MCPB
Items 2 & 3
7/8/04

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

June 30, 2004

MEMORANDUM

TO: Montgomery County Planning Board

VIA: John A. Carter, Chief, Community-Based Planning Division JAC

FROM: Sue Edwards, I-270 Team Leader (301-495-4518) SE
Community-Based Planning Division

SUBJECT 1: Forest Conservation Plan: Northwest Cluster Elementary School No. 7 - Dairymaid Road and Mateny Drive, Germantown Master Plan

SUBJECT 2: Mandatory Referral No. 04305-MCPS-1: Northwest Cluster Elementary School No. 7 - Dairymaid Road and Mateny Drive, Germantown Master Plan

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STAFF RECOMMENDATIONS:

Forest Conservation Plan Recommendations: Environmental Planning staff recommends **approval** with the following conditions:

1. No encroachment into stream buffers for stormwater management facilities, or sediment control facilities, without permission of the Planning Board, except for necessary outfalls and temporary sediment control facilities in non-forested portions of stream buffers. If at later stages of stormwater review and design it is determined that a stormwater management facility, or sediment control facility, is not properly sized and it must be enlarged to accommodate the proposed drainage areas, the applicant will have to find additional space outside of the stream buffer. This may mean the reconfiguration of site layout, and loss of developable area outside of stream buffers.

2. Compliance with the stormwater and sediment control regulations of the Montgomery County Department of Permitting Services (MCDPS).

3. Compliance with the conditions of the approval of the Forest Conservation Plan prior to MCDPS release of sediment and erosion control permit.

Mandatory Referral Recommendations: Staff recommends **approval** with the following comments:

1. The existing soccer field and playground will be permitted and maintained by the M-NCPPC until Sunday, November 21, 2004, and turned over to Montgomery County Public Schools (MCPS) control on Monday, November 22, 2004.

2. MCPS will not preclude, and will participate in the planning and construction of a future trail connection between Northwest Cluster Elementary School No. 7 and South Gunners Branch Local Park.

3. MCPS will make modifications to the existing playground equipment suitable for pre-school children when building the school playground.

PROJECT SUMMARY

Northwest Cluster Elementary School No. 7 is located at Dairymaid Drive and Mateny Road in the Village of Clopper Mill portion of Germantown, Maryland (Attachment 1: Vicinity Map). This school is needed to relieve overcrowding in the Germantown Elementary and Spark M. Matsunaga Elementary School service areas. The opening date for the new 640-student school is September 2006.

The Northwest Elementary School No. 7 has been registered with the U.S. Green Building Council and is the first school in Maryland to be registered with the Leadership in Energy and Environmental Design (LEED). The project goal is to obtain a Gold rating in the LEED certification program. The school design will be a prototype for the new Clarksburg Town Center elementary school to be constructed in this same timeframe.

The building program consists of 29 teaching stations with a core capacity of 740 students. The basic design for the school includes 25 classrooms with 4 additional classrooms and a gymnasium included as an add-alternate.

The 13.71-acre site was acquired at no cost as a condition of subdivision. The land was transferred in two parcels to the Montgomery County Public Schools; one parcel has been leased as an interim use to the Maryland-National Capital Park and Planning Commission for use as playfields and a playground.

The adjoining playfield will be reconstructed and used for outdoor recreation during school hours and for community use during periods when school is not in session. When the reconstruction is completed, school maintenance personnel will assume responsibility for the field and playground. The existing parking lot for the play area will be closed during construction; on-street parking along Dairymaid Drive for playground patrons will be available during this period.

BACKGROUND

Description of Site

The school site was selected among four candidate sites in May 2002. The site is located on the southwest corner of the intersection of Mateny Road and Dairymaid Drive (see Attachment 2: Site Plan). Vehicular access to the school will be from Dairymaid Drive which is classified as an arterial roadway with a right-of-way of 80 feet. The site is bounded on the northeast by Dairymaid Drive; on the south by a stream buffer and stormwater management facility, and on the west by the Farmingdale Estates residential development. The site is covered with grass cover; and there are no forest stands outside of the protected stream buffer.

Project Description

MCPS intends to build a new elementary school to accommodate growing school enrollment in the Germantown community. The overall building program (approximately 82,500 square feet) consists of a base building (73,200 square feet). with four additional classrooms and gymnasium (9,300 square feet) as an add-alternate. The new building will be in full compliance with the Americans with Disabilities Act (ADA). The design establishes a core capacity of 740 students for grades K through grade 5. Each floor will have two break-out rooms centrally located in the classroom clusters This design will encourage a flexible approach that accommodates changing educational programs, interdisciplinary teaching methods, and efficient and cost-effective use of space. The multi-purpose room with stage, instructional media center and gymnasium will be accessible to the community for use during non-school hours.

The new school will be a partial two-story building with a steel frame structure with brick and metal cladding on exterior facades (see Attachment 3: Exterior Elevation Drawings). The academic classrooms are clustered such that the first level contains pre-kindergarten through grade 2 and classrooms on the upper floor are grades 3-5. The administrative suite is located at the front of the building to allow supervision of the main entrance, lobby, and the bus loop. The secondary entrance on the west side can be used to access the gymnasium and multi-purpose room after school hours; parking for these community uses is immediately adjacent to the secondary entrance.

The building forms an enclosed courtyard that will be used as an environmental laboratory. The perimeters of the courtyard have two hours of sunlight; other portions experience approximately four to six hours of sunlight. The landscape plan depicts where pathways and landscape beds are to be placed. Portions of the courtyard are reserved for student planting beds (to be constructed after the school is occupied). The most noticeable feature is a Council Ring to be constructed from salvaged Black Rock culvert stones and assembled to form a round seating area. A rain garden combining soil absorption and appropriate plantings will also be established in the first phase of the school project (see Courtyard Plans).

There will be approximately 75 parking spaces on site. The amount is considerably less than provided in new elementary schools such as Spark M. Matsunaga in Germantown which was built with 98 spaces. The new school will utilize on street parking along Dairymaid and Mateny Roads. The school will also advocate that visitors from the neighborhood walk to activities at the school.

The new building and site circulation will establish a separate loop for car and bus traffic. Student drop-off and faculty/visitor parking will enter from Dairymaid Drive approximately 250 feet from Mateny Road. A second access point on Dairymaid Drive will accommodate bus drop-off and additional parking.

Play areas are established adjoining the pre-kindergarten and kindergarten areas. An outdoor learning area is sited overlooking the reforestation area, wetlands, and stormwater facility. The area for hard surface play is on the western edge of the building adjacent to the playfield to be restored.

Construction is expected to take approximately 18 months with occupancy of the school expected in September 2006. During construction the trailer and construction staging area will be contained in the front of the building site. Construction will take place between 7:00 a.m. and 5:00 p.m. in accordance with the Montgomery County Noise Ordinance.

ANALYSIS

Master Plan

The use of this site for a public school conforms with the Germantown Master Plan. Northwest Elementary School No. 7 is located in analysis area CL-9 of the Germantown Master Plan, adopted and approved in 1989. The general location of an elementary school site to serve the Clopper's Mill community is depicted in Attachment 4: Master Plan.

Transportation

Based on our review of the Local Area Transportation Review analysis submitted recently for the subject mandatory referral, Transportation Planning staff finds that the proposed construction of the Northwest Elementary School No. 7 will not have adverse effects on the roadway system serving the site.

The existing roadway system and sidewalks in the vicinity of the site will provide adequate vehicular capacity and safe pedestrian accessibility to the school. Also, the site access points and internal vehicular/pedestrian circulation system as shown on the site plan are adequate to safely accommodate the vehicular/pedestrian activities associated with operation of the subject elementary school.

Landscaping

The landscape plan for this "green school" uses a hierarchy of plant types with common maintenance requirements. This hierarchy follows from Lawn Type I (regular mowing) through Lawn Type II (infrequent mowing) to various meadows and planting beds for native plant materials and bio-retention areas to be determined by the project civil engineer and landscape architect. The landscape plan specifies shade trees be placed in landscape islands within the parking areas as required of private developers in Montgomery County. The attention to landscape details is a new venture for MCPS and will help the new school to visually fit within an existing residential community.

Staff recommends substituting the beds of liriope (*Liriope muscari*) groundcover with comparable amounts of perennials and grasses specified by the landscape plan. Use of only native plant materials, in lieu of liriope, would increase the site's biological connections and further enhance the environmental conditions of the site by attracting wildlife such as birds and butterflies.

Recreation Facilities

Soccer Field

The soccer field and playground at South Gunners Branch Local Park were constructed in the late 1980's. The goal at that time was to utilize vacant school sites for recreation uses. At such times when the sites were developed with school facilities, the recreation facility would revert to MCPS and become part of the school inventory.

The orderly transfer of maintenance responsibilities for the playfield and playground from the M-NCPPC to MCPS should take place on or about Monday, November 22, 2004 when the fall soccer season is completed (see Attachment 5: Memo from Park Planning and Resource Analysis). The soccer field would re-open when the school is ready for occupancy with field assignments and scheduling made by Community Use of Public Facilities (CUPF). In the interim, those users currently using the South Gunners Lake field will be shifted to other fields within the M-NCPPC and CUPF inventory.

After transfer to MCPS, the soccer field would be closed in order to construct the geo-thermal well heating system. The well drilling and installing the associated underground pipe system is expected to take six months. When completed, the soccer field would be restored to the current condition or better and re-opened for use for the fall 2006 permitting season.

Playground

The existing playground along Dairymaid Drive is used by the community; MCPS has verbally committed to retaining a playground on the site. The equipment is aging to the point where some elements should be replaced in the next 2-3 years. MCPS should consider modernizing the equipment by removing those pieces not suitable for pre-school and elementary age users. Replacement pieces could be directed to the need for pre-school level play equipment because the new school play equipment will be directed to serving elementary-aged users.

Proposed Trail
The initial South Gunners Branch Local Park plans depicted a combination asphalt and boardwalk path connecting the park with the future school. The boardwalk was necessary due to crossing streams and encroaching on wetland buffers. Although the talk is environmentally challenging, the goal of a connection between park and school should continue to be pursued. The exact trail alignment is yet to be determined. Staff recommends that MCPS accommodate and play an active role in planning and constructing any future trail connection between the portions of the site used for community recreation and the portions used for the school facility.

Environment

Forest Conservation Law Compliance
Environmental Planning staff has reviewed the applicant's Preliminary Forest Conservation Plan (Attachment 6). The 13.71-acre site includes 3.30 acres of forest, all of which the applicant is proposing to retain. By retaining all the existing forest the applicant will meet the requirements of Section 22A-12(b) and qualify for a 0.56-acre credit for retaining forest above the conservation threshold. The project has no afforestation or reforestation requirements.

The project has an approved Natural Resources Inventory and Forest Stand Delineation (NRI/FSD)(# 4-04250 of May 10, 2004). The NRI/FSD lists fourteen (14) specimen and twenty-one (21) significant trees, most of which are within a stream valley buffer running along the southern portion of the property. The total stream buffer area is 4.49 acres all of which will be protected.

Environmental Guidelines
The site is not located within a Special Protection Area (SPA). Part (2.02 acres) of the stream valley buffer along the southern portion of the site is within the 100-year floodplain. The site also contains 3.63 acres of wetlands of which 3.16 acres are forested. All of these resources will be protected in accordance with environmental guidelines.

Water and Sewer
Public water is available immediately from an existing 12-inch water main on Dairymaid Drive adjacent to the site. Existing 8-inch public sanitary sewer is available within the stream buffer south of the property.

Stormwater Management
Stormwater management quantity control is provided in the adjacent existing stormwater management area. Stormwater quality control will be provided on the school site. The applicant has submitted a Stormwater Management Concept Plan to the Montgomery County Department of Permitting Services for its review. This concept shows all roof run-off being diverted to the north and east sides of the school where it will be collected in pipes and discharged to the proposed infiltration trench for treatment. On-site storage and treatment facilities will be used; the concept plans shows all stormwater management and sedimentation control facilities being kept out of environmentally sensitive areas.

Staff is concerned that sediment and erosion control measures proposed for the site may need to be enlarged to accommodate the proposed drainage areas at a later stage of stormwater review and design. Any future expansion of these facilities may encroach into the stream valley or wetland buffers. Staff has placed a condition in the Forest Conservation Plan approval that if resizing of the sediment and erosion control facilities becomes necessary in the future, the case will be referred back to the Planning Board.

Water Quality
The project site lies within the Gunner's Branch of the Middle Great Seneca Creek Watershed. Gunner's Branch is a large tributary that drains portions of Germantown that have relatively new developed areas with stormwater controls. Regional controls have been used in some areas. The *Countywide Stream Protection Strategy* (CSPS, 1998) rates stream and habitat conditions within the watershed as 'fair'. CSPS lists watershed imperviousness at 23.4%, based on data available at that time. The project will add 3.34 acres of impervious surface to the site. This will bring site imperviousness to 24.3%, well below the typical imperviousness for the PD-4 base zone.

Leadership in Energy in Environmental Design (LEED)
Montgomery County Public Schools (MCPS) intends for the new Northwest Elementary School No. 7 at Dairymaid/Mateny Road, Germantown, Maryland, to be the first Gold Certified school in Montgomery County. It will be the facility on which future new schools and renovation/modification of existing schools will be modeled. In keeping with this concept, conservation of energy is a primary design factor (see Attachment 7: LEED scoring list).

The importance and consideration placed on energy conservation is reflected in the configuration and orientation of the building, the selection of materials, and the mechanical/electrical systems used. The new building will be designed to exceed ASHRAE 90.1-2001 energy requirements and BOCA Basic Energy Conservation codes as well as Montgomery County energy conservation codes. The design will incorporate the ANSI/ASHRAE/IES Energy Efficient Design for New Buildings. Energy efficient design features that will be incorporated into the project are as follows:

- Air lock vestibule at entry.
- An efficient relationship of fenestration and building materials to produce an efficient building envelope.
- Double-glazed thermal break windows.
- Operable windows for natural ventilation in all classrooms.
- Solar loads controlled by the use of high performance, spectrally selective, insulating glass units.
- An HVAC system that is zoned with individual room thermostats and controlled by MCPS Energy Management System.
- Lighting and power electrical systems that will utilize techniques of energy conservation.
- Plumbing systems that minimize the use of water including domestic hot water requirements.
- Plumbing systems that incorporate the use of graywater for toilet flushing in certain areas.
- Weather-tight windows and doors.

PUBLIC OUTREACH

MCPS convened a Facilities Advisory Committee to review various schematic design options for the project beginning in November and December 2003. Representatives from the surrounding elementary school and Parent Teacher Associations were included. The final schematic design was approved by the Board of Education in April 2004. The project team also briefed the Germantown Alliance (April 14, 2004) to build support for the new school project and to showcase the energy and environmental features.

Staff mailed 257 notices to residences adjacent to the school site in the communities of the Villages of Clopper Mill, Farmingdale Estates, and Pleasant Fields. Staff spoke to one person by telephone in support of the school project.

CONCLUSION

This school project is exemplary in its design within an existing residential community. Use of LEED standards and technology establishes great community support for the school, and the resulting reduction of over-capacity conditions at Matsunaga and Germantown elementary schools. The community anxiously awaits the opening of this facility.

Staff recommends approval of this mandatory referral and transmittal of comments to MCPS.

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Attachments:

1. Vicinity Map
2. Site Plan
3. Exterior Elevations
4. Master Plan
5. Park Planning and Resource Analysis Memo
6. Environmental Planning Memo
7. LEED Scoring List