Renovation:	*0 SF*
Total:	**66,640 SF**

Figure 4: Option 4 site plan (GWWO, 2025).

Option for Student Relocation During Construction

Due to site constraints it is not feasible for the students to remain onsite for the duration of renovation or new construction of Cold Spring Elementary School. It is recommended that the students be relocated to a holding school.

Comparative Analysis of All Options

OPTION			FIRST FLOOR	SECOND FLOOR
1	**Demolition:**	0 SF		
	Addition:	0 SF		
	Renovation:	53,294 SF		
	Total:	53,294 SF		
	Efficiency:	69%		
2	**Demolition**	6,326 SF		
	Addition:	17,371 SF		
	Renovation:	46,968 SF		
	Total:	64,339 SF		
	Efficiency:	71%		
3	**Demolition:**	46,883 SF		
	Addition:	61,245 SF		
	Renovation:	6,461 SF		
	Total:	67,706 SF		
	Building Efficiency:	68%		
4	**Demolition:**	53,294 SF		
	New:	66,640 SF		
	Renovation:	0 SF		
	Total:	66,640 SF		
	Building Efficiency:	69%		

Renewal New Construction Demolition

Note: Existing building = 53,294 SF

Summary Table and Cost Comparison of All Options

SQUARE FOOTAGE	*OPTION 1*	*OPTION 2*	*OPTION 3*	*OPTION 4*
Existing	53,294	53,294	53,294	53,294
Demolition	0	6,326	46,883	53,294
Addition/New	0	17,371	61,245	66,640
Renovation	53,294	46,968	6,461	0
Total Gross Square Feet	**53,294**	**64,339**	**67,706**	**66,640**

Conclusions and Recommendations

Four options are presented within this study and were designed with input from the feasibility study participants. Three options meet the educational programmatic requirements of the educational specification. The constraints of working within the existing building footprint for renewal-only in Option 1 does not allow all programs defined in the educational specification to be incorporated into Cold Spring Elementary. Option 4 Replacement is the most preferred option. Option 1 Renewal is the least preferred option.

In accordance with the opinions of the feasibility study participants and MCPS staff, it is recommended that Option 4, as described in Description of Options section, and its associated site improvements be implemented.

PROJECT SCOPE, OBJECTIVES, & GOALS

Scope and Intent

Montgomery County Public Schools (MCPS) plans to update Cold Spring Elementary School to meet the current school needs and projected student population. When completed, the facility will have a capacity of 465 students with a core capacity of 640.

The architectural and engineering design team included GWWO Architects, James Posey Associates and Clark Azar & Associates. The team reviewed the educational specifications, met with the school staff, community members, and the Parks & Planning committee and developed four options ranging from existing building renewal to complete replacement that meet the criteria for the project. The Feasibility Study Participants reviewed the progression of these concepts throughout the design process. Their comments and suggestions were discussed, refined, and incorporated at each step during the process. The final concepts are presented in this report.

Objectives and Goals

The following goals and objectives have been developed as a summary of the comments received from the public meeting process. The building shall:

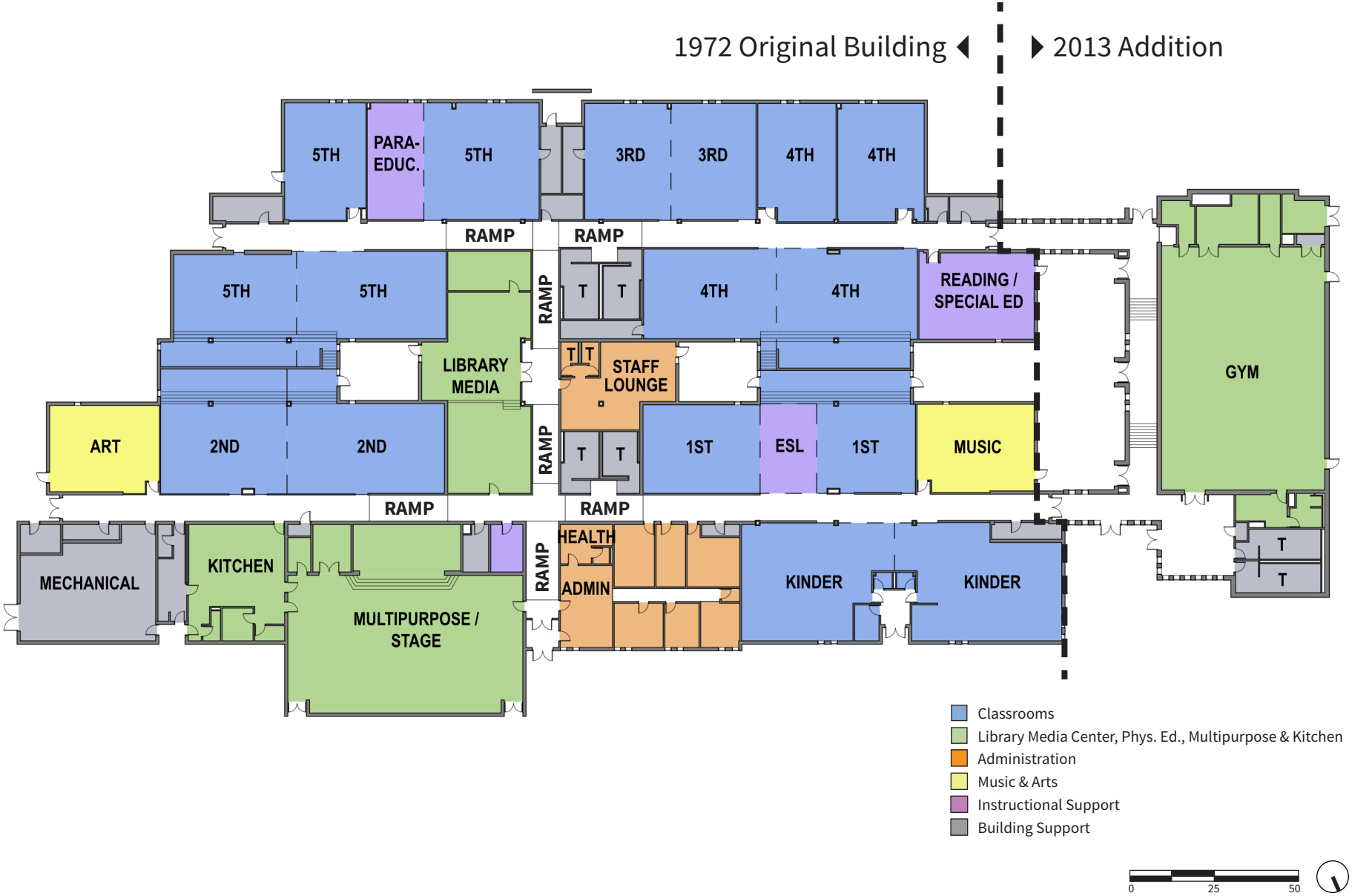
- Improve visibility of the main entrance.
- Include sustainable design features such as natural daylighting and energy efficient systems.
- Redesign the site circulation so that it is safe and efficient for pedestrian and vehicular use.
- Provide the safest possible environment for students and staff inside the school.
- Provide barrier-free ADA compliant access throughout.
- Maintain the programmatic flexibility of teaching spaces and meet educational specification requirements.
- Provide a new mechanical system with appropriate conditioning that can sustain occupant comfort.
- Provide secure outdoor learning environments.
- Provide acoustically separate, enclosed classrooms.
- Be a design that reflects the school's unique character and integrates into the culture and community of the school.

EXISTING CONDITIONS

Vicinity Plan

Existing Site Plan

Existing Building Plan



Existing Conditions Summary

The original Cold Spring Elementary School was built in 1972 with a Gymnasium addition completed in 2013. The building is an open-concept, split-level structure that navigates elevation changes with multiple ramps in the corridors and steps throughout various learning spaces. Many classrooms operate without walls and doors, open to both the corridor and adjacent teaching spaces.

The building is constructed of non-combustible material. The existing exterior walls are masonry with brick veneer, primarily uninsulated, with small windows providing minimal natural daylight. There is a sloping asphalt shingle roofing system on the 1972 building, with a built-up roofing and a vegetated tray system on the Gym addition. Both roofing systems are showing signs of degradation. The structural system is a combination of load bearing masonry walls, steel framing, steel roof joists, and concrete slabs-on-grade. The existing heating, ventilation and air-conditioning (HVAC) systems are beyond their expected lifespan.

The Cold Spring Elementary School facility is situated on a 12.38 acre parcel (P515) at 9201 Falls Chapel Way in Potomac, Maryland. The site is bounded to the east by Falls Chapel Way and neighboring homes to the north, south and west.

The existing school exits to grade at all levels. There are ramps and stairs throughout the building that mitigate the steep grade changes from the north to the south sides of the site. The eastern portion of the school is the original 1972 structure and to the west is the 2013 addition with connecting corridors back to the original building, enclosing a larger courtyard. The school building spans from the topmost level of the site, which also accommodates the portable classroom and adjacent daycare, to the mid-level of the site with access to site circulation and paved play area. Stepped storm water management areas isolate the play fields and flood plain at the lowest level of the site.

There is a 42-foot difference between the highest and lowest elevations of the site. In comparison to the Main Entry elevation on the north side of the school, the site slopes up about 9-foot towards the south. There is also a 6-foot difference between the school driveway entrance up to the exit.

The lowest play field is approximately 12 feet below the Main Entry and Gymnasium level of the building. The students use an exterior stair and ramp adjacent to the driveway to access the lower play fields.

The bus loop shares a driveway with car traffic, building services, the staff parking lot, as well as visitor parking. The parking area is located to the north and has 61 regular and two ADA compliant spaces. The two ADA spots are located at the Main Entry level and are across the drive from the drop-off area, connected by crosswalk. There are 63 total marked parking spaces on site. Parents often parallel park along the wider parts of the driveway.

Refer to Appendix C for more information.

DESCRIPTION OF OPTIONS

General

Four options have been developed in response to the MCPS educational specifications and feedback from the feasibility study participants for Cold Spring Elementary School. Each addresses the physical and instructional capacity of the school.

All options will meet the requirements of the Maryland Green Building Council - High-Performance Green Building Program and will comply with GBI Green Globes (minimum two Green Globes) and the International Green Construction Code (IgCC).

Common Design Elements for Each Option

Site Elements

Sediment and Erosion Control

Any project over 5,000 sf of disturbance will need to receive approval of the erosion and sediment control plan from Montgomery County DPS. Plans should conform to the 2011 Standards and Specifications for Soil Erosion and Sediment Control from Maryland Department of the Environment. It is anticipated that any major project will need to include a sediment trap or sediment basin. All projects will also require a stabilized construction entrance, inlet protection, silt or super silt fence, stockpile areas, concrete washouts, and permanent stabilization.

Site Demolition

Each option approaches site demolition to various degrees. Existing site features located within the proposed building footprint or modifications to existing site items will require demolition. At a minimum, site circulation will need to be demolished and reconfigured in all options.

Grading

The site should be designed to have a balance between cut and fill to limit the amount of export or import for the site. All grass areas should be stabilized with sod.

Forestation

The project will not be clearing any forest. Large trees near the public sidewalk or along residential properties should be maintained when possible. The property will need to go through with a forest conservation exemption or a full forest conservation plan depending on the amount of work being proposed. All work will be reviewed by the Maryland National Capital Park and Planning Commission.

Site Improvements

Any pavement shall meet the following requirements:

- Sidewalk shall be concrete (4,500 psi). Sidewalks shall be 5’ wide and 4” deep with WWF 6x6 and a 4” stone base.
- All curb and gutter shall be concrete (4,500 psi).
- All heavy duty concrete (4,500 psi) for ADA spaces or vehicular pavement shall be 8” thick with WWF 4x4 and 4” GAB.
- Asphalt pavement shall be 6” thick (2” asphalt surface course and 4” asphalt base course) with a 6” GAB.
- Heavy duty asphalt pavement for the bus loop, loading dock, or construction access shall be 6” thick (2” asphalt surface course and 4” asphalt base course) with an 8” GAB.
- All pavement shall be over an approved subgrade.

Parking

ADA Parking should be upgraded to provide the minimum number of required ADA parking spaces.

Proposed Utilities

Water - The waterline for the site may be required to be upgraded to an 8" DIP to serve the sprinkler system, hydrants, and domestic demand for the building. This would require a new water meter vault with easement. The existing waterline will require a service connection abandonment. The new line will require a new service connection.

Sanitary Sewer - The existing sanitary sewer should be reused if possible. If a new line is necessary, a new line should be connected to either the line in Falls Chapel Way if possible to avoid the floodplain.

Gas - The existing line should be reused if able. Otherwise, a new line will need to be coordinated with Washington Gas.

Electric - The existing electric should be maintained if possible. If a new electric main is needed, the locations should be closest to the new transformer to limit the amount of new electric main that will be needed. All work to be coordinated with PEPCO.

Stormwater Management

All new work will need to meet Montgomery County SWM requirements. The site will need to meet the County's ESD requirements. It is assumed that a combination of pervious pavement, micro-bioretention, and other ESD practices will be needed. If ESD cannot be met, Chapter 3 or structural practices can be considered.

Storm Drainage

Existing drainage issues along the north will need to be addressed. A storm drain will likely need to be added to drain this runoff towards the existing storm drain in Falls Chapel Way.

Fields and Courts

The existing grass fields and associated ADA access should be maintained if possible. The existing hard and soft surface play areas are in good shape and should also be maintained if possible.

Architectural Elements

Educational Specification

All program spaces will be provided in options 2, 3, & 4. Ed Spec square footages will be met in all approaches that enlarge the building footprint. Spaces will be laid out to provide appropriate adjacencies. Adequate storage will be provided and distributed across the school.

Accessibility

The building will comply with the Americans with Disability Act (ADA) Accessibility Guidelines and the Maryland Accessibility Code (COMAR 09.12.53).

Safety and Security

Crime Prevention Through Environmental Design (CPTED) principals will be followed to promote a safe and secure environment.

Daylighting

Natural light will be provided in all teaching spaces.

Exterior Walls

High performance exterior wall systems will be provided to eliminate thermal bridging and minimize air/vapor permeance. Walls will include continuous R-25 insulation, to be confirmed during design. Masonry veneer units will be the primary building cladding material to maximize durability. The existing envelope will be replaced in full in areas of renovation. New additions will match existing brick.

Exterior Glazing

High performance double pane low-e glazing with a low center of glass U-value. Visible Light Transmittance will be balanced with Solar Heat Gain Coefficients to maximize daylighting without negatively impacting energy performance. Approximately 15 - 25%, depending on the option, of the exterior walls will be glazed to minimize energy usage.

Roofing

New R-30 minimum built-up asphalt roofing will be provided.

Finishes

New finishes will be provided throughout the school. Finish materials, including but not limited to, flooring, tiling, ceilings, paints, casework will comply with MCPS standards.

Structural Elements

Areas of Renovation

The existing exterior building walls are composite construction comprised of 4-inch-thick brick veneer with an 8-inch-thick concrete masonry block backup which, in most cases, is also a loadbearing wall supporting the roof framing. The most economical approach to reskinning the building would be to leave the existing walls in place and add new wall construction outboard of the existing wall. The new wall could consist of cold-formed steel studs with an insulation layer, and a combination of a masonry veneer and/or metal wall panel finish.

With improvements to the MEP systems including new rooftop units, additional structural support will be required to account for new roof loads, bracing the new units on the various sloped roof types, and strategically positioning the units to maintain views of the school where possible. Additional structural reinforcement would be required on the 1972 portion of the building if a photovoltaic system is required.

Areas of New Construction/Addition

The roof structure will be comprised of steel decking supported by open-web steel joists. The decking may have several profiles and gages with depths ranging from 1½ to 3 inches, dictated by the most economical joist spacing, acoustic requirements and the need to support a photovoltaic array. The steel joists will be supported by steel wide-flange girders. Rooftop mechanical equipment will be supported by heavy duty steel joists and wide-flange beams.

The floor structure will typically consist of 3” of cast-in-place, normal weight concrete on 2” deep composite deck (total slab thickness = 5”), supported by steel wide-flange beams and girders designed to act compositely with the floor slabs.

The ground floor will typically be 5-inch-thick concrete slab-on-grade construction. Thicker slabs may be required to support heavy loads such as floor mounted mechanical equipment. Based on a review of the existing building drawings, it is anticipated that the foundation will be a concrete spread footing system; however, a geotechnical investigation of the building site will be required to confirm the feasibility of this foundation type.

Vertical support for the roof and floor framing will be provided by a combination of steel wide flange and tube columns. Lateral stability under wind and seismic loads will be achieved by steel rigid moment frames and reinforced concrete masonry shear walls.

Mechanical Elements

Primary Heating and Cooling Infrastructure System (Option 1)

A centralized air-to-water heat pump unit system is recommended to support the proposed renovation concept. This type of mechanical system provides the ability to have independent heating or cooling year-round, while delivering an extremely high level of overall building energy efficiency.

Extended range vertical heat pump units will be provided for space conditioning within the general classroom areas, with these units located within mechanical closets positioned near the area served.

Primary Heating and Cooling Infrastructure System (Options 2-4)

A ground-coupled geothermal heat pump unit system is recommended to support the proposed renovation concept. This type of mechanical system provides the ability to have independent heating or cooling year-round, while delivering an extremely high level of overall building energy efficiency.

A ground-coupled geothermal borehole field will be located northwest of the existing school and positioned below the play field.

Ventilation and Dehumidification

A series of outdoor, roof mounted, DOAS units with supply and exhaust fans, enthalpy wheels for pre-conditioning outdoor air, DX heat pump coils with water-cooled compressors, and hot gas reheat coils for tempering supply air will be provided to deliver conditioned ventilation airflow to the classroom areas served. Airflow supplied from these DOAS units will be dehumidified, conditioned, and delivered to each space directly. Exhaust airflow from classrooms, restrooms, and storage room areas will be routed through each DOAS unit's enthalpy wheel for pre-conditioning of outdoor air.

Multi-Purpose Room and Gymnasium HVAC Systems

A series of outdoor, roof mounted, air handling units with heat pump type water-cooled compressors, and hot gas reheat coils will provide space conditioning and ventilation for the cafe/multipurpose room, and gymnasium areas. The water-cooled compressor will be connected to the geothermal heat pump loop. Full airside economizer and enthalpy wheel energy recovery devices will be provided where required by the International Energy Conservation Code. Demand control ventilation will be provided for the unit serving the Gymnasium.

Miscellaneous Building Areas

Data, Telecomm, and Elevator Room will be served by ductless split systems. Heating-only type spaces such as mechanical rooms, electrical rooms, stairs, storage rooms, and entry vestibules will be provided with electric cabinet and propeller unit heaters. In addition, a dedicated switch-operated exhaust fan will also be provided within the health suite area and within the administration workroom

Building Automation Control System

Automatic temperature controls will be direct digital type controls (DDC). Actuation will be electric / electronic for all systems. All system components will be installed in accordance with MCPS standards and networked to the existing front-end server located at the MCPS Energy Management Office.

Plumbing Elements

Domestic Water Systems

A new combination fire/water service will enter the school within the main mechanical room. The new combination fire/water service will be capable of supporting both the fire and water service demands of the new school. A new domestic water service, complete with basket strainer and backflow preventer will separate the domestic water and fire services prior to distributing water throughout the school. Domestic water piping will be distributed from this first floor mechanical room area to plumbing fixtures and equipment located throughout the school. The existing domestic water piping will be replaced throughout the entire school in renovation options.

Domestic hot water will be generated by a pair of electric resistance tank type domestic water heaters.

Storm Water Piping System

For renovation and addition options, storm water drainage, including roof drains, overflow drains, and storm water piping systems will be replaced to the greatest extent possible throughout the entire school, with limited portions of the existing underground piping anticipated to remain to accommodate project phasing. New storm water drainage, including roof drains, overflow drains, and storm water piping systems will be provided throughout the entire school for the replacement option. Above- and below-grade storm water piping will be constructed from PVC material. All storm water piping systems will exit the school at various locations and coordinate with available site piping connections provided for the proposed renovation and addition option.

Roof drains with interior storm water piping are anticipated for flat roof areas. Roof gutters with exterior downspouts are anticipated for sloped roof areas. Cast iron storm water leader shoes will be provided where downspouts transition to below grade storm water piping before connecting to the site storm water system.

Sanitary Water Piping System

New sanitary waste and vent piping systems will be provided throughout the entire school. Above- and below-grade sanitary and vent piping will be constructed from PVC material. Vent piping will terminate at the roof level, with a minimum 25-foot separation provided between vent piping terminations and any outdoor air intake locations. Sanitary piping systems will exit the building at various locations and will coordinate with the available site piping connections provided for the proposed renovation and addition option.

Plumbing Fixtures

New plumbing fixtures will meet the Americans with Disabilities Act (ADA) and utilize water conservation features. Floor-mounted water closets will utilize 1.28 gallon per flush valves. Urinals will be wall-hung and provided with pint flush valves (0.125 gallon per flush). Wall-hung cast-iron lavatories will utilize self-closing faucets that supply 0.35 gallons per minute. Showers will utilize 1.5 GPM type heads. The water consumption figures noted are equal to or less than what is required by the current plumbing code and for promoting good water conservation practices.

Fire Protection Elements

Sprinkler System

The entire building will be fully sprinklered, with the sprinkler system separated into several zones that will match the fire alarm pull zones for the building. A fire flow test will be performed during the early stages of design to confirm the available municipal water pressure and determine if a fire pump is required to support the proposed sprinkler system. A fire pump is not currently anticipated based on the available water pressure at the existing school. All work will be specified to conform to standards of the National Fire Protection Association (NFPA) and will include requirements for performance verification through hydraulic calculations.

Fire Detection and Alarm Systems

The fire detection and alarm system will comply with State of Maryland Fire Code, local authorities having jurisdiction, International Building Code, and NFPA. The fire detection and alarm system will be a stand-alone, addressable, and will have voice evacuation capability. The main fire alarm control panel (FACP) will be located either in the main telecom room or in a location as directed by MCPS. The FACP will be equipped with battery backup. The fire alarm annunciator with graphic display and adjacent keypad will be located at the main building entrance vestibule or lobby.

Electrical Elements

General

New electrical distribution equipment, lighting fixtures, lighting controls, receptacles, voice/data system, public address system, and security system components will be provided.

Electric Service

A new outdoor pad-mounted Pepco utility transformer will be provided adjacent to the new main electrical room. (The front of the utility transformer will be within 20 feet from a vehicular paved road.) A secondary service concrete-encased ductbank (with minimum 10 ducts) will be run from the utility transformer to the CT section of the new main switchboard in the new main electrical room.

Power Distribution

The new main electrical room will consist of the new main switchboard, dry-type transformer(s), distribution panelboard, lighting panelboard, and branch circuit panelboards.

A separate “auxiliary” electrical room will be provided within the new main electrical room for new generator-connected equipment. Generator-connected equipment will consist of enclosed switches, automatic transfer switches, dry-type transformers, and panelboards.

Solar Photovoltaic

Electrical provisions will be made for a future solar photovoltaic (PV) system in order for the school to be solar PV ready. These provisions will include a dedicated tap section for PV system connection at the main switchboard and underground raceways for PV canopies. Raceways for PV system components located on the roof will be provided by the PV System Installer.

Generator Power

There will be an onsite outdoor natural-gas generator with weatherproof, sound-attenuated enclosure, sized to accommodate emergency / life-safety and standby loads via automatic transfer switches. The generator will be rated at 277/480 volts, 3-phase, 4-wire. The estimated size for the generator is 100 kW.

Lighting

Luminaires (lighting fixtures) will utilize LED light sources. LED luminaires in corridors, classrooms, instructional spaces, offices, workrooms, seminar rooms, storage rooms, group toilet rooms, and rooms with lay-in ceilings will be recessed 2' x 2' or 2' x 4' LED luminaires.

Exterior full-cutoff dark-sky compliant LED building-mounted luminaires will be provided. Exterior luminaires will include building-mounted luminaires around the perimeter of the building, and pole-mounted luminaires for parking, drop-off, and bus loop.

Lighting Controls

Switching of luminaires will have ON/OFF and RAISE/LOWER lighting level capability in regularly occupied spaces and will be zoned as appropriate for larger spaces. Occupancy sensors will be utilized for automatic control of both interior and exterior lighting. In addition, an astronomic time switch / time clock will be used to turn ON/OFF exterior lighting if needed.

Lightning Protection

Lightning protection will not be provided. Building systems will be protected from lightning-induced currents and transients by surge protective devices (SPD's) at the main switchboard, generator emergency / life-safety panelboards (per NEC), generator standby panelboards, lighting panelboards, and receptacle branch circuit panelboards.

Public Address System

Intercommunications/public address system devices will include speakers and call switches. Stand-alone sound reinforcement systems will be provided in the multipurpose room, main gymnasium, and music rooms per MCPS standards.

Security System

Security systems will include door access control (card readers), intrusion detection (keypads and motion detectors), and video surveillance (cameras). Distributed antenna system will be provided for public safety radio for first responders.

Technology Infrastructure

The school will have communications (data and voice) systems including wireless access points throughout for Wi-Fi. Provisions for audio/visual systems for instructional technology will be provided.

Option 1 - Renewal

Option 1 is solely a renewal of the existing square footage and building envelope; this includes new walls and doors for spatial division, acoustic treatment, addressing accessibility issues at restroom entrances and ramps in corridors, new finishes, insulating existing exterior walls, enlarging window openings to improve low glazing percentage, enlargement of the secure entrance vestibule, as well as site and systemic updates as outlined in the following sections. The portable classroom currently on site would be removed after renovation, however, the adjacent Academy Child Development Center would remain. Classroom sizes would be adjusted to meet educational specification standards, which provides some space to be reallocated to administrative and health suite needs, however, Option 1 does not meet all MCPS requirements or program adjacencies within the existing footprint alone. This option would not accommodate the 465 student capacity proposed in the educational specification.

OPTION 1	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*0 SF*
Addition:	*0 SF*
Renovation:	*53,294 SF*
Total:	**53,294 SF**

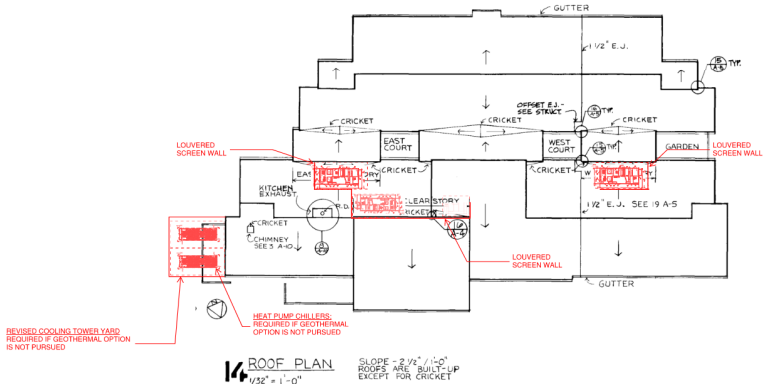
Civil

Both existing curb cuts will be modified to provide two way traffic. The southern curb cut would serve as the bus loop entrance and exit. The bus loop is sized to serve three buses. The northern curb cut would serve as the entrance and exit for the parent drop off loop as well as staff parking. The existing play fields and hard/soft play areas would all be preserved. SWM requirements would be minimal with this approach.

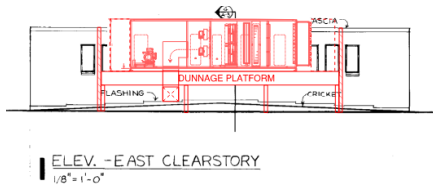
Structural

With improvements to the MEP systems including new rooftop units, additional structural support will be required to account for new roof loads, bracing the new units on the various slanted roof types, and strategically positioning the units to maintain views of the school where possible. (Refer to section diagrams on page 26 for additional information) Additional structural reinforcement would be required on the 1972 portion of the building if a photovoltaic system is required.

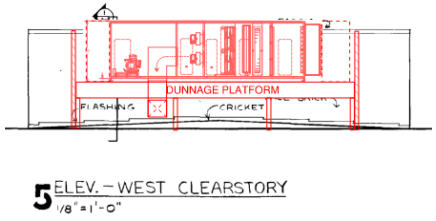
Sketches of Proposed Rooftop Unit Locations



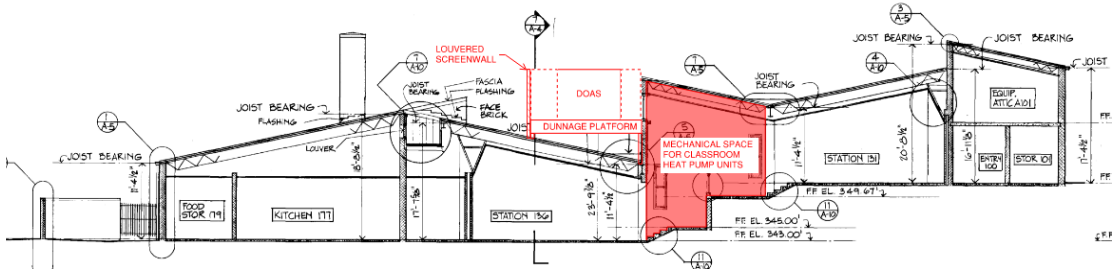
Location of Rooftop Mechanical Equipment



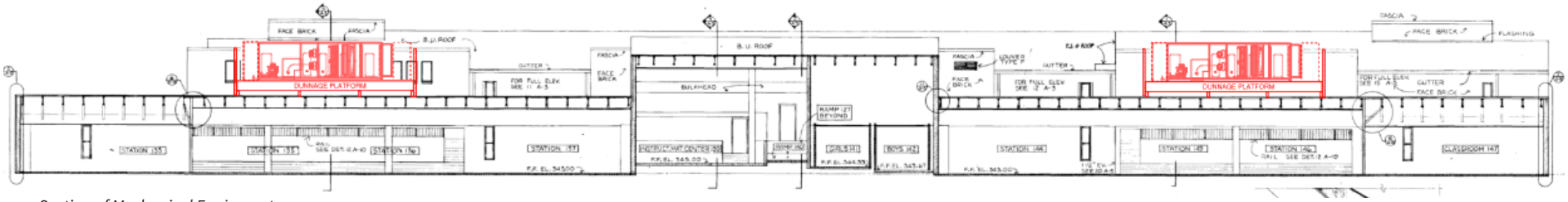
Elevation of Mechanical Equipment



Elevation of Mechanical Equipment



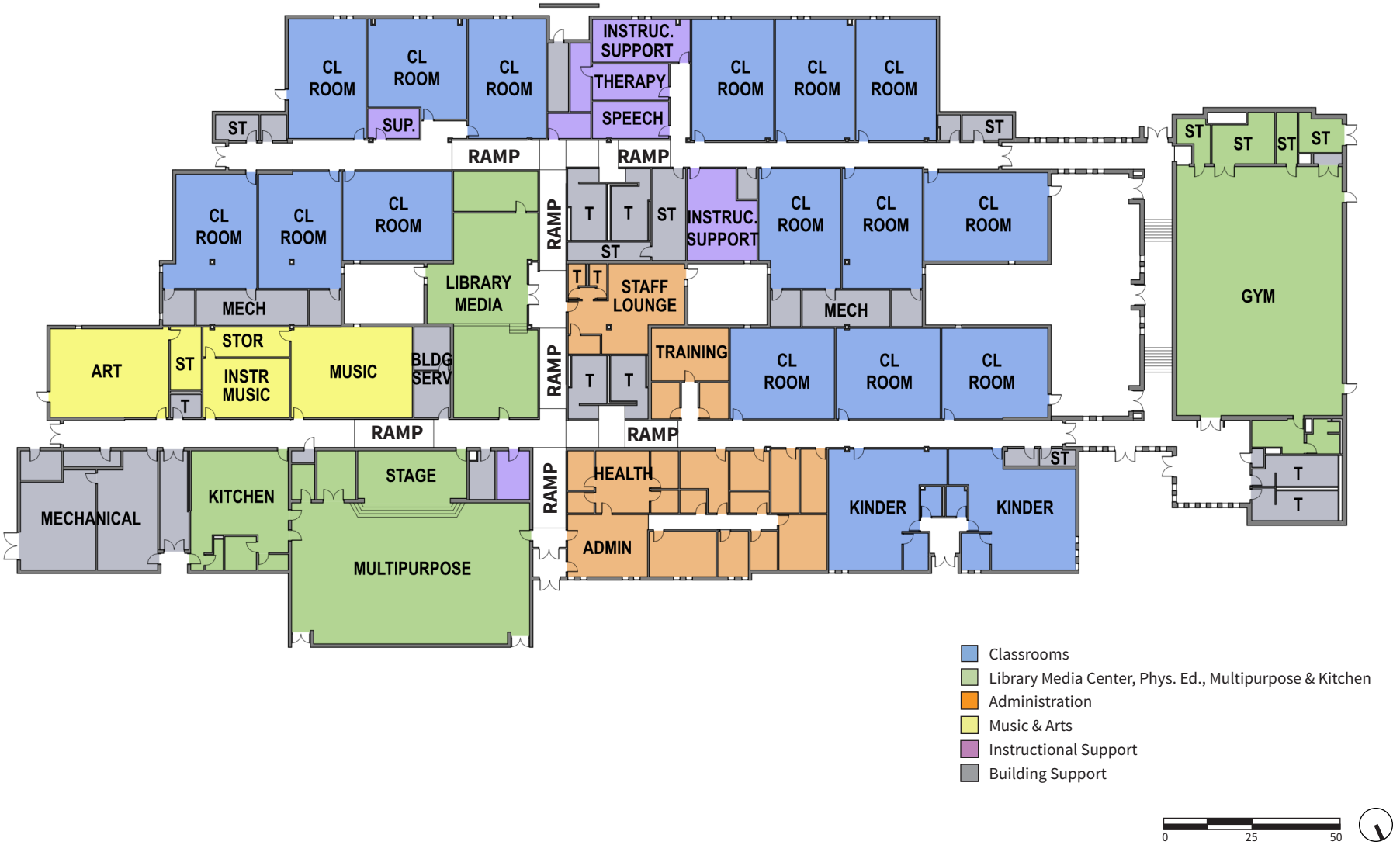
Section of Mechanical Equipment



Section of Mechanical Equipment

Option 1 Site Plan

Option 1 First Floor Plan



Option 1 Advantages and Disadvantages

Advantages

- Site
  - Separates cars from buses
  - Increases stacking space for parent pick-up/drop-off
  - Additional parking included
  - Retains adjacent daycare (Academy CDC)
  - No impact to play areas
- Building
  - Mechanical, electrical, plumbing upgrades
  - Envelope upgrades
  - Enlarged administration and health suites
  - Enclosed, acoustically separate classrooms
  - New finishes and casework
  - Improvements to program adjacencies

Disadvantages

- Site
  - Bus loop drop-off is not at the main entrance
  - No natural surveillance of site entry points for security
  - Limited natural access control without visible main entrance from Falls Chapel Way
  - Service remains on the front of the building where trucks back over sidewalk curb causing a safety issue for pedestrians
- Building
  - Does not meet all MCPS educational specification program or adjacencies
  - Does not include pre-kindergarten program
  - No Kitchen or serving line enlargement
  - Limited natural daylight due to low glazing percentage
  - Multiple ramps and levels throughout the building

Option 2 - Renewal & Additions

Option 2 demolishes 10% of the building, renovates the remaining square footage, and constructs four additions onto the north, east, and west facades to meet the educational specification requirements. The renewal of the existing building area is similar to Option 1: new walls and doors, acoustic treatment, addressing accessibility, new finishes, insulating existing exterior walls, enlarging window openings, and enlargement of the secure entrance vestibule. The existing Administration Suite and Kindergarten classrooms are enlarged and replaced in the same location by the north addition, making the main entrance more visible to visitors. The two eastern additions incorporate a new Pre-kindergarten program and an Art and Music wing. Additional mechanical space is added with the west addition to provide a direct connection to the proposed geothermal well field on site. Both the portable classroom and the Academy Child Development Center are removed and relocated, respectively. All site circulation and MEP upgrades for Option 2 are described in the following sections.

OPTION 2	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*6,326 SF*
Addition:	*17,371 SF*
Renovation:	*46,968 SF*
Total:	**64,339 SF**

Civil

Both existing curb cuts will be modified to provide two way traffic. The southern curb cut would serve as the bus loop and staff parking entrance and exit. The bus loop is sized to serve 5 buses and can be expanded to serve more. Additional parking would be added in front of the building that would also serve as the fire access turn around. The northern curb cut would serve as the entrance and exit for the parent drop off loop as well as additional staff parking. A turn around would be added near the school entrance to turn vehicles around to head towards the exit. There may still be concerns with vehicles backing up onto Falls Chapel Way. The splitting of the entrance/exits allows most of the staff and buses to be separated from the parent pickup and drop-off queue. The existing play fields would all be preserved. A portion of the asphalt play space would be required to be modified to accommodate the mechanical/electrical expansion. Additional SWM facilities would be required to handle the additions and new paving.

Structural

Similar to Option 1, MEP improvements will add new rooftop units, therefore, additional structural support will be required to account for new roof loads, bracing the new units on the various slanted roof types, and strategically positioning the units to maintain views of the school where possible.

Option 2 Site Plan

Option 2 First Floor Plan

Option 2 Advantages and Disadvantages

Advantages

- Site
  - Separates cars from buses and both drop-off loops are adjacent to Main Entry
  - Improves natural access control with entrance visibility
  - Minimal impact to existing play areas
  - Increases parking capacity
  - Includes pre-kindergarten play area with direct access from classrooms
- Building
  - Meets all educational specifications for program area
  - New Main Entry, Lobby, and Administration Suite
  - MEP and envelope upgrades
  - Encloses classrooms for acoustic separation
  - New finishes and casework

Disadvantages

- Site
  - Service remains on the front of the building where trucks back over sidewalk curb causing a safety issue for pedestrians
  - Limited natural surveillance of site entry points
- Building
  - Limited natural daylight within renovated existing building
  - Pre-kindergarten classrooms are not adjacent to administration
  - Mechanical closets accessed from classrooms
  - Multiple ramps and levels throughout the building
  - Extensive floor leveling required to improve space utilization

Option 3 - Gymnasium Renewal & Addition

Option 3 involves renovating the existing Gymnasium and demolishing the remaining 90% of the building for replacement with a two-story structure. The main entrance is relocated to the northeast corner of the building, facing Falls Chapel Way for increased visibility and street presence. The Service area is moved to the southeast corner of the building, away from pedestrian circulation routes and screened to address concerns from neighbors. Pre-kindergarten classrooms are near the Administration Suite and have direct access to the Pre-K play area. Kindergarten classes remain in a similar location as the existing floor plan, maintaining their adjacency to the paved play. There are two courtyards in the addition, accessible from art, the library media center, and the south corridor. The Multipurpose room, Library, and Gymnasium all remain accessible by the public for after-hours use. Site circulation is reconfigured to separate buses and cars, increase parking capacity, and create a dedicated service drive. Existing play areas remain intact.

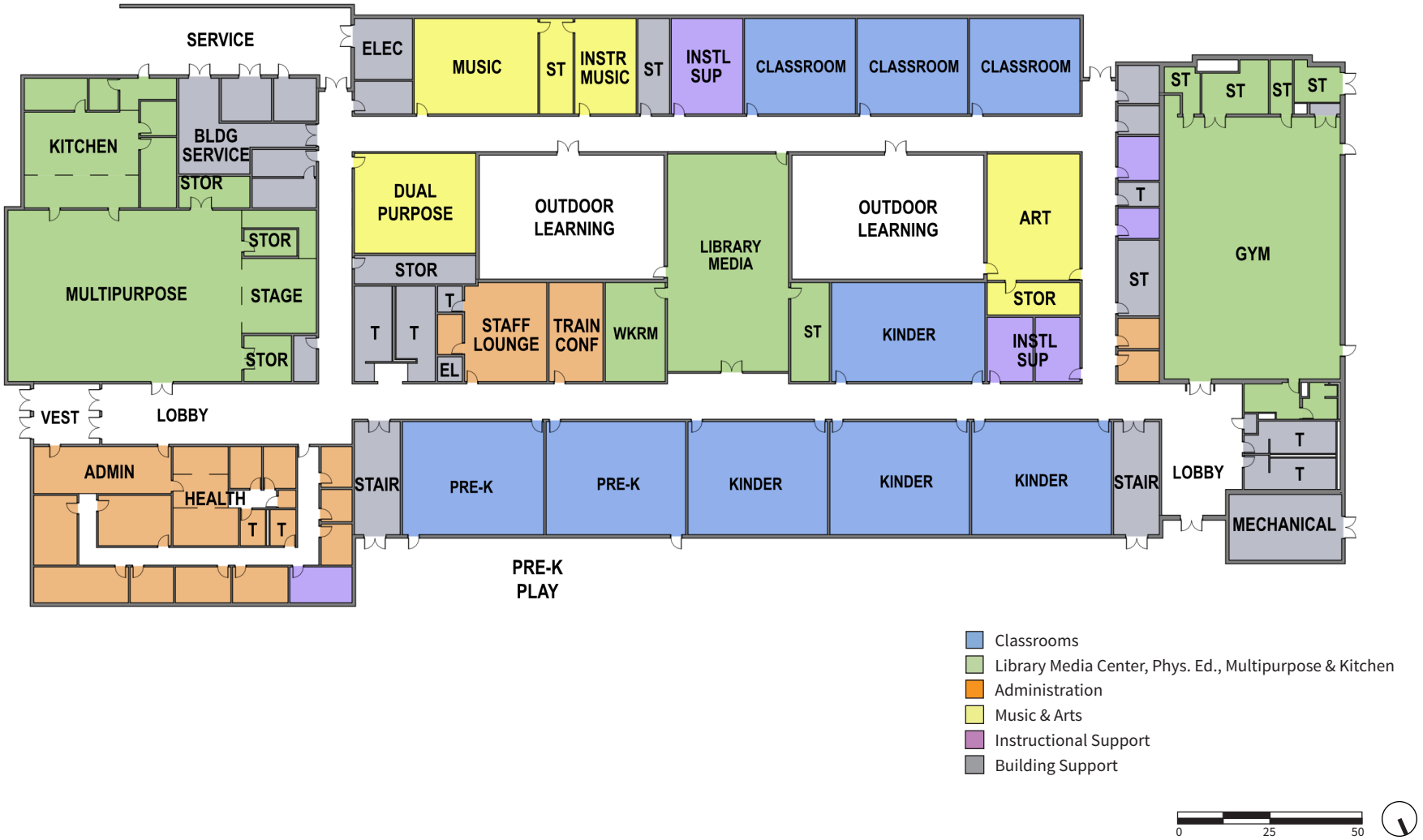
OPTION 3	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*46,883 SF*
New:	*61,245 SF*
Renovation:	*6,461 SF*
Total:	**67,706 SF**

Civil

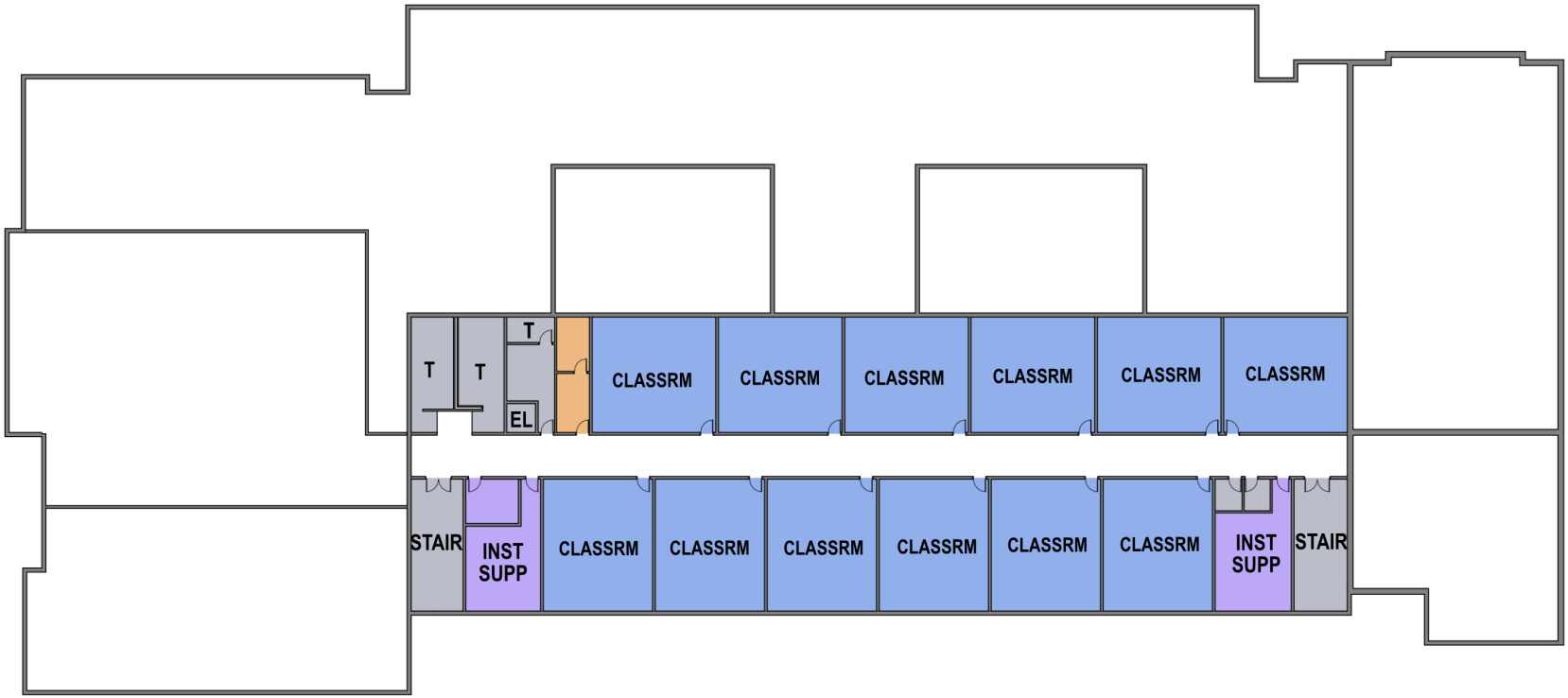
Both existing curb cuts will be modified to provide two way traffic. The southern curb cut would serve as the bus loop entrance and exit. The bus loop is sized to serve three buses. A mechanical drive will also serve the loading dock and trash pickup. The southern curb cut would serve as the entrance and exit for the parent drop off loop as well as staff parking. The existing play fields would all be preserved. A portion of the asphalt play space would be required to be modified to accommodate the mechanical/electrical expansion. A new pre-K play space will be added at the front of the building. New outdoor learning spaces are incorporated into the two enclosed courtyards. Additional SWM facilities would be required to handle the addition and new impervious improvements.

Option 3 Site Plan

Option 3 First Floor Plan



Option 3 Second Floor Plan



Classrooms
Library Media Center, Phys. Ed., Multipurpose & Kitchen
Administration
Music & Arts
Instructional Support
Building Support

0 25 50

Option 3 Advantages and Disadvantages

Advantages

- Site
  - Improves site security with natural surveillance of site entry points
  - Improves natural access control with visible entrance from the street
  - Integrates of outdoor learning courtyards
  - Locates service away from pedestrian pathways and screened from neighbors
  - Increases parking
  - Locates building further away from property line
- Building
  - Meets all educational specifications for program area
  - Provides two enclosed courtyards
  - Provides natural daylight in all classrooms
  - Classroom flexibility
  - Pre-kindergarten and Kindergarten programs are adjacent to parking and the Administration Suite
  - More compact building footprint than Options 1, 2 and 4
  - Two-story classroom volume sits back from property line and neighbors

Disadvantages

- Site
  - Bus loop and drop-off areas are not adjacent to main entrance
- Building
  - May still require ramping and steps down to existing gymnasium level

Option 4 - Replacement

Option 4 completely demolishes the existing building for a full replacement approach. The new building footprint is a compact, two-story option, which provides a dedicated Pre-kindergarten play area next to the existing paved play. The Main Entry also faces Falls Chapel Way and improves student arrival and dismissal observation with site circulation improvements. The Service area is moved to the southeast corner similar to Option 3, with drive access from the bus loop. There is one elongated courtyard with entrances on all sides for multiple program uses, primarily by Art and the Library Media Center. The Multipurpose room, Library, and Gymnasium all remain accessible by the public for after-hours use. The second story volume stacks over the north part of the building, stepping back from the neighbors beyond. Existing play fields remain.

OPTION 4	
SQUARE FOOTAGE ANALYSIS	
Existing:	*53,294 SF*
Demolition:	*53,294 SF*
New:	*66,640 SF*
Renovation:	*0 SF*
Total:	**66,640 SF**

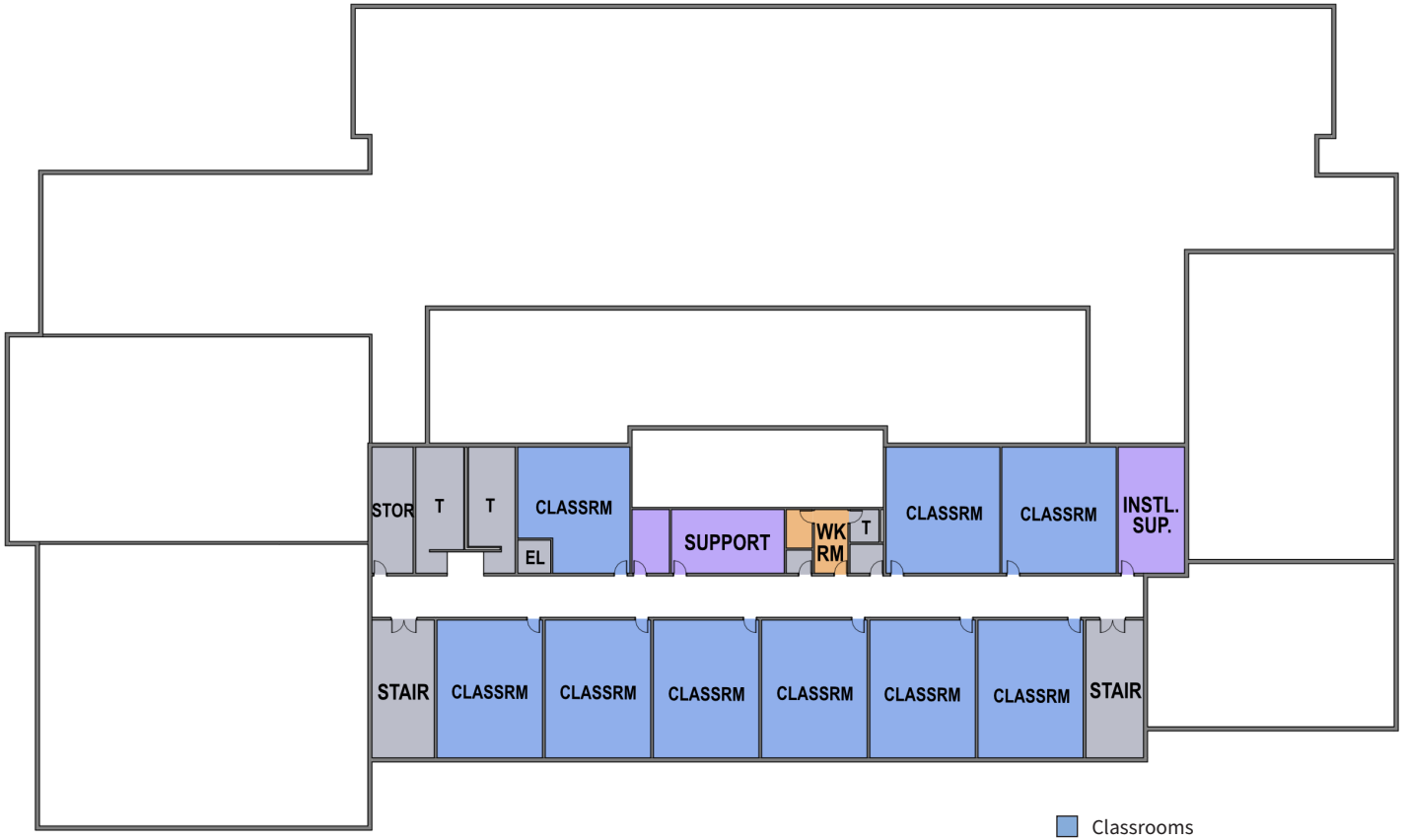
Civil

Both existing curb cuts will be modified to provide two way traffic. The southern curb cut would serve as the bus loop entrance and exit. The bus loop is sized to serve three buses. A mechanical drive will also serve the loading dock and trash pickup. The northern curb cut would serve as the entrance and exit for the parent drop off loop as well as staff parking. A turn around would be added near the new main entrance to turn vehicles around to head towards the exit. Additional parking will be provided to bring the total number of parking spaces above 80. The existing play fields and all the hard and soft surface play spaces would be preserved. A new pre-K play space will be added at the southwest corner of the building. A new outdoor learning space will be added in the courtyard. Additional SWM facilities would be required to handle the new building and new impervious improvements.

Option 4 Site Plan

Option 4 First Floor Plan

Option 4 Second Floor Plan



- Classrooms
- Library Media Center, Phys. Ed., Multipurpose & Kitchen
- Administration
- Music & Arts
- Instructional Support
- Building Support

0 25 50

Option 4 Advantages and Disadvantages

Advantages

- Site
  - Separates buses and cars
  - Increases parking
  - Building is sited closer to Falls Chapel Way
  - Provides good natural surveillance of site entry points
  - Provides natural access control with entrance visibility from the street
  - Gym entrance is more visible from and closer to parking area
  - Provides a large outdoor learning courtyard
  - Service is located away from pedestrian pathways and screened from neighbors
- Building
  - Meets all educational specifications for program area and adjacencies
  - Flexible classroom spaces
  - Natural daylight in all classrooms
  - Enclosed outdoor learning courtyard
  - More compact footprint than Options 1 and 2
  - Two-story classroom volume sits back from property line and neighbors

Disadvantages

- Site
  - Car drop-off and pick-up is not adjacent to the Main Entry, but secondary access point is provided
- Building
  - Pre-K and Kindergarten classes are far from Main Entry to be adjacent to play area
  - Arrival and dismissal sequence potentially occurring in two directions

Discussion of Options

Option 1 renovates the existing building and does not add any square footage. The open concept interior is enclosed with walls and doors. New mechanical, electrical and plumbing updates improve the climate control and efficiency of the building. Window enlargements provide more daylight into the school, which currently has a very low glazing percentage. Proposed sitework addresses most safety and traffic concerns, except for the service area at the front of the building. Play areas are not impacted. This is the only option that does not fully achieve all MCPS educational specification requirements, notably missing the pre-kindergarten and additional kindergarten classrooms.

Option 2 demolishes 10% of the building and renovates the rest in a similar manner to Option 1, further increasing the footprint with four one-story additions. The main entrance gains more visibility to visitors with a new administration and health suite, however the service remains in place at the front of the building. The kitchen and library media center are expanded as needed. With the additions in this option, there is more flexibility for better program adjacencies. Proposed sitework addresses safety and traffic concerns. There is a slight impact to paved play area.

Option 3 renovates the existing gymnasium and replaces 90% of the school with a two-story structure. The main entrance is relocated closer to the street for greater visibility. In this option, pre-kindergarten and kindergarten classrooms are both adjacent to the administration suite and close to parking. There are two courtyards for outdoor learning that are accessible from the south corridor, art, and the library media center. Site circulation improvements address drop-off concerns and incorporate a dedicated service drive. There is a slight impact to paved play area. This option has the most compact footprint of all the approaches, due to the larger second floor.

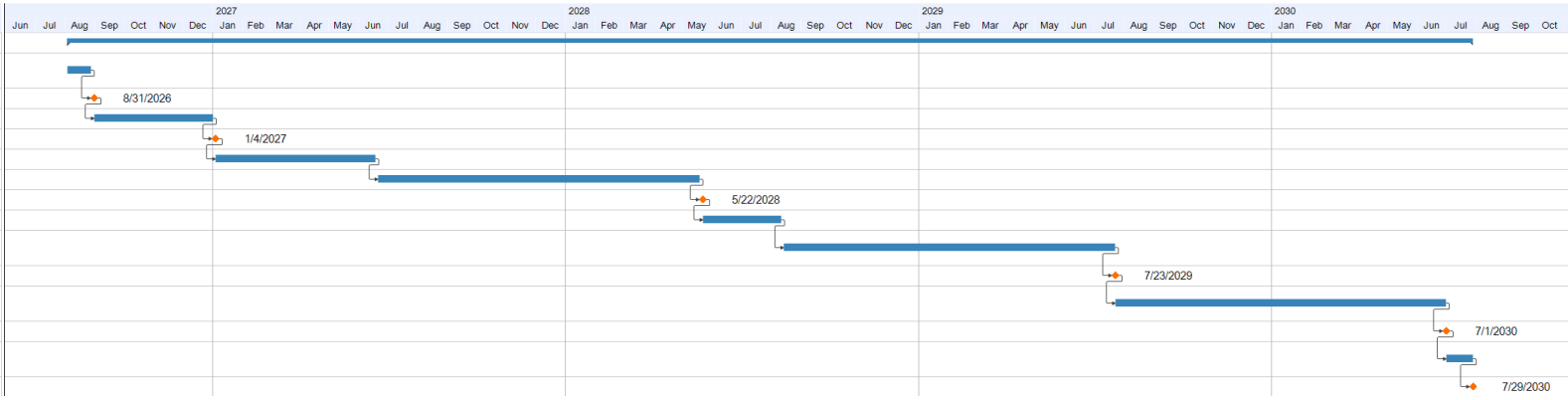
Option 4 fully demolishes and replaces the existing school with a two-story building. Similar to Option 3, the main entrance is moved to the northeast corner of the school for better presence along Falls Chapel Way. The centralized courtyard in this option is accessible from all sides. Pre-kindergarten and kindergarten are moved to the south corridor, but maintain adjacencies to the dedicated play space. Site circulation improvements address drop-off concerns and incorporate a dedicated service drive. Option 4 is the only option that not only leaves play areas undisturbed, but adds more play space.

Based on the feedback from the feasibility study meetings and the information provided in the cost estimate, Option 4 is the preferred option.

PROJECT IMPLEMENTATION SCHEDULE

The A/E team has developed the following schedule based on MCPS's expectations of the planning and design processes.

#	Name	Duration	Start	Finish
1	**Project**	**1,040 d**	**8/3/2026**	**7/29/2030**
2	Architect Selection/Negotiations	20 d	8/3/2026	8/28/2026
3	NTP		8/31/2026	
4	Schematic Design	90 d	8/31/2026	1/1/2027
5	BOE Approval		1/4/2027	
6	Design Development	120 d	1/4/2027	6/18/2027
7	Construction Documents	240 d	6/21/2027	5/19/2028
8	Advertise for Bid		5/22/2028	
9	Bid Phase	60 d	5/22/2028	8/11/2028
10	Building Construction (0% to 50%)	245 d	8/14/2028	7/23/2029
11	Midpoint of Construtions		7/23/2029	
12	Building Construction (51% to 100%)	245 d	7/23/2029	7/1/2030
13	Substantial Completion		7/1/2030	
14	Punchlist & Final Building Commissioning	20 d	7/1/2030	7/29/2030
15	Occupancy		7/29/2030	



APPENDIX A: SPACE ALLOCATION SUMMARY

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Existing***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
CLASSROOMS						
Prekindergarten	0	0 SF	1200 SF	2	2400 SF	
Kindergarten	2	3185 SF	1200 SF	4	4800 SF	
Standard	14	16239 SF	850 SF	15	12750 SF	
Art	1	876 SF	1200 SF	1	1200 SF	
Music	1	943 SF	1200 SF	1	1200 SF	
Instrumental Music Room	0	(Portables)	450 SF	1	450 SF	
Dual Purpose Room	0	0 SF	1000 SF	1	1000 SF	
Subtotal		21243 SF			23800 SF	**-2557**
SUPPORT ROOMS						
Large Instructional Support Room	1	615 SF	550 SF	1	550 SF	
Small Instructional Support Room	1	474 SF	425 SF	2	850 SF	
Speech/Language Room	1	143 SF	250 SF	1	250 SF	
Therapy/Support Room	0	0 SF	250 SF	1	250 SF	
Personal Care Room	0	0 SF	100 SF	1	100 SF	
Testing/Conference Room	0	0 SF	140 SF	1	140 SF	
Support Staff Offices	0	0 SF	140 SF	2	280 SF	
Subtotal		1232 SF			2420 SF	**-1188**
LIBRARY MEDIA CENTER						
Learning Environment	1	1639 SF	2100 SF	1	2100 SF	
Work and Production Area	1	306 SF	475 SF	1	475 SF	
Storage Room	0	0 SF	300 SF	1	300 SF	
Subtotal		1945 SF			2875 SF	**-930**
PHYSICAL EDUCATION						
Gymnasium	1	3707 SF	3700 SF	1	3700 SF	
Office	1	231 SF	140 SF	1	140 SF	
Storage	1	249 SF	250 SF	1	250 SF	
Storage	2	199 SF	100 SF	2	200 SF	
Outside Storage	1	138 SF	140 SF	1	140 SF	
Subtotal		4524 SF			4430 SF	**94**
MULTIPURPOSE ROOM						
Multipurpose Room	1	2971 SF	3200 SF	1	3200 SF	
Chair Storage	1	169 SF	180 SF	1	180 SF	
Table Storage	0	0 SF	180 SF	1	180 SF	
Platform	1	502 SF	450 SF	1	450 SF	
Before/After Care Prep Area	0	0 SF	25 SF	1	25 SF	
Before/After Care Storage	1	74 SF	100 SF	1	100 SF	
Subtotal		3716 SF			4135 SF	**-419**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Existing***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
KITCHEN						
Serving Area	1	310 SF	300 SF	1	300 SF	
Walk-in Cooler/Freezer	0	0 SF	155 SF	1	155 SF	
Dry Storage	1	138 SF	192 SF	1	192 SF	
Office	0	0 SF	100 SF	1	100 SF	
Toilet Room	1	38 SF	70 SF	1	70 SF	
Preparation Area	1	529 SF	555 SF	1	555 SF	
Subtotal		1015 SF			1372 SF	**-357**
STAFF AREAS						
Staff Lounge	1	730 SF	650 SF	1	650 SF	
Privacy Room	0	0 SF	50 SF	2	100 SF	
Subtotal		730 SF			750 SF	**-20**
COUNSELING SUITE						
Counselor's Office	1	171 SF	160 SF	1	160 SF	
Itinerant Staff Office	0	0 SF	160 SF	1	160 SF	
Subtotal		171 SF			320 SF	**-149**
STAFF DEVELOPMENT AREA						
Staff development Office	1	259 SF	100 SF	1	100 SF	
Reading Specialist Office	1	918 SF	100 SF	1	100 SF	
Training/Conference Room	0	0 SF	400 SF	1	400 SF	
Subtotal		1177 SF			600 SF	**577**
HEALTH SERVICES SUITE						
Waiting Area	0	0 SF	100 SF	1	100 SF	
Treatment/Medication Area	0	0 SF	120 SF	1	120 SF	
Office/Health Assessment Room	1	156 SF	100 SF	1	100 SF	
Health Assessment/Isolation Room	0	0 SF	100 SF	1	100 SF	
Rest Area	0	0 SF	200 SF	1	200 SF	
Toilet Room	1	25 SF	50 SF	1	50 SF	
Storage Room	0	0 SF	40 SF	1	40 SF	
Subtotal		181 SF			710 SF	**-529**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Existing***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
ADMINISTRATION						
General Office	1	398 SF	500 SF	1	500 SF	
Workroom	1	234 SF	300 SF	1	300 SF	
Principal's Office	1	203 SF	250 SF	1	250 SF	
Assistant Principal's Office	1	165 SF	125 SF	1	125 SF	
Conference Room	1	142 SF	275 SF	1	275 SF	
Storage	1	23 SF	100 SF	1	100 SF	
Record Room	0	0 SF	75 SF	1	75 SF	
Toilet Room	0	0 SF	50 SF	1	50 SF	
2nd Floor Workroom	0	0 SF	75 SF	1	75 SF	
Subtotal		1165 SF			1750 SF	**-585**
BUILDING SERVICE FACILITIES						
Building Services Office	0	0 SF	140 SF	1	140 SF	
Locker/Shower Area	0	0 SF	150 SF	1	150 SF	
Compactor/Trash Room	1	199 SF	150 SF	1	150 SF	
General Storage and Receiving	0	0 SF	550 SF	1	550 SF	
General Storage	5	565 SF	240 SF	3	720 SF	
Building Services Outdoor Storage	1	107 SF	175 SF	1	175 SF	
Subtotal		871 SF			1885 SF	**-1014**
BUILDING SUPPORT AREAS						
Book Storage	3	394 SF	200 SF	1	200 SF	
PTA Storage	1	41 SF	100 SF	1	100 SF	
Emergency Command Center	0	0 SF	200 SF	0	0 SF	
Telecommunication Closet	1	105 SF	150 SF	1	150 SF	
Telecommunication Closet	0	0 SF	50 SF	3	150 SF	
Subtotal		540 SF			600 SF	**-60**
TOTAL NET SQUARE FEET		**38,510 SF**			**45,647 SF**	**-7137**
GROSS AREA		**53,294 SF**				

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 1***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
CLASSROOMS						
Prekindergarten	0	0 SF	1200 SF	2	2400 SF	
Kindergarten	2	2207 SF	1200 SF	4	4800 SF	
Standard	15	12982 SF	850 SF	15	12750 SF	
Art	1	1121 SF	1200 SF	1	1200 SF	
Music	1	1220 SF	1200 SF	1	1200 SF	
Instrumental Music Room	1	461 SF	450 SF	1	450 SF	
Dual Purpose Room	0	0 SF	1000 SF	1	1000 SF	
Subtotal		17991 SF			23800 SF	**-5809**
SUPPORT ROOMS						
Large Instructional Support Room	1	517 SF	550 SF	1	550 SF	
Small Instructional Support Room	1	372 SF	425 SF	2	850 SF	
Speech/Language Room	1	251 SF	250 SF	1	250 SF	
Therapy/Support Room	1	250 SF	250 SF	1	250 SF	
Personal Care Room	1	98 SF	100 SF	1	100 SF	
Testing/Conference Room	1	143 SF	140 SF	1	140 SF	
Support Staff Offices	1	137 SF	140 SF	2	280 SF	
Subtotal		1768 SF			2420 SF	**-652**
LIBRARY MEDIA CENTER						
Learning Environment	1	1631 SF	2100 SF	1	2100 SF	
Work and Production Area	1	302 SF	475 SF	1	475 SF	
Storage Room	0	0 SF	300 SF	1	300 SF	
Subtotal		1933 SF			2875 SF	**-942**
PHYSICAL EDUCATION						
Gymnasium	1	3707 SF	3700 SF	1	3700 SF	
Office	1	142 SF	140 SF	1	140 SF	
Storage	1	249 SF	250 SF	1	250 SF	
Storage	2	199 SF	100 SF	2	200 SF	
Outside Storage	1	138 SF	140 SF	1	140 SF	
Subtotal		4435 SF			4430 SF	**5**
MULTIPURPOSE ROOM						
Multipurpose Room	1	2978 SF	3200 SF	1	3200 SF	
Chair Storage	1	169 SF	180 SF	1	180 SF	
Table Storage	0	0 SF	180 SF	1	180 SF	
Platform	1	502 SF	450 SF	1	450 SF	
Before/After Care Prep Area	0	0 SF	25 SF	1	25 SF	
Before/After Care Storage	1	74 SF	100 SF	1	100 SF	
Subtotal		3723 SF			4135 SF	**-412**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 1***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
KITCHEN						
Serving Area	1	310 SF	300 SF	1	300 SF	
Walk-in Cooler/Freezer	0	0 SF	155 SF	1	155 SF	
Dry Storage	1	138 SF	192 SF	1	192 SF	
Office	0	0 SF	100 SF	1	100 SF	
Toilet Room	1	38 SF	70 SF	1	70 SF	
Preparation Area	1	529 SF	555 SF	1	555 SF	
Subtotal		1015 SF			1372 SF	**-357**
STAFF AREAS						
Staff Lounge	1	669 SF	650 SF	1	650 SF	
Privacy Room	1	53 SF	50 SF	2	100 SF	
Subtotal		722 SF			750 SF	**-28**
COUNSELING SUITE						
Counselor's Office	1	151 SF	160 SF	1	160 SF	
Itinerant Staff Office	1	162 SF	160 SF	1	160 SF	
Subtotal		313 SF			320 SF	**-7**
STAFF DEVELOPMENT AREA						
Staff development Office	1	95 SF	100 SF	1	100 SF	
Reading Specialist Office	1	93 SF	100 SF	1	100 SF	
Training/Conference Room	1	366 SF	400 SF	1	400 SF	
Subtotal		554 SF			600 SF	**-46**
HEALTH SERVICES SUITE						
Waiting Area	1	93 SF	100 SF	1	100 SF	
Treatment/Medication Area	1	93 SF	120 SF	1	120 SF	
Office/Health Assessment Room	1	156 SF	100 SF	1	100 SF	
Health Assessment/Isolation Room	1	94 SF	100 SF	1	100 SF	
Rest Area	1	113 SF	200 SF	1	200 SF	
Toilet Room	1	56 SF	50 SF	1	50 SF	
Storage Room	1	50 SF	40 SF	1	40 SF	
Subtotal		655 SF			710 SF	**-55**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 1***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
ADMINISTRATION						
General Office	1	448 SF	500 SF	1	500 SF	
Workroom	1	209 SF	300 SF	1	300 SF	
Principal's Office	1	240 SF	250 SF	1	250 SF	
Assistant Principal's Office	1	125 SF	125 SF	1	125 SF	
Conference Room	1	273 SF	275 SF	1	275 SF	
Storage	1	95 SF	100 SF	1	100 SF	
Record Room	1	75 SF	75 SF	1	75 SF	
Toilet Room	1	54 SF	50 SF	1	50 SF	
2nd Floor Workroom	0	0 SF	75 SF	1	75 SF	
Subtotal		1519 SF			1750 SF	**-231**
BUILDING SERVICE FACILITIES						
Building Services Office	1	142 SF	140 SF	1	140 SF	
Locker/Shower Area	1	153 SF	150 SF	1	150 SF	
Compactor/Trash Room	0	0 SF	150 SF	1	150 SF	
General Storage and Receiving	1	252 SF	550 SF	1	550 SF	
General Storage	8	852 SF	240 SF	3	720 SF	
Building Services Outdoor Storage	1	107 SF	175 SF	1	175 SF	
Subtotal		1506 SF			1885 SF	**-379**
BUILDING SUPPORT AREAS						
Book Storage	1	279 SF	200 SF	1	200 SF	
PTA Storage	1	81 SF	100 SF	1	100 SF	
Emergency Command Center	0	0 SF	200 SF	0	0 SF	
Telecommunication Closet	1	105 SF	150 SF	1	150 SF	
Telecommunication Closet	3	225 SF	50 SF	3	150 SF	
Subtotal		690 SF			600 SF	**90**
TOTAL NET SQUARE FEET		**36,824 SF**			**45,647 SF**	**-8823**
GROSS AREA		**53,294 SF**				

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 2***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
CLASSROOMS						
Prekindergarten	2	2400 SF	1200 SF	2	2400 SF	
Kindergarten	4	4862 SF	1200 SF	4	4800 SF	
Standard	15	13032 SF	850 SF	15	12750 SF	
Art	1	1225 SF	1200 SF	1	1200 SF	
Music	1	1205 SF	1200 SF	1	1200 SF	
Instrumental Music Room	1	449 SF	450 SF	1	450 SF	
Dual Purpose Room	0	1002 SF	1000 SF	1	1000 SF	
Subtotal		24175 SF			23800 SF	**375**
SUPPORT ROOMS						
Large Instructional Support Room	1	691 SF	550 SF	1	550 SF	
Small Instructional Support Room	2	801 SF	425 SF	2	850 SF	
Speech/Language Room	1	244 SF	250 SF	1	250 SF	
Therapy/Support Room	1	242 SF	250 SF	1	250 SF	
Personal Care Room	1	102 SF	100 SF	1	100 SF	
Testing/Conference Room	1	161 SF	140 SF	1	140 SF	
Support Staff Offices	2	286 SF	140 SF	2	280 SF	
Subtotal		2527 SF			2420 SF	**107**
LIBRARY MEDIA CENTER						
Learning Environment	1	1945 SF	2100 SF	1	2100 SF	
Work and Production Area	1	478 SF	475 SF	1	475 SF	
Storage Room	0	298 SF	300 SF	1	300 SF	
Subtotal		2721 SF			2875 SF	**-154**
PHYSICAL EDUCATION						
Gymnasium	1	3707 SF	3700 SF	1	3700 SF	
Office	1	142 SF	140 SF	1	140 SF	
Storage	1	249 SF	250 SF	1	250 SF	
Storage	2	199 SF	100 SF	2	200 SF	
Outside Storage	1	138 SF	140 SF	1	140 SF	
Subtotal		4435 SF			4430 SF	**5**
MULTIPURPOSE ROOM						
Multipurpose Room	1	2946 SF	3200 SF	1	3200 SF	
Chair Storage	1	169 SF	180 SF	1	180 SF	
Table Storage	1	143 SF	180 SF	1	180 SF	
Platform	1	500 SF	450 SF	1	450 SF	
Before/After Care Prep Area	1	25 SF	25 SF	1	25 SF	
Before/After Care Storage	1	74 SF	100 SF	1	100 SF	
Subtotal		3857 SF			4135 SF	**-278**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 2***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
KITCHEN						
Serving Area	1	301 SF	300 SF	1	300 SF	
Walk-in Cooler/Freezer	1	155 SF	155 SF	1	155 SF	
Dry Storage	1	205 SF	192 SF	1	192 SF	
Office	1	101 SF	100 SF	1	100 SF	
Toilet Room	1	70 SF	70 SF	1	70 SF	
Preparation Area	1	554 SF	555 SF	1	555 SF	
Subtotal		1386 SF			1372 SF	**14**
STAFF AREAS						
Staff Lounge	1	616 SF	650 SF	1	650 SF	
Privacy Room	2	100 SF	50 SF	2	100 SF	
Subtotal		716 SF			750 SF	**-34**
COUNSELING SUITE						
Counselor's Office	1	173 SF	160 SF	1	160 SF	
Itinerant Staff Office	1	173 SF	160 SF	1	160 SF	
Subtotal		346 SF			320 SF	**26**
STAFF DEVELOPMENT AREA						
Staff Development Office	1	118 SF	100 SF	1	100 SF	
Reading Specialist Office	1	98 SF	100 SF	1	100 SF	
Training/Conference Room	1	428 SF	400 SF	1	400 SF	
Subtotal		644 SF			600 SF	**44**
HEALTH SERVICES SUITE						
Waiting Area	1	100 SF	100 SF	1	100 SF	
Treatment/Medication Area	1	122 SF	120 SF	1	120 SF	
Office/Health Assessment Room	1	100 SF	100 SF	1	100 SF	
Health Assessment/Isolation Room	1	100 SF	100 SF	1	100 SF	
Rest Area	1	200 SF	200 SF	1	200 SF	
Toilet Room	1	74 SF	50 SF	1	50 SF	
Storage Room	1	40 SF	40 SF	1	40 SF	
Subtotal		736 SF			710 SF	**26**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 2***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
ADMINISTRATION						
General Office	1	538 SF	500 SF	1	500 SF	
Workroom	1	417 SF	300 SF	1	300 SF	
Principal's Office	1	274 SF	250 SF	1	250 SF	
Assistant Principal's Office	1	129 SF	125 SF	1	125 SF	
Conference Room	1	274 SF	275 SF	1	275 SF	
Storage	1	101 SF	100 SF	1	100 SF	
Record Room	1	74 SF	75 SF	1	75 SF	
Toilet Room	1	93 SF	50 SF	1	50 SF	
2nd Floor Workroom	0	0 SF	75 SF	1	75 SF	
Subtotal		1900 SF			1750 SF	**150**
BUILDING SERVICE FACILITIES						
Building Services Office	1	151 SF	140 SF	1	140 SF	
Locker/Shower Area	1	236 SF	150 SF	1	150 SF	
Compactor/Trash Room	0	150 SF	150 SF	1	150 SF	
General Storage and Receiving	1	554 SF	550 SF	1	550 SF	
General Storage	6	638 SF	240 SF	3	720 SF	
Building Services Outdoor Storage	1	217 SF	175 SF	1	175 SF	
Subtotal		1946 SF			1885 SF	**61**
BUILDING SUPPORT AREAS						
Book Storage	1	251 SF	200 SF	1	200 SF	
PTA Storage	1	96 SF	100 SF	1	100 SF	
Emergency Command Center	0	0 SF	200 SF	0	0 SF	
Telecommunication Closet	1	105 SF	150 SF	1	150 SF	
Telecommunication Closet	2	225 SF	50 SF	3	150 SF	
Subtotal		677 SF			600 SF	**77**
TOTAL NET SQUARE FEET		**46,066 SF**			**45,647 SF**	**419**
GROSS AREA		**64,339 SF**				

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 3***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
CLASSROOMS						
Prekindergarten	2	2554 SF	1200 SF	2	2400 SF	
Kindergarten	4	5027 SF	1200 SF	4	4800 SF	
Standard	15	12735 SF	850 SF	15	12750 SF	
Art	1	1182 SF	1200 SF	1	1200 SF	
Music	1	1207 SF	1200 SF	1	1200 SF	
Instrumental Music Room	1	470 SF	450 SF	1	450 SF	
Dual Purpose Room	0	974 SF	1000 SF	1	1000 SF	
Subtotal		24149 SF			23800 SF	**349**
SUPPORT ROOMS						
Large Instructional Support Room	1	549 SF	550 SF	1	550 SF	
Small Instructional Support Room	2	911 SF	425 SF	2	850 SF	
Speech/Language Room	1	236 SF	250 SF	1	250 SF	
Therapy/Support Room	1	230 SF	250 SF	1	250 SF	
Personal Care Room	1	101 SF	100 SF	1	100 SF	
Testing/Conference Room	1	180 SF	140 SF	1	140 SF	
Support Staff Offices	2	284 SF	140 SF	2	280 SF	
Subtotal		2491 SF			2420 SF	**71**
LIBRARY MEDIA CENTER						
Learning Environment	1	2118 SF	2100 SF	1	2100 SF	
Work and Production Area	1	476 SF	475 SF	1	475 SF	
Storage Room	0	306 SF	300 SF	1	300 SF	
Subtotal		2900 SF			2875 SF	**25**
PHYSICAL EDUCATION						
Gymnasium	1	3707 SF	3700 SF	1	3700 SF	
Office	1	142 SF	140 SF	1	140 SF	
Storage	1	249 SF	250 SF	1	250 SF	
Storage	2	199 SF	100 SF	2	200 SF	
Outside Storage	1	138 SF	140 SF	1	140 SF	
Subtotal		4435 SF			4430 SF	**5**
MULTIPURPOSE ROOM						
Multipurpose Room	1	3223 SF	3200 SF	1	3200 SF	
Chair Storage	1	175 SF	180 SF	1	180 SF	
Table Storage	1	180 SF	180 SF	1	180 SF	
Platform	1	449 SF	450 SF	1	450 SF	
Before/After Care Prep Area	1	25 SF	25 SF	1	25 SF	
Before/After Care Storage	1	113 SF	100 SF	1	100 SF	
Subtotal		4165 SF			4135 SF	**30**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 3***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
KITCHEN						
Serving Area	1	301 SF	300 SF	1	300 SF	
Walk-in Cooler/Freezer	1	163 SF	155 SF	1	155 SF	
Dry Storage	1	204 SF	192 SF	1	192 SF	
Office	1	100 SF	100 SF	1	100 SF	
Toilet Room	1	75 SF	70 SF	1	70 SF	
Preparation Area	1	582 SF	555 SF	1	555 SF	
Subtotal		1425 SF			1372 SF	**53**
STAFF AREAS						
Staff Lounge	1	650 SF	650 SF	1	650 SF	
Privacy Room	2	179 SF	100 SF	2	200 SF	
Subtotal		829 SF			850 SF	**-21**
COUNSELING SUITE						
Counselor's Office	1	161 SF	160 SF	1	160 SF	
Itinerant Staff Office	1	160 SF	160 SF	1	160 SF	
Subtotal		321 SF			320 SF	**1**
STAFF DEVELOPMENT AREA						
Staff Development Office	1	102 SF	100 SF	1	100 SF	
Reading Specialist Office	1	101 SF	100 SF	1	100 SF	
Training/Conference Room	1	429 SF	400 SF	1	400 SF	
Subtotal		632 SF			600 SF	**32**
HEALTH SERVICES SUITE						
Waiting Area	1	149 SF	100 SF	1	100 SF	
Treatment/Medication Area	1	123 SF	120 SF	1	120 SF	
Office/Health Assessment Room	1	107 SF	100 SF	1	100 SF	
Health Assessment/Isolation Room	1	109 SF	100 SF	1	100 SF	
Rest Area	1	200 SF	200 SF	1	200 SF	
Toilet Room	1	73 SF	50 SF	1	50 SF	
Storage Room	1	25 SF	40 SF	1	40 SF	
Subtotal		786 SF			710 SF	**76**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 3***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
ADMINISTRATION						
General Office	1	520 SF	500 SF	1	500 SF	
Workroom	1	296 SF	300 SF	1	300 SF	
Principal's Office	1	244 SF	250 SF	1	250 SF	
Assistant Principal's Office	1	125 SF	125 SF	1	125 SF	
Conference Room	1	274 SF	275 SF	1	275 SF	
Storage	1	102 SF	100 SF	1	100 SF	
Record Room	1	80 SF	75 SF	1	75 SF	
Toilet Room	1	75 SF	50 SF	1	50 SF	
2nd Floor Workroom	1	190 SF	75 SF	1	75 SF	
Subtotal		1906 SF			1750 SF	**156**
BUILDING SERVICE FACILITIES						
Building Services Office	1	140 SF	140 SF	1	140 SF	
Locker/Shower Area	1	152 SF	150 SF	1	150 SF	
Compactor/Trash Room	1	146 SF	150 SF	1	150 SF	
General Storage and Receiving	1	562 SF	550 SF	1	550 SF	
General Storage	3	615 SF	240 SF	3	720 SF	
Building Services Outdoor Storage	1	172 SF	175 SF	1	175 SF	
Subtotal		1787 SF			1885 SF	**-98**
BUILDING SUPPORT AREAS						
Book Storage	1	276 SF	200 SF	1	200 SF	
PTA Storage	1	101 SF	100 SF	1	100 SF	
Emergency Command Center	0	0 SF	200 SF	0	0 SF	
Telecommunication Closet	1	153 SF	150 SF	1	150 SF	
Telecommunication Closet	3	144 SF	50 SF	3	150 SF	
Subtotal		674 SF			600 SF	**74**
TOTAL NET SQUARE FEET		**46,500 SF**			**45,747 SF**	**753**
GROSS AREA		**67,706 SF**				

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 4***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
CLASSROOMS						
Prekindergarten	2	2460 SF	1200 SF	2	2400 SF	
Kindergarten	4	4921 SF	1200 SF	4	4800 SF	
Standard	15	12719 SF	850 SF	15	12750 SF	
Art	1	1199 SF	1200 SF	1	1200 SF	
Music	1	1201 SF	1200 SF	1	1200 SF	
Instrumental Music Room	1	460 SF	450 SF	1	450 SF	
Dual Purpose Room	1	1001 SF	1000 SF	1	1000 SF	
Subtotal		23961 SF			23800 SF	**161**
SUPPORT ROOMS						
Large Instructional Support Room	1	649 SF	550 SF	1	550 SF	
Small Instructional Support Room	2	915 SF	425 SF	2	850 SF	
Speech/Language Room	1	267 SF	250 SF	1	250 SF	
Therapy/Support Room	1	250 SF	250 SF	1	250 SF	
Personal Care Room	1	108 SF	100 SF	1	100 SF	
Testing/Conference Room	1	140 SF	140 SF	1	140 SF	
Support Staff Offices	2	288 SF	140 SF	2	280 SF	
Subtotal		2617 SF			2420 SF	**197**
LIBRARY MEDIA CENTER						
Learning Environment	1	2120 SF	2100 SF	1	2100 SF	
Work and Production Area	1	476 SF	475 SF	1	475 SF	
Storage Room	1	303 SF	300 SF	1	300 SF	
Subtotal		2899 SF			2875 SF	**24**
PHYSICAL EDUCATION						
Gymnasium	1	3700 SF	3700 SF	1	3700 SF	
Office	1	200 SF	140 SF	1	140 SF	
Storage	1	254 SF	250 SF	1	250 SF	
Storage	2	198 SF	100 SF	2	200 SF	
Outside Storage	1	153 SF	140 SF	1	140 SF	
Subtotal		4505 SF			4430 SF	**75**
MULTIPURPOSE ROOM						
Multipurpose Room	1	3236 SF	3200 SF	1	3200 SF	
Chair Storage	1	175 SF	180 SF	1	180 SF	
Table Storage	1	179 SF	180 SF	1	180 SF	
Platform	1	505 SF	450 SF	1	450 SF	
Before/After Care Prep Area	1	25 SF	25 SF	1	25 SF	
Before/After Care Storage	1	111 SF	100 SF	1	100 SF	
Subtotal		4231 SF			4135 SF	**96**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 4***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
KITCHEN						
Serving Area	1	341 SF	300 SF	1	300 SF	
Walk-in Cooler/Freezer	1	163 SF	155 SF	1	155 SF	
Dry Storage	1	201 SF	192 SF	1	192 SF	
Office	1	106 SF	100 SF	1	100 SF	
Toilet Room	1	75 SF	70 SF	1	70 SF	
Preparation Area	1	557 SF	555 SF	1	555 SF	
Subtotal		1443 SF			1372 SF	**71**
STAFF AREAS						
Staff Lounge	1	687 SF	650 SF	1	650 SF	
Privacy Room	2	124 SF	50 SF	2	100 SF	
Subtotal		811 SF			750 SF	**61**
COUNSELING SUITE						
Counselor's Office	1	160 SF	160 SF	1	160 SF	
Itinerant Staff Office	1	160 SF	160 SF	1	160 SF	
Subtotal		320 SF			320 SF	**0**
STAFF DEVELOPMENT AREA						
Staff Development Office	1	102 SF	100 SF	1	100 SF	
Reading Specialist Office	1	127 SF	100 SF	1	100 SF	
Training/Conference Room	1	389 SF	400 SF	1	400 SF	
Subtotal		618 SF			600 SF	**18**
HEALTH SERVICES SUITE						
Waiting Area	1	100 SF	100 SF	1	100 SF	
Treatment/Medication Area	1	118 SF	120 SF	1	120 SF	
Office/Health Assessment Room	1	100 SF	100 SF	1	100 SF	
Health Assessment/Isolation Room	1	102 SF	100 SF	1	100 SF	
Rest Area	1	196 SF	200 SF	1	200 SF	
Toilet Room	1	63 SF	50 SF	1	50 SF	
Storage Room	1	40 SF	40 SF	1	40 SF	
Subtotal		719 SF			710 SF	**9**

COLD SPRING ELEMENTARY SCHOOL						
PROGRAM SPACE	***Option 4***		***Ed Spec***			***Difference***
	Qty.	**Net SF**	**SF per space**	**Qty.**	**Net SF**	
ADMINISTRATION						
General Office	1	499 SF	500 SF	1	500 SF	
Workroom	1	300 SF	300 SF	1	300 SF	
Principal's Office	1	266 SF	250 SF	1	250 SF	
Assistant Principal's Office	1	125 SF	125 SF	1	125 SF	
Conference Room	1	275 SF	275 SF	1	275 SF	
Storage	1	101 SF	100 SF	1	100 SF	
Record Room	1	86 SF	75 SF	1	75 SF	
Toilet Room	1	64 SF	50 SF	1	50 SF	
2nd Floor Workroom	0	126 SF	75 SF	1	75 SF	
Subtotal		1842 SF			1750 SF	**92**
BUILDING SERVICE FACILITIES						
Building Services Office	1	138 SF	140 SF	1	140 SF	
Locker/Shower Area	1	149 SF	150 SF	1	150 SF	
Compactor/Trash Room	0	140 SF	150 SF	1	150 SF	
General Storage and Receiving	1	550 SF	550 SF	1	550 SF	
General Storage	2	759 SF	240 SF	3	720 SF	
Building Services Outdoor Storage	1	172 SF	175 SF	1	175 SF	
Subtotal		1908 SF			1885 SF	**23**
BUILDING SUPPORT AREAS						
Book Storage	1	198 SF	200 SF	1	200 SF	
PTA Storage	1	100 SF	100 SF	1	100 SF	
Emergency Command Center	0	0 SF	200 SF	0	0 SF	
Telecommunication Closet	1	153 SF	150 SF	1	150 SF	
Telecommunication Closet	3	139 SF	50 SF	3	150 SF	
Subtotal		590 SF			600 SF	**-10**
TOTAL NET SQUARE FEET		**46,464 SF**			**45,647 SF**	**817**
GROSS AREA		**66,640 SF**				

APPENDIX B: EDUCATIONAL SPECIFICATION

Cold Spring Elementary School

Educational Specifications

Feasibility Study/Schematic Design

Date: February 27, 2025

Montgomery County Public Schools
Rockville, Maryland 20850

MONTGOMERY COUNTY PUBLIC SCHOOLS
Expanding Opportunity and Unleashing Potential

Table of Contents

Space Summary

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Classrooms				22,800
Prekindergarten	2	Includes 250 s.f. storage	1200	2400
Head Start		Includes 250 s.f. storage	1200	0
Kindergarten	4	Includes 250 s.f. storage	1200	4800
Standard	15	Includes 150 s.f. storage	850	12750
Art	1	Includes 250 s.f. storage	1200	1200
Music	1	Includes 250 s.f. storage	1200	1200
Instrumental Music Room	1		450	450
Dual purpose Room	1		1000	1000
Support Rooms				2,420
Large Instructional Support Room	1		550	550
Small Instructional Support Room	2		425	850
Speech/Language Room	1		250	250
Therapy/Support Room	1		250	250
Personal Care Room	1		100	100
Testing/Conference Room	1		140	140
Support Staff Offices	2		140	280
Library Media Center				2,875
Learning Environment	1		2100	2100
Work and Production Area	1		475	475
LMC Storage Room	1		300	300
Physical Education				4,430
Gymnasium	1		3700	3700
Office	1		140	140
Storage	1		250	250
Storage	2		100	200
Outside Storage	1		140	140
Multipurpose Room				4,135
Multipurpose Room	1		3200	3200
Chair Storage	1		180	180
Table Storage	1		180	180
Platform	1		450	450
Before/After Care Prep Area	*1*		*25*	*25*
Before/After Care Storage	*1*		*100*	*100*

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Kitchen				1,372
Serving Area	1		300	300
Walk-in Cooler/Freezer	1		155	155
Dry Storage	1		192	192
Office	1		100	100
Toilet Room	1		70	70
Preparation Area	1		555	555
Administration				1,750
General Office	1		500	500
Workroom	1		300	300
Principal's Office	1		250	250
Assistant Principal's Office	1		125	125
Conference Room	1		275	275
Storage	1		100	100
Record Room	1		75	75
Toilet Room	1		50	50
2nd Floor Workroom	1		75	75
Counseling Suite				320
Counselor's Office	1	Needs to fit an L-shaped desk, round table, 4 chairs	160	160
Itinerant Staff Office	1	Needs to fit an L-shaped desk, round table, 4 chairs	160	160
Staff Development Area				600
Staff Development Office	1		100	100
Reading Specialist Office	1		100	100
Training/Conference Room	1		400	400
Health Services Suite				710
Waiting Area	1		100	100
Treatment/Medication Area	1		120	120
Office/Health Assessment Room	1		100	100
Health Assessment/Isolation Room	1		100	100
Rest Area	1		200	200
Toilet Room	1		50	50
Storage Room	1		40	40
Staff Areas				750
Staff Lounge	1		650	650
Privacy Room	2		50	100
Building Service Facilities				1,885
Building Services Office	1		140	140
Locker/Shower Area	1		150	150
Compactor/Trash Room	1		150	150
General Storage and Receiving	1		550	550
General Storage	3		240	720
Building Services Outdoor Storage	1		175	175
Building Support Areas				800
Book Storage	1		200	200
PTA Storage	1		100	100
Emergency Command Center	1	if building is greater than 100K GSF	200	200
Telecommunication Closet	1		150	150
Telecommunication Closet	3		50	150
Total	**25**			**44,847**

Introduction

☐ This document describes the facilities that are needed for the Cold Spring Elementary School educational program. The descriptions below will provide the architect with important guidelines and staff will be used by staff representatives to review drawings for the facility.

☐ This school will be designed with a capacity for 465 students, a core capacity for 640 students. There is no scheduled completion date at this time.

☐ The educational specifications are divided into three sections.

- The first section, the space summary, lists the type of spaces and square footage required when the project is complete.
- The second section describes the general design, location, and specific requirements for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
- The third section identifies additional program requirements for the school.

☐ The architect should show the location for relocatable classrooms, should they be required in the future. These units should be sited in a location where it will not cause conflict with the constructability of a future addition. The necessary utility connections, i.e. electrical power, fire alarm, public address, and data should be provided near the future location of relocatable classrooms.

☐ The architect will provide a space summary comparison between the programmed space requirements and the proposed after each phase of the project including but not limited to the schematic design, design development, and final design phase.

☐ The design of the school should promote a collaborative approach for both teaching and learning. Flexibility of design should be provided to accommodate changing educational programs and pedagogy.

☐ The project will be designed to the meet current local and state sustainability guidelines.

General Planning Considerations

In the general planning of this building, special consideration is to be given to the following comments and instructions:

Code and Guidelines

☐ The architect is expected to become thoroughly familiar with all national, state and local fire safety, life safety, and health code regulations and to follow applicable rules of the State Interagency Committee on School Construction.

☐ The building is to be accessible to the disabled within the meaning of the latest edition of the Americans with Disabilities Act and to conform to all the latest requirements of the *Americans with Disabilities Act Standards for Accessible Design*. (The regulation can be found at https://www.ada.gov/2010ADAstandards_index.htm)

☐ In addition to the ADASAG, the *Maryland Accessibility Code* (COMAR.05.02.02) also is required for public schools. (The regulation can be found at http://mdcodes2.umbc.edu/dhcd/access.htm).
Per COMAR 23.03.02: Regulation .29, all high school projects that include replacing or upgrading the electrical system should be designed and constructed sot that a designated public shelter area can be fully powered in the event of an emergency.

☐ The architect should refer to the MCPS Facility Guideline Specifications when noted. The Document can be found at:
http://www.montgomeryschoolsmd.org/departments/construction/publications/guidelines.shtm

☐ Special consideration should be given to energy conservation including total life-cycle costs. The current Department of General Service (DGS) requirements shall be applied as design criteria. Life-cycle cost accounting in accordance with DGS criteria is required. A statement on energy conservation must be a part of the preliminary plans submission. Additional details on energy conservation will be provided under separate cover.

☐ The architect should refer to MSDE 2006 *Classroom Acoustic Guidelines* to address the acoustical qualities for classrooms. Core learning spaces should include sound-absorptive finishes for compliance with reverberation time requirements as specified in ANSI, *Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools* (ANSI S12.60-2002.)

☐ High quality materials are to be used in the construction. The architect should refer to the MCPS Facility Design Guidelines.

Educational Considerations

☐ The school should be designed to support flexible and collaborative learning environments. When possible, the architect should identify collaborative work spaces throughout the building. These spaces can be located near the instructional spaces as well as informal areas such as the library, hallways, etc.

- ☐ All spaces should be designed in such a way that can be adapted to changes in pedagogical changes in the future.
- ☐ The classrooms should be designed to accommodate various size groups. Each classroom should be readily adaptable for group work, various presentation formats, and should have maximum connectivity to outside resources.
- ☐ The shape of the classroom and the design of built-in features and storage areas should provide optimum net usable floor area. Elongated rooms and features that protrude into floor area, limiting flexibility, are to be discouraged. Rectangular shaped classrooms are preferred.
- ☐ For maximum instructional flexibility, large special instruction areas such as those provided for general music and multipurpose laboratories should be designed to allow easy conversion of some or all of the space for other kinds of instruction in the future
- ☐ Every teaching station, support space, and core area must be wired for computer and VOIP telephone, along with adequate electrical supply in compliance with Maryland Sate design guidelines for Technology in Schools and the MCPS Office of Technology and Innovation (OTI) guidelines. Facilities must be adaptable to accommodate rapid development in high technology and its equipment since educational program and organization in this field are dynamic. Space and power supply must be flexible to meet these changing needs.

Facility Considerations

- ☐ The architect is to design the spaces within 5 percent (plus/minus) of the net square foot guidelines provided in this document unless otherwise noted.
- ☐ The first impression of a building is important. The main entrance to the school should have a clear and inviting identity, and the architect should emphasize the entrance area through its design and landscape.
- ☐ The facility is to reflect an appealing visual, acoustic, and thermal environment and is to be properly furnished and equipped. Well-chosen colors and textures should be used.
- ☐ The design of the main lobby area needs to convey a feeling of warmth and welcome. The inclusion of a lighted showcase in which student work can be displayed is recommended.
- ☐ The main lobby should have a large overhead-animated electronic display board for messages and videos.
- ☐ Lighting must meet current guidelines and provide adequate levels.
- ☐ Carpeting should be limited to the principal's office, assistant principal's office and conference room in the administration suite and the main reading room of the library media center (LMC).

- ☐ The inclusion of lighted showcases to display student work should be provided in the corridors of the main entrance, art, technology education, gymnasium, and in each grade level area. They should be recessed into the wall with access from within a room and have an electric outlet.
- ☐ Staff work areas should be arranged to encourage interdisciplinary interaction.
- ☐ Noise and distracting sounds are to be minimized. In areas such as the multipurpose room and classrooms, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.
- ☐ A MCPS-designed alarm system will provide security for this facility. The architect will provide for this system in consultation with the Division of Design and Construction (DDC) staff.
- ☐ Some windows must be operable in each space in the building. Transmission of radiation through windows into various portions of the plant is to be considered in relation to heating and ventilating and in relation to planning the building for air conditioning. All instructional spaces should have windows, preferably exterior windows. If the design does not permit exterior windows, windows onto corridors should be provided.
- ☐ All windows should be equipped with window coverings. The specification for the window coverings will be provided by DDC. Screens on operable windows should be installed in all food related areas.
- ☐ Careful placement of glass is required to avoid excess heat gain in occupied areas.
- ☐ The entire school is to be air-conditioned.
- ☐ Zoning the plant for heating and air-conditioning should be related to after-hours use of various areas such as offices, gymnasium, multipurpose room, and the instructional media center. Appropriate location of parking, corridor barriers, and toilet rooms is necessary for after-hours use. Some classrooms nearby the multipurpose room should be zoned for after hour use as well.
- ☐ Core spaces such as the cafeteria, gymnasiums, and LMC should be easily accessible for community use and secure from the rest of the building after school hours.
- ☐ Special attention should be given to security measures within the building including location of security barriers in corridors, lockable doors to secure various sections of the building for after-hour use.
- ☐ Spaces that serve no real educational function, such as corridors, should be limited while at the same time assuring an easy to supervise and smooth flow of pupil traffic to and from the LMC, multipurpose room, gymnasium, specialized centers, and support rooms.
- ☐ For security purposes, all doors into classrooms, conference rooms, offices, etc. must be designed with a sidelight window with shades. If a sidelight is not possible, then the door requires a vision panel.

- ☐ Noise and distracting sounds are to be minimized. In areas such as the multipurpose room and classrooms, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.
- ☐ Some toilet rooms should be located so that they may be used during after-hour use.
- ☐ Bathrooms for staff and students should be located throughout the building. Some student bathrooms must be located near the cafeteria and gymnasiums.
- ☐ To the extent feasible, at least one inclusive restroom should be provided on each floor and in high-traffic areas for student use. These toilets should be designed with a non-locking door and one individual stall in each toilet room.
- ☐ Electric water bottle filling stations with filters should be strategically located throughout the building and close to the restrooms. All of the water coolers should have water bottle filling stations and should be located near high volume areas such as the cafeteria and gymnasium and on each floor.
- ☐ Corridors where lockers are installed must be a minimum of 10' in width.
- ☐ The number of lockers in the corridor should be equal to the core capacity plus 10% of the core capacity.
- ☐ The location of the elevator(s) must consider use by the student population, LMC staff, and after-hours users.
- ☐ A public address system is required in the facility. The architect and engineers should refer to the MCPS Facility Guideline Specifications for additional information.
- ☐ A building services call system is required.
- ☐ A room numbering system which is logical and understandable and which lends itself to electronic scheduling of room assignments for students is required.

Site Considerations

- ☐ A covered walkway from the bus loading area to the front door is desirable.
- ☐ The design of the building and grounds must provide for a secure environment for students and staff. Isolated areas should be minimized and natural surveillance encourage by eliminating visual barriers.
- ☐ Exterior lighting is to be shaded from neighboring properties and is to be operable as appropriate from both time and key switches. For major entrances, a doorbell should be installed.
- ☐ Separate controls on a time clock for illumination of walkways and parking lots, including parking areas for the stadium area are required.

☐ Landscaping and provision for outdoor watering are to be included. Planting is to include screen planting and those that may be needed for erosion control. Other landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.

Technology Framework

The latest technology should be integrated into every aspect of building. The architect should consult with the OTI and the DDC for the latest technology requirements. The architect must at a minimum plan for the following elements.

- ☐ With wireless access, local area and wide area computer and video networks, students should have access to each other, to schools throughout the county with similar capabilities, and to universities and government institutions throughout the world.
- ☐ Each classroom is to have one dedicated 20 amp electrical circuit for a charging mobile laptop cart.
- ☐ Each classroom will have an interactive teaching board at the teaching wall and computer network outlet (CNO) for the teacher's computer.
- ☐ Additional outlets to allow for charging of personal student devices should be provided in the classrooms and throughout the building.
- ☐ CNOs consisting of a flush mounted standard electrical box with 1 1/2" conduit to the ceiling space overhead should be located in all classrooms, offices, and other work locations according to the following general rules:
  - ☐ one CNO per office, staff office, planning room, etc. adjacent to telephone outlet
  - ☐ One CNO for VOIP system in the classroom
  - ☐ Two CNOs for student use located 3' apart along the back or side wall in each classroom.
  - ☐ Multiple CNOs in media center at circulation desk, reference areas, etc.
  - ☐ One CNO at each science lab workstation
  - ☐ All other areas such as the stage, bookstore, dining room, etc., where computers might be used.
- ☐ The number and location of telecommunication closets required to support the building-wide computer network is dependent on the size and geometry of the building. The layout of the telecommunication closets will be determined during the design phase of the project.
- ☐ Outdoor wireless access points need to be provided at the schools.
- ☐ Wireless access point needs to be provided at the main entrance of the school for a message board.
- ☐ CNOs for security cameras are required at the schools. The number and location will be determined during the design process.

Description of Facilities

Please refer to the summary of spaces in the front of this document for the square foot requirements for each space described below. Square foot allocations should be considered the standard to be followed, although minor deviations are permitted.

Prekindergarten/Kindergarten Classroom

☐ If the school has a Head Start program, the classroom should be designed as a prekindergarten/kindergarten classroom.

☐ Each room should allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach.

☐ An area should be designated for placement of a 12’ by 15’ area rug over the finished floor (NIC).

☐ A 100 square foot walk-in storage closet and 150 square feet of general storage (casework throughout the classroom) is needed.

☐ All prekindergarten rooms should have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building.

☐ The prekindergarten classrooms must have direct access to the prekindergarten play areas. See the Site Requirements section for a description of play areas. The computers should not be located next to a marker board where magnets might damage the hardware and software. Glare from the windows on the computer screens should be eliminated as much as possible. Security for the computers should be planned in consultation with the DDC. Computer/technology wiring must be in accordance with MSDE/MCPS guidelines.

☐ Every classroom must have computer outlets for two student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest revision of the MSDE *Maryland Public School Standards for Telecommunications Distribution Systems*.

☐ The main teaching wall layout should be in accordance to MCPS Facilities Guide.

☐ A sink must be provided,

☐ In a non-class-size reduction school, the built-in student wardrobe area must provide at least 28 individual compartments to store students’ belongings. The architect is to refer to the MCPS Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.

☐ In a class-size reduction school, the built-in student wardrobe area must provide least 24 individual compartments to store students’ belongings. The architect is to refer to the MCPS

Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.

☐ A total of 20 feet of tackboard and 10 feet of magnetic marker board should be installed at eye-level height for small children, with tack stripping along walls for display of student work.

☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.

☐ Each room must have a toilet room that is accessible from within the room and easily accessible from outside. The toilet room will contain a standard height toilet, a child height sink with mirror, and soap and towel dispensers that are accessible to small children. The light switch should automatically turn on the vent fan.

☐ Each classroom should be equipped with window coverings per the MCPS design guidelines.

☐ Battery operated clocks will be installed.

☐ All classrooms should be equipped with a handicapped accessible sink, with cabinets above and below.

☐ A full-length mirror should be installed in the prekindergarten rooms only.

Standard Classroom

☐ Each classroom should be designed to support flexible furniture arrangements that will support a variety of teaching and learning models.

☐ 150 square feet of casework storage is needed in the classroom.

☐ The computers should not be located next to a marker board where magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS DDC. Computer/technology wiring must be in accordance with DDC/MSDE/OTI guidelines.

☐ Every classroom must have computer outlets for two student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.

☐ The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.

☐ The remaining walls should be outfitted with magnetic maker board and a tack strip above.

☐ A small 4x4 tack board may be considered near the entrance of each classroom and will be discussed during the quarter scale review.

- ☐ Lockers will be provided in the hallway for storing student belongings. The architect should design the facility with 700 lockers if the core capacity is 640 and 815 lockers if the core capacity is 740.
- ☐ All classrooms should be equipped with an accessible sink.
- ☐ A storage area is needed to hold at least two science kits (approximate 27" x 17" x 12" each) and one math kit in each classroom.
- ☐ General storage space must be built in and must accommodate 24- by 36-inch paper and a 4-drawer file cabinet. Each classroom must include 48 linear feet of built-in adjustable shelving.
- ☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- ☐ Designated shelf space, not near a window, for an aquarium/terrarium with nearby electrical outlet, is desirable.
- ☐ Each classroom should be equipped with window coverings or shades. The specifications for the window coverings will be provided by DDC.
- ☐ Battery operated clocks will be installed.
- ☐ A school may consider reducing the size of each classroom to create small break-out/collaborative rooms in the school. The number and design of these breakout/collaborative rooms may be determined by school and MCPS staff.

Special Education Classroom

☐ The specific requirements are the same as the requirements for standard classroom requirements. Please refer to the preceding section for these requirements.

☐ Please see the additional requirements section of document for additional special education program requirements specific to this school.

Art Room

The art room is to provide space for teaching and creating art, displaying student work and educational aids, and storing supplies and materials. The room should be designed as follows:

- ☐ The minimum square footage for the teaching area must be 800 square feet. The ideal room dimensions are approximately 25' x 32'.
- ☐ The art room must not be carpeted.
- ☐ Both art and music rooms must be located near student restrooms.
- ☐ Two computer drops along wall for student use should be provided.
- ☐ The design of all work, display, and storage areas should create an environment that is functional and easy to clean.
- ☐ Lighting should be both natural and artificial and conducive to close work.
- ☐ A door to the outside is desirable.
- ☐ Space and electrical outlets for two kilns should be in the farthest corner of the storeroom with proper ventilation.
- ☐ Eight duplex electrical outlets are to be provided (where feasible quadruplex outlets may be utilized).
- ☐ Any available wall space should have tack boards.

The window wall should have the following:

- ☐ Windows that permit views of the surrounding landscape.
- ☐ Window coverings to permit room darkening.
- ☐ Shelves under windows 15" deep.
- ☐ Tack board or tack strips above windows if space permits.

The teaching wall should have the following:

- ☐ Standard teaching wall should be provided. The architect should refer to DDC standards.
- ☐ Fourteen-inch deep, 24 inch high, shelving under the center of the 16-foot long tack board and white board.

Sinks and sink area:

☐ Three sinks should be provided. Faucets should be accessible to students and positioned to prevent splashes onto floor.

- ☐ One ADA accessible sink (34" high)
- ☐ One sink located on a peninsula (30" high). Peninsula is to be no longer than 3 feet.
- ☐ One 12” deep sink (32").

☐ Removable plaster traps

☐ Closed cabinets below and above

☐ Conveniently located towel and soap dispensers

☐ At least 9 feet of counter space (includes 1 ½ feet of counter space on both sides of the sinks) with rounded corners

☐ Hot and cold water faucets

☐ A tile backsplash that spans from the countertop to the bottom of the wall cabinets.

☐ Extra caulking where the countertop meets the backsplash.

☐ A 5- to 7-foot open space is needed for drying rack(s) along one wall.

The wall opposite or adjacent to the teaching station should have the following:

☐ One 6-foot tall, 12-foot long tack board with 24-inch tall, 14-inch deep shelving units below.

Art Storeroom

☐ The storeroom must be approximately 8.5-9’ wide by approximately 25-30’.

☐ The storeroom must have a 6-foot wide, 30-inch tall, and 34-inch deep worktable immediately inside the entrance to the storeroom with 5-6 built-in sliding drawers. This table will accommodate a 30-inch square paper cutter and storage of large art reproductions and papers below.

☐ Three or four 6-foot tall, 36-inch wide paper storage shelf sections, 24” deep with shelves 8 inches on center to accommodate 18” x 24” paper.

☐ An empty floor space should be left to accommodate flat files. 5-drawer flat file units are 40 ¾”W x 15 3/8”H x 28 3/8”D x 2” drawer depth. Three of these 5-drawer units will be stacked on top of each other. (NIC)

☐ Empty floor space should be left to accommodate one rolling care and filing cabinet.

- ☐ All extra space should be filled storage shelving and cabinets. There should be no empty walls in the storage closet.
- ☐ Seven foot tall open shelving, 18 inches deep, should be provided along remaining walls where space permits. Twelve to fourteen inch deep sections are acceptable for some sections where 18-inch deep shelves won't fit.
- ☐ Teacher wardrobe should be provided in the storeroom.

Kiln Area

- ☐ The kiln area should be located at the far end of the storeroom and should accommodate two kilns.
- ☐ Two or three 7-foot tall, 18-inch deep, 36-inch wide shelf sections near kiln area for storage of ceramic work.
- ☐ Two kiln exhaust hoods and fans (local switch) must be installed with a 24 hour timer. Positive ventilation (using negative pressure) is needed to assure removal of fumes.
- ☐ Kilns should be 30 inches wide, 30 inches deep and 36 inches tall. Allow an additional 6 inches in depth for opening of the kiln lid.
- ☐ Electrical characteristics for the kiln are 250 volt, 50 amps, single phase, and 7200 watts. Provide 2-250V, 50 amp 3-prong plug outlets. NEMA configuration 6-50R. Provide two outlets on wall behind the kilns.

Hallway Outside

- ☐ The hallway outside of the art room should have two tack boards for displaying artwork. Tack strips also should be provided on other walls.
- ☐ There should be a lockable showcase with lights located near the art room or at the main entrance of the school.

Music Suite

Spatial Needs
Music Room
Instrumental Music Room
Music Storage Room

- ☐ The music room and instrumental music room should be located adjacent to each other with a shared storage room.
- ☐ These rooms should be located near the multipurpose room to allow easy access to the performance platform.
- ☐ The two music rooms must be acoustically treated for isolation and reverberation with a combination of absorptive and reflective acoustic wall panels, by Wenger or equal, to be included the base bid design.

Music Room

- ☐ The teaching area for the music room must be 34’ x 31’ and have a circle 20 feet in diameter, with chairs arranged around three sides of a surrounding box of the circle.
- ☐ 100 linear feet of general storage (casework throughout the classroom) is needed in the classroom. Adjustable, open shelving must allow for storage of books, CDs, and small instrument as follows:
  - ☐ 12” deep shelving for 140 books (140 linear inches)
  - ☐ 12” deep shelving for 13-15 baskets 12”x9” for small musical instruments
  - ☐ 12” deep shelving for four medium sized drums (12”x12”x12”)
  - ☐ Two 18” deep shelves, 3’ long for bass xylophones
  - ☐ 12” deep shelving, 42” long for 4 alto xylophones, 2 shelves high
  - ☐ 12” deep shelving, 42” long for 4-6 soprano xylophones, 3 shelves high
  - ☐ 12” deep shelving for 4 alto and 4 soprano glockenspiels
  - ☐ Some additional shelving for books, CDs, instruments, and teaching materials.
- ☐ The music room needs a child height sink.
- ☐ Window coverings will be provided for room darkening. If there is a roof monitor then window coverings are required.

- ☐ The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout. The teaching wall also should have a single music staff on both marker boards located on the upper third of the magnetic board.
- ☐ An additional 8'magnetic marker board should be provided in the classroom with a single music staff.
- ☐ Two 4' tack boards should be provided in the classroom.
- ☐ A minimum of eight duplex electrical outlets should be provided in the classroom. No fewer than four outlets should be located on the teaching wall, space out along the teaching wall.
- ☐ 36" wide doors into the music room and platform to accommodate the passage of a piano.
- ☐ Two speaker outlets and 12" deep shelves, installed 6' 8" high, should be located in the front of the classroom for speakers.
- ☐ Additional outlets should be provided throughout the room for use of instruments and sound system.
- ☐ The architect should show the location for an electronic keyboard at the main teaching wall.
- ☐ A location for a teacher's desk is required.
- ☐ A teacher's wardrobe is required.

Instrumental Music Room

- ☐ A deep sink and countertop area should be provided for cleaning and repairing musical instruments.
- ☐ 36" doors into the instrumental music room must be wide enough to accommodate the passage of piano and large instruments.

Music Storage Room

- ☐ A 250-square foot secure room to store instruments, equipment, choral and instrumental music, music stands, and instructional charts is necessary with access from the music room.
- ☐ Ideally, this room should be located between the general and instrumental music rooms with access from both rooms.
- ☐ 48"W x 24"D x 84"H wood cabinets with adjustable shelves and lockable doors should be provided in the instrumental storage room for the sound system. Some open adjustable shelving also should be provided. Specific storage and shelving specifications are available through Montgomery County Public School's MCPS Facility Guideline Specifications.

Dual Purpose Room

- ☐ This room should be designed to accommodate both art and music activities in the school but with less detail than the regular art and music rooms.
- ☐ Some acoustical treatment should be provided in the room.
- ☐ One sink designed at 34” should be provided along with some countertop area.
- ☐ No kiln area is needed and less shelving than described in the art room is to be provided.

Support Rooms

Spatial Needs
Large Instructional Support Room
Small Instructional Support Room
Speech/Language Room
Occupational Therapy/Physical Therapy (OT/PT) Room
Testing Room
Support Staff Offices
Parent Resource Room (For Title 1 Schools)

Large Instructional Support Room

☐ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.

☐ This room should have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.

☐ The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.

☐ The remaining walls should be outfitted with magnetic maker board and a tack strip above.

☐ A small 4x4 tack board may be considered near the entrance of each classroom and will be discussed during the quarter scale review.

☐ Each classroom must include a minimum of 50 linear feet of built-in adjustable shelving for books.

☐ Space for a big book rack should with an incline to display the book open and also for storage beneath for space to lay the books flat should be provided.

☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.

☐ 40 mailboxes should be designed for storage of student work such as folders or notebooks.

☐ This classroom should be equipped with a handicapped accessible sink. Cabinets should be provided above and below the counter area.

☐ Each classroom should be equipped with window coverings. DDC will provide the specifications for the window coverings.

☐ Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

Small Instructional Support Room

- ☐ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.
- ☐ This room should have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.
- ☐ The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- ☐ The remaining walls should be outfitted with magnetic maker board and a tack strip above.
- ☐ A small 4x4 tack board may be considered near the entrance of each classroom and will be discussed during the quarter scale review.
- ☐ Each classroom must include built-in adjustable shelving under the windows.
- ☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- ☐ This classroom should be equipped with a handicapped accessible sink. Cabinets should be provided above and below the counter area.
- ☐ Each classroom should be equipped with window coverings. DDC will provide the specifications for the window coverings.
- ☐ Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- ☐ Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

Speech/Language Room

- ☐ This room requires a marker board, tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe.
- ☐ Room for a teacher's desk, lockable file cabinet, and table to work with small groups of students is required.
- ☐ The speech/language room should be wired for access to one computer workstation each.
- ☐ The speech room must be located on the first floor and be acoustically treated.
- ☐ The speech room needs a 4’ x 4’ mirror mounted to the wall to supplement verbal skills training.
- ☐ The speech room requires a sink with counter space.

Occupational Therapy/Physical Therapy (OT/PT) Room

- ☐ Each room must have two marker boards that are mounted two feet off the floor.
- ☐ A tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe are required.
- ☐ A sink with counter space is required in the OT/PT room.
- ☐ Room for two teacher's desks, lockable file cabinet, and assorted sized furniture with adjustable legs should be provided.
- ☐ The OT/PT room should be wired for access to two computer workstations each.
- ☐ Data and electrical outlets should be located on all walls to allow for multiple uses and flexibility to move equipment around if needed.
- ☐ The OT/PT room requires a ceiling mounted hook, with a 12'foot diameter clear space for hanging swings and other suspended equipment.

Swing Hardware and Accessories Recommendations

- **Equipment that should be paired**- Base mat, chain for length, height adjuster, rotational component.

- Kit-LINK
- Includes rotational hook: LINK and chain: LINK Height adjuster: LINK
- Mat- LINK

Swings:

- Cocoon: LINK - Autism
- Platform: LINK - OT/PT/PEP

- ☐ The OT/PT room requires a lockable storage closet with sufficient area to house large gross motor equipment (minimum of 35 square feet) such as therapy balls, scooter boards, walkers, balance beams, ramps, etc.

Testing Room

- ☐ School and/or central office staff test individual students or small groups of students. Typical testing includes psychological, diagnostic, vision/hearing, gifted, and makeup testing for required standardized tests. This room also will be used to accommodate post-test conferences with teachers and/or parents.
- ☐ This room should be designed as a secure room for testing materials and should have a counter with lockable cabinets above and below.
- ☐ This room needs acoustical treatment as well as video, voice, and data outlets.

Support Staff Offices

- ☐ Office space is needed for permanent as well as itinerant support staff (curriculum coordinator, team coordinator, social worker, psychologist, auditory and vision specialists, and psychiatrist).
- ☐ A teacher's wardrobe should be provided for itinerant staff use.
- ☐ Video, voice, and data outlets should be provided.

Parent Resource Room (For Title 1 Schools)

- ☐ Space for a teacher's desk, computer, and telephone should be provided.
- ☐ Space for a conference table and chairs as well as soft seating should be provided in this room.
- ☐ Space should be provided for bookshelves and other shelving to store a variety of types of materials and supplies.
- ☐ Data and electrical outlet should be provided for an interactive teaching board.
- ☐ Magnetic board should be provided in this room.

Library Media Center

Spatial Needs
Main Learning Environment
Instructional Area
Work and Production Area
General Storage

☐ The Library Media Center (LMC) is the information hub of the school.

☐ The latest version of the MSDE document, *Facilities Guidelines for Library Media Programs,* may be used as a reference for the design of the LMC.

☐ The LMC should be centrally located and easily accessible from the outside to allow the LMC easy access by outside groups during after school hours and in the summer.

☐ There should be easy access to the elevator.

☐ Toilet rooms should be located nearby the LMC.

☐ Sight lines are an important feature in the design of the LMC. Staff should have visual supervision of the entire LMC including the entrance from the LMC circulation desk.

☐ Flexible lighting with the ability to darken separate areas of the main resource room without affecting other spaces.

☐ If possible, the LMC should not be located below high noise level activities such as music, technology education, cafeteria, or physical education.

☐ Multiple charging outlets need to be provided throughout the LMC and can be located in the floor, wall, and counters. Consideration should be given to the location of the circulation desk and seating areas that may require data and or power for the use of computers or staff/student work areas.

☐ Ideally, a countertop with outlets above the counter should be provided along one of the walls of the LMC to allow users to plug in portable devices. The counter should be located in an area that can be easily supervised and at a desk top height so that chairs can be interchanged in the library.

Main Learning Environment

This is the main area of the library that includes the stacks, instructional space, and circulation area.

Stacks (the area containing book shelves)

- ☐ The height of the low moveable bookshelves should accommodate three rows of books and the height should be 42 inches high in order to accommodate picture and nonfiction books.
- ☐ Must be on wheels to allow for flexibility.
- ☐ Different materials can be explored based on design and cost factors to include metal and wood shelving.
- ☐ Soft, comfortable seating should be provided for individual and collaborative student work and power should be provided throughout this area.
- ☐ Consideration should be given for shelving for special types of collections such as graphic novels, periodicals, and oversized books including picture books. The shelving should be flexible that can convert for different types of collections.
- ☐ Wall shelving should be maximized in this area, where possible. (height 5 feet when possible)
- ☐ Consideration should be given to provide opportunities to display and highlight student work and items in the collection.
- ☐ Lights should be designed to allow for flexible arrangement of shelving in the stacks.
- ☐ Shelving is to be allocated on the average as follows:

	Linear Feet
Non-Fiction (including biographies)	430
Fiction	285
Picture Books (with no dividers)	75
Magazines (with space for back issues)	12
New Book/Interest Display	10
Media Center Storage (20-24” depth)	As space allows

Circulation Area

- ☐ The architect needs to identify a location for a circulation desk that is large enough to accommodate two computer workstations and a networked printer to access the online catalog system.
- ☐ If space permits, storage cabinets should be provided in the circulation area for miscellaneous activities such as book repairs and holds.
- ☐ The circulation desk furniture package will include the following features:
  - ☐ a storage area for book return carts;
  - ☐ a book return container to catch the books;
  - ☐ supplies drawers;
  - ☐ a writing area unit; and
  - ☐ an area for a laser printer and supplies.
  - ☐ The front height of the circulation desk should have an area that does not exceed 39" in height so that elementary students have access.
  - ☐ There should be two means of egress for the circulation desk.
  - ☐ The work surface for the staff member should meet ADA compliance with optimal ergonomics (keyboard height).
  - ☐ Electric and Ethernet needs to be provided.

Instructional Area

- ☐ Sight lines are an important feature in this area. Staff should have visual supervision of the entire LMC from this area.
- ☐ A teaching wall area designed for an interactive board should be included.
- ☐ This area needs to accommodate read-alouds and other instructional activities.
- ☐ This area should include table and chair seating as well as soft seating so that the combination of seating totals 30. A variety of heights in the instructional area for students including standing and sitting options should be provided.
- ☐ The space should be easy to reconfigure for a variety of uses and groupings with the use of flexible furniture to support whole class, small group, and project based learning activities.

☐ The instructional areas need access to all forms of technology in the school including wireless access.

Work and Production Area

This area was formerly two distinct spaces: the library media specialist office and library media center workroom. The new combined space now supports the library media staff functions and is also used as a multipurpose space to include maker activities for student and school staff use.

☐ The work area should be delineated through the use of a different ceiling height or half wall.

☐ This room requires VCT floor material.

☐ Consideration for a counter for student use is preferable.

☐ Adequate electrical and data outlets are to be designed in consultation with the LM Specialist and central office staff members.

☐ It must contain a sink with hot and cold water, in addition to ample worktops for library media processing, student and teacher use.

☐ Space is needed for two staff work stations. This can be built-in or through furniture.

☐ Two lockable wardrobes need to be provided. See media center specifications available from the MCPS Facility Guideline Specifications.

☐ This space needs to contain open shelving to accommodate materials for student use such as maker space supplies and hands on activities as well as closed lockable cabinets for library media center supplies.

☐ Space should be provided for a networked school printer that is accessible by teachers and students.

☐ Electric and data should be located on all walls to provide flexibility in the use of the space.

☐ The work area includes space for collaborative planning and processing of library media materials.

Library Media Storage

☐ The library media storage room provides for storage of library media materials, equipment, seasonal materials and supplies.

☐ Electric and Ethernet should be provided to accommodate library media technology needs.

- ☐ A variety of shelving should be provided for instructional materials for teacher use such as DVDs, audio book resources, and equipment with some open space to accommodate computer cart storage.

- ☐ Varied depths of shelving should be provided including 6”, 12” and 24” deep.

Physical Education

The gymnasium has two major purposes:

- To provide an indoor facility for the physical education instructional program.
- To provide for student and community recreation during after school hours, weekends, summers, and holidays.

Spatial Needs
Gymnasium (74'x50')
Physical Education Office
Storage Rooms
Lobby Area
Outdoor Storage

Gymnasium

☐ The location of the gymnasium should be near the play areas, directly accessible from a corridor, and easily accessible from the parking lots.

☐ Buffering the gymnasium with a corridor or related spaces is required to separate gymnasium noise from the rest of the school.

☐ No glass walls should be designed in the gymnasium for safety and security purposes. Clerestory windows can be designed to provide natural light in the gymnasium.

☐ The physical education office should be adjacent to the gymnasium and lobby.

☐ The architect should refer to detailed requirements provided by MCPS Facility Guideline Specifications.

☐ Any windows into the gymnasium should be oriented north and south so that direct east-west sunlight does not impact play in the gymnasium. However, windows should not be placed in the end walls.

☐ The gymnasium should be ADA accessible from within and without (access from inside gym to playfields).

☐ A ceiling clearance of a minimum of 24 feet free of girders, pipes, heating vents, lights and curtain supports is required.

☐ No ledges or sills should be created over 6' in height that would make it difficult to retrieve a ball.

☐ Glazed tile on the walls must cover at least seven feet from the floors.

☐ If the gymnasium is a community sized gymnasium (84'x 75') then a vinyl-mesh curtain to divide the floor area into two equal size spaces should be provided. It must be the type that can

be electrically rolled to the ceiling for storage. If the gymnasium has a divider curtain, a clock with a protective wire covering should be provided on both ends of the room.

☐ Adequate lighting in the gymnasium is required. The lighting should be securely mounted and guarded to prevent damage by balls with keylock switches to control the lighting.

☐ A minimum number of windows to prevent glare and glass breakage is requested.

☐ Acoustical treatment of walls and ceiling is required and must be able to withstand damage by balls.

☐ Ventilation equipment must not inhibit use of the space for auditorium purposes.

☐ A wood floor should be installed in the gymnasium. Striping for basketball, volleyball, and floor games should be provided. (i.e. hopscotch and four square)

☐ Graphics or approved words should be painted on the gymnasium walls. The school may choose from an approved curriculum list of words to paint on the gymnasium walls. The list of words will be provided by MCPS staff.

☐ A marker board, 4'x6', with no ledge is required.

☐ Separate heating source or controls to permit use when the remaining part of the building is not occupied is required.

☐ Recessed door handles are required.

☐ Doorway center posts must be removable to allow for the passage of equipment.

☐ A recessed fire alarm box or covered fire alarm box, preferably in a corner of the room needs to be provided.

☐ Two call buttons located at opposite sides of the gymnasium are required to contact the main office.

☐ A clock with a protective wire covering should be provided on a sidewall of the gymnasium. The fire extinguisher, if mounted in the gymnasium, should be recessed into the wall.

☐ Wall safety padding must be mounted under each basketball backstop with 16 feet under end basketball backstops and 12 feet under side basketball backstops with nylon nets.

☐ Doors or openings should not be directly behind basketball backstops.

☐ Fan-shaped basketball backstop, adjustable from 8 feet to 10 feet, must be mounted four feet from the sidewalls to provide two equal sized side courts. The backstops must be of aluminum composition. Collapsible rims must be provided.

☐ A basketball backstop, adjustable from 8 feet to 10 feet, must be mounted on each end wall for full court play. The fan-shaped backstops must be of aluminum composition. Collapsible rims must be provided.

- ☐ A hand crank must be provided for the adjustable basketball backstops if they are not operated electrically.
- ☐ Four climbing ropes (1 knotted, 3 plain) with hoist located 6 feet from the ground and safety cables located away from ceiling lights and basketball backstops should be provided.
- ☐ One 8-foot semi-guyed (wall mounted) horizontal bar with safety chain and floor plates should be provided. The MCPS shade shop will provide safety padding.
- ☐ One pair of volleyball aluminum uprights and one center volleyball aluminum upright (insertion type) must be provided. Heavy-duty net ratchet and removable crank handle should be included.
- ☐ Five solid brass floor plates and floor sleeves need to be installed. Two volleyball nets, 32" in length with end sleeves for wooden dowels should be provided.
- ☐ Two portable game standards are required.
- ☐ Audio controls for a sound system that are easily accessible to the instructor should be provided.
- ☐ A wall-mounted, chin up bar should be provided. The lowest bar height should be approximately 5 feet from the floor.
- ☐ Video, voice, data and electrical outlets on opposite walls of the gymnasium are required.

Physical Education Office

The following items are required in the physical education office:

- ☐ Non-breakable window to the gymnasium, low enough to view students, is required.
- ☐ Non-breakable window to the lobby for supervision, low enough to view students, is required.
- ☐ Toilet and shower facilities are required.
- ☐ Video, voice, data and electrical outlets are required.
- ☐ Window blinds for windows are required.
- ☐ VCT flooring is required.
- ☐ A call button the main office is required.
- ☐ Three full size clothing locker should be provided.
- ☐ Electrical outlets.
- ☐ A tack board should be provided.

- ☐ A wall-mounted clock should be provided.
- ☐ A small closet with shelves should be designed in this office.

Storage Rooms

- ☐ All of the storage rooms require 8-foot doors and 12-foot ceiling heights with a flush threshold.
- ☐ One of the storage rooms needs to accommodate and maneuver a mat mover cart (7’ x 3’) in and out of the room easily.
- ☐ The large storage room requires 8-foot double doors with no center post and must be able to accommodate a set of parallel bars.
- ☐ The large storage room must contain shelves, 6 feet high and 18 inches deep, mounted on at least two walls. The shelves must be adjustable after installation.
- ☐ The large storage closet must have a length that will accommodate a 12' long balance beam.
- ☐ Both of the small storage closets must contain shelves, 6 feet high 18 inches deep, mounted on the two side and back walls. The shelves must be adjustable after installation.
- ☐ One of the small storage rooms will be used for community use (ICB) and should have straps to store the volleyball standards along one wall (about 10’ long).

Lobby Area

- ☐ Separate toilet rooms for boys and girls should be located in the lobby.
- ☐ An electric water cooler with bottle filling station and filter should be located in the lobby area.
- ☐ Six feet of tack board should be installed in the lobby area.
- ☐ The window between the lobby and physical education office must be low enough to view people in the lobby.
- ☐ A set of doors to separate the gymnasium, lobby area, and restrooms from the rest of the school during after-hours is required.

Multipurpose Room and Platform

Spatial Needs
Multipurpose Room
Platform
Chair Storage
Table Storage
Before/After Care Kitchenette
Before/After Care Storage

Multipurpose Room

- ☐ The multipurpose room should have a ceiling height of 12–14 feet.
- ☐ A building service utility closet should be provided near the entrance to the multipurpose room for convenient lunch cleanups.
- ☐ Table storage and chair storage must be located adjacent to the multipurpose room.
- ☐ Exits from the multipurpose room must be sufficient to allow maximum seating.
- ☐ The doors from the main corridor into the multipurpose room should be on hold opens.
- ☐ Toilet rooms and an electric water cooler with bottle filling station and filter should be near the multipurpose room to allow for public use.
- ☐ Audiences need to be able to hear and see presentations from all locations in the room.
- ☐ Ventilation equipment noise must not inhibit use of the space for auditorium purposes.
- ☐ Acoustical treatment is needed.
- ☐ Proper lighting and sound amplification are required.
- ☐ Each side of the risers at the multipurpose room floor level should be equipped with video, voice, data and electrical outlets.
- ☐ Lighting, windows, fire alarm box, clock, and ceiling must be protected to prevent damage by balls.
- ☐ Outdoor play areas should be accessible from the multipurpose room. Children should not have to cross driveways or parking lots to access the play areas.
- ☐ An audio loop system should be provided for hearing impaired students; guidelines are available through the Division of Desisgn and Construction .
- ☐ An independent sound system should be provided in the multipurpose room.

☐ A call button to the main office should be provided.

Platform

☐ A minimum of 450 square feet of useable space must be provided for the performance platform.

☐ The platform should have a proscenium opening 24 feet wide. The depth is to be 15 feet deep. The platform floor is to be three risers above the multipurpose room floor. A full set of platform curtains is to be provided. An 8'x10' motorized projection screen is to be provided. Platform steps must NOT be carpeted.

☐ The platform must be accessible to the physically handicapped.

☐ Each side of the platform should be equipped with video, voice, data and electrical outlets.

☐ Access should be provided to the platform from both sides.

Chair and Table Storage

☐ Storage rooms are required for the storing the tables in the multipurpose room and folding chairs.

Before/After Care Kitchenette

☐ A sink (34”), refrigerator, counter space, and base and wall cabinets should be provided in this area.

☐ A secured overhead door is required for this space.

Food Services

- ☐ The kitchen is operated as a "finishing kitchen" and should include an area for dry storage, a manager's workstation, toilet facilities, preparation and serving area, and a receiving area for daily deliveries.
- ☐ A sheltered dock is preferred and should be separate from other school receiving.
- ☐ Delivery flow path must be clear of preparation area.
- ☐ The trash room should be separate from the rest of the building i.e. no common walls.
- ☐ The trash room should not be accessed from the kitchen.
- ☐ Air conditioning must be available at all times in elementary kitchens, storage, and office.
- ☐ Code requirements for lighting, surfaces, and equipment must be met. These requirements are included in the MCPS Facility Guideline Specifications.
- ☐ Windows must have screens.
- ☐ Receiving door should be 48” wide and must be self-closing with peephole and doorbell to manager’s office.
- ☐ An easy to mop floor such as, slip resistant quarry tile floor or polyurethane cement flooring system is required. If quarry tile is used then the color of grout should be the same or darker than the color of the floor.
- ☐ There should be direct access to both the hallway and the multipurpose room to facilitate one-way circulation through the serving line.
- ☐ A minimum 9’ ceiling height is recommended.
- ☐ A building service closet with floor type mop basin shall be located outside the kitchen but readily accessible to the kitchen.
- ☐ A dedicated circuit is required for the cash register with under the floor conduit for connection to the computer in the manager’s office.

Serving Area

- ☐ A 26 ft. long serving line with 3-ft. clearance at each end should be provided.
- ☐ The color selection will be approved by Food Services.
- ☐ A single door refrigerator and microwave oven on a cart adjacent to the service area is needed.

- ☐ A wall clock and tack board should be located on a wall so it is visible from the serving line wall.

Walk-in Cooler/Freezer

- ☐ A 7' 9" x 8' 8 1/2" cooler is required.
- ☐ A 7' 9" x 10’ 8 1/2" freezer with a height of 8' 6" is required.
- ☐ A mobile polymer shelving and dunnage is required.
- ☐ A roof top compressor is required.

Dry Storage

- ☐ The recommended dimension for the dry storage area is 12’ x 16’.
- ☐ A mobile polymer shelving and dunnage is required.
- ☐ Adequate ceiling height for top shelf storage should be considered.
- ☐ This space should be totally secure and free of roof access ladders or electrical panels.
- ☐ Locking cabinets for chemical storage should be provided.

Manager‘s Office

- ☐ Visibility to delivery and serving area is required.
- ☐ The office should be located away or protected from outside door draft.
- ☐ Desk (NIC), file (NIC), telephone, tack board, and LAN access are required.

Toilet Room

- ☐ A hand sink with soap and towel dispenser, sanitary napkin disposal, and three full-height lockers are required.

Preparation Area

- ☐ A roll-in double convection oven is required.
- ☐ An oven cart and dolly (2 each) are required.
- ☐ A half size range is required.

- ☐ A heat removal exhaust hood is required.
- ☐ Work tables, one 6 ft. and the other 8 ft. with 2 drawers each, under the table are needed.
- ☐ Arlington wire baskets (500 each) and dollies (10 each) are required.
- ☐ Hand sink with pedals and soap and towel dispensers that meet the code requirements are needed.
- ☐ A three compartment sink, 24” x 24” x 14”, with 24 inch drainboards, is required. Disposal in drain board with pre-rinse spray is required.
- ☐ A 6-foot louvered shelf above with hooks is required.
- ☐ A mobile warmer to accommodate Arlington baskets is needed.
- ☐ Two utility carts are required.

Administration suite

Spatial Needs
General Office
Workroom
Command Center
Principal's Office
Assistant Principal's Office
Conference Room
Counselor's Office
Storage Room
Records Room

- ☐ The administration suite must be located with good access from the main entrance of the school and visual oversight of the main entrance and bus drop-off area.
- ☐ The suite must be a natural first stop for visitors to the school and must, therefore, have direct corridor access. A security vestibule must be designed so that all visitors must enter the general office to check in before entering the school.
- ☐ Spaces need to be arranged for student and visitor flow and for efficient use by office staff.
- ☐ The general office is to be treated as the center of the administration suite with direct access to the principal's office, the workroom, and the health suite.
- ☐ A coat closet is to be provided for office staff and visitors.
- ☐ Sufficient electrical outlets are to be provided (where feasible, quadruplex outlets may be utilized) as well video, voice, data and electrical outlets for the general office, principal's, and assistant principal's offices.
- ☐ A glass display case should be located in the vestibule of the Administration suite entrance.
- ☐ The administration suite should be designed with separate toilet rooms. If the school chooses, one of these toilet rooms may be located in the principal's office.
- ☐ The administrative secretary should have access to a private area during the day to work on fiscal duties.

General Office

- ☐ A counter/or furniture should be provided near the entrance to greet and separate visitors from staff and to provide a place to write.
- ☐ Space for two to three staff persons is required behind the counter/furniture.

- ☐ The general office should be equipped with a staff bulletin board.

Workroom

- ☐ The location of mailboxes should not create congestion by impeding the smooth flow of traffic in the general office and hallways. Staff mailboxes are to be readily accessible but not visible from the main entrance and are to contain 80 boxes at least 5.5 inches tall by 12 inches wide plus five additional boxes that are somewhat larger.
- ☐ Cabinetry appropriate for storing a variety of office and school supplies should be designed along one wall of the workroom.
- ☐ A portion of countertop is to be more than 30 inch wide to accommodate a large paper cutter.
- ☐ Space adequate for a large copying machine with necessary electric service and ventilation is required.
- ☐ A sink (34") is needed in the workroom.
- ☐ There should be direct access to a corridor from the workroom.
- ☐ The workroom should be treated acoustically to keep machine and work noises at low levels.

Command Center

- ☐ An interior room in the school needs to be designated as the command center for shelter in place/lock down emergencies. In many schools, the workroom in the administration suite may serve this purpose. The room cannot be on an outside wall.
- ☐ The room designated as the command center must have all data and communication equipment including the public address (PA) system.
- ☐ The PA console should be located in the room that is designated as the command center.
- ☐ Window coverings such as mini blinds or roller shades must be provided for all windows and doors to the command center.
- ☐ In secondary schools, the security camera monitors should be located in this area.
- ☐ The space designated as the Command Center must be large enough to accommodate up to six staff persons.
- ☐ Storage space is needed for the shelter in place/lock down emergency kit.

Principal's Office

- ☐ This office requires an outside window, a public entrance connected to the main office, and a private entrance.
- ☐ These areas are to relate effectively with each other as well as to the general office.
- ☐ Each office should be planned for an l-shaped desk, computer, phone, file cabinets, and a small table for four to six chairs for small group meetings.
- ☐ This office requires a private toilet room.

Assistant Principal's Office

- ☐ This office should be carpeted.
- ☐ This office should be equipped with a tack board and two-shelf adjustable bookcases under the windows. Each shelf must be able to hold a 12 inch notebook upright
- ☐ This office should have good visible access to the main entrance and bus drop-off.

Conference Room

- ☐ The conference room should be carpeted.
- ☐ The conference room requires a magnetic marker board, a tack board, and one bookcase.
- ☐ The conference room should be equipped with a video, voice, data and electrical outlets and outlets to accommodate an interactive teaching board.

Counselor's Office

- ☐ The counselor's office should be easily accessible from the classrooms and near, but not a part of, the administration suite and should have a window.
- ☐ This office needs a marker board, tackboard, telephone and computer.

Storage and Records Rooms

- ☐ Two lockable rooms are needed for storage of office supplies and student records.
- ☐ The records room needs space for lockable file cabinets.

2nd Floor Workroom

- ☐ This room requires appropriate electrical wiring and ventilation to house a copier for staff use.
- ☐ This room requires a work counter and cabinets under and over the counter for storing supplies.

Staff Development Area

Spatial Needs
Staff Development Office
Reading Specialist Office
Training/Conference Room

Staff Development Office

- ☐ The staff development area should be located near the classrooms.
- ☐ The office should include one workstation.
- ☐ This office needs a marker board, tack board, closet, and video, voice, and data outlets.

Reading Specialist Office

- ☐ The staff development area should be located near the classrooms.
- ☐ The office should include one workstation.
- ☐ This office needs a marker board, tack board, closet, and video, voice, and data outlets.

Training/Conference Room

- ☐ This room will be used for staff training needs.
- ☐ This room should include ample shelving for training materials.
- ☐ The room should be able to comfortably accommodate up to 12 participants seated around a conference table.
- ☐ A marker board and tack board should be installed.
- ☐ Data and electrical outlets should be provided to accommodate an interactive teaching board.

Health Services Suite

Spatial Needs
Waiting Area
Treatment/Medication Area
Office/Health Assessment Room
Health Assessment/Isolation Room
Rest Area
Toilet Room
Storage Room

- ☐ The Health Services Suite should be in complete compliance with COMAR 13A.05.05.10A.
- ☐ The health suite must meet accessibility requirements of the ADA, and at a minimum, include spaces for waiting, examination and treatment, storage, resting, a separate room for private consultation and for use as the school health services professional's office, a toilet room, and lockable cabinets for storing health records and medications.
- ☐ A designated school health services professional from the Montgomery County Department of Health and Human Services (DHHS) must be involved in the planning of the health services suite.
- ☐ The architect should refer to MSDE document, *School Health Services,* June 2002 for specific utility information.
- ☐ The suite should be designed to provide easy visual supervision of all the spaces by the health services professional. The suite should be laid out so that an additional workstation for a health professional can be positioned near the treatment and waiting areas.
- ☐ In addition to access to the general office, the health services suite also must have a window into the general office so that office staff may monitor the room when heath staff is unavailable.
- ☐ The health room also must have a door to the corridor.
- ☐ Ventilation is important throughout the health suite.
- ☐ The countertops should be seamless to aid in maintaining sanitary conditions.
- ☐ The floor finish should be an easily cleaned non-absorbent material. Carpet should not be used in any areas of the health suite.
- ☐ A non-porous ceiling material should be used. Vinyl-coated ceiling tile or painted drywall is an acceptable choice.
- ☐ If any of the areas are enclosed then glazed walls areas should be provided.

- ☐ The health suite requires wall and base cabinets, lockable file cabinets, for storing health records. A portion of these cabinets must be lockable to store medications, medical supplies, and equipment.

Waiting Area

- ☐ The waiting area should have space for four to eight chairs.
- ☐ A small tack board should be provided in the waiting area to display health care and other information of importance to students and staff.

Treatment/Medication Area

- ☐ This area should be adjacent to the waiting area to facilitate the efficient flow of students.
- ☐ This area should have a kitchen type sink (34") with cabinets above and below (including a locked medicine cabinet), a 34-inch high countertop, and a small residential style refrigerator/freezer to store medical supplies and foods.
- ☐ A minimum of 12 linear feet of wall and base cabinets should be provided.
- ☐ The freezer should have an icemaker.
- ☐ The treatment area also requires a computer.

Office/Health Assessment Room

- ☐ The room requires one computer, fax machine, and electronic connection and physical proximity to a copy machine.
- ☐ The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- ☐ A small sink (34"), with cup, towel, and soap dispensers should be provided.

Health Assessment/Isolation Room

- ☐ This room needs to have access and have a door to the corridor.
- ☐ The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- ☐ A small sink (34"), with cup, towel, and soap dispensers should be provided.

- ☐ Space should allow for a small desk, secretarial chair, three lateral file cabinets with four drawers and a recovery cot.
- ☐ This room will require a telephone and a computer..
- ☐ In the rest area and Isolation Room, supplementary power ventilation capable of 20 changes per hour should be provided, with control by means of a separate switch within the health suite.
- ☐ A window is needed in this room to provide supervision from the treatment area and office. The design of the window also needs to ensure that only staff can see into the room.

Rest Area

- ☐ This area should not be a fully contained room but rather an area that can provide privacy for each cot with a draw curtain on a ceiling track.
- ☐ The rest area needs space four cots with individual light switches for wall sconces, electrical outlets 16” from the finished floor, and bedside cabinets for each rest area.
- ☐ This area should not be a fully contained room but rather an area that can provide privacy for each cot with a draw curtain on a ceiling track.
- ☐ The Isolation Room (see above) should be located adjacent to the rest area,
- ☐ In the rest area and Isolation Room, supplementary power ventilation capable of 20 changes per hour should be provided, with control by means of a separate switch within the health suite.

Toilet Room

- ☐ One ADA toilet should be provided.
- ☐ The toilet room should be accessed without having to go through another functional space in the health suite such as a rest area.
- ☐ Ideally, students should be able to enter the health suite solely to use the toilet room without disrupting other activities.

Storage Room

- ☐ The storage area is to have space sufficient for a four drawer locked file cabinet, a wardrobe for coats, and space for storing large items such as wheelchairs.

Staff Lounge

- ☐ The staff lounge is a place for staff members to relax, study, plan, and think together.
- ☐ Two toilet rooms are required just outside of the staff lounge.
- ☐ The staff lounge should contain a compact built-in kitchen with six linear feet of counter space for a microwave and sink (34”) and a space for a refrigerator (NIC).
- ☐ A clock should be provided.
- ☐ Ventilation must be provided. An operable window in the staff room is preferred.
- ☐ An area should be designated for Video, voice, data and electrical outlets.

Privacy Room

- ☐ A small, enclosed room with countertop and space for one chair is needed.
- ☐ An electrical outlet should be provided above and below the counter and the counter should be tall enough to accommodate a small refrigerator.
- ☐ A small sink is needed for hand washing and washing of personal items.
- ☐ A mirror should be provided above the counter.
- ☐ This space needs to be accessible to staff with disabilities.

Building Service Facilities

Spatial needs
Building Service Office
Locker/Shower area
Compactor/Trash Room
General Storage & Receiving Area
General Storage
Building Service Outdoor Storage
Building Service Closets

Building Service Office

- ☐ The entire building services area should be located adjacent to the general receiving area.
- ☐ The office should be designed as a general office that can accommodate two staff members with two desks and appropriate wiring for computers, phones, etc.
- ☐ If possible, the office should have a window or a sightline to the outside to monitor weather conditions.

Locker/Shower Area

- ☐ A locker area must be located near the receiving area.
- ☐ Six full-size lockers should be provided in the locker area.
- ☐ The locker area should be designed with an enclosed toilet room and shower room for building service staff use.
- ☐ An ENERGY STAR stackable washer and dryer are required in this area.

Compactor/Can Wash/Trash Room

- ☐ This room needs to be completely separate from the kitchen spaces with no common walls.
- ☐ Trash trucks must have access to this room.
- ☐ The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.
- ☐ Hot and cold water should be available for flushing and cleaning.
- ☐ The room should be designed to be pest free and well ventilated.

- ☐ Floors should be sloped so that wash down stays within the room and goes down the drain.
- ☐ The compactors need to be installed with enough clearance away from the wall to permit staff to access the equipment from all sides.
- ☐ A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- ☐ The room should be designed with a ramp to allow trashcans to be rolled to the dock.

General Storage and Receiving Area

- ☐ The receiving area should be enclosed, floor to ceiling, with a chain link fence.
- ☐ Flexible shelving is required but should not occupy more than one third of the area.
- ☐ This area must be secured.
- ☐ Good lighting and easy access to materials being stored are required.
- ☐ Electrical outlets, upgraded lighting and ventilation must be provided in this area.

General Storage

- ☐ Flexible shelving to accommodate books, teaching aids, large size (24" x 36") paper, and other instructional supplies is required.
- ☐ Good lighting and easy access to materials being stored are required.
- ☐ Electrical outlets, upgraded lighting and ventilation must be provided in all large storage rooms for future flexibility.

Building Service Outdoor Storage Room

- ☐ Outdoor storage is to be near the service area and is to be suitable for heavy mowing, snow removal, and other outdoor equipment.
- ☐ The dimensions of the outdoor storage area must be able to accommodate two tractors side by side (one tractor is approximately 9’ long by 7.5’ wide and a second smaller tractor) and other equipment.
- ☐ A rolling garage style door and a regular door must be provided.
- ☐ A ramped and paved driveway is required for the tractor so that it can access the sidewalk and driveways of the school during snow removal.

- ☐ Electrical service and lighting inside must be provided. Access to the light switches must be available at both entrances.
- ☐ Proper ventilation for storage of gasoline is required.

Building Service Closets

- ☐ At a minimum, there should be a building service closet for each 19,000 gross square of the facility. In addition, there should be a building service closet on each floor and each wing of the facility and near the gymnasium.
- ☐ The closets should be a minimum of 25 sq. ft.
- ☐ The building service closet must accommodate a minimum of one utility cart.
- ☐ The closet requires shelving for cleaning supplies and a mop/broom holder is required.
- ☐ The closet requires a floor mop sink with hot and cold running water and a floor drain.
- ☐ Where feasible, closet doors should swing outward in order to maximize the storage area and provide easier access to items within the closets.

Building Support Spaces

Spatial needs
Book Storage
PTA Storage
Emergency Command Center
Telecommunications Rooms

Book Storage

☐ This room should be located near the standard classrooms.

☐ Metal shelving that is 12’ deep should be provided in this room.

PTA Storage

☐ This room should be located near the multipurpose room.

☐ Metal shelving should provided along one side of the room.

Telecommunication Equipment Closet

☐ These rooms should have corridor access and be centrally located in the school.

☐ Specifications for this space are available from the MCPS Facility Guideline Specifications.

Site Requirements

- ☐ The architect should consider the architecture of the neighborhood in designing the building
- ☐ The site should be designed to provide a clear view of all play areas and to facilitate supervision from one location.
- ☐ Protective fencing may need to be provided near heavily wooded areas, busy streets, steep hills, parking lots and turnaround areas.
- ☐ Metal drains/grates should not be located in the playing fields, paved play areas and mulched playground equipment areas.
- ☐ Paved areas and fields must be as level as possible. Water should not collect on paved areas or in mulched areas. The architect should consider the architecture of the neighborhood in designing the building.
- ☐ The design should retain as many trees as possible in order to buffer the school and the playing fields.
- ☐ Pedestrian access must be provided from the surrounding neighborhoods.
- ☐ An unimproved area on-site should be designated to serve as an environmental study area in the future. The architects may refer to the following two MSDE design guidelines: *Conserving and Enhancing the Natural Environment on New and Existing School Sites,* 1999 and *A Practical Guide Planning, Constructing, and Using School Courtyards,* 2012. The documents are available at the following website: www.marylandpublicschools.org/MSDE/newsroom/publications
- ☐ A covered area for students in the bus loading area should be provided.
- ☐ Space for buses to load at one time is needed. The number of buses will be reviewed during the design phase in consultation with the Department of Transportation.
- ☐ Bike racks should be provided near the building.
- ☐ Playground equipment areas should not be located at the bottom of hills unless a provision is made to channel water away from the equipment areas.
- ☐ Accessible parking spaces should be located near the main entrance, the before/after Care entrance, and the playing fields.

Driveway and Service Drive

- ☐ The architect/engineer should refer to the MCPS Facility Guideline Specifications when designing the driveway, bus loop, service drives, etc.
- ☐ Bus traffic should be separated from car traffic at all times, when possible. Bus loading zones should be able to accommodate the entire student body.
- ☐ A student drop off area should be provided and must be separate from the bus loop area.
- ☐ All driveways must be arranged so that children do not cross them to get to the play areas.
- ☐ Care for safety of students must be exercised in developing the driveways including use of safety rails in the bus loading area.
- ☐ Pedestrian access to the school facilities should be designed to make the best use of community right-of-ways and avoid crossing of loading zone areas.
- ☐ The site must comply with the most current ADA or COMAR regulations, whichever is most stringent.
- ☐ Site access must be provided to comply with fire protection and storm water management.
- ☐ Driveway aprons are to be perpendicular to the centerline of the street; and if there is an intersecting street on the opposite side from the proposed driveways, the driveway apron should line up with the intersecting street.
- ☐ Driveways should be located so that vehicle headlights do not project into adjacent homes.
- ☐ A service drive is required to service the kitchen, boiler room, and general delivery area. The architect should refer to the MCPS Facilities Guide.
- ☐ Site access must be provided to comply with fire protection and storm water management regulations.

Parking

- ☐ Ideally, a minimum of 80 parking spaces should be designed initially for a school with regular staffing allocations, with future expansion possible. At schools with class-size reduction, 100 parking spaces should be provided.
- ☐ The parking area should be designed to maximize safety and minimize speed.
- ☐ Adequate lighting should be provided.
- ☐ Parking area should have two exits.
- ☐ Guardrails or bollards are to be installed to protect fields and play areas.

Landscaping

- ☐ Planting should include screen planting and other planting needed for erosion control.
- ☐ Existing plant stock, if on site, is to be evaluated for reuse and protected accordingly.
- ☐ Landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.
- ☐ Consideration should be given to safety and security when selecting plant materials.
- ☐ Provision for outdoor watering must be included.
- ☐ The landscaping plan should include areas for outdoors environmental education programs.

Physical Education Site Requirements

The items described below are for a school that meets the minimum useable site size of 7.5 acres that is capable of fitting the instructional program, including site requirements. At schools with smaller sites, the architect is to work with MCPS staff, including the Physical Education Curriculum Coordinator, Safety Director, and school staff to determine layout of the play areas. The outdoor physical educational instructional space should not be compromised for playground equipment.

Softball Fields

- ☐ Two softball fields should be provided with the following design requirements:
- ☐ 250' radius, with a soccer field superimposed should be provided if possible. See below for the soccer field dimensions.
- ☐ The site size will determine the number and dimension of the softball fields.
- ☐ Softball fields should have metal benches protected by fencing for each team's use.
- ☐ The fencing and benches should not interfere with soccer field usage.
- ☐ The softball backstops (2) shall be in diagonal corners of the field or in corners on the same side. See the diagram in the MCPS Facilities Guideline Specifications.
- ☐ Softball infields are not skinned for elementary schools. However, one field may be skinned if it does not significantly impact the soccer playing area.

Soccer

- ☐ The site size will determine the size of the soccer fields. The elementary school size soccer field is 150'x240' however the minimum size field should be 105' x 180'.
- ☐ No permanent goals or temporary goals should be installed on the soccer fields.

Paved Play Areas

- ☐ Two paved areas, 80' x 100' should be provided if the site permits.
- ☐ If located adjacent to one another, a grassy strip of at least 20' should be between the two paved areas.
- ☐ One area should have four basketball goals with appropriate striping (see diagram in the MCPS Facility Guideline Specification).

☐ A second area, designated for primary use, shall be striped according to drawings provided in the MCPS Facility Guideline Specification. On small sites, this pave area should be fenced for use by Grade Kindergarten students.

Kindergarten Paved Play Area

☐ A third paved area, at least 40’x 60’ but preferably 80' x 100', is desired, is needed for the Kindergarten students.

☐ This area needs to be located adjacent to the Kindergarten playground (mulched) area and close to the other paved play areas.

☐ This area requires a fence around it or adequate separation from the other paved play areas.

☐ The area will be striped according to drawings provided in the Facility Guideline Specification.

Playground Equipment Areas (mulched areas)

☐ One or two areas shall be provided near the playing fields and large paved play area for playground equipment. Each area should be approximately 40’x40’. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.

☐ The area shall be level, bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for these areas.

☐ An underground drainage system must be provided.

☐ The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

Kindergarten Play Area (mulched area)

☐ A mulched kindergarten play area of 40' x 60' should be located adjacent to the kindergarten paved play area described in the physical education section for playground equipment. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.

☐ The area shall be level bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for this area.

☐ Protective fencing should enclose the area.

☐ An underground drainage system must be provided.

☐ The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

Prekindergarten Play Areas

☐ If the school has a prekindergarten, Head Start, or Preschool Education Program, then a separate and fenced outdoor play is required.

☐ This area must be adjacent to the classrooms with access directly from the classrooms.

☐ If the school does not have a prekindergarten program than the outdoor play area should be master planned so that it can be added on at a later time.

☐ The prekindergarten play area should include a 40’x40’ paved play area and a 40’x40’ mulched area. The architect will consult with the MCPS staff on the design of the playground equipment.

Additional Program Requirements

☐ If there is major site work on this project, the design team should review how the arrival and drop-off of disabled students are accommodated to meet current accessibility requirements.

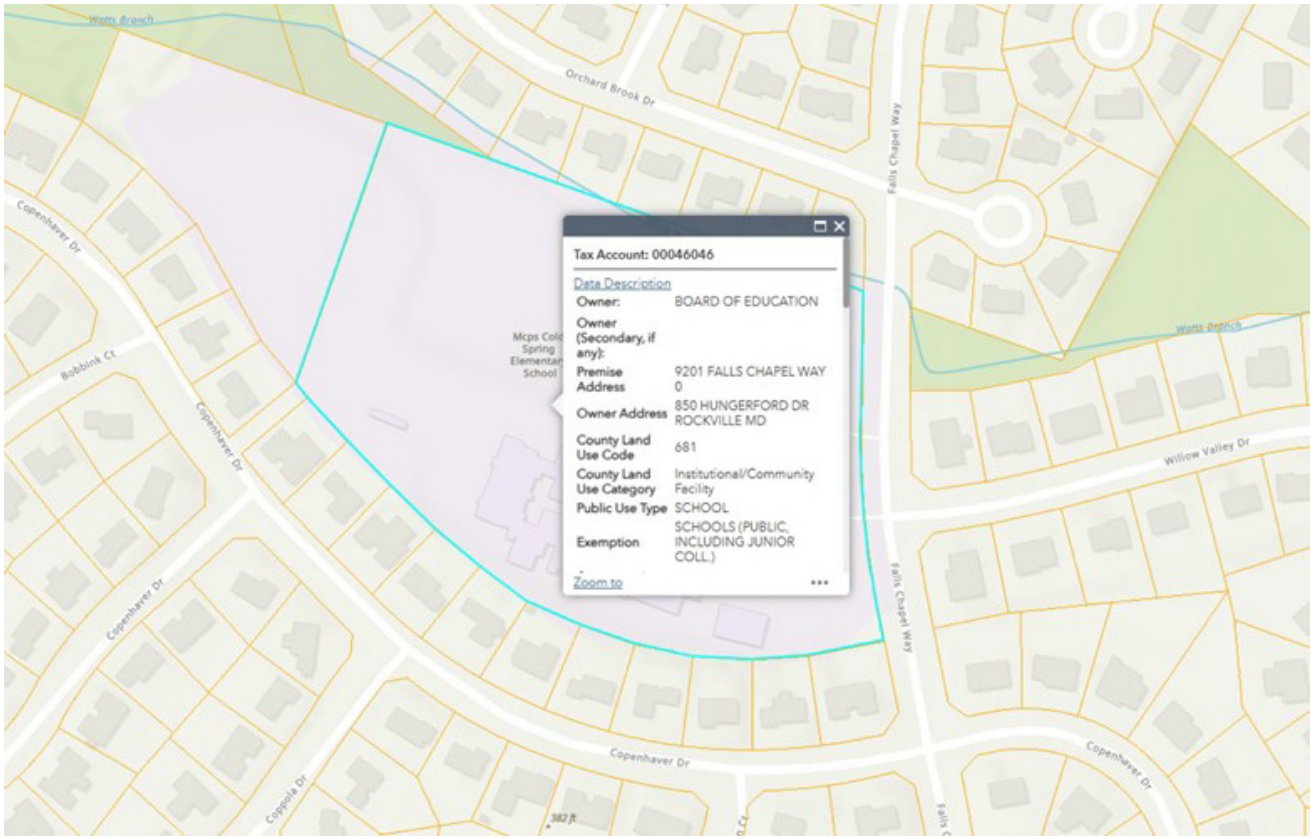
APPENDIX C: EXISTING CONDITIONS SURVEY & PHOTOS

Civil Overview

The existing Cold Spring Elementary School is located at 9201 Falls Chapel Way in Potomac, MD. The site is bordered on the northeast and southwest by single detached residential properties, Falls Chapel Way at the east of the school, and Watts Branch Park west of the school.

The property is known as Parcel P515 and is located on tax map FQ53. The property is 435,600 sf (10 acres). The property is zoned R-200.

The site is currently an operating elementary school consisting of the school building, combined bus and parent drop-off and associated parking, 2 basketball courts, a grass play field, soft surface play areas, and an asphalt play area.



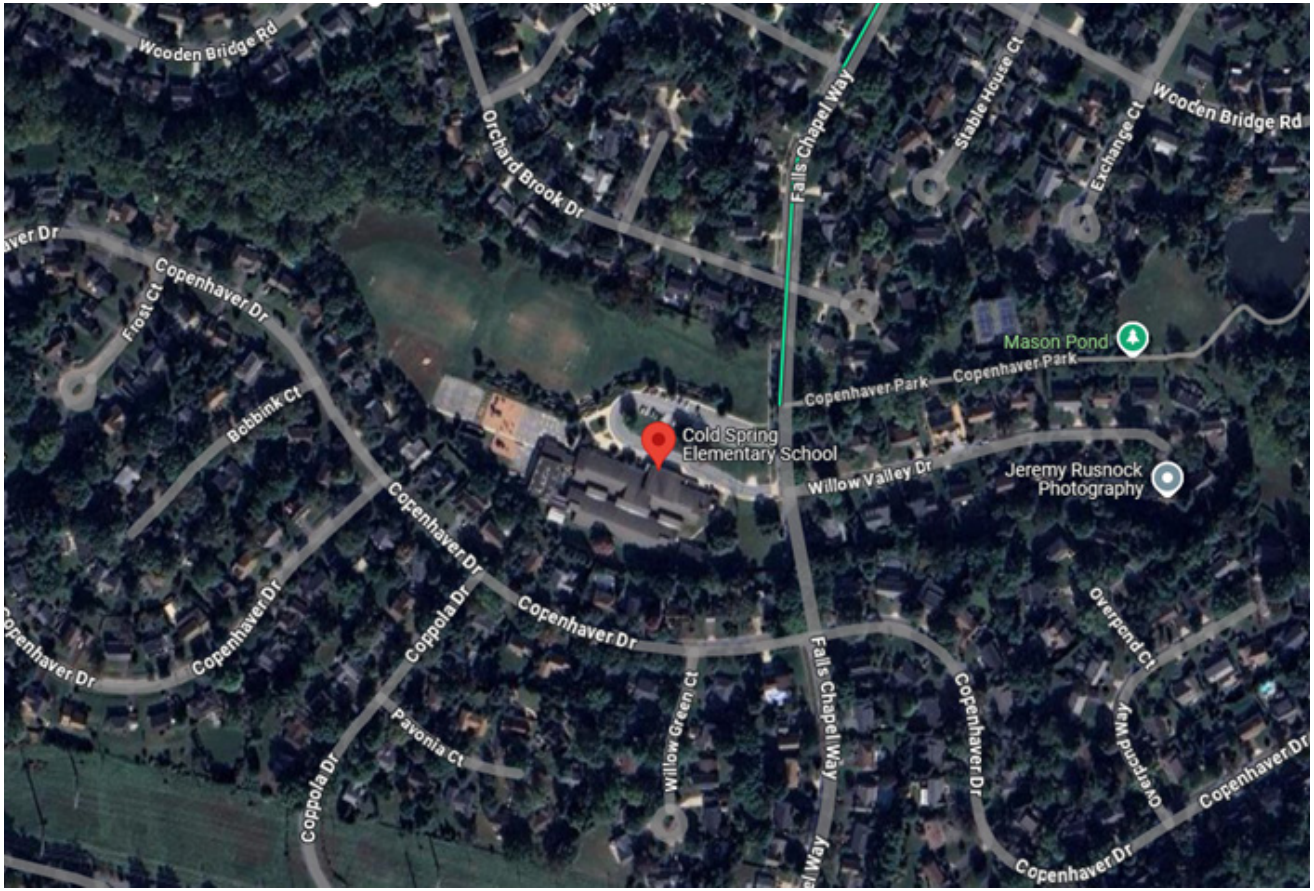
Site Circulation and Parking

The site currently has two curb cuts, both located on Falls Chapel Way. One curb serves as the entrance only, while the other serves as the exit only. The parking lot contains 69 spaces, including 2 ADA-designated spaces.

The parking lot connects directly to the parent drop-off and the bus loop. The parent drop-off loop experiences significant congestion during arrival and dismissal times due to all the traffic for the school entering and exiting from the same points. The exit is located near the intersection with Willow Valley Drive, contributing to traffic delays.

There is only one loading dock for the school, accessible from the curb cut near the front corner of the building which is not ideal from a visibility perspective and access for deliveries and trash being at the front of the school.

There are currently 4 ADA parking spaces striped. Two are across the main entrance and appear to be ADA compliant. There are also 2 spaces near the exit. The spaces appear to have proper slopes but do not have compliant signs or access to the building.



Zoning

The property is zoned R-200. Educational uses are allowed in residential zones. Below are the requirements of the zone:

Lot coverage:	35% maximum
Building Setback – Front:	25’
Building Setback – Side:	25’
Building Setback – Rear:	20’
Building Height:	35’ max

MCPS is allowed leeway in several zoning categories if the building is unable to comply with the zoning requirements. Parking for MCPS projects is based on MCPS experience. It is anticipated that all staff members will be required to park on site and have space for visitor spaces during the day. MCPS is contractually required through the teachers union to provide a minimum of 80 parking spaces.

Property Topography

In general, the property drains from south to north. There are significant grade changes from the south to the north. There are currently several micro-bioretention areas that are tiered with retaining walls on the north side of the parking areas and the paved play spaces. The runoff from the site drains to an unnamed tributary to Watts Branch. This area is within MDE Watershed #02140202, which is designated as Use Water I-P water. Class I-P waters are intended general use and public drinking water.

Soils

Soils for the site are noted as Gaila-Urban land Complex (7UB and 7UC), Baile Silt Loam (6AB) and Wheaton-Urban Land Complex (66UB and 66UC).

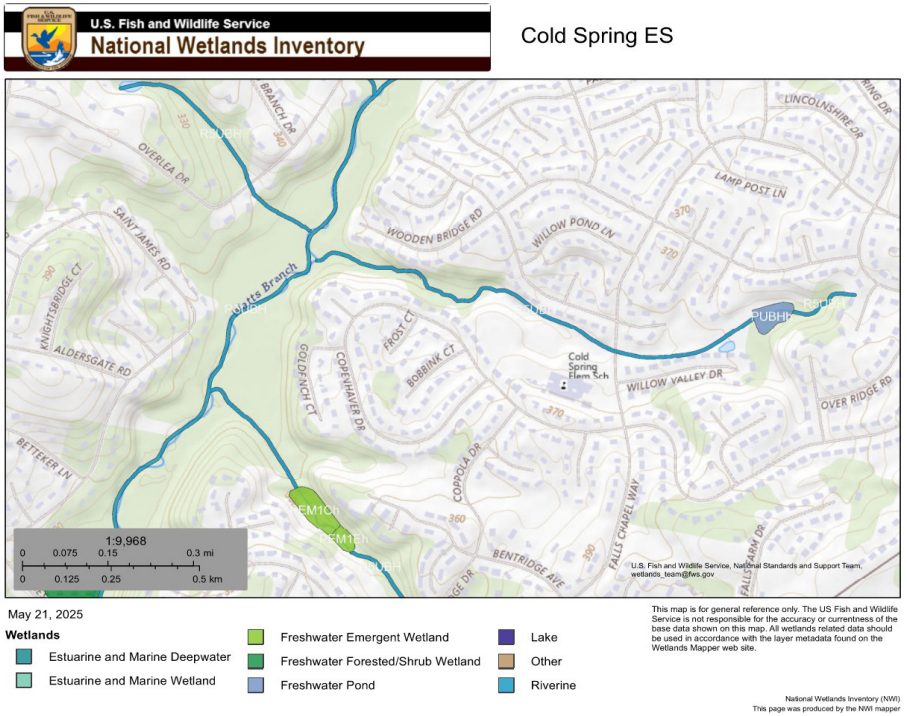
Floodplain, Wetlands, and Streams

A portion of the site is located within the 100-year floodplain per FEMA map 24031C0337D (effective as of 9/29/2006).

There are currently no wetlands on the property per the National Wetlands Inventory. There is currently a stream that correlates to the floodplain.

Forest and Landscaping

Most of the vegetation for the site is focused along the southern property lines. It does not appear that any of the landscaped areas meet the requirements of a forest. There are other miscellaneous trees located around the site. All the trees appear to be in reasonable shape.



Vicinity map with wetlands inventory.

Existing Athletic Facilities

There are two soccer fields which are located northwest of the building and both fields are in fair condition. The hard and soft surface play areas were installed with the 2013 addition and are in good condition. There is ADA access to the grass play fields.

Existing Utilities

Water

The site is currently served by a 6” Asphaltic Ductile Iron pipe waterline that comes from an 8” cast iron or sand spun line in Falls Chapel Way.
Sanitary Sewer: The site currently drains to an 8” sanitary sewer main that is located on the property in an easement. The sewer main runs near the stream.

Storm Drainage

There are currently two storm drain outfalls on the site. One outfalls to the stream located on the north end of the property. There is rip-rap outflow protection to prevent erosion. The other outfall ties a 15” RCP into a 60” RCP on the far side of the stream.

Stormwater Management

The site includes three micro-bioretention facilities per Environmental Site Design regulations. Retaining walls are incorporated within the micro-bioretention areas to create a tiered treatment system. Additionally, the gymnasium addition from 2013 included a green roof.

Electric and Gas

Electric and gas for the site come from Falls Chapel Way near the curb. The gas is noted as a 1.5” line. The existing transformer and generator are located near the loading dock.

Vicinity map showing water and sewer lines.

Vicinity map showing storm drainage.

Structural Analysis

A limited structural analysis was performed to determine the feasibility of supporting a photovoltaic system on the building roof. The analysis was based on a review of available building drawings and the assumption that the existing structure is in good condition. The analysis is not comprehensive but based on an evaluation of a representative sample of components of the roof structure. The original school building was constructed in 1971, and a gymnasium was added in 2013. The roof structures are comprised of steel decking supported by open-web steel bar joists spanning between wide flange steel girders and masonry bearing walls. The girders are supported by a combination of steel columns and masonry bearing walls.

1971 Building

The roof of the original building features a “sawtooth” configuration with a typical slope of 2½-inches per foot. This condition will result in the accumulation of drifting snow, and consequently larger snow loads, at roof valleys and on low roof areas adjacent to higher roofs. A detailed evaluation of the location and extent of snow drift effects on the structure was beyond the scope of this study; however, the analysis does indicate that locating solar panels in these regions may require the reinforcement of the roof framing. The analysis also shows that at roof areas unaffected by drifting snow loads, the joists and girders have a modest reserve capacity that may be sufficient to support a non-ballasted, directly anchored type of solar panel system, depending on its weight. Analysis of the roof deck, however, indicates that it may not have the reserve capacity required to support a directly anchored solar panel system, necessitating the introduction of a new substructure to support the solar array, carrying the loads directly to the existing joists and girders.

2013 Gymnasium Addition

The roof structure above the gymnasium, P.E. office, toilet rooms and lobby were evaluated. The gymnasium roof currently features a vegetative or “green” roof system. The structural general notes indicate that the design dead load used for the gym roof includes 30 p.s.f. to account for the weight of the green roof. If this roof is removed and replaced with a membrane-type roof, the structure should have sufficient capacity to support a ballasted or directly anchored solar panel system. Due to snow drift effects, however, the extent of the solar array should be no closer than 9’-0” from the inside face of the parapet walls.

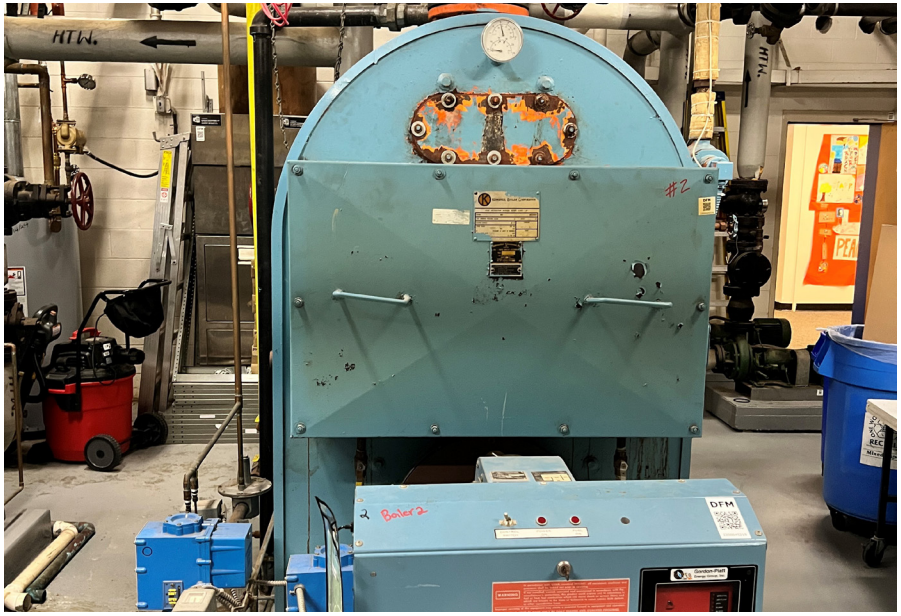
The analysis of the lower roof above the P.E. office, toilet rooms and lobby indicates that the joists and deck should have sufficient capacity to support a ballasted or directly anchored solar panel system.

Mechanical Systems

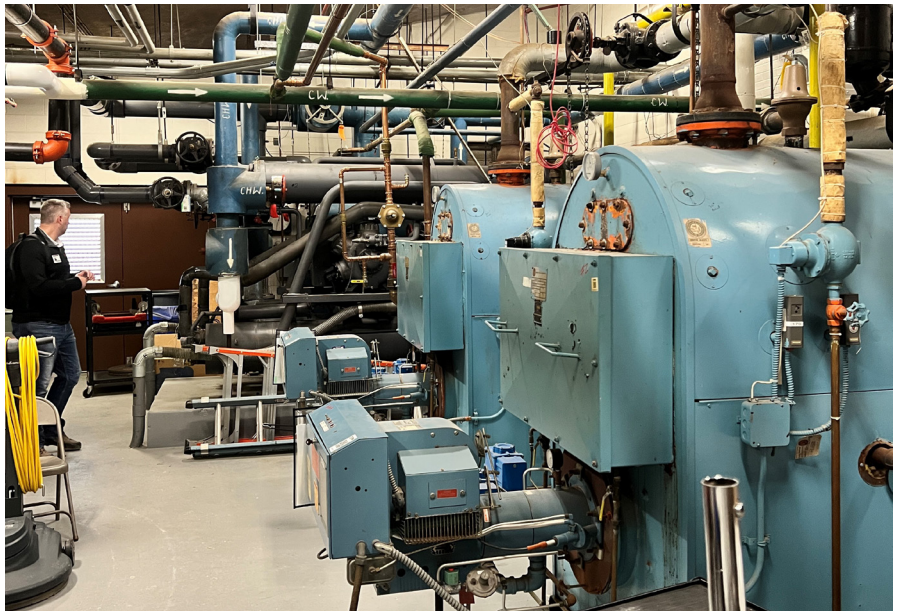
Cold Spring Elementary School was originally constructed in 1972, with a cooling tower replacement in 2007, and a gymnasium addition constructed in 2012. It appears that the majority of mechanical equipment that currently exists within the school dates to the original 1972 construction. The following is a description of the existing mechanical systems.

Heating Water Infrastructure Systems

Two steel forced-draft firebox gas-fired boilers produce heating water for the school. Located within the first floor boiler room area, this equipment was installed in 1972 and appeared to be in fair to poor condition. This equipment has exceeded its useful service life and is recommended for replacement during any future building renovations.



Existing heater water boiler



Existing heating water boilers

Existing heating water pumps

Manufactured by Kawanee Boiler Corporation (Model M 175), each boiler has a gross output rating of 1,750 MBH. While the existing boilers are functioning adequately to satisfy the existing school, there does not appear to be surplus capacity to support any planned additions without losing standby capacity in the event that one boiler fails. Combustion air enters the boiler room through a wall-mounted louver positioned adjacent to the exterior doors. While provided, this approach does not comply with the current International Mechanical Code (IMC) and CSD-1 requirements for combustion air.

Heating water is supplied to the building's four-pipe distribution system through two base-mounted end-suction pumps, located within the lower level boiler room area. Manufactured by Taco, these constant speed pumps are arranged in a lead/lag setup, with only one pump operating at any time. The existing pumps were installed during the 1972 original construction and appeared to be in fair to poor condition. The heating water distribution system is equipped with an air separator, shot feeder, and an air-charged expansion tank.

Chilled Water Infrastructure Systems

A single 150-ton water-cooled chiller (Trane Model CG139C) is provided for production of chilled water. This chiller was installed during the original 1972 construction and appeared to be in fair to poor condition. The chiller is located within the first floor boiler room. This equipment has exceeded its useful service life and is recommended for replacement during any future building renovations. There does not appear to be surplus capacity available to support any planned additions or expansions to the school.

Heat rejection from the water-cooled chiller is accomplished by a single induced draft cooling tower located on the roof, above the penthouse mechanical room. The cooling tower is mounted on structural dunnage, with vibration isolation provided between the cooling tower base and the structure. Manufactured by Baltimore Aircoil Company (model 15146), this tower was installed around 2007 and is approaching the end of its anticipated useful life. Outdoor condenser water piping is constructed from PVC and is installed without heat trace.

Chilled water is supplied to the building's four-pipe distribution system through a base mounted end-suction type pump. Condenser water is distributed between the chiller and cooling tower through an additional base mounted end-suction type pump. Chilled and condenser water pumping system redundancy is accomplished through a common standby base mounted end-

suction pump, connected to both the chilled and condenser water systems. Manufactured by Bell & Gossett (Series 1510), all three pumps are located within the first floor mechanical room, equipped with constant speed motors, and appeared to be in fair to poor condition. The chilled water distribution system is equipped with an air separator, shot feeder, and an expansion tank.

HVAC Systems

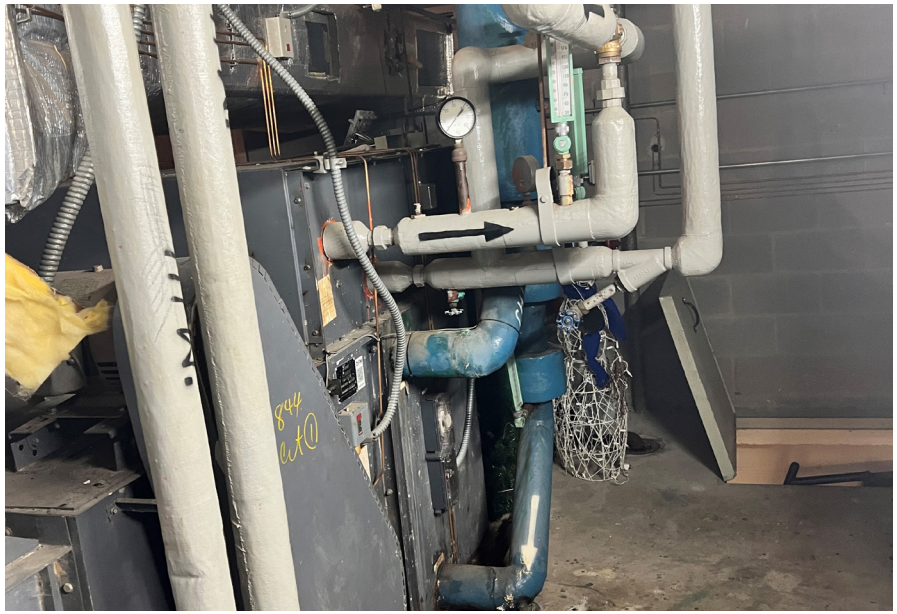
The heating, ventilating, and air conditioning (HVAC) systems vary slightly throughout the school. A majority of these systems, excluding the gymnasium area, were installed in 1972 and appeared to be in poor condition. The following is a breakdown of the various spaces and their associated HVAC systems.

Classroom and Media Center Areas

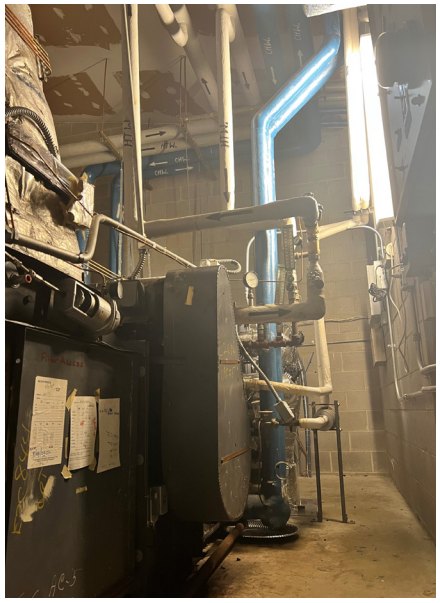
Classroom and Media Center areas throughout the school are provided with space conditioning and ventilation through a series of indoor constant volume, multizone, air handling units. The air handling units are located in mechanical mezzanine spaces near the areas served and provided with chilled and heating

Existing heater water pumps

Existing cooling tower



Existing air handling unit for classroom and media center areas



Existing air handling unit for admin/health suite

Existing condensing unit for admin/health suite

systems. Outside air is introduced to the air handling units through wall louvers within the mezzanine spaces. Manufactured by Trane (Climate Changer), these air handling units and branch chilled and heating water piping was installed during the 1972 original construction. This equipment has exceeded its useful service life and is recommended for replacement during any future building renovations.

Administration and Health Suite Areas

Administration and health suite areas are provided with space conditioning and ventilation through an indoor constant volume, multizone, air handling unit. The air handling unit is located in a mechanical mezzanine space near the areas served and provided with a direct expansion (DX) cooling coil and a heating water coil connected to the building's heating water system. An air-cooled condensing units is installed at grade, adjacent to the multipurpose room, for heat rejection from the DX cooling coil. Outside air is introduced to the air handling unit through a wall louver within the mezzanine space. Manufactured by Trane (Climate Changer), this air handling unit, air-cooled condensing unit (Trane Model RAUA-2006-E) and branch heating water piping was installed during the 1972 original construction. This equipment has exceeded its useful service life and is recommended for replacement during any future building renovations.

Gymnasium and Gymnasium Lobby Areas

The gymnasium is provided with heating and ventilation by a gas-fired heating and ventilating (H&V) unit, along with companion outdoor air intakes and exhaust fans for summer operation. Air-conditioning for the gymnasium is currently not provided. Manufactured by Mestek, this H&V unit is located on a mechanical mezzanine that is positioned above the gymnasium storage area. The adjacent gymnasium lobby and gymnasium office areas are provided with space conditioning and ventilation through a packaged rooftop unit (installed at grade), complete with DX cooling and gas-fired heating. All equipment within this area was installed in 2012 and appeared to be in good to fair condition during our site visit.

Multipurpose Room and Stage Areas

The Multipurpose Room and Stage areas are provided with space conditioning and ventilation through an indoor constant volume, multizone, air handling unit. The air handling unit is located in a mechanical mezzanine space near

Existing gymnasium lobby rooftop unit

the areas served and provided with chilled and heating water coils connected to the building's four-pipe chilled and heating water systems. Outside air is introduced to the air handling unit through a wall louver within the mezzanine space. Manufactured by Trane (Climate Changer), this air handling unit and branch chilled and heating water piping was installed during the 1972 original construction. This equipment has exceeded its useful service life and is recommended for replacement during any future building renovations.

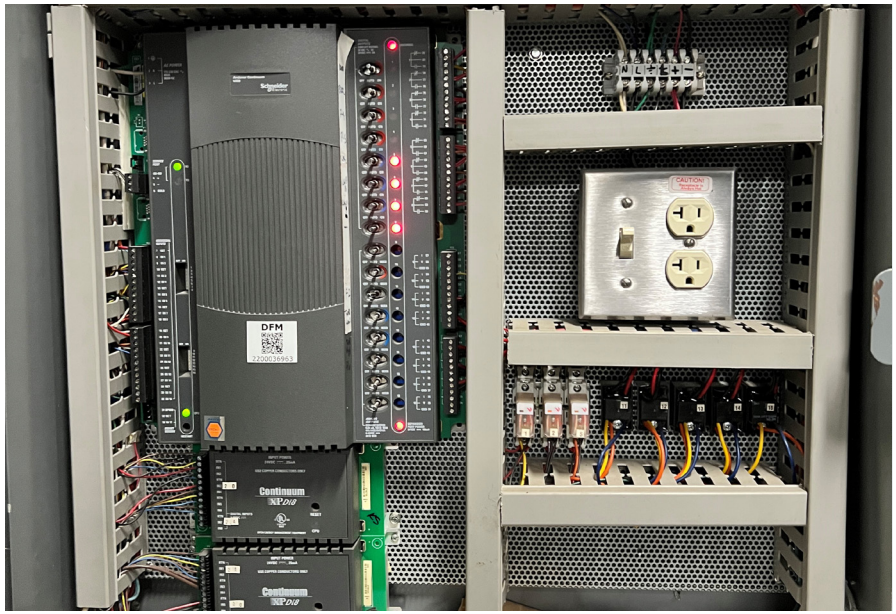
Kitchen Area

A ceiling-mounted exhaust register is positioned near the can wash area and is ducted to a an indoor exhaust fan. Exhaust air from this fan is discharged through a wall louver. Additionally, a single roof mounted exhaust fan is installed to serve the kitchens hood, located above the oven. The age of the kitchen exhaust fans is not known.

Existing gymnasium H&V unit

Existing air handling unit for multipurpose room

Existing kitchen area



Existing central plant DDC controller

Existing boiler room air compressor

Building Exhaust Systems

A combination of roof-mounted, ceiling-mounted, and wall-mounted fans remove exhaust and pressure relief air throughout the building. The age and condition of these fans vary throughout the school; generally, they appear to have exceeded their useful service life.

Automatic Temperature Control (ATC) Systems

The school's existing ATC system is primarily comprised of a StruxureWare direct digital control (DDC) system with BACnet protocol. Beyond these StruxureWare components, limited pneumatic control components serve equipment (such as air handling unit damper and valve actuators) throughout the school. Pneumatic control components are supplied by an existing duplex air compressor with a horizontal storage tank located within the first floor boiler room. Replacement of any existing pneumatic control device with electronically-operated DDC type components is recommended under any planned building renovations.

Plumbing Systems

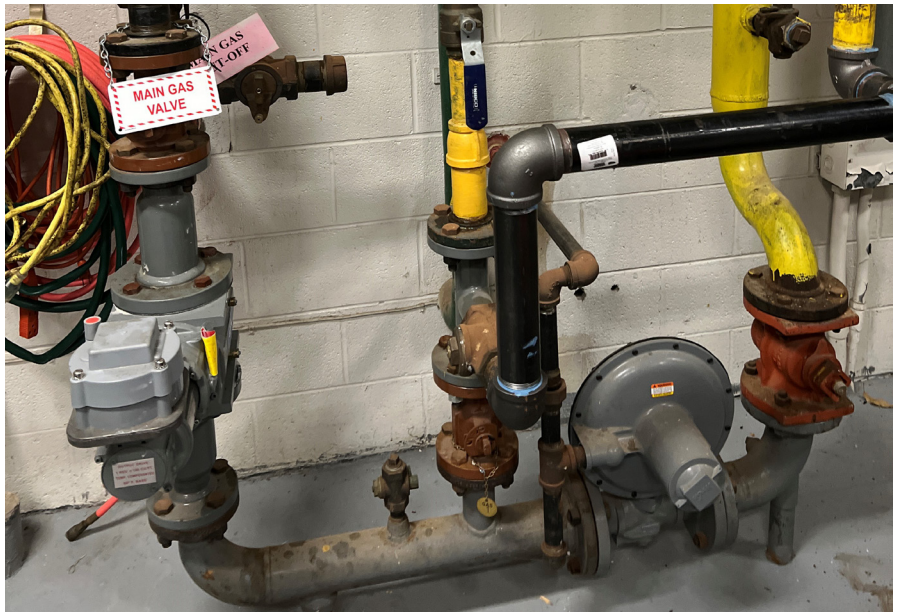
Domestic Cold Water and Associated Domestic Water Piping

Cold Spring Elementary School is served from the county water system through a 6-inch combination fire and water service, entering the building within the first floor boiler room. A 3-inch domestic water main extends from this service to support the building's domestic water requirements. It is anticipated that limited surplus capacity exists within the existing 3-inch domestic cold water main.

The school's domestic water piping systems (including cold water, hot water, and hot water return piping) vary in age, with this piping installed either during the school's 1972 original construction or during the 2012 gym addition. These piping systems and associated piping components (valves, fittings, and piping insulation) are nearing or have exceeded their useful service life and are recommended for replacement during any planned building renovations.

Combination fire and water and sprinkler backflow preventer

Domestic water heater and hot water circulation pump



Incoming natural gas service

Domestic Hot Water Equipment

Domestic hot water is generated by a water heater that is located within the first floor boiler room. Manufactured by State Industries (Model GS6-75-XRRS 400), this heater is provided with a 75.1 MBH gas burner, capable of 73 gallons per hour recovery, and complete with an integral 74-gallon hot water storage tank. This equipment was installed around 2024 and appeared to be in good condition. A circulation pump maintains continuous hot water flow throughout the building. It is anticipated that minimal surplus capacity exists for the existing hot water heater.

Natural Gas Service

The 2-inch incoming natural gas service and associated rotary meter (Washington Gas meter no. 761290) is located within the first floor boiler room with a pressure regulating valve located outdoors. This gas service supplies MEP equipment throughout the school, including the existing boilers, water heater, air handling units, and the emergency generator.

Sanitary Waster, Storm Water, and Vent Piping

Like the domestic water piping systems, a majority of the existing above- and below-grade sanitary waste, vent, and storm water piping systems were installed either during the school's 1972 original construction or during the 2012 gym addition. These piping systems are nearing or have exceeded their useful service life and are recommended for replacement during any planned building renovations.

Lavatory fixtures

Fire alarm control panel and voice control panel

Urinals

Plumbing Fixtures

Plumbing fixtures appeared to generally be in good condition. The water closets are floor-mounted, urinals are wall-hung, and the lavatories are individual wall-hung type.

Fire Protection Systems

Sprinkler Systems

The entire Cold Spring Elementary School is currently provided with sprinkler coverage throughout,. The age of existing sprinkler piping and associated sprinkler heads is unknown. A double-check type backflow preventer is provided within the first floor boiler room, separating the fire service from the domestic water service. A fire line extends from this backflow preventer to a series of zone valve assemblies, located within the first floor boiler room. Sprinkler mains extend from each zone valve assembly and serve sprinkler heads located throughout their respective zone.

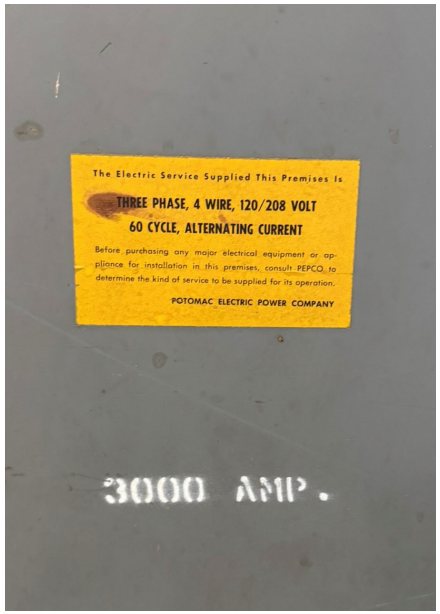
Fire Detection and Alarm System

The addressable fire alarm control panel (FACP), located in can wash adjacent to the boiler room, is by Fire-Lite Alarms, Model MS 9600UDLS with ACC-25/50 Audio Command Center for voice evacuation. There is fire alarm annunciator panel (FAAP) with graphic display and indicator lights at the main entrance lobby. Adjacent to the FAAP is a fire alarm system paging microphone. Fire alarm devices include manual pull stations, duct and area smoke detectors, magnetic door holders at fire doors in the corridors, and audible and visual notification devices. Notification devices (speaker/strobes and strobes) are ceiling mounted in the corridors and classrooms.

Electrical Systems

General

Cold Spring Elementary School (ES) was originally constructed in 1972 with a gymnasium addition constructed in 2012. It appears that most of the existing electrical distribution equipment within the school date to the 1972 and 2012 projects.



Switchboard nameplate inconsistency

Switchboard nameplate inconsistency

Enclosed circuit breaker and tap serving gym addition

The following is a description of the existing electrical service, power distribution, lighting and lighting controls, voice/data, public address, security (door access control, intrusion detection, video surveillance), and fire detection and alarm systems.

Electrical Service

The electrical service to Cold Spring ES is provided by a Pepco via a pad-mounted transformer (746 446 5142) located on the east side of the building, near the boiler room. Secondary service feeders are run in an underground ductbank from the secondary of the Pepco utility transformer to a CT section of the main switchboard located in the boiler room. The Pepco meter (KZD350368481) is located in the boiler room, near the exterior entrance.

Power Distribution

The main switchboard, manufactured by Westinghouse, is rated at 120/208 volts, 3-phase, 4-wire, with a 2000-ampere bus. (The nameplate on the main switchboard incorrectly indicates a rating of 277/480 volts, 3-phase, 4 wire, with a 4000-ampere bus.) The switchboard consists of three sections. From right to left, the first section is the CT cabinet section. The second section is a mains section with three fused switches as follows: 400A fused switch serving Panel M, 400A fused switch serving Chiller No. 1, and 400A fused switch serving Chiller No. 2. The third section is a distribution section with a 1200A main fused switch, 200A fused switch serving portable classrooms, and molded case circuit breakers serving Panels A, B, C, D, K, BRL and “Emergency Panel”. The main switchboard bus is tapped to serve a General Electric 600A enclosed circuit breaker mounted to the side of the main switchboard, and a 400A enclosed switch serving Panel GL in the gym addition.

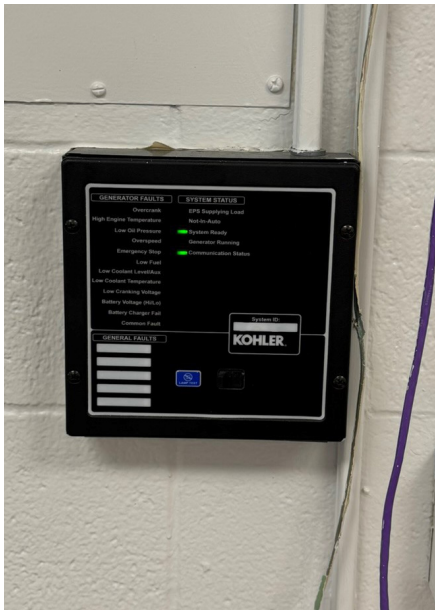
Panels A, B, C, D, K, M, and BRL are original to the school’s construction and are manufactured by Westinghouse. Panels A, B, C, D are and are located in the corridors. Panel K (Westinghouse, Type NQB) is located in the kitchen. Panel M, BRL, and “Emergency Panel” are located in the boiler room.

Generator Distribution

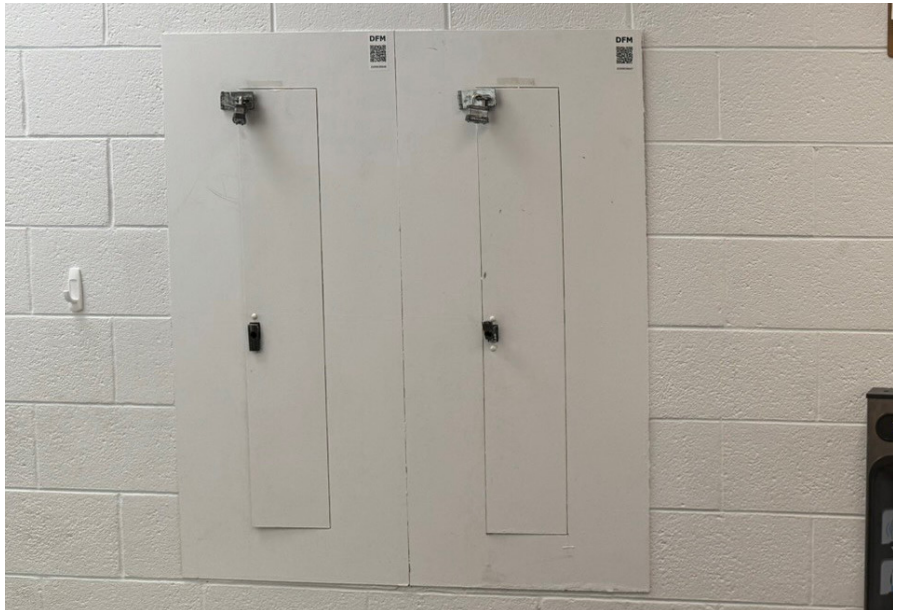
A natural-gas, outdoor generator in weatherproof enclosure, located on the north side of the school near the boiler room, provides emergency and optional stand-by power to Cold Spring ES. The generator, manufactured by Kohler

Typical branch circuit panelboards in corridor

Gym additional panel



Generator remote annunciator panel in the main office area



Typical branch circuit panelboards in corridor

Automatic transfer switches in boiler room

Typical classroom lighting

Kitchen lighting

Power Systems, is rated at 50 kW, 120/208 volts, 3 phase, 4-wire. The generator serves two automatic transfer switches in the boiler room.

Exterior Generator

The main switchboard serves a Siemens, Type P1, "Emergency Panel" in the boiler room that has a 3P 100A circuit breaker serving "Standby" automatic transfer switch (ATS) and a 3P-80A circuit breaker serving "Life Safety" ATS. Automatic transfer switches are by Kohler Power Systems, located in the boiler room. "Standby" ATS connects to adjacent "Standby" panelboard, which serves fire alarm equipment, emergency lighting, telephone, and boilers. "Life Safety" ATS connects to adjacent "Life Safety" panelboard, which serves pumps, kitchen freezer and refrigerator.

Lighting and Lighting Controls

Fluorescent lighting is primarily used in Cold Spring ES. Classrooms, instructional spaces, offices, corridors, and multipurpose room utilize 2'x4' recessed fluorescent troffer luminaires (lighting fixtures) with prismatic lens and linear fluorescent lamps. The stage within the multi-purpose room has six surface mounted incandescent aimable spot lights in front of the stage and seven surface incandescent aimable spot lights above the stage. The kitchen has 4-foot long fluorescent luminaires with wraparound prismatic lenses and linear fluorescent lamps. The gymnasium has high bay luminaires utilizing eight 32-watt compact fluorescent lamps in each luminaire. The boiler room and rooms with open ceilings have industrial type luminaires with linear fluorescent lamps. Exit signs have red lettering.

There are exterior building mounted wall pack luminaires, some having yellowing lenses. The gym addition has full-cutoff LED exterior building mounted luminaires with bronze finish. The parking lot and bus loop have flood lights mounted on top of the light poles, which are not dark sky compliant.

Line-voltage toggle switches are used to control lighting in each space. Cold Spring ES does not use occupancy sensors to automatically turn off lighting when rooms are unoccupied.

Lighting and lighting controls do not meet current energy-code requirements (i.e., 2021 International Energy Conservation Code) for lighting power density (watts per square foot), occupant sensor controls, and light-reduction controls (dimming).

Gym lighting

Exterior, wall pack lighting fixture

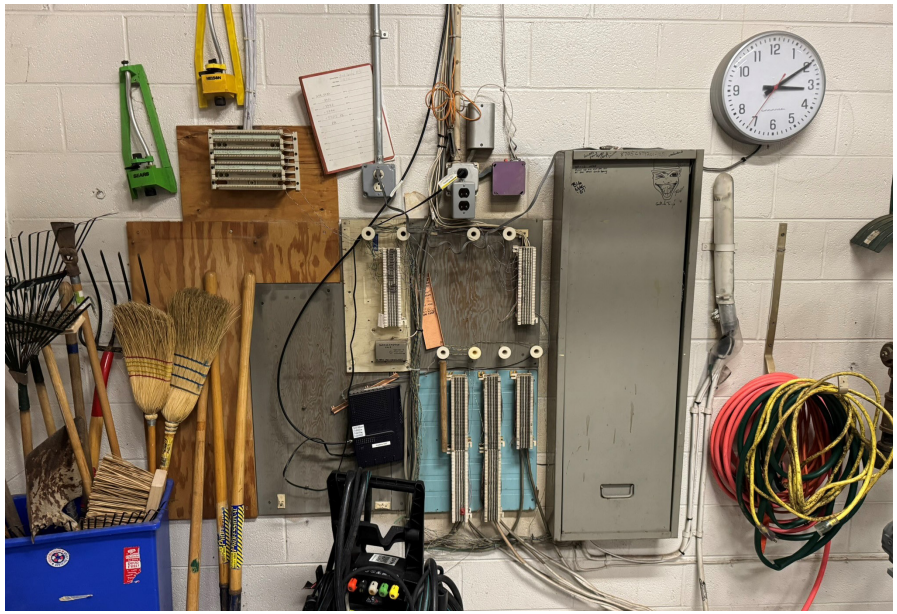
Exterior, pole-mounted lighting fixture

Cafeteria lighting

Typical classroom lighting controls

Data racks in storage room

Data racks in storage room



Telephone system demarcation point in boiler room

Data and Voice Systems

There are two data racks and a Dell server rack located in a storage room used as the main telecom room. These data racks were installed during the 2002 cabling infrastructure upgrades. Data racks are by CableTalk. Rack-mounted data fiber optic distribution enclosures/light interface units are by Corning. Data patch panels are by Superior Modular Products (EFS). Electronic data switches are by Cisco. Category 5e wiring is installed throughout the school, which provides network connectivity. Classrooms have teacher outlets and student outlets. Category 5e data cables are blue in color. Wireless access points (Cisco routers) are mounted on the ceilings of classrooms and in corridors.

The telephone system is a separate key system for telephones in the school offices. The telephone company demarcation point is in the boiler room. The telephone switch is also located in the boiler room. The head-end equipment is by Comdial. There are Comdial “Impression” handsets in the main office area.

Intercom and Sound Systems

The public address/intercom system is by Dukane, with the cabinet/console located in the main office area. The system has the capability to perform select local calls to classrooms or paging throughout the school. Each classroom has a 2’x2’ recessed ceiling speakers and a wall-mounted call switch.

In the multi-purpose room, there is a portable sound system by Ensign on a cart with Klipsch performance speakers on each side of the stage.

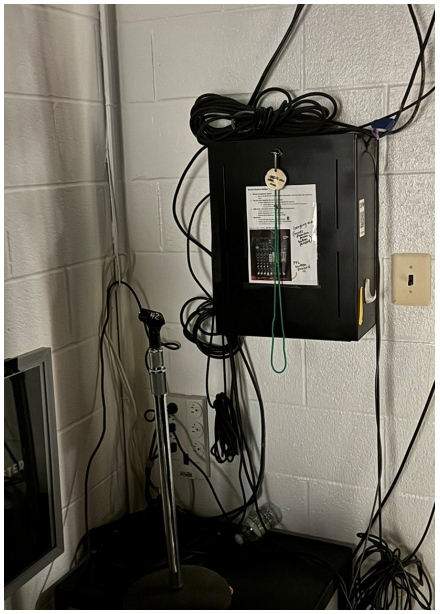
There is a stand-alone sound system in the gymnasium with microphone outlets, two ceiling-mounted spherical speakers, and mixer/amplifier (Architectural Acoustics by Peavey) located in the gym office.

Video and Audio/Visual Systems

There is rack-mounted video distribution system equipment behind the data racks in the storage room used as the main telecom room. Equipment includes General Instrument/Jerrold Commander IV Processor, General Instrument/ Jerrold Duplex Filter, Comcast box, and VHS player by JVC. Cable TV outlets are located in classrooms.

Classrooms have Promethean smart boards.

Public address system



Cafeteria sound system

Gym sound system

Video distribution system

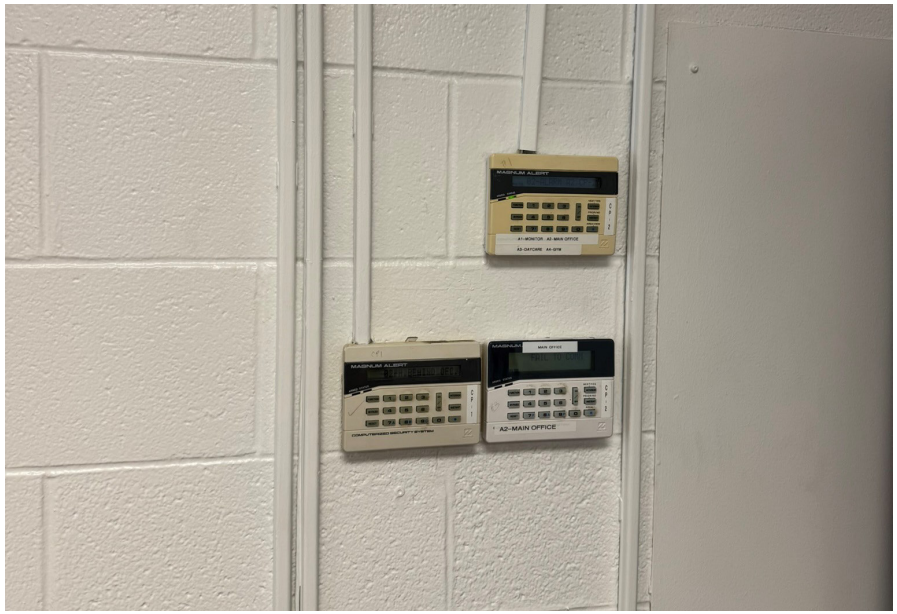
Cafeteria performance speakers

Classroom smartboard

Security Systems

There are exterior proximity card readers at the main entrance of the school and at the exterior door in the back of the gym addition leading to the relocatables. The intrusion detection system is by Napco (Magnum Alert/Gemini), consisting of keypads, motion detectors/sensors, and glass break detectors/sensors. There are three keypads located in the main office area. There are both ceiling mounted motion detectors/sensors and glass break detectors/sensors in classrooms with exterior windows. There are wall mounted motion detectors/sensors in the multipurpose room.

There is a video surveillance camera at the front entrance that is part of an entry monitoring system with a two-way communications speaker/microphone call station, proximity card reader, and access door hardware.



Intrusion detection system keypads

Architectural Overview

The existing Cold Spring Elementary School building was originally built in 1972, with a Gym addition completed in 2013. There are various areas of concern within the building, such as accessibility, security, program organization, storage, and water penetration. The following images display examples of these concerns around the exterior and interior of Cold Spring Elementary.

Entry

The main entry of the building is unassuming and dominated by the presence of the adjacent Multipurpose Room volume. There is a narrow awning in front of the main doors, which faculty and staff say does not provide enough cover for pick-up, drop-off, and magnet school bussing needs. Because of this condition, the vestibule is typically darkened without other windows to daylight the space.

Service

General service is on the front facade of the building, along the car and bus drop-off lane. The exterior doors lead into the mechanical, receiving and kitchen areas. Two brick enclosures hide equipment and outdoor storage from view, however, one of the enclosures is no longer fenced in, which is a concern. Currently, there is not a curb cut to facilitate trash collection as seen in the photo to the right.

Exterior

Cold Spring Elementary hosts a daycare program, Academy Child Development Center, on the southeast side of the property. Relocating the daycare was not part of the design team's scope, however, MCPS indicates that it could be a future possibility in any option that removes the detached building. There is a portable classroom on the southwest side of the school that currently houses the instrumental music classroom and connects back to the building using a covered walkway. Some parts of the building envelope are showing signs of deterioration, as seen in the following photos. There are also sections of the sidewalk that are crumbling around the site. Mature trees and some student memorials dot the school grounds, which are important to the parents and staff to maintain as much as possible.

Main Entry

Service Area - Trash Collection

Service Area - Open Enclosure

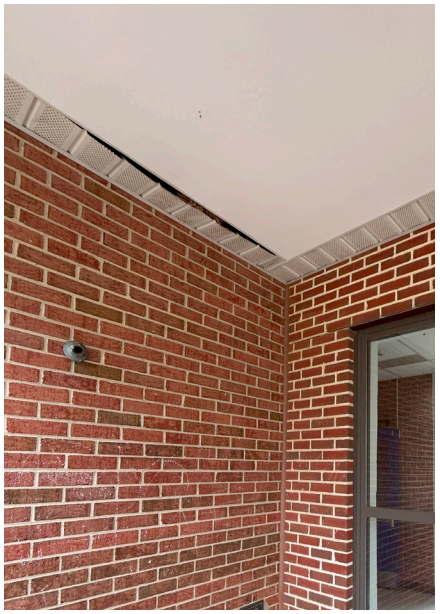
Academy Child Development Center

Instrumental Music Portable

Gym Entry

Student Memorial

Deterioration on Service Enclosure



Soffit Opening

Deterioration on Gym Facade

Deterioration on Mechanical Enclosure

Sidewalk Conditions

Deterioration of Chimney Cap

Enclosed Exterior Space on South Facade

Open Concept Layout

The existing school was designed as large, open learning areas without much acoustic treatment. Students and staff have found it increasingly difficult over the years to maintain focus during lessons. Some classrooms have been enclosed with walls and doors around the time of the 2013 Gym addition, although the majority of the classrooms are still open to the corridors as seen on the top right. The noise from passing students, instrument practice in the music classroom, or story time across the hall permeates into every open environment. There are two conditions within the school where there are four to six classrooms that are only separated by tiered landings and half walls, pictured at the bottom right. Two classrooms that share a space often attempt to create separation by putting book shelves, tackboards, or mail boxes in the middle. Any dedicated instructional support space for a specific class, such as English as a Second Language, is typically also found in the space between two classrooms, with lessons occurring while class is in session.

Interior Accessibility

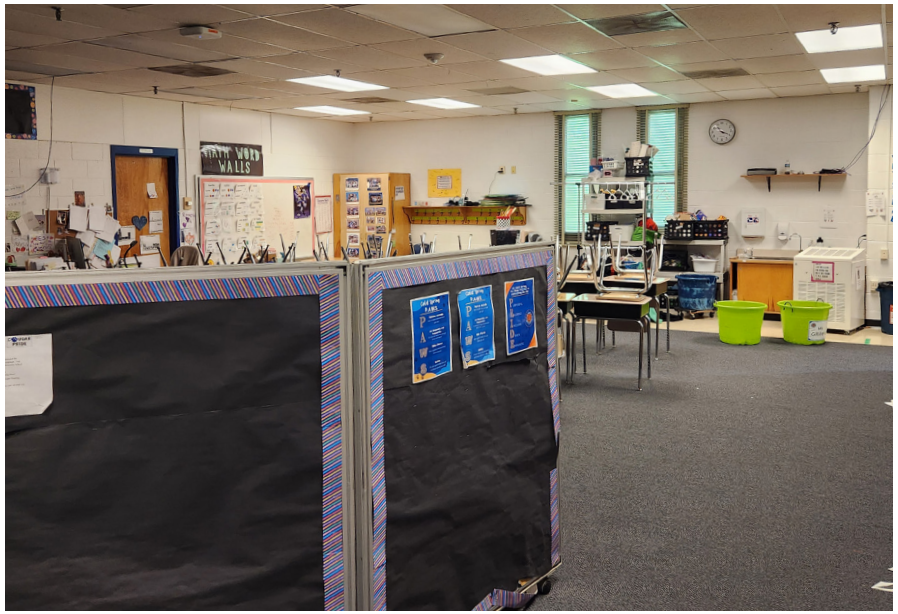
While there are seven ramps throughout the corridors of the existing school building, Cold Spring Elementary struggles with direct and accessible routes. For example, only one centralized corridor with ramps connects the lower levels of the school to the upper levels. The long corridor adjacent to the gymnasium only provides stairs, forcing some students and staff to go around to the central corridor to access that space. There are also multiple levels within the library media center. For accessible access to both levels in this room, students and staff have to exit the media center and use the corridor ramps. Multiple student restrooms have sloped entries because they are positioned along the corridor ramps, limiting accessibility. Accessbility is also a major priority for the school staff, students and parents.

Typical Classroom Open to Corridor

Open, Tiered Classroom Space

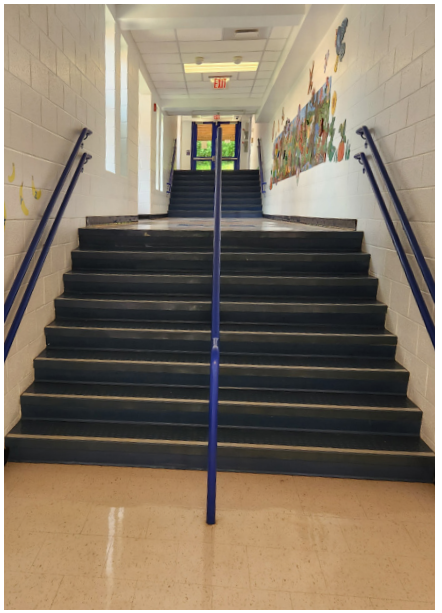
Library Media Center Half Wall

Ramp at Restroom Entry



Example of Classroom Division Attempt

Library Media Center Steps



Gym Corridor

Kitchen

Currently, the Kitchen is smaller than what the educational specification calls for and the Serving Line is difficult to utilize properly, according to the teachers. Either the students are lining up in the corridor waiting to grab their food while disrupting nearby classes, or the students are waiting at tables in the Multipurpose Room and food pickup has to be carefully coordinated in the limited space.

Storage

Cold Spring Elementary lacks sufficient storage casework and closets. Student belongings are often spread out in the learning space or piled up onto the stairs and landings between classrooms. The staff has exhausted all the bookshelves and open corners in each room throughout the school.

Enclosed Courtyards

There are three enclosed courtyards in the existing building footprint. Pictured to the bottom right is the largest of the three, which includes an extensive ramp system and a grassy area with raised vegetable garden beds. The Cold Spring Elementary staff was vocal about how well these courtyards are used as breaks from the little natural light that many of the classrooms get. Some classrooms get direct access to the outdoor spaces, like the library media center where students can take books outside during their time there. The courtyards are valued parts of the building and the community would like to see them rejuvenated or incorporated into the various approaches studied.

Kitchen Serving Line

Example of Student Storage Areas

Large Existing Courtyard

APPENDIX D: LONG TERM OPERATIONAL AND MAINTENANCE COSTS

Energy Model Output Report

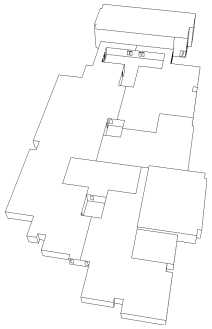
Project:	Cold Spring ES - Option 1
Address:	941 Falls Chapel Way, Potomac, MD 20854
Climate File:	Baltimore_TMY2.fwt
Simulation:	Cold Spring ES - Option 1.aps

Design Team:	JPA
Energy Analyst:	JPA
Owner:	MCPS
Conditioned Area (ft²):	53358.7500

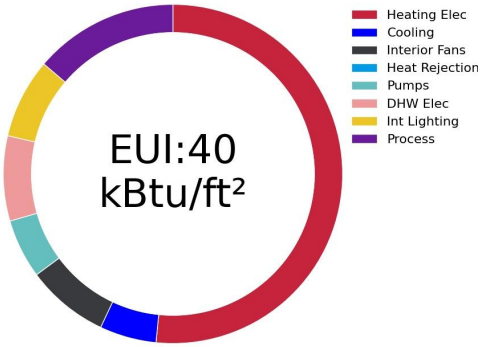
Annual Energy Consumption (kBtu/ft²/year) & CO2 KgCO2/ft²/yr

Energy End Use	Site Energy	Source Energy	CO2 Emissions
Heating Fossil Fuel	0.0	0.0	0.0
Heating Electricity	21.0	33.1	1.0
Space Cooling	2.2	3.2	0.1
Fans Interior	3.2	4.9	0.1
Heat Rejection	0.0	0.0	0.0
Pumps	2.3	3.4	0.1
DHW Fossil Fuel	0.0	0.0	0.0
DHW Electricity	3.3	5.1	0.1
Interior Lighting	3.1	4.8	0.1
Exterior Lighting	0.0	0.0	0.0
Receptacle	0.0	0.0	0.0
Data Center	0.0	0.0	0.0
Cooking Fossil Fuel	0.0	0.0	0.0
Cooking Electricity	0.0	0.0	0.0
Elevators & Escalators	0.0	0.0	0.0
Refrigeration	0.0	0.0	0.0
Process	5.6	8.5	0.2
TOTAL (ex renewables)	**40**	**63**	**1**

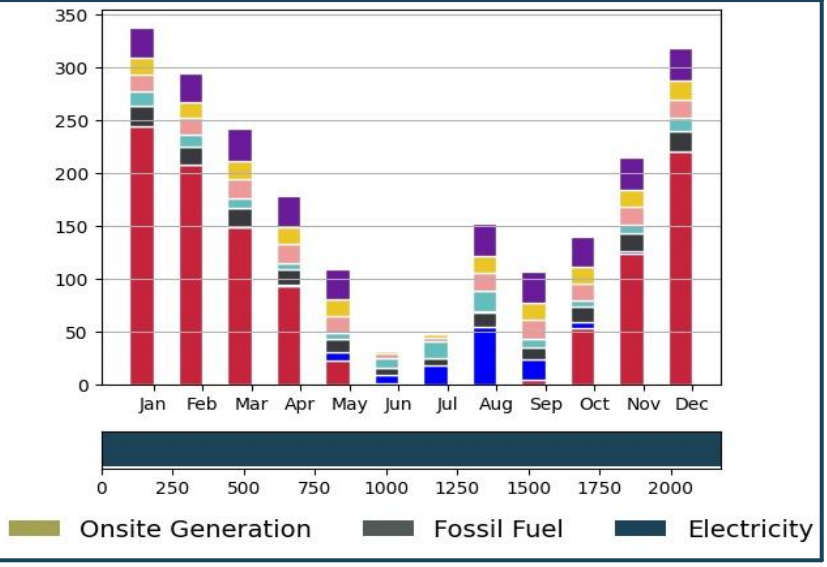
Project Viewer - 3D Model



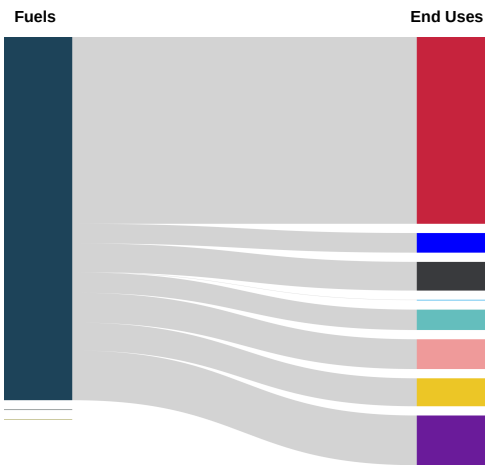
Site Energy Use Intensity



Site Energy Dashboard (MBtu)



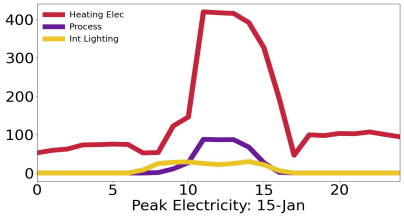
Site Energy Flows – Sankey Diagram

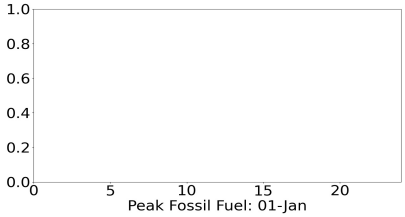


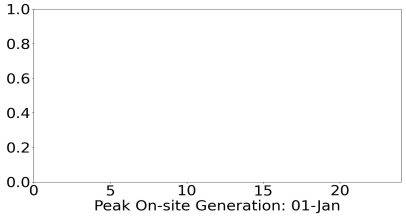
Annual Fuel Costs and Peak Demands

Fuels	Cost ($)	Peak Day	Peak Time	Peak Demand
Electricity	101,995.00	15-Jan	11:00	580.5 kW
Fossil Fuel	0.00	01-Jan	0:00	0.0 kBtu/h
Total	101,995.00	01-Jan	0:00	

Peak Energy Sources for Electricity (kW), Fossil Fuel (kBtu/h) and Onsite Power Generation (kW): Top 3 Contributors







MAINTENANCE AND OPERATION COSTS ESTIMATE **OPTION 1**

A. OPERATION

	Systems	Quantity	Units	Total Cost
1	Two-pipe Chilled/Heating Water System	0	SQUARE FOOT	$0
2	Four-pipe Chilled Water and Heating Water System	0	SQUARE FOOT	$0
3	Heat Pump System	53359	SQUARE FOOT	$1,601
4	Condenser Water System	0	TON	$0

Total Operation Cost	$1,601

B. MAINTENANCE - REPAIR

	Equipment	Quantity	Total Cost
1	Chiller, Air Cooled, Reciprocating; Repair air cooled chiller, 100 ton	2	$15,295
2	Water Cooled Condenser; Repair condenser, water cooled, 15 ton	7	$2,887
3	Fan Coil, DX Air Conditioner, Cooling Only; Repair fan coil, DX 3 ton	54	$9,116
4	Multi-Zone Air Conditioner; Repair multi-zone rooftop unit, 40 ton	4	$18,591
5	Single Zone Variable Volume; Repair single zone variable volume, 20 ton	3	$9,167
6			
7			
8			
9			
10			

Subtotal	$55,057

C. MAINTENANCE - FILTERS

	Equipment	Quantity	Total Cost
1	Particulate Air Filtration, Supported Type, 1"	54	$9,798
2	Particulate Air Filtration, Supported Type, 2"	14	$5,081
3	Particulate Air Filtration, Supported Type, 4"	7	$5,081
4	Particulate Air Filtration, Supported Type, 12"	0	$0

Subtotal	$19,960

D. MAINTENANCE - PREVENTATIVE MAINTENANCE

	Equipment	Quantity	Total Cost
1	Chiller, Recip., Water Cooled	2	$1,319
2	Condensing Unit, Water Cooled	3	$361
3	Condensing Unit, Water Cooled	4	$1,154
4	Air Handling Unit	3	$760
5	Air Handling Unit	4	$1,311
6	Fan Coil Unit	54	$13,166
7	Pump, Centifugal	6	$405
8	Controls	1	$272
9			
10			

Subtotal	$18,748

Total Maintenance Cost	$93,764

ONE TIME OPERATIONS COSTS ESTIMATE **OPTION 1**

A. EXISTING[1]

Estimated Remaining Equipment Life	0 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Equipment Cost	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

B. RENOVATION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$3,743,791.24
Total HVAC Cost	$5,820,395.37
Subtotal HVAC Equipment Cost[2]	$1,343,170.46
Total HVAC Equipment Cost	$2,088,199.53
Single Payment (P/F) Present Worth	**$2,902,836.51**

C. ADDITION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

D. NEW CONSTRUCTION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

Total Cost **$2,902,837**

Notes:

1. HVAC equipment not replaced as part of scope of work
2. Values from or calculated based on cost estimate
3. Below the Line Costs include general conditions, overhead & profit, bonds & insurance, prevailing wage requirement, design contingency, and esclation

Energy Model Output Report

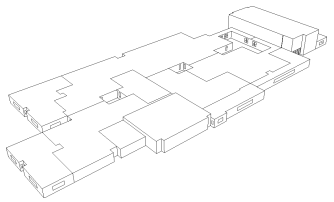
Project:	Cold Spring ES - Option 2
Address:	9201 Falls Chapel Way, Potomac, MD 2085…
Climate File:	Baltimore_TMY2.fwt
Simulation:	Cold Spring ES - Option 2.aps

Design Team:	JPA
Energy Analyst:	JPA
Owner:	MCPS
Conditioned Area (ft²):	64758.5000

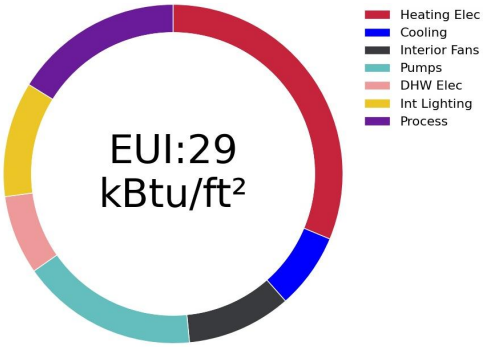
Annual Energy Consumption (kBtu/ft²/year) & CO2 KgCO2/ft²/yr

Energy End Use	Site Energy	Source Energy	CO2 Emissions
Heating Fossil Fuel	0.0	0.0	0.0
Heating Electricity	9.1	14.3	0.4
Space Cooling	2.1	3.1	0.1
Fans Interior	2.9	4.4	0.1
Heat Rejection	0.0	0.0	0.0
Pumps	4.9	7.5	0.2
DHW Fossil Fuel	0.0	0.0	0.0
DHW Electricity	2.2	3.4	0.1
Interior Lighting	3.2	4.9	0.1
Exterior Lighting	0.0	0.0	0.0
Receptacle	0.0	0.0	0.0
Data Center	0.0	0.0	0.0
Cooking Fossil Fuel	0.0	0.0	0.0
Cooking Electricity	0.0	0.0	0.0
Elevators & Escalators	0.0	0.0	0.0
Refrigeration	0.0	0.0	0.0
Process	4.7	7.3	0.2
TOTAL (ex renewables)	**29**	**44**	**1**

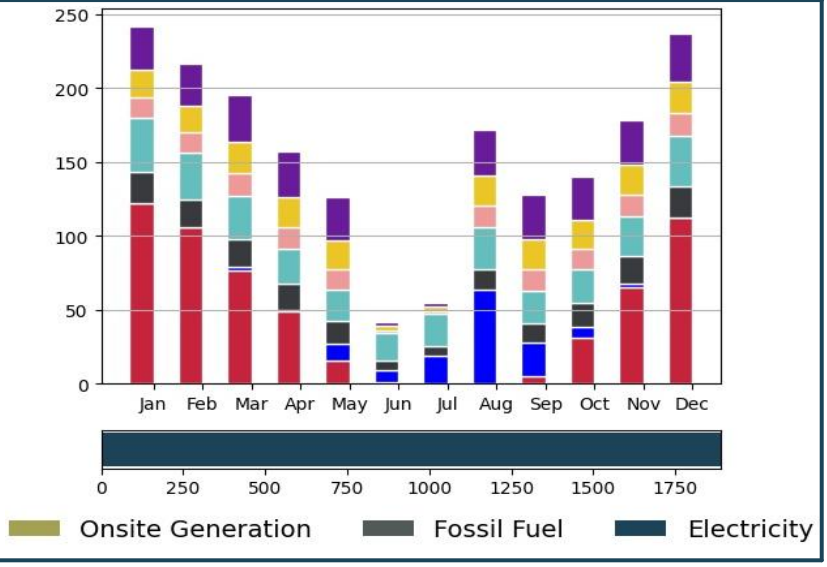
Project Viewer - 3D Model



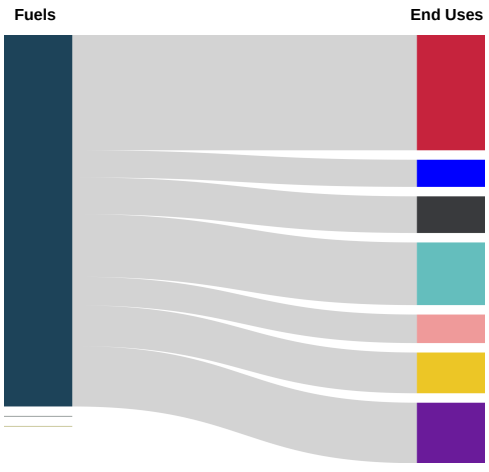
Site Energy Use Intensity



Site Energy Dashboard (MBtu)



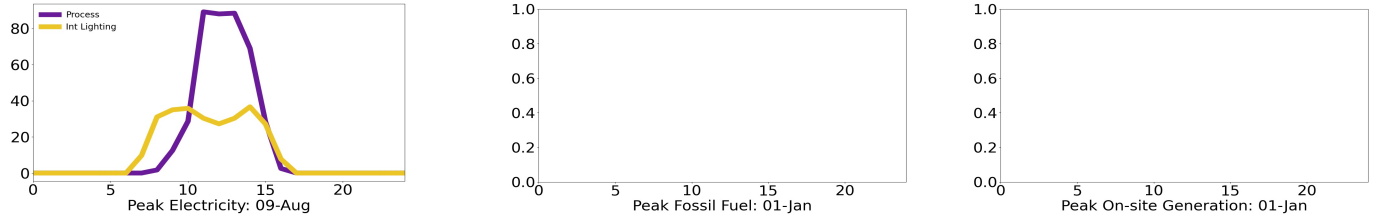
Site Energy Flows – Sankey Diagram



Annual Fuel Costs and Peak Demands

Fuels	Cost ($)	Peak Day	Peak Time	Peak Demand
Electricity	88,579.00	09-Aug	13:00	368.3 kW
Fossil Fuel	0.00	01-Jan	0:00	0.0 kBtu/h
Total	88,579.00	01-Jan	0:00	

Peak Energy Sources for Electricity (kW), Fossil Fuel (kBtu/h) and Onsite Power Generation (kW): Top 3 Contributors



MAINTENANCE AND OPERATION COSTS ESTIMATE **OPTION 2**

A. OPERATION

	Systems	Quantity	Units	Total Cost
1	Two-pipe Chilled/Heating Water System	0	SQUARE FOOT	$0
2	Four-pipe Chilled Water and Heating Water System	0	SQUARE FOOT	$0
3	Heat Pump System	64759	SQUARE FOOT	$1,943
4	Condenser Water System	0	TON	$0

Total Operation Cost	$1,943

B. MAINTENANCE - REPAIR

	Equipment	Quantity	Total Cost
1	Water Cooled Condenser; Repair condenser, water cooled, 15 ton	7	$2,887
2	Fan Coil, DX Air Conditioner, Cooling Only; Repair fan coil, DX 3 ton	65	$10,973
3	Multi-Zone Air Conditioner; Repair multi-zone rooftop unit, 40 ton	4	$18,591
4	Single Zone Variable Volume; Repair single zone variable volume, 20 ton	3	$9,167
5			
6			
7			
8			
9			
10			

Subtotal	$41,619

C. MAINTENANCE - FILTERS

	Equipment	Quantity	Total Cost
1	Particulate Air Filtration, Supported Type, 1"	65	$11,794
2	Particulate Air Filtration, Supported Type, 2"	14	$5,081
3	Particulate Air Filtration, Supported Type, 4"	7	$5,081
4	Particulate Air Filtration, Supported Type, 12"	0	$0

Subtotal	$21,955

D. MAINTENANCE - PREVENTATIVE MAINTENANCE

	Equipment	Quantity	Total Cost
1	Condensing Unit, Water Cooled	3	$361
2	Condensing Unit, Water Cooled	4	$1,154
3	Air Handling Unit	3	$760
4	Air Handling Unit	4	$1,311
5	Fan Coil Unit	65	$15,848
6	Pump, Centifugal	2	$135
7	Controls	1	$272
8			
9			
10			

Subtotal	$19,841

Total Maintenance Cost	$83,415

ONE TIME OPERATIONS COSTS ESTIMATE **OPTION 2**

A. EXISTING[1]

Estimated Remaining Equipment Life	0 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Equipment Cost	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

B. RENOVATION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$5,369,092.20
Total HVAC Cost	$8,347,217.14
Subtotal HVAC Equipment Cost[2]	$1,242,329.43
Total HVAC Equipment Cost	$1,931,424.00
Single Payment (P/F) Present Worth	**$2,684,900.56**

C. ADDITION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$1,234,689.70
Total HVAC Cost	$1,919,546.75
Subtotal HVAC Equipment Cost[2]	$459,472.50
Total HVAC Equipment Cost	$714,332.47
Single Payment (P/F) Present Worth	**$993,003.94**

D. NEW CONSTRUCTION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

Total Cost **$3,677,904**

Notes:

1. HVAC equipment not replaced as part of scope of work
2. Values from or calculated based on cost estimate
3. Below the Line Costs include general conditions, overhead & profit, bonds & insurance, prevailing wage requirement, design contingency, and esclation

Energy Model Output Report

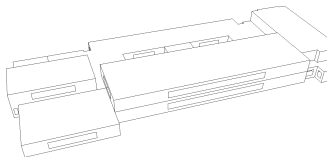
Project:	Cold Spring ES - Option 3
Address:	9201 Falls Chapel Way, Potomac, MD 2085…
Climate File:	Baltimore_TMY2.fwt
Simulation:	Cold Spring ES - Option 3.aps

Design Team:	JPA
Energy Analyst:	JPA
Owner:	MCPS
Conditioned Area (ft²):	67029.7500

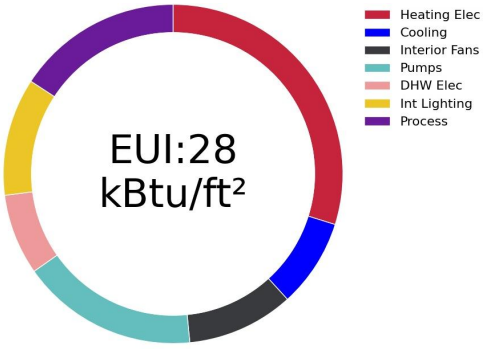
Annual Energy Consumption (kBtu/ft²/year) & CO2 KgCO2/ft²/yr

Energy End Use	Site Energy	Source Energy	CO2 Emissions
Heating Fossil Fuel	0.0	0.0	0.0
Heating Electricity	8.5	13.4	0.4
Space Cooling	2.4	3.5	0.1
Fans Interior	2.9	4.4	0.1
Heat Rejection	0.0	0.0	0.0
Pumps	4.8	7.4	0.2
DHW Fossil Fuel	0.0	0.0	0.0
DHW Electricity	2.2	3.3	0.1
Interior Lighting	3.2	4.9	0.1
Exterior Lighting	0.0	0.0	0.0
Receptacle	0.0	0.0	0.0
Data Center	0.0	0.0	0.0
Cooking Fossil Fuel	0.0	0.0	0.0
Cooking Electricity	0.0	0.0	0.0
Elevators & Escalators	0.0	0.0	0.0
Refrigeration	0.0	0.0	0.0
Process	4.5	6.9	0.2
TOTAL (ex renewables)	**28**	**43**	**1**

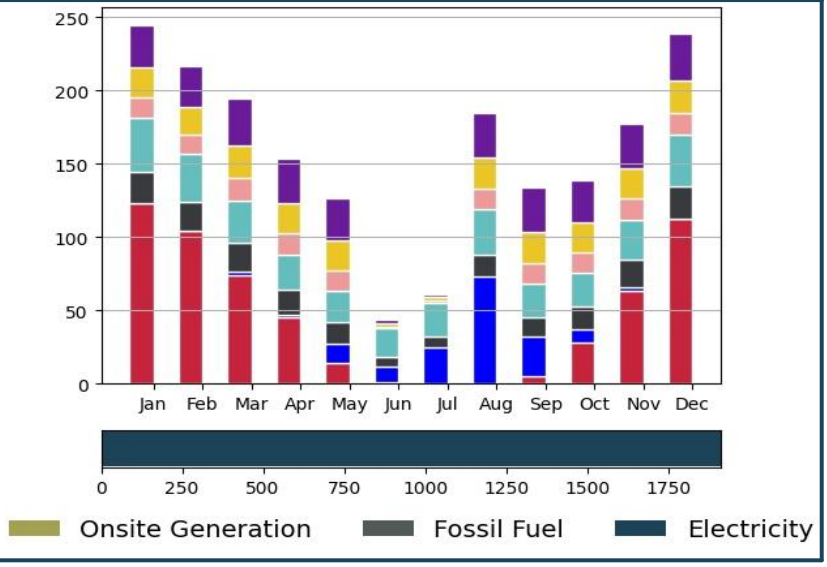
Project Viewer - 3D Model



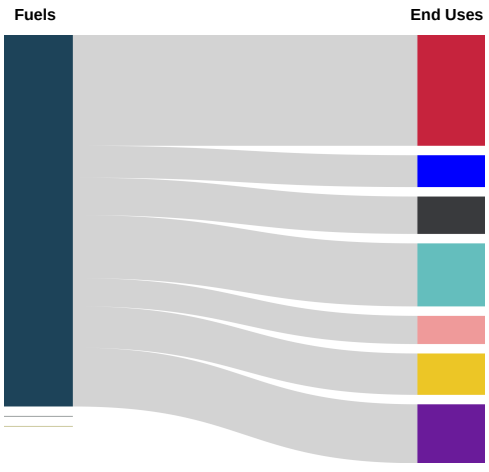
Site Energy Use Intensity



Site Energy Dashboard (MBtu)



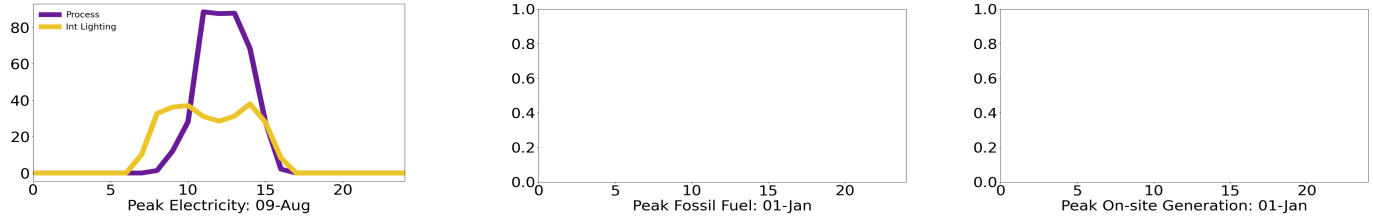
Site Energy Flows – Sankey Diagram



Annual Fuel Costs and Peak Demands

Fuels	Cost ($)	Peak Day	Peak Time	Peak Demand
Electricity	89,699.00	09-Aug	13:00	395.4 kW
Fossil Fuel	0.00	01-Jan	0:00	0.0 kBtu/h
Total	89,699.00	01-Jan	0:00	

Peak Energy Sources for Electricity (kW), Fossil Fuel (kBtu/h) and Onsite Power Generation (kW): Top 3 Contributors



MAINTENANCE AND OPERATION COSTS ESTIMATE **OPTION 3**

A. OPERATION

	Systems	Quantity	Units	Total Cost
1	Two-pipe Chilled/Heating Water System	0	SQUARE FOOT	$0
2	Four-pipe Chilled Water and Heating Water System	0	SQUARE FOOT	$0
3	Heat Pump System	67030	SQUARE FOOT	$2,011
4	Condenser Water System	0	TON	$0

Total Operation Cost	$2,011

B. MAINTENANCE - REPAIR

	Equipment	Quantity	Total Cost
1	Water Cooled Condenser; Repair condenser, water cooled, 15 ton	7	$2,887
2	Fan Coil, DX Air Conditioner, Cooling Only; Repair fan coil, DX 3 ton	67	$11,311
3	Multi-Zone Air Conditioner; Repair multi-zone rooftop unit, 40 ton	4	$18,591
4	Single Zone Variable Volume; Repair single zone variable volume, 20 ton	3	$9,167
5			
6			
7			
8			
9			
10			

Subtotal	$41,956

C. MAINTENANCE - FILTERS

	Equipment	Quantity	Total Cost
1	Particulate Air Filtration, Supported Type, 1"	67	$12,157
2	Particulate Air Filtration, Supported Type, 2"	14	$5,081
3	Particulate Air Filtration, Supported Type, 4"	7	$5,081
4	Particulate Air Filtration, Supported Type, 12"	0	$0

Subtotal	$22,318

D. MAINTENANCE - PREVENTATIVE MAINTENANCE

	Equipment	Quantity	Total Cost
1	Condensing Unit, Water Cooled	3	$361
2	Condensing Unit, Water Cooled	4	$1,154
3	Air Handling Unit	3	$760
4	Air Handling Unit	4	$1,311
5	Fan Coil Unit	67	$16,336
6	Pump, Centifugal	2	$135
7	Controls	1	$272
8			
9			
10			

Subtotal	$20,329

Total Maintenance Cost	$84,603

ONE TIME OPERATIONS COSTS ESTIMATE **OPTION 3**

A. EXISTING[1]

Estimated Remaining Equipment Life	0 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Equipment Cost	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

B. RENOVATION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$475,764.52
Total HVAC Cost	$739,661.43
Subtotal HVAC Equipment Cost[2]	$170,897.00
Total HVAC Equipment Cost	$265,690.09
Single Payment (P/F) Present Worth	**$369,339.66**

C. ADDITION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$6,315,005.89
Total HVAC Cost	$9,817,809.79
Subtotal HVAC Equipment Cost[2]	$1,622,529.64
Total HVAC Equipment Cost	$2,522,513.46
Single Payment (P/F) Present Worth	**$3,506,582.61**

D. NEW CONSTRUCTION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

Total Cost **$3,875,922**

Notes:

1. HVAC equipment not replaced as part of scope of work
2. Values from or calculated based on cost estimate
3. Below the Line Costs include general conditions, overhead & profit, bonds & insurance, prevailing wage requirement, design contingency, and esclation

Energy Model Output Report

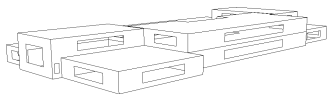
Project:	Cold Spring ES - Option 4
Address:	9201 Falls Chapel Way, Potomac, MD 2085…
Climate File:	Baltimore_TMY2.fwt
Simulation:	Cold Spring ES - Option 4.aps

Design Team:	JPA
Energy Analyst:	JPA
Owner:	MCPS
Conditioned Area (ft²):	66839.2500

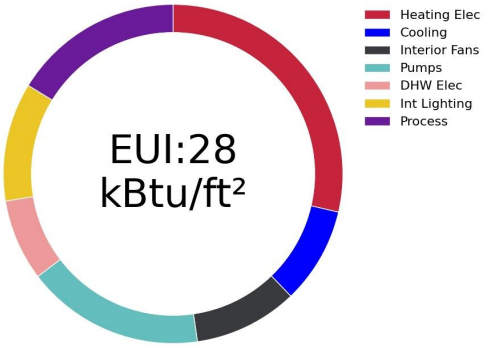
Annual Energy Consumption (kBtu/ft²/year) & CO2 KgCO2/ft²/yr

Energy End Use	Site Energy	Source Energy	CO2 Emissions
Heating Fossil Fuel	0.0	0.0	0.0
Heating Electricity	8.1	12.8	0.4
Space Cooling	2.6	3.8	0.1
Fans Interior	2.8	4.2	0.1
Heat Rejection	0.0	0.0	0.0
Pumps	4.8	7.3	0.2
DHW Fossil Fuel	0.0	0.0	0.0
DHW Electricity	2.2	3.3	0.1
Interior Lighting	3.2	4.9	0.1
Exterior Lighting	0.0	0.0	0.0
Receptacle	0.0	0.0	0.0
Data Center	0.0	0.0	0.0
Cooking Fossil Fuel	0.0	0.0	0.0
Cooking Electricity	0.0	0.0	0.0
Elevators & Escalators	0.0	0.0	0.0
Refrigeration	0.0	0.0	0.0
Process	4.6	7.0	0.2
TOTAL (ex renewables)	**28**	**43**	**1**

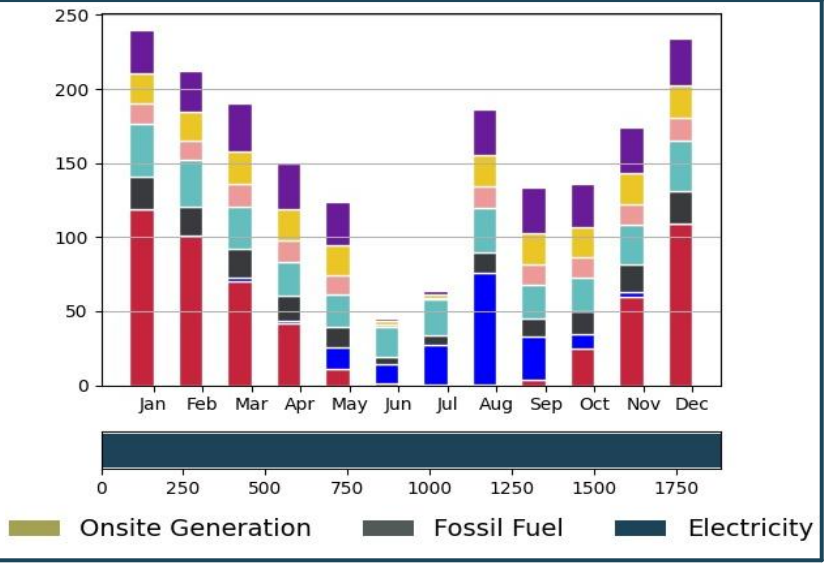
Project Viewer - 3D Model



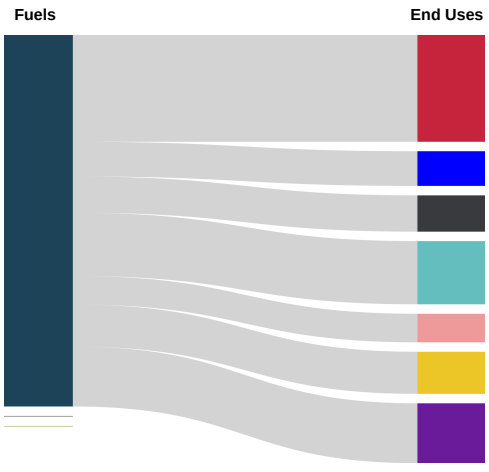
Site Energy Use Intensity



Site Energy Dashboard (MBtu)



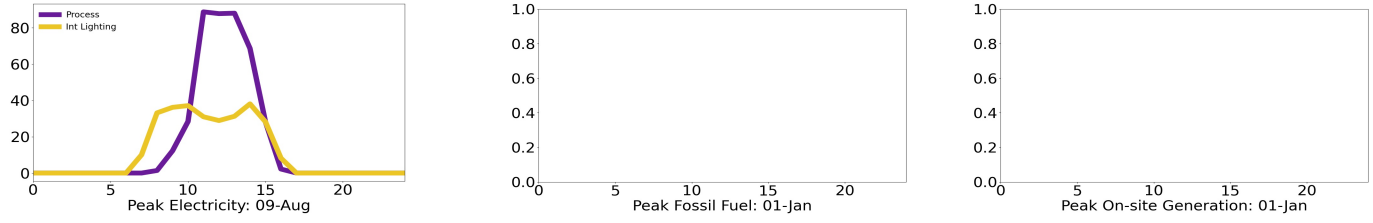
Site Energy Flows – Sankey Diagram



Annual Fuel Costs and Peak Demands

Fuels	Cost ($)	Peak Day	Peak Time	Peak Demand
Electricity	88,471.00	09-Aug	13:00	399.9 kW
Fossil Fuel	0.00	01-Jan	0:00	0.0 kBtu/h
Total	88,471.00	01-Jan	0:00	

Peak Energy Sources for Electricity (kW), Fossil Fuel (kBtu/h) and Onsite Power Generation (kW): Top 3 Contributors



MAINTENANCE AND OPERATION COSTS ESTIMATE **OPTION 4**

A. OPERATION

	Systems	Quantity	Units	Total Cost
1	Two-pipe Chilled/Heating Water System	0	SQUARE FOOT	$0
2	Four-pipe Chilled Water and Heating Water System	0	SQUARE FOOT	$0
3	Heat Pump System	66840	SQUARE FOOT	$2,005
4	Condenser Water System	0	TON	$0

Total Operation Cost	$2,005

B. MAINTENANCE - REPAIR

	Equipment	Quantity	Total Cost
1	Water Cooled Condenser; Repair condenser, water cooled, 15 ton	7	$2,887
2	Fan Coil, DX Air Conditioner, Cooling Only; Repair fan coil, DX 3 ton	67	$11,311
3	Multi-Zone Air Conditioner; Repair multi-zone rooftop unit, 40 ton	4	$18,591
4	Single Zone Variable Volume; Repair single zone variable volume, 20 ton	3	$9,167
5			
6			
7			
8			
9			
10			

Subtotal	$41,956

C. MAINTENANCE - FILTERS

	Equipment	Quantity	Total Cost
1	Particulate Air Filtration, Supported Type, 1"	67	$12,157
2	Particulate Air Filtration, Supported Type, 2"	14	$5,081
3	Particulate Air Filtration, Supported Type, 4"	7	$5,081
4	Particulate Air Filtration, Supported Type, 12"	0	$0

Subtotal	$22,318

D. MAINTENANCE - PREVENTATIVE MAINTENANCE

	Equipment	Quantity	Total Cost
1	Condensing Unit, Water Cooled	3	$361
2	Condensing Unit, Water Cooled	4	$1,154
3	Air Handling Unit	3	$760
4	Air Handling Unit	4	$1,311
5	Fan Coil Unit	67	$16,336
6	Pump, Centifugal	2	$135
7	Controls	1	$272
8			
9			
10			

Subtotal	$20,329

Total Maintenance Cost	$84,603

ONE TIME OPERATIONS COSTS ESTIMATE **OPTION 4**

A. EXISTING[1]

Estimated Remaining Equipment Life	0 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Equipment Cost	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

B. RENOVATION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

C. ADDITION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	0.00
Subtotal HVAC Cost[2]	$0.00
Total HVAC Cost	$0.00
Subtotal HVAC Equipment Cost[2]	$0.00
Total HVAC Equipment Cost	$0.00
Single Payment (P/F) Present Worth	**$0.00**

D. NEW CONSTRUCTION

Estimated Equipment Life	16 Yrs
Below the Line Costs Multiplier[2,3]	1.55
Subtotal HVAC Cost[2]	$6,689,665.59
Total HVAC Cost	$10,353,932.48
Subtotal HVAC Equipment Cost[2]	$1,762,664.65
Total HVAC Equipment Cost	$2,728,164.89
Single Payment (P/F) Present Worth	**$3,792,461.64**

Total Cost **$3,792,462**

Notes:

1. HVAC equipment not replaced as part of scope of work
2. Values from or calculated based on cost estimate
3. Below the Line Costs include general conditions, overhead & profit, bonds & insurance, prevailing wage requirement, design contingency, and esclation