CONFIDENTIAL
Do Not Distribute Due to
Public Safety/Security

Preliminary Plans Presentation

Gaithersburg Cluster Elementary School #8New School

Prepared for Montgomery County Board of Education

October 2019



Preliminary Plans Presentation

Gaithersburg Cluster Elementary School #8

New School

400 Victory Farm Drive Gaithersburg, MD 20877

Montgomery County Board of Education

Mrs. Shebra L. Evans
Mrs. Patricia O'Neill
Wice President
Ms. Jeanette E. Dixon
Member
Dr. Judith Docca
Member
Ms. Karla Silvestre
Mrs. Rebecca Smondrowski
Ms. Brenda Wolff
Mrs. President
Member
Member
Member
Member

Mr. Nathaniel Tinbite Student Member

Montgomery County Public Schools Administration

Dr. Jack R. Smith Superintendent of Schools

Mr. Seth P. Adams Director, Department of Facilities Management

Ms. Adrienne L. Karamihas Director, Division of Capital Planning

Mr. Dennis Cross Facilities Team Leader, Division of Construction

Mr. Gary Mosesman Team Manager, Division of Construction Mr. Seth Feriano Project Manager, Division of Construction

Facility Advisory Process Involvement

Involvement

The Preliminary Plans for the Gaithersburg Cluster Elementary School #8 new school facility project were developed based on the educational specifications prepared by Montgomery County Public Schools (MCPS). Through a series of public work sessions, several design alternatives were developed and evaluated. The proposed plans presented herein were the result of reviews and subsequent modifications in accordance with recommendations and suggestions received during these work sessions.

Participants in Facility Advisory Process

| Lang Soo-Hoo | Community Member | City of Gaithersburg |
|----------------------|------------------|------------------------------------|
| Phillis Soo Hoo | Community Member | City of Gaithersburg |
| Kaufman Steve | Community Member | City of Gaithersburg |
| Dena Saunders | Community Member | City of Gaithersburg |
| Vicky Lee | Community Member | City of Gaithersburg |
| Ericka Alvarado | Community Member | City of Gaithersburg |
| Matt Hopkins | Community Member | City of Gaithersburg |
| Abigail Lindstrom | Community Member | City of Gaithersburg |
| Deborah Sarabia | Community Member | City of Gaithersburg |
| Pamela Campos | Community Member | City of Gaithersburg |
| Melisa Bishop-Bryant | Community Member | City of Gaithersburg |
| Kim Rowe | Community Member | City of Gaithersburg |
| Paula Hall | Community Member | City of Gaithersburg |
| Rita Mitrik | Staff | Strawberry Knoll Elementary School |
| Thelma L. Spencer | Community Member | City of Gaithersburg |
| Christine Rumney | Community Member | City of Gaithersburg |
| Maria Estela Merrell | Community Member | City of Gaithersburg |
| Nicholas Ritchie | Community Member | City of Gaithersburg |
| Carolyn Garvey | Community Member | City of Gaithersburg |
| Jane Farfan | Community Member | City of Gaithersburg |
| Felix Farfan | Community Member | City of Gaithersburg |
| | | |

Facility Advisory Process Involvement (continued)

Participants in Facility Advisory Process (continued)

| G. McClure | Community Member | City of Gaithersburg |
|---------------------|----------------------|----------------------|
| Tim Sanersri | Community Member | City of Gaithersburg |
| Karyn Ryan | Community Member | City of Gaithersburg |
| Hilela Mahinvool | Community Member | City of Gaithersburg |
| Bill Pettey | Community Member | City of Gaithersburg |
| Carol Pettey | Community Member | City of Gaithersburg |
| Mathias Graf | Community Member | City of Gaithersburg |
| Gagne Daniel | Community Member | City of Gaithersburg |
| Bruce Cohen | Community Member | City of Gaithersburg |
| Carolyn Donovan | Community Member | City of Gaithersburg |
| Jhonas Vassar | Community Member | City of Gaithersburg |
| Angelica Sanchez | Community Member | City of Gaithersburg |
| Monica Marquina | City of Gaithersburg | City of Gaithersburg |
| Robert Chiappone | Community Member | City of Gaithersburg |
| Kathy Wendal Kawski | Community Member | City of Gaithersburg |
| Jacquelynn Wozniak | Community Member | City of Gaithersburg |
| Dave Andersen | Community Member | City of Gaithersburg |
| Kevin Tindall | Community Member | City of Gaithersburg |
| Marc Gordon | Community Member | City of Gaithersburg |
| Mike Pates | Community Member | City of Gaithersburg |
| Patti Pates | Community Member | City of Gaithersburg |
| Jerilynn Butler | Community Member | City of Gaithersburg |
| Jasmine Forbes | City of Gaithersburg | City of Gaithersburg |
| Abram Kagan | Community Member | City of Gaithersburg |
| Jenny Kagan | Community Member | City of Gaithersburg |
| Lea Eaton | Community Member | City of Gaithersburg |
| Abdul Mansaray | Community Member | City of Gaithersburg |
| Ray Abel | Community Member | City of Gaithersburg |
| Janeth Maldonado | Community Member | City of Gaithersburg |
| Rhonda Thiessen | Community Member | City of Gaithersburg |
| | | |

Facility Advisory Process Involvement (continued)

Participants in Facility Advisory Process

Nancy Emenaker Community Member City of Gaithersburg Nancy Beach Community Member City of Gaithersburg Victoria Diaz M Community Member City of Gaithersburg Yin Cheng Community Member City of Gaithersburg Community Member Beth Junium City of Gaithersburg Lynn Slepski Community Member City of Gaithersburg

Lisa Henry Teacher Summit Hall Elementary School

Lynda Ralli Nurse Summit Hall Elementary School / DHHS

Sondra Edward

Abigail Quinn

Teacher

Gaithersburg Elementary School

Gaithersburg Elementary School

Michael Shimoura

Teacher

Gaithersburg Elementary School

Beckey Sherman

Teacher

Gaithersburg Elementary School

Jason Snyder Assistant Principal Washington Grove Elementary School

Keely Cooke Principal Rosemont Elementary School

Patrick E. Scott Principal Strawberry Knoll Elementary School Meridith McNerney Principal Gaithersburg Elementary School

Project Information

Background / History

Location: 400 Victory Farm Dr., Gaithersburg, Maryland 20877

Cluster: Gaithersburg Cluster

Site Size: 9 acres

Building Size 101,963 gross square feet

Program Capacity: 740

Since 2007, elementary school enrollment in the Gaithersburg Cluster has increased by 820 students. Some of this growth is due to new housing planned for in the Shady Grove Sector Plan. In addition, development of the Crown community continues, with over 2,000 residential units planned in the Rosemont Elementary School service area. Elementary school enrollment growth continues in the Gaithersburg Cluster and several schools exceed program capacities (Gaithersburg, Rosemont, Strawberry Knoll, Summit Hall, and Washington Grove elementary schools). In the 2014–2015 school year, a Gaithersburg Cluster Elementary School Capacity Study was conducted to determine whether additions to cluster schools could address the projected space deficits. The study concluded that a new elementary school along with potential additions to existing schools would be required to solve capacity challenges.

The actions above were completed including the feasibility study for a possible addition at Gaithersburg Elementary School to increase the capacity for 1,000 students. The feasibility study revealed several challenges with construction, security, and administration of the building, as well as the absence of a recommendation to address the space deficits at Rosemont and Strawberry Knoll elementary schools.

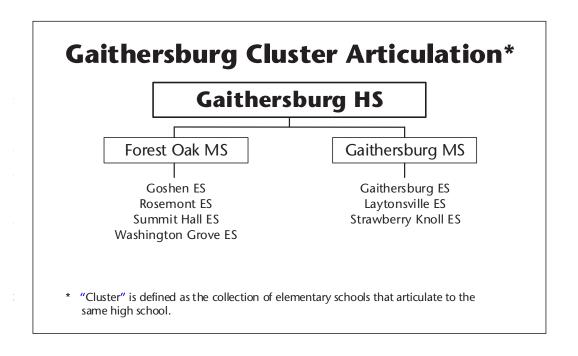
On August 31, 2017, the Board of Education authorized a site selection committee to evaluate potential school sites in the Gaithersburg Cluster. Based on the work of the site selection committee, the superintendent of schools recommended and the Board of Education approved the opening of a new elementary school in the Gaithersburg Cluster on the Kelley Park site. The new school is scheduled to open in September 2022.

An FY 2019 appropriation was approved to begin the architectural design and planning for Gaithersburg Elementary School #8. In order for this project to be completed on time, county and state funding must be provided at the levels approved in this CIP.

The Gaitherburg Cluster includes two middle schools (Forest Oak and Gaithersburg) and seven elementary schools (Gaithersburg, Goshen, Laytonsville, Rosemont, Strawberry Knoll, Summit Hall, Washington Grove). Gaithersburg Elementary School #8 would serve as the eighth elementary school in the cluster. Given that the student enrollment continues to increase at the elementary school level, the Board of Education's Requested FY 2019 Capital Budget and Amendments to the FY 2019–2024

A *Linkages to Learning* will be designed as an add-alternate to this project, contingent on funding availability through Montgomery County Department of Heath and Human Services. *Linkages to Learning* is a community school partnership with an integrated focus on health, social services, community engagement and leadership to support student learning, strong families, and healthy communities.

The chart below indicates the articulation of schools in the Gaithersburg Cluster.



The following data include student enrollment projections compared to capacity, demographic characteristics, and program capacity table for elementary schools in the cluster for school year 2018-2019:

| | | | Actual | | | | Proje | ctions | | | |
|--------------------|-----|---|---------------------------------------|---------------------------|---------------------------|---------------------------|--|----------------------------|-------------------------------|------|------|
| Schools | | | 18–19 | 19–20 | 20–21 | 21–22 | 22–23 | 23–24 | 24–25 | 2028 | 2033 |
| Gaithersburg ES | CSR | Program Capacity Enrollment Available Space Comments | 788 839 (51) See text | 788 848 (60) | 788 815 (27) | 788 811 (23) | 788 840 (52) | 788 888 (100) | 788 931 (143) | | |
| Gaithersburg ES #8 | CSR | Program Capacity Enrollment Available Space Comments | Planning for new school | | | | 740 0 <i>740</i> Opens | 740 0 740 | 740 0 <i>740</i> | | |
| Goshen ES | | Program Capacity Enrollment Available Space Comments | 594 578 16 See Text | 594 575 19 | 594 574 20 | 594 622 (28) | 594 638 (44) | 594 638 (44) | 594 637 (43) | | |
| Laytonsville ES | CSR | Program Capacity Enrollment Available Space Comments | 449 384 65 See Text | 449 377 72 | 449 391 58 | 449 386 63 | 449 371 78 | 449 361 88 | 449 359 90 | | |
| Rosemont ES | CSR | Program Capacity Enrollment Available Space Comments | 595 628 (33) See text | 595 647 (52) | 595 617 (22) | 595 636 (41) | 595 671 (76) | 595 696 (101) | 595 714 (119) | | |

| | | | Actual | | | | Proje | ctions | | | |
|---------------------|-----|------------------|----------|-------|-------|-------|-------|--------|-------|------|------|
| Schools | | | 18–19 | 19–20 | 20–21 | 21–22 | 22–23 | 23–24 | 24–25 | 2028 | 2033 |
| Strawberry Knoll ES | CSR | Program Capacity | 454 | 454 | 454 | 454 | 454 | 454 | 454 | | |
| | | Enrollment | 640 | 646 | 675 | 684 | 690 | 694 | 701 | | |
| | | Available Space | (186) | (192) | (221) | (230) | (236) | (240) | (247) | | |
| | | Comments | | | | | | | | | |
| | | | See text | | | | | | | | |
| Summit Hall ES | CSR | Program Capacity | 435 | 435 | 435 | 435 | 435 | 435 | 435 | | |
| | | Enrollment | 672 | 676 | 674 | 686 | 691 | 704 | 711 | | |
| | | Available Space | (237) | (241) | (239) | (251) | (256) | (269) | (276) | | |
| | | Comments | | | | | | | | | |
| | | | See text | | | | | | | | |
| Washington Grove ES | CSR | Program Capacity | 613 | 613 | 613 | 613 | 613 | 613 | 613 | | |
| | | Enrollment | 492 | 512 | 537 | 568 | 600 | 627 | 641 | | |
| | | Available Space | 121 | 101 | 76 | 45 | 13 | (14) | (28) | | |
| | | Comments | | | | | | | | | |
| | | | See text | | | | | | | | |
| Cluster Information | | HS Utilization | 97% | 97% | 97% | 99% | 105% | 110% | 114% | 116% | 124% |
| | | HS Enrollment | 2352 | 2359 | 2351 | 2406 | 2541 | 2667 | 2764 | 2829 | 3000 |
| | | MS Utilization | 88% | 90% | 91% | 92% | 94% | 96% | 96% | 96% | 98% |
| | | MS Enrollment | 1727 | 1765 | 1772 | 1798 | 1846 | 1874 | 1882 | 1877 | 1910 |
| | | ES Utilization | 108% | 109% | 109% | 112% | 96% | 99% | 101% | 102% | 110% |
| | | ES Enrollment | 4233 | 4281 | 4283 | 4393 | 4501 | 4608 | 4694 | 4740 | 5150 |

Demographic Characteristics of Schools

| | | | 2018–2 | 019 | | | 2018 | -2019 | 2017-2018 | | |
|--------------------------|-------------------|-------------|--------------|--------|------------|---------|---------|---------|-----------|--|--|
| | Total | Two or more | Black or | | | | | | Mobility | | |
| Schools | Enrollment | races % | Afr. Amer. % | Asian% | Hispanic % | White % | FARMS%* | ESOL%** | Rate%*** | | |
| Gaithersburg HS | 2352 | 3.3% | 23.0% | 7.1% | 53.2% | 13.3% | 43.6% | 23.5% | 15.9% | | |
| Forest Oak MS | 864 | 3.2% | 24.5% | 5.9% | 55.1% | 11.0% | 56.5% | 17.7% | 15.5% | | |
| Gaithersburg MS | 863 | 5.0% | 22.0% | 6.7% | 48.4% | 17.7% | 48.2% | 18.5% | 14.2% | | |
| Laytonsville ES | 384 | 8.3% | 17.7% | 7.8% | 22.1% | 43.8% | 16.4% | 10.4% | 10.3% | | |
| Gaithersburg ES | 839 | 2.0% | 15.7% | 3.1% | 76.2% | 2.7% | 85.8% | 53.6% | 21.0% | | |
| Goshen ES | 578 | 5.0% | 24.6% | 11.9% | 40.1% | 18.2% | 43.8% | 24.2% | 15.4% | | |
| Rosemont ES | 628 | 6.2% | 27.5% | 9.6% | 47.5% | 9.2% | 53.7% | 44.3% | 20.2% | | |
| Strawberry Knoll ES | 640 | 6.6% | 25.2% | 12.2% | 43.4% | 12.2% | 41.6% | 22.0% | 16.2% | | |
| Summit Hall ES | 672 | 1.8% | 20.1% | 3.3% | 72.2% | 2.4% | 79.6% | 57.6% | 20.5% | | |
| Washington Grove ES | 488 | 2.3% | 24.0% | 6.1% | 57.6% | 10.0% | 72.3% | 51.2% | 12.1% | | |
| Elementary Cluster Total | 4229 | 4.3% | 21.9% | 7.4% | 54.3% | 11.8% | 59.8% | 39.9% | 17.3% | | |
| Elementary County Total | 76195 | 5.4% | 21.5% | 14.0% | 32.7% | 26.0% | 38.3% | 25.6% | 13.1% | | |

^{*}Percent of students approved for Free and Reduced-priced Meals Program (FARMS) during the 2018–2019 school year.

Notes: Native Hawaiian/Pacific Islander and American Indian/Alaskan Native categories total less than 1% and were therefore excluded from the table.

Due to federal and state guidelines, demographic characteristics of schools of less than or equal to 5 students per category are reported as 0%.

^{**}Percent of English for Speakers of Other Languages (ESOL) during the 2018–2019 school year. High School students are served in regional ESOL centers.

^{***}Mobility Rate is the number of entries plus withdrawals during the 2017–2018 school year compared to total enrollment.

| | | | | | | | | | | | | | | | | | | | 9 | Spe | ecia | al E | du | cat | ior | ı Se | erv | ices | 5 | | | | |
|--|---------------|---------------------------|-------------|---------------|-----------------------|------------------------|--------------------|-----------|-----------|--------------|---------------|----------|----------|----------|---------|--------------|---------|----------|---------|--------|-------|--------|------------|----------------|----------|---------------|-----------|-------|-------|---------|---------|------------------------|-------|
| Program Capacity Table (School Year 2018–2019) | | | | | | | | | | School Based | Cluster Based | Qu | | Clus | ter | | | | Cou | ınty | · & I | Reg | iona | al Ba | asec | | | | | | | | |
| Schools | Grades Served | Capacity (HS @90% MS@85%) | Total Rooms | Support Rooms | Regular Secondary @25 | Regular Elementary @23 | CSR Grades 1–2 @18 | Pre-K @20 | Pre-K @40 | HS @20 | CSR KIND @18 | KIND @22 | ESOL @15 | METS @15 | HSM @13 | ELEM LAD @13 | ELC @10 | LANG @12 | LFI @10 | SCB @6 | AAC@7 | AUT @6 | BRIDGE @10 | DHOH @7 | SESS @10 | EXTENSIONS @6 | GT/LD @13 | PD @7 | PEP@6 | PEP @12 | PEP @18 | VISION (Elementary) @7 | OTHER |
| Gaithersburg HS | 9-12 | 2429 | 122 | | 96 | | | | | | | | 7 | 4 | | | | | 3 | 4 | | | 8 | | | | | | | | | | |
| Forest Oak MS | 6-8 | 949 | 47 | | 43 | | | | | | | | 2 | | | | | | | 2 | | | | | | | | | | | | | |
| Gaithersburg MS | 6-8 | 1009 | 52 | | 44 | | | | | | | | 2 | 1 | | | | | | | | 2 | 3 | | | | | | | | | | |
| Gaithersburg ES | PreK-5 | 788 | 44 | 4 | | 15 | 12 | | 1 | | 9 | | | | 1 | | | | | | | 2 | | | | | | | | | | | |
| Goshen ES | K-5 | 594 | 34 | 4 | | 13 | 10 | | | | 5 | | | | 1 | | | 1 | | | | | | | | | | П | П | П | П | | |
| Laytonsville ES | K-5 | 449 | 27 | 4 | | 16 | | | | | | 2 | | | 1 | | | | | 4 | | | | | | | | | | | | | |
| Rosemont ES | PreK-5 | 595 | 36 | 4 | | 10 | 10 | | 1 | | 6 | | | | 1 | | | | | | | 4 | | | | | | | | | | | |
| Strawberry Knoll ES | HS-5 | 454 | 32 | 4 | | 1 | 11 | 1 | | 1 | 6 | | | | 1 | | | | | | | 3 | | | | | | | 1 | 1 | 2 | | |
| Summit Hall ES | HS-5 | 435 | 28 | 5 | | | 13 | 1 | 1 | 1 | 6 | | | | 1 | | | | | | | | | | | | | | | | | | |
| Washington Grove ES | HS-5 | 613 | 34 | 4 | | 10 | 8 | | 2 | 1 | 4 | | | | 1 | | | | | | | | | | | | | | 1 | 1 | 2 | | |

Project Design Objectives

The objective of this project is to construct a new Elementary School to address the increase in student enrolment of the Gaithersburg School Cluster. Following the guideline provided in the Regulation FAA-RA *Long-range Educational Facilities Planning*, the proposed new facility will be designed for a capacity of 740 students including the core spaces. The building design will encourage a flexible approach to accommodate the educational program and maximum connectivity to the surrounding physical environment. Each instructional area will have adequate learning spaces, work areas, restrooms, and storage facilities.

The following are key elements of the project design:

- Minimize footprint to reduce impact on existing Kelley Park site amenities
- The main entrance of the school will address Victory Farm Drive
- Provide safe site access (pedestrian and vehicular) with separate bus and student drop-off loops and strategically located curb cuts and crosswalks
- Provide streamlined circulation within building with appropriate programmatic adjacencies
- Provide accessible community use spaces without sacrificing school security
- Provide site amenities, such as new play equipment, that enhance the site and better serve the community
- Provide a design that responds to the natural environmental features of the site while creating learning opportunities

Space Summary:

| Teaching Stations | | Small Instructional Support Room | 4 |
|-----------------------------------|----|--------------------------------------|---|
| Pre-kindergarten Classrooms | 2 | Speech/Language Room | 1 |
| Head Start | 1 | Therapy/Support Room | 1 |
| Kindergarten | 6 | Special Education Conference Room | 1 |
| Standard Grades 1-5 | 24 | Sensory Room | 1 |
| Autism | 3 | Testing/Conference Room | 1 |
| Art | 1 | Support Staff Offices | 4 |
| Music | 1 | Title 1 Parent Resource Room | 1 |
| Instrumental Music | 1 | Counselor Suite | |
| Dual Purpose Room | 1 | Counselor's Office | 1 |
| • | | Itinerant Staff Office | 1 |
| Core Facilities | | Staff Development Area | |
| Administrative Suite | 1 | Staff Development Office | 1 |
| Health Suite | 1 | Reading Specialist Office | 1 |
| Multipurpose Room | | Training/Conference Room | 1 |
| Multipurpose Room with Platform | 1 | Staff Lounge | 1 |
| Storage Rooms | 2 | Building Service Facilities | |
| Before/Aftercare Prep and Storage | 1 | Office with Locker/Shower Room | 1 |
| Kitchen | 1 | Compactor Room | 1 |
| Physical Education | | General Storage and Receiving | 1 |
| Gymnasium | 1 | General Storage | 3 |
| Office | 1 | Building Service Outdoor Storage | 1 |
| Storage | 4 | Book Storage | 1 |
| Library Media Center | | PTA Storage | 1 |
| Learning Environment | 1 | | |
| Work and Production Area | 1 | Linkages to Learning (Add-Alternate) | 1 |
| Storage | 2 | Reception | 1 |
| Main Telecom | 1 | Conference / Meeting Room | 1 |
| | | Storage Closet | 1 |
| Support Spaces | | Offices | 3 |
| Large Instructional Support Room | 2 | Toilet | 1 |

Site Design

Site Features:

The new Gaithersburg Elementary School will be located on the south side of Victory Farm Drive, approximately 350 feet east of Girard Street, in the City of Gaithersburg, Maryland. The property is currently used as a public park (known as "Kelley Park") with three baseball/softball fields, two tennis courts, a playground, parking lot and associated infrastructure to support the baseball/softball fields. Two vehicular access points to the site are located along Victory Farm Drive. The site slopes significantly from east to west, with over 30 feet of elevation change in the developed portions of the property. A significant portion of the site (3.8 acres) is within a mapped FEMA 100-year floodplain and the same area is known to contain Wetland areas.

The layout of the new school site will be largely driven by the location of the 100-year floodplain. The school and associated infrastructure will be located to prevent permanent encroachments into this area. A bus loop with 35 internal parking spaces is proposed on the western frontage of the building. On the east, a student drop-off lane with internal parking is proposed. Total on-site parking for the site will be in the vicinity of 100 spaces. Recreation and play areas will be located on the east, south and west sides of the site to provide separation from vehicular areas and easy access from points of egress from the school building. A retaining wall will be installed to provide a necessary grade transition between the existing baseball field and the new school building and associated site amenities. ADA compliant routes will be provided from the building and parking areas to the recreation and play areas.

Stormwater Management:

No formal stormwater management (SWM) practices are provided under existing conditions. With the new school development, Environmental Site Design (ESD) practices will be implemented to the Maximum Extent Practicable (MEP) in accordance with Montgomery County and the State of Maryland regulations. Typically ESD practices include micro-bioretention, bio-swales, green roofs, and porous paving systems. If the full required SWM volume cannot be provided in the ESD facilities, then underground structural system(s) will be provided to manage the remaining runoff volume.

Forest Conservation & Natural Resource Protection:

To the maximum extent feasible, the school development will refrain from construction impacts within the 100-year floodplain and its corresponding 25 foot buffer. The exiting wetlands and their buffer will remain untouched. The development will comply with the City of Gaithersburg Environmental Standards and Forest Conservation Regulations.

Building Design

General Description:

The proposed building is a partial three-story, steel-framed structure with brick veneer over masonry block exterior walls. Interior walls are primarily masonry block. The lateral wind and seismic resisting system will be masonry shear wall. All aspects of the plan are designed to meet the most current educational specifications, life-safety, health, and fire code requirements as well as compliance with the *Americans with Disabilities Act*. The building materials are in accordance with the MCPS facility design guidelines and designed with a focus on the sustainability and maintainability of the school.

The building is oriented northeast with the identifiable main entrance of the building facing Victory Farm Drive. The administrative suite is located at the front of the building to allow supervision of the main entrance, lobby, and student drop-off loop. The academic areas are organized along the corridor to maximize the natural daylighting into the classrooms and promote an efficient interior circulation system. The prekindergarten, kindergarten, head start and first grade classrooms are located on the ground floor level for security and safety reasons. The remainder of the classrooms for Grades 2-5 are located on the upper floor levels. Stairways at each end of the building and a centrally-located stair in the lobby, along with an elevator provide vertical circulation within the building.

The core support spaces of the building, consisting of the multi-purpose room, gymnasium, and media center, meet the standards of the elementary school program and are also designed to support community use by grouping the spaces together on the main floor of the building with controlled access. A secondary entrance with a canopy provides a sheltered entry from the fields and outdoor play area into the gymnasium lobby area.

Heating, Ventilation, and Air-Conditioning (HVAC) System:

The heating and cooling system for the school will consist of a variable refrigerant flow (VRF) system with water-cooled condensing units. Mechanical infrastructure to support the system's condensing units will include gas-fired condensing boilers, a cooling tower, cooling tower distribution pumps, loop distribution pumps, and a plate-and-frame heat exchanger. Ceiling cassette type VRF terminals will provide heating and cooling for the classroom and administration areas throughout the school. Conditioned outdoor air for the classroom and administration areas will be supplied by a series of rooftop dedicated outdoor air systems, complete with indirectly gas-fired furnaces for heating, direct expansion cooling, and energy recovery for pre-conditioning and tempering of the outdoor air. Airflow supplied from these dedicated outdoor air units is to be dehumidified, conditioned, and delivered directly to each space at a room neutral temperature. Rooftop heat pump units will provide space conditioning and ventilation airflow for the multipurpose room and gymnasium area. Data/IT closets throughout the school will be cooled through individual ductless split type air-conditioning units with

Building Design (continued)

low ambient cooling operation. Automatic temperature controls will be direct digital type controls (DDC). Control system components will be interfaced with the central MCPS energy management control system for remote monitoring and energy management routines. The HVAC design shall be compliant with the latest applicable codes, and the current MCPS facilities design standards.

Plumbing System:

The storm sewer, sanitary sewer and domestic water systems will be provided in accordance with the latest Washington Suburban Sanitary Commission (WSSC) plumbing codes and regulations. A combination fire/water service will extend to serve the proposed elementary school. A gas-fired condensing type water heater will generate domestic hot water for the school. The domestic hot water system will be complete with a circulation pump, an expansion tank, and a thermostatic mixing valve. A natural gas service from Washington Gas will be provided. This gas service will be positioned outdoors and located adjacent to the main mechanical room. New plumbing fixtures will be designed to meet the *Americans with Disabilities Act* (ADA) and utilize water conservation features. Floor-mounted water closets will utilize dual-flush type valves, capable of providing either 1.6 or 1.0 gallons per flush. Urinals will be wall-hung and provided with pint flush valves. Wall-hung cast-iron lavatories will utilize self-closing faucets that supply 0.5 gallons per minute. The water consumption figures noted are equal to or less than what is required by both the current plumbing code for promoting good water conservation practices.

Fire Protection System:

The entire school will be fully-sprinklered throughout with a wet-pipe sprinkler system in accordance with the National Fire Protection Association (NFPA) Standard 13. The sprinkler system will be separated into multiple zones that will align the building's fire alarm pull zones. A fire detection and alarm control panel with voice evacuation will serve initiation devices (smoke detectors and manual pull stations) and notification devices (fire alarm speakers and strobes). Fire alarm annunciator panel with graphic display will be provided at the main building entrance.

Power System:

There will be a 2000-ampere, 277/480-volt main switchboard serving panelboards and transformers in the main electrical room and electrical closets throughout the school. There will be panelboards for mechanical, lighting, emergency lighting, receptacle, and generator standby loads. There will be an onsite outdoor 125-kW natural-gas generator to serve life-safety and standby loads via automatic transfer switches. Life safety loads include emergency egress lighting, exit lights, and fire alarm equipment. Standby loads include teacher station receptacles, telecom room receptacles, kitchen freezer and cooler, energy management system (EMS) panels, elevator cab, sumps pumps, smoke dampers, and heaters/heat trace for rooftop units.

Building Design (continued)

Lighting and Lighting Controls:

Energy-efficient light emitting-diode (LED) lighting will be provided throughout. MCPS standard classroom lighting will be provided, which will have lighting relay room controllers, lighting control stations (switches), and ceiling sensors to control lighting fixtures and provide multiple levels of lighting. Emergency lighting will be automatically switched ON during a power outage.

Exterior Lighting:

Exterior lighting will utilize light emitting-diode (LED) lighting fixtures and will be designed to shield adjacent residences from intrusive glare while maintaining light levels for safety and security purposes. The lighting fixtures will be full cutoff with no uplight to minimize light pollution into the night sky. There will be building mounted lighting around the perimeter of the proposed building addition. Wall-mounted fixtures will be designed to shield adjacent residences from intrusive glare while maintaining light levels for safety and security.

Intercom and Sound Systems:

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

Communications and Security Systems:

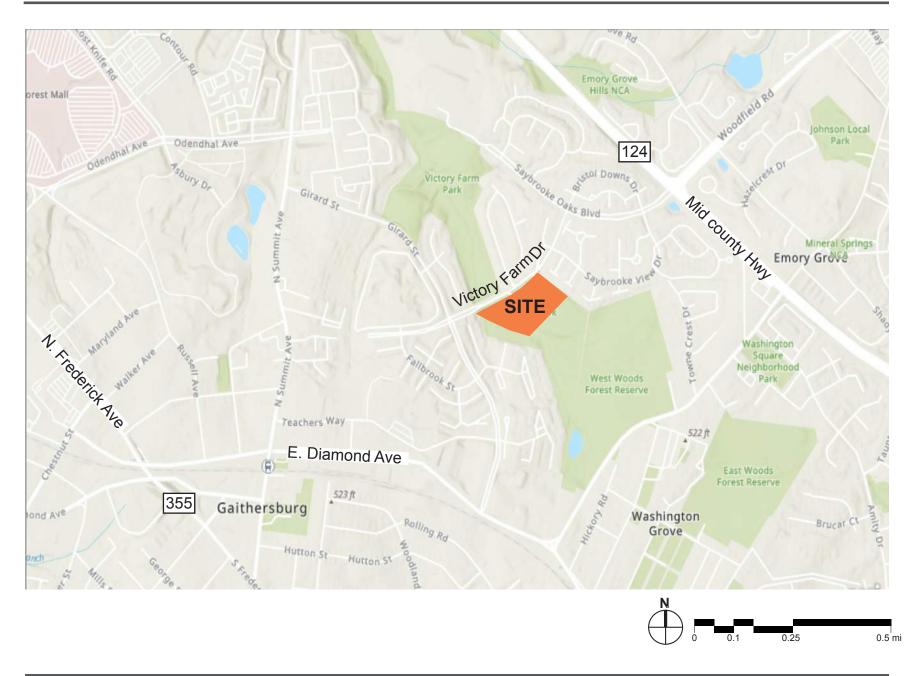
The school will have communications (data and voice) systems including wireless access points throughout for Wi-Fi. Provisions for audio/visual systems for instructional technology will be provided. Security systems will include door access control (card readers), intrusion detection (keypads and motion detectors), and video surveillance (cameras). Distributed antenna system will be provided for public safety radio for first responders.

Sustainability

The proposed project will be designed and constructed with an emphasis on environmental sustainability. The architecture and engineering systems will align with facility management sustainability principals to ensure long term operational effectiveness. The project will be certified with Green Globes at a 2 Globe level and meet the 2018 International Green Construction Code (IgCC). Key features related to sustainability include the following:

- High Performance Building Envelope: High performance insulation and glazing will be utilized to address heat gain and loss through the building envelope. In addition, a light color roof will be designed to reduce solar heat gain.
- Daylighting: The building envelope will include low-e, double pane windows providing natural light and views from all teaching spaces.
- High Efficiency LED Lighting with Occupancy Based Controls: Sustainable lighting control design in a typical classroom includes low voltage switches and occupancy sensors.
- High Efficiency Heating, Ventilation and Air Conditioning (HVAC) Equipment: High efficiency HVAC equipment will be utilized to provide for occupant and thermal comfort within the building at reduced energy consumption.
- Occupancy and CO2 Demand Control Ventilation: Carbon dioxide sensors will be utilized for high occupant density spaces to reduce the quantity of outside air used when these spaces are not fully occupied. This will limit the amount of energy used to heat and cool large spaces, like the gymnasium, while they are unused.
- Recycled Materials: Where the use is appropriate, recycled materials will be specified and used for the construction of the building.
- Construction and Demolition Waste Management: A plan to divert the construction and demolition material from landfills and incinerators will be implemented during construction.
- Stormwater Treatment: Stormwater management facilities will be implemented into the design to address stormwater runoff from new impervious surfaces. These facilities reduce strain on public storm sewers, help the health of local waterways, and combat erosion and flooding concerns during significant storm events

Vicinity Map



Existing Site Plan



KEY LEGEND

- A. Beach Volleyball Court
- B. Field 1
- C. Field 2
- D. Parking Lot
- E. Tennis Courts
- F. Basketball Half Court
- G. Playground



Proposed Site Plan



KEY LEGEND

- A. Beach Volleyball Court
- B. Field 1
- 1. New Building
- 2. Main Entry
- 3. Bus Loop
- 4. Service Entry
- 5. Student Drop Off
- 6. Paved Play Area
- 6a. Early Ed. Paved Play
- 7. Mulched Play Area
- 7a. Early Ed Mulched Play Area
- 8. Athletic Fields
- 9. Future Relocatables
- 10. Community 'Tot Lot'
- 11. Dedicated 'Tot Lot' Parking
- 12. Community Use Entrance (After Hours)
- 13. New Walkpath Connection



Existing First Floor Plan

This page left intentionally blank

Proposed Elevations



North West Elevation



North East Elevation

Proposed Elevations



South West Elevation



South East Elevation

Proposed Elevations



View from Student Drop-off Loop

Project Team, Schedule and Estimated Construction Costs

Design Team Members

Architect: Smolen ■ Emr ■ Ilkovitch Architects
Civil Engineer: Macris, Hendricks & Glascock, P.A.
Structural Engineer Comprehensive Structural Solutions, LLC

Mech./Electrical/Plumbing Engineers: James Posey Associates, Inc.

Project Schedule

Preliminary Plans Presentation: October 2019
Construction Documents Completed: December 2020
Award Construction Contract: April 2021
Project Completed: August 2022

Estimated Construction Costs

New Building: 101,963 Gross Square Feet

Construction Cost Estimate for \$32,750,000

Building and Site: