

District: Shrewsbury
School Name: Sherwood Middle School
Recommended Category: Preferred Schematic
Date: September 30, 2009

Recommendation:

That the Executive Director is authorized to approve the Town of Shrewsbury, as part of its Invitation for Feasibility Study, to proceed into schematic design for the replacement of the existing Sherwood Middle School. MSBA staff has reviewed the designer's options for the Sherwood Middle School and accept the District's preferred solution to replace the existing building with a new middle school as the most cost-effective and educationally sound option.

Background:

The Sherwood Middle School, the District's prioritized Statement of Interest, is a 100,560 square foot, three-story facility that serves grades 5 and 6. The current enrollment is 917 students. The original structure, which was built in 1964, is 88,902 square feet and was designed for 700 students. In 1995, the District added 10 modular classrooms to alleviate overcrowding. The facility shares a 50-acre site with the Oak Middle School which serves grades 7 and 8. The District identified a number of building issues associated with the Sherwood Middle School, including poor air quality and moisture problems, traffic congestion during drop off and pick up hours, old windows, and outdated and insufficient boiler equipment.

In addition to the physical plant issues, the District identified severe overcrowding and programmatic deficiencies, including SPED being conducted in hallways, the cafeteria and the lobby; severely deficient and insufficient number of bathroom facilities, with no bathrooms in the portables; an undersized cafeteria that requires four lunch periods with the first beginning at 10:25 AM; and, a lack of adequate music space.

Shrewsbury has stated that the District's school system has reached capacity. In the last decade, the District has constructed two new schools (Floral Street Elementary School and Shrewsbury High School), conducted a full renovation of the Oak Middle School, and constructed an addition to the Parker Road Pre-school. In addition, the District has added 23 modular classrooms across four other schools and leased two classrooms for its kindergarten program. The District recently completed a grade reconfiguration that has provided some relief, but has still affected delivery of the educational program. As a critical first step in the Feasibility Study, the District and the MSBA met to discuss enrollment projections to address the District's concerns and have mutually agreed that a facility designed for 900 students positions the District to efficiently meet space capacity needs throughout future enrollment variations.

On November 28, 2007, the MSBA Board of Directors voted to invite the District to conduct a feasibility study for the Sherwood Middle School to further study the problems identified at the facility.

Discussion

The Feasibility Study by Lamoureux Pagano Associates (LPA), dated September 4, 2009, presents material regarding project need, educational programs, existing facility and site conditions, district financial information and an evaluation of three major options. The study documents existing conditions and considers code compliance for use in developing the renovation options. The existing facility is steel frame construction with masonry bearing internal partitions and features economy grade systems for the building shell, structure and MEP systems. The building has virtually no insulation, includes single pane non-thermal windows, and the existing systems and equipment have reached the end of their useful life. The modular units were installed over 13 years ago as a temporary measure to deal with overcrowding and need to be replaced with a more permanent solution that provides code compliant access to restroom and water facilities.

The scale of additions and renovations necessary to support the design enrollment of 900 students will require that the entire facility be brought up to compliance with current Architectural Access Board (AAB) and current building codes if the facility is renovated and/or updated. While the facility is generally in good condition and could support renovation and addition structural upgrades, the study indicates that low floor to ceiling clearances and the need to create physical space for routing new mechanical, electrical, plumbing and fire protection systems will significantly drive up cost and complicate the project. The District and their team considered a number of possibilities and narrowed them down to the three most feasible options, including:

- **Base Renovation/No New Build Option (99,902 square feet)** – This option lays out the minimum requirements needed to address building repairs and replace obsolete systems and includes continued use of the modular units. This option does not address educational needs, leaves un-insulated walls in place, relies on AAB code relief, fails to address SOI issues, and does not represent a long term solution. This option was developed as a benchmark against which to compare the other options.
- **Renovation/Addition (150,902 square feet)** – This option includes 80,902 square feet of renovated space and 70,000 square feet of a new addition. This option meets educational program needs with some compromise, replaces existing MEP systems and modular units with a more permanent solution. The limitations of this option includes a larger facility than needed due to inefficient existing space, classrooms below the MSBA guidelines, and un-insulated walls, and it relies on AAB code relief.
- **New Construction (144,000 square feet)** – The new construction option meets all objectives of the educational program without compromise, represents the most efficient facility with a smaller footprint and lowest area of building envelope and strengthens the ability to share resources and spaces with the Oak Middle School. The initial cost is greater than that of the other options.

The Designer presented their findings to the District and was asked to find potential savings among the options to address the community's sensitivity to the potential size

and cost of a proposed project. The Feasibility Study Supplement by LPA, dated September 11, 2009, presents material regarding efforts taken by the District and their team to reduce project costs. The Designer and the District considered options to adjust the program, including higher utilization of rooms, and investigated the potential for increased sharing of resources and space with the recently renovated Oak Middle School. Two additional options were developed based on the renovation/addition and new construction options. Each of these options includes the elimination of some dedicated space for which teaching could be accomplished through the use of a non-assigned general classroom leading to higher room utilization, the sharing of dedicated music program space with the Oak Middle School, and an assumed classroom size of 24 students.

- Renovation/Addition (132,500 square feet) – Merits and limitations similar to the Renovation and Addition option described above.
- New Construction (130,000 square feet) – Merits and limitations similar to the New Construction option described above.

Summary of Preliminary Design Pricing

Option	Gross SF	Estimated Project Cost	Construction Cost /SF
Base Renovation/No new build option (Does not address SOI Issues)	99,902	\$21,551,610	\$190
Renovation/Addition	150,902	\$52,068,412	\$282
New Construction	144,000	\$52,560,467	\$322
Renovation/Addition (Updated)	132,500	\$46,359,780	\$293
New Construction (Updated)	130,000	\$48,182,720	\$310

The District selected the updated new construction option at 130,000 square feet as the preferred option. MSBA reviewed the material presented and agrees with the District’s recommendation for a new building for the following reasons:

- Satisfies all current code requirements and does not rely on AAB code relief;
- More energy efficient facility estimated to be 20% more efficient than a renovation/addition option; based on initial estimates the cost savings could be on the order of \$2.5 million over 20 years.
- Strengthens the connection to the Oak Middle School enabling increased sharing of resources between the middle schools;
- Best meets the modified educational program;
- Better addresses site deficiencies;
- Less disruption to students and staff and a shorter construction schedule;

MSBA has reviewed the conclusions of the Feasibility Study and the enrollment data with the District and found:

- 1) All initial paperwork required has been processed including an executed Initial Certificate of Compliance, the composition of the School Building Committee and the enrollment questionnaire.
- 2) MSBA has completed an enrollment projection utilizing the enrollment questionnaire completed by Shrewsbury, and has reviewed Shrewsbury's existing middle school capacity as provided by the District and an updated status of development under construction in the District. The MSBA enrollment projection supports an enrollment of 900 students for replacement of the Sherwood Middle School on the existing site.
- 3) MSBA reviewed the feasibility study and finds that options investigated were sufficiently comprehensive in their scope and that the District's preferred option is reasonable and the most cost-effective when potential energy savings are considered in the analysis.
- 4) MSBA staff is confident that a quality, cost efficient school facility can be constructed for less than \$310/square foot and will work with the District to establish a design budget for the construction project prior to commencement of schematic design.

Based on the review outlined above, staff recommends the Town of Shrewsbury be approved to proceed into schematic design for the construction of a new Sherwood Middle School on the existing site.