

District: Mount Greylock Regional School District  
School Name: Mount Greylock High School  
Recommended Category: Project Scope and Budget  
Date: November 18, 2009

### Recommendation

That the Executive Director is authorized to enter into a Project Scope and Budget Agreement and a Project Funding Agreement with the Mount Greylock Regional School District to upgrade the heating plant, including replacement of three boilers, at the Mount Greylock High School located in the Town of Williamstown. The Executive Director will request a subsequent Project Scope and Budget Agreement and a Project Funding Agreement with the Mount Greylock Regional School District to address issues associated with the locker room ceiling collapse.

### Background

The Mount Greylock Regional School District was formed in 1960 as a grade seven through twelve school, servicing the Towns of Lanesborough and Williamstown. The Mount Greylock Regional High School, built in 1961, is a single-story masonry and steel building with an interior open courtyard, totaling approximately 180,000 square feet including two additions to the building in 1968. The school's layout includes a gymnasium, cafeteria with kitchen, auditorium with stage, greenhouse, and a library with the core classrooms sharing exterior walls with other ancillary spaces. The building's envelope consists of masonry construction and a predominantly flat roof supported by steel beams and steel bar joist construction. The current enrollment at the high school is 646.

The Statement of Interest filed in 2008 and refreshed in 2009 identified problems associated with the aging building and systems. While the District initially had envisioned more comprehensive renovations of the facility, there was particular emphasis on the age and lack of reliability associated with the school's heating plant. The existing boilers and appurtenances date back to 1960 and 1968. The school has continually had programs to maintain and repair the boilers and other equipment. The heating plant equipment is at the end of its useful life and needs significant repairs or replacement as indicated in an October 27, 2008 report from Industrial Steel and Boiler Services, Inc. One of the facility's three boilers (Boiler No. 2) was decertified this summer (2009) and is completely out of service, leaving the heating plant without adequate standby capacity. This is a significant concern to the District as their SOI notes that the other two boilers are of similar age and are frequently out of service for repair during the heating season.

After the 2009 Statement of Interest was filed, the school experienced a collapse of the ceiling system in the Girls' Locker Room rendering the space uninhabitable, but fortunately causing no injuries. Upon further inspection by the Williamstown Building Inspector, both locker rooms were sealed off until repairs could be completed. Initial study determined that the plaster ceiling system was installed with nails that were too short to support the weight of the ceiling assembly. While other ceiling areas similarly installed have not failed, several areas are exhibiting significant signs of damage and are considered at risk. During the investigation of the collapse, a ceiling area above the 1960 Boys' Shower Rooms was found to have significant corrosion damage above the ceiling of the shower room, affecting the structural bar joists and concrete floor metal panning supporting the mechanical penthouse above the shower room, as well as

disintegration of the shower rooms ceiling and support structure. The potential sources of moisture causing the corrosion include moisture migration from the shower room and past leaks in the mechanical equipment located in the affected mechanical penthouse.

On September 30, 2009, the MSBA Board voted to invite the Mount Greylock Regional School District to collaborate with the MSBA in conducting a Feasibility Study for a Potential Repair on the Mount Greylock High School. After the Board's vote, the District proceeded to select designers to perform a feasibility study using a local designer selection process, and has performed a feasibility study on the heating system. Given the urgency of the issues with the heating system and the differences between the scopes of work, the District issued two requests for services, one for a designer for the heating system and one for a designer for the ceiling replacement.

### Project Description

The District selected Hesnor Engineering to perform the study to evaluate potential alternative solutions for the heating system. The Designer has recommended the following three options:

Option 1 examined replacement of Boiler No. 2 with a similarly sized boiler while leaving the two other existing boilers in service. The cost of this option was estimated at \$150,000.

Option 2 examined replacement of Boiler No. 2 immediately with two modular boilers and future replacement of the remaining two boilers with three modular boilers for a total build-out of five boilers. The cost of this option was estimated at \$350,000 (includes two new modular boilers only while leaving existing Boilers 1 and 3 in service).

Option 3 examined installation of two modular boilers on the mezzanine level to replace the failed boiler and continue to operate the remaining two existing boilers. The cost of this option was estimated at \$150,000.

The District's preferred alternative is a modification of Option 2, which they believe will be the best long-term solution to address reliability concerns regarding the heating plant. The proposed scope includes the immediate replacement of the existing No. 2 boiler with two modular boilers, as described in the study, on an emergency basis in Phase 1, and subsequent replacement of the other two existing unreliable boilers and appurtenances in Phase 2 to fully implement a long-term solution to the problems associated with the heating plant. The fuel system also will be modified to address potential air quality permitting issues and for increased combustion efficiency.

As the District needs to expedite Phase 1 of the work to provide heating system reliability this winter, staff recommend proceeding with a project scope and budget agreement for the HVAC portion of the scope. The District is in the final stages of its selection for the ceiling replacement and is engaging the services of Barry Architects to further evaluate the problem with the ceiling system. The MSBA will review the District's conclusions and return to the Board with a recommendation for this portion of the work once the District and its Designer have had the opportunity to evaluate the options for the ceiling replacement and fully define the scope.

## Discussion

MSBA staff has reviewed the materials provided by the District for the HVAC repair and has discussed scope and budget with the District. The District has provided a total project budget of \$1,049,986, which includes an estimated construction cost of \$965,077 for the immediate replacement of Boiler No. 2, subsequent replacement of boilers No. 1 and 3, and related upgrades to the central heating plant. Based upon a construction cost of \$965,077, the basis of the Total Facilities Grant would be \$1,042,186.

Mount Greylock Regional High School 646 Students 180,000 square feet	District's Proposed Total Project Budget	Basis of Total Facilities Grant
Total Project Budget:	\$1,049,986	\$1,042,186
Project Cost per square foot	\$5.83	\$5.79
Total Construction Budget	\$965,077	\$965,077
Construction Cost per sq. ft.	\$5.36	\$5.36
Reimbursement Rate		54.16%
Total Facilities Grant		\$564,448

MSBA staff recommends that \$1,042,186 be the basis of the Total Facilities Grant for the Project Scope and Budget Agreement and Project Funding Agreement for the construction of heating plant repairs at the Mount Greylock Regional High School.

A recommendation for a Project Scope and Budget Agreement and Project Funding Agreement for the construction of repairs to the locker room ceilings and associated work will be presented once the Designer has worked with the District to provide a more comprehensive evaluation of and potential solutions to the problem.