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## State advances CCHS building project to schematic design phase

by Ginny Lamere



The proposed new school and adjacent second gym would be located behind the existing structure. The old building would be removed to create parking and a grassy area. (Diagram by OMR Architects)

The Concord-Carlisle Regional High School (CCHS) building project moved a step forward last week when the state gave the go-ahead to develop schematic designs to replace the school with a new facility on the same site (see diagram, page 4). The Massachusetts School Building Authority (MSBA) Board of Directors approved the Concord-Carlisle Building Committee's (CCBC) preferred design option on July 27. This is the direction OMR Architects and the Owner's Project Manager, KV Associates of Boston (KVA), have been working towards for several weeks. The estimated total budget for the project is roughly \$92,500,000.

A July 27 memo from the MSBA Board states, "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."

MSBA Executive Director Katherine Craven states in a July 27 press release, "We have worked diligently with Concord-Carlisle over the last several years and I look forward to continuing our work with them during this

next stage in the process to replace the existing school with a new school that meets MSBA guidelines.”

If a final Project Scope and Budget Agreement is signed and the towns approve construction funds, the state would reimburse approximately 31% of approved project costs. If the project qualifies for various incentives, the reimbursement rate may increase slightly. However, the MSBA memo notes, “The proposed facility includes spaces that are deemed ineligible for reimbursement, including a radio station, television station and adult education office. This area is limited and is understood to be completely outside the participation of the MSBA.” In addition, the plan includes two gymnasiums (as does the existing school), and MSBA will offer reimbursement for only a single gym. The second gym is to be in an adjacent building.

Superintendent Diana Rigby relayed a comment by the MSBA Board member Terry Kwan. She noted that the MSBA staff and the Concord-Carlisle Regional School District had worked hard to secure the second gym and praised the school district for their exemplary physical education (PE) program. “In this time of health issues for young people, isn’t it wonderful that Concord-Carlisle offers that PE program.”

According to the MSBA press release, State Treasurer Steven Grossman said, “This is a very exciting stage in the MSBA process. The schematic designs that will be produced will give us our first look at the improved Concord-Carlisle Regional High School. They will help us narrow the scope and budget of the project so that we can be sure the final product is efficient, sustainable and affordable.”

On August 17, the CCBC will approve the completed schematic designs and project budget, before submitting them to the MSBA for approval on August 19.

#### Sustainability: costs and paybacks

Various strategies for sustainability and energy efficiency were discussed over the last two meetings. Models with specific upgrades were analyzed to understand their value over time. An energy-savings goal of 33% above the Stretch Code for the new building was voted on by the CCBC. (The Stretch Code tightens requirements for energy efficiency in new buildings and was approved last year in Carlisle.) The costs for these improvements will be roughly \$735,000; the payback in lower operating costs will be nine years at present energy costs.

The Sustainability Subcommittee studied three types of windows and insulation systems for their analysis, which was done with a model using the Stretch Code as a baseline.

To reach the goal, the new building will have high-efficiency mechanical, heating and cooling systems and high-end insulation in the walls and roof. OMR Project Manager Lisa Pecora-Ryan explained that some features were bundled into a package defined as “Stretch Code Plus.” These features will improve energy efficiency by almost 27% for an added cost of \$231,000. The savings for these improvements are expected to match the cost in four years. To reach an improvement of 33%, R-40 roof and R-15 wall insulation will be needed as well as double-pane glazing with heat mirror film windows. The additional cost for these features, defined as “Superior Envelope” will cost roughly \$500,000. Payback is expected in nine years.

A third tier of improvements was also discussed. This model included the “Stretch Code Plus,” the “Superior Envelope” and a Photovoltaic system (PV system), which uses solar panels to convert sunlight to electricity. This would have added an additional \$800,000 for a 200-KW system. This would have improved energy-efficiency over the Stretch Code baseline by almost 42%. The payback is estimated at 14 years.

CCBC Co-chair Jerry Wedge said, “What I see here is if we could get a Superior Envelope with our building, then future generations could go back in and by 2030 could maybe reach the higher [sustainability] goals by adding the PV [system].” The CCBC discussed these options. Deputy Superintendent John Flaherty advocated

for putting in very energy-efficient windows now, pointing out that if the school district had to retrofit all the windows in ten years due to high energy costs, it would be much more expensive.

Discussion ensued as to whether the committee should plan for the baseline building with the possibility of adding in extra energy-efficient features, or whether to plan for a building with the Superior Envelope.

CCBC member Stan Durlacher suggested starting with a base budget, as that will be tough enough to pass at the ballot box.

CCBC member Elise Woodward said, "I'm interested in the committee thinking systemically about the project." She wanted the CCBC to focus not just on the construction costs but also on the operating costs in the future. "Think about the potential savings as a way to balance the tax impact." She wants to see the difference in operating costs with different levels of green materials. If operating costs over the next decade or two were to diminish, the two towns could see that as a tax benefit. She advocated for the Superior Envelope to be included in the project package for schematic design. "The likelihood that we would decide to add costs, add alternatives, to the project is very small. It would be preferable to have the base building estimate include the things that will add value to the project in the long run. We could have deductive alternates to pull the cost down." The CCBC will come to a decision after firm numbers have been established for the cost estimate due in mid-August.

CCBC member and Carlisle Selectman Tim Hult said, "The \$500K looks really good to me in terms of trade-offs." He warned that the estimate should not grow to \$95 million. The CCBC voted to incorporate the Superior Envelope into schematic design.

#### Landscape plan

Principal landscape architect William Brown of Brown Sardina Inc. gave an overview of the site plan proposal. He is happy with the site because of the amount of room around it and the ability to design storm water strategies into the landscape inexpensively. The parking area wraps around three sides of the building, but not between the new building and the Beede Center swimming facility. Trees line the walkways around the parking areas.

The new building will sit higher on the hill behind the present CCHS. The main entrance will be on the far side of the building. There will be a shaded landscaped area with sidewalks and places to sit outside this door. A woodland garden on the right side of building, in the area of the sledding hill, is part of the plan. The lower level entrance will be at the same level as the Beede Center. An amphitheater may be situated outside this doorway for class use and performances. The site of the present CCHS will become a grassy area.

The JV field behind the present high school will be lost with the construction of the new building and parking areas around it. The field could be relocated to where the student parking lot is currently, or in the flat grassy area between the lower entrance and the Beede Center, which is where CCHS currently sits. RSC member Peter Fischelis pointed out that the parking area covers some of the sledding hill.

#### Field drainage correction?

The CCBC discussed whether or not to improve the state of the athletic fields and storm water drainage of the fields as part of this building project. Wedge and RSC Chair Peter Fischelis said the work on the fields needs to be done, and if not done as part of this project, it would need to be addressed in the next few years. CCBC and RSC member Louis Salemy pointed out that the fields could be improved any time. He advocated concentrating on adding sustainability features to the new building and avoiding creep in project cost. Woodward suggested making both towns aware of the work that needs to be done and discussing the issue with both towns' finance

committees.

The CCBC voted not to include the field improvements as part of the CCHS building project.

### Schematic Design

The design team has been reaching out to various groups in the community to get their input for the new school building. OMR continues to refine their schematic design drawings with specific dimensions for classrooms, corridors and other spaces. The goal of bringing in more natural light has led to several cupolas which will funnel light to lower floors.

Salemy and Michael Rosenfeld discussed the costs of the second gym. The design will be as economical as possible and a less expensive multi-purpose surface will be used on the second gym floor, rather than a hardwood floor.

The Concord Fire Chief requested that the design team put in features so the gym and cafeteria could be used as a community shelter. In that case, the kitchen would be needed to prepare food. A high-voltage outlet on the outside of the building is needed so an emergency generator could be hooked up, and the elevators will need fire service controls. He also requested a fire command center in the school. The building will need a public address system which can be accessed by the command center. Superintendent Rigby said the command center would be a shared space.

On August 1, preliminary drawings were to be issued for cost estimation. All parties will be reviewing these as cost analysis starts in earnest in early August. The next CCBC meeting will be held on August 17 in the Little Theater at CCHS at 6 p.m., when CCBC members will review how the estimates were derived. Δ