MARYVALE ELEMENTARY SCHOOL/
CARL SANDBURG LEARNING CENTER

COLLOCATION FEASIBILITY STUDY

PREPARED FOR

MONTGOMERY COUNTY PUBLIC SCHOOLS

architecture
incorporated

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October 2013

Maryvale Elementary School / Carl Sandburg Learning Center
Collocation

1000 1st Street
Rockville, Maryland 20850

Montgomery County Board of Education

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

I. INTRODUCTION

Feasibility Study Participants:

Ms. Karen Gregory	Principal	Maryvale Elementary School
Ms. Marlene Kenny	Principal	Carl Sandburg Learning Center
Mr. Brent Mascott	Interim Principal	Maryvale Elementary School
Mr. Seth Adams	Assistant to the Director	Division of Construction - MCPS
Mr. Rakesh Bagai	Project Manager	Division of Construction - MCPS
Ms. Toni Baron	Staff	Carl Sandburg Learning Center
Ms. Sharona Clinthum	Staff	Maryvale Elementary School
Ms. Susan Dowling	Community	Carl Sandburg Learning Center
Ms. Becky Hubbard	Staff	MCPS
Ms. Erin Kemp	Staff	Maryvale Elementary School
Mr. Zachary Larnard	Planner	Division of Long-range Planning - MCPS
Ms. Caryn Nagler	Community	Maryvale Elementary School
Ms. Imani Pearson	Staff	Maryvale Elementary School
Mr. Vaughn Proffton	Neighbor	Maryvale Elementary School
Ms. Carol Scott	Community	Carl Sandburg Learning Center
Mr. Michael Shpur	Architect	Division of Construction - MCPS
Ms. Pat Talbert Smith	Neighbor	Maryvale Elementary School
Mr. John Stanton	Neighbor	Maryvale Elementary School
Ms. Sarah Starr	Staff	Carl Sandburg Learning Center
Ms. Jillian Storms	Architect	Maryland State Department of Education
Ms. Deborah Szyfer	Senior Planner	Division of Long-range Planning - MCPS

The purpose of the feasibility study was to assess the collocation of the Maryvale Elementary School program with the Carl Sandburg Learning Center program, at the existing Maryvale Elementary School site located at 1000 1st Street in Rockville, Maryland. The programmatic goal for the collocated facility is to have the Maryvale Elementary School with a student capacity of 748, and a core capacity of 740 students, collocated with the Carl Sandburg Learning Center with a student capacity of 142.

Architecture, Inc. would like to thank all of the feasibility study participants for their time and commitment to this task. Their enthusiastic attitude, creative ideas and thorough analysis have helped make this study meaningful for the school system and the community at large.

II. EXECUTIVE SUMMARY

A. PURPOSE

This feasibility study develops design alternatives and related costs for the collocation of Maryvale Elementary School with the Carl Sandburg Learning Center at the Maryvale Elementary School site. Three design alternatives are analyzed in consideration of the educational specifications, objectives of each school program, physical limitations of the existing site and applicable codes and regulations. A preferred option as chosen by the feasibility study participants is designated as Option 1.

B. HISTORY

The Maryvale Elementary School facility is located at 1000 1st Street in Rockville, Maryland. The existing Maryvale Elementary School facility was constructed in 1969 as the Southlawn Middle School. The original single-story structure remains essentially as originally constructed. The current Maryvale Elementary School program replaced the original middle school program circa 1982. Beyond the above noted program change, the building has received only minor modifications and upgrades throughout its history.

C. METHODOLOGY

Evaluation of the existing facility and site was conducted by the design team of architects and engineers to determine the feasibility for the proposed collocation, which will comply with the educational specifications for each school. The methodology employed in this study included a thorough review of all data and drawings that were made available with respect to existing site conditions, visits to the site to conduct an existing conditions survey, meetings with the feasibility study participants and MCPS staff, incorporation of review comments and objectives of the educational specifications and the development of alternatives in response to the educational programs for each school and existing site limitations.

D. SUMMARY

This study assessed the advantages and disadvantages of varied approaches for implementation of the current educational specifications for the Maryvale Elementary School and Carl Sandburg Learning Center educational programs on the Maryvale Elementary School site. Creation of a new collocated facility to house the educational programs was reviewed as well as reuse of the existing 45-year old facility to accommodate the educational programs. These approaches were discussed, reviewed and refined with input from the feasibility study participants.

The existing Maryvale Elementary School facility will be unable, without enlargement, to accommodate the proposed collocated programs including the Maryvale Elementary School program with a projected capacity of 748, and a core capacity of 740; and the Carl Sandburg Learning Center program with a projected capacity of 142. The existing facility is capable of accommodating only a small portion of the program requirements. The existing Maryvale Elementary School facility would require an extensive expansion to accommodate the collocated programs, as all proposed spatial requirements will not fit within the existing building envelope. Additionally, the existing building's location on the site precludes development of the required programmatic site

elements: specifically separate bus cueing for each program; separate parent drop-off for each program; and parking. Based upon the inability of the site to meet the programmatic requirements while attempting to maintain the existing Maryvale Elementary School structure and the magnitude of the existing building expansion required to accommodate the collocated educational programs, reuse of the existing facility was determined to be the least-favored option.

Site topography varies greatly with a street elevation ranging from approximately 412 ft to 416 ft, and an existing finished floor level of 422 ft. The site slopes up steeply from building level (422 ft) to the existing athletic field elevation of approximately 430 ft. The varying site elevations in conjunction with the goal to provide at-grade access from the school to the exterior play areas and ball fields as well as separate bus loops and parent drop-off -zones for each program necessitated the exploration of options for leveling the site. Several options were reviewed during the process. After much evaluation, three options were pursued in detail for the new facility. Each of these plan options incorporate key elements for the implementation of the educational programs into a new collocated facility including:

- A new state of the art facility which meets the educational specifications for each school.
- Administrative areas for each school located adjacent to one another to facilitate teaming and sharing of staff resources.
- Administrative areas that are centrally located and adjacent to each school's main entrance to provide security and oversight of the school entrance, parent drop-off, bus loop and parking areas.
- A single-story structure for Carl Sandburg Learning Center.
- A two-story structure for Maryvale Elementary School.
- A media center that is centrally located with possible shared general stack areas as well as break out spaces for each school.
- A shared kitchen and building service areas.
- Separate gymnasium and multipurpose rooms for each school.
- Multipurpose rooms that are conveniently located to ball fields and outdoor play areas.
- Bus and parent traffic routes that are separated as much as practical.
- Ball fields to serve as buffer zone between each school's outdoor play areas.
- An energy-efficient, environmentally conscious design as the basis for LEED silver certification.
- Maintain the identity of each school.
- Provide opportunities for students to interact when appropriate
- Recognize special education students for their individual capabilities.

Three options were developed that met the programmatic requirements provided by MCPS. Cost estimates are provided for each option. After review and discussion, Option 1 was selected as the preferred option that best meets the requirements outlined above.

The following is a summary of the three options as well as an estimated total cost for each option:

E. UNIQUE ELEMENTS of OPTION 1: (Preferred)

- New collocated "V" shaped Maryvale Elementary School / Carl Sandburg Learning Center building centrally located on leveled site.
- Administrative areas for each program adjacent to one another and centrally located adjacent to each school's main entrance that provide suitable security with oversight of school entrance, parent drop-off, bus loop and parking areas.
- Separate architectural identities for each program with separate main entrances and separate front facades.
- Centrally collocated media center for each program.
- Two-story Maryvale Elementary School wing with Grades pre-K – 1 on 1st floor and Grades 2 – 5 on 2nd floor.
- Single-story Carl Sandburg Learning Center wing as required by program requirements.
- Centrally located courtyards for each program to provide natural light to interior classrooms and to provide additional outdoor learning environments.
- Main corridor circulation control doors between the schools to facilitate appropriate controlled interaction between the student populations.
- Shared kitchen and building services adjacent to separate multipurpose rooms for each program.
- Outdoor play areas for each program that are buffered from one another by the ball fields.
- Outdoor play areas and ball fields conveniently located for each school and program.
- Separate traffic loops for Maryvale Elementary School buses and parent drop-off.
- Shared traffic loop for Carl Sandburg Learning Center buses and parent drop-off.
- Approximately 200 combined parking spaces for both schools.

Option 1 – Total Cost = $62,712,000

F. UNIQUE ELEMENTS of OPTION 2:

- New collocated rectilinear shaped Maryvale Elementary School / Carl Sandburg Learning Center building centrally located on leveled site.
- Administrative areas for each program adjacent to one another and centrally located adjacent to each school's main entrance that provide suitable security with oversight of school entrance, parent drop-off and parking areas.
- Shared building front facade facing 1st Street.
- Centrally collocated media center for each program.
- Two-story Maryvale Elementary School wing with Grades pre-K – 1 on 1st floor and Grades 2 – 5 on 2nd floor.
- Single-story Carl Sandburg Learning Center wing as required by program requirements.
- Centrally located courtyards for each school to provide natural light to interior classrooms and to provide additional outdoor learning environments.
- Main corridor circulation control doors between the schools to facilitate appropriate controlled interaction between the student populations.
- Shared kitchen and building services adjacent to separate multipurpose rooms for each program.
- Outdoor play areas and ball fields located adjacent to each school's physical education area.
- Outdoor play areas for each program are buffered from one another by the ball fields
- Shared traffic loop for each school's parent drop-off.
- Separate traffic loop for Maryvale Elementary School buses.
- Separate traffic loop for Carl Sandburg Learning Center buses.
- Approximately 200 combined parking spaces for both schools.

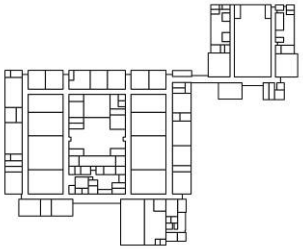
Option 2 – Total Cost = $61,933,000

G. UNIQUE ELEMENTS of OPTION 3:

- Revitalization and expansion of the existing Maryvale Elementary School building to create the collocated Maryvale Elementary School / Carl Sandburg Learning Center facility.
- Administrative areas for each program adjacent to one another and adjacent to each school's main entrance providing oversight of school entrance, parent drop-off and parking areas.
- Centrally collocated media center for each program.
- Two-story Maryvale Elementary School wing created by construction of 2nd floor above existing 1st floor.
- New single-story Carl Sandburg Learning Center wing as required by program requirements.
- Courtyards for each program to provide natural light to interior classrooms and to provide additional outdoor learning environments.
- Shared kitchen and building services adjacent to separate multipurpose rooms for each program.
- Outdoor play areas for each program are buffered from one another by the ball fields
- Shared traffic loop for Maryvale Elementary School buses and each program's parent drop-off.
- Separate traffic loop for Carl Sandburg Learning Center buses.
- Approximately 190 combined parking spaces for both schools.

Option 3 – Total Cost = $63,988,000

H. COMPARATIVE ANALYSIS



EXISTING BUILDING

Existing Building	= 92,050 SF

OPTION 1 – NEW CONSTRUCTION

OPTION 1

First Floor	= 144,300 SF
Second Floor	= 32,700 SF
Total Building Area	= 177,000 SF

OPTION 2 – NEW CONSTRUCTION

OPTION 2

First Floor	= 140,200 SF
Second Floor	= 34,600 SF
Total Building Area	= 174,800 SF

OPTION 3 – REVITALIZATION/EXPANSION

OPTION 3

Revitalization	= 80,900 SF
Area of Addition First Floor	= 66,300 SF
Area of Addition Second Floor	= 33,400 SF
Area of Addition	= 99,700 SF
Total Building Area	= 180,600 SF

I. CONCLUSION AND RECOMMENDATIONS

All of the options have the ability to solve the various challenges associated with the collocation of the Maryvale Elementary School program with the Carl Sandburg Learning Center program, at the existing Maryvale Elementary School site. Each of the three options solves these challenges by distinctly different means. Of the three schemes created, the preferred option is Option 1. This option provides the best solution for the creation of a new collocated building. Option 1 provides separate identities for each school with separate main entrances and separate front facades. This option creates adjacent centrally located administrative areas, each with good security oversight of school entrances, parent drop-offs, bus loops and parking areas. Option 1 also makes efficient use of the site, accommodating the desired locations for outdoor play areas and ball fields for each school while providing separate traffic loops for both schools. Based upon the above noted factors, it is recommended that Option I, as depicted herein, and its associated site improvements be implemented.

J. DESCRIPTION OF OPTIONS
SUMMARY TABLE AND COST COMPARISON

Square Footage:	Option 1 (Preferred)	Option 2	Option 3	
Existing	0	0	92,050	
New Construction	177,000	174,800	99,700	
Revitalization	0	0	80,900	
Demolition (Total)	92,050	92,050	11,150	
Existing to Remain	0	0	80,900	
Total Gross Square Feet	177,000	174,800	180,600	
Total Project Cost	$62,712,000	$61,933,000	$63,988,000	

PDF/FEASIBILITY STUDY COST OUTLINE ($000s) – PREFERRED OPTION 1

CONSTRUCTION COST ESTIMATE	$52,362
PLANNING	$4,376
CONTINGENCY AND RELATED COSTS	$5,974
TOTALS:	$62,712

A. SCOPE AND INTENT

The purpose of this feasibility study is to evaluate several alternative options for the collocation of Maryvale Elementary School with the Carl Sandburg Learning Center at the Maryvale Elementary School site in order to provide Montgomery County Public Schools with sufficient data to determine the necessary scheduling and funding. Cost estimates for each option have been developed as a basis for consideration in the decision making process.

Presently, Maryvale Elementary School enrollment is 581 in Grades prekindergarten – 5. Current enrollment at the Carl Sandburg Learning Center is 125. The proposed collocation will increase the projected Maryvale Elementary School student capacity to 748 and the Carl Sandburg Learning Center capacity to 142.

The scope of work includes an evaluation of the existing Maryvale Elementary School building and site with respect to the needs of the proposed collocated educational specifications and applicable codes and regulations. The objective of the evaluation is to determine the feasibility of the existing building and site, and design alternatives to provide a physical plant that is conducive to the instructional philosophy, visions and goals of the two schools and the community. In addition to collecting and reviewing available data, the design team participated in progress review meetings at both schools with each school's administration, MCPS staff and community representatives. As each design alternative was presented and reviewed during the feasibility study, comments were recorded and alternative schemes revised accordingly. The three options are presented herein with Option 1 being the preferred option.

B. METHODOLOGY

This feasibility study was developed with the following methodology:

- Review of available data and drawings of the existing facilities.
- Four meetings, which included members of each school's staff, PTA, community and MCPS staff.
- Establishment of the needs, goals and objectives.
- Development of review comments and the final options.
- Designation of Option 1 as the preferred scheme.

The following are the primary goals and objectives established by the feasibility study participants to be addressed by the A/E design team and the MCPS staff.

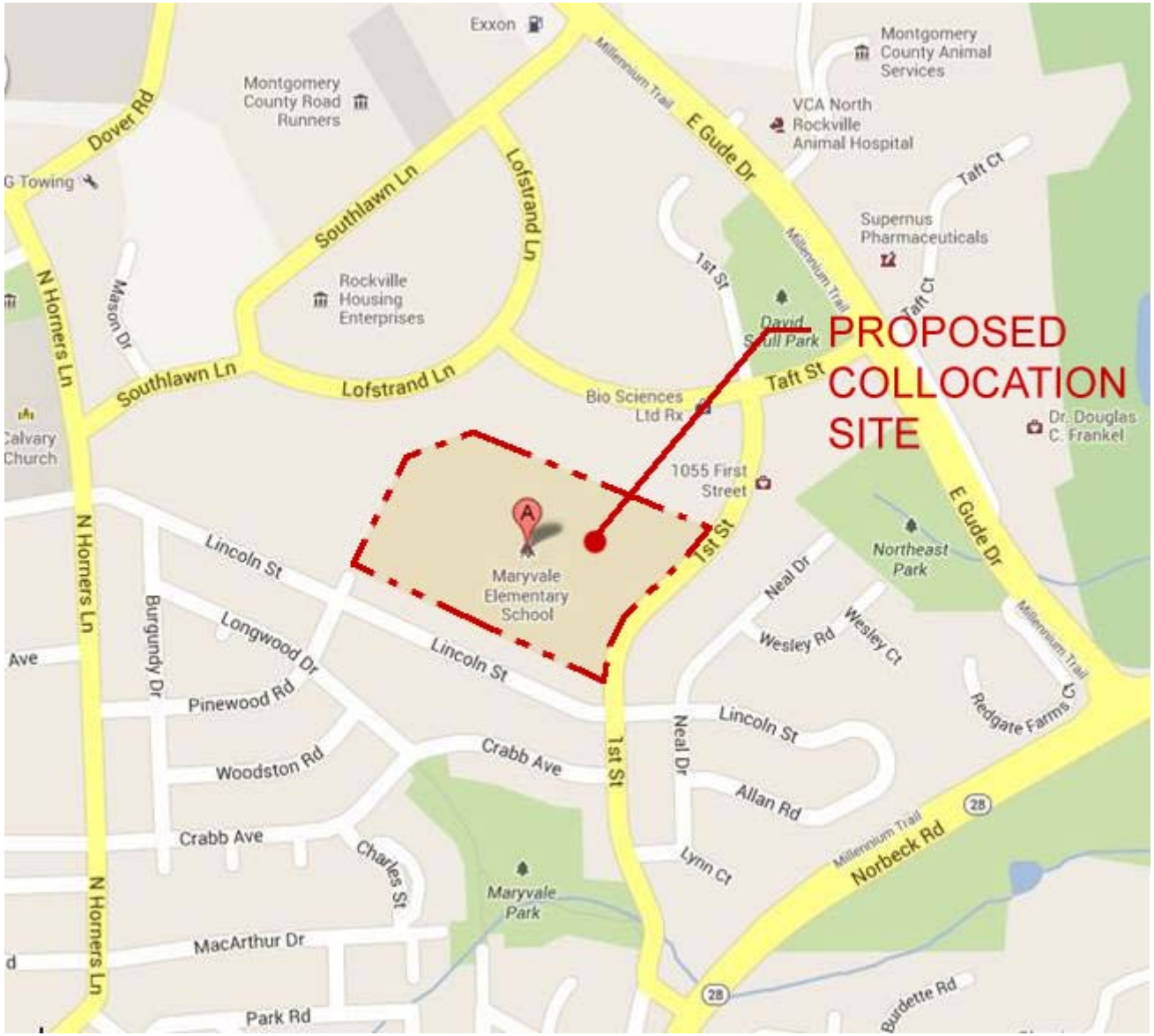
A. SITE GOALS AND OBJECTIVES

- Provide separate bus loops and bus loading areas for each school.
- Provide separate parent drop-off areas for each school.
- Provide adequate and separate parking for each school.
- Provide administrative visibility and visual control of the bus and parent drop-off areas as well as the parking areas.
- Allow the ball fields to serve as a buffer zone between the remainder of the outdoor play areas for the two schools.
- Provide ADA compliant access around the collocated building and throughout the site.

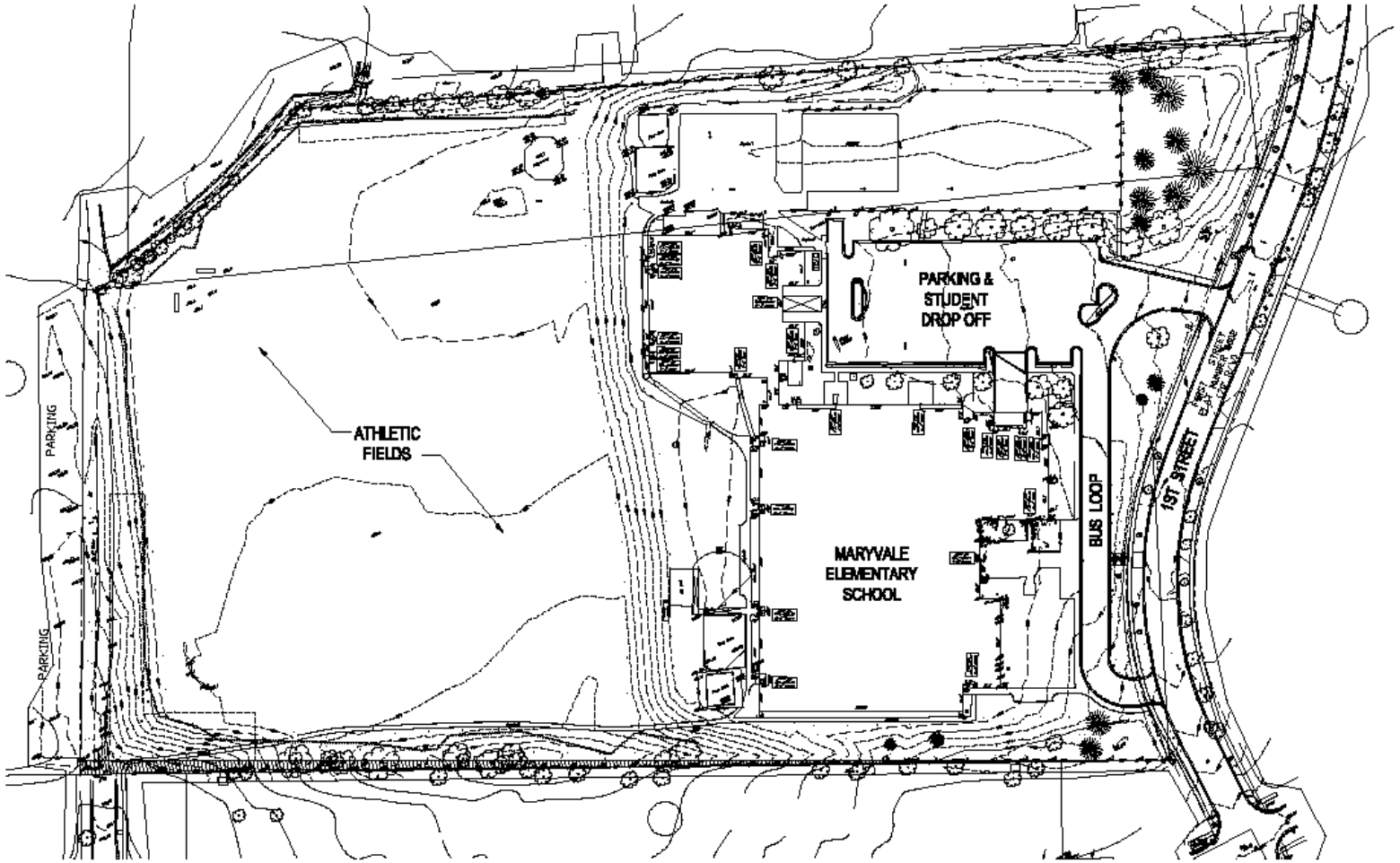
B. BUILDING GOALS AND OBJECTIVES

- Be respectful of each school's individual needs.
- Facilitate opportunities for interaction between the student populations in well-planned and controlled locations while being respectful of the security needs for each program.
- Locate the two administrative suites adjacent to one another to facilitate staff teaming and support.
- Share kitchen and building services operations.
- Keep multipurpose rooms separate for each school but adjacent to kitchen.
- Provide natural lighting to as many occupied rooms as possible.
- Provide ADA compliant access to the collocated building.

VICINITY MAP



EXISTING SITE PLAN



DESCRIPTION OF EXISTING FACILITIES

The existing Maryvale Elementary School facility was originally constructed in 1969 as the Southlawn Middle School and consists of a sprawling single-story building. The existing building design is fairly rectilinear with the primary central corridors creating a circulation route around the media center located at the building's core. The main entry is flanked by classrooms to the south and the multipurpose room to the north, and leads to the main office and administrative area. The gymnasium is remote from the building core, connected via corridor to the north of the main building areas.

The existing single-story structure has received only minor upgrades throughout its history. These modifications include the following:

1985 – Handicapped accessibility upgrades
1992 – Visual fire alarm system
1993 – Reroofing
2001 – Renovation to create daycare space
2001 – Teacher's lounge renovation
2002 – HVAC & life safety enhancement
2003 – Life safety improvements
2004 – HVAC & life safety enhancement
2005 – HVAC Renovations
2008 – Toilet room renovations

SITE ASSESSMENT

1. Size of Site:

The current school site is located at 1000 1st Street in the City of Rockville. The site is zoned as R-60 so the resulting front yard set back is typically 25', the rear yard setback is 20', and side yard is 8'. The school is located north of Norbeck Road (MD 28) and west of Gude Drive. The school is situated on 17.5 acres labeled as Parcel 572 on Tax Map GR 43. An additional 0.17 acres, Parcel 559 is part of the site also (back left). The school site can be found on ADC map 29-E05. The property generally resembles a 1100' by 700' rectangle with the building facing 1st Street on the narrower side of the rectangle. The existing building footprint occupies approximately 92,050 square feet; the parking area and bus loop occupy 53,970 square feet and the paved play areas occupy an additional 19,100 square feet; for a total impervious area of approximately 165,120 square feet, or 3.79 acres.

2. Site Features

The school property is bordered by single-family houses on the south side (Lincoln Street), industrial buildings to the west and north, and 1st Street to the east. The school was originally built as a middle school in the late 1960s. The first floor elevation is about 422.1 feet and the school building and parking occupies the front half of the site. Significant elevation changes occur across the site. 1st Street generally is about elevation 410 feet, so the parking lot and driveways steeply slope up towards the school resulting in ADA compliance issues. Immediately behind the school is a steep hill that increases from elevation 422 feet up to 432 feet. The rear of the site is occupied by relatively flat multi athletic fields and two softball/baseball backstops. Mulched and asphalt play areas are located around the back left and right side of the school (if the school is viewed from 1st Street).

3. Traffic and Parking:

The property contains an entrance/exit driveway and one exit-only driveway located on the eastern boundary of the property. 1st Street runs along the entire eastern boundary. Buses and cars both enter the site from the northern driveway. All of the parking (103 spots) and student drop off (by parents) occur in a large parking lot off to the right as one enters the school. Busses stay to the left and travel to a long, dedicated loop for their passenger pick up and drop offs. Busses then exit via the southernmost driveway. Parents exit the parking lot by leaving the same entrance from which they entered.

4. Water and Sewer Adequacy:

Plans obtained through the MCPS archive site indicate that the water and sewer work all occurred with the original construction of the school in 1968. The water and sewer service to the school is provided by the City of Rockville Department of Public Works. Water is supplied by an 8" cast iron main (with outside meter vault) that is located north of the existing parking lot. The 8" water line connects to an existing 8" line that runs beneath 1st Street. Flow tests will have to be ordered to determine the size of a new service line.

The public sewer is also an 8" line and it runs parallel to the 8" water on site. The 8" sanitary field connects to the 8" sewer that is located under 1st Street and flows from north to south along the entire school frontage.

5. Stormwater Management and Storm Drain Relocations:

No stormwater management currently exists on site. Stormwater management facilities using environmental site design (ESD) will be provided to the maximum extent practicable, in compliance with State and City of Rockville stormwater management regulations. There are several storm drain lines that collect runoff from most of the site and combine to outfall in a 30" RCP at one location just north of existing entrance to the main parking lot (near water and sewer connections). The very back portion of the ball fields drain out to a swale in the southwest corner of the site (where Pinewood Road dead ends into school site). The front left (southeast) corner of the school, including some of the bus loop/exit, drains out via a swale or curb/gutter into 1st Street.

6. Tree Protection/Forest Conservation:

There are large trees that surround the perimeter of the school and around the front of the school, but no natural forest exists on the site. Two easements were created as part of the Richard Montgomery Modernization in 2007. A .22 acre and 0.35 acre easement were created for tree plantings. The 0.22 acre easement is in the back right (northern) corner and the 0.35 acre easement is in the back left (southwestern) corner. Norton Land Design will conduct the forest conservation plans for the project.

A. GENERAL

Three conceptual options were developed in response to the MCPS educational specifications and the review comments of the feasibility study participants for the collocation of Maryvale Elementary School and Carl Sandburg Learning Center at the Maryvale Elementary School site. Options #1 and #2 propose to demolish the existing building, replacing it with a completely new two-story building. Option #3 proposes to revitalize the majority of the existing facility; demolish a small portion of the existing building; construct a new second floor above the existing single-story building and construct an addition to create an expanded Carl Sandburg Learning Center portion of the proposed new facility. All three options contain all spaces required by the educational program.

B. COMMON DESIGN ELEMENTS

1. Site

There are three building options for the collocation of Maryvale Elementary School and Carl Sandburg Learning Center at the Maryvale Elementary School site. They are all very similar from a site standpoint. The similarities include:

- A significant amount of earthwork (cut to haul) will have to occur to maximize the useable (and ADA compliant) area of the site.
- The new school building will have the first floor elevation lowered by about 2' from the existing school so that ADA compliant walkways can be constructed between 1st Street and the school.
- The perimeter of the site (north and south) will have some retaining walls with the most significant wall along the southern boundary.
- SWM will be provided by using green roofs, porous paving (if soils infiltrate), bio-filters and other environmental site design (ESD) measures.
- New water and sewer connections will be made between the building and the main lines in 1st Street.
- A third entrance/exit will be built onto 1st Street. The City of Rockville has indicated they would be amenable to this idea.
- A service loop will traverse the area behind the school.
- The athletic fields will remain in the rear of the site, but will generally be lowered by about 10' in elevation.
- Forest Conservation will have to occur off site.

2. Structural System

The scope of the structural design will be to provide the necessary structural system(s) to support the building's dead and live loads, and simultaneously be compatible with the architectural scheme and the mechanical and electrical systems. The elementary school and learning center building will use a structural steel frame, which allows the floor and/or roof to be constructed and immediately allow other trades to access the building and start installation of partitions, mechanical, electrical, plumbing, etc. as well as the exterior masonry and brick walls.

Second floor framing will consist of a 5¼ inch thick composite slab (3¼ inches of lightweight concrete on 2 inch deep steel deck) supported by steel beams and girders with structural steel columns.

Roof framing at both the one and two-story areas will consist of a galvanized steel deck supported on open web steel joists and steel girders with structural steel columns.

3. HVAC System

The mechanical design will be in accordance with applicable codes and standards, State of Maryland Interagency Committee (IAC), and the Montgomery County Public Schools Facilities Guide. The mechanical system design in conjunction with the entire facility energy consumption shall meet or exceed 30% energy savings above the LEED Baseline system.

In general the mechanical system will be single-zone vertical heat pump units coupled with a Dedicated Outdoor Air System (DOAS).The DOAS will provide 100% outdoor air and will utilize plate type heat exchangers for waste energy recovery captured through the building exhaust. The heat exchangers will have a minimum sensible efficiency of 50%. Large areas of occupancy such as the Gymnasium, Cafeteria, Multi-Purpose Rooms, Kitchen and Auditoriums will be conditioned using single zone rooftop heat pump units with Demand Control Ventilation (DCV). Rooftop units will be equipped with electric strip heaters and coil freeze pump connected to emergency power. The water source heat pump system will either be a geothermal ground source system or a standard boiler, cooling tower and flat-plate heat exchanger system as determined by the Life Cycle Cost Analysis (LCCA) in accordance with the State of Maryland requirements. The Heating, Ventilating and Air Conditioning (HVAC) system will be controlled by a Direct Digital Control (DDC) based Building Automation System (BAS) with an integral Energy Management System (EMS). Local controls will be provided for split systems, unit heaters and thermostatically controlled exhaust fans.

The mechanical system will be commissioned by a Commissioning Agent working in conjunction with the design professionals and the contractors in accordance with the requirements for LEED for Schools.

4. Plumbing System

The plumbing design will be in accordance with applicable codes and standards, State of Maryland Interagency Committee (IAC), WSSC, and the Montgomery County Public Schools Facilities Guide. The plumbing system design in conjunction with the entire facility energy consumption shall meet or exceed 30% energy savings above the LEED Baseline system. Low flow plumbing fixtures, as defined in the Montgomery County Public Schools Facilities Guide, will be provided and will reduce the water consumption of the building with respect to the LEED Baseline system.

All plumbing fixtures will be provided in accordance with their intended user. Plumbing system specialties will be provided as directed in the Montgomery County Public Schools Facilities Guide. The water heater will be a high efficiency gas-fired water heater with a minimum thermal efficiency of 94% and will generate 140 degree F hot water. The building water tempering valve assembly will mix the 140 degree F hot water, cold water and re-circulated hot water to provide 110 degree F hot water for distribution to the building fixtures. Kitchen fixtures or equipment requiring 140 degree F water will be supplied with such.

Radon venting will be provided for every 5000 sq. ft. of building slab. Backflow preventers will be provided in accordance with WSSC to protect the potable water system.

The plumbing system will be commissioned by a commissioning agent working in conjunction with the design professionals and the contractors in accordance with the requirements for LEED for Schools.

5. Fire Protection System

The fire protection design will be in accordance with applicable codes and standards, State of Maryland Interagency Committee (IAC), WSSC, NFPA and the Montgomery County Public Schools Facilities Guide. The fire protection system design eventually depends on the flow test data that will be received at a later date. However, for this narrative we are assuming there is adequate street flow and pressure that a fire pump is not required.

The building will be fully protected by a wet sprinkler system. Pre-charged dry sprinklers will be provided in areas subject to freezing. If pre-charged dry sprinklers cannot be effectively installed then a dry pipe system will be provided. The system will be hydraulically calculated and the shop drawing plans will be prepared by individuals meeting the requirements of the Montgomery County Public Schools Facilities Guide. The system will be sized in accordance with the appropriate hazard and the sprinkler zoning will be coordinated with the fire alarm system. A fire department connection (siamese connection) will be provided in a location approved by the authority having jurisdiction and it will have a fire hydrant located within 100 feet. The system will connect to the incoming water system downstream of a dedicated backflow preventer (installed by the plumbing contractor) and it will be fully drainable.

The fire protection system will be specified to use recycled materials to the greatest extent possible to assist in the building's LEED rating system.

6. Electrical System

The electrical design will be in accordance with applicable codes and standards, State of Maryland Interagency Committee (IAC), and the Montgomery County Public Schools Facilities Guide. The electrical system design in conjunction with the entire facility energy consumption shall meet or exceed 30% energy savings above the LEED Baseline system.

A 480Y/277v electrical service will be provided from an outdoor pad-mount transformer. The preliminary size estimate for the school is 3,000kVA. A 4000A, 480Y/277V, 3PH, 4W main switchboard is projected for the project. The distribution system will be sized based on connected loads and copper cabling and bussing used for distribution. Panel boards will be located as indicated in the Montgomery County Public Schools Facilities Guide. Transformers with K-13 ratings and surge protective devices included for all data power panels.

An outdoor weather-protected natural gas generator will be provided, unless on-site propane is desired. The emergency system will be broken into a life safety branch and a stand-by branch for optional equipment. The loads will be sub-divided as indicated in the Montgomery County Public Schools Facilities Guide. The preliminary size estimate for the school is 150kW.

Lighting requirements as defined in the Montgomery County Public Schools Facilities Guide will be provided. Exterior lighting will consider light pollution standards and utilize Dark Sky compliant fixtures. Industry improvements in sources and controls will be presented for consideration.

Special systems will include fire alarm, IT, AV, paging, and security. The complete voice evacuation fire alarm system will be provided in the MEP design. A complete IT system will be provided and the current requirements, whether CAT5, CAT6, or wireless, incorporated into the MEP design. The paging/notification and AV components will be coordinated with the County and provided in the MEP design. The security will be installed under a separate contract, but the power requirements will be coordinated with the County and provided in the MEP design.

C. OPTION 1 – NARRATIVE

Option 1 proposes to demolish the existing Maryvale Elementary School building and construct a new building to accommodate the collocated Maryvale Elementary School / Carl Sandburg Learning Center programs. This "V" shaped option places the two schools side by side within the building with the core shared/collocated program areas adjacent to one another along the building's diagonal central spine. The schools' administrative areas are centrally collocated at the building corner providing very good oversight of the bus loops, parent drop-offs and parking areas. This design provides separate identities and separate front façades for each school. Specific features, graphic representations as well as advantages and disadvantages for this option are as follows:

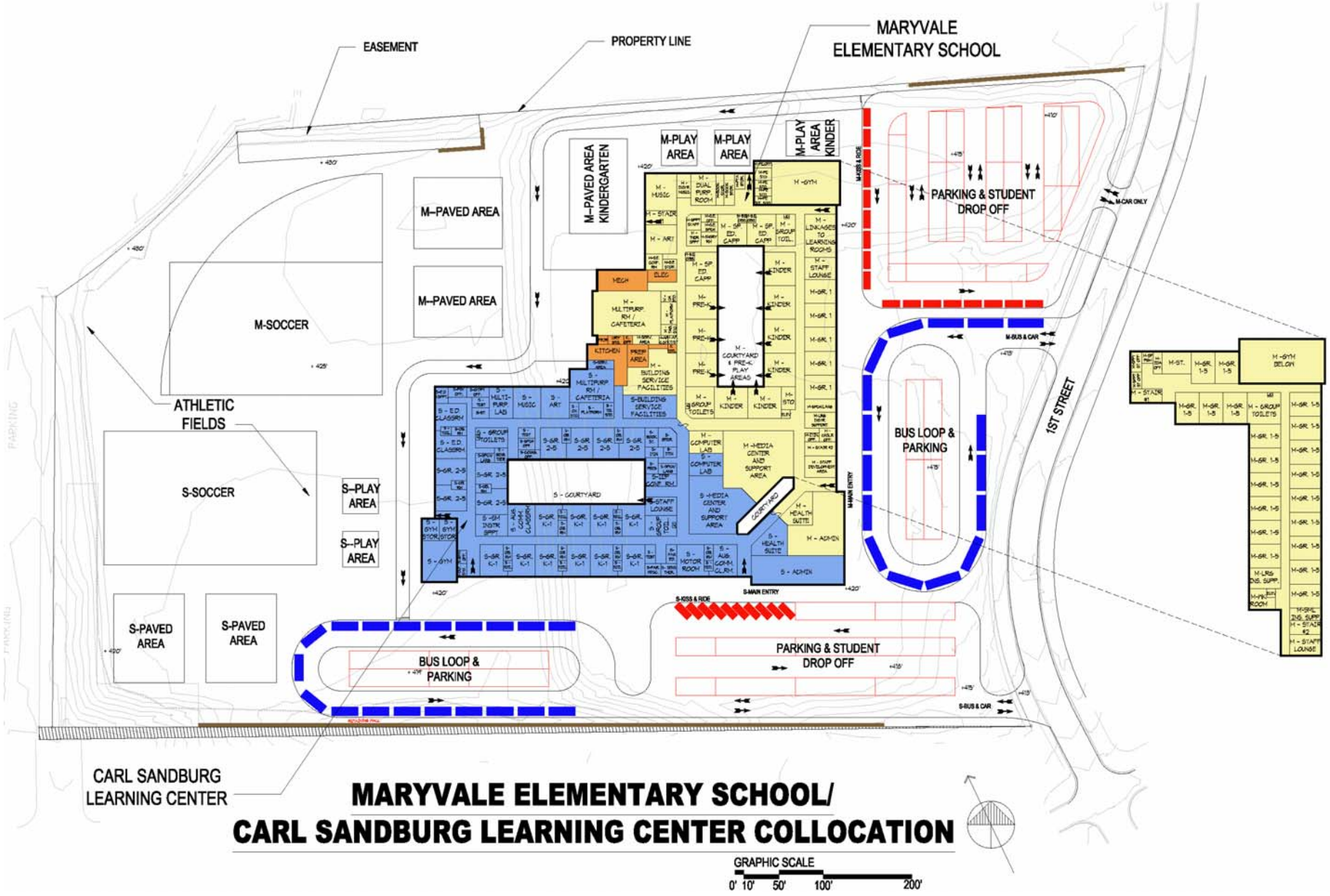
Site Considerations

Option 1 proposes a centrally located school building with Maryvale Elementary School on the north/east side and Carl Sandburg Learning Center on the south side. There would be one driveway for both Carl Sandburg Learning Center bus and car traffic along the southern border of the site. The Maryvale Elementary School bus loop and parking would be located in the middle of the front of the site. The Maryvale Elementary School student drop off and additional parking would be located on the northern, front portion of the site and would have a third entrance/exit only.

Building

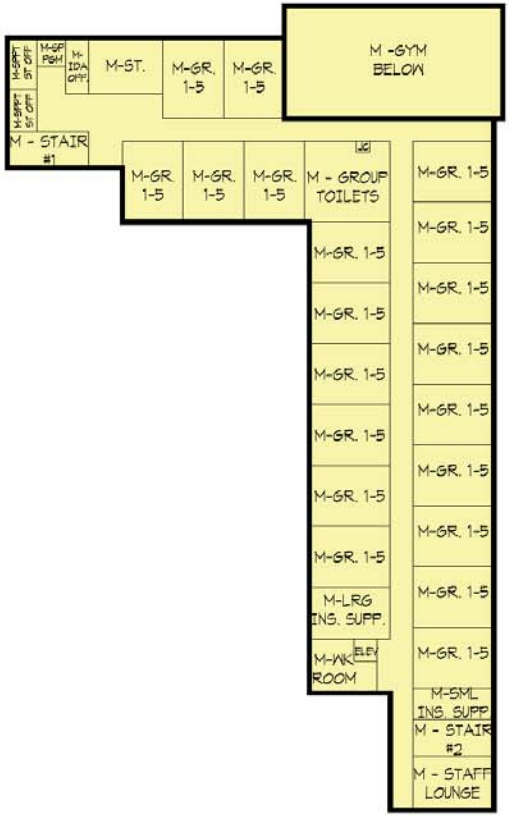
Option 1 proposes a new building to accommodate the collocated Maryvale Elementary School / Carl Sandburg Learning Center programs. This Option includes a "V" shaped layout with the schools placed side by side and the shared and collocated program areas being adjacent to one another along the building's diagonal central spine. The Maryvale Elementary School portion of the collocated facility will be a two-story structure and the Carl Sandburg Learning Center portion will be a single-story as necessitated by student needs. The adjacent administration areas for each school are centrally located at the building corner providing very good oversight of the bus loops, parent drop-offs and parking areas. The "V" shaped design facilitates a separate identity and separate front façade for each school. The main corridor through each program's classroom blocks provide a loop student circulation route to all parts of each school. The points at which each program's primary corridors intersect with the other program's provides the opportunity for well controlled circulation between the two schools. The gymnasiums for each program are conveniently located to the outdoor activity areas. The two multipurpose rooms flank the shared kitchen area.

PROPOSED SITE PLAN OPTION 1

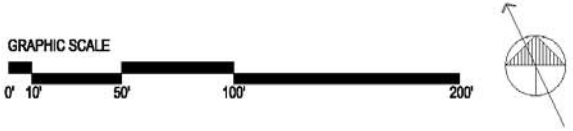


PROPOSED FLOOR PLAN OPTION 1

FIRST FLOOR



SECOND FLOOR



OPTION 1

	ADVANTAGES	DISADVANTAGES
BUILDING & SITE	❑ Effectively provides separate identities for each school. ❑ Most efficient use of site. ❑ Administration areas have better oversight of parent drop-off, bus loading and parking areas than Option 2. ❑ Additional courtyard adjacent to centrally located and collocated media center provides natural daylight. ❑ Multipurpose rooms & gymnasiums for both programs conveniently located to outdoor play areas/ball fields. ❑ Courtyards provide daylight to interior classrooms. ❑ Natural daylight to both multipurpose rooms. ❑ Separate bus loop and parent drop-off for Maryvale Elementary School. ❑ Extensive bus queuing for each program. ❑ Traffic patterns for each program are separate. ❑ Separate parent drop-off loops for each program.	❑ Building area is larger than Option 2 due to more linear layout. ❑ Courtyards do not provide daylight to interior corridors like Option 2. ❑ Shared bus loop and parent drop-off loop for Carl Sandburg Learning Center. ❑ Extensive use of retaining walls to level site.

D. OPTION 2 – NARRATIVE

Option 2 proposes to demolish the existing Maryvale Elementary School building and construct a new building to accommodate the collocated Maryvale Elementary School / Carl Sandburg Learning Center programs. This rectilinear option places the two schools side by side within the building with the core shared/collocated program areas adjacent to one another along the building's central spine. The schools adjacent administrative areas are centrally collocated along the building's shared front façade, facing 1st Street, providing good oversight of the parent drop-off and parking areas. The efficient rectangular design minimizes the building footprint. Specific features, graphic representations as well as advantages and disadvantages for this option are as follows:

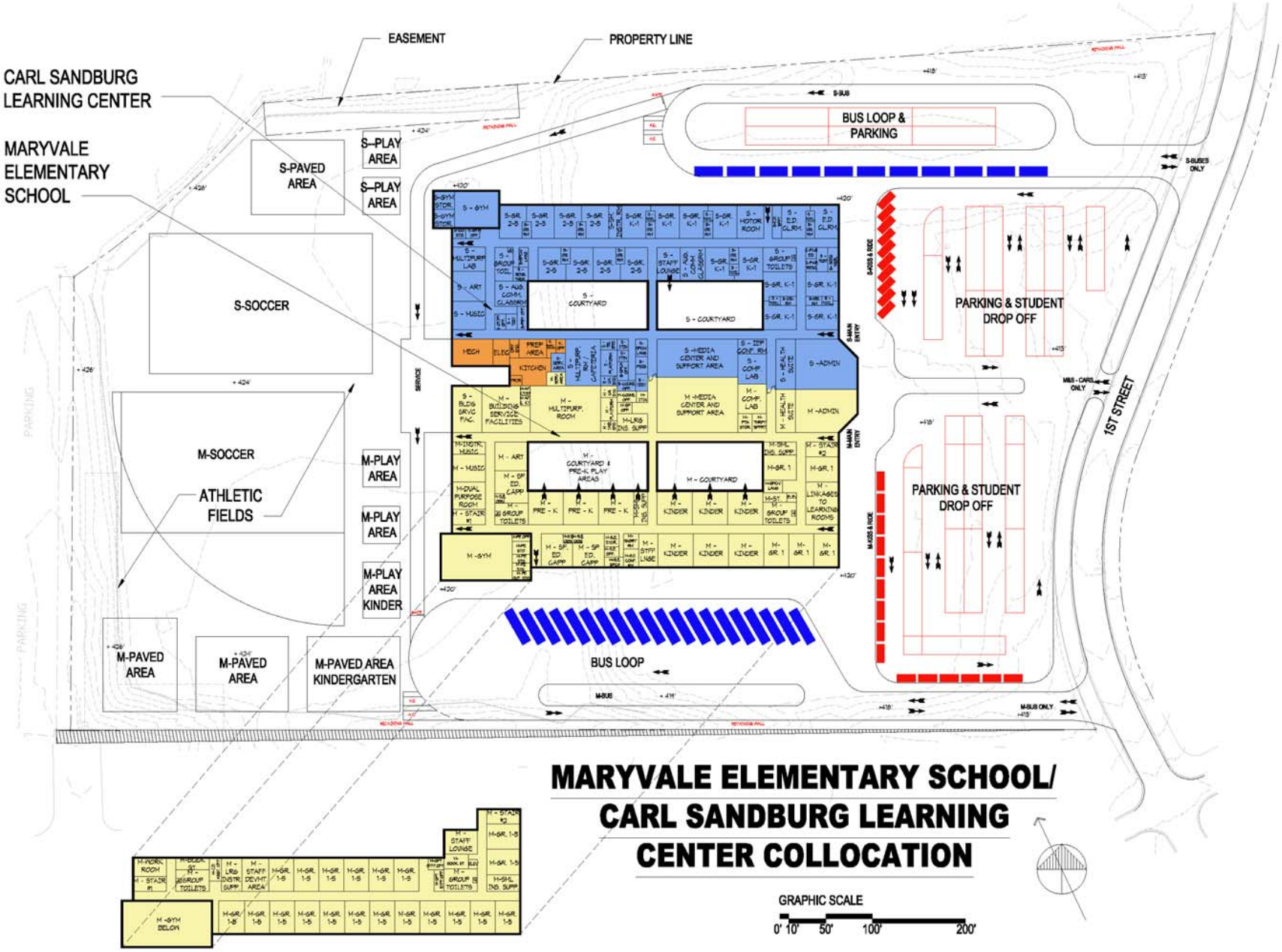
Site Considerations

Option 2 proposes a centrally located rectangular school building with Maryvale Elementary School on the south side and Carl Sandburg Learning Center on the north side. The bus loops for each school would be located on the respective sides and would have dedicated entrance/exit driveways that would be located closer to the property lines. A new, third entrance/exit would be constructed in the between the other two where student drop offs and parking for both schools would occur in the middle of the site.

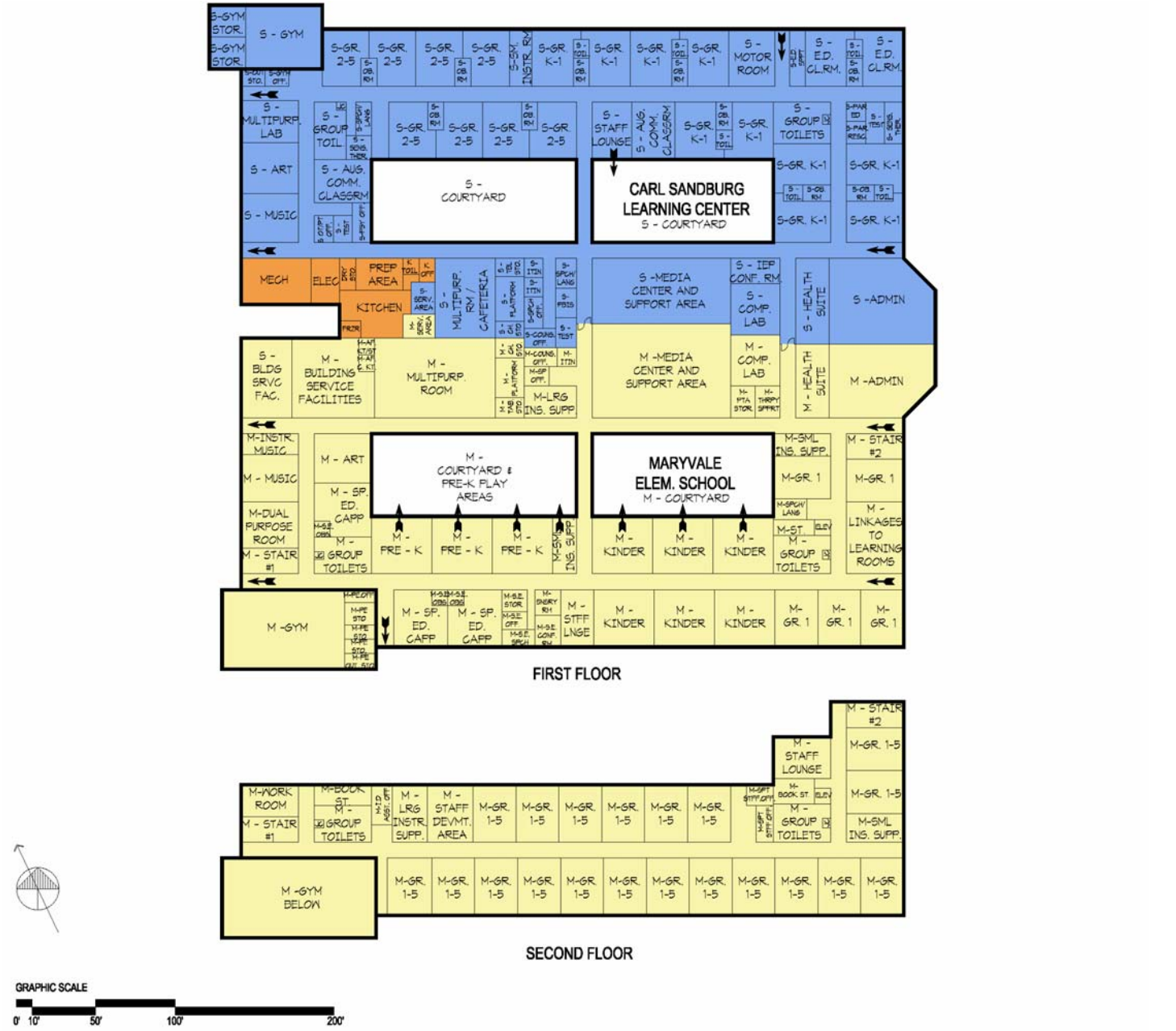
Building

Option 2 proposes a new building to accommodate the collocated Maryvale Elementary School / Carl Sandburg Learning Center programs. This option includes a rectilinear layout with the schools placed side by side and the shared and collocated program areas being adjacent to one another along the building's central spine. The Maryvale Elementary School portion of the collocated facility will be a two-story structure and the Carl Sandburg Learning Center portion will be a single-story as necessitated by student needs. The adjacent administrative areas for each school are centrally located and face 1st Street along the building's front facade. The main corridors through each school's classroom blocks provide efficient student circulation to all parts of each school and also provide the opportunity for well controlled circulation between the two programs. The gymnasiums are located to the back corners of each school and are conveniently located to the outdoor activity areas. The two multipurpose rooms flank the shared kitchen area.

PROPOSED SITE PLAN OPTION 2



PROPOSED FLOOR PLAN OPTION 2



OPTION 2

	ADVANTAGES	DISADVANTAGES
BUILDING & SITE	❑ Most efficient floor plan. Has smaller footprint than Options 1 or 3. ❑ Main entrances for each school located at front of 1st Street. ❑ Efficient student circulation routes within each program and between programs. ❑ Administration areas have good oversight of parent drop-off areas and parking areas. ❑ Multipurpose rooms & gymnasiums for both programs conveniently located to outdoor play areas/ball fields. ❑ Numerous courtyards provide daylight to interior classrooms and corridors. ❑ Daylight to multipurpose rooms across corridors. ❑ Separate bus loops for each program. ❑ Extensive bus queuing for each program.	❑ Separate identities for each school not as well defined as Option 1. ❑ Shared parent drop-off vehicle entrance for both programs. ❑ Administration areas have limited oversight of bus loading areas. ❑ 2-story Maryvale Elementary School and 1-story Carl Sandburg Learning Center share the front façade so it may be more difficult to provide separate identities. ❑ Extensive use of retaining walls to level site.

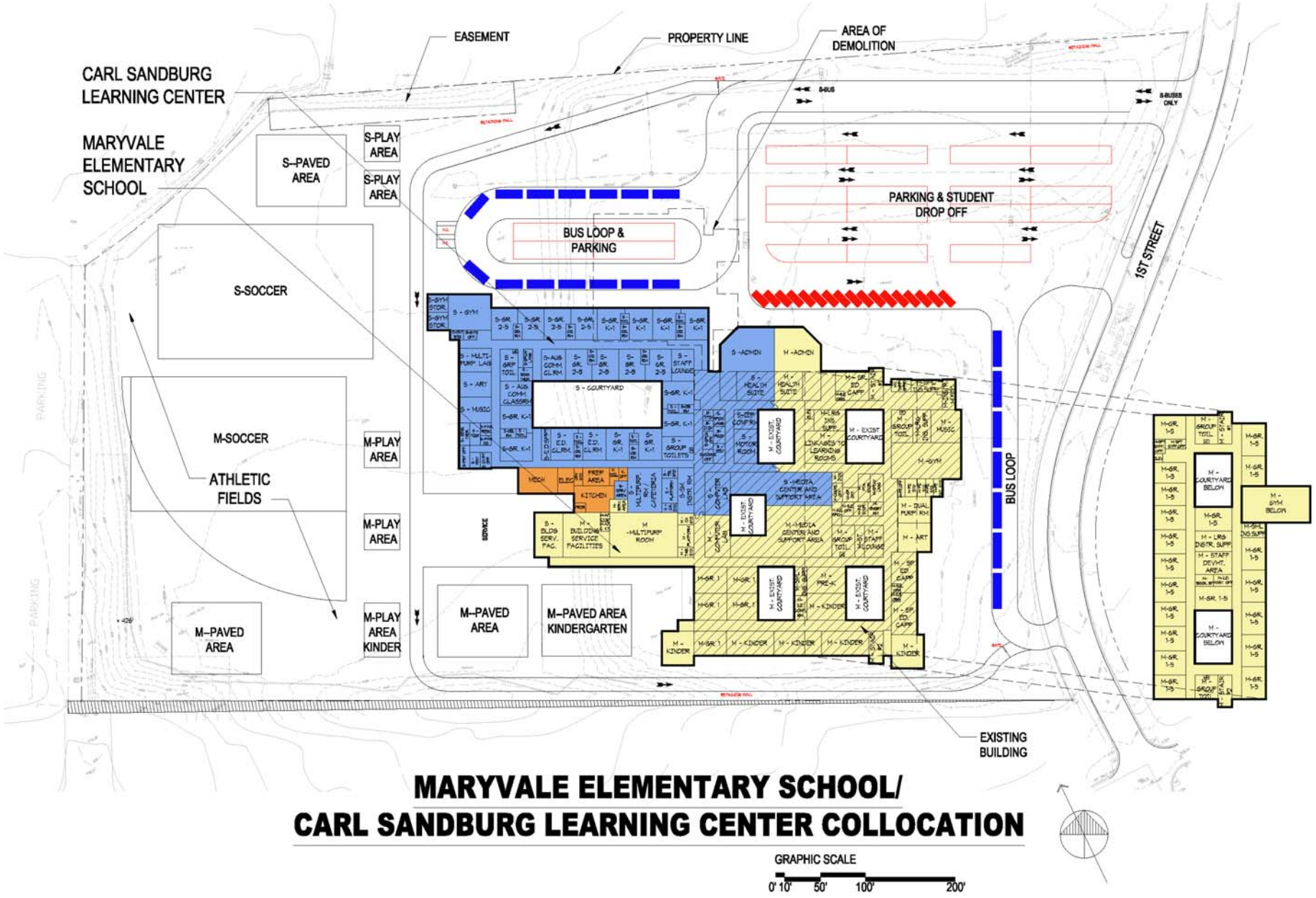
E. OPTION 3 – NARRATIVE

Option 3 is a revitalization and expansion of the existing Maryvale Elementary School facility which includes the construction of a new second floor above the existing first floor building areas. Portions of the existing facility will be demolished to facilitate construction of the additions to accommodate the collocated Maryvale Elementary School / Carl Sandburg Learning Center programs. The existing bus loop and parking areas are reused and expanded, and a new bus loop is created to serve the Carl Sandburg Learning Center. Specific features, graphic representations as well as advantages and disadvantages for this option are as follows:

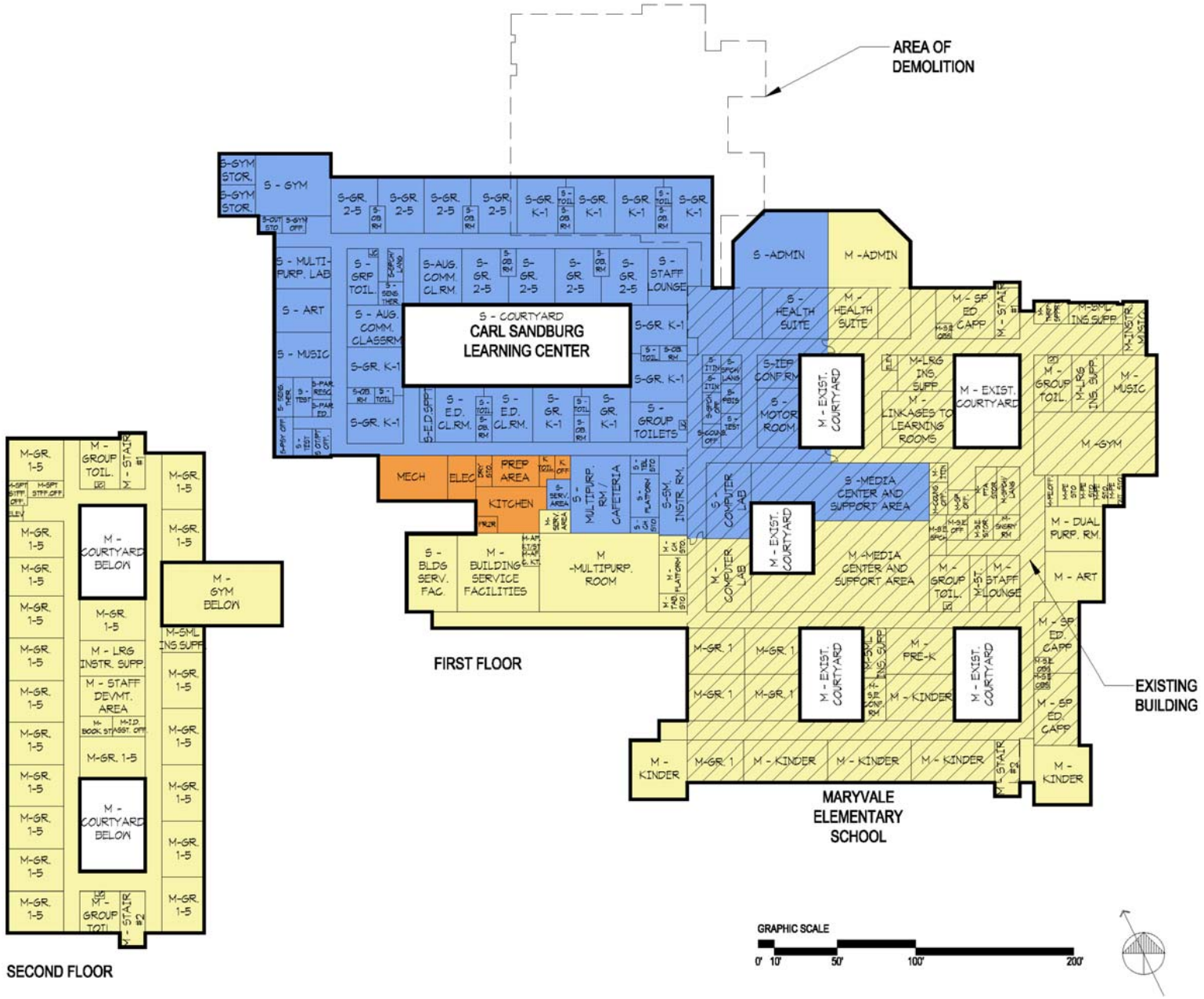
Site Considerations

Option 3 proposes a school building located more along the southern border of the site with Maryvale Elementary School on the east side and Carl Sandburg Learning Center on the west side. The bus loop for Maryvale Elementary School would be very similar to the one there currently where bus traffic enters in the middle of the site and exits at southern boundary. The bus loop for Carl Sandburg Learning Center would be along the northern boundary of the site and would have its own dedicated driveway. Parking and student drop offs would be in a shared lot, using the same entrance/exit that is currently there (and shared with Maryvale Elementary School busses entering the site).

PROPOSED SITE PLAN OPTION 3



PROPOSED FLOOR PLAN OPTION 3

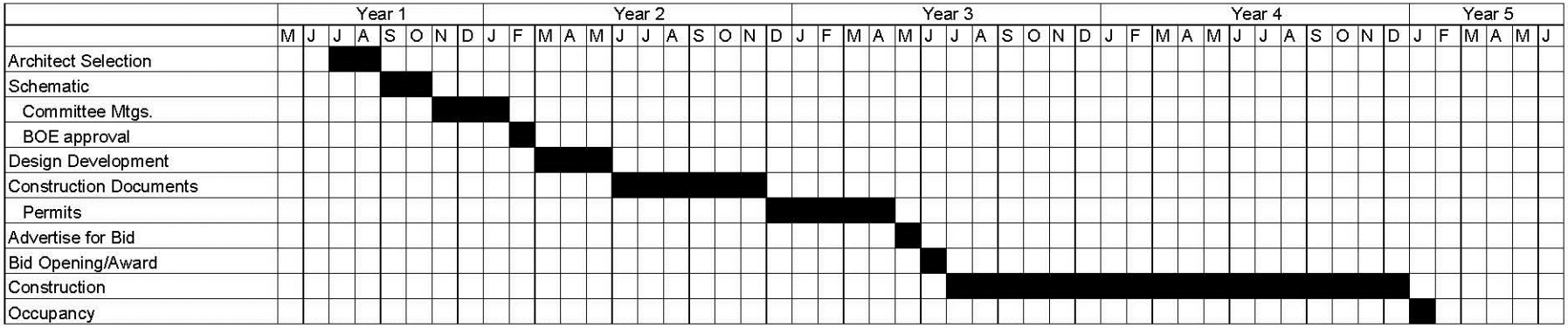


OPTION 3

	ADVANTAGES	DISADVANTAGES
BUILDING & SITE	❑ Majority of the existing structure is reused as part of the new collocated building.	❑ Requires extensive revitalization to salvage existing building areas. ❑ Does not provide separate identity for each school. ❑ Admin areas have poor visibility of bus loading areas. ❑ Requires reinforcement of existing structure to build new second floor above. ❑ Does not provide a distinct separation between the two building programs. ❑ Vehicular circulation is less efficient than options 1 & 2. ❑ Building does not front to 1st Street. ❑ Provides less parking than Options 1 & 2. ❑ Limited bus queuing for Maryvale Elementary School due to reuse of existing bus loop. ❑ Shared bus and car entrance for Maryvale Elementary School. ❑ Shared parent drop-off area for both Schools. ❑ Least efficient, least effective and most expensive option.

VII. PROPOSED PROJECT IMPLEMENTATION SCHEDULE

Evaluating the time required to fully execute the design and construction of the new collocated Maryvale Elementary School / Carl Sandburg Learning Center, the evaluation team has developed the following schedule of activities and time durations:



The cost estimates in this feasibility study are based upon current construction market conditions for both building and site.

DESCRIPTION OF OPTIONS
SUMMARY TABLE AND COST COMPARISON

Square Footage:	Option 1 (Preferred)	Option 2	Option 3	
Existing	0	0	92,050	
New Construction	177,000	174,800	99,700	
Revitalization	0	0	80,900	
Demolition (Total)	92,050	92,050	11,150	
Existing to Remain	0	0	80,900	
Total Gross Square Feet	177,000	174,800	180,600	
Total Project Cost	**$62,712,000**	**$61,933,000**	**$63,988,000**	

PDF/FEASIBILITY STUDY COST OUTLINE ($000s) – PREFERRED OPTION 1

CONSTRUCTION COST ESTIMATE	$52,362
PLANNING	$4,376
CONTINGENCY AND RELATED COSTS	$5,974
TOTALS:	$62,712

IX. APPENDIX 1: SPACE SUMMARIES & EDUCATIONAL SPECIFICATIONS

A. Carl Sandburg Learning Center - Space Summary

B. Maryvale Elementary School - Space Summary

C. Educational Specifications

Carl Sandburg Learning Center
Square Foot Summary

When this project is complete, the following spaces are to be provided:
The capacity will be 142. Updated April 22, 2013

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Classrooms				
Classrooms (Grades K-1)	**10**	Includes 200 sf storage	900	**9000**
Toilet Rooms (Grades K-1)	5	Provide one for each pair	100	**500**
Classrooms (Grades 2-5)	**8**	Classrooms with 200 s.f. storage	900	**7200**
Student Support/Observation Room	11	Provide one for each pair	150	**1650**
Classroom (Emotional Disabilities)	**2**	Classrooms with 150 s.f. storage	900	**1800**
Toilet Room (Emotional Room)	1		100	**100**
Student Support Room (Emotional Disabilities)	1		250	**250**
Classroom (Augmentative Communication)	**2**	Classrooms with 200 s.f. storage	900	**1800**
Art	1	Includes 250 s.f. storage/no kiln	1100	**1100**
Music	1	Includes 250 sf storage	1050	**1050**
Computer Lab	1		900	**900**
Multipurpose Lab	1	Perimeter sinks, 1 oven, 1 dishwasher and 1 washer/dryer	900	**900**
Support Rooms				
Sensory Therapy Room	2		200	**400**
Motor Room	1	With storage closet	1000	**1000**
OT/PT Office	1		250	**250**
PBIS (Positive Behavioral Interventions and	1		225	**225**
Speech/Language Room	2		200	**400**
Speech Therapist Office	1		200	**200**
Testing Room	3		150	**450**
Counselor's Office	1		250	**250**
Psychologist Office	1	Adjacent to testing room	150	**150**
Book Room	1		300	**300**
Small Instructional Room	1		450	**450**
Parent Educator Office	1		150	**150**
Parent Resource Room	1		250	**250**
Other Itinerant Staff Offices	2		150	**300**
IEP Conference Room	1	To accommodate up to 20 people	450	**450**

Carl Sandburg Learning Center
Square Foot Summary

When this project is complete, the following spaces are to be provided:
The capacity will be 142. Updated April 22, 2013

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Physical Education				
Gymnasium	1		1800	**1800**
Office	1		150	**150**
Storage	2		450	**900**
Outdoor Storage	1		150	**150**
Media Center				
Resource/Circulation	1		1250	**1250**
Materials Preparation/Office	1		250	**250**
Media Storage	1		300	**300**
Textbook storage	1		200	**200**
Control Room	1		250	**250**
Telecommunication Closet	1		200	**200**
Multi-Purpose Room				
Multi-Purpose Room/Cafeteria	1		1800	**1800**
Chair Storage	1		150	**150**
Table Storage	1		150	**150**
Platform with Ramps	1		450	**450**
Kitchen	1		1000	**1000**
Administration				
General Office	1		350	**350**
Principal's Office	1		250	**250**
Conference Room	1		300	**300**
Work Room	1		250	**250**
Telephone Room	1		50	**50**
Records Room	1		125	**125**
Testing Closet	1		150	**150**
Student Support Office	1		150	**150**
Elementary Program Specialist Offices	2		150	**300**
Staff Development Office	1		200	**200**
Training Area	1		450	**450**
Staff Lounge	1		700	**700**

Carl Sandburg Learning Center
Square Foot Summary

When this project is complete, the following spaces are to be provided:
The capacity will be 142. Updated April 22, 2013

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Health Services Suite				
Waiting Area	1		100	**100**
Treatment/Medication Area	1		120	**120**
Office/Consult/Examination Area	1		100	**100**
Examination/Isolation	1		100	**100**
Rest Areas	1		200	**200**
Toilet Room	1		50	**50**
Grooming Room	1		80	**80**
Storage Area	1		40	**40**
Laundry Room	1		50	**50**
Building Services Office	1	Office with Shower area	300	**300**
General Storage	3	Indoor Storage Closets	250	**750**
	1	Outdoor Storage Closet/Shed	300	**300**
Compactor Room	1		150	**150**
Recycling Room	1		150	**150**
TOTAL		**TOTAL**		**46240**

Maryvale Elementary School Modernization
Square Foot Summary

When this project is complete, the following spaces are to be provided:
Capacity after modernization will be 748 with a core capacity of 740. January 18, 2013

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Classrooms				
Prekindergarten	**3**	Includes 250 s.f. storage	1300	**3900**
Kindergarten	**6**	Includes 250 s.f. storage	1300	**7800**
Grades 1-5	**25**	Includes 150 s.f. storage	900	**22500**
Art	1	Includes 250 s.f. storage	1100	**1100**
Music	1	Includes 250 s.f. storage	1050	**1050**
Instrumental Music Room	1		400	**400**
Dual purpose Room	1		1000	**1000**
CAPP Program				
Classroom (Special Education CAPP)	**3**	Includes 150 s.f. storage	1050	**3150**
Special Education Classroom Observation Rooms	3		100	**300**
Storage	1		150	**150**
Speech Room	1		150	**150**
Sensory Room	1		200	**200**
Office	1		100	**100**
Support Rooms				
Large Instructional Support Room	2		600	**1200**
Small Instructional Support Room	3		450	**1350**
Speech/Language Room	1		250	**250**
Therapy/Support Room	1		250	**250**
Instructional Data Assistant Office	1		250	**250**
Support Staff Offices	2		150	**300**
Special Programs Office	1		150	**150**
Special Education Conference Room	1		300	**300**
Media Center				
Main Resource Area	1		2350	**2350**
Materials Preparation/Office Area	1		400	**400**
Media Storage	1		350	**350**
Textbook Storage	1		200	**200**
Control Room and Storage	1		250	**250**
Telecommunication Equipment Closet	1		150	**150**
Telecommunication Closet	3		50	**150**
Computer Laboratory	1		900	**900**

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Physical Education				
Gymnasium	1		3700	**3700**
Office	1		150	**150**
Storage	1		250	**250**
Storage	2		100	**200**
Outside Storage	1		150	**150**
Multipurpose Room				
Multipurpose Room	1		3700	**3700**
Chair Storage	1		200	**200**
Table Storage	1		200	**200**
Platform	1		450	**450**
Before/After Care Kitchenette	1		50	**50**
Before/After Care Storage	1		100	**100**
Kitchen				
Serving Area	1		300	**300**
Walk-in Cooler/Freezer	1		155	**155**
Dry Storage	1		192	**192**
Office	1		100	**100**
Toilet Room	1		70	**70**
Preparation Area	1		555	**555**
Administration				
General Office	1		500	**500**
Workroom	1		350	**350**
Principal's Office	1		250	**250**
Assistant Principal's Office	1		150	**150**
Conference	1		300	**300**
Telephone Booth	1		50	**50**
Storage	1		100	**100**
Record Room	1		100	**100**
Testing Room	1		150	**150**
Toilet Room	1		50	**50**
2nd Floor Workroom	1		75	**75**
Counseling Area				
Counselor's Office	1		250	**250**
Itinerant Staff Office	1		150	**150**

Facility	#	Description	Net Sq. Ft.	Total Net Sq. Ft.
Staff Development Area				
Staff Development Office	1		100	**100**
Reading Specialist Office	1		100	**100**
Training/Conference Room	1		450	**450**
Health Services Suite				
Waiting Area	1		100	**100**
Treatment/Medication Area	1		120	**120**
Office/Health Assessment Room	1		100	**100**
Health Assessment/Isolation Room	1		100	**100**
Rest Areas	1		200	**200**
Toilet Room	1		50	**50**
Storage Area	1		40	**40**
Staff Lounge	1		700	**700**
Building Service Facilities				
Building Services Office	1		150	**150**
Locker/Shower Area	1		150	**150**
Compactor/Trash Room	1		150	**150**
General Storage and Receiving	1		400	**400**
General Storage	3	250 sq. ft. each	250	**750**
Building Services Outdoor Storage	1		175	**175**
Book Storage	2		300	**600**
PTA Storage	1		150	**150**
The following spaces should be designed as an add-alternate:				
Linkages to Learning				
Reception Area	1		200	**200**
Conference Room	1		300	**300**
Storage Closet	1		50	**50**
Mental Health Counselor's Office/Play Therapy Room	1		250	**250**
Case Manager's Office	1		150	**150**
Site Coordinator Office	1		150	**150**
Staff Toilet	1		60	**60**
Total				**1160**
Total	37			**69342**

Elementary School

Educational Specifications

Feasibility Study

Date January 18, 2013

Montgomery County Public Schools
Rockville, Maryland 20850

Table of Contents

Introduction

☐ This document describes the facilities that are needed for the _____ educational program. The descriptions provide the architect with important guidelines and will be used by staff representatives when reviewing drawings for the facility.

☐ The program capacity for this school will be ___ with a master-planned (core) capacity for ___. The school needs a __-classroom master-planned addition to bring the program school up to its master-planned capacity. The architect should show the location for the future classroom addition.

☐ The educational specifications are divided into three sections.

- The first section, the space summary, lists the type of spaces and square footage required when the project is complete.
- The second section describes the general design, location, and specific requirements for each type of space in accordance with Montgomery County Public Schools (MCPS) standards.
- The third section identifies additional program requirements for the school.

☐ The architect should show the location for relocatable classrooms, should they be required in the future. These units should be sited in a location where it will not cause conflict with the constructability of a future addition. The necessary utility connections, i.e. electrical power, fire alarm, public address, and data should be provided near the future location of relocatable classrooms.

☐ The architect will provide a space summary comparison between the programmed space requirements and the proposed after each phase of the project including but not limited to the feasibility study, schematic design, design development, and final design phase.

☐ For all new schools and modernizations, the project will be designed for LEED Silver certification by the United States Green Building Council (USBGC) under the LEED for Schools guidelines. If this project is a classroom addition, the certification requirement applies only if the addition doubles the existing building footprint. If this project is a building renovation, the certification requirement applies only if the renovation alters more than fifty percent of the existing building gross floor area.

General Planning Considerations

In the general planning of this building, special consideration is to be given to the following comments and instructions:

☐ The architect is expected to be compliant with all national, state and local fire safety, life safety, and health code regulations and to follow applicable rules of the State Interagency Committee on School Construction.

☐ The building is to be accessible to the disabled within the meaning of the latest edition of the Americans with Disabilities Act and to conform to all the latest requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board. (The regulation can be found at http://www.access-board.gov/adaag/html/adaag.htm). In addition to the ADAAG, the *Maryland Accessibility Code* (COMAR.05.02.02) revised in 2002 also is required for public schools. (The regulation can be found at http://mdcodes.umbc.edu/dhcd2/Title05.pdf)

☐ The facility is to reflect an appealing visual, acoustic, and thermal environment and is to be properly furnished and equipped. Well chosen colors and textures are to be used. Lighting must meet current guidelines and provide adequate levels.

☐ High quality materials are to be used in the construction.

☐ The architect should refer to the MCPS Facility Guideline Specifications when noted. The document can be found at: http://www.montgomeryschoolsmd.org/departments/construction/publications/guidelines.shtm

☐ The first impression of a building is important. The main entrance to the school should have a clear and inviting identity, and the entrance area should be designed and landscaped to emphasize its importance. A covered walkway from the bus loading area to the front door is desirable. The design of the main lobby area needs to convey a feeling of warmth and welcome. The inclusion of a lighted showcase in which children's work can be displayed is recommended.

☐ The design of the building and grounds must provide for a secure environment for students and staff. Isolated areas should be minimized and natural surveillance encouraged by eliminating visual barriers.

☐ For security purposes, all doors into classrooms, conference rooms, offices etc. must have a sidelight window with shades.

☐ Water coolers should be provided throughout the school.

☐ Every teaching station, support space, and core area must be wired for computer, CCTV, and telephone, along with adequate electrical supply in compliance with Maryland Sate design guidelines for Technology in Schools and the MCPS Office of the Chief Technology Office (OCTO) guidelines. Facilities must be adaptable to accommodate rapid development in high

technology and its equipment since educational program and organization in this field are dynamic. Space and power supply must be flexible to meet these changing needs.

☐ Core spaces such as the cafeteria, gymnasiums, and instructional media center should be easily accessible for community use and secure from the rest of the building after school hours.

☐ An MCPS designed alarm system will provide security for this facility. The architect will provide for this system in consultation with the DOC staff.

☐ Building code requirements call for less than fifty percent of interior corridor space to be used for displaying flammable materials. Display areas can be provided by a 5' x 5' bulletin board per classroom or an equivalent amount of space in a larger area. Please refer to the MCPS Facility Guideline Specifications.

☐ Students should have ADA compliant access to the play areas from the multipurpose room. Play areas are to be protected from any vehicular traffic. Unobstructed supervision of play areas from one central area is desirable.

☐ The school is to be air-conditioned except for the gymnasium and kitchen. Careful placement of glass is required to avoid excess heat gain in occupied areas.

☐ Some windows must be operable in each space in the building. Transmission of radiation through windows into various portions of the plant is to be considered in relation to heating and ventilating and in relation to planning the building for air conditioning. All instructional spaces should have windows, preferably exterior windows. If the design does not permit exterior windows, windows onto corridors should be provided.

☐ Zoning the plant for heating and air-conditioning should be related to after-hours use of various areas such as offices, gymnasium, multipurpose room, and the instructional media center. Appropriate location of parking, corridor barriers, and toilet rooms is necessary for after-hours use. Some classrooms nearby the multipurpose room should be zoned for after hour use as well.

☐ The architect should refer to MSDE's 2006 *Classroom Acoustic Guidelines* to address the acoustical qualities for classrooms. In addition, the architect should refer to *American National Standard, Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools* (ANSI S12.60-2002) for additional information.

☐ Noise and distracting sounds are to be minimized. In areas such as the multipurpose room and classrooms, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.

☐ Adult restrooms should be provided in accordance with the latest code requirements. Adult restrooms in elementary schools will be unisex.

☐ Spaces that serve no real educational function, such as corridors, should be limited while at the same time assuring an easy to supervise and smooth flow of pupil traffic to and from the

instructional media center, multipurpose room, gymnasium, specialized centers, and support rooms.

- ☐ Carpeting should be limited to the principal's office, assistant principal's office and conference room in the administration suite and the main reading room of the instructional media center.

- ☐ All instructional, resource, or office spaces that students may occupy should be designed with either a sidelight or glass panel in the door and must be able to be supervised from the corridor or an adjacent space. Doors should be provided between classrooms whenever possible, however, expensive folding walls should be carefully considered as they are rarely utilized.

- ☐ The classrooms should be designed to accommodate various size groups. Each classroom should be readily adaptable for group work, various presentation formats, and should have maximum connectivity to outside resources.

- ☐ The shape of the classroom and the design of built-in features and storage areas should provide optimum net usable floor area. Elongated rooms and features that protrude into floor area, limiting flexibility, are to be discouraged. Rectangular shaped classrooms are preferred.

- ☐ Metal adjustable shelving is to be provided in all building storage closets.

- ☐ All plan reviews will be coordinated through the Division of Construction.

- ☐ Special consideration must be given to energy conservation including total life-cycle costs. The current Maryland State Department of General Service (DGS) requirements will be applied as design criteria. Life-cycle cost accounting in accordance with DGS criteria is required.

- ☐ Per COMAR 23.03.02: Regulation .29, all school projects that include replacing or upgrading the electrical system should be designed and constructed sot that a designated public shelter area can be fully powered in the event of an emergency.

Description of Facilities

Please refer to the summary of spaces in the front of this document for the square foot requirements for each space described below. Square foot allocations should be considered the standard to be followed, although minor deviations are permitted.

Prekindergarten/Kindergarten Classroom

- ☐ If the school has a Head Start program, the classroom should be designed as a prekindergarten/kindergarten classroom.
- ☐ Each room should allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach.
- ☐ An area should be designated for placement of a 12’ by 15’ area rug over the finished floor.
- ☐ A 100 square foot walk-in storage closet and 150 square feet of general storage (casework throughout the classroom) is needed.
- ☐ When possible there should be interconnecting interior doors between all kindergarten and pre-kindergarten rooms.
- ☐ All prekindergarten rooms should have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building.
- ☐ The prekindergarten classrooms must have direct access to the prekindergarten play areas. See the Site Requirements section for a description of play areas. The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should be eliminated as much as possible. Security for the computers should be planned in consultation with the DOC. Computer/technology wiring must be in accordance with MSDE/MCPS guidelines.
- ☐ Every classroom must have computer outlets for five student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the February 2002 revision of the MSDE *Maryland Public School Standards for Telecommunications Distribution Systems*.
- ☐ The main teaching wall layout should be in accordance to MCPS Facilities Guide.
- ☐ A sink with a drinking fountain must be provided, with cabinets above and below.
- ☐ In a non class-size reduction school, the built-in student wardrobe area must provide 28 individual compartments to store students’ belongings. The architect is to refer to the MCPS Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.

- ☐ In a class-size reduction school, the built-in student wardrobe area must provide 24 individual compartments to store students' belongings. The architect is to refer to the MCPS Facility Guideline Specifications for a typical cubby design. Lockers in the classroom may be considered for the kindergarten classrooms.
- ☐ A total of 20 feet of tackboard and 10 feet of magnetic whiteboard should be installed at eye-level height for small children, with tack stripping along walls for display of student work.
- ☐ Each room must have a toilet room that is accessible from within the room and easily accessible from outside. The toilet room will contain a standard height toilet, a sink with child-height mirror, and soap and towel dispensers that are accessible to small children. The light switch should automatically turn on the vent fan.
- ☐ Each classroom should be equipped with window blinds per the MCPS design guidelines.
- ☐ Battery operated clocks will be installed.
- ☐ All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- ☐ A full-length mirror should be installed.

Standard Classroom

- ☐ Each room must have an open classroom area with moveable furniture.
- ☐ 150 square feet of casework storage is needed in the classroom.
- ☐ When possible there should be interconnecting interior doors between all classrooms.
- ☐ The computers should not be located next to a whiteboard where magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS DOC. Computer/technology wiring must be in accordance with DOC/MSDE/OCTO guidelines.
- ☐ Every classroom must have computer outlets for 5 student workstations and 1 teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.
- ☐ The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- ☐ Thirty built-in individual compartments in the wardrobe area for storing student personal property are required. The architect should refer to the MCPS Facility Guideline Specifications for a typical cubby design for grades K-1 and grades 2-5. Lockers in the hallway may be used in place of the classroom cubbies.
- ☐ If lockers are designed for storing individual student property, the architect should design the facility with 700 lockers if the core capacity is 640 and 815 lockers if the core capacity is 740.
- ☐ All classrooms should be equipped with a handicapped accessible sink with drinking bubbler.
- ☐ A storage area is needed to hold at least two science kits (approximate 27" x 17" x 12" each) and one math kit in each classroom.
- ☐ General storage space must be built in and must accommodate 24- by 36-inch paper and a 4-drawer file cabinet. Each classroom must include 48 linear feet of built-in adjustable shelving.
- ☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- ☐ Designated shelf space, not near a window, for an aquarium/terrarium with nearby electrical outlet, is desirable.
- ☐ Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.

- ☐ Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- ☐ Battery operated clocks will be installed.
- ☐ Shelving or cabinetry should be provided in every teaching station for the VCR and television. A school may choose to place the television and VCR on a cart. Appropriate CCTV receptacles and a duplex outlet should be provided nearby for the operation of the TV and VCR. Placement of the TV should be to maximize student viewing and not be unduly influenced by exterior or interior extraneous light.
- ☐ A school may consider reducing the size of each classroom to create small break-out rooms in the school. The number and design of these breakout rooms may be determined by school and MCPS staff.

Special Education Classroom

☐ The specific requirements are the same as the requirements for standard classroom requirements. Please refer to the preceding section for these requirements.

☐ Please see the additional requirements section of this document for additional special education program requirements specific to this school.

Art Room

The art room is to provide space for teaching and creating art, displaying student work and educational aids, and storing supplies and materials. The room should be designed as follows:

- ☐ The art room must not be carpeted.
- ☐ Both art and music rooms must be located near student restrooms.
- ☐ For technology accessibility purposes, the art room is to be considered as a regular classroom with appropriate data, CCTV, modem, and electrical outlets.
- ☐ The design of all work, display, and storage areas should create an environment that is functional and easy to clean.
- ☐ Lighting should be both natural and artificial and conducive to close work.
- ☐ A door to the outside is desirable.
- ☐ Space and electrical outlets for two kilns should be in the farthest corner of the storeroom with proper ventilation.
- ☐ Eight duplex electrical outlets are to be provided (where feasible quadruplex outlets may be utilized).

The window wall should have the following:

- ☐ Windows that permit views of the surrounding landscape.
- ☐ Blinds to permit room darkening.
- ☐ Shelves under windows 15” deep.
- ☐ Tack board or tack strips above windows if space permits.

The teaching wall should have the following:

- ☐ Two 3-foot wide by 7-foot tall, 18" deep, shelf sections for storage of unfinished work.
- ☐ 16’ long by 4-foot tall whiteboard with 4-foot 6-foot tall tack board on both sides. Tack and white boards should be mounted 2 to 4 inches above low shelving.
- ☐ Fourteen-inch deep, 24 inch high, shelving under the center of the 16-foot long tack board and white board.
- ☐ Wall mounted projection screen with electrical outlet underneath.

The wall near the entrance should have the following:

- ☐ Three sinks should be provided. Faucets should be accessible to students and positioned to prevent splashes onto floor.
    - ☐ One teacher sink (36" high)
    - ☐ One sink located on a peninsula (30"-32" high). Peninsula is to be no longer than 3 feet.
    - ☐ One ADA accessible sink (30"-32").
- ☐ Sinks and sink area should also include:
- ☐ Removable plaster traps
- ☐ Closed cabinets below and above
- ☐ Conveniently located towel and soap dispensers
- ☐ At least 9 feet of counter space (includes 1 ½ feet of counter space on both sides of the sinks) with rounded corners
- ☐ Hot and cold water faucets with bubbler
- ☐ A 5- to 7-foot open space is needed for drying rack(s) along one wall.
- ☐ Approximately 30 smock hooks in 3 feet of staggered tiers, beginning 2 feet from the floor, spaced 4 inches apart, up to 48 inches high. (Optional in rooms where one end of drying rack(s) that measure 44 inches wide and 24 inches deep is accessible, since hooks can be installed on pegboard ends.)

The wall opposite or adjacent to the teaching station should have the following:

- ☐ One 6-foot tall, 12-foot long tack board with 24-inch tall, 14-inch deep shelving units below.
- ☐ Two or three 7-foot tall, 18-inch deep, 36-inch wide shelf sections near kiln area for storage of ceramic work

Kiln Area

- ☐ The kiln area should be located at the far end of the storeroom and should accommodate two kilns.
- ☐ Two kiln exhaust hoods and fans (local switch) must be installed. Positive ventilation (using negative pressure) is needed to assure removal of fumes.
- ☐ Kilns should be 30 inches wide, 30 inches deep and 36 inches tall. Allow an additional 6 inches in depth for opening of the kiln lid.

- ☐ Electrical characteristics for the kiln are 208 volt, 30 amps, single phase, and 7200 watts. Provide 2-50 amp 250-volt outlets NEMA configuration 6-50R. Provide outlet(s) on wall behind kiln(s).
- ☐ Kilns may be located in the far end of the storeroom with built-in hood above and metal shelving 12 inches to 18 inches deep on walls adjacent to the kiln area. See notes above for additional kiln information.

Art Storeroom

- ☐ The storeroom must have a 6-foot wide, 30-inch tall, and 34-inch deep worktable immediately inside the entrance to the storeroom with built-in adjustable shelves below and 14-inch deep wall hung shelving above. This table will accommodate a 30-inch square paper cutter and storage of large art reproductions and papers below, in 3 banks of shelving units 8 inches on center, 20-inches wide (inside width).
- ☐ One or two 6-foot tall 20-inch wide paper storage shelf section(s), 24 inches deep with shelves 8 inches on center to accommodate 18" x 24" paper.
- ☐ Seven foot tall open shelving, 18 inches deep, should be provided along remaining walls where space permits. Twelve to fourteen inch deep sections are acceptable for some sections where 18-inch deep shelves won't fit.
- ☐ Storeroom door is to be lockable, and 2 coat hooks are to be mounted behind the door.

Music Suite

Spatial Needs
Music Room (includes 250 sq. ft. storage)
Instrumental Music Room

- ☐ The music room and instrumental music room should be located adjacent to each other with a shared storage room.
- ☐ These rooms should be located near the multipurpose room to allow easy access to the platform.
- ☐ The rooms must be acoustically treated for isolation and reverberation.

Music Room

- ☐ The music room should have a clear circular area of at least 20 feet in diameter and access to the music storage room.
- ☐ A 150-square foot secure closet area to store instruments, equipment, choral music, and instructional charts is necessary with access from the music room.
- ☐ Variable sized shelving must allow for storage of books, records, and small instruments.
- ☐ The music room needs a child height sink with a work area and drinking fountain.
- ☐ Window blinds and a wall-mounted retractable projection screen are required.
- ☐ Approximately 20 feet of white board and 4 feet of tack board must be provided. Continuous tack strips are needed around the room.
- ☐ Specific storage and shelving specifications are available through Montgomery County Public School's MCPS Facility Guideline Specifications.
- ☐ Eight duplex electrical outlets are to be provided (where feasible, quadruplex outlets may be utilized).
- ☐ This room must be acoustically treated.
- ☐ Doors into the music room and stage platform must be wide enough to accommodate the passage of a piano.

Instrumental Music Room

- ☐ A secure closet area is needed adjacent to the room for large instrument storage.
- ☐ A sink and countertop area should be provided for cleaning and repairing musical instruments.
- ☐ The Instrumental Music Room must be soundproofed.
- ☐ Doors into the instrumental music room must be wide enough to accommodate the passage of a piano.

Dual Purpose Room

- ☐ This room should be designed to accommodate both art and music activities in the school but with less detail than the regular art and music rooms.
- ☐ Some acoustical treatment should be provided in the room.
- ☐ One sink for student use should be provided along with some countertop area.
- ☐ No kiln area is needed and less shelving than described in the art room is to be provided.
- ☐ The exact details of the design should be discussed with the school staff and community.

Support Rooms

Spatial Needs
Large Instructional Support Room
Small Instructional Support Room
Speech/Language Room
Occupational Therapy/Physical Therapy (OT/PT) Room
Testing/Conference Room
Instructional Data Assistant Office
Support Staff Offices (two)

Large Instructional Support Room

- ☐ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.
- ☐ Every classroom must have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.
- ☐ Approximately 10 to 15 linear feet of magnetic marker board and 10 to 15 linear feet of tack board, both with tack strips and map rails above the boards, should be installed in each classroom. Marker boards should be located so as to reduce glare. Tack strip is needed on all available walls. The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- ☐ Each classroom must include a minimum of 50 linear feet of built-in adjustable shelving for books.
- ☐ Space for a big book rack should with an incline to display the book open and also for storage beneath for space to lay the books flat should be provided.
- ☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- ☐ 40 mailboxes should be designed for storage of student work such as folders or notebooks.
- ☐ This classroom should be equipped with a handicapped accessible sink with drinking bubbler. Cabinets should be provided above and below the counter area.
- ☐ Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.

- ☐ Each classroom should be equipped with a retractable projection screen (7’ x 7’). The projection screen should not be mounted near any emergency lighting tracks. All areas of the screen should be illuminated and readable when the lights are dimmed.
- ☐ Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- ☐ Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

Small Instructional Support Room

- ☐ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture is desired.
- ☐ Every classroom must have computer outlets for two or three student workstations and one teacher workstation. The building information and communications distribution system and other aspects of the building design must comply with the latest edition of MSDE *Maryland Public School Standards for Telecommunications Distribution System*.
- ☐ Approximately 10 to 15 linear feet of magnetic marker board and 10 to 15 linear feet of tack board, both with tack strips and map rails above the boards, should be installed in each classroom. Marker boards should be located so as to reduce glare. Tack strip is needed on all available walls. The architect should refer to the MCPS Facility Guideline Specifications for the main teaching wall layout.
- ☐ Each classroom must include built-in adjustable shelving under the windows.
- ☐ A small lockable teacher's wardrobe must be provided, as per MCPS Facility Guideline Specifications.
- ☐ This classroom should be equipped with a handicapped accessible sink with drinking bubbler. Cabinets should be provided above and below the counter area.
- ☐ Each classroom should be equipped with window blinds. The specifications for the window blinds will be provided by DOC.
- ☐ Each classroom should be equipped with a retractable projection screen (7’ x 7’). The projection screen should not be mounted near any emergency lighting tracks. All areas of the screen should be illuminated and readable when the lights are dimmed.
- ☐ Electrical and data outlets should be provided in the ceiling for a ceiling mounted LCD projector.
- ☐ Battery operated clocks will be installed. The clock should not be mounted behind the projection screen.

Speech/Language Room

- ☐ This room requires a whiteboard, tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe.
- ☐ Room for a teacher's desk, lockable file cabinet, and table to work with small groups of students is required.
- ☐ The speech/language room should be wired for access to one computer workstation each.
- ☐ The speech room must be located on the first floor and be acoustically treated.
- ☐ The speech room needs a 4’ x 4’ mirror mounted to the wall to supplement verbal skills training.
- ☐ The speech room requires a sink with counter space.

Occupational Therapy/Physical Therapy (OT/PT) Room

- ☐ Each room must have whiteboard that is mounted two feet off the floor.
- ☐ A tack board, open and closed lockable storage, open shelving, and a lockable teacher wardrobe are required.
- ☐ A sink with counter space is required in the OT/PT room.
- ☐ Room for a teacher's desk, lockable file cabinet, and assorted sized furniture with adjustable legs should be provided.
- ☐ The OT/PT rooms should be wired for access to one computer workstation each.
- ☐ The OT/PT requires a ceiling mounted hook for a swing.

  The OT/PT room requires lockable storage with sufficient area to house large gross motor equipment (minimum of 35 square feet) such as therapy balls, scooter boards, walkers, balance beams, ramps, etc.

Testing/Conference Room

- ☐ School and/or central office staff test individual students or small groups of students. Typical testing includes psychological, diagnostic, vision/hearing, gifted, and makeup testing for required standardized tests. This room also will be used to accommodate post-test conferences with teachers and/or parents.
- ☐ This room should be designed as a secure room for testing materials and should have a counter with lockable cabinets above and below.
- ☐ This room needs acoustical treatment as well as video, voice, and data outlets.

Instructional Data Assistant Office

- ☐ This room is required for a data assistant who conducts assessments, updates individual student test scores, and provides remediation of students' skills.
- ☐ This room houses one computer with printer and card reader and must be lockable and secure.
- ☐ This room requires some built-in casework with shelves and doors, a small lockable teacher’s wardrobe, whiteboards, and video, voice, data outlets, nd space for file cabinets.

Support Staff Offices

- ☐ Office space is needed for permanent as well as itinerant support staff (curriculum coordinator, team coordinator, social worker, psychologist, auditory and vision specialists, and psychiatrist).
- ☐ A teacher’s wardrobe should be provided for itinerant staff use.
- ☐ Video, voice, and data outlets should be provided.

Instructional Media Center

Spatial Needs
Main Resource Area
Materials Preparation/Office Area
Media Storage
Textbook Storage
Control Room/Storage
Head End Equipment Closet
LAN Wire Closet

☐ The architect should refer to the MSDE document, *Facilities Guidelines for Library Media Programs, 1998* as a guide for media center design.

☐ Staff in the Department of Educational Media and Technology must approve specific design.

☐ The media center is to be central to the instructional program of the school.

☐ The total media complex is to be enclosed and lockable.

☐ The media center is to accommodate multiple arrangements and uses as functions change. It should be acoustically designed for multiple activities. Furniture and shelving should have casters for easy moving, to divide one area from another, and create traffic patterns.

☐ A complete media center is to include the following areas that are described in the following sections:

- Study and Research Area
- Informal Reading Area
- Instructional Area
- Production and Group Project Area
- Administrative Area

Main Resource Area

☐ The main resource area should have 3 separate lighting zones for the storytelling area, the instructional area, and the circulation area. Each zone should be independently operable. Dimming capabilities are recommended in the storytelling and instructional areas.

☐ Two CCTV outlets should be located in the main resource room—one near the storytelling area and one in the instructional area. CCTV receptacles and electrical outlets should be located 44" apart.

The Main Resource Area is to be subdivided to provide for the following program activities:

Study and Research Area

- ☐ Space is needed in the Main Resource Area for an information desk.
- ☐ This area should be designed with ten computer workstations for student use. These computers will be used for accessing the catalog as well as research.
- ☐ This area requires study and research tables, reference materials, professional library materials, basic collections, and stacks.

Informal Reading Area

- ☐ Space is needed in the Main Resource Area for books and periodicals to encourage literacy, lifelong learning, and reading for pleasure.
- ☐ This area needs to provide space to seat 30 students on the floor away from the busy areas for a storytelling area.
- ☐ A projection screen should be accessible. Emergency lighting should not affect the projection screen.
- ☐ Zone lighting should be controlled from this area.
- ☐ A CCTV receptacle and appropriate electrical outlet should be located near this area.
- ☐ The architect may want to define this area by architecture and/or accent carpeting.
- ☐ Picture book shelving also may help define this area.

Instructional Area

- ☐ Space is needed in the Main Resource Area for formal seating for small, large group, and whole class instruction.
- ☐ A “teaching wall” with appropriate instructional technology, and display space is needed.
- ☐ This area should not be located near an entrance.
- ☐ It should seat 30 students at tables.
- ☐ A projection screen with appropriate floor mounted outlets should be located in this area.
- ☐ Lights in this area should be separate for dimming without affecting the reference area.

Production and Group Project Area

- ☐ Space is needed in the Main Resource Area for functional work and meetings for individuals, teams, and classes as well as facilities for media production should be designed in the main resource area.
- ☐ This area allows for individual study desks for students to carry on independent study research projects, analyze information, and solve problems.

Administrative Area

- ☐ Space is needed in the Main Resource Area for the circulation desk should be designed near the entrance of the media center. This area needs writing space, book return, computer workstation, file cabinet, and storage.
- ☐ An electronic catalog area (ECC) should be located near the circulation desk and should contain one to two computer workstations.
- ☐ The reference section area should contain two to four computer workstations. These should be located near the electronic card catalog and be positioned so they may be utilized with the ECC for directed instruction to students for on-line retrieval skills. Appropriate data, telephone and electrical outlets as well as casework should be provided for these workstations. Casework should include wire management, area for student books and a pullout keyboard.

Materials Preparation/Office Area

- ☐ The Office and Materials Preparation Rooms may be combined into one room. The Office access should be located immediately behind the circulation desk at the entrance to the Media Center. Plentiful interior windows from these rooms into the Media Center are to be provided for supervision.
- ☐ The materials preparation area provides for the preparation of several types of instructional materials, such as transparencies, slides, and charts.
- ☐ The materials preparation area should have corridor access.
- ☐ This space requires appropriate counter space for repairs, including cabinetry, sink, storage of tools and cords, as well as electrical and computer receptacles for testing equipment.
- ☐ Appropriate casework for storage, computer workstations, data, electrical, and modem receptacles should be provided.
- ☐ See media center specifications available from the MCPS Facility Guideline Specifications.

- ☐ The office area should include space for collaborative planning and processing of library media materials.
- ☐ The office area must be accessible to the materials preparation area and main reading room. It should include appropriate casework for a computer workstation, book shelving, and cabinetry as well as phone, data, and electrical receptacles. Adequate space should be allocated for the media center file server.

Media and Textbook Storage

The storage areas should be located adjacent to the materials preparation work area and should have the following specifications:

- ☐ Space is needed for the storage of instructional materials, such as seasonal materials, maps and globes, and instructional equipment, such as projectors for distribution. Minor repairs, cleaning, and testing of equipment are completed here. Space for manipulatives, especially mathematics and science, is needed.
- ☐ Textbook storage provides for storage of textbooks, workbooks, and classroom materials.

Control Room/Storage Area

- ☐ A support room should be located adjacent to the control room so the room can serve the dual function of a support space and TV studio.
- ☐ The support room used as a TV studio should have adequate electrical outlets and acoustical treatment.
- ☐ See studio specifications for media center communication labs available from the MCPS Facility Guideline Specifications.

Telecommunication Equipment Closet

- ☐ This room is to be located in or near the instructional media center.
- ☐ It should have corridor access and be centrally located in the school.
- ☐ Specifications for this space are available from the MCPS Facility Guideline Specifications.

Shelving Requirements

- ☐ The architect is to refer to the MCPS Facility Guideline Specifications for the material to be used for the shelving in the media center resource area and storage area.

- ☐ The shelving should be interchangeable within standard upright wall units in accordance with MCPS specifications (maximum height and island shelving requirements are available from the MCPS Facility Guideline Specifications).
- ☐ Low shelving is desirable for sight and safety reasons when extra shelving is needed.

☐ Shelving is to be allocated on the average as follows:

	Linear Feet
Books	700
Picture Books (with dividers)	165
Magazines (with space for back issues)	20
New Book/Interest Display	10
Media Center Storage (20-24” depth)	As space allows
Textbook Storage (12-18” depth)	As space allows

Computer Laboratory

- ☐ This room should have direct access to the Instructional Media Center.
- ☐ The computer laboratory should be zoned for independent air-conditioning during times when the rest of the building is closed.
- ☐ The minimum dimensions of the room should provide for an uninterrupted area of 25’ x 32’ so that the computer laboratory may be designed with the following requirements.
- ☐ Each computer laboratory should accommodate 32 student workstations.
- ☐ The layout should be designed with four rows with eight computers in each row facing the teaching wall. Each row should have a center aisle that separates each row, with four computers on either side of the aisle.
- ☐ File server and printers are to be located near teacher’s desk or in office.
- ☐ A teacher’s wardrobe and storage cabinets should be provided.
- ☐ The teaching wall should be designed to accommodate a Promethean board. The teaching wall layout will be provided by the Division of Construction.
- ☐ Tackboards should be provided in the laboratory.
- ☐ The architect should consult with the OCTO/DOC for the latest technology requirements.

Physical Education

The gymnasium has two major purposes:

- To provide an indoor facility for the physical education instructional program.
- To provide for student and community recreation during after school hours, weekends, summers, and holidays.

Spatial Needs
Gymnasium (74'x50')
Physical Education Office
Storage Rooms
Lobby Area
Outdoor Storage

Gymnasium

☐ The location of the gymnasium should be near the play areas, directly accessible from a corridor, and easily accessible from the parking lots.

☐ Buffering the gymnasium with a corridor or related spaces is required to separate gymnasium noise from the rest of the school.

☐ The physical education office should be adjacent to the gymnasium and lobby.

☐ The architect should refer to detailed requirements provided by MCPS Facility Guideline Specifications.

☐ Any windows into the gymnasium should be oriented north and south so that direct east-west sunlight does not impact play in the gymnasium. However, windows should not be placed in the end walls.

☐ The gymnasium should be ADA accessible from within and without (access from inside gym to playfields).

☐ A ceiling clearance of 18-20 feet free of girders, pipes, heating vents, lights and curtain supports is required.

☐ No ledges or sills should be created over 6' in height that would make it difficult to retrieve a ball.

☐ Glazed tile on the walls must cover at least seven feet from the floors.

☐ If the gymnasium is a community sized gymnasium (84'x 75') then a vinyl-mesh curtain to divide the floor area into two equal size spaces should be provided. It must be the type that can be electrically rolled to the ceiling for storage. If the gymnasium has a divider curtain, a clock with a protective wire covering should be provided on both ends of the room.

- ☐ Adequate lighting in the gymnasium is required. The lighting should be securely mounted and guarded to prevent damage by balls with keylock switches to control the lighting.
- ☐ A minimum number of windows to prevent glare and glass breakage is requested.
- ☐ Acoustical treatment of walls and ceiling is required and must be able to withstand damage by balls.
- ☐ Ventilation equipment must not inhibit use of the space for auditorium purposes.
- ☐ A wood floor should be installed in the gymnasium. Striping for basketball, volleyball, and floor games should be provided. (i.e. hopscotch and four square)
- ☐ Graphics or approved words should be painted on the gymnasium walls. The school may choose from an approved curriculum list of words to paint on the gymnasium walls. The list of words will be provided by MCPS staff.
- ☐ A whiteboard, 4'x6', with no ledge is required.
- ☐ Separate heating source or controls to permit use when the remaining part of the building is not occupied is required.
- ☐ Recessed door handles are required.
- ☐ Doorway center posts must be removable to allow for the passage of equipment.
- ☐ A recessed fire alarm box or covered fire alarm box, preferably in a corner of the room needs to be provided.
- ☐ Two call buttons located at opposite sides of the gymnasium are required to contact the main office.
- ☐ A clock with a protective wire covering should be provided on a sidewall of the gymnasium. The fire extinguisher, if mounted in the gymnasium, should be recessed into the wall.
- ☐ Wall safety padding must be mounted under each basketball backstop with 16 feet under end basketball backstops and 12 feet under side basketball backstops with nylon nets.
- ☐ Doors or openings should not be directly behind basketball backstops.
- ☐ Fan-shaped basketball backstop, adjustable from 8 feet to 10 feet, must be mounted four feet from the sidewalls to provide two equal sized side courts. The backstops must be of aluminum composition. Collapsible rims must be provided.
- ☐ A basketball backstop, adjustable from 8 feet to 10 feet, must be mounted on each end wall for full court play. The fan-shaped backstops must be of aluminum composition. Collapsible rims must be provided.

- ☐ A hand crank must be provided for the adjustable basketball backstops if they are not operated electrically.
- ☐ Four climbing ropes (1 knotted, 3 plain) with hoist located 6 feet from the ground and safety cables located away from ceiling lights and basketball backstops should be provided.
- ☐ One 8-foot semi-guyed (wall mounted) horizontal bar with safety chain and floor plates should be provided. The MCPS shade shop will provide safety padding.
- ☐ One pair of volleyball aluminum uprights and one center volleyball aluminum upright (insertion type) must be provided. Heavy-duty net ratchet and removable crank handle should be included.
- ☐ Five solid brass floor plates and floor sleeves need to be installed. Two volleyball nets, 32" in length with end sleeves for wooden dowels should be provided.
- ☐ Two portable game standards are required.
- ☐ A wall-mounted, chin up bar should be provided. The lowest bar height should be approximately 5 feet from the floor.
- ☐ Computer data/CCTV/electrical/network receptacles on opposite walls of the gymnasium are required.

Physical Education Office

The following items are required in the physical education office:

- ☐ Non-breakable window to the gymnasium, low enough to view students, is required.
- ☐ Non-breakable window to the lobby for supervision, low enough to view students, is required.
- ☐ Toilet and shower facilities are required.
- ☐ Computer/Telephone/Cable TV outlets connected to the school-wide network are required.
- ☐ Venetian blinds for windows are required.
- ☐ VCT flooring is required.
- ☐ A call button the main office is required.
- ☐ Three full size clothing locker should be provided.
- ☐ Electrical outlets.
- ☐ A tack board should be provided.
- ☐ A wall-mounted clock should be provided.

- ☐ A small closet with shelves should be designed in this office.

Storage Rooms

- ☐ All of the storage rooms require 8-foot doors and 12-foot ceiling heights with a flush threshold.
- ☐ The large storage room requires 8-foot double doors with no center post and must be able to accommodate a set of parallel bars.
- ☐ The large storage room must contain shelves, 6 feet high and 18 inches deep, mounted on at least two walls. The shelves must be adjustable after installation.
- ☐ Both of the small storage closets must contain shelves, 6 feet high 18 inches deep, mounted on the two side and back walls. The shelves must be adjustable after installation.
- ☐ Two volleyball wall racks should be installed in the small storage closet designated for community use. Each rack will hold two uprights.
- ☐ The large storage closet must have a length that will accommodate a 12' long balance beam.

Lobby Area

- ☐ Separate toilet rooms for boys and girls should be located in the lobby.
- ☐ An electric water cooler and public telephone should be located in the lobby area.
- ☐ Six feet of tack board should be installed in the lobby area.
- ☐ The window between the lobby and physical education office must be low enough to view people in the lobby.
- ☐ A control gate to separate the gymnasium, lobby area, and restrooms from the rest of the school during after-hours is required.

Multipurpose Room and Platform

Spatial Needs
Multipurpose Room
Platform
Chair Storage
Table Storage

Multipurpose Room

- ☐ The multipurpose room should have a ceiling height of 12–14 feet.
- ☐ A building service utility closet should be provided near the entrance to the multipurpose room for convenient lunch cleanups.
- ☐ Table storage and chair storage must be located adjacent to the multipurpose room.
- ☐ Exits from the multipurpose room must be sufficient to allow maximum seating.
- ☐ Toilet rooms and an electric water cooler should be near the multipurpose room to allow for public use.
- ☐ Audiences need to be able to hear and see presentations from all locations in the room.
- ☐ Ventilation equipment noise must not inhibit use of the space for auditorium purposes.
- ☐ Acoustical treatment is needed.
- ☐ Proper lighting and sound amplification are required.
- ☐ Each side of the risers at the multipurpose room floor level should be equipped with CCTV/data/voice/modem/electrical receptacles.
- ☐ Lighting, windows, fire alarm box, clock, and ceiling must be protected to prevent damage by balls.
- ☐ Outdoor play areas should be accessible from the multipurpose room. Children should not have to cross driveways or parking lots to access the play areas.
- ☐ An audio loop system should be provided for hearing impaired students; guidelines are available through the Division of Construction.
- ☐ An independent sound system should be provided in the multipurpose room.
- ☐ A call button to the main office should be provided.

Platform

- ☐ The platform should have a proscenium opening 24 feet wide. The depth is to be 15 feet deep. The platform floor is to be three risers above the multipurpose room floor. A full set of platform curtains is to be provided. An 8'x10' motorized projection screen is to be provided. Platform steps must NOT be carpeted.
- ☐ The platform must be accessible to the physically handicapped.
- ☐ Each side of the platform should be equipped with CCTV/data/voice/modem/electrical receptacles.

Chair and Table Storage

- ☐ Storage rooms are required for the storing the tables in the multipurpose room and folding chairs.

Food Services

- ☐ The kitchen is operated as a "finishing kitchen" and should include an area for dry storage, a manager's workstation, toilet facilities, preparation and serving area, and a receiving area for daily deliveries.
- ☐ A sheltered dock is preferred and should be separate from other school receiving.
- ☐ Delivery flow path must be clear of preparation area.
- ☐ The trash room should be separate from the rest of the building i.e. no common walls.
- ☐ The trash room should not be accessed from the kitchen.
- ☐ Air conditioning must be available at all times in elementary kitchens, storage, and office.
- ☐ Code requirements for lighting, surfaces, and equipment must be met. These requirements are included in the MCPS Facility Guideline Specifications.
- ☐ Windows must have screens.
- ☐ Receiving door should be 48” wide and must be self-closing with peephole and doorbell to manager’s office.
- ☐ An easy to mop, slip resistant quarry tile floor is required. Color of grout should be the same or darker than the color of the floor.
- ☐ There should be direct access to both the hallway and the multipurpose room to facilitate one-way circulation through the serving line.
- ☐ A minimum 9’ ceiling height is recommended.
- ☐ A building service closet with floor type mop basin shall be located outside the kitchen but readily accessible to the kitchen.
- ☐ A dedicated circuit is required for the cash register with under the floor conduit for connection to the computer in the manager’s office.

Serving Area

- ☐ A 26 ft. long serving line with 3-ft. clearance at each end should be provided.
- ☐ The color selection will be approved by Food Services.
- ☐ A single door refrigerator and microwave oven on a cart adjacent to the service area is needed.
- ☐ A wall clock and tack board should be located on a wall so it is visible from the serving line wall.

Walk-in Cooler/Freezer

- ☐ A 7' 9" x 8' 8 1/2" cooler is required.
- ☐ A 7' 9" x 10’ 8 1/2" freezer with a height of 8' 6" is required.
- ☐ A mobile polymer shelving and dunnage is required.
- ☐ A roof top compressor is required.

Dry Storage

- ☐ The recommended dimension for the dry storage area is 12’ x 16’.
- ☐ A mobile polymer shelving and dunnage is required.
- ☐ Adequate ceiling height for top shelf storage should be considered.
- ☐ This space should be totally secure and free of roof access ladders or electrical panels.
- ☐ Locking cabinets for chemical storage should be provided.

Manager‘s Office

- ☐ Visibility to delivery and serving area is required.
- ☐ The office should be located away or protected from outside door draft.
- ☐ Desk (NIC), file (NIC), telephone, tack board, and LAN access are required.

Toilet Room

- ☐ A hand sink with soap and towel dispenser, sanitary napkin disposal, and 3 full-height lockers are required.

Preparation Area

- ☐ A roll-in double convection oven is required.
- ☐ An oven cart and dolly (2 each) are required.
- ☐ A half size range is required.
- ☐ A heat removal exhaust hood is required.

- ☐ Work tables, one 6 ft. and the other 8 ft. with 2 drawers each, under the table are needed.
- ☐ Arlington wire baskets (500 each) and dollies (10 each) are required.
- ☐ Hand sink with pedals and soap and towel dispensers that meet the code requirements are needed.
- ☐ A three compartment sink, 24” x 24” x 14”, with 24 inch drainboards, is required. Disposal in drainboard with pre-rinse spray is required.
- ☐ A 6-foot louvered shelf above with hooks is required.
- ☐ A mobile warmer to accommodate Arlington baskets is needed.
- ☐ Two utility carts are required.

Administration suite

Spatial Needs
General Office
Workroom
Code Red/Code Blue Command Center
Principal's Office
Assistant Principal's Office
Conference Room
Counselor's Office
Telephone Room
Storage Room
Records Room

- ☐ The administration suite must be located with good access from the main entrance of the school and visual oversight of the main entrance and bus drop-off area.
- ☐ The suite must be a natural first stop for visitors to the school and must, therefore, have direct corridor access. A security vestibule must be designed so that all visitors must enter the general office to check in before entering the school.
- ☐ Spaces need to be arranged for student and visitor flow and for efficient use by office staff.
- ☐ The general office is to be treated as the center of the administration suite with direct access to the principal's office, the workroom, and the health suite.
- ☐ A coat closet is to be provided for office staff and visitors.
- ☐ The Administration suite should be carpeted.
- ☐ Sufficient electrical outlets are to be provided (where feasible, quadruplex outlets may be utilized) as well as CCTV receptacle for the general office, principal's, and assistant principal's offices.
- ☐ A glass display case should be located in the vestibule of the Administration suite entrance.
- ☐ The administration suite should be designed with separate toilet rooms. If the school chooses, one of these toilet rooms may be located in the principal's office.

General Office

- ☐ A counter should be provided near the entrance to greet and separate visitors from staff and to provide a place to write.
- ☐ Space for two to three staff persons is required behind the counter.

- ☐ The general office should be equipped with a staff bulletin board.

Workroom

- ☐ The location of mailboxes should not create congestion by impeding the smooth flow of traffic in the general office and hallways.
- ☐ Cabinetry appropriate for storing a variety of office and school supplies should be designed along one wall of the workroom.
- ☐ A portion of countertop is to be more than 30 inch wide to accommodate a large paper cutter.
- ☐ Space adequate for a large copying machine with necessary electric service and ventilation is required.
- ☐ A sink is needed in the workroom.
- ☐ There should be direct access to a corridor from the workroom.
- ☐ The workroom should be treated acoustically to keep machine and work noises at low levels.

Command Center

- ☐ An interior room in the school needs to be designated as the command center for Code Red/Code Blue emergencies. In many schools, the workroom in the administration suite may serve this purpose. The room cannot be on an outside wall.
- ☐ The room designated as the command center must have all data and communication equipment including data, cable, phone, and public address (PA) system.
- ☐ The PA console should be located in the room that is designated as the command center.
- ☐ Window coverings such as mini blinds or roller shades must be provided for all windows and doors to the command center.
- ☐ In secondary schools, the security camera monitors should be located in this area.
- ☐ The space designated as the Command Center must be large enough to accommodate up to six staff persons.
- ☐ Storage space is needed for the Code Red/Code Blue emergency kit.

Principal's Office

- ☐ This office should be carpeted.
- ☐ This office should be equipped with a tack board and two-shelf adjustable bookcases under the windows. Each shelf must be able to hold a 12 inch notebook upright.
- ☐ The office should be directly accessible to the conference room through a connecting door.
- ☐ This office should have good visible access of the main entrance and to the bus drop-off area.

Assistant Principal's Office

- ☐ This office should be carpeted.
- ☐ This office should be equipped with a tack board and two-shelf adjustable bookcases under the windows. Each shelf must be able to hold a 12 inch notebook upright
- ☐ This office should have good visible access to the main entrance and bus drop-off.

Conference Room

- ☐ The conference room should be carpeted.
- ☐ The conference room is to have a whiteboard, a tack board, and one bookcase.
- ☐ The conference room should be equipped with a telephone jack.
- ☐ Casework should be provided on one wall with two, two-drawer file cabinets for confidential records, letters forms, etc.

Counselor's Office

- ☐ This office should be carpeted.
- ☐ The counselor's office should be easily accessible from the classrooms and near, but not a part of, the administration suite and should have a window.
- ☐ This office needs a whiteboard, tackboard, telephone, and bookshelves.

Telephone Booth

- ☐ A small room where a teacher can talk privately on the telephone is required. (The room needs a door with a window, or a "phone in use" light.)
- ☐ This room should have a small built in countertop and room for one chair.
- ☐ This room should be carpeted.

Storage and Records Rooms

- ☐ Two lockable rooms are needed for storage of office supplies and student records.
- ☐ The records room needs space for lockable file cabinets.

2nd Floor Workroom

- ☐ This room requires appropriate electrical wiring and ventilation to house a copier for staff use.
- ☐ This room requires a work counter and cabinets under and over the counter for storing supplies.

Staff Development Area

Spatial Needs
Staff Development Office
Reading Specialist Office
Training/Conference Room

Staff Development Office

- ☐ The staff development area should be located near the classrooms.
- ☐ The office should include one workstation.
- ☐ This office needs a whiteboard, tack board, closet, and video, voice, and data outlets.

Reading Specialist Office

- ☐ The staff development area should be located near the classrooms.
- ☐ The office should include one workstation.
- ☐ This office needs a whiteboard, tack board, closet, and video, voice, and data outlets.

Training/Conference Room

- ☐ This room will be used for staff training needs.
- ☐ This room should include ample shelving for training materials.
- ☐ The room should be able to comfortably accommodate up to 12 participants seated around a conference table.
- ☐ A whiteboard and tack board should be installed.
- ☐ The wiring for an overhead LCD projector should be provided.

Health Services Suite

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

- ☐ The Health Services Suite should be in complete compliance with COMAR 13A.05.05.10A.
- ☐ The health suite must meet accessibility requirements of the ADA, and at a minimum, include spaces for waiting, examination and treatment, storage, resting, a separate room for private consultation and for use as the school health services professional's office, a toilet room, and lockable cabinets for storing health records and medications.
- ☐ A designated school health services professional must be involved in the planning of the health services suite.
- ☐ The architect should refer to MSDE document, *School Health Services,* June 2002 for specific utility information.
- ☐ The suite should be designed to provide easy visual supervision of all the spaces by the health services professional. The suite should be laid out so that an additional workstation for a health professional can be positioned near the treatment and waiting areas.
- ☐ In addition to access to the general office, the health services suite also must have a window into the general office so that office staff may monitor the room when heath staff is unavailable.
- ☐ The health room also must have a door to the corridor.
- ☐ Ventilation is important throughout the health suite. .
- ☐ The countertops should be seamless to aid in maintaining sanitary conditions.
- ☐ The floor finish should be an easily cleaned non-absorbent material. Carpet should not be used in any areas of the health suite.
- ☐ A non-porous ceiling material should be used. Vinyl-coated ceiling tile or painted drywall is an acceptable choice.
- ☐ If any of the areas are enclosed then glazed walls areas should be provided.

- ☐ The health suite requires wall and base cabinets, lockable file cabinets, for storing health records. A portion of these cabinets must be lockable to store medications, medical supplies, and equipment.

Waiting Area

- ☐ The waiting area should have space for four to eight chairs.
- ☐ A small tack board should be provided in the waiting area to display health care and other information of importance to students and staff.

Treatment/Medication Area

- ☐ This area should be adjacent to the waiting area to facilitate the efficient flow of students.
- ☐ This area should have a kitchen type sink with cabinets above and below (including a locked medicine cabinet), a 34-inch high countertop, and a small residential style refrigerator/freezer to store medical supplies and foods.
- ☐ A minimum of 12 linear feet of wall and base cabinets should be provided.
- ☐ The freezer should have an icemaker.
- ☐ The treatment area also requires a computer.

Office/Health Assessment Room

- ☐ The room requires one computer, fax machine, and electronic connection and physical proximity to a copy machine.
- ☐ The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- ☐ A small sink, with cup, towel, and soap dispensers should be provided.

Health Assessment/Isolation Room

- ☐ The spaces used for consultation and examinations must be enclosed with sufficient acoustical isolation to ensure complete privacy and confidentiality.
- ☐ A small sink, with cup, towel, and soap dispensers should be provided.

Rest Area

- ☐ This area should not be a fully contained room but rather an area that can provide privacy for each cot with a draw curtain on a ceiling track.
- ☐ The rest area needs space for two to four cots, and one bedside cabinet.
- ☐ There should be a separate privacy room within the rest area, with a door and space for a cot and a single pedestal desk and chair.
- ☐ In the rest area and privacy room, supplementary power ventilation capable of 20 changes per hour should be provided, with control by means of a separate switch within the health suite.

Toilet Room

- ☐ One ADA toilet should be provided.
- ☐ The toilet room should be accessed without having to go through another functional space in the health suite such as a rest area.
- ☐ Ideally, students should be able to enter the health suite solely to use the toilet room without disrupting other activities.

Storage Room

- ☐ The storage area is to have space sufficient for a four drawer locked file cabinet, a wardrobe for coats, and space for storing large items such as wheelchairs.

Staff Lounge

- ☐ The staff lounge is a place for staff members to relax, study, plan, and think together.
- ☐ Two toilet rooms are required just outside of the staff lounge. The toilet rooms may be labeled "adult" rather than "male" and "female" in an elementary school.
- ☐ The staff lounge should contain a compact built-in kitchen with six linear feet of counter space for a microwave and sink and a space for a refrigerator (NIC).
- ☐ A clock should be provided.
- ☐ A small, enclosed room with countertop and space for one chair is needed for a telephone.
- ☐ Ventilation must be provided. An operable window in the staff room is preferred.
- ☐ An area should be designated for a computer with jacks for computer & telephone (modem).

Building Service Facilities

Spatial needs
Building Service Office
Locker/Shower area
Compactor/Trash Room
Recycling Room
General Storage & Receiving Area
General Storage
Building Service Outdoor Storage
Building Service Closets

Building Service Office

- ☐ The entire building services area should be located adjacent to the general receiving area.
- ☐ The office should be designed as a general office that can accommodate two staff members with two desks and appropriate wiring for computers, phones, etc.

Locker/Shower Area

- ☐ A locker area must be located near the receiving area.
- ☐ Six full-size lockers should be provided in the locker area.
- ☐ The locker area should be designed with an enclosed toilet room and shower room for building service staff use.
- ☐ An ENERGY STAR stackable washer and dryer is required in this area.

Compactor/Can Wash/Trash Room

- ☐ This room needs to be completely separate from the kitchen spaces with no common walls.
- ☐ Trash trucks must have access to this room.
- ☐ The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.
- ☐ Hot and cold water should be available for flushing and cleaning.
- ☐ The room should be designed to be pest free and well ventilated.
- ☐ Floors should be sloped so that wash down stays within the room and goes down the drain.

- ☐ The compactors need to be installed with enough clearance away from the wall to permit staff to access the equipment from all sides.
- ☐ A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- ☐ The room should be designed with a ramp to allow trashcans to be rolled to the dock.

Recycling Room

- ☐ The recycling room should be located next to the trash room. This room will be used for the sorting of recycled items.
- ☐ Space for a recycling dumpster for cardboard is needed outside of the recycling room (approximately 8'x8').
- ☐ This room needs to be completely separate from the kitchen spaces with no common walls.
- ☐ Trash trucks must have access to this room.
- ☐ The room should be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.
- ☐ Hot and cold water should be available for flushing and cleaning.
- ☐ The room should be designed to be pest free and well ventilated.
- ☐ Floors should be sloped so that wash down stays within the room and goes down the drain.
- ☐ A roll-up door for trash transfer to trucks, steam cleaning equipment, and trash collection containers are needed.
- ☐ Ramp should allow trashcans to be rolled to the dock.

General Storage and Receiving Area

- ☐ The receiving area should be enclosed, floor to ceiling, with a chain link fence.
- ☐ Flexible shelving is required but should not occupy more than one third of the area.
- ☐ This area must be secured.
- ☐ Good lighting and easy access to materials being stored are required.
- ☐ Electrical outlets, upgraded lighting and ventilation must be provided in this area.

General Storage

- ☐ Flexible shelving to accommodate books, teaching aids, large size (24" x 36") paper, and other instructional supplies is required.
- ☐ Good lighting and easy access to materials being stored are required.
- ☐ Electrical outlets, upgraded lighting and ventilation must be provided in all large storage rooms for future flexibility.

Building Service Outdoor Storage Room

- ☐ Outdoor storage is to be near the service area and is to be suitable for heavy mowing, snow removal, and other outdoor equipment.
- ☐ The dimensions of the outdoor storage area must be able to accommodate two tractors side by side. (one tractor is approximately 9’ long by 7.5’ wide and a second smaller tractor) and other equipment.
- ☐ A rolling garage style door and a regular door must be provided.
- ☐ A ramped and paved driveway is required for the tractor so that it can access the sidewalk and driveways of the school during snow removal.
- ☐ Electrical service and lighting inside must be provided. Access to the light switches must be available at both entrances.
- ☐ Proper ventilation for storage of gasoline is required.

Building Service Closets

- ☐ At a minimum, there should be a building service closet for each 19,000 gross square of the facility. In addition, there should be a building service closet on each floor and each wing of the facility.
- ☐ The closets should be a minimum of 25 sq. ft.
- ☐ The building service closet must accommodate a minimum of one utility cart.
- ☐ The closet requires shelving for cleaning supplies and a mop/broom holder is required.
- ☐ The closet requires a floor mop sink with hot and cold running water and a floor drain.
- ☐ Where feasible, closet doors should swing outward in order to maximize the storage area and provide easier access to items within the closets.

Site Requirements

- ☐ The architect should consider the architecture of the neighborhood in designing the building
- ☐ The site should be designed to provide a clear view of all play areas and to facilitate supervision from one location.
- ☐ Protective fencing may need to be provided near heavily wooded areas, busy streets, steep hills, parking lots and turnaround areas.
- ☐ Metal drains/grates should not be located in the playing fields, paved play areas and mulched playground equipment areas.
- ☐ Paved areas and fields must be as level as possible. Water should not collect on paved areas or in mulched areas. The architect should consider the architecture of the neighborhood in designing the building.
- ☐ The design should retain as many trees as possible in order to buffer the school and the playing fields.
- ☐ Pedestrian access must be provided from the surrounding neighborhoods.
- ☐ An unimproved area on-site should be designated to serve as an environmental study area in the future.
- ☐ A covered area for students in the bus loading area should be provided.
- ☐ Space for buses to load at one time is needed. The number of buses will be reviewed during the design phase in consultation with the Department of Transportation.
- ☐ Bike racks should be provided near the building.
- ☐ Playground equipment areas should not be located at the bottom of hills unless a provision is made to channel water away from the equipment areas.

Driveway and Service Drive

- ☐ The architect/engineer should refer to the MCPS Facility Guideline Specifications when designing the driveway, bus loop, service drives, etc.
- ☐ Bus traffic should be separated from car traffic at all times, when possible. Bus loading zones should be able to accommodate the entire student body.
- ☐ A student drop off area should be provided and must be separate from the bus loop area.
- ☐ All driveways must be arranged so that children do not cross them to get to the play areas.

- ☐ Care for safety of students must be exercised in developing the driveways including use of safety rails in the bus loading area.
- ☐ Pedestrian access to the school facilities should be designed to make the best use of community right-of-ways and avoid crossing of loading zone areas.
- ☐ The site must comply with the most current ADA or COMAR regulations, whichever is most stringent.
- ☐ Site access must be provided to comply with fire protection and storm water management.
- ☐ Driveway aprons are to be perpendicular to the centerline of the street; and if there is an intersecting street on the opposite side from the proposed driveways, the driveway apron should line up with the intersecting street.
- ☐ Driveways should be located so that vehicle headlights do not project into adjacent homes.
- ☐ A service drive is required to service the kitchen, boiler room, and general delivery area. The architect should refer to the MCPS Facilities Guide.
- ☐ Site access must be provided to comply with fire protection and storm water management regulations.

Parking

- ☐ Ideally, a minimum of 80 parking spaces should be designed initially for a school with regular staffing allocations, with future expansion possible. At schools with class-size reduction, 100 parking spaces should be provided.
- ☐ The parking area should be designed to maximize safety and minimize speed.
- ☐ Adequate lighting should be provided.
- ☐ Parking area should have two exits.
- ☐ Guardrails or bollards are to be installed to protect fields and play areas.

Landscaping

- ☐ Planting should include screen planting and other planting needed for erosion control.
- ☐ Existing plant stock, if on site, is to be evaluated for reuse and protected accordingly.
- ☐ Landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.

- ☐ Consideration should be given to safety and security when selecting plant materials.
- ☐ Provision for outdoor watering must be included.
- ☐ The landscaping plan should include areas for outdoors environmental education programs.

Physical Education Site Requirements

The items described below are for a school that meets the preferred site size of 12 usable acres. At schools with smaller sites, the architect is to work with MCPS staff, including the Physical Education Curriculum Coordinator, Safety Director, and school staff to determine layout of the play areas. The outdoor physical educational instructional space should not be compromised for playground equipment.

Softball Fields

- ☐ Two softball fields should be provided with the following design requirements:
- ☐ 250' radius, with a soccer field superimposed should be provided if possible. See below for the soccer field dimensions.
- ☐ The site size will determine the number and dimension of the softball fields.
- ☐ Softball fields should have metal benches protected by fencing for each team's use.
- ☐ The fencing and benches should not interfere with soccer field usage.
- ☐ The softball backstops (2) shall be in diagonal corners of the field or in corners on the same side. See the diagram in the MCPS Facilities Guideline Specifications.
- ☐ Softball infields are not skinned for elementary schools. However, one field may be skinned if it does not significantly impact the soccer playing area.

Soccer

- ☐ The site size will determine the size of the soccer fields. The elementary school size soccer field is 150'x240' however the minimum size field should be 105' x 180'.
- ☐ No permanent goals or temporary goals should be installed on the soccer fields.

Paved Play Areas

- ☐ Two paved areas, 80' x 100' should be provided if the site permits.
- ☐ If located adjacent to one another, a grassy strip of at least 20' should be between the two paved areas.
- ☐ One area should have four basketball goals with appropriate striping (see diagram in the MCPS Facility Guideline Specification).

☐ A second area, designated for primary use, shall be striped according to drawings provided in the MCPS Facility Guideline Specification. On small sites, this pave area should be fenced for use by Grade Kindergarten students.

Kindergarten Paved Play Area

- ☐ A third paved area, at least 40’x 60’ but preferably 80' x 100', is desired, is needed for the Kindergarten students.
- ☐ This area needs to be located adjacent to the Kindergarten playground (mulched) area and close to the other paved play areas.
- ☐ This area requires a fence around it or adequate separation from the other paved play areas.
- ☐ The area will be striped according to drawings provided in the Facility Guideline Specification.

Playground Equipment Areas (mulched areas)

- ☐ One or two areas shall be provided near the playing fields and large paved play area for playground equipment. Each area should be approximately 40’x40’. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- ☐ The area shall be level, bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for these areas.
- ☐ An underground drainage system must be provided.
- ☐ The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

Kindergarten Play Area (mulched area)

- ☐ A mulched kindergarten play area of 40' x 60' should be located adjacent to the kindergarten paved play area described in the physical education section for playground equipment. The size and shape of the play area will be developed during the design process in consultation with MCPS staff.
- ☐ The area shall be level bare ground, unseeded, and no sod. MCPS will provide equipment dimensions for this area.
- ☐ Protective fencing should enclose the area.
- ☐ An underground drainage system must be provided.
- ☐ The loose-fill surfacing material (engineered wood fiber) must meet ADA requirements. A border must be provided to contain the filler. The surfacing materials must meet or exceed safety specifications for shock absorbing qualities as outlined by US CPSC.

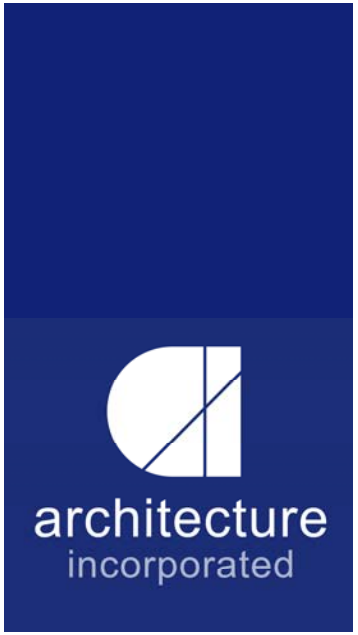
Prekindergarten Play Areas

- ☐ If the school has a prekindergarten, Head Start, or Preschool Education Program, then a separate and fenced outdoor play is required.
- ☐ This area must be adjacent to the classrooms with access directly from the classrooms.
- ☐ If the school does not have a prekindergarten program than the outdoor play area should be master planned so that it can be added on at a later time.
- ☐ The prekindergarten play area should include a 40’x40’ paved play area and a 40’x40’ mulched area. The architect will consult with the MCPS staff on the design of the playground equipment.

Additional Program Requirements

☐ If there is major site work on this project, the design team should review how the arrival and drop off of disabled students are accommodated to meet current accessibility requirements.

☐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