

Educational Specifications
Bellows Falls Middle School

1/27/10

10 Year Enrollment Projection to be provided under separate cover by Chris Kibbe

Introduction

Bellows Falls Middle School is made up of two construction periods. The first part of the building was erected in 1927 as a high school. In 1955, a substantial addition was made, nearly doubling the floor space to about 90,000 square feet. With the exception of an auditorium renovation five years ago, little significant upgrading of the building has been done, though there have been some capital improvements over the years. The building has electrical, plumbing and heating systems that have not experienced any real overhaul in 50 years. The ventilation system that once existed in the building has been shut down over the years, much of it due to fire marshal concerns that the ventilation would contribute to the spread of fire in the building. The lighting has had some updates, with the latest being in the 80's.

The purpose of the project is to bring the building up to current codes, as well as support the demands of today's increasing technology driven society. The modernization is intended to improve the functioning of the building for its educational uses, as well as reduce our overall energy consumption and our carbon footprint.

The Educational Program to be Housed

The Middle School consists of four grades, 5 through 8. The grades are teamed (meaning that teachers of the same grade work together to plan curriculum for their students) and the teams should be in proximity to each other. It is also important that some physical space is allotted to give 5th and 6th grades (elementary level) some distance from 7th and 8th grades. There are huge developmental differences between these groups, and it is important to give each space that is their own. Vermont School Quality Standards call for exploratory activities at the middle school level, including family and consumer (formerly called home ed), design technology (formerly called wood shop), technology integration (formerly called computer science), and world language as well as health, physical education and the arts. In addition, all students should take math, science, English, reading and social studies. We have had low academic scores in the past, so small group work space will be important, in order to remediate students who need it.

School Philosophy/Mission

We envision The Bellows Falls Middle School to be a place where
ALL MEMBERS OF THE LEARNING COMMUNITY STRIVE TO:

1. Engage in and promote lifelong learning
2. Have high expectations
3. Celebrate the achievement of high standards
4. Contribute to and promote positive school climate
5. Respect and recognize one another's passions, strengths, challenges and needs
6. Lead healthy lives

Goals for the Educational Programs to be Housed

Educational programs should give students the skills, knowledge and habits of mind to be successful at subsequent educational opportunities and prepare them to be a functioning member of their communities of families, town and country.

Areas to be Considered for New Construction, Addition or Renovation

Windows may be replaced or refurbished to increase energy efficiency. The ventilation system needs to be repaired, or alternate methods of ventilation introduced into the building. The electrical system needs to be upgraded to meet current codes. Science and food labs will need additional electrical, water and drainage. Bathrooms need to be refurbished, and the plumbing system upgraded. There must be bathroom access for male and female students on each floor, as well as handicap bathrooms. The two boilers serving the buildings have reached the end of their usable lives and need to be replaced. The school consists of only three zones, and the heating is inconsistent. The wood shop needs a fire suppression system in order to use the electrical equipment housed there. It is likely that a large amount of the equipment will need to be repaired or replaced. Handicap accessibility is poor. The school is broken into 6 levels. There must be some classroom space that has level egress. Locker rooms must have individual shower and changing areas. Sound proofing (spray on foam on the gym, art room and shop ceilings) has attracted dirt and dust and needs to be cleaned/removed. Bleachers may be considered for the gym. Exterior lighting needs to be brought to a level conducive to the safety of the buildings' users and for security purposes. There must be phones and intercoms in all areas. Our grand staircase and murals are an area of pride for us and should be left intact. However, the dual staircases (outside and inside) are a real hardship for many that visit the building. The only exterior access elevator is in the back of the building, and security requires that it is key access. There is no phone there to alert someone in the building to grant access. An elevator that can be accessed by the main entrance would be preferable. There are other features of the building, such as the built in wood work in many classrooms that would be nice to preserve. Water fountains should be in every hall way. PA system must be heard in all spaces that could be occupied. Unclear whether the current system could be preserved and expanded for this. All bathrooms should be handicap accessible, with dedicated ventilation on a timer, so the fans won't be accidentally be left on.

The Community to be Served

Bellows Falls is a rural town which was once a predominantly industrial center, and still houses some industrial centers. There are about 5000 residents in the Rockingham School District, serving the towns of Bellows Falls and Saxtons River. The Middle School serves these towns, as well as accepting tuition students from the neighboring towns of Westminster, Athens and Grafton. The population represented at the middle school is 97% white, 61% eligible for free and reduced lunches.

The Pupils to be Served

Current enrollment at BFMS is 260 students. Enrollment projections through F15 shows expected enrollment ranging from 249 to 276. This would require 10 classrooms for daily regular education use. It is anticipated the special education programs (one for cognitively challenged students, one for behaviorally/emotionally challenged students, and one for learning disabled students) currently housed in the building would continue, with the addition of an autism program. Classroom space would need to be devoted to these, as well as for 2 special educators and 2 CFG teachers. The spaces for the latter could be smaller, as the groups are typically small in that setting. Our band, choral and theater programs are great strengths, so we would continue to support our students in this, as well as our art and general music program. We would also need classroom space for world language and health, and labs for science and family/consumer classes. We need to plan for at least one computer lab, and the wood shop. Our students' counseling needs are great, and we would need to preserve the three office spaces currently allocated to guidance/HCRS/SAP counselors.

Timetable for Project

We plan to request money to support an architect's design at the March 2010 town meeting. The design will help us to determine project costs, and it is hoped to bring this to the voters in March 2011. If funding is approved, construction would start in summer of 2011. Project would be completed in summer of 2013. Punch list items to be resolved by December 2013.

Instructional Areas

General Classrooms should allow approximately 35 square feet per student, to a maximum of 25 students. 10 would be needed. Each classroom should have the capacity for wireless or wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 48 square feet. Coat hooks on walls. Cable TV access.

Art Room should allow approximately 55 square feet per student use, to a maximum of 20 students. 200 square feet of storage area, 4 mop sinks. Darkroom should accommodate four working units. It should have the capacity for wireless or wired internet, up to 20 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount a white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 200 square feet. 18 cubic inch open front cubbies for student use. Floor should be easy to clean, and not as hard as cement. (Students and teacher often stand to work on projects. Some kind of surface that provides some give, but is still sealed.) Coat hooks on walls. Cable TV access. Needs ventilation/electricity

to support kiln. High quality lighting. Remove ceiling sound proofing. Built in wall storage, both open shelves and closed. General ventilation needs improvement.

Music Room should allow classroom space of approximately 35 square feet per students, up to 25 students, and room for chorus risers to accommodate 50 students, for a total of 1050 square feet. Storage for instruments, music, stereo equipment of 100 square feet. Electrical outlets evenly spaced on perimeter, wired or wireless internet connections, carpeted floor, soundproofed walls. Each classroom should have the capacity for wireless or wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount a white board and a smart board(4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Coat hooks on walls. Cable TV access. It would be great if this space were adjacent to the auditorium.

Band Room should have tiered seating, carpeted, sound proofed, approximately 1000 sf. 3 sound proofed practice areas of 100 square feet each. Instrumental storage 200 sf. 18 cubic inch open front cubbies for student use. Open wall space to mount both a white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Coat hooks on walls. Cable TV access. 100 square feet for uniform storage, with 20 square feet of wall shelves for hats and shoes. Mop sink. Would be great if this classroom were adjacent to the auditorium.

Science Labs should allow approximately 55 square feet per student up to 25 students. 4 would be needed. Each should have the capacity for wireless or wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 200 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 48 square feet. Coat hooks on walls. Cable TV access. 5 propane and sink units built into storage, placed on islands, so the whole class can face the front of the room and have the lab units between themselves and the teacher. Ventilation hood over one working area. Electrical outlets on room perimeter and at lab areas. 1 secure chemical storage in central storage area, not in classrooms, of 100 square feet.

Computer Lab should be approximately 35 square feet per student, up to 25 maximum. It should have the capacity for wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter and in the floor. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 50 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Coat hooks on walls. Cable TV access. Air conditioned to preserve tech functioning.

Library should be approximately 1500 square feet. It should have the capacity for wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter and in the floor. Open wall space to mount both a smart board (4' x 6') and white board

(4' x 8'). Wiring to support a ceiling mount projector. Tech storage of 200 square feet. Library workroom of 100 square feet. Walls have built in book shelves, no higher up the wall than 6 feet. Wall space above this height designed for display of student art pieces. Perimeter wall outlets at counter height. Librarian needs unimpeded view of library (no wide columns) Book shelves on the floor of the library should be able to be moved, not built ins. Sink as required per building code. Air conditioned to preserve tech functioning.

Gymnasium itself is adequate. Divider curtain from ceiling to house two classes. Storage sufficient as is. Pull down bleachers to seat 300 behind folding wall, so that wall surface can be used for PE units that require wall space. Private changing areas and showers in both locker rooms. Current locker room size far exceeds our needs. Some of this space could go toward storage. Remote locker room supervision capacity. Keep 2 offices with bathrooms. Current ceiling insulation needs to be removed and replaced with something that won't collect dust. Keep/expand exercise room. Ceiling fans or other ventilation method. Natural light access needed. Lights as flush with ceiling as possible. Preserve the horizontal climbing wall. Ceilings in hallways off the foyer are too low-students damage by jumping and poking at them. Need solid or higher ceilings. Bathrooms off these hallways need handicap access. Additional storage for rec equipment and movable ladder. School PA system in gym needs to be such that announcements can be heard over the gym noise. Additional electrical outlets on gym perimeter. Hanging system for wall mats.

Auditorium is adequate. Seating needs some refurbishment. Need spot lights/lighting for performances. Improved ventilation needed, natural light access needed. This space should be air conditioned. Sound system needs upgrade.

Language Lab should allow approximately 35 square feet per student, to a maximum of 25 students. Classroom should have the capacity for wireless or wired internet, up to 25 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 48 square feet. Coat hooks on walls. Cable TV access.

Wood Shop requires 250 square feet per student, to a maximum of 16 students. The space requires a sprinkler system. 600 square feet of wood storage, adjoining or proximal classroom of 35 square feet per student, to a maximum of 16. Soundproofing, sawdust suction system, good ventilation required. Teacher office of 100 square feet, 100 square feet teacher storage, 200 square feet wood storage.

ELL requires approximately 35 square feet per student up to 10 students. Classroom should have the capacity for wireless or wired internet, up to 10 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies

for student use. Floor should be tiled. Built in bookcases equivalent of 24 square feet. Coat hooks on walls. Cable TV access.

Family and Consumer Lab should allow approximately 65 square feet per student up to 20 students. It should have the capacity for wireless or wired internet, up to 20 machines, and multiple outlets, evenly spaced on room perimeter and in floors by seating area. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher food storage closet of 200 square feet. Supply closet of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 24 square feet. Coat hooks on walls. Cable TV access. 5 units of sinks, hooded ventilation stoves and cabinet storage. Each unit should have space for a "dining table" to seat 6 people, with outlets in the floor beneath to support 4 sewing machines. Wiring/space for three large refrigerator/freezer units, interspaced in the classroom, as well as three dishwashers. Teacher unit of sink/working area with tiltable mirror over it or camera hooked to viewer, so students can easily see demonstrations. Washer and dryer vents and electricity are needed.

Large group instruction area of 350 square feet, to accommodate group presentations. Computer tables with internet and power access built into each table to accommodate laptops; tiered seating. White board and smart board installed, ceiling projector. Should accommodate up to 75 students. This would be appropriate for class meetings; whole grade instruction using distance learning methods; parent and public meetings too small for the auditorium but too large for a classroom.

Student Support Services

Guidance suite should allow 15 square feet per student, up to 8 students, in three separate rooms. (Guidance, Student Assistance and HCRS Counselor) Each of the rooms should be sound proofed for confidentiality. Carpeting required. Common waiting/conference area to the three spaces, 100 square feet. Records/resource storage 100 square feet. Internet and phone access to all areas.

Autism Program would need 1000 square feet, and include a stove, refrigerator, sink and cabinets. (Kitchen set up) Lighting should not be incandescent. Full spectrum lighting would be preferable. Handicap toilet with room for staff support person adjacent, but not in the room.. Should have the capacity for wireless or wired internet, up to 10 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount a white board (4' x 8'). Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Coat hooks on walls. Cable TV access. Washer and dryer vents and electricity are needed. Should have two small adjacent rooms for quiet tutoring/time out rooms, as well as a gross motor area of 200 sf.

EBD Program would need 600 square feet. Lighting should not be incandescent. Full spectrum lighting would be preferable. A small tutoring room should adjoin. Internet access for up to 10 students. Phone access. Open wall space to mount a white

board (4' x 8'). Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be carpeted. Coat hooks on walls. Cable TV access. South facing room would be optimum. Sound dampers on ceilings, two exits. Small counter/sink area with wiring for a micro and small refrigerator. Should have two small adjacent rooms for quiet tutoring/time out rooms.

Lifeskills Program would need 600 square feet, and include a stove, refrigerator, sink and cabinets. Kitchen set up. Handicap toilet with room for staff support person, with lockable drop down changing mats and ceiling mounted hoist lift. Should be adjacent, but not in the room. . Should have the capacity for wireless or wired internet, up to 10 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount a white board (4' x 8'). Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Coat hooks on walls. Cable TV access. More than standard wall outlets are required for high level of augmentative devices.

Special education suite requires 2-3 testing spaces that are soundproofed, and hold only the tester and one student. Space is needed for physical, occupational and speech therapy, ideally one room of 250 feet for each and 50 square feet of storage for each. Secretarial space of 500 square feet with storage for student records, and a conference room of 10 by 20 feet for building meetings. These areas could be combined into a central area. Conference room and secretarial area air conditioned for meeting comfort and functioning of copy machine.

Special ed teaching spaces 35 square feet per student up to 10 students. Classroom should have the capacity for wireless or wired internet, up to 10 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 24 square feet. Coat hooks on walls. Cable TV access.

Health Service should be 250 square feet, plus toilets/shower, plus treatment room with sink, cupboards and counter space for student cot/privacy. 200 additional square feet storage for student records, medical supplies, medical equipment (wheelchair, crutches, etc) Locking med cabinet. Student waiting area separated from evaluation area for confidentiality. Toilets should have call button.

Data Facilitator requires 150 square foot office with phone and computer access.

21C office requires 150 square foot office with phone and computer access

Tech office requires 150 square foot office with phone and computer access. Requires storage for tech equipment of 150 square feet.

CFG classrooms 35 square feet per student up to 10 students. Classroom should have the capacity for wireless or wired internet, up to 10 machines, and multiple outlets, evenly spaced on room perimeter. Open wall space to mount both a smart board (4' x 6') and white board (4' x 8'). Wiring to support a ceiling mount projector. Teacher storage in room of 100 square feet. 18 cubic inch open front cubbies for student use. Floor should be tiled. Built in bookcases equivalent of 24 square feet. Coat hooks on walls. Cable TV access.

Tutoring spaces, 25 square feet, with phone/computer access.

Cafeteria/Food Preparation

Cafeteria should allow approximately 12 square feet per student and needs to seat up to 125 students per lunch. Water fountain and large, multiperson handwashing station should be in the room. Outlets should be around perimeter and spaced on floor, if they are sealed enough to allow for daily floor washing. Toilet access for boys and girls should be accessible from within the caf. Kitchen should be 900 square feet, with clearances and venting to support a dishwasher power booster, hooded ventilation for baking and frying, direct wired convection ovens, pasta cookers. Current storage area is adequate, about 200 sf. Need computer access/power for café terminals.

The serving window is at present about 12 feet, it should be increased to at least 22 feet long. This would allow for a pizza warmer, a heated slide unit, a deli unit, and a steam table, and some space to put out other lunch items on the counters. The deli unit and steam table should be at least 4 well units, with drains. The square footage of this counter with the deli and steam table build in would be about (22' x 30") 55 sf.



Hot serving
line

Deli

Express

Pizza

Other equipment; a set of stacked gas convection ovens, a 6 burner gas stove with a griddle attached, a steamer, a steam kettle, large warming unit, walk-in cooler, walk-in freezer, at least one reach-in refrigerator, a new hood system with fire suppression system, and some additional counter space not listed below.

Square footage of equipment:

| | |
|--------------------------|-----|
| 6 burner stove w/griddle | 15 |
| Double gas stacked over | 10 |
| Electric Steamer | 5.5 |

| | |
|------------------------------------|---------------------|
| 4 pan refrigerated deli | 12.5 |
| 4 pan steam table | 8.9 |
| Steam Kettle 40 gallon | 9 |
| 5 Work Tables in Present Kitchen | 60 |
| Walk-in Cooler 12 x 12 | 144 |
| Walk –in Freezer 12 x 12 | 144 |
| 3 bay Sink Unit in Present Kitchen | 23.5 |
| Stand-up refrigerator (new) | 15 |
| Warming Box (new) | 5 |
| Present dishwasher run out tables | 54.5 |
| Dish/Pot Pan storage racks 3 x 10 | 30 |
| Mixer | 3 |
| Total | 540 square feet |

Administrative Area.

Administrative suite should include office space of 200 square feet each for ISS, principal and assistant principal; a conference room 10 x 20; storage of 100 square feet; and secretary/work area of 300 square feet. This area should also have one unisex student toilet off the ISS room, and one unisex adult toilet. This area should be air conditioned for functioning of copy equipment and comfort for parent meetings.

Staff Planning/Work Room

This space should be 500 square feet, with male and female handicap accessible toilets, wiring to support several microwaves and a refrigerator and a sink/cabinet/counter area. There should be space for storage, copy machines, giant shredder, and counter space for laminators and work preparation. This area should be air conditioned for functioning of copy equipment.

Maintenance

Maintenance requires 200 square foot tool room; a custodial office of 150 square feet, a 200 sf shop and storage of 1000 square feet. The custodial space should have capacity for a washer and dryer, and a mop sink or floor basin. Storage should have floor to ceiling shelving. Maintenance closets need to be on each floor, housing floor basins and needed cleaning equipment. There is underutilized, unheated storage behind the boiler room that could serve custodial needs if heating, ventilation and electricity were provided.

Environmental Considerations for the Facility

Schools teach environmental stewardship for the future. The lighting should be as green as possible, while producing the appropriate levels for student work. (Lighting should be flexible enough to be reduced when natural light is strong. 50 footcandles of artificial light at work surfaces in classrooms. See state board rule 6140.

Energy efficient methods should be considered in every area. There is a geothermal heat source not far from the school.

The uneven heating in the building has caused much discomfort in the winter months. In the summer months, the top floor grows extremely hot.

Classroom acoustics should be considered in the design.

Natural light should be utilized to the greatest extent possible.

Safety concerns need to be considered. All spaces should have a speaker to hear important instructions in case of emergency. Security measures such as cameras or motion detectors should be considered, especially for stair wells which present inherent supervision challenges.

Site considerations for the facility

The building was designed to hold more students than is currently projected for some time to come. We should be able to get our needs met within the existing footprint. Consideration should be given to using the roof or back parking area as playground space. Also to be considered is purchase of the small lot across Cherry Street as a playground. Accessible egress/ingress is needed for the building, in a way that can be utilized by the public when school is open. The current elevator is in the back of the building, and has no communication method with the main office to allow use. An elevator would need to be equipped with a method to identify those who are entering the school. It would be wonderful to consider restoring the front lawn/stairs to the design used prior to the addition of the concrete apron/gym entrance. This would allow a great expanse in the front for student activities. The trees in the front would need to be removed.

Community programs to be housed, or accommodated by the facility

Recreation Department activities are often held in our gym. Dedicated storage for volleyball and other rec activities should be planned, 100 sf and 15 feet tall.