Project Information (Continued)

Educational Program Objectives

The purpose of this project is to modernize the existing Wayside Elementary School to meet the requirements of the educational specifications. Based on the condition of the existing facility and the cost to bring the school into compliance with current code requirements, the most cost-effective modernization option is to construct a replacement building attached to the 2007 addition which will remain. The modernization was master-planned as part of the 2007 addition in an effort to maximize the effectiveness of program adjacencies and flow throughout the building.

After the modernization, the program capacity for the school will be 640 with a master-planned (core) capacity for 740 students. The building will be in full compliance with the Americans with Disabilities Act (ADA) and the design will incorporate a four-classroom master-planned addition to bring the school up to its master-planned capacity. The project will be designed to achieve LEED Silver certification or higher by the U.S. Green Building Council (USGBC) under the LEED for Schools rating system.

The modernized Wayside Elementary School will provide the required teaching spaces and support spaces for the school programs. It will provide a safe environment for students and staff by including a secure entry and visual monitoring of the site entrance points. The design of the building allows for good internal circulation and for after-hours community use, provides access to the multi-purpose room, instructional media center, and gymnasium while being able to secure the rest of the building.

Project Information (Continued)

Teaching Stations and Spaces Provided When Completed:

(Number of teaching stations is indicated within parentheses)

Summary of classrooms in Modernized Building:

Kindergarten	(5)
Standard Grades 1-5	(12)
Special Education Classrooms - School/Community-based Program (SCB)	(2)
Special Education Classrooms - Preschool Education Program (PEP)	(2)
Art Room	1
Music Room	1
Instrumental Music Room	1
Dual Purpose Room	1
Computer Laboratory	1

Summary of Classrooms in Addition to remain:

Grades 1-5	(11)

Total Teaching Stations:	**(32)**

Core Facilities in Modernized Building:

Administrative Suite	1
Health Suite	1
Multi-Purpose Room with Platform and Kitchen	1
Instructional Media Center	1
Gymnasium	1

Project Information (Continued)

Support Spaces in Modernized Building:

Special Education Conference Room	1
Speech/Language Room	1
Motor Therapy Room/Sensory Room	1
PEP Speech/Language Room	1
PEP Motor Room	1
Large Instructional Support Room	1
Small Instructional Support Room	2
Support Staff Offices	3
Instructional Data Assistant Office	1
Staff Development Office	1
Reading Specialist Office	1
Training/Conference Room	1
Storage	2
Trash/Compactor Room	1
Building Services	1

Support Spaces in Addition to remain:

Small Instructional Support Room	1
Testing/Conference Room	1
Staff Development Office	1
Staff Lounge	1
Counselor's office	1
General Storage	2

Project Information (Continued)

Site Design

Site Features:
Wayside Elementary School is situated on a 9.26 acre lot located at 10011 Glen Road in Potomac, Maryland. The site is bounded on the south by Glen Road with detached single-family housing on the north and east and on the west by a private swimming pool. The site is currently improved with a one and two-story school building, a softball field, three mulched playgrounds, paved play areas, parking lots totaling 66 spaces, a student drop-off loop, a loading area, and a bus loop. The student drop-off and parking lot are accessed from Glen Road. The site is split into two distinct terraces, sloping from the softball field at the northeastern corner down to the school building and play areas.

In the proposed site design, the existing field is retained in its current location. Existing hard and soft play areas to the northwest of the school building will be retained where possible, while new mulch play areas will be provided to the northeast of the school building. The existing bus loop will be reconfigured to allow for more bus queuing on site as well as new parking spaces at the main entrance. The existing student drop-off loop will be expanded to provide additional parking (100 total spaces are proposed) and additional car queuing.

Stormwater Management System:
A new stormwater management system will be provided for quality controls on-site in accordance with the most current state and Montgomery County stormwater management regulations. The proposed stormwater management will include a vegetated roof on portions of the new building and other Environmental Site Design (ESD) measures as required by the state and Montgomery County, which include micro-bioretention, landscape infiltration, infiltration berms and/or other micro-scale stormwater management practices. The existing stormwater management system installed as part of the 2007 addition will be retained and incorporated into the new site stormwater management.

Utilities:
All existing utilities, including water, sewer, gas, and electrical services will be upgraded to support the needs of the modernized school.

Exterior Lighting:
The exterior lighting of the modernized school 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.

Project Information (Continued)

Building Design

General Description:
The proposed modernized building, designed to meet MCPS educational specifications, is a partial two-story, steel-framed structure with brick veneer and masonry interior walls. There will be four master-planned classrooms that will be provided as an unfinished building shell to be fit-out and finished in the future. The main entrance will be relocated adjacent to the main parking lot where the visitors to the building will enter. The main entrance will be visible from the Glen Road side of the building and the bus loop. The administrative suite will be located in the corner facing both the bus loop and the parking lot with student drop-off. There will be a glass entrance vestibule open only to the administrative lobby requiring all visitors to check-in at the front office before entering the school. The instructional media center, multi-purpose room, and gymnasium will be available for after-hours use, while allowing the remainder of the building to be secured.

The modernized building will connect to both ends of the 2007 addition which will create a circulation loop utilizing the existing corridors in the addition and the new double loaded corridors in the modernized building. This loop frames a central courtyard which maximizes daylight into classrooms and support spaces and provides a secure outdoor learning environment and activity area. This orientation will also provide better circulation through the school by way of the looped travel path created on the first floor. The two story portion of the modernized building will connect to the 2007 addition at the second floor corridor and will extend the classroom wing along the west side of the building. The second floor will be connected to the first through the new open stair at the main entrance, the two existing fire stairs, a new fire stair a the bus loop and the existing elevator.

The character of the modernized building aims to create an attractive and inviting school building for the community. The large expanses of masonry will be reduced with punched windows, shifting volumes and through the use of various materials. The modernized building will use brick, glazed and ground face block with light and dark banding to break up the mass of the building and connect to the language of the 2007 addition. The colors selected for the materials will be from an earth tone palate.

Classroom Technology:
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 flexible teaching spaces where students can be organized into small groups for project-oriented teaching or to face a teacher in a traditional lecture teaching method.

Code Compliance/ Accessibility:
All areas will be designed to meet the most current national and local building codes including fire, life-safety, and health standards. The facility will be in full compliance with the Americans with Disabilities Act (ADA)

Project Information (Continued)

Building Design(continued)

Sustainable Design:
This 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 vegetative 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 conditioning (HVAC) system utilizing a geo-exchange 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 buildings 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

Project Information (Continued)

Building Design(continued)

Mechanical Systems:

Heating, Ventilation and Air-Conditioning System:
The modernized school will be heated and cooled 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 classroom will be provided by an HHP integrated energy-recovery unit mounted on the roof.

Plumbing System:
Plumbing fixtures will comply with the 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 and regulations. Water-saving plumbing fixtures will be used.

Fire Protection System:
The school will be fully-sprinklered with a wet system in accordance with the National Fire Protection Association Code (NFPA-13 and 14) and will be provided with a voice-annunciated fire alarm system.

Energy Management System:
A primary design factor will be conservation of energy. The importance and consideration placed on energy conservation will be 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 new school 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/IES Energy Efficient Design for new buildings.

Project Information (Continued)

Building Design(continued)

Electrical Systems:

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

Public Address System:
A new public address system will be provided to serve the new facility. 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 with 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 school 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 Safety and Security. In addition, a secure entry vestibule will direct all visitors to check in at the front desk before entering the school with the second set of doors always locked during school hours.

Technology Infrastructure:
The building will be equipped with data/voice/video over internet protocol (VoIP), video and wireless 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 system will consist of a fiber-optic backbone cable system with 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: one channel for school distribution from the studio, two channels for school distribution or two-way video from any point in the building and two spare channels available for future use.

Proposed Site Plan

Proposed First Floor Plan

1ST FLOOR PLAN

1. Gymnasium
2. Multi-Purpose Room
3. Platform
4. Kitchen
5. Staff lounge
6. Art
7. Music
8. Instrumental Music
9. SCB
10. Classroom
11. PEP
12. Kindergarten
13. Training / Conference Room
14. Dual Purpose Room
15. Instructional Media Center
16. Computer lab
17. S.E. Conference Room
18. Speech / Language Room
19. Motor Therapy / Sensory Room
20. Instructional Support Room
21. Instructional Data Office
22. Support Staff Office
23. Grooming Room
24. Observation Room
25. Preparation Room
26. Staff Development Office
27. Reading Specialist Office
28. Health Suite
29. Administration Office
30. Compactor / Trash
32. Locker / Shower
33. Telecommunications
34. Principal
35. Assistant Principal
36. Telephone Booth
37. Conference
38. Record Room
39. Workroom
C Circulation
E Electrical
EL Elevator
J Building Services
M Mechanical Room
O Office
S Storage
G Girls Toilet
B Boys Toilet
T Staff Toilet
EXISTING

0' 25' 50' 100'

N

Proposed Second Floor Plan

2ND FLOOR PLAN

- 1. Classroom
- 2. Future Classroom
- 3. Support Staff
- 4. Workroom
- 5. Instructional Support
- 6. Staff Development
- 7. Testing / Conference
- 8. Reading Resource
- EL Elevator
- E Electrical
- C Circulation
- J Building Services
- O Office
- S Storage
- G Girls Toilet
- B Boys Toilet
- T Staff Toilet
- EXISTING