Office of the Superintendent of Schools MONTGOMERY COUNTY PUBLIC SCHOOLS Rockville, Maryland

June 14, 2012

MEMORANDUM

To: Members of the Board of Education

From: Joshua P. Starr, Superintendent of Schools

Subject: Preliminary Plans Presentation—Rock Creek Forest Elementary School

Modernization Project

WHEREAS, The architect for the proposed Rock Creek Forest Elementary School modernization project, Walton, Madden, Cooper, Robinson, Poness, Inc., has prepared a schematic design in accordance with the educational specifications; and

WHEREAS, The participants in the Rock Creek Forest Elementary School facility advisory process have provided input for the proposed schematic design; now therefore be it

<u>Resolved</u>, That the Board of Education approves the preliminary plans report for the Rock Creek Forest Elementary School modernization project developed by Walton, Madden, Cooper, Robinson, Poness, Inc.

JPS:LAB:JS:mas

Attachment

Preliminary Plans Presentation

Rock Creek Forest Elementary School

Modernization

Prepared for Montgomery County Board of Education

June 2012

WALTON • MADDEN • COOPER • ROBINSON • PONESS, INC

Preliminary Plans Presentation

Rock Creek Forest Elementary School

Modernization

8330 Grubb Road Chevy Chase, Maryland 20815

Montgomery County Board of Education

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Montgomery County Schools Administration

Dr. Joshua P. Starr Superintendent of Schools

Mr. James C. Song Director, Department of Facilities Management

Mr. R. Craig Shuman

Mr. Michael P. Shpur

Director, Division of Construction

Architect, Division of Construction

Mr. Saeyin Oh Project Manager, Division of Construction

Ms. Deborah Szyfer Senior Planner, Division of Long-range Planning

Facility Advisory Process Involvement

Involvement

The preliminary plans for the Rock Creek Forest Elementary School modernization project were developed based on the educational specifications prepared by Montgomery County Public Schools (MCPS). Through a series of public meetings, several design alternatives were developed and evaluated. The proposed plans presented herein were reviewed and subsequently modified in accordance with recommendations and suggestions received during the schematic design meetings.

Participants in Facility Advisory Process

Mr. David Chia	Principal/Chair	Rock Creek Forest Elementary School
Mr. Chacko Abraham	Staff	Rock Creek Forest Elementary School
Ms. Siah Annand	Parent	Rock Creek Forest Elementary School
Ms. Anastasia Brown	Parent	Rock Creek Forest Elementary School
Mr. Craig Brown	Parent	Bethesda Chevy-Chase Cluster Coordinator
Ms. Ingrid Brown	Staff	Rock Creek Forest Elementary School
Ms. Brooke Cecil	Staff	Rock Creek Forest Elementary School
Mr. Robert Clemens	Parent	Rock Creek Forest Elementary School
Ms. Nicole Cohen	Staff	Rock Creek Forest Elementary School
Ms. Carrie Conley	Principal Intern	Rock Creek Forest Elementary School
Mr. Jeff Cross	Parent	Rock Creek Forest Elementary School
Ms. Maria Espinosa	Parent	Rock Creek Forest Elementary School
Ms. Marge Gillespie	Community	Rock Creek Forest Elementary School
Mr. Tim Gillespie	Community	Rock Creek Forest Elementary School
Ms. Susan Hanna	Staff	Rock Creek Forest Elementary School
Ms. Pam Herrick	Parent	Rock Creek Forest Elementary School
Ms. Jennifer Hitchcock	Staff	Rock Creek Forest Elementary School
Ms. Mindy Hofmann	Parent	Rock Creek Forest Elementary School
Ms. Silvia Holman	Staff	Rock Creek Forest Elementary School
Ms. Tracy Jacobs	Parent	Rock Creek Forest Elementary School

Facility Advisory Process Involvement

Participants in Facility Advisory Process (continued)

Ms. Kathy Kircher	Community	Rock Creek Forest Elementary School
Ms. Judy Koenick	Community	Rock Creek Forest Elementary School
Mr. Aron Krasnopoler	Parent	Rock Creek Forest Elementary School
Ms. Veronica Lay	Staff	Rock Creek Forest Elementary School
Ms. Fran Lewandoski	Parent	Rock Creek Forest Elementary School
Mr. Ralph Lopez	Community	Rock Creek Forest Elementary School
Mr. Jeremy Marcus	Parent	Rock Creek Forest Elementary School
Ms. Erin McCormick	Staff	Rock Creek Forest Elementary School
Ms. Karie McMickle	Parent	Rock Creek Forest Elementary School
Ms. Michele Meier	Staff	Rock Creek Forest Elementary School
Ms. Nancy Morgan	Staff	Rock Creek Forest Elementary School
Ms. Tricia Nudelman	Parent	Rock Creek Forest Elementary School
Ms. Becky OBrien	Parent	Rock Creek Forest Elementary School
Mr. Saeyin Oh	Project Manager	Division of Construction, MCPS
Mr. David Riffle	Construction Manager	Henley Construction
Mr. John Rios	Staff	Rock Creek Forest Elementary School
Mr. Tom Rose	Community	Rock Creek Forest Elementary School
Mr. Rosa Sacks	Parent	Rock Creek Forest Elementary School
Mr. Paul Schnitman	Community	Rock Creek Forest Elementary School
Ms. Karen Shalett	Parent	Rock Creek Forest Elementary School
Mr. Mike Shpur	Architect	Division of Construction, MCPS
Ms. Kathryn Smith	Community	Rock Creek Forest Elementary School
Ms. Jillian Storms	School Facilities Architect	Maryland State Department of Education
Ms. Deborah Szyfer	Facility Planner	Division of Long-range Planning, MCPS
Ms. Maya Valmon	Student	Rock Creek Forest Elementary School
Ms. Meredith Valmon	Parent	Rock Creek Forest Elementary School
Mr. Paul Vicenzi	Community	Rock Creek Forest Elementary School
Ms. Jane Ward	Community	Rock Creek Forest Elementary School

Rock Creek Forest Elementary School Modernization

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Project Information

Background/History

Location: 8330 Grubb Road, Chevy Chase, Maryland 20815

Cluster: Bethesda-Chevy Chase Cluster

History and Square Footage

of Existing Building: 1950 Original School Building 11,050 square feet

1953 Addition 17,042 square feet 1977 Addition 6,205 square feet 1989 Addition 14,225 square feet 1992 Addition 6,000 square feet

Total 54,522 square feet

Site Size: 7.9 acres

Current School Capacity and Student Enrollment:

	Actual	Projections					
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Program Capacity	310	310	310	745	745	745	745
Enrollment	578	594	615	620	689	680	673
Available Space	(268)	(284)	(305)	125	56	65	72

Number of Relocatable Classrooms: Six relocatable classrooms are currently on site to accommodate the needed teaching stations for

the student enrollment.

Current Parking Spaces: 35

Educational Program Objectives

The objectives of the project are to modernize the Rock Creek Forest Elementary School and to provide required program spaces for grades K-5. The project is scheduled to be completed in January 2015. The program summary includes 40 teaching stations including 4 special education classrooms and related support spaces. The feasibility study and the life-cycle cost analysis completed in October 2011 revealed that, due to the conditions of the existing facility, and the cost to bring it into compliance with existing code requirements, the most cost-effective modernization option is to demolish the existing building and construct a replacement building on the site.

The replacement facility is designed for a capacity of 745 students with core spaces being designed to accommodate 740 students. A philosophy of adaptable classrooms with the flexibility to accommodate various presentation formats and maximum connectivity to outside resources has been incorporated in the design. Each instructional area will have adequate learning space, work areas, restrooms, storage, and other support facilities. The modernized facility will be in full compliance with the Americans with Disabilities Act (ADA).

Participants in the planning process expressed a vision for a modernized Rock Creek Forest Elementary School to be a welcoming and beautiful school that enhances the education of the students; a safe and child-friendly school that is flexible enough to accommodate a variety of teaching methods and class sizes; a state-of-the-art facility; and an environmentally sensitive school that is comfortable, provides maximum day lighting, and is energy efficient.

Some of the design goals include the following:

- Arrange public spaces grouped together and separated from the instructional classroom space
- · Locate administration suite adjacent to the main entrance with visual surveillance of student drop-off and bus loops
- · Provide gymnasium and multi-purpose room accessible to the school and community during non-school hours
- Provide safer vehicular access with a student drop-off loop separate from the bus loop
- Create a defined and welcoming entry
- Create a building with functional spatial relationships
- Create a building that allows easy supervision of students

Teaching Stations and Spaces Provided When Complete

(Number of teaching stations counted towards capacity is indicated in parentheses)

Summary of Classrooms:		Support Spaces:	
Prekindergarten Classrooms	(2)	Speech/Language Room	1
Kindergarten Classrooms	(8)	Instrumental Music	1
Classrooms (Grades 1-5)	(22)	Therapy/Support Room	1
Special Education Classrooms	(4)	Large Instructional Support Room	2
Music	1	Small Instructional Support Room	2
Dual-Purpose Room	1	Instrumental Music	1
Computer Laboratory	1	Testing/Conference Room	1
Art	1	Instructional Data Assistant Office	1
		Support Staff Offices	3
Core Facilities:		Staff Development Office	1
Administrative Suite	1	Reading Specialist Office	1
Health Suite	1	Resource Room	1
Multi-Purpose Room with Platform	1	Training/Conference Room	1
Kitchen	1	Building Services Suite	1
Instructional Media Center	1	Staff Lounge	1
Gymnasium	1	Recycling Room	1
		Conference Room	1
Total Teaching Stations	36	Compactor Room	1
		General Storage	4
		Workroom	3
		PTA Storage	1
		Outdoor Storage	1

Site Design

Site Features:

Rock Creek Forest Elementary School is situated on a 7.9 acre site at 8330 Grubb Road, Chevy Chase, Maryland. The site is bounded on the northeast by Grubb Road, on the northwest by Colston Drive, on the southeast by Blaine Drive, and on the southwest and southeast by single-family homes. The school site currently consists of an existing single-story building, paved driveways, a bus loop, parking, play areas, and ball fields. A large portion of the school site is relatively level with the exception of a steep, wooded slope that exists on the south and southeast sides of the of the site. The site plan proposes modernizing the existing play fields in the western end of the site. On-site traffic circulation is designed to provide safer access to the school for pedestrians and to maximize on-site parking while minimizing overflow parking onto adjacent streets. On-site bus loading for 10 buses, a student drop-off lane, and approximately 100 parking spaces will be provided and accessed from adjacent streets. Sidewalks connect the residential communities to the school. The existing forest areas at the eastern and southern ends of the site will be preserved. Emphasizing native and drought tolerant species, Landscaping will screen the service and parking areas, enhance the building, and provide shade to parking and pedestrian areas.

Stormwater Management:

The new stormwater management systems will be provided for both quantity and quality control measures on site using the most current environmental site design methodology. The proposed stormwater management will include the use of environmental site design elements required by the State of Maryland and Montgomery County.

Utilities:

All existing utilities, including water, sewer, gas, and electrical services will be upgraded to support the needs of the replacement building.

Exterior Lighting:

The exterior lighting will be designed to shield adjacent residences from intrusive glare while maintaining light levels for safety and security. The light fixtures will be 100% down-lighting to minimize light pollution into the night sky.

Building Design

General Description:

The proposed building, designed to meet Montgomery County Pubic School's educational specifications, is a partial three-story, steel-framed structure with textured and patterned masonry exterior facades. The proposed plan consolidates the academic areas apart from the public areas of the building. The public areas, located in the one-story wing at the front and to the right of the school entrance, include the administrative suite, the multi-purpose room, the gymnasium, art, music, dual-purpose room, and support spaces. The academic wing to the left of the main entrance consists of a three-story classroom wing, the instructional media center, and the computer laboratory.

The main entrance of the building is clearly identifiable from the street. The administrative suite is located at the front of the building to allow supervision of the main entrance, lobby, student drop-off, and bus loop. The instructional media center is centrally located in the building on the main level. The kindergarten classrooms also are located on the main level. The prekindergarten, prekindergarten education program (PEP) classrooms, and first grade classrooms are located on the lower level. The remainder of the classrooms for upper grades and support spaces are located on the upper level. Three stairways and an elevator in the classroom wing provide vertical circulation within the building. The canopy at the main entrance serves as a shelter from inclement weather and also identifies the main entrance to the building. Pedestrian entry from Colston Drive or Grubb Road is at the main (middle) level. There is on-grade exiting at the lower level to Blaine Drive.

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 lecture method.

Code Compliance/Accessibility:

All areas in the school will be designed to meet national and local codes including fire, life-safety, accessibility, and health standards. The proposed replacement building will be in full compliance with the Americans with Disabilities Act (ADA).

Building Design (continued)

Sustainable Design Intent (LEED)

The project is registered and will be certified for silver or higher rating in conformance with Leadership in Energy and Environmental Design (LEED) certification through the United States Green Building Council. Some of the sustainable aspects of the project include the following:

- Encouraging alternative transportation to the school by providing conveniently located bike racks and preferred parking for low emitting/fuel-efficient vehicles and carpools.
- Preserving a high percentage of vegetated open space to protect the surrounding ecosystem
- Managing stormwater to both reduce runoff quantity and improve quality
- Using highly reflective roof surfaces combined with a vegetated roof portion to reduce heat island effect and heat gain to the building
- Installing water-conserving, low-flow plumbing fixtures
- Optimizing the energy performance of the building by providing a highly energy efficient building envelope, lighting system, and heating ventilation, and air condition system, utilizing a geoexchange system
- Optimizing equipment selection, installation, and operation of HVAC equipment through Enhanced Commissioning of the building energy systems
- Diverting construction "waste" from landfills that can instead be salvaged for reuse or recycled
- · Adhering to construction indoor air quality management plans and using low-emitting building materials to safeguard occupant health
- Providing a high level of occupant control over individual lighting and thermal comfort to promote enhanced indoor environment
- Promoting user education to increase awareness of the building's green features and to utilize the school as a teaching tool for environmental and sustainability topics
- · Using construction materials that are recycled and regionally manufactured
- Implementing a Green Housekeeping plan
- Maximizing daylight in classrooms
- Minimizing background noise level from HVAC systems in classrooms and other core learning spaces and control reverberation time with sufficient sound-absorptive materials

Building Design (continued)

Mechanical Systems

HVAC System:

The proposed new building will be heated and air-conditioned by a two-pipe hydronic heat pump (HHP) system. The HHP system will consist of individual vertical water-cooled units for each classroom. Heating and cooling are provided by a geothermal ground source heat pump system. Ventilation for the classrooms will be provided by a integrated energy-recovery unit mounted on the roof.

Plumbing System:

Plumbing fixtures will comply with Americans with Disabilities Act (ADA) requirements. The balance of the sanitary sewer and domestic water systems will be provided in accordance with the latest Washington Suburban Sanitary Commission (WSSC) Plumbing Code Regulations. Water-saving plumbing fixtures will be used.

Fire Protection System:

The building will be fully-sprinklered complying with the National Fire Protection Association Code (NFPA-13 and 14) and will be provided with a voice-annunciated fire alarm system.

Energy Management Statement:

A primary design factor is the conservation of energy. The importance and consideration placed on energy conservation are reflected in the configuration and orientation of the building, 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 building will be designed to exceed ASHRAE 90.1-2007 energy requirements and IBC Basic Energy Conservation codes as well as Montgomery County energy conservation codes. The design will incorporate the ANSI/ASHRAE energy-efficient design for new buildings.

Building Design (continued)

Electrical Systems

Electrical System:

The building will receive a new 277/480V, 3-phase 4-wire electrical service. The building will also have emergency power provided by a natural gas-fueled generator to handle the fire alarm, emergency lighting, telecommunications, kitchen freezer and cooler, and the energy recovery units that provide freeze protection. Lighting will be energy efficient 2x4 fluorescent fixtures in common areas, with direct and indirect pendant type lighting in the classrooms.

Public Address System:

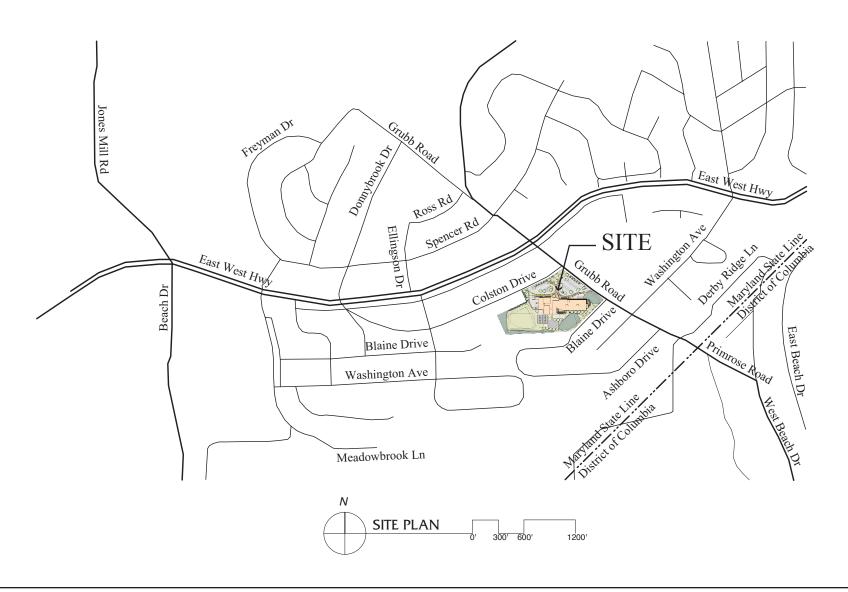
A new public address system will be provided to serve the replacement building. Each classroom will have a call-back switch and speakers. The corridors and restrooms will have speakers only.

Security System:

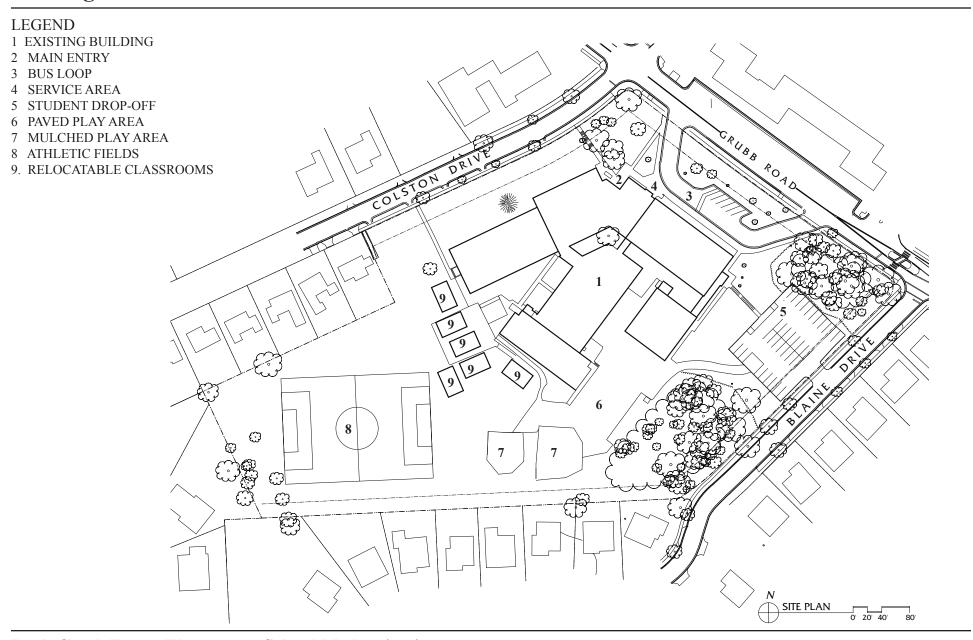
The building will include a visitor management system that will provide office staff the ability to monitor and control visitor access to the school building. The visitor management system will include a computer-based visitor sign-in system that will monitor and track all visitors to the school building. The new facility will also have a new building security system consisting of motion and contact sensors at all exterior doors that will be monitored by the MCPS Department of School Safety and Security.

Technology Infrastructure:

The building will be equipped with data, voice/voice over internet protocol (VoIP), video, and wireless access systems. The network system design will include outlet boxes, conduits, surface raceways, conduit sleeves, and properly-sized telecommunications closets for the low voltage systems. The infrastructure design will consist of a fiber-optic backbone cable system with a category 5E UTP cable for station drop connectivity, supporting switched 10/100/1000 Mbps Ethernet. With the improved switching systems, these systems have the capability of providing a gigabyte ethernet system with provisions to accommodate future changes in technology. For video distribution, a 1,000 Mhz, bi-directional, broadband distribution system with coax trunk cable and RG-6 quad-shielded coax drop cable will be utilized. The system allows full cable spectrum to every part of the building with five dedicated channels: three channels for school distribution or two-way video from any point in the building, and two spare channels available for future use.



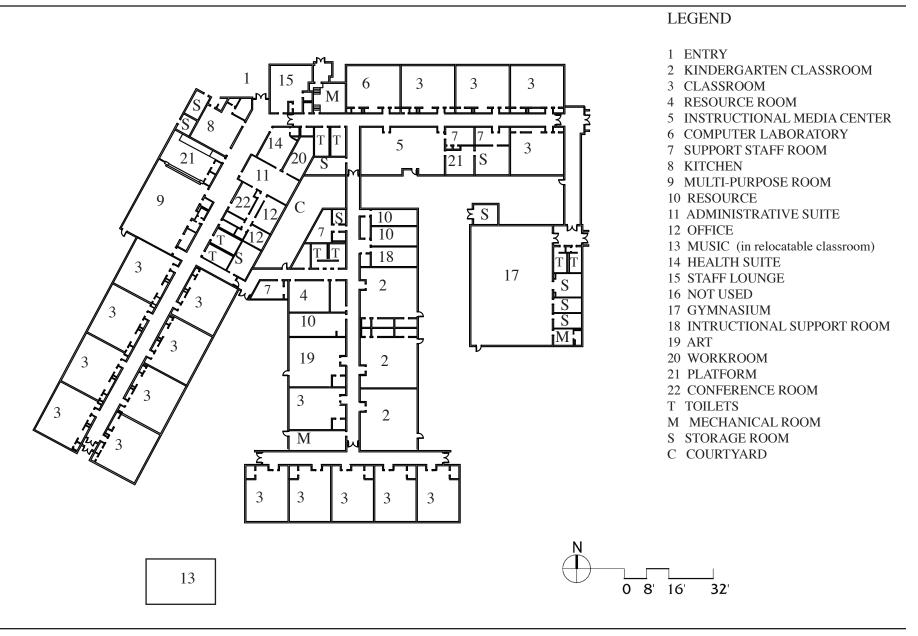
Existing Site



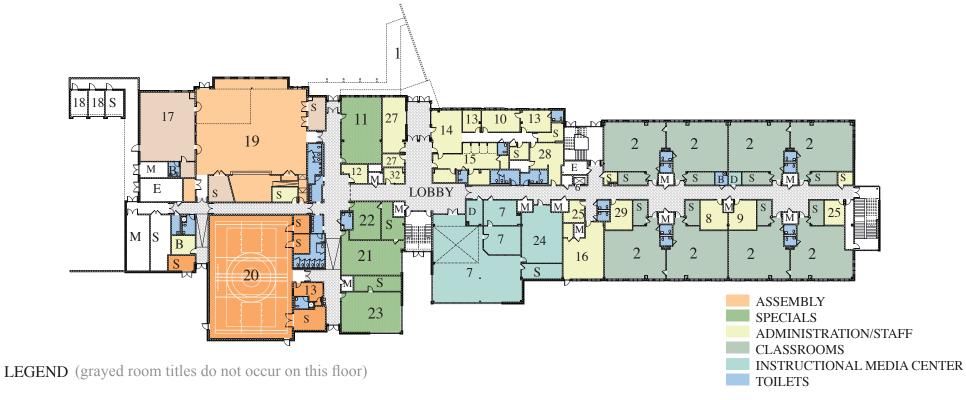
Proposed Site Plan



Existing First Floor Plan



Proposed Main Level Plan



1	CANOPY	14 A	ADN

- 3 CLASSROOM
- 4 PREKINDERGARTEN CLASSROOM

2 KINDERGARTEN CLASSROOM

- 5 SPECIAL EDUCATION CLASSROOM 18 RECYCLE/COMPACTOR
- 6 ELEVATOR
- 7 INSTRUCTIONAL MEDIA CENTER
- 8 SPEECH/LANGUAGE ROOM
- 9 THERAPY/SUPPORT
- 10 CONFERENCE ROOM
- 11 DUAL-PURPOSE ROOM
- 12 PTA STORAGE 13 OFFICE

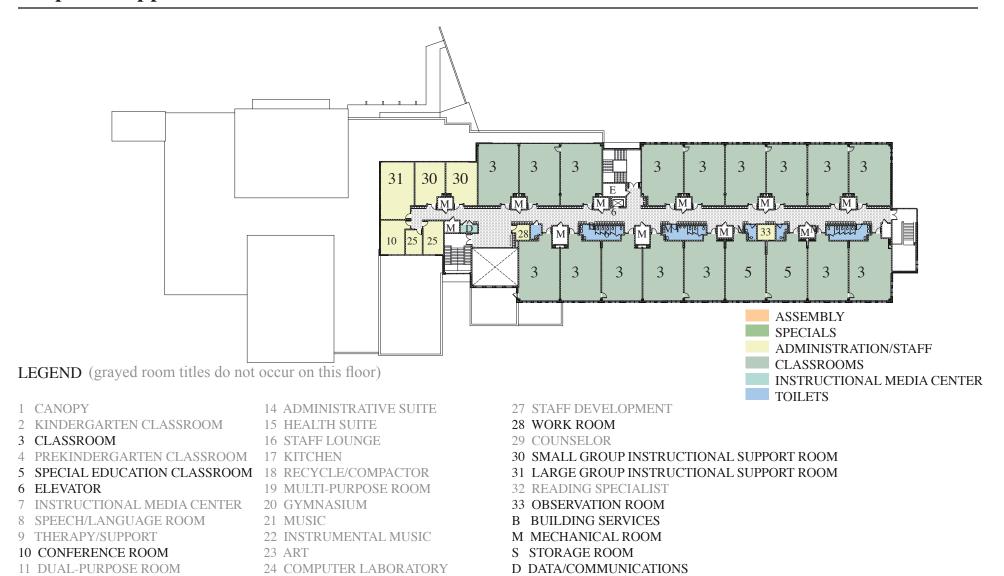
- MINISTRATIVE SUITE
- 15 HEALTH SUITE
- 16 STAFF LOUNGE
- 17 KITCHEN
- 19 MULTI-PURPOSE ROOM
- 20 GYMNASIUM
- 21 MUSIC
- 22 INSTRUMENTAL MUSIC
- 23 ART
- 24 COMPUTER LABORATORY
- 25 SUPPORT STAFF OFFICES
- 26 TESTING/CONFERENCE ROOM

- 27 STAFF DEVELOPMENT
- 28 WORK ROOM
- 29 COUNSELOR
- 30 SMALL GROUP INSTRUCTIONAL SUPPORT ROOM
- 31 LARGE GROUP INSTRUCTIONAL SUPPORT ROOM
- 32 READING SPECIALIST
- 33 OBSERVATION ROOM
- **B BUILDING SERVICES**
- M MECHANICAL ROOM
- S STORAGE ROOM
- D DATA/COMMUNICATIONS
- E ELECTRICAL

Rock Creek Forest Elementary School Modernization

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Proposed Upper Level Floor Plan



E ELECTRICAL

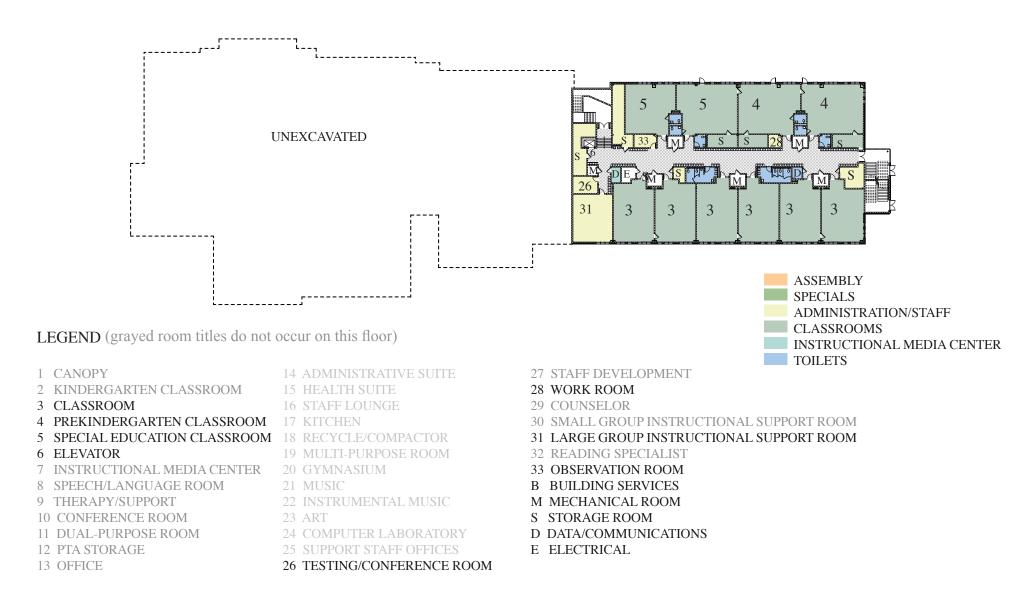
Rock Creek Forest Elementary School Modernization

25 SUPPORT STAFF OFFICES

26 TESTING/CONFERENCE ROOM

12 PTA STORAGE

13 OFFICE



Proposed Elevations



NORTH ELEVATION





EAST ELEVATION MAIN ENTRANCE

Proposed Elevations



SOUTH ELEVATION





WEST ELEVATION MAIN ENTRANCE

Project Team, Schedule, and Estimated Construction Cost

Design Team Members

Architect WALTON • MADDEN • COOPER • ROBINSON • PONESS, INC

Construction Manager Henley Construction Company

Civil Engineer Adtek Engineers, Inc.
Structural Engineer Adtek Engineers, Inc.
MEP Engineering James Posey Associates
Food Service Consultant Nyikos Associates, Inc.
Traffic Consultant Street Traffic Studies, Ltd.
Forest Conservation Norton Land Design

Project Schedule

Preliminary Plans Brochure

Construction Documents Completed

Award Construction Contract

Project Completed

June 2012

March 2013

May 2013

January 2015

Estimated Construction Costs

Existing Building: Existing 54,522 square feet

Demolition 54,522 square feet
New Construction 98,000 square feet
Total 98,000 square feet

Construction Cost Estimate:

Building and Site \$ 26,272,000