

**BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM**

TITLE: Laurel Woods Elementary School Schematic Design Report **DATE:** August 15, 2013

PRESENTER(S): Bruce Gist, Director, School Construction
Tom Terranova, Project Manager, Colimore Architects

OVERVIEW:

The attached schematic design brochure describes the proposed additions to Laurel Woods Elementary School. Laurel Woods Elementary School opened in 1973 with an open classroom design for Grades K – 5. Laurel Woods Elementary School was expanded with subsequent building additions in 1987 and 2008. Further systemic renovations and modernizations of the interior spaces, as well as a complete roof replacement, were completed in 2004 and 2005 respectively.

Due to the predicted increase in the student population, as well as the need for reallocated program spaces inside of the school, the design and planning committee agreed on a two-story classroom addition. The addition includes an art and music room, and along with a cafetorium expansion. These changes increase the school capacity by 100 seats and improve the utilization of the existing academic support spaces. A new physical education activity room will be bid as an alternate.

RECOMMENDATION/FUTURE DIRECTION:

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

**Submitted
by:**

Bruce Gist
Director, School Construction

**Approval/
Concurrence:**

Renee A. Foose, Ed.D.
Superintendent

Susan C. Mascaro
Chief of Staff

Ken Roey
Chief Facilities Officer

**ADDITIONS to
LAUREL WOODS ELEMENTARY SCHOOL**
FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM



SCHEMATIC DESIGN REPORT

AUGUST 15, 2013

**Colimore Architects, Inc.
1240 Key Highway
Baltimore, Maryland 21230
410-752-3720**



Schematic Design Report

Additions to Laurel Woods Elementary School

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY

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August 15, 2013

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Planning Advisory Committee

Planning Committee

Susan Brown	Laurel Woods Elementary School, Principal
Rhonda Inskeep	Laurel Woods Elementary School, Assistant Principal
Debbie Gaeng	Laurel Woods Elementary School, Teacher
Janet Yarn	Laurel Woods Elementary School, Teacher
Assunta Vitiello	Laurel Woods Elementary School, Teacher
Judy Wolf	Laurel Woods Elementary School, Teacher
Kelly Miller	Laurel Woods Elementary School PTA, Parent
Julie Brown	Laurel Woods Elementary School PTA, Parent
Scott Washington	Howard County Public School System (HCPSS) Manager of Design and Preconstruction Services, School Construction
Bruce Gist	HCPSS, Director of School Construction
Dan Keiser	HCPSS, Program Manager, School Construction
David Ramsay	HCPSS, Director of Transportation
Marcy Hersl	HCPSS, Assistant/Risk Analyst
Jennifer Bubenko	HCPSS, Planning Specialist
Ken Roey	HCPSS, Chief Facilities Officer
Betsy Zentz	HCPSS, Interagency Specialist
Wayne Crosby	HCPSS, Director of School Facilities
Todd Holmes	Howard County Department of Recreation and Parks, Program Coordinator
Matt Madera	Howard County Department of Recreation and Parks, Facility Director
Raul Delerme	Howard County Department of Recreation and Parks, Bureau Chief
Gloria Mikolajczyk	Maryland State Department of Education – School Facilities, Architectural Supervisor
Dan Hagan	J. Vinton Schafer & Sons, Inc., Construction Manager

Architects

James A. Colimore, AIA	Colimore Architects Inc., Principal in Charge
Meredith Sullivan, AIA	Colimore Architects Inc., Project Director
Tom Terranova	Colimore Architects Inc., Project Manager

Design Team

Architect	Colimore Architects Inc.	Baltimore, MD
Civil Engineer	Fisher, Collins & Carter Inc.	Ellicott City, MD
Structural Engineer	Columbia Engineers Inc.	Columbia, MD
Mechanical Engineer	Burdette, Koehler, Murphy and Associates, Inc.	Baltimore, MD
Electrical Engineer	Burdette, Koehler, Murphy and Associates, Inc.	Baltimore, MD
Construction Manager	J. Vinton Schafer & Sons, Inc.	Abington, MD

Project Description

Laurel Woods Elementary School is a single-story masonry structure, Type IIB construction (noncombustible/unprotected) that opened in 1973. The building was expanded with subsequent building additions in 1987 and 2008. The building underwent further renovations in 2004 and the roof was replaced in 2005. Currently there are six (6) portable classrooms located in the front and rear of the school. The building is in good condition with no identified structural deficiencies. The building is one story with egress directly onto grade around the building. The student enrollment, as of May, 2013, is 564 students. The population of the school is continuing to grow, making the need for the expanded space necessary in order to keep pace with the programmatic requirements of the Howard County Public School System (HCPSS).

The school currently has need of the following, which were considered during project design:

- Eight (8) new classrooms
- Dedicated music room
- Dedicated art room
- Restrooms and storage
- New physical education activity room (Add Alternate Number 1)
- Expanded cafetorium
- New secure entrance
- Increased mechanical and electrical infrastructure as needed to support additional spaces

In addition to the above, the school wishes to maintain portable classroom units at the front of the building and remove those at the rear to provide space for the reorganization of the existing outdoor recreational areas.

The proposed classroom addition will be two-stories with two stair towers providing direct egress from the building. New security doors will be provided inside the existing entry doors to create a secure vestibule visible from the main office. Entry after normal opening hours will be remotely controlled by office personnel.

An emergency vehicle access lane will be extended around the south and east sides of the building to the proposed classroom addition. This will also be used as access during construction.

Project Sustainable Intent

The design of these additional spaces will be in accordance with 'Green' practices. The addition and renovation space will be reviewed for energy conservation.

The existing energy star rating of the building will be documented. Proposed improvements and/or upgrades necessary to improve by 20 percent will be identified.

The goal of incorporating sustainability practices where it also encourages learning experiences will be a focus of the design.

Project Facts

Existing Building Gross Square Footage:	55,000
Gross Square Footage of New Additions:	16,500
Gross Square Footage of Add-Alternates:	2,000

New Total Building Gross Square Footage:	73,500
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Project Schedule

Planning Meetings Completed	June 28, 2013
Schematic Design Presented to Board of Education For Review and Approval	August 15, 2013
Schematic Design Submission to IAC For Review and Approval	August 15, 2013
Design Development Submission to Board of Education For Review and Approval	October 24, 2013
Design Development Submission to IAC For Review and Approval	October 24, 2013
Construction Documents Submission to Board of Education For Review and Approval	February 2014
Construction Documents Submission to IAC For Review and Approval	February 2014
Project out for Bids (3 weeks)	April 2014
Bids Received	May 2014
Construction Begins	July 2014
Construction Completed	August 2015

Planning Process

The proposed additions are in response to programmatic needs of the school as outlined by representatives of the HCPSS. Preliminary design exercises quickly identified the challenges presented by the confines of the site and configuration of the existing floor plan. The existing building, portable classroom units and outdoor recreational areas are tightly locked between steep slopes and a parking area already at capacity. Adding to the existing floor plan in a way that will coordinate with the existing circulation pathways will require substantial site grading and reconfiguration of outdoor spaces.

The location selected for the classroom addition will require the least amount of site work compared to other options studied while providing easier access for emergency vehicles. The proposed two-story addition further reduces the required site work while minimizing the impact on the surrounding outdoor areas.

Prior to presenting this initial design concept to committee members for consideration and comment, it was reviewed by civil consultants, Fisher, Collins and Carter for feasibility of construction with respect to site work, grading and stormwater management.

A series of schematic design review meetings were held at the school, each well attended by members of the Planning Advisory Committee. Comments and direction from committee members throughout the course of these meetings were vital in developing the design of the various additions and site.

The design process is outlined below:

- Scope of design provided by the HCPSS
- Preliminary plan developed based on the schools existing floor plan, footprint, site constraints, and input from the HCPSS
- First of three committee meetings in June 2013 – comments were received, documented and incorporated into the preliminary plan
- Second committee meeting – presented revised plan incorporating agreed upon comments from the first committee meeting. Additional comments were received, documented, and incorporated into the preliminary plan
- Plans further developed based on third committee meeting
- Thorough review of each specific space with the appropriate staff will be conducted to further refine the design of each space.

With the involvement of the committee during the June meetings, the design quickly evolved into a viable schematic plan that meets the needs of the school. The following are being taken into consideration throughout the design process and will be addressed

with each submission:

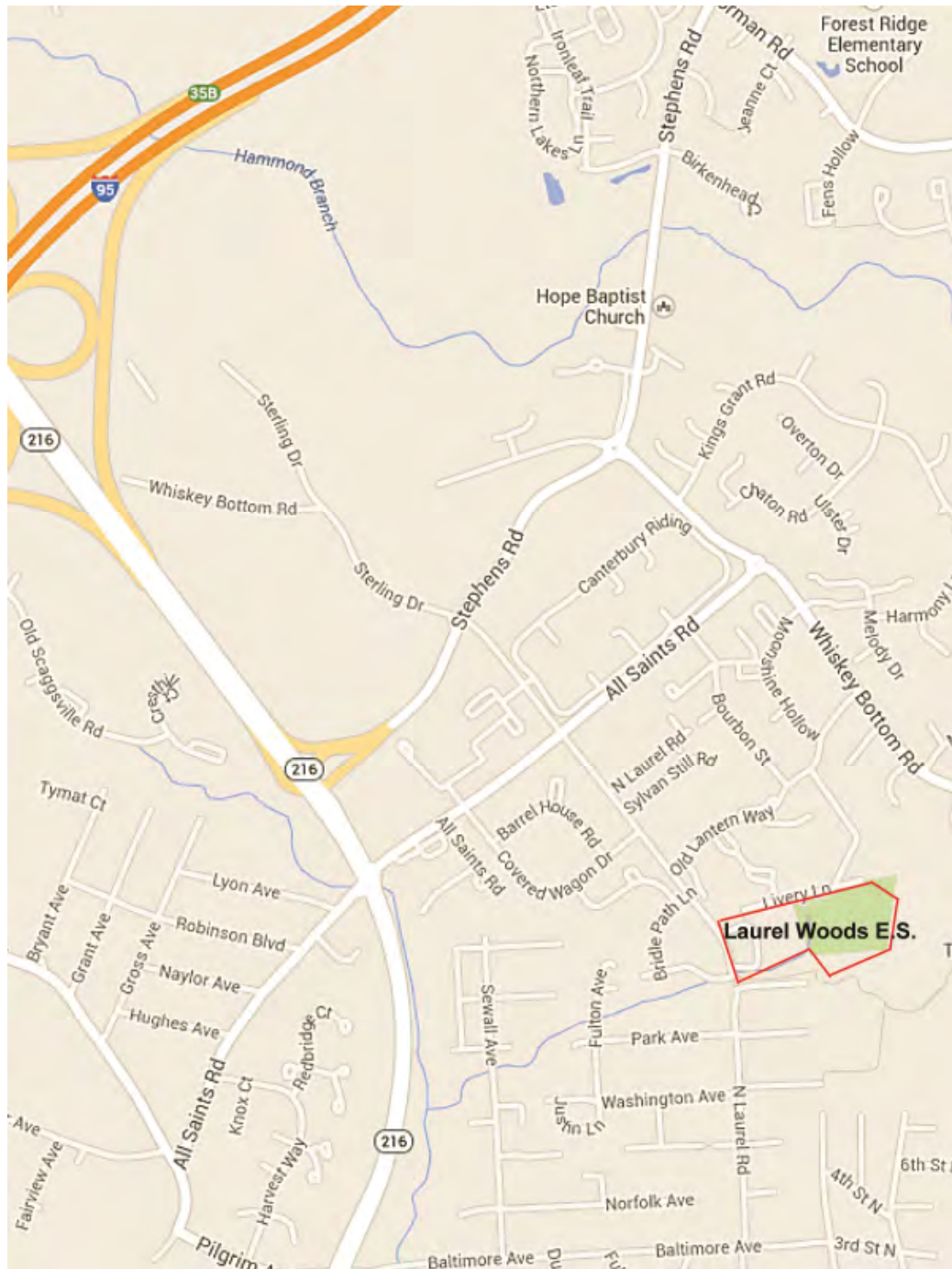
- Budget
- Sustainability of design, construction and operation
- Construction impact on the school while in session
- Existing building infrastructure
- Communication of existing spaces with proposed additions

J. Vinton Schafer & Sons, Inc. has been involved in the design process from the beginning, providing input on constructability, phasing, and budget considerations. Their involvement will help us achieve an efficient design and construction sequence that will deliver the finished additions on time and within budget.

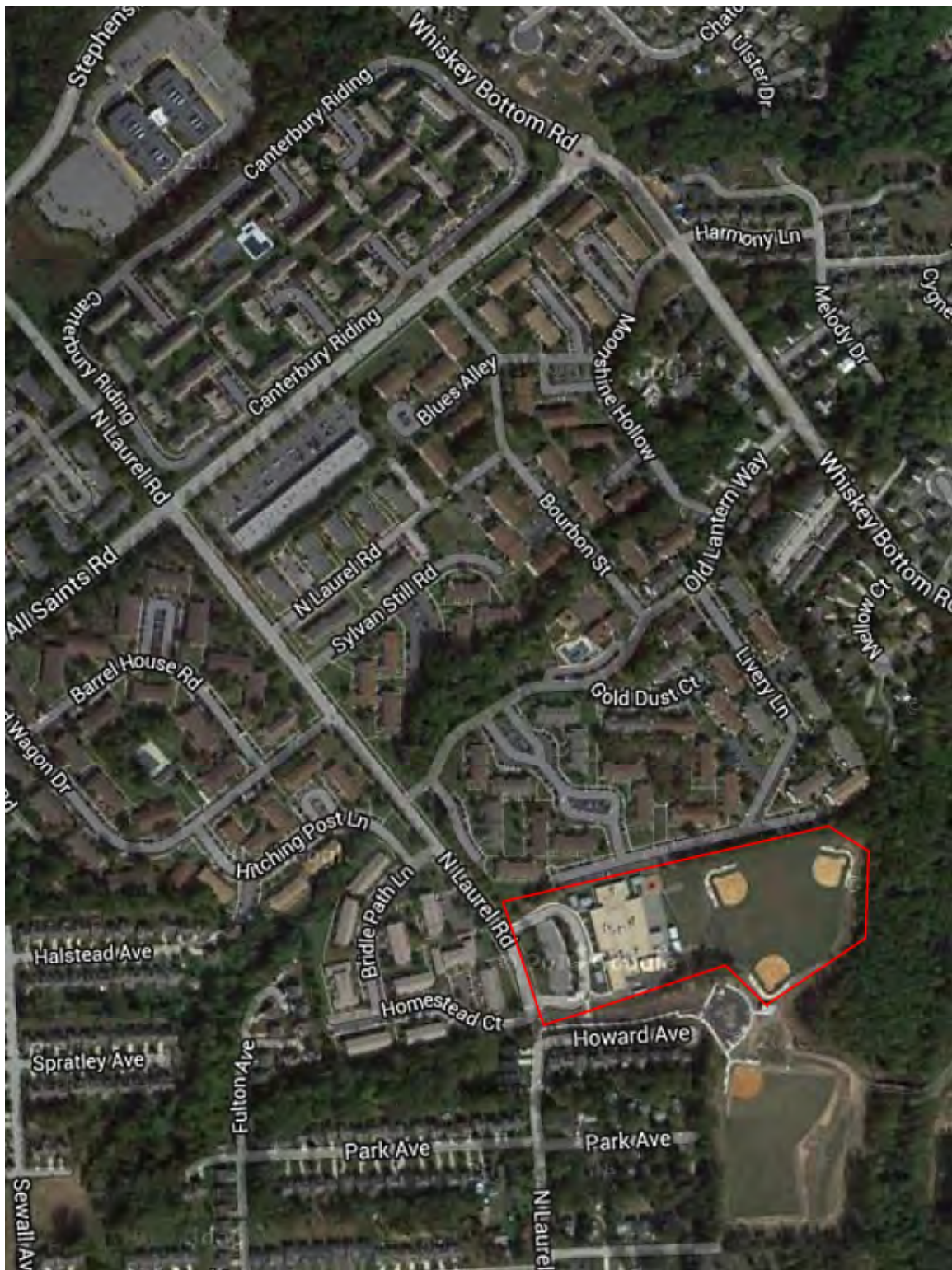
Vicinity Map

Laurel Wood Elementary School is located off North Laurel Road. The school is situated on a 11.5-acre site surrounded by forest and residential developments. It is located about a mile south of Forest Ridge Elementary School.

Public water, sewer, and natural gas serve the site.



Aerial Site Photo



Existing Site Constraints

Laurel Woods Elementary School is situated on a challenging site, with steep slopes on three sides. The proposed additions will necessitate substantial reworking of existing site grades as shown on the Site Plan of Figure 1. Outdoor spaces for recreation are also limited. The proposed design has relocated all outdoor play areas affected by the new construction.

Site Plan & Building Notes

Key features of the proposed site and building changes are identified with circled numbers:

1. Location of two-story classroom addition – See enlarged plans of Figures 2 and 3
2. Location of cafetorium expansion – See enlarged plan of Figure 4
3. Location of new secure vestibule entrance – See enlarged plan of Figure 5
4. Location of a proposed emergency access lane/ construction access road
5. Reconfigured macadam play areas
6. Relocated rubberized play area
7. Relocated mulched play area
8. Relocated asphalt play area
9. Location of P.E. activities room – Add Alternate Number 1 – See enlarged plan of Figure 6



Figure 1 - Proposed Site Plan

Legend:

- = Administration
- = Cafetorium / Kitchen
- = Circulation
- = Classroom
- = Facilities
- = Fine Arts
- = Gymnasium / P.E.
- = Media Center
- = Special Education

Abbreviations:

- CR = Classroom
- CC = Custodial Closet
- S = Storage
- T = Toilet
- PR = Project Room
- Ki = Kiln
- Serv = Server Room
- Of = Office

Existing Building = 55,000 g.s.f.

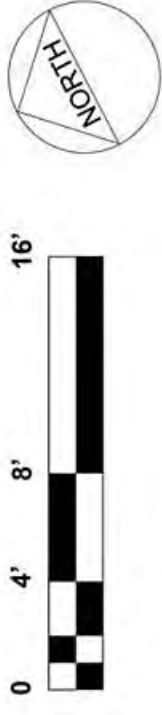
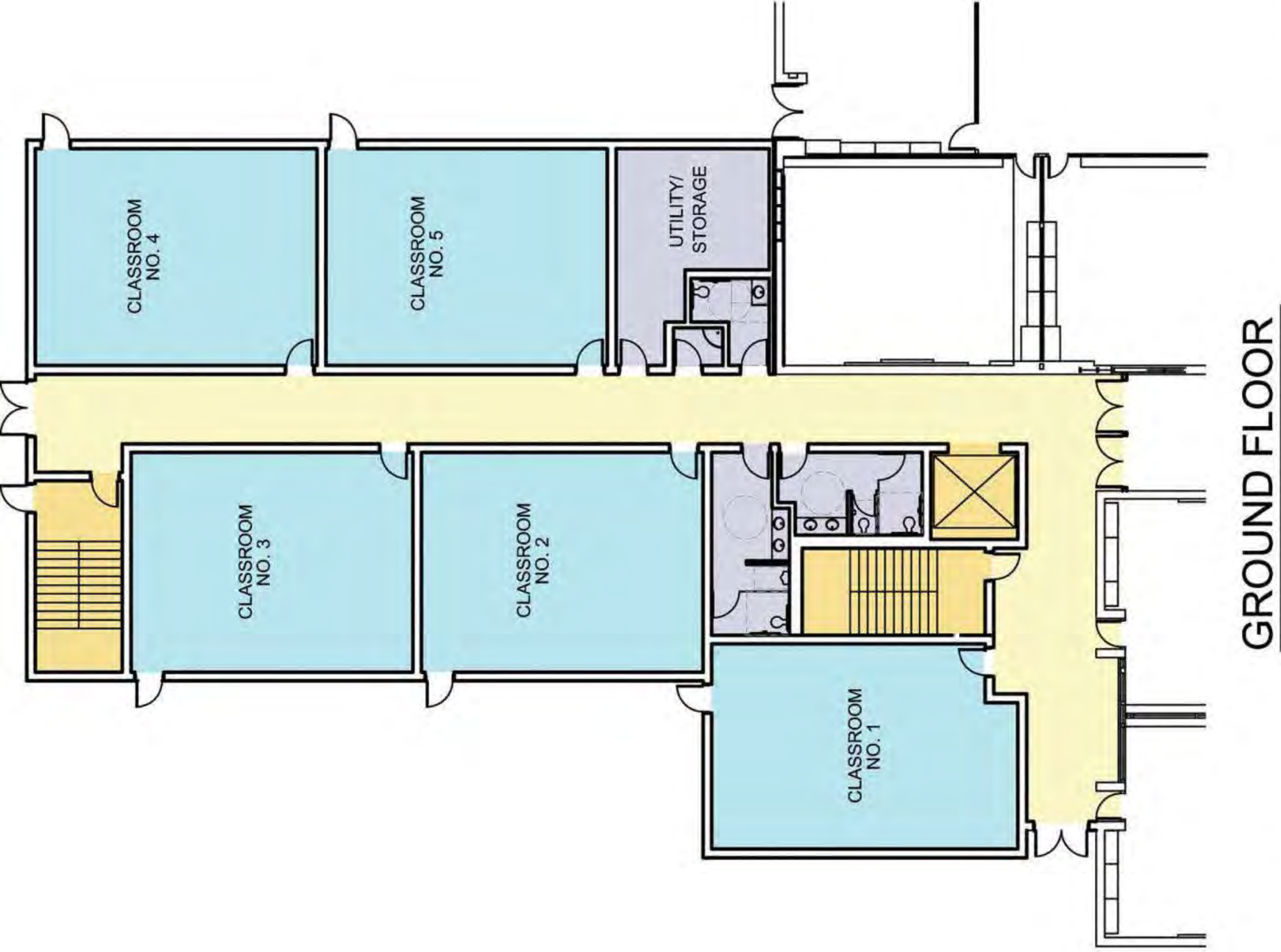
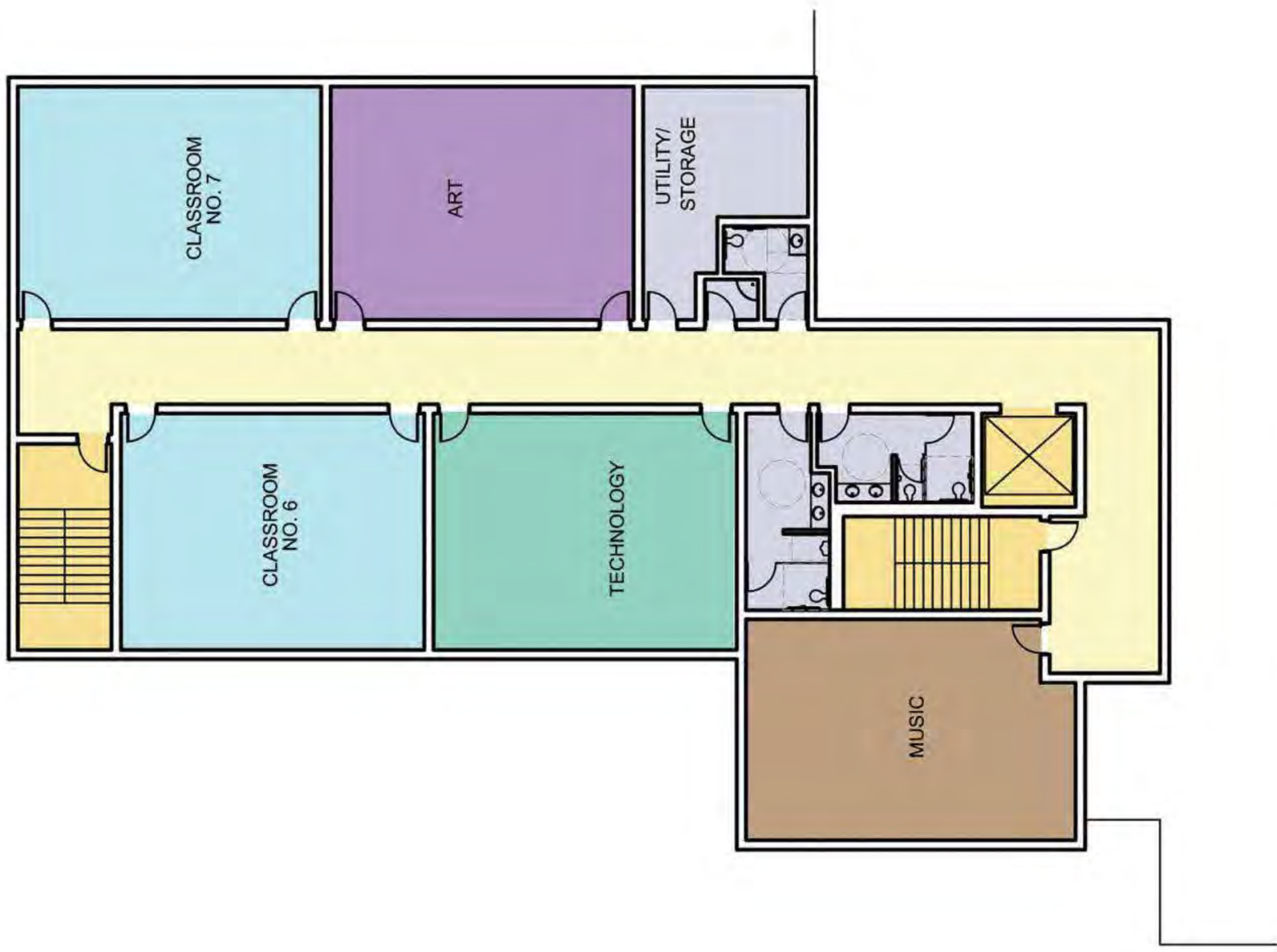


Figure 2 - Existing Floor Plan





GROUND FLOOR



SECOND FLOOR

Figure 4 - Enlarged Plan at Proposed Classroom Addition

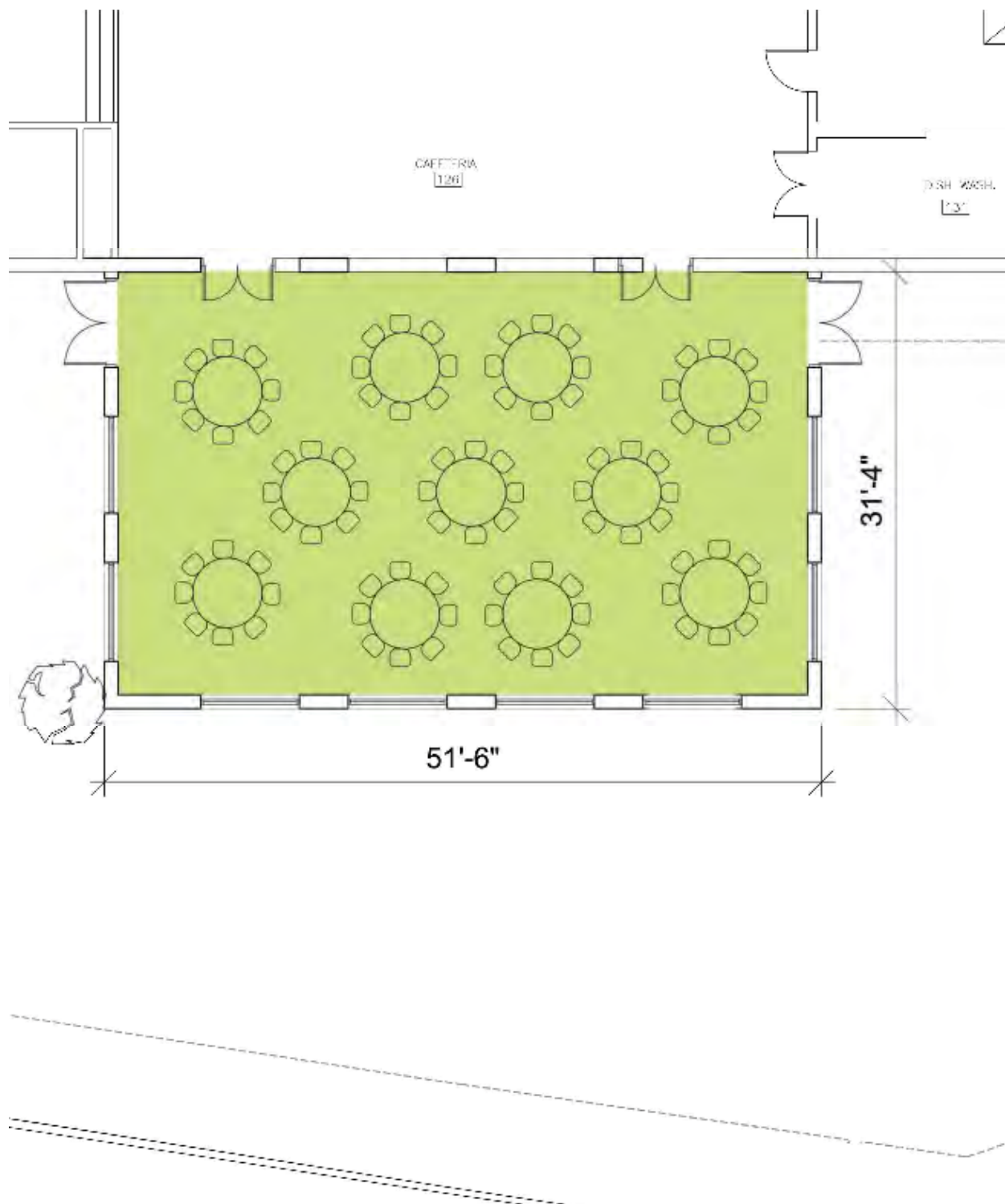


Figure 5 – Enlarged Plan at Cafetorium Addition

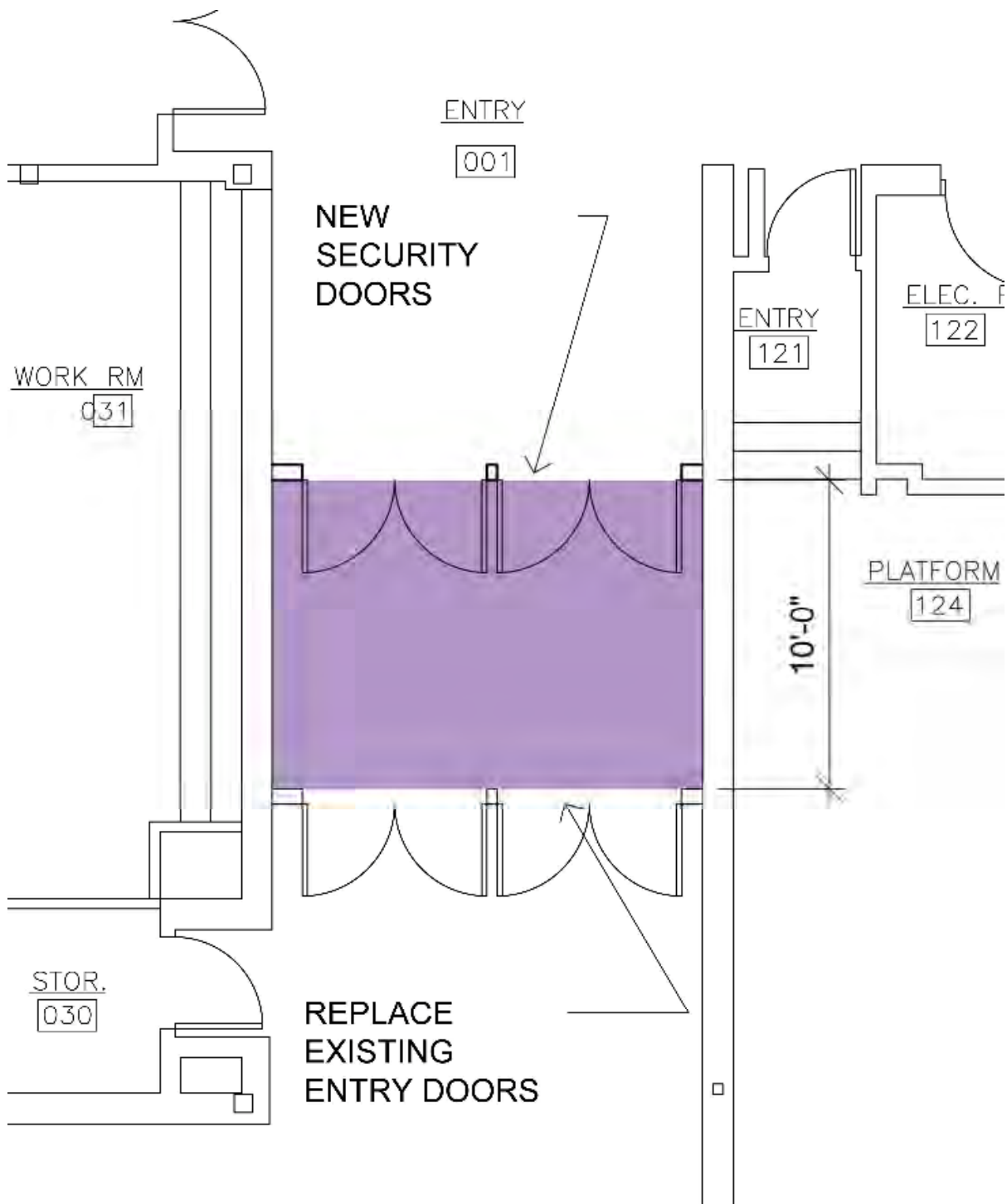


Figure 6 – Enlarged Plan at Secure Entry Vestibule

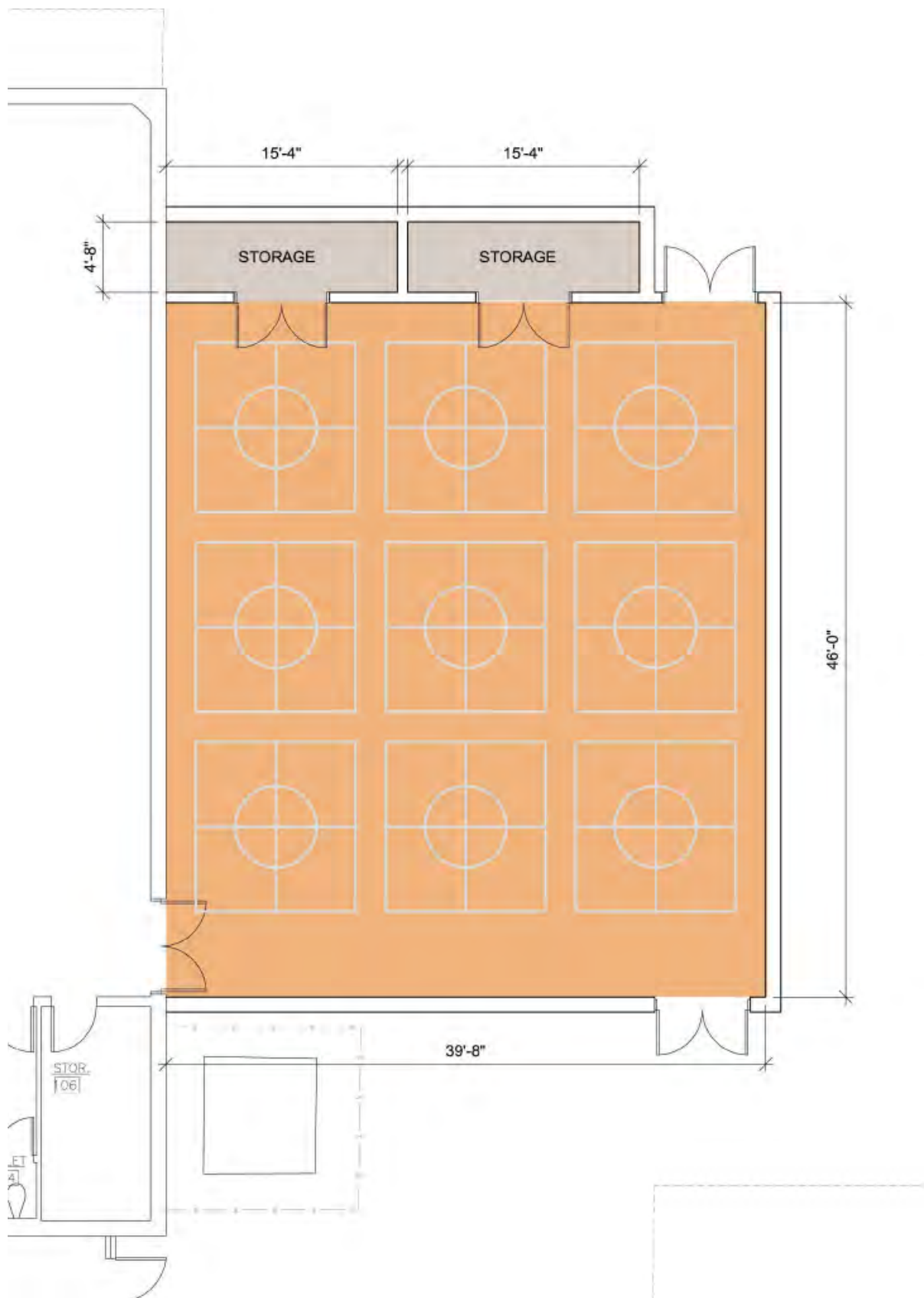


Figure 7 – Enlarged Plan at PE Activities Room

Proposed Space Analysis

Space	Qty.	Phase	S.F.	Total Net S.F.
Adminisitrative Spaces				2,368
Reception	1	Existing	138	138
General Office	1	Existing	282	282
Principal's Office	1	Existing	174	174
Principal's Lavatory	1	Existing	37	37
Assistant Prinical's Office	1	Existing	134	134
Testing/Prep Office	1	Existing	38	38
Conference Room	1	Existing	276	276
Work/Prep Room	1	Existing	344	344
Work Room	1	Existing	297	297
Teacher's Lounge	1	Existing	394	394
Parent Liason Room	1	Existing	188	188
Staff Lavatory	1	Existing	66	66
Cafetorium/Kitchen				5,893
Student Dining	1	Existing	2,441	2,441
Cafetorium Addition	1	Proposed	1,581	1,581
Stage	1	Existing	516	516
Chair Storage	1	Existing	180	180
Kitchen	1	Existing	675	675
Dish Wash	1	Existing	226	226
Storage	1	Existing	132	132
Locker	1	Existing	70	70
Janitor's Closet	1	Existing	18	18
Kitchen Office	1	Existing	54	54
Classrooms				25,375
Pre-K	1	Existing	965	965
Kindergarten	4	Existing	<i>varies</i>	3,536
1st Grade	4	Existing	<i>varies</i>	2,852
2nd Grade	4	Existing	<i>varies</i>	2,730
3rd Grade	4	Existing	<i>varies</i>	2,825

Space	Qty.	Phase	S.F.	Total Net S.F.
4th Grade	4	Existing	<i>varies</i>	2,832
5th Grade	4	Existing	<i>varies</i>	3,145
Proposed Classrooms	7	Proposed	<i>varies</i>	5,673
Technology	1	Proposed	817	817
Alternative Education				
Room	1	Existing	183	183
Computer Lab	1	Existing	645	645
ESOL	1	Existing	96	96

Fine Arts	2,953
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Music Room	1	Existing	375	375
Music Room	1	Proposed	804	804
Storage	1	Existing	38	38
Art Room	1	Existing	830	830
Art Room	1	Proposed	806	806
Storage	1	Existing	70	70
Kiln	1	Existing	30	30

Health Services	560
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Waiting	1	Existing	100	100
Treatment/Med Room	1	Existing	120	120
Office/Consult/Exam	1	Existing	100	100
Exam/Isolation Room	1	Existing	100	100
Student Lavatory ADA	1	Existing	100	100
Storage Room	1	Existing	40	40

Physical Education	4,749
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Gymnasium	1	Existing	2,423	2,423
Storage	2	Existing	<i>varies</i>	294
P.E. Activity Room	1	Add-Alt.	1,824	1,824
Storage	2	Add-Alt.	71	142
Office	1	Existing	66	66

Space	Qty.	Phase	S.F.	Total Net S.F.
Media Center				2,196
Main Reading Room	1	Existing	1,756	1,756
Office/Work Space	1	Existing	297	297
Reading Room	1	Existing	97	97
Storage	1	Existing	46	46
Special Education				1,246
Classroom	2	Existing	<i>varies</i>	406
Teachers' Offices/ Testing Room	1	Existing	840	840
Total Net Educational S.F.				45,340
Miscellaneous Spaces				4,340
Staff Toilets	5	Existing	<i>varies</i>	284
Student Toilets	15	Existing	<i>varies</i>	1,660
Boiler Room	1	Existing	700	700
Electrical Room	1	Existing	50	50
Custodial Storage	2	Existing	<i>varies</i>	131
Custodial Office	1	Existing	87	87
Utility/Storage	2	Proposed	320	640
Proposed Staff Toilet(s)	2	Proposed	70	140
Proposed Boys' Toilet(s)	2	Proposed	174	348
Proposed Girls' Toilet(s)	2	Proposed	150	300

Proposed Space Analysis Summary

Total Net Educational S.F.	45,340
Gross Area Factor	28160
(Admin., Classrooms, Cafetorium., etc.)	61.69%
(Walls, Circulation, Toilets, Mech./Elec., etc.)	38.31%
	100.00%
Gross Area of Building	73,500

Construction Cost Estimate

Additions to Laurel Woods Elementary School

Site Work	\$	745,139
Additions	\$	4,197,282
Total for Project		\$ 4,942,421

Options:

Add-Alternate for P.E. activities room addition	+\$	401,655
Add-Alternate for upgrade to DDC controls	+\$	297,552

Total for Project (including Options)		\$ 5,641,628
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Notes

- Construction cost estimate was prepared by the construction manager, J. Vinton Schafer & Sons Inc, and assumes that bids will be received in May, 2014.
- Estimate includes a schematic design phase cost estimate contingency of +5% for the building and +15% for the site.
- Estimate assumes non-wage rate pricing. (Add 9% for wage rate)
- Estimate does not include a project contingency.