ACTION

HOWARD COUNTY
PUBLIC SCHOOL SYSTEM

BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM

TITLE: Deep Run Elementary School Schematic Design Report **DATE:** July 11, 2013

PRESENTER(S): Mr. Bruce Gist, Director of School Construction

Melissa Wilfong, Senior Associate, Grimm + Parker Architects

OVERVIEW:

The attached schematic design brochure describes the general scope of work for Deep Run Elementary School. This project is to proceed in two phases. The first phase will address the needed additions to the school. This includes a two-story classroom addition which will house replacement space for the existing integrated modular classroom pod, as well as a new four-classroom pod with support areas. Also included is a new administration addition adjacent to the main entrance with a secured vestibule area. The creation of this new administration area will allow for renovation of the existing space to provide a COMAR compliant health suite, as well as additional staff support spaces.

The second phase will include extensive renovations to the existing building. These renovations include both programmatic and systemic upgrades such as the conversion of the existing open area pods into self-contained classrooms, as well as new roofing, mechanical, and electrical systems. It is the intent of the design to achieve a LEED (Leadership in Energy and Environmental Design) "Certified" designation.

RECOMMENDATION/FUTURE DIRECTION:

It is recommended that the schematic design report for Deep Run Elementary School be approved as submitted.

Submitted by:

Ken Roey, Executive Director
Facilities Planning and Management

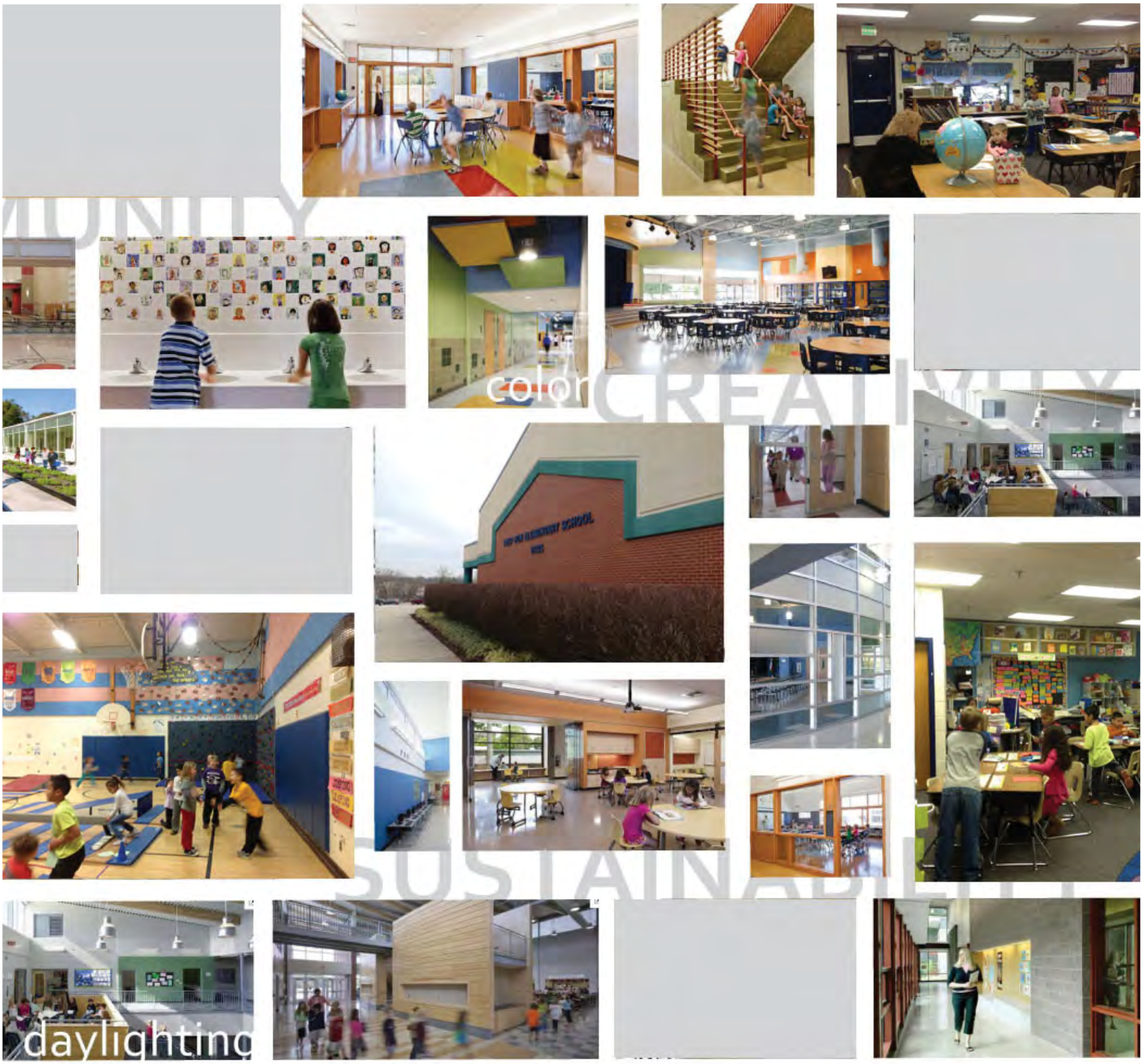
Bruce Gist
Director, School Construction

Approval/ Concurrence:

Renee A. Foose, Ed.D.
Superintendent

Susan C. Mascaro
Chief of Staff

Camille B. Jones
Chief Operating Officer



DEEP RUN ELEMENTARY SCHOOL

GRIMM AND PARKER

Howard County Public School System

SCHEMATIC DESIGN SUBMISSION | JULY 11, 2013

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DEEP RUN ELEMENTARY SCHOOL

SCHEMATIC DESIGN SUBMISSION

JULY 11, 2013

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Ken Roey	HCPSS, Executive Director, Facilities Planning and Management
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Scott Washington	HCPSS, Manager of Design and Pre-Construction
Betsy Zentz	HCPSS, Construction Interagency Specialist
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Ken Kolb	Riparius Construction
Ed Shamus	Riparius Construction
Wanda Grasu	Riparius Construction
Gretchen Wagner	Grimm + Parker Architects
Melissa Wilfong	Grimm + Parker Architects

DESIGN TEAM

ARCHITECT	Grimm + Parker Architects	Calverton, MD
CIVIL ENGINEER	Fisher, Collins & Carter, Inc.	Ellicott City, MD
STRUCTURAL ENGINEER	Columbia Engineering, Inc.	Columbia, MD
MEP ENGINEER	James Posey Associates	Baltimore, MD
LEED CONSULTANT	Sustainable Design Consulting, LLC	Washington, DC

PLANNING PROCESS

The design of Deep Run Elementary School was cultivated over the course of several meetings held with school construction staff, the design team, and the planning advisory committee. These collaborative meetings facilitated the discussion and distribution of knowledge, expertise, and experience between educators, facilities managers, county staff, and the design team. This comprehensive process was truly instrumental in the development of the design.

The meetings addressed the following items:

- Overview of the process for the Howard County Public School System (HCPSS) renovations and additions, including schedule and budget.
- Review of the site plan and areas for possible expansion.
- Review of the existing floor plan to identify deficiencies in the current school layout.
- Discussion about existing classroom pods and how they can be modified to function more effectively for teachers and students.
- Review and detailed discussion of proposed new addition layouts and space adjacencies.
- Brief overview of Leadership in Energy and Environmental Design (LEED) and potential sustainable practices to be incorporated into the project.

This submission reflects the consensus of much deliberation and discussion among committee members to provide the most responsive layout to acheive the needs of the school and its students.

PROJECT DESCRIPTION

Deep Run Elementary School is a one-story structure serving kindergarten through fifth grade with the additional Regional Early Childhood Center (RECC) program in the HCPSS. Construction of the original structure began in 1989, and the first students arrived at the beginning of the 1990 academic year. Two major renovations and additions have expanded the footprint of the building since its opening. The first renovation, completed in 1997, added classroom space to the east and west sides of the building and expanded the cafeteria to the north. The more recent 2008 addition expanded the kindergarten and pre-kindergarten space in the northeast corner of the school. The approximate gross square footage is 83,000 square feet. The current student population of the school is 750 students with 140 full and part-time staff members.

Due to the age of the school and its systems, coupled with its growing population, there are numerous program and functional deficiencies. To address these deficiencies, the project will proceed in two phases. The first phase will address the needed additions, while the second phase will include extensive renovations to the existing building.

The proposed new construction will include the replacement of six modular classrooms with permanent construction, a 100-seat four classroom addition with an additional two classrooms currently housed in portables, as well as a new administration suite adjacent to the main entrance with a secured entry sequence. The renovations, along with systemic upgrades to the existing building, will comply with the HCPSS "Guidelines Manual for Renovations and Modernizations of Existing Schools." This includes dividing the current open pod classroom arrangements into separate classrooms. The health suite will also be renovated and enlarged to comply with the current state standards.

The design will employ sustainable practices to help achieve United States Green Building Council (USGBC) LEED certification. This is in keeping with the sustainable goals of the county, to reduce negative impact on the environment and enhance the health and comfort of the building occupants, thereby improving building performance.

SITE NARRATIVE

Deep Run Elemenatry School is located on Old Waterloo Road in Elkridge, Maryland in a residential neighborhood. The site is approxiamtely 11.67 acres and is located adjacent to Waterloo Community Park.

The existing parking area adjacent to the school accommodates 12 school buses and 70 parking spaces which includes 3 handicap spaces. The existing parent drop-off area runs parallel to Old Waterloo Road. It is approximately 150 feet long and accommodates 8 cars at a time. The 140 staff members park in the school lot with overflow parking on Old Waterloo Road.

The site currently accommodates two playground areas, a hard play area, a multi-purpose field, and a baseball field. There is a significant grade difference between the school and these recreational areas. The areas are accessed by a sloping sidewalk on the south side of the site and a path from the bus loop on the north side of the site.

The grade change on the site creates limited opportunities for the location of the proposed additions. There are also challenges with needed emergency egress from the classroom addition to the fields. Additionally a large existing use setback along Old Waterloo Road, limits expansion opportunities to the west. As it is developed, the new site design will address egress issues, grade modification for the new additions, as well as required bioretention areas for stormwater management.

ARCHITECTURAL NARRATIVE

Deep Run Elementary School is currently arranged in a pod configuration with open classrooms divided with operable walls or partial gypsum board partitions. The typical pod has four classrooms, a smaller project room, as well as a central commons area. There are also four portable classrooms on the site that house two gifted and talented classes, instrumental music, and teacher planning and office functions for Title I programs.

The project construction will be divided into two phases to minimize the impact on the occupants of the school. Phase I primarily entails new construction, including the addition of a new two-story section of the building located at the existing modular construction. This addition will replace the six modular classrooms, provide four additional standard classrooms and two additional special program classrooms and include some additional service spaces as well as stairs and an elevator. This addition also includes new mechanical and electrical rooms that will serve the addition and also be designed to serve the entire building when the full build out is complete.

Phase I also includes the construction of a new administrative suite at the main entry of the building that would provide supervision and control of the entrance for building security. This addition creates space for renovation of the existing administrative areas into an adequately sized health suite as well as new administration support areas for the additional educators who are currently working out of a portable classroom. It also provides necessary support spaces such as a conference room, storage space, and staff toilet rooms.

Phase II includes the renovation of the entire building to bring the facility up to current HCPSS standards for renovations and modernizations. This would include replacement of the current HVAC system with a geothermal system, replacement of the entire roof, replacement of most plumbing and electrical services, replacement of many of the low voltage systems, and additional architectural upgrades. Since Phase I will be completed before Phase II has begun, the additional classrooms provided in Phase I will provide swing space for the students as this work is underway.

Phase II would also include the conversion of the existing mechanical room into an adequately sized band room, which is currently housed in a portable classroom. Since the mechanical functions will be located in the new mechanical room provided as part of the Phase 1 addition, the current space will be vacated to allow for a new use in this area.

MECHANICAL & PLUMBING NARRATIVE

HVAC Systems

HVAC for Deep Run Elementary School will be provided through a geothermal heating and cooling system. A geothermal borehole field, consisting of approximately 120 boreholes, each 400 ft. deep, located in the multi-purpose field behind the elementary school will be provided. Geothermal supply and return piping for the field will extend from the field into the new mechanical room being constructed with the new classroom addition.

A modular water-to-water heat pump unit, located in the new mechanical room, will be installed to provide heating water for the variable air volume (VAV) terminals and miscellaneous heating elements throughout the building.

Typical classroom heating, ventilating and air conditioning will be provided through variable air volume, water-cooled heat pump rooftop units. The classrooms in the new main classroom addition will be served by a dedicated rooftop unit. The remainder of the classrooms and auxiliary spaces will be served by new rooftop units located in the same locations as the present rooftop units serving these spaces. Each enclosed classroom will have a dedicated VAV terminal with hot water heat to provide individual temperature control in each space.

The new administration area will have a separate rooftop unit with VAV terminals to provide individual space temperature control. This rooftop unit will be located on the roof of the new administration area. The renovation of the existing administration area will be conditioned by a new heat pump rooftop unit to serve the health suite and teacher planning area.

Dedicated single-zone constant volume heat pump units will provide room conditioning for the gymnasium and the cafeteria. The existing media center rooftop VAV unit will be replaced with a VAV water-cooled heat pump rooftop unit with the various areas served by individual VAV terminals. Heat pump loop water will be circulated throughout the building via base-mounted end-suction pumps located in the new mechanical room. Pumps will operate in a lead-lag arrangement and will be equipped with variable frequency drives.

Heating water heating elements will provide miscellaneous heat for building entrances, toilet rooms, etc.

Duct systems will generally be rectangular sheet metal with flexible duct connecting to ceiling-mounted air devices; horizontal mains will be located above ceilings wherever possible.

Plumbing Systems

The existing domestic cold-water service to the building is adequate to satisfy the needs of the existing building as well as the new additions. A backflow preventer assembly will need to be added to meet present day codes. Piping for the new plumbing fixtures will be connected to the existing domestic cold-water mains as required.

All plumbing fixtures will be institutional grade with a dual-position 1.6 / 1.1 gallon per flush valve on water closets and 0.125 gallon urinals. Flow restrictors will be installed on all faucets for 0.5 gallons per minute.

The existing natural gas fired storage type water heater is only one year old and will be used to generate domestic hot water for the existing school and new additions.

Sanitary and storm water mains from the new building additions will connect into exterior utility mains around the building. The existing storm water and sanitary piping in the building will be reused, where practical. Since the existing school is being re-roofed, new roof drains will be installed, in locations where required, and connected back to existing storm water mains above the ceiling. New overflow drains need to be added to the roof system to meet present day code requirements. All systems will be provided in accordance with applicable plumbing code requirements. Plumbing fixtures will comply with Americans with Disabilities Act (ADA) requirements.

Automatic Temperature Control

A direct digital automatic temperature control system will be provided to monitor and control the entire HVAC system including associated equipment serving the new additions.

Fire Protection System

According to available records, the entire existing building is fully sprinklered. The existing building is separated into several zones that match the fire alarm pull zones for the existing building. New sprinklers will be provided for the new additions as required. The existing combination water/fire system is adequate to provide the required pressure and flow to meet the requirements of both the existing and new fire protection systems. The existing sprinkler heads and most of the branch piping should be replaced to accommodate the new building layout. All work will be specified to conform to standards of the National Fire Protection Association (NFPA) and will include requirements for hydraulic calculations confirming the system's performance.

ELECTRICAL NARRATIVE

Electrical Service Equipment

The existing building electrical service will be replaced and upgraded to 277/480 volt service. Based on updated building load information, the utility company will determine the size of the new exterior service transformer and secondary service entrance requirements. The existing utility company current transformer cabinet will also be replaced.

Normal Power Distribution

The existing main circuit breaker/switchboard combination will be replaced with a new assembly rated at 3000A. New electrical feeders will originate from the replacement switchboard to new branch circuit panelboards in renovated areas.

A new distribution panel will be located in the building classroom addition to accommodate additional classroom and associated mechanical loads.

Selected branch circuit panelboards will be replaced to accommodate areas of significant renovation.

Emergency Power Distribution

The existing natural gas fueled emergency generator and associated transfer and distribution equipment will be replaced. All new life safety and optional standby loads will be connected to the new emergency power distribution system. Connection of new mechanical equipment will be reviewed during the design development phase.

New life safety branch circuits will be connected to new emergency power branch circuit panels.

Lighting

New lighting and branch circuit wiring will be provided throughout the project area. In general, interior lighting will be 2 foot by 4 foot recessed type fluorescent fixtures with 32 watt 4100 K T-8 lamps and electronic ballasts. Other energy saving light features such as compact fluorescent downlights and HID lights will also be provided for the interior and exterior lighting designs. Fixtures featuring lighting technology will also be considered. Automatic lighting control will be provided for room lighting systems in compliance with the new energy code. Exit lights will be LED type.

Intercom System

The existing intercom equipment rack will be reconfigured and expanded to serve the project areas or replaced. Each new classroom will have a call back switch and ceiling-mounted speakers. Newly created corridors and restrooms will have ceiling-mounted speakers. This item will be reviewed with the HCPSS at the design development phase.

Fire Detection and Alarm System

The existing fire detection and alarm system will be replaced and upgraded to serve the building additions and the existing school building. Initiation and notification devices will be located through the project area in compliance with local life safety code requirements.

Data/Telephone Cabling

A new data and telephone cabling and outlet system will be provided throughout the project area. The system design will include outlet boxes, conduits, surface raceways, conduit sleeves, and properly sized telecommunications closets for the installation of the low voltage system cabling.

Intrusion Detection and Alarm System

New intrusion detection and alarm system devices will be provided throughout the project area. System device locations will be determined by HCPSS standards. The existing Intrusion detection and alarm system panel will be expanded and reprogrammed to accommodate new system devices, if possible, or new head-end equipment will be provided.

Media Retrieval/Video Distribution System

Changes to the existing media retrieval system are anticipated. New video distribution system cabling will be provided throughout the project area. The existing video distribution head-end equipment will be expanded to serve the project areas. This item will be reviewed with the HCPSS at the design development phase.

Video Surveillance System

Changes to the existing video surveillance system are anticipated and will be reviewed with the HCPSS at the design development phase.

GREEN BUILDING NARRATIVE

Design for LEED

The USGBC established the Leadership in Energy and Environmental Desgin (LEED) program as a tool to evaluate the energy efficiency and environmental impacts of building projects. The LEED building rating system uses six categories in which projects can obtain credits to achieve certification (Sustainable Site, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation and Design Process). The four levels of certification (from highest to lowest) are, Platinum, Gold, Silver, and Certified. The credit threshold for each level of certification varies for different rating systems. To qualify for certification a project must meet certain prerequisite credits. The number of additional credits required is dependent on the level of certification that the project is seeking to attain.

Project Objectives

Grimm + Parker is pursuing LEED certification at the Certified level for Deep Run Elementary School. The project will be registered under the LEED for Schools v3 (LEED-S) rating system. After a preliminary analysis, 45 credits were targeted as achievable for the school, with 20 additional possible credits. Credits have been identified as achievable based on economic and design feasibility and potential environmental benefits. The credit tally stands at a comfortable margin for achieving the targeted certification level for the building. However, additional credits may need to be included as the project develops as it is not uncommon for a few credits to become unattainable due to any number of factors.

LEED Credit Goals

Credits targeted will be those that will help provide quality space at a greatly reduced environmental impact. Goals include:

- Providing dedicated walk and bike paths and bike racks, and including preferred parking for LEV and FEV vehicles.
- Reducing storm water runoff and pollution.
- Reducing potable water usage. A water savings of 30-35 percent is targeted through the use of water conserving fixtures such as dual flush toilets, low flush urinals, and low flow faucets.
- Reducing energy consumption by adopting high efficiency HVAC systems.
- Reducing impact of transportation and extraction of virgin material by the use of regional materials and those with significant recycled content.

- Providing lighting and thermal controls to ensure accommodation of the individual preferences of its occupants.
- Installing low-emitting paints, adhesives, sealants, and carpet systems.
- Installing permanent monitoring systems to ensure adequate ventilation.
- Using low-mercury lighting bulbs.
- Implementing a green housekeeping plan.

While some credits have a greater first cost associated with them, the long-term environmental and economic benefits justify including them in the LEED goals.

Moving Forward

LEED Online
All documentation will be submitted via USGBC's website (www.leedonline.org) to be reviewed and approved by the USGBC for both the design and construction phases of the project through an account accessible by all team members.

LEED Tracking
The LEED consultant will create a tracking tool that assigns credit responsibilities to team members. The tool records documentation progress and identifies pending tasks required to complete documentation. This is updated and circulated to the team on a regular basis in keeping with the pace of project progress.

LEED SCORECARD

Y	?Y	?N	N			
6	2	3	10		**Sustainable Sites**	Possible Points 24
Y				Prereq 1	**Construction Activity Pollution Prevention**	
Y				Prereq 2	**Environmental Site Assessment**	
1				Credit 1	**Site Selection**	1
			4	Credit 2	**Development Density & Community Connectivity**	4
			1	Credit 3	**Brownfield Redevelopment**	1
		1		Credit 4.1	**Alternative Transportation:** Public Transportation Access	4
1				Credit 4.2	**Alternative Transportation:** Bicycle Storage & Changing Rooms	1
2				Credit 4.3	**Alternative Transportation:** Low Emitting & Fuel Efficient Vehicle	2
	2			Credit 4.4	**Alternative Transportation:** Parking Capacity	2
			1	Credit 5.1	**Site Development:** Protect or Restore Habitat	1
		1		Credit 5.2	**Site Development:** Maximize Open Space	1
		1		Credit 6.1	**Stormwater Design:** Quantity Control	1
1				Credit 6.2	**Stormwater Design:** Quality Control	1
			1	Credit 7.1	**Heat Island Effect:** Non-Roof	1
			1	Credit 7.2	**Heat Island Effect:** Roof	1
			1	Credit 8	**Light Pollution Reduction**	1
			1	Credit 9	**Site Master Plan**	1
1				Credit 10	**Joint Use of Facilities**	1

Y	?Y	?N	N			
6			3		**Water Efficiency**	Possible Points 11
Y				Prereq 1	**Water Use Reduction: 20% Reduction**	
4				Credit 1	**Water Efficient Landscaping**	4
			2	Credit 2	**Innovative Wastewater Technologies**	2
2				Credit 3	**Water Use Reduction: 30%/ 35%/ 40%**	4
			1	Credit 4	**Process Water Use Reduction**	1

Y	?Y	?N	N			
14		9	10		**Energy & Atmosphere**	Possible Points 33
Y				Prereq 1	**Fundamental Commissioning of Building Energy Systems**	
Y				Prereq 2	**Minimum Energy Performance**	
Y				Prereq 3	**Fundamental Refrigerant Management**	
10		9		Credit 1	**Optimize Energy Performance: 8% and up**	19
			7	Credit 2	**On-Site Renewable Energy: 1%-13%**	7
2				Credit 3	**Enhanced Commissioning**	2
			1	Credit 4	**Enhanced Refrigerant Management**	1
2				Credit 5	**Measurement & Verification**	2
			2	Credit 6	**Green Power**	2

Y	?Y	?N	N			
4	2	1	4		**Materials & Resources**	Possible Points 13
Y				Prereq 1	**Storage & Collection of Recyclables**	
1		1		Credit 1.1	**Building Reuse:** Maintain Existing Walls, Floors, and Roof	2
1				Credit 1.2	**Building Reuse:** Maintain 50% of Interior Non-Structural Elemen	1
1	1			Credit 2	**Construction Waste Management: 50%/ 75%**	2
				Credit 3	**Materials Reuse: 5%/ 10%**	2

Materials & Resources, Cont.

Y	?Y	?N	N			
			2	Credit 4	**Recycled Content: 10%/ 20%**	2
1	1			Credit 5	**Regional Materials: 10%/ 20%**	2
			1	Credit 6	**Rapidly Renewable Materials: 2.5%**	1
			1	Credit 7	**Certified Wood: 50%**	1

Indoor Environmental Quality — Possible Points 19

12	2	1	6			
Y	?Y	?N	N			
Y				Prereq 1	**Minimum IAQ Performance**	
Y				Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	
Y				Prereq 3	**Minimum Acoustical Performance**	
1				Credit 1	**Outdoor Air Delivery Monitoring**	1
			1	Credit 2	**Increased Ventilation: 30%**	1
1				Credit 3.1	**Construction IAQ Management Plan:** During Construction	1
			1	Credit 3.2	**Construction IAQ Management Plan:** Before Occupancy	1
1				Credit 4.1	**Low-Emitting Materials:** Adhesives & Sealants	1
1				Credit 4.2	**Low-Emitting Materials:** Paints & Coatings	1
1				Credit 4.3	**Low-Emitting Materials:** Flooring Systems	1
1				Credit 4.4	**Low-Emitting Materials:** Composite Wood & Agrifiber Products	1
		1		Credit 4.5	**Low-Emitting Materials:** Furniture & Furnishings	1
1				Credit 4.6	**Low-Emitting Materials:** Ceiling & Wall Systems	1
			1	Credit 5	**Indoor Chemical & Pollutant Source Control**	1
1				Credit 6.1	**Controllability of Systems:** Lighting	1
1				Credit 6.2	**Controllability of Systems:** Thermal Comfort	1
1				Credit 7.1	**Thermal Comfort:** Design	1
1				Credit 7.2	**Thermal Comfort:** Verification	1
	2		1	Credit 8.1	**Daylight & Views:** Daylight 75% of Spaces	3
			1	Credit 8.2	**Daylight & Views:** Views for 90% of Spaces	1
			1	Credit 9	**Enhanced Acoustical Performance**	1
1				Credit 10	**Mold Prevention**	1

Innovation & Design Process — Possible Points 6

3			1			
Y	?Y	?N	N			
1				Credit 1.1	**Innovation in Design**	1
1				Credit 1.2	**Innovation in Design**	1
				Credit 1.3	**Innovation in Design**	1
				Credit 1.4	**Innovation in Design**	1
1				Credit 2	**LEED Accredited Professional**	1
			1	Credit 3	**The School as a Teaching Tool**	1

Regional Priority Credits — Possible Points 4

Y	?Y	?N	N			
				Credit 1.1	**Regional Priority**	1
				Credit 1.2	**Regional Priority**	1
				Credit 1.3	**Regional Priority**	1
				Credit 1.4	**Regional Priority**	1

45	6	14	34	**Total**	Possible Points 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110 points

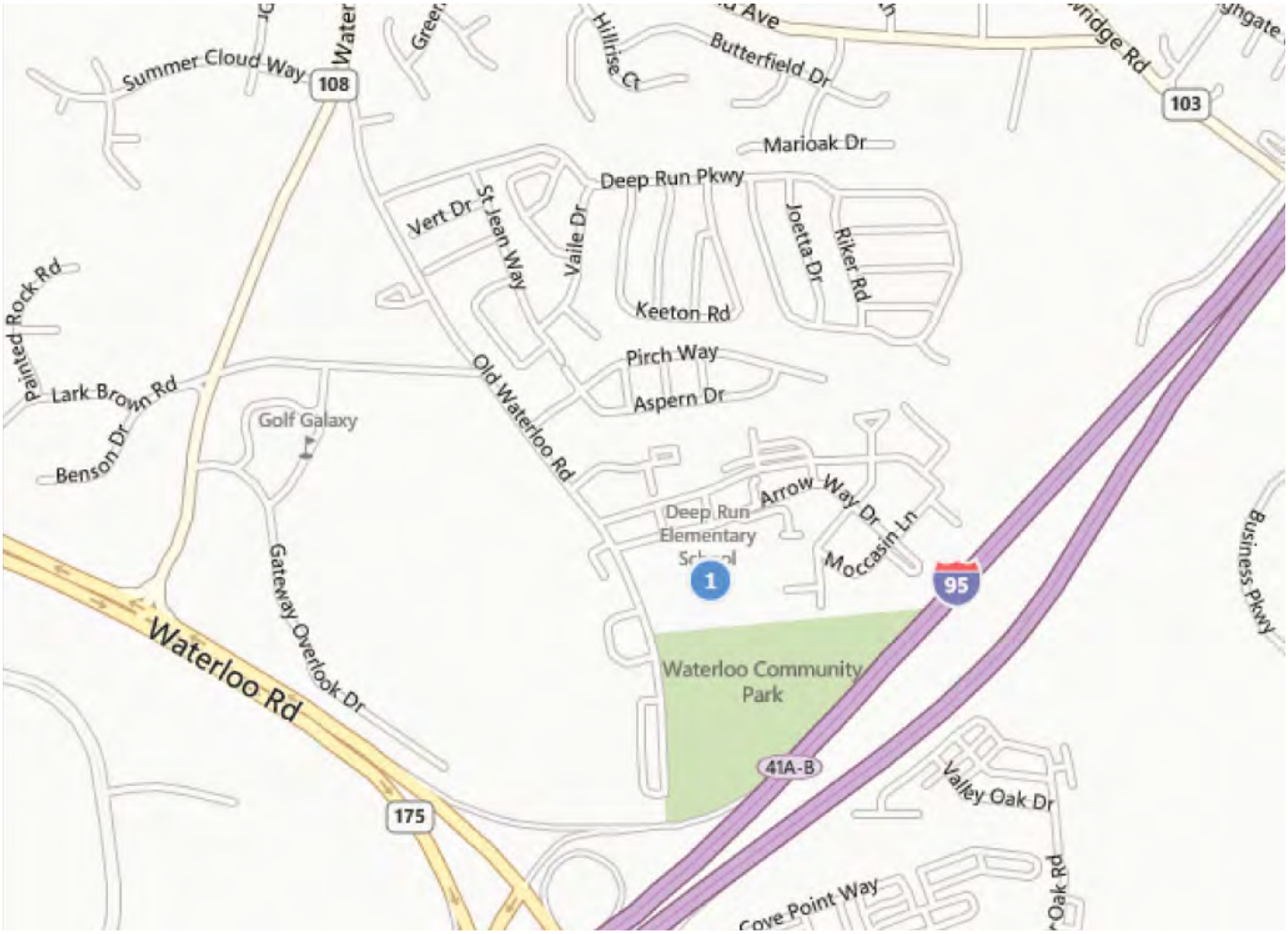
PROJECT FACTS

Existing Building Square Footage:	83, 242 SF
Existing Modular Construction to be Demolished:	- 6, 758 SF
New Addition Square Footage:	21, 243 SF
Total Building Square Footage with Additions:	97, 727 SF

PROJECT SCHEDULE

Planning Meetings Completed	JUNE 2013
Schematic Design submitted to Board of Education	JULY 2013
Design Development submitted to Board of Education	OCTOBER 2013
Construction Documents submitted to Board of Education	FEBRUARY 2014
Project out for Bids	APRIL 2014
Bids Received	MAY 2014
Construction Start: Phase I	JULY 2014
Construction Start: Phase II	JULY 2015
Construction Complete: Phases I & II	AUGUST 2016

VICINITY MAP



The existing Deep Run Elementary School is located on Old Waterloo Road in Elkridge, Maryland and is approximately 1 mile from Waterloo Road (Route 175). The site is approximately 11.67 acres.

AERIAL SITE PHOTO

PROPOSED SITE PLAN

* The following items are designated with numbers on the site plan on the following page.

1 Location of parking: 70 existing spaces will be restriped to accomodate additional handicapped parking spaces and priority parking for low-emitting and fuel efficient vehicles

2 Location of bus loop: 12 existing bus spaces

3 Existing drop off and stacking lane

4 Existing Grades 1 to 5 play area with playground equipment

5 Existing RECC and Pre-K play area with playground equipment

6 Existing multipurpose field, location of new geothermal well field

7 Existing softball field

8 Existing hard play area

9 Existing courtyard

10 Existing service area

11 Existing use setback

12 Existing steep grade change on south and east side of building

13 New secured school entrance, adjacent to administration

14 New administration addition

15 New classroom addition

16 New egress paths down to fields

17 Waterloo Community Park

PROPOSED SITE PLAN

EXISTING FLOOR PLAN

* The following items are designated with numbers on the existing floor plan on the following page.

1 Modular construction classrooms.

2 Typical classroom pod layout. Currently separated with operable walls or partial walls making acoustic speparation between classrooms very difficult.

3 Administration suite: location is not ideal to monitor entrance of the school and keep it secure during school hours.

4 Health suite: size and layout do not meet current state standards.

5 Staff restroom facilites: location not convenient for all staff members and quantity is not sufficient.

EXISTING FLOOR PLAN

- ADMINISTRATION
- HEALTH SUITE
- CLASSROOM
- ACADEMIC SUPPPORT
- CAFETORIUM
- GYMNASIUM
- MUSIC
- ART
- MEDIA CENTER
- RESTROOMS
- SERVICE

PROPOSED FLOOR PLANS

* The following items are designated with numbers on the proposed floor plans on the following page.

1 Two-story classroom addition includes: 6 rebuilt classrooms (from modular pod), 4 new classrooms (100 seats), 2 new gifted and talented classrooms (relocated from portable classrooms), staff restrooms, mechanical pump room, and electric room.

2 Typical classroom pod layout with new classroom division walls and doors providing self-contained, acoustically separated classrooms.

3 Administration addition: located at the main entry of the school to ensure secure access to the school during hours of operation. Includes additional staff restrooms and a separate entrance for staff access.

4 Health suite is renovated to meet current state standards.

5 Existing administration suite is renovated into new teacher planning and staff offices (relocated from portable classroom). Renovation includes additional staff restrooms.

6 Existing mechanical room is renovated into new instrumental music classrooom (relocated from portable classroom). Location is acoustically isolated from other teaching areas and adjacent to existing music classroom.

7 Media center is enclosed with new walls and doors to separate it from the corridor.

PROPOSED FIRST FLOOR PLAN

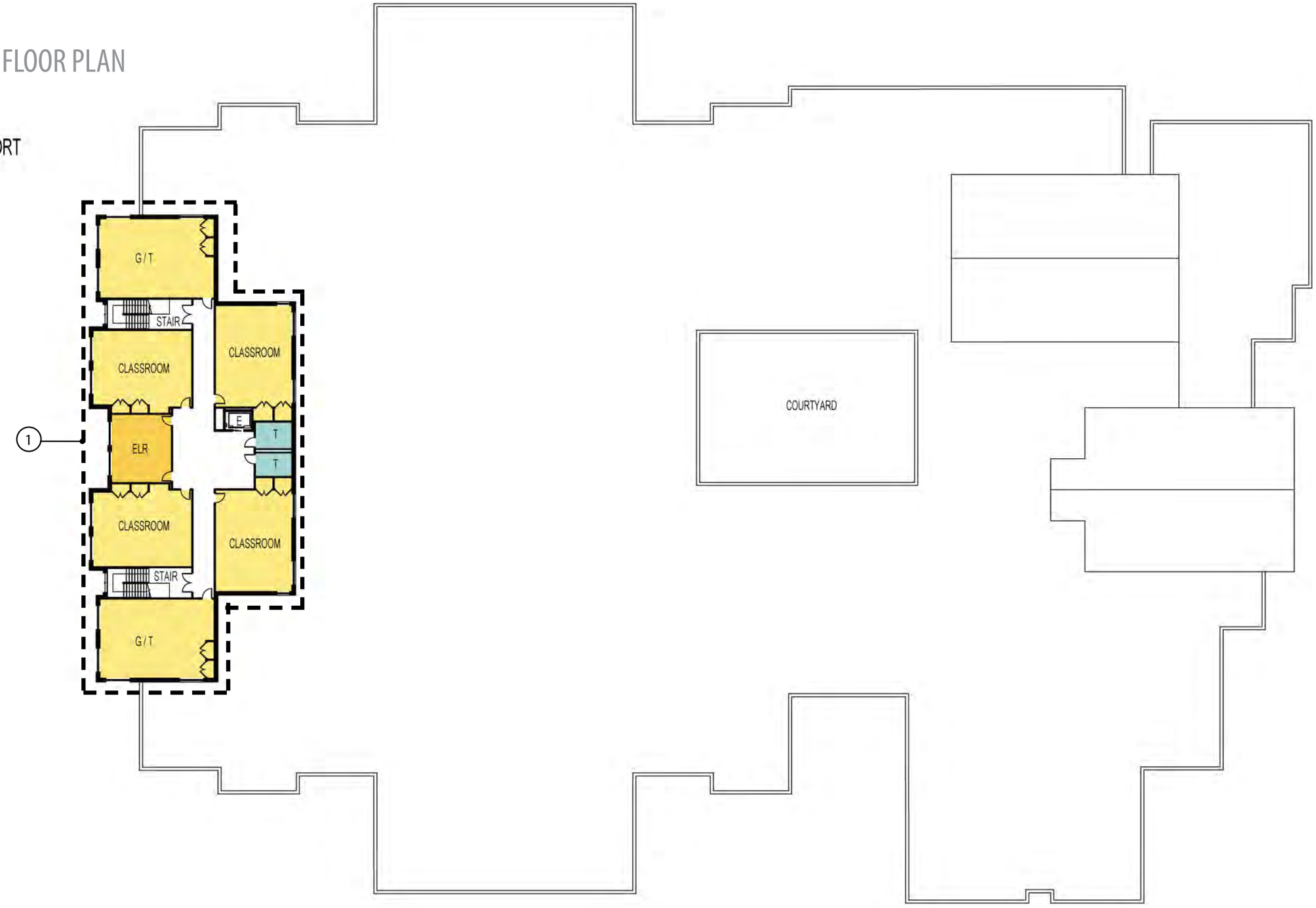
- ADMINISTRATION
- HEALTH SUITE
- CLASSROOM
- ACADEMIC SUPPPORT
- CAFETORIUM
- GYMNASIUM
- MUSIC
- ART
- MEDIA CENTER
- RESTROOMS
- SERVICE

PROPOSED SECOND FLOOR PLAN

CLASSROOM

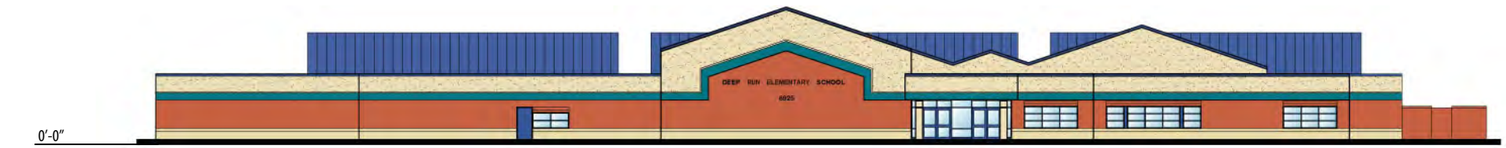
ACADEMIC SUPPPORT

RESTROOMS

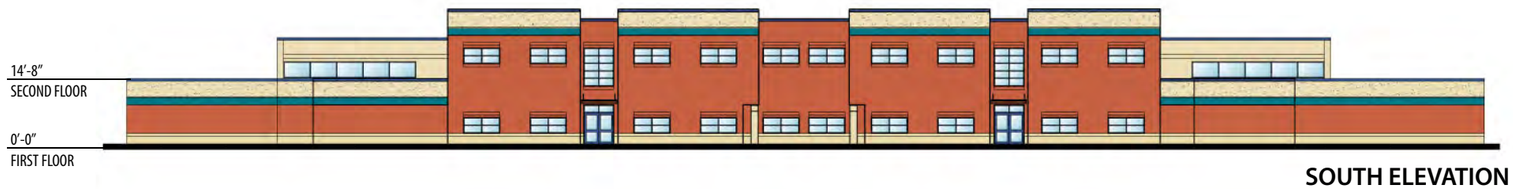


BUILDING ELEVATIONS

0′ 8′ 16′ 32′



NORTH ELEVATION



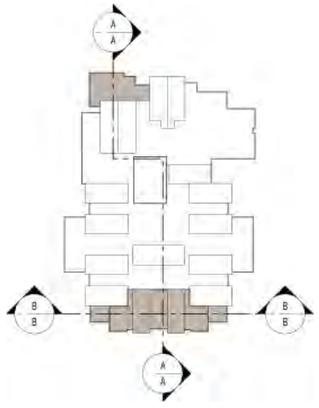
SOUTH ELEVATION

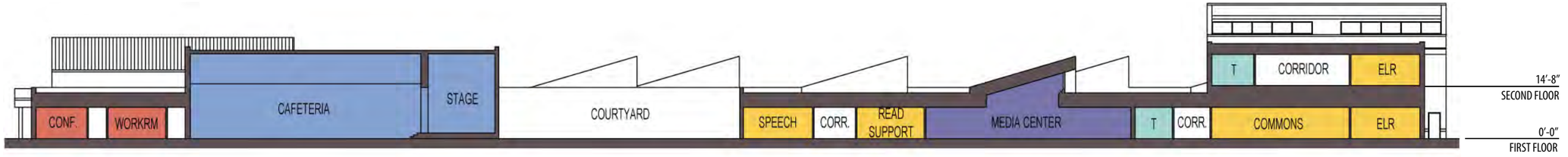
EAST ELEVATION

WEST ELEVATION

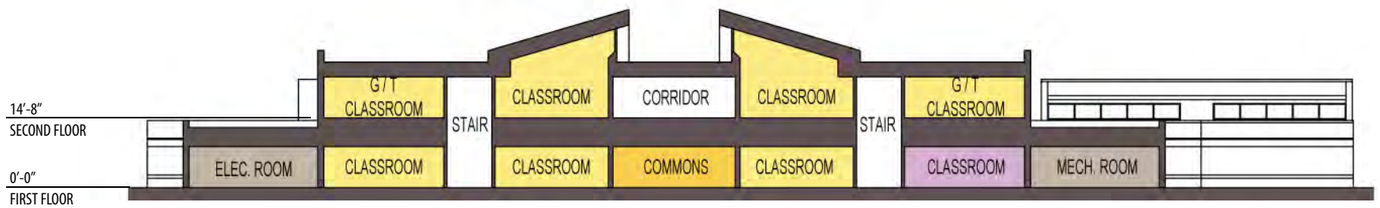
BUILDING SECTIONS

0′ 8′ 16′ 32′





SECTION A - A



SECTION B - B

DEEP RUN ELEMENTARY SCHOOL

SPACE SUMMARY/PROGRAM ANALYSIS

SCHEMATIC DESIGN PROGRAM			
FACILITY		PROGRAM	
	ROOM / SPACE DESCRIPTION	AREA	UNITS
ADMINISTRATION		**4,739**	**SF**
	SECRETARIAL/RECEPTION AREA	513	SF
	PRINCIPAL'S OFFICE W/CLOSET	200	SF
	PRINCIPAL'S PRIVATE LAVATORY	44	SF
	ASST. PRINCIPAL'S OFFICE W/CLOSET	188	SF
	SECURE TEST PREP OFFICE & STORAGE	149	SF
	CONFERENCE ROOM (3)	822	SF
	RECORDS	125	SF
	PARENT VOLUNTEER ROOM	135	SF
	WORK PREP ROOM W/STORAGE	887	SF
	TEACHER PLANNING AND OFFICES	1,252	SF
	STAFF LOUNGE	380	SF
	TOILET ROOM	44	SF
ALTERNATIVE EDUCATION AREA		**202**	**SF**
	OFFICE	202	SF
CAFETORIUM/KITCHEN		**5,108**	**SF**
	STUDENT DINING	3,313	SF
	STAGE	569	SF
	CHAIR STORAGE	221	SF
	KITCHEN AND SERVING	615	SF
	DISHWASHING AREA	186	SF
	DRY STORAGE	60	SF
	LOCKER/LAVATORY	69	SF
	JANITOR'S CLOSET	25	SF
	KITCHEN OFFICE	50	SF
CLASSROOMS K-5 and ELRs		**36,386**	**SF**
	KINDERGARTEN CLASSROOMS (4)	4,152	SF
	KINDERGARTEN LAVATORIES	133	SF
	GRADES 1-5 CLASSROOMS (29)	22,823	SF
	COMMONS	4,559	SF
	EXTENDED LEARNING ROOMS (ELR)	3,532	SF
	KINDERGARTEN STORAGE	280	SF
	GRADES 1-5 STORAGE	907	SF
REGIONAL EARLY CHILDHOOD CENTER		**4,123**	**SF**
	PRESCHOOL/PK CLASSROOMS (2)	1,782	SF
	PRESCHOOL/PK LAVATORIES	86	SF
	STORAGE	41	SF
	MINC CLASSROOMS (2)	1,495	SF

SCHEMATIC DESIGN PROGRAM			
FACILITY		PROGRAM	
	ROOM / SPACE DESCRIPTION	AREA	UNITS
	MINC LAVATORIES	72	SF
	MINC STORAGE	41	SF
	OT/PT LARGE THERAPY ROOM	307	SF
	OT/PT SMALL THERAPY ROOM	83	SF
	OT/PT OFFICE	155	SF
	OT/PT STORAGE ROOM	61	SF
COMPUTER ROOM		**1,453**	**SF**
	COMPUTER ROOM (2)	1,453	SF
CUSTODIAL AREA		**739**	**SF**
	STORAGE ROOM #1	188	SF
	STORAGE ROOM #2	100	SF
	OFFICE/STORAGE ROOM	451	SF
ALS		**360**	**SF**
	CLASSROOM	360	SF
GIFTED & TALENTED AREA		**2,530**	**SF**
	G/T RESOURCE ROOM (3)	2,481	SF
	STORAGE	49	SF
GUIDANCE AREA		**156**	**SF**
	GUIDANCE REC/OFFICE/COUNSELING	156	SF
HEALTH		**856**	**SF**
	WAITING ROOM	110	SF
	TREATMENT/MEDICATION	120	SF
	REST AREA	224	SF
	OFFICE/CONSULT/EXAM	98	SF
	EXAMINATION/ISOLATION	123	SF
	TOILET ROOM SHOWER & CHANGING TABLE	103	SF
	TOILET ROOM	38	SF
	STORAGE	40	SF
LIBRARY MEDIA CENTER		**3,590**	**SF**
	MAIN READING ROOM	2,968	SF
	OFFICE/WORK SPACE	121	SF
	MEDIA PRODUCTION/VIDEO AREA	336	SF
	STORAGE	165	SF
MUSIC CENTER		**1,763**	**SF**
	GENERAL MUSIC	859	SF
	INSTRUMENTAL MUSIC	801	SF
	STORAGE	103	SF
PHYSICAL EDUCATION / GYMNASIUM		**3,941**	**SF**
	GYMNASIUM	3,247	SF
	STORAGE	547	SF
	OFFICE	147	SF
PSYCHOLOGICAL SERVICES AREA		**202**	**SF**
	PSYCHOLOGICAL SERVICES	202	SF
READING RESOURCE AREA		**202**	**SF**
	OFFICE	202	SF

SCHEMATIC DESIGN PROGRAM			
FACILITY		PROGRAM	
	ROOM / SPACE DESCRIPTION	AREA	UNITS
MATH RESOURCE AREA		**202**	**SF**
	OFFICE	202	SF
SPECIAL EDUCATION (K-5) AREA		**2,200**	**SF**
	CLASSROOM	600	SF
	TOILET ROOM W/LIFT & CHANGING TABLE	100	SF
	EXTENDED LEARNING ROOMS (ELR)	1,500	SF
SPEECH/LANGUAGE THERAPY		**205**	**SF**
	SPEECH THERAPY	205	SF
OT/PT		**207**	**SF**
	OT/PT THERAPY ROOM	207	SF
VISUAL ART AREA		**2,027**	**SF**
	STUDIO (2)	1,837	SF
	KILN/STORAGE	190	SF
TOTAL NET EDUCATIONAL AREA		**66,866**	**SF**
TOILET ROOMS		**2,523**	**SF**
	STAFF TOILET ROOMS	670	SF
	STUDENT TOILET ROOMS	1,853	SF
SERVICE AREAS		**1,340**	**SF**
	MECHANICAL PUMP ROOM	670	SF
	MAIN ELECTRIC ROOM	670	SF
	ELECTRICAL CLOSETS	63	SF
TOTAL NET AREA		**70,729**	**SF**
OVERALL GROSS BUILDING AREA		**97,727**	**SF**
EFFICIENCY FACTOR		**72.4%**	

PROJECT COST ESTIMATE

CONSTRUCTION COSTS:

Phase I: Building	$ 6, 773, 293
Phase I: Site Development	$194, 000
Phase II: Building	$ 8, 736, 614

TOTAL : **$15,703,907**

NOTES:

* The construction cost estimate was prepared by the construction manager, Riparius Construction Inc., and assumes bids will be received in May 2014.

* The following additional options will be considered as funding allows:

    - Expansion of parking lot and student drop-off areas.

    - Expansion of RECC classrooms.

* Estimate includes a schematic design phase cost estimate contingency of 10%.

* Estimate assumes non-wage rate pricing. (Add 8% for wage rate.)

* Estimate does not include a project contingency.