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Preliminary Plans Presentation

Highland View Elementary School Addition

Prepared for
Montgomery County Board of Education

September 26, 2024



Preliminary Plans Presentation

Highland View Elementary School Addition

9010 Providence Ave
Silver Spring, Maryland 20901

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Ms. Robin O'Hara	Senior Planner, Division of Capital Planning and Real Estate

Community Design Process Involvement

Involvement

The preliminary plans for the Highland View Elementary School Addition 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 in this brochure were reviewed and subsequently modified in accordance with recommendations and suggestions received during the schematic design work sessions.

Participants in the Community Design Process

Hanna Yim	Principal	Highland View Elementary School
Diana Hayden	Assistant Principal	Highland View Elementary School
Adrian Breeman	Parent/PTA Member	Highland View Elementary School
Alexa Weedon	Staff	Highland View Elementary School
Andrew Miele	Staff	Highland View Elementary School
Bridget Egan	Staff	Highland View Elementary School
Candace Dorin	Staff	Highland View Elementary School
Celena Nimmo	Staff	Highland View Elementary School
Damian Grasso	Staff	Highland View Elementary School
D.J. Connelly	Capital Budget and Projects Manager	Division of Capital Planning and Real Estate, MCPS
Dre Feltren	Parent	Highland View Elementary School
Eleesha Daley	Project Manager	Division of Design and Construction, MCPS
Emily Feltren	Parent	Highland View Elementary School
Erika Dworkin	Planner	Division of Capital Planning and Real Estate, MCPS
Erin Crabtree	Staff	Highland View Elementary School
Henry Reeves	Community Member	Highland View Elementary School
Jemma Pugsley	Staff	Highland View Elementary School
Jennifer Arney	Parent	Highland View Elementary School
Jessica Thompson	Staff	Highland View Elementary School

Community Design Process Involvement

Participants in the Community Design Process

Jo Anne Murray	Architect	Maryland State Department of Education, OSF
Kathryn Maitland	Staff	Highland View Elementary School
Kelly Shuman	Staff	Highland View Elementary School
Kim Stonerook	Staff	Highland View Elementary School
Kristi Malaguit	Staff	Highland View Elementary School
Kori Purdum Matheis	Design Team, Architect	Proffitt & Associates Architects
Lauren Focarazzo	Parent	Highland View Elementary School
Laurie Burny	Staff	Highland View Elementary School
Luis Mejia	Interpreter	Montgomery County Public Schools
Madalyn Burns	Design Team, Architect	Proffitt & Associates Architects
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Morgan Becker	Staff	Highland View Elementary School
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Natalie Lukehart	Staff	Highland View Elementary School
Oscar Orellana	Assistant Project Manager	Division of Design and Construction, MCPS
Reena Trivedi	Staff	Highland View Elementary School
Robin O'Hara	Senior Planner	Division of Capital Planning and Real Estate, MCPS
Sean Lash	Parent	Highland View Elementary School
Sean Lindaman	Design Team, Civil	Clark Azar & Associates, Inc.
Seth C. Adams	Associate Superintendent	Office of Facilities Management, MCPS
Shannon Alshaikh	Staff	Highland View Elementary School
Sherri Pfaff	Staff	Highland View Elementary School

Community Design Process Involvement

Participants in the Community Design Process

Shiho C. Shibasaki	Assistant Director	Office of Facilities Management, MCPS
Sonya Kim	Staff	Highland View Elementary School
Stacy Justice	Staff	Highland View Elementary School
Stephen Wallace	Parent	Highland View Elementary School
Steven Magenheim	Staff	Highland View Elementary School
Sylvia Augusteijn	Staff	Highland View Elementary School
Tod Chernikoff	Community Member	Highland View Elementary School

Note: Only those participants who provided their full names appear on the list.

Project Information

Background/History

Location: 9010 Providence Ave, Silver Spring, Maryland 20901

Cluster: Downcounty Consortium

Site Size: 6.6 acres

**History and Square Footage
of Existing Building:**

1953	Original Building	21,088 square feet
1970	Addition	7,404 square feet
1975	Addition	5,888 square feet
1994	Addition	24,833 square feet
2019	Addition	94 square feet
<hr/>		
Total		59,307 square feet

Program Capacity: 336

Number of Relocatable Classrooms: 6

Current Parking Spaces: 47

Highland View Elementary School currently serves students from Kindergarten through Grade 5. The school’s September 2023 enrollment was 380 students. Student enrollment projections for Highland View Elementary School show an increase in enrollment to 419 students within the next 6 years. The addition is planned to help alleviate overcrowding that necessitates the use of 6 on-site relocatable classrooms and provide expanded capacity for the future. The project is scheduled to be completed by August 2027.

Project Information

Educational Program Objectives

The objective of the proposed project is to construct a three-story classroom addition to increase the program capacity of Highland View Elementary School to 528 seats. The addition will include 8 standard classrooms, 1 music room, and 1 instrumental music room. It also will contain instructional support rooms, support staff offices, staff development areas, and a Parent and Teacher Association (PTA) storage room. Add-alternate renovations will include an expansion of the health suite, creation of kindergarten classroom restrooms and storage rooms, enhancements to the multipurpose room, updates to the media center, and ADA modifications throughout the site. The project will provide a cost effective, energy efficient, and safe facility to meet the needs of the school.

The building design goals include the following:

- Design a new three-story classroom wing constructed into the hillside to preserve the usable site area and facilitate the addition of an accessible pedestrian bridge to the play area
- Provide an expanded and updated health suite with separate isolation area
- Capture underutilized space to provide restrooms and storage rooms for kindergarten classroom use
- Provide controllable natural daylight into all new teaching spaces
- Provide the safest environment possible for the students and staff
- Provide clear, easily supervised circulation paths for intuitive and simple wayfinding

The site design goals include the following:

- Improve accessibility for the hilltop play area
- Expand the school bus loop and provide additional parking
- Improve safety and functionality of site access points

Project Information

Added Teaching Stations and Spaces Provided When Complete

(Number of teaching stations included in capacity is indicated in parenthesis)

New Construction

Summary of Classrooms:

Standard Classrooms	(8)
Music	(1)
Instrumental Music	1

Support Spaces:

Large Instructional Support	1
Small Instructional Support	1
OT/PT Therapy/Support Room	1
Support Staff Office	2
2nd Counselor's Office	1
Staff Development Office	1
Reading Specialist Office	1
Training/Conference Room	1
Privacy Room	1
Parent Teacher Association Storage	1
Remote Workroom	1

Renovation of Existing Space (Add Alternates)

Health Services Suite:

Waiting Area	1
Treatment/Medication Area	1
Office/Health Assessment Room	1
Health Assessment/Isolation Room	1
Rest Area	1
Toilet Room	1
Storage Room	1

Assistant Principal's Office	1
Records Room	1
Multipurpose Room	1
Kindergarten Restrooms	3
Kindergarten Storage Rooms	3
Outdoor Storage Room	1

Library Media Center (LMC):

Learning Environment	1
Work and Production Area (Maker Space)	1

Project Design

Site Design

Highland View Elementary School is situated on a 6.61 acre parcel located at 9010 Providence Avenue, Silver Spring, Maryland 20901. The site is zoned R-60 and is bound on the north and east by detached single family residential properties and two access points, one named Providence Avenue, and the other named Lauer Terrace. On the southeastern corner of the property, the site borders another right-of-way named Saffron Lane. Along the southern and western property lines, the site borders apartment complexes and a homeowners association.

Vehicular access to the site is provided at two locations, both along the north edge of the property. At the northwestern corner, school bus loop access is provided via extension of Providence Avenue. The school bus loop also accommodates a small number of reserved staff parking spaces. At the northeastern corner, Lauer Terrace terminates into the main parking area, which also serves as the student drop-off loop. The vehicular access points provide access to the site approximately level with the main entry first floor on the north side of the building. The main entry first floor is below grade at the east side of the building, and beyond the building the site continues to slope steeply upward toward the east and southeast. The site slopes downward away from the building toward the west and southwest. There is an existing 20' Washington Suburban Sanitary Commission (WSSC) right-of-way and a storm drain easement along the southwestern property line of the site.

A small expansion to the school bus loop is proposed, which will provide improved fire truck access and the ability to stripe eight short-term parking spaces within the center of the loop. Improvements will be made to the current parking area within the drop-off loop and walkways from the drop-off loop to the main entrance. These improvements are designed to meet Americans with Disability Act (ADA) regulations and provide a fully accessible route. An add-alternate for a new 12 space parking area to the north and west of the existing gymnasium is also included.

A new retaining wall will be required to wrap around the addition to allow for a pathway for emergency and maintenance access to the rear of the site. A pedestrian bridge will be constructed from the third floor of the addition to the existing hilltop play area.

Project Design

Site Design

Stormwater Management:

New site development will be managed by incorporating Environmental Site Design (ESD) practices to the Maximum Extent Practicable (MEP) in compliance with local and state regulations. A new micro-bioretenion areas is proposed to be used adjacent to the add-alternate parking, a bioswale will be installed to the southeast of the addition, and an infiltration area will be added between the addition and the drop-off area. Where proper infiltration rates and soil types are observed in the add-alternate parking lot, pervious pavement will be used.

Utilities:

The existing 6” water service and sanitary sewer connection are believed to be adequate to extend within the building to serve the addition. The storm drainage from the addition will be tied to the new proposed bioswale. A new inlet and storm drain will be required to the south of the existing building. The existing electrical service will need to be upgraded to accommodate the new loads from the addition.

Project Design

Building Design

Code Compliance and Accessibility:

The building and site will be designed to comply with Montgomery County commercial building codes which include:

- 2021 International Building Code (IBC) with local Amendments
- Chapter 8 County Building Code
- ANSI/ASHRAE/IES Standard 90.1 2022
- 2021 International Mechanical Code (IMC)
- Montgomery County Code Chapter 8 (Mechanical)
- Washington Suburban Sanitary Commission (WSSC) Plumbing and Fuel Gas Code
- 2017 National Fire Protection Association (NFPA) 70 National Electric Code
- Montgomery County Code Chapter 17 (Electrical)
- 2018 National Fire Protection Association (NFPA) Fire Code
- 2018 NFPA 101 Life Safety Code
- 2013 NFPA 13R: Commercial Sprinklers
- 2021 International Green Construction Code (IgCC)
- Maryland Accessibility Code, COMAR 09.12.53
- 2010 ADA Standards for Accessible Design

Note: The codes listed above have not yet been adopted by the County but are anticipated to be adopted prior to the permit application.

Project Design

Building Design

General Description:

Highland View Elementary School is a two-story split-level structure. The original building was constructed in 1953. It included a main entrance level and a two-story classroom wing, which was offset by a half story from the main level. The main entrance level included a main office area, health room, restrooms, the media center, the multipurpose room, the stage, and the kitchen. The lower level of the classroom wing contained five classrooms and some support space along the west side of the corridor. The east side of the corridor contained only a crawl space due to the rise in elevation along that side of the building. Finished grade to the east of the building varies from close to the upper-level finished floor height to about 5'0" below the upper finished floor. The upper floor of the classroom wing contained 10 classrooms, 5 on each side of the corridor.

In 1970, three additions were constructed. The first was a single-story addition to the east of the existing main entrance level. The second was a single-story addition to the north of the existing kitchen. The first two additions were demolished in 1994 when the final addition was built. The third addition was a single-story classroom addition that aligns with the lower level of the two-story classroom wing. It still exists and contains three kindergarten classrooms. It created a courtyard between itself and the two-story classroom wing to the east.

The gymnasium and its support spaces were added in 1975. The gymnasium finished floor elevation aligns with the lower classroom wing and kindergarten wing elevation.

In 1994, the final addition was completed. This scope included removal of the existing main entrance level spaces except for the multipurpose room and stage. A new two-story addition was constructed in its place. The main entrance level includes the main office, staff lounge, art room, music room, and existing multipurpose room and kitchen. Stacked above the main entrance level is the instructional media center, three classrooms, and support spaces. An addition between the multipurpose room and gymnasium created a new gymnasium entrance lobby, which aligns with the main entrance floor level and includes stairs and a chairlift to provide access down to the lower level.

The proposed addition, designed to meet the MCPS educational specifications, is a three-story addition to the east of the 1994 addition. It will be constructed into the hillside with its lowest level aligned with the main entrance finished floor, its second floor aligned with the media center level, and its third floor as a stand-alone upper story. A three-story elevator and stair tower will be provided. The top floor will have a pedestrian bridge connection to provide an accessible route to the hilltop play area.

Project Design

The connection on the main level will house music, instrumental music, a shared music storage room, large instructional support, small instructional support, therapy/support, a resource office, and PTA storage. The south, east, and west exterior walls will act as retaining walls as the grade will be above finished floor. The second floor will connect at the media level and will include four typical classrooms, speech, training/conference, a staff development office, a reading specialist office, an itinerant staff office, a remote workroom, a privacy room, and restrooms. The third floor is completely new and will house four classrooms and restrooms.

Exterior:

The proposed exterior design will incorporate the following architectural materials:

- Exterior veneer materials will complement the existing materials, including use of two colors of face brick with some decorative accents. Cast stone sills will be used for windows.
- Thermally broken aluminum windows with 1” insulated glazing will be used to provide an abundance of natural daylight. Exterior doors and frames will be painted insulated hollow metal.

The exterior walls at the lowest level will be cast in place concrete retaining walls. At the second level, they will switch to metal stud cavity type constructed of cold formed metal stud backup, gypsum sheathing, insulation, air space, and face masonry veneer.

Roof Assemblies:

The addition will receive a steel joist roofing system sloped at ¼” minimum per foot, topped with metal deck, rigid insulation, and single-ply roofing. The roofing system will be light colored to minimize heat island effect. A portion of the roof structure will be designed to support photovoltaic panels, which will provide on-site renewable energy.

Project Design

Interior:

The building interiors will comply with MCPS standards and is expected to include the following:

- Flooring:
 - Vinyl composition tile (VCT) resilient flooring throughout
 - Carpet in assistant principal's office and library media center main reading areas
 - Ceramic tile in restrooms
- Walls:
 - Corridor and core spaces are to be concrete masonry units (CMU) masonry
 - Typical classroom walls and support spaces are to be metal stud walls with drywall finish
 - Rubber wall base, typical throughout
 - Porcelain tile base in corridors
- Ceilings will be Acoustic ceiling tile throughout

Classroom Technology:

The classrooms will be designed to support interactive educational technology that includes controlled wireless computer access and interactive whiteboard systems. Individual classrooms are designed to provide a student seating arrangement that can be organized into small groups for project-oriented teaching, or students can face the teacher in a traditional method.

Code Compliance/Accessibility:

All areas of the building will be designed to meet state and local building codes, including fire, life-safety, and health standards. The proposed building will be ADA compliant.

Project Design

Building Design

Sustainability:

The proposed project will be designed and constructed with an emphasis on environmental sustainability. The architecture and engineering systems will align with MCPS facility management sustainability principles to ensure long-term operational effectiveness. The project will comply with the newly adopted Montgomery County Green Building Code, utilizing the 2021 International Green Construction Code (IgCC) compliance path. The key sustainability features are listed below:

- Encourage alternative transportation to the new facility by providing bicycle racks.
- Manage stormwater to reduce surface runoff quantity and improve quality.
- Use highly reflective roof surfaces and/or vegetated roofs to reduce heat gain in the building.
- Install water conserving and low-flow plumbing fixtures in the new addition.
- Optimize the energy performance of the building by providing a highly energy efficient building envelope, lighting system, and heating, ventilation, and air conditioning systems (HVAC).
- Optimize equipment selection, installation, and operation of new HVAC equipment through commissioning of the energy systems.
- Adhere to construction indoor air quality management plans and use low emitting building materials to safeguard occupant health.
- Provide on-site renewable energy via use of roof-mounted photovoltaic panels.
- Provide a high level of occupant control over individual lighting and thermal comfort to promote an enhanced indoor environment in the new building.
- Use construction materials that are recycled and regionally manufactured for the new addition.
- Maximize daylight in classrooms.
- Minimize background noise level from HVAC systems in classrooms and control reverberation time with sufficient sound absorption materials.

One of the primary design factors required to achieve a sustainable facility is the conservation of energy. The importance and consideration placed on energy conservation will be reflected in the selection of materials and the mechanical/electrical systems utilized. In addition, a direct digital automatic temperature control system will be provided to monitor and control all new HVAC equipment from a central building management system. The new building addition will be designed to meet or exceed ANSI/ASHRAE/IES Standard 90.1 2022.

Project Design

Building Design

Structural Design:

The proposed roof structure will be steel joist framing to a series of steel girders and steel columns. The typical joist spacing will be 5'0" on center maximum. Due to the of existing adjacent lower roof structures, reinforcing of the existing roof structure may be required to accommodate snow drift loading.

The proposed second and third floor structures will be comprised of 3 ½" normal weight concrete bearing on 1 ½" composite metal decking, supported by composite steel beams. The composite steel beams will frame to a series of composite steel girders and columns. Typical beam spacing will be 7'0" on center maximum.

The main level floor exterior walls will be cast in place concrete and will be designed as basement walls to retain the adjacent soils. Additional retaining walls along the exterior wall may be required to allow for proposed main floor windows. Footings will step up as feasible to align with the proposed exterior wall of the second-floor classrooms.

Lateral wind and seismic resisting system for the proposed addition will be steel moment frame.

The foundation system is pending direction from the Geotechnical Engineer.

Project Design

Building Design

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

The addition to the building includes a three-story addition to the northeast portion of the building. During the design development phase, two major mechanical systems will be analyzed and considered. To provide consistency in equipment from one portion of the building to another, the space conditioning equipment provided in the addition would be connected to the dual temperature heating and cooling plant in the existing building; however, the space ventilation equipment is independent of the central dual temperature plant given the potential heating and cooling capacity limitations. As an alternative option, the existing heating and cooling plant can be left as is and all HVAC systems associated with the addition will be independent of the existing building systems. The proposed independent system would include heat recovery variable refrigerant flow/volume (VRF/VRV) systems coupled with packaged direct expansion cooling, gas-fired heating, rooftop dedicated outdoor air system (DOAS) units. This system will also provide independent heating and cooling flexibility during the “in-between” seasons, where sometimes simultaneous heating and cooling is needed in different parts of the building, which the current dual temperature system is unable to provide.

Plumbing:

The existing water service consists of a 6” combined sprinkler/domestic water service. The addition is not expected to exceed the limits of the current incoming service and does not necessarily require the service to be replaced.

Cold water, hot water and hot water recirculation will be extended from the existing building systems to serve the fixtures and equipment in the addition, as required. A new sanitary drainage system for the addition serving the new plumbing fixtures will be sized per the requirements of the American Society of Plumbing Engineers, Washington Suburban Sanitary Commission (WSSC), and the International Plumbing Code. The storm water system will be sized per the requirements of the American Society of Plumbing Engineers, WSSC, and the International Plumbing Code.

Fire:

The entire addition will be protected by means of a wet pipe sprinkler system that is connected to the new incoming service. Sprinkler systems will be in strict accordance with all local and state codes as well as the International Codes and NFPA.

Project Design

Building Design

Power System:

The addition will require an electric service upgrade to accommodate the new loads.

The switchboard will be replaced due to the service upgrade with incoming service feeds upsized for a new 2000A service. The new switchboard will refeed any existing to remain loads being fed from the current switchboard. The new addition is proposed to be fed from space in the new Switchboard and will feed a mechanical panelboard which will also serve the proposed lighting within the addition, as well as serving all the 208/120V loads.

An emergency circuit will be extended into the new addition to serve the new proposed life safety egress lighting. The existing fire alarm system will be expanded with new manual pull stations located where required, as well as ceiling smoke detectors with associated door hold opens at all fire doors.

Lighting and Controls:

Lighting within the new addition and renovated areas shall be light-emitting diode (LED) type fixtures. 2'x4' flat panel fixtures will be provided as typical but will be coordinated with MCPS. Lighting controls in new and renovated areas will be provided to meet all applicable energy codes including the use of occupancy/vacancy and daylight sensors where applicable. Dimming for fixtures in classroom will be provided. Exterior lights shall be LED and full cutoff, the building mounted and site lighting shall be controlled through Photocell and Building Automation System (BAS) (Photocell ON/BAS Off).

Communications:

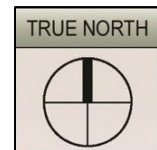
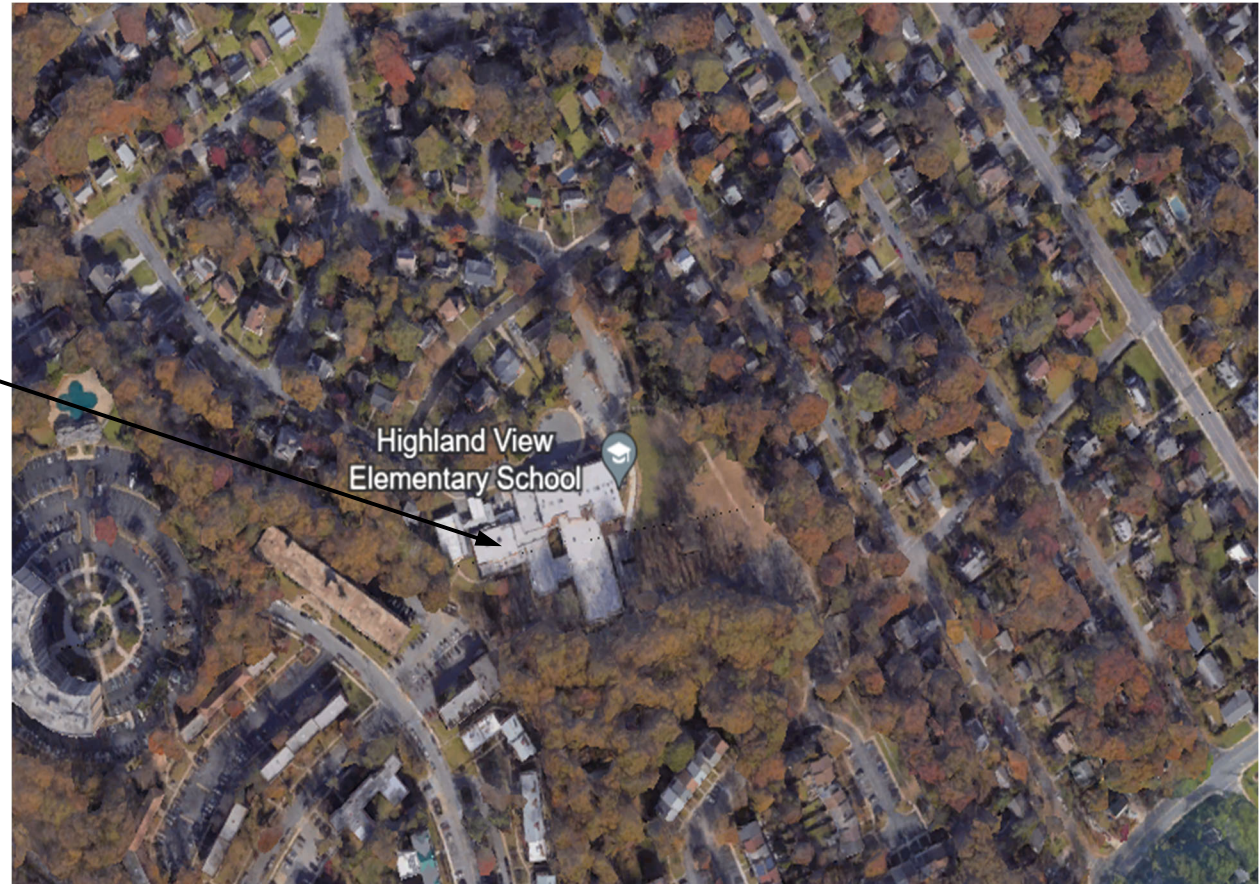
The public address (PA) system will be expanded to serve the new addition. New ceiling mounted PA speakers located in the corridors and classrooms will be provided. Classrooms will receive a call-switch located adjacent to the entrance to the classroom to call the office through the PA system. Renovated portions of the building will use the existing main distribution frame (MDF)/intermediate distribution frame (IDF) rooms with a new IDF being added in the addition to serve that portion of the building.

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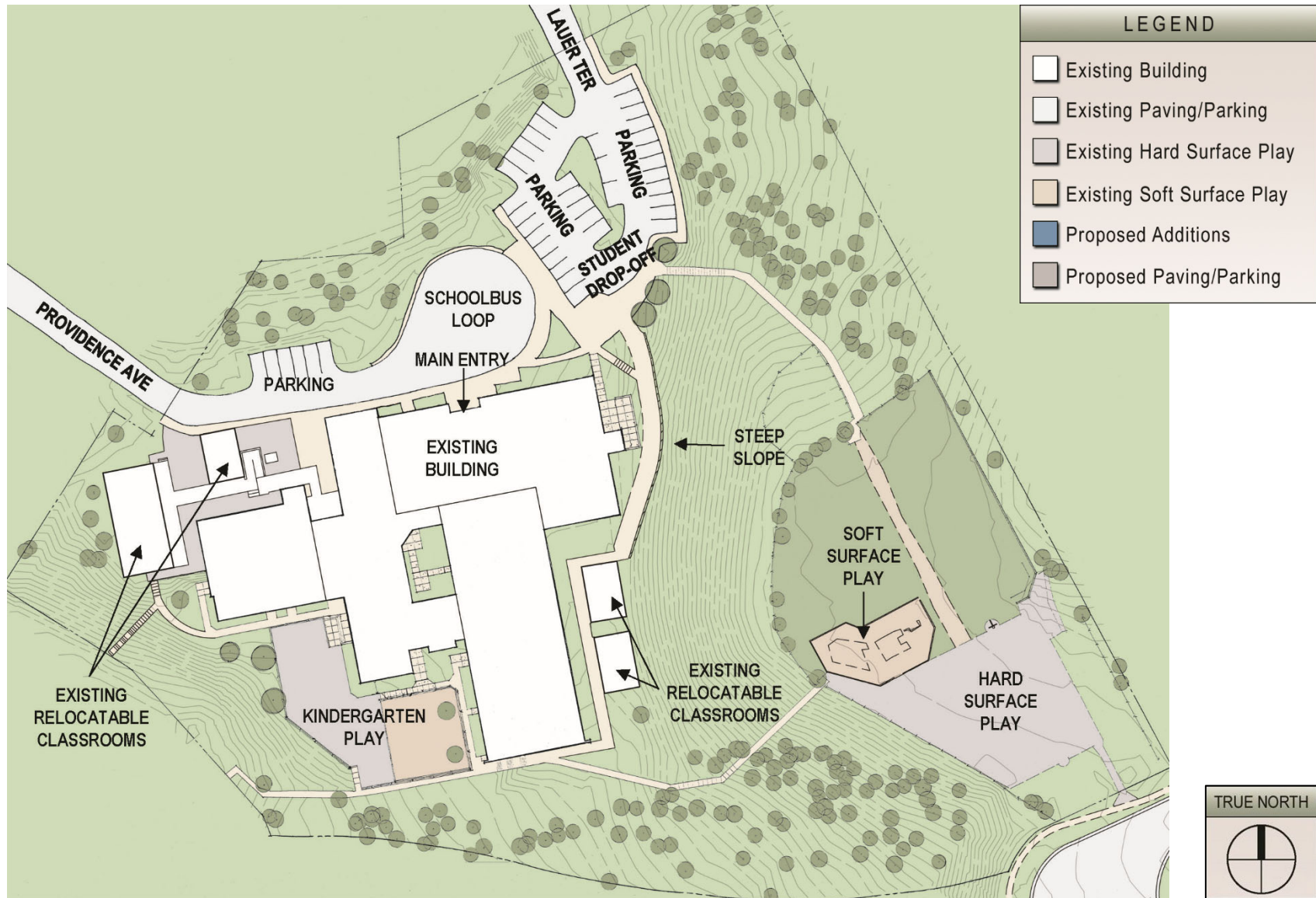
Vicinity Map

Site

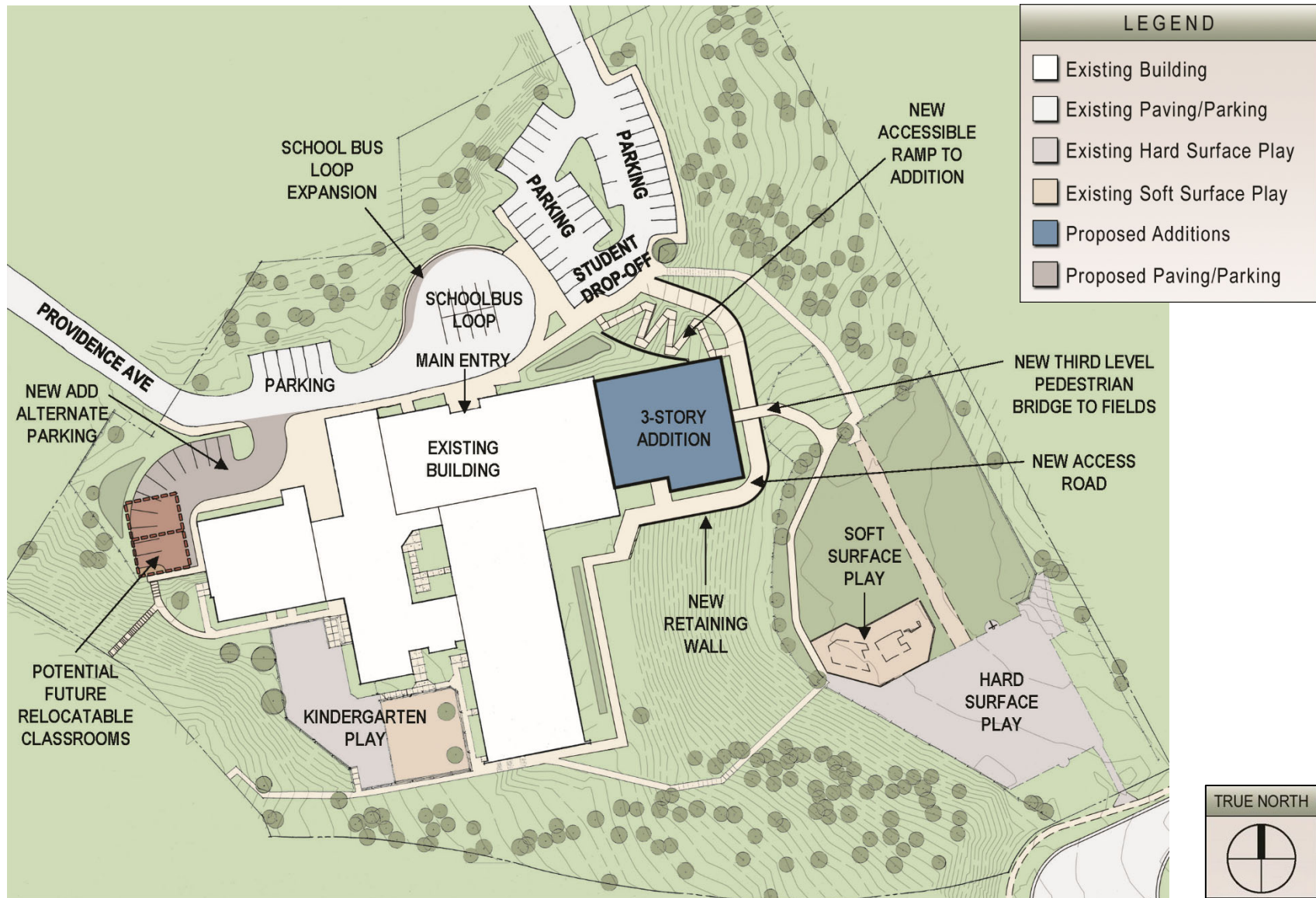
**HIGHLAND VIEW
ELEMENTARY SCHOOL**
9010 Providence Ave,
Silver Spring, Maryland 20901



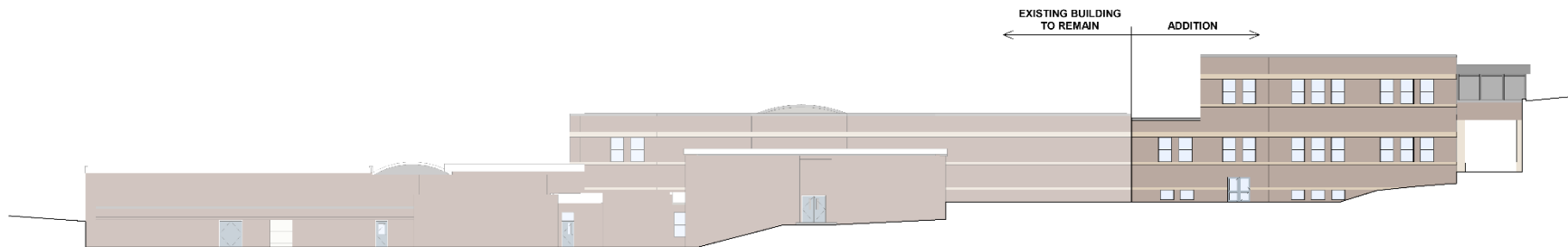
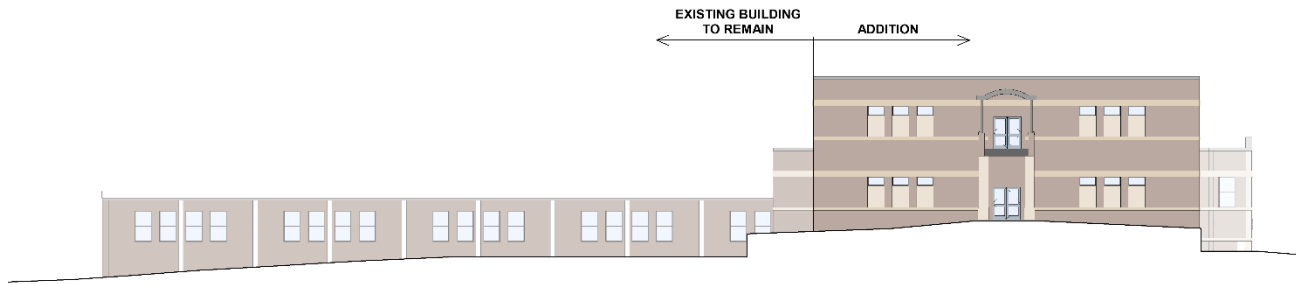
Existing Site Plan



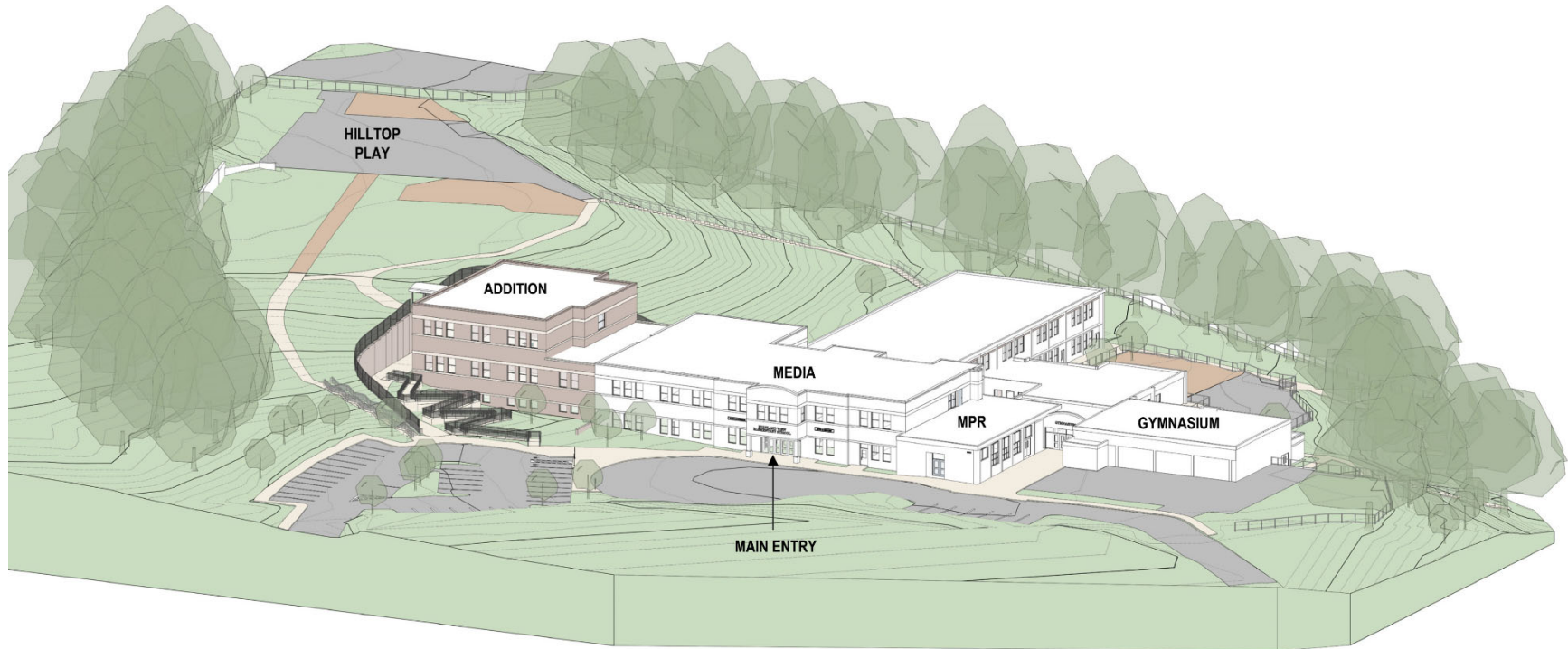
Proposed Site Plan



Proposed Elevations

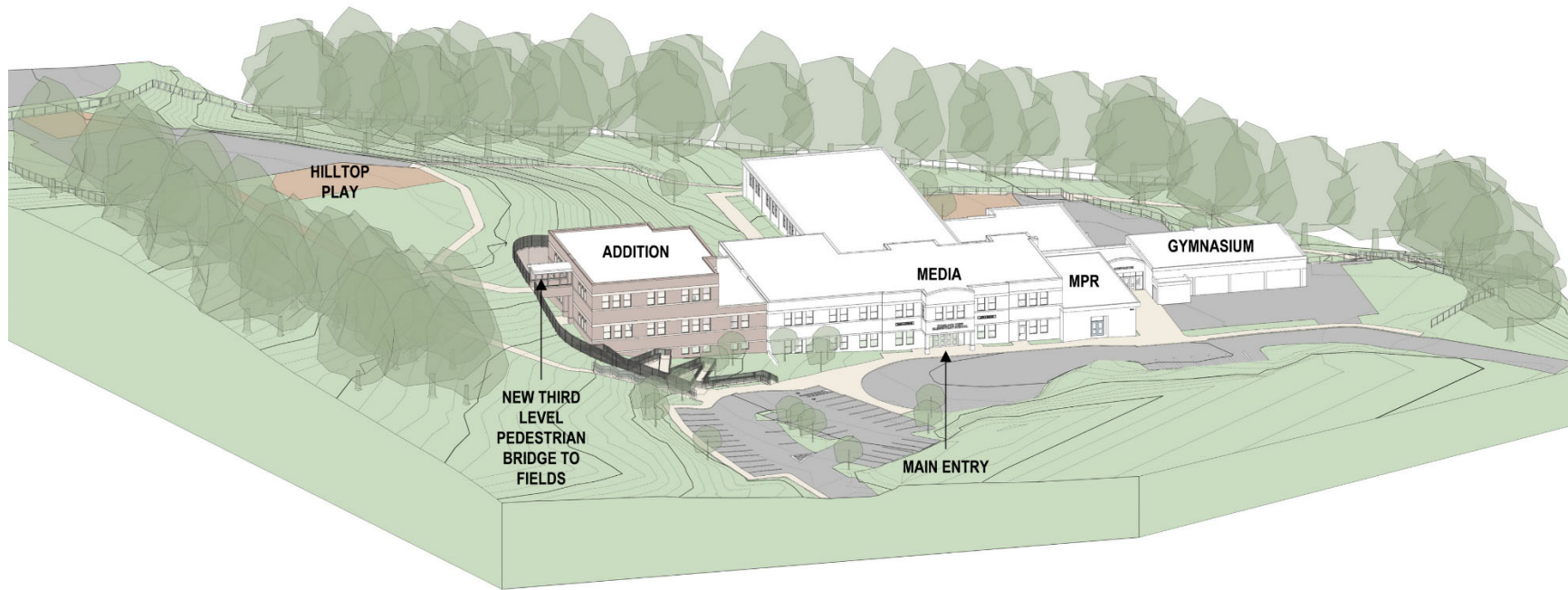


Proposed Renderings



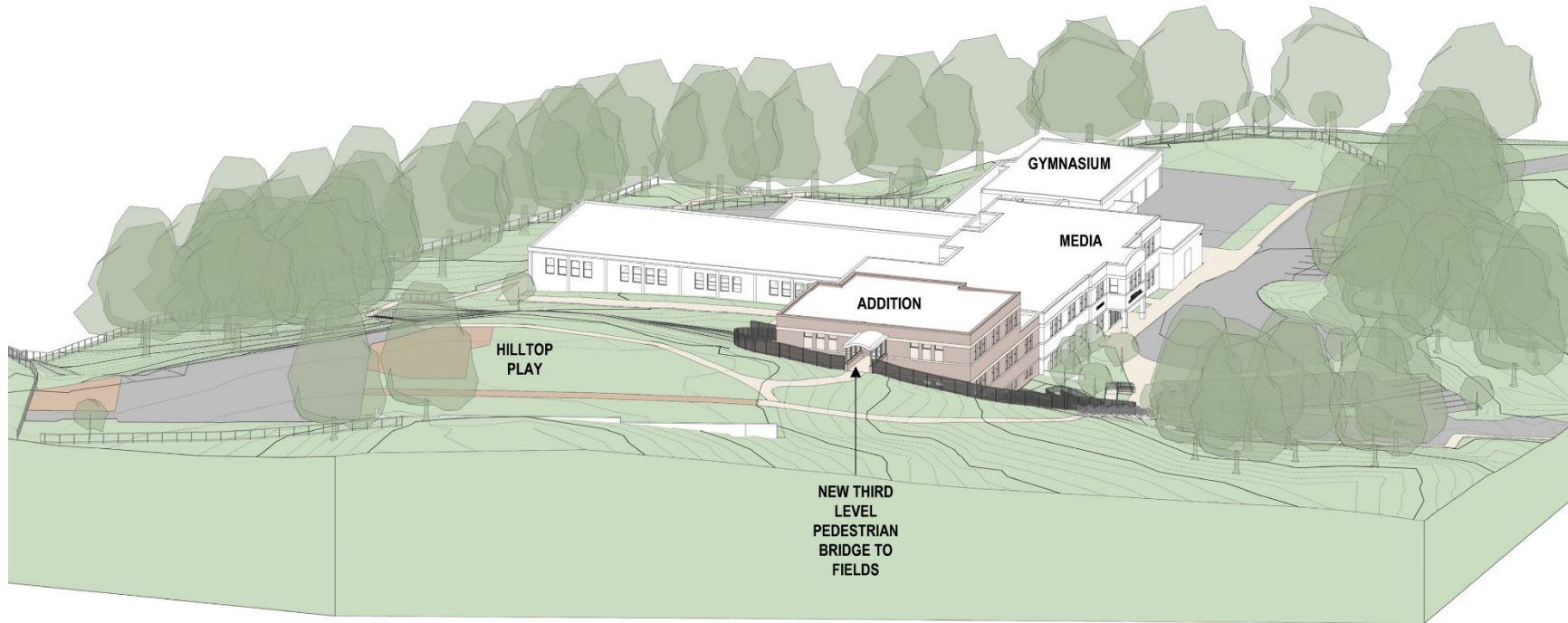
View from School Bus Loop

Proposed Renderings



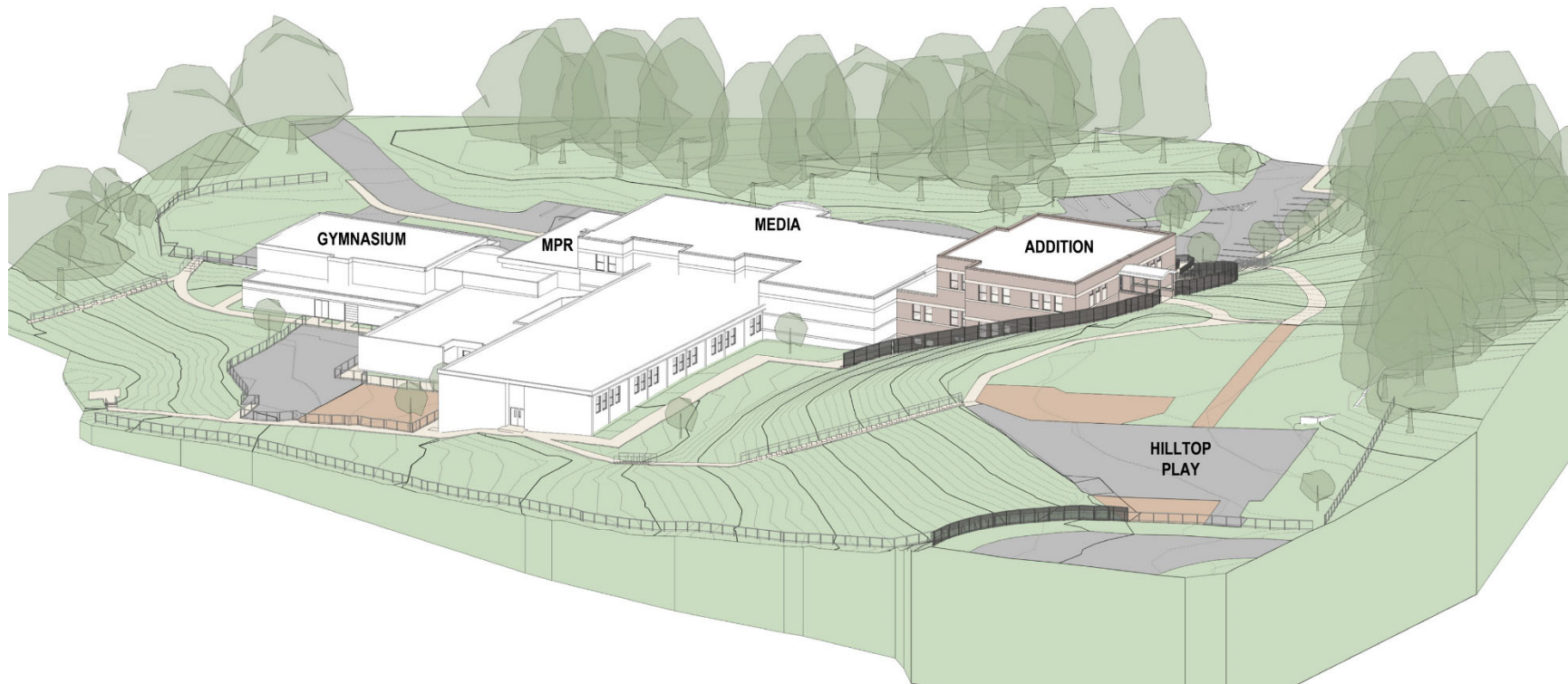
Main Entry and Addition from Parking/Student Drop-off

Proposed Renderings



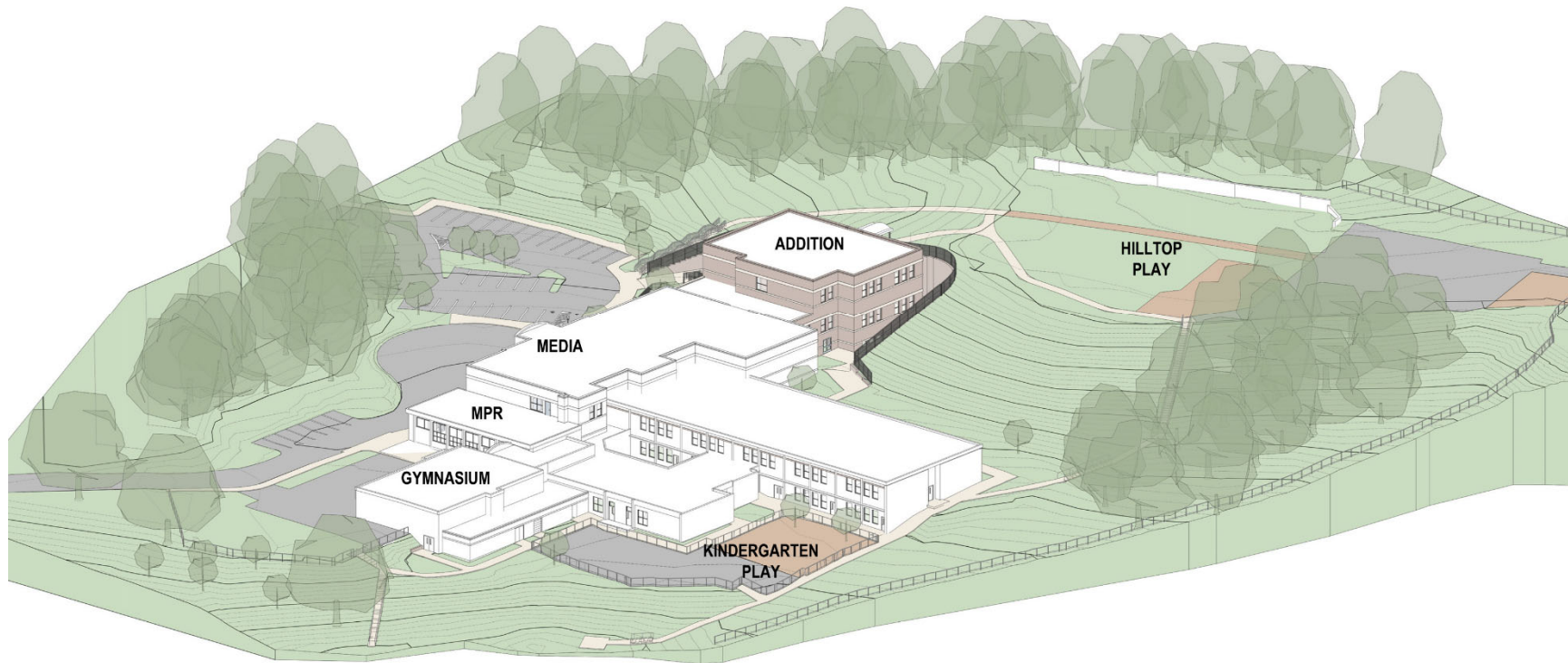
View from Hilltop Play Area

Proposed Renderings



View from Southeast

Proposed Renderings



View from Southwest

Project Team, Schedule, and Estimated Construction Costs

Design Team Members

Architect:	Proffitt & Associates Architects
Civil Engineer:	Clark Azar & Associates, Inc.
Structural Engineer:	Comprehensive Structural Solutions, LLC
Mechanical/Electrical/Plumbing Engineer:	Alban Engineering, Inc.

Project Schedule

Preliminary Plans Presentation:	September 2024
Construction Documents Completed:	September 2025
Award Construction Contract:	November 2025
Project Completed:	August 2027

Facility Data

Existing Building:	59,307 square feet
Existing Building Demolition:	350 square feet
Existing Building to Remain:	58,957 square feet
Renovated Area (Alternates):	6,975 square feet
New Construction (Base Bid):	17,157 square feet

Total: 76,114 square feet

Program Capacity: 528

Estimated Construction Costs

Construction Cost Estimate for Building and Site (Base Bid): \$13,251,840
