

Montgomery County Public Schools
Department of Facilities Management

Northwest Area Elementary School #6

Design Feasibility Analysis



November 1998

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Northwest Area Elementary School #6

Design Feasibility Analysis

Introduction/Background

As a part of the FY1999-2004 Capital Improvements Program (CIP) the Board of Education requested funds to construct a new elementary school to address an impending shortage of elementary level classroom seats in the Northwest High School Cluster. The initial request proposed opening the new elementary school for the 2000-2001 school year. The project was subsequently deleted from the final approved Master Plan last May as a result of County Council action. The superintendent of schools has recommended to the Board of Education that funds be requested for the new school in the upcoming FY 2000 capital budget, along with an amendment to the FY 1999-2000 CIP to open the school in 2001.

Substantial enrollment growth continues to occur in portions of Germantown as a result of rapid housing development in portions of the Germantown community. Currently, over 3,000 housing units are under development in the McNair elementary school service area. Projections of housing starts indicate that this trend will persist beyond the year 2004.

This year McNair Elementary School's enrollment is 792 students, with a school capacity of 719. McNair elementary's enrollment is projected to increase by over 50 students each year for the next six years as new homes occupy. Moreover, enrollment at McNair is projected to reach 1,140 students by 2004, if no new elementary level classroom seats are made available and boundaries are not redrawn. This amount represents a six year increase of some 350 students. Further, these projections only incorporate approximately half of the new housing units forecasted to be constructed in the next six years, as construction of new dwelling units continues in undeveloped sections of the service area.

McNair elementary school has four (4) relocatable classrooms on site this year to address overutilization issues. It will be necessary to add more relocatable classrooms each year until the new Northwest Elementary School #6 opens. Unfortunately, site constraints at McNair elementary School restrict the number of relocatable classrooms that can be accommodated to twelve (12) and further strains the 'core' facilities of the school, i.e., cafeteria, media center, play areas, etc. This fact underscores the urgency of opening the new school before enrollment growth outstrips the school system's ability to address overutilization at McNair Elementary School with relocatable classrooms.

The proposed new Northwest Elementary School #6 is needed to relieve excess enrollment at McNair, as well as absorb students who will continue to be generated by the construction of the large subdivisions in this area in subsequent years. In addition to the

pressing situation at McNair elementary school, enrollment growth continues at the other elementary schools in the Northwest Cluster. Because of continuing new development in the Germantown elementary school service area, and the fact that this school has exceeded its enrollment projection for this Fall, it now appears that it also will be necessary to provide enrollment relief for this school through the opening of the new Northwest Elementary School #6.

Germantown Elementary School has a capacity of 400 and is projected to increase its enrollment of 448 this year to 520 students by 2004. Together, the projected enrollments at McNair and Germantown elementary schools would result in a deficit in capacity within the Northwest Cluster of 550 elementary level seats by 2004, if the new Northwest Elementary School #6 is not opened and boundaries adjusted before that time.

The new school will provide relief for McNair and Germantown elementary schools, as well as other Northwest cluster schools. Classroom shortages are expected to reach 550 seats by the 2003-2004 school year. As a consequence of the issues outlined above, the Requested FY2000 Capital Budget and Amended FY1999 to FY2004 Capital Improvements Program request the opening of Northwest Elementary School #6 in September 2001.

Technical Feasibility Analysis

The following is a summary analysis of the physical and technical factors affecting implementing the new elementary school. The study included analysis of potential sites for the school, as well as concomitant infrastructure improvements and funding resources needed to support the school on the selected site.

Site Selection:

A committee of citizens and Board of Education staff was convened in September 1998 to review and identify a site for the proposed new elementary school. The site selected by the committee was recommended to the Board of Education for approval at its regular meeting on October 26, 1998. The selected site is a 10-acre parcel to be conveyed to the Board of Education by the developer of the Kingsview Village subdivision at no cost. The site is located on the future westward extension of Richter Farm Road and a subdivision road, Falconcrest Drive, in the Ronald McNair Elementary School service area. The schedule for completion of roadways and utility extensions to the site is consistent with a school opening in July 2001. The site is part of an open field that has been farmed for many years. Figure 1, located in the Appendix, is a map showing the location of the proposed elementary school site.

The selected site is scheduled to be conveyed to the Board of Education by December 10, 1998 in accordance with Montgomery County Planning Board's subdivision approval requirements for the Kingsview Village subdivision development plans. Its approval is

contingent on the construction and conveyance of roads to the county government, upon which the school would be dependent for access and utility extensions.

A detailed summary of all aspects of the site selection criteria and other considerations are documented in the site selection recommendations contained in Appendix 1 of this report. A resolution recommending approval of this site by the Board of Education is contained in Appendix 2. The Board of Education acted to approve this site during its October 26, 1998 meeting.

Kingsview Village Development Construction Schedule:

The developers of the Kingsview Village subdivision, Crescent Development, Inc., have begun construction of infrastructure elements of the subdivision. The overall development plan includes construction of approximately 938 housing units comprising 417 units of single-family houses, 272 townhouse units, and 915 apartment units. Dedication of the right-of-ways for the two roads bordering the elementary school, Richter Farm Road extension and Falconcrest Drive, is expected to occur in December 1998. The developer is also anticipating approval of the development's storm drain and paving plans by the Planning Board in that same month.

The developer is scheduled to begin actual construction of Phase I housing units in April 1999. Completion of construction of Phase I units is scheduled for December 2000, well ahead of the proposed opening date for the new elementary school.

School Site Development:

As a part of the subdivision development and site dedication, the developer has committed to making improvements to the site topography to render it suitable to accommodating an elementary school facilities program. This dedicated site will be pre-graded to achieve topographic conditions agreed to by the developer as part of a site grading study performed by the Board of Education's civil engineer. The resulting topography of the site will help minimize site construction costs.

The developer will begin construction of roadways surrounding the school site in April 1999. Richter Farm Road, which will be extended south and west from its current intersection with MD Route 118, will have a 100-foot right-of-way with a 70-foot paved road surface. Although this road will ultimately be extended west to Schaeffer Road, Phase I of the developer's construction plans call for completing construction up to the school site by December 1999. Construction of the balance of Richter Farm Road to Schaeffer Road is scheduled to occur by December 2000.

The schedule for constructing Falconcrest Drive past the school site parallels the schedule for constructing Richter Farm Road to the school site. It is planned that all vehicular traffic access the site from Falconcrest Drive.

Off-site infrastructure utilities, such as water, sewer and storm drainage systems, will be constructed by the developer as a part of the roadway construction. On-site utilities will

be extended onto the school site as a part of the school construction project.

School site amenities will consist of elementary-level play-fields, vehicular parking and circulation facilities, pedestrian access features, and site utilities. The developer has agreed to provide for meeting site afforestation requirements at an off-site location adjacent to the county's Soccer Complex, currently under design development. Storm water management will also be provided off-site.

School Building Design:

Although the Board of Education typically builds new elementary and middle schools using existing designs, evolving changes in building design to meet advancing curriculum needs necessitates development of a new building prototype that better addresses those needs. Other advantages of this approach include achieving greater site utilization efficiency, flexibility in designing for site-specific conditions, and improved building operational and functional relationships. The school will be planned for a core capacity of 740 students, with an initial capacity for 640 student when it is opened in 2001.

The building will be a two story structure. The design approach will reflect current thinking in all instructional, administrative and operational areas.

School Construction Schedule:

Following is a proposed detailed implementation schedule for the new elementary school.

Site Selection:	September - October 1998
Architect Selection:	November - December 1998
Schematic (Concept) Planning:	December 1998 - March 1999
Design Development:	April 1999 - August 1999
Construction Documents:	September 1999 - December 1999
Bidding:	January 15, 2000
Construction:	March 1, 2000
Occupancy:	June 2001

Project Cost Projections:

Anticipated costs associated with direct construction phase implementation of the new elementary school is approximately \$8,000,000. Cost are reflective of recent school construction in the immediate geographical area.

Conclusions and Recommendations

As indicated above, enrollment projections and increasing development activity in the Northwest high school cluster necessitates serious consideration of constructing a new elementary school to address anticipated overutilization of existing schools within the cluster. It is proposed that the new school be constructed on a 10-acre, site located in the proposed Kingsview Village subdivision in Germantown. The site is ideally located in the vicinity of existing schools that are experiencing current and projected enrollment increases at the elementary level.

MCPS staff has been working closely with the developers of the Kingsview Village subdivision since 1996 coordinating final site configuration and implementation of infrastructure utilities associated with development plans of the proposed school site. Current schedules for the subdivision development plans are consistent with those of the Board of Education's proposal to construct an elementary school for initial occupancy in 2001.

The implementation schedule for the new school calls for architectural planning to begin in January 1999, followed by construction starting in the Spring of 2000. Initial occupancy of the new school is scheduled for the Fall of 2001.

It is recommended that serious consideration be given to the Board of Education's plans to commence planning for opening the new school in July 2001.



Northwest Elementary School

Funding and Implementation Schedules

Fiscal Year >	FY 98				FY 99				FY 00				FY 01				FY 02				FY 03				FY 04						
Calendar Year >	1998				1999				2000				2001				2002				2003				2004						
Calendar Quarter >	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3
Implementation Schedule:																															
Feasibility Study:																															
Final Program Development:																															
Architect Selection:																															
Schematics:																															
Design Documents:																															
Bidding / Const'n Planning:																															
Construction:																															
Move-In:																															
Funding Schedule:																															
Totals																															
Feasibility Study:	\$100				\$100																										
Planning:	\$879								\$615				\$200																		
Site:	\$920												\$720																		
Construction:	\$10,691												\$8,500																		
Other:	\$704												\$525																		
Totals:	\$13,294				\$100				\$615				\$9,945																		
Calendar Quarter >	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3
Calendar Year >	1998				1999				2000				2001				2002				2003				2004						
Fiscal Year >	FY 98				FY 99				FY 00				FY 01				FY 02				FY 03				FY 04						

Project Cost Summary Data

General Facility Data			Planning Expenses		Construction-Related Expenses:		General Construction Cost			
Factor	Existing	Proposed	Item	Cost	Direct Expenses	Cost	Item	Unit	Quantity	Total Cost
Core Capacity:			A/E Services:	\$720,000	WSSC SDC Fees:	\$250,000	New Construction:	\$105/s.f.	76500	\$8,032,500
Student Capacity:			Printing:	\$30,000	Electric Service Fees:	\$20,000	Modernization:	\$80/s.f.	0	\$0
Building Area (S.F.):			Energy Analysis:	\$6,000	PA System:	\$16,000	Renovation:	\$60/s.f.	0	\$0
Net:			EMS Design:	\$9,000	Telephone System:	\$30,000	Demolition:	\$7.50/s.f.	0	\$0
Gross:		76500	CATV/LAN Design:	\$9,000	Security System:	\$30,000	Asbestos Removal:	\$3/s.f.	0	\$0
Site Area (Ac.):		12.0	Topo. Survey:	\$22,000	Asbestos Monitoring:	\$0	SWM/Environmental:	LS		\$30,000
Gross S.F./Student:			Geotech. Survey :	\$8,000	Total:	\$346,000	ES Gymnasium:	LS		\$1,100,000
Net S.F./Student:			Traffic Impact	\$10,000	In-Contract Expenses:		Site Work:	\$12/s.f.		\$920,000
			Pre-Con Services:	\$125,000	EMS:	\$150,000	Construction Phasing:	LS		\$100,000
			Other:	\$0	CATV Wiring:	\$25,500	Earthwork:	LS		\$120,000
Project Scope			Total:	\$879,000	LAN/Data Wiring:	\$225,000	Sub-Total:			\$10,302,500
New elementary school for the Germantown community.					ES Play Equipment:	\$12,000	Direct Expenses	LS		\$346,000
					Total	\$412,500	In-Contract Expenses:	LS		\$412,500
							Sub-Total:			\$11,061,000
							Contingency:	@5.0%		\$550,000
							Total:			\$11,611,000