

District: Minuteman Regional Vocational Technical School District
 School Name: Minuteman Technical Vocational High School
 Recommended Category: Preferred Schematic
 Date: July 30, 2015

Recommendation

That the Executive Director be authorized to approve the Minuteman Regional Vocational Technical School District, as part of its Invitation to Feasibility Study, to proceed into Schematic Design to replace the existing Minuteman Technical Vocational Regional High School with a new facility on the existing site. MSBA staff has reviewed the Feasibility Study and accepts the District’s preferred solution.

District Information	
District Name	Minuteman Regional Vocational Technical School District
Elementary School(s)	N/A
Middle School(s)	N/A
High Schools	Minuteman Technical Vocational High School
Priority School Name	Minuteman Technical Vocational High School
Type of School	High School
Grades Served	9-12
Year Opened	1975
Existing Square Footage	330,000
Additions	N/A
Acreage of Site	66 acres
Building Issues	<p>The District identified deficiencies in the following areas:</p> <ul style="list-style-type: none"> – Mechanical systems – Plumbing systems – Electrical systems – Structural integrity – Roof – Accessibility <p>In addition to the physical plant issues, the District reported that the existing facility does not support the delivery of its educational program.</p>
Original Design Capacity	Unknown
2015-2014 Enrollment	673
Agreed Upon Enrollment	<p>Study Enrollment includes the following configurations:</p> <ul style="list-style-type: none"> – 435 students (grade configuration 9-12, member towns only) – 800 students (grade configuration 9-12, member and non-member towns)
Enrollment Specifics	<p>The District’s School Building Committee voted (June 2014) to base the proposed project on an alternative design enrollment of 628 students serving grades 9-12. The MSBA acknowledged the District’s request and does not object to the District including an alternative design enrollment between 435 and 800.</p>

MSBA Board Votes	
Invitation to Feasibility Study	July 29, 2009
Re-categorization from Feasibility Study to Eligibility Period	January 25, 2012
Invitation to Feasibility Study	June 6, 2012
Preferred Schematic Authorization	On August 6, 2015 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization March 2016
Feasibility Study Reimbursement Rate (<i>Incentives points are not applicable</i>)	40%

Consultants	
Owner's Project Manager	Skanska USA Building, Inc.
Designer	Kaestle Boos Associates, Inc.

Discussion

The existing Minuteman Technical Vocational High School is a 330,000 square foot, three-story building with an open-plan layout on a 64 acre site. The existing facility currently serves students in grades 9-12 from sixteen member and non-member cities and towns.

The original school building was constructed in 1975 and, although there have been no major additions; there have been several interior reconfigurations which have attempted to accommodate the District's educational program. The District identified numerous deficiencies in the Statement of Interest including: lack of appropriate accessibility; inefficient and failing building envelope and roofing; and mechanical, electrical, and plumbing systems and original windows that are approaching the end of their useful life.

In conjunction with its consultants, the District performed a comprehensive assessment of the existing conditions and the educational program and received input from educators, administrators, and facilities personnel. Based on the findings of this effort, the District and its consultants initially studied six preliminary options that included one base repair option of the existing facility, two options for 435 students, and three options for 800 students, as presented below:

Option	Description of Preliminary Options
1	Base repair of existing facility
A	Renovation of existing facility (for 435, grades 9-12)
B	New construction on existing site (for 435, grades 9-12)
C	Renovation of existing facility (for 800, grades 9-12)
D	Addition/renovation of existing facility (for 800, grades 9-12)
E	New construction on existing site (for 800, grades 9-12)

Subsequent to the submittal of its Preliminary Design Program, the District developed an alternative design enrollment of 628 students that includes students from its member cities and towns, as well as a reduced number of students from out-of-District, or non-member cities and towns. The School Building Committee voted on June 17, 2014 to focus the District's efforts on the alternative design enrollment of 628 students in grades 9-12. The MSBA was notified of the

District’s intent and did not object to the submittal of a Preferred Schematic Report that included options based on an alternative design enrollment between 435 and 800 students. The following is a list of the additional alternatives developed and considered based on a design enrollment of 628 students in grades 9-12.

Option	Additional Options Added (for 628, students 9-12)
F	Renovation of existing facility (for 628, grades 9-12)
G	Addition/renovation of existing facility (for 628, grades 9-12)
H	New construction on existing site (for 628, grades 9-12)

Based on further evaluation of the study enrollments, the District chose to eliminate the options associated with enrollments for 435 and 800 students. The District determined that an enrollment of 435 students would result in a significant reduction in the diversity of Chapter 74 programs, academic electives, student activities, and athletics, thereby excessively degrading the quality of the educational experience for its students. The District also determined that there was insufficient local support for the size and associated costs for a facility designed for 800 students. In addition, although “Option 1” would be the least-costly, it does not satisfy the requirements of the educational program, would be the most disruptive to students, and would have the longest estimated construction duration. Therefore, it was not considered a viable option.

Upon further review, MSBA staff and the District agreed to evaluate three final options, based on the alternative design enrollment of 628 students, for further development and consideration in the final evaluation and development of the preliminary design pricing as presented below. (Also shown below for comparative purposes are the base repair option, a new construction option for 435 students “Option B,” and a new construction option for 800 students “Option E”).

Summary of Preliminary Design Pricing for Final Evaluation of Options

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sf)	Square Feet of New Construction (cost*/sf)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sf)	Estimated Total Project Costs
Option 1: Base Repair of High School	305,808	305,808 \$192/sf	0 \$0/sf	\$1,155,863	\$59,740,856 \$195/sf	\$81,596,070
Option B: New, 435	224,997	0 \$0/sf	224,997 \$448/sf	\$18,150,508	\$119,556,674 \$531/sf	\$143,468,009
Option E: New, 800	323,537	0 \$0/sf	323,537 \$441/sf	\$18,195,397	\$160,793,182 \$497/sf	\$192,951,818
Option F: Renovation, 628	305,808	305,808 \$394/sf	0 \$0/sf	\$8,886,780	\$129,223,980 \$423/sf	\$176,547,602
Option G: Reno/add, 628	284,512	123,491 \$348/sf	161,021 \$482/sf	\$10,646,439	\$131,310,459 \$462/sf	\$175,333,834

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sf)	Square Feet of New Construction (cost*/sf)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sf)	Estimated Total Project Costs
<i>Option H: (New, 628)***</i>	<i>242,893</i>	<i>0</i> <i>\$0/sf</i>	<i>242,893</i> <i>\$428/sf</i>	<i>\$17,507,727</i>	<i>\$121,392,277</i> <i>\$500/sf</i>	<i>\$144,922,145</i>

** Marked up construction costs*

*** Does not include construction contingency*

****District's preferred option*

The District has selected “Option H,” as the preferred solution to proceed into Schematic Design. This option consists of a new two-story building and associated site development, located to the west of the existing high school. The District selected “Option H” as its preferred alternative because new construction is the least-costly option for the District’s preferred design enrollment of 628 students, it provides an opportunity to establish an efficient layout that incorporates all of the educational goals and flexible spaces for delivering the District’s desired educational program without impacting the current facility, and it has a shorter anticipated construction duration. Although the delivery of the District’s educational program can be achieved in “Option F” and “Option G,” the significant estimated cost difference and anticipated disruption to students during construction were not conducive to the goals of the project.

The District presented its proposed project to the MSBA Facilities Assessment Subcommittee (“FAS”) on June 24, 2015. At that meeting, members of the FAS discussed: the proposed location of permanent trade space utilities; permitting requirements; special education delivery and collaborative spaces; the difference in cost per square foot for the new construction options evaluated; flexibility for future programmatic changes; correlation between the curriculum and industry; availability of natural lighting in all spaces; exterior features; and the potential for students and alumni to be involved in aspects of the building design. The MSBA has requested that the District keep the MSBA informed of developments and progress related to discussions with member cities and towns that will occur throughout the Schematic Design phase.

MSBA staff reviewed the conclusions of the Feasibility Study, all subsequent submittals, and the enrollment data with the District and found:

- 1) MSBA reviewed the Feasibility Study and subsequent material and finds that the options investigated were sufficiently comprehensive in scope, the approach undertaken in this study was appropriate, and the District’s preferred solution is reasonable and cost-effective and meets the needs identified by the District.
- 2) The District’s “Educational Program Plan Labor Market Information Analysis” is comprehensive, demonstrates demand for the proposed Chapter 74 curriculum offerings, and aligns with evolving trends in employment.
- 3) The District has reviewed the proposed Chapter 74 programs with the Department of Secondary and Elementary School (the “DESE”). While both DESE’s application process and the MSBA’s Grant Program approval process are still underway, the DESE is in general agreement with the proposed plans submitted to the DESE and the District has

worked with its School Committee to craft a fiscally responsible plan that downsizes the school to avoid over-reliance on non-member enrollment while still maintaining a high quality vocational and academic curriculum.

- 4) The MSBA staff's review of the District's enrollment and application data demonstrate sufficient demand for program offerings to ensure that the facility will be utilized.
- 5) The recent amendment of 603 CMR 4.00 includes provisions to "...establish a capital construction and renovation increment to be added to the tuitions paid on behalf of non-resident students..." and a similar provision for non-resident students enrolled in special education programming addresses one of the District's long-standing concerns regarding its members' share of supporting non-member students.
- 6) The District has submitted an operational budget for educational objectives and a capital budget statement for MSBA review.
- 7) The District's schematic design submittal will be subject to final review and approval by the Department of Elementary and Secondary Education as part of the schematic design submittal prior to a Project Scope and Budget Agreement.
- 8) Subject to Board approval, the MSBA will participate in a project that includes spaces that meet MSBA guidelines, with the exception of variations previously agreed to by the MSBA. All proposed spaces will be reviewed during the Schematic Design phase.
- 9) As part of the Schematic Design phase, the District will work with the MSBA to determine a mutually agreeable methodology to differentiate eligible costs from ineligible costs.

Based on the review outlined above, staff recommends that the Minuteman Regional Vocational Technical School District be approved to proceed into Schematic Design to replace the existing Minuteman Technical Vocational High School with a new facility on the existing site.