

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Howe School

other names/site number Howe High School, Old Howe School

2. Location

street & number 390 Boston Road not for publication

city or town Billerica vicinity

state Massachusetts code MA county Middlesex code 017 zip code 01821

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title Judith B. McDonough, Executive Director
Massachusetts Historical Commission, State Historic Preservation Officer

Date

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional Comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register
 - See continuation sheet.
- determined eligible for the National Register
 - See continuation sheet.
- determined not eligible for the National Register
- removed from the National Register
- other (explain):

Signature of the Keeper

Date of Action

Howe School
Name of Property

Middlesex, Massachusetts
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

(Check only one box)

- private
- public-local
- public-State
- public-Federal
- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
<u>1</u>		buildings
		sites
		structures
		objects
<u>1</u>		Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

Education: private academy, then public secondary school, and then public grammar school

Current Functions

(Enter categories from instructions)

First floor: town food pantry
Second floor: Town of Billerica Museum

7. Description

Architectural Classification

(Enter categories from instructions)

Greek Revival/Italianate

Materials

(Enter categories from instructions)

foundation granite

walls brick

roof slate

other _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

See 7 of continuation sheets.

Howe School
Name of Property

Middlesex, Massachusetts
County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.) See continuation sheet 8.

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.) See continuation sheet 9.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Areas of Significance

(Enter categories from instructions)

Education

Period of Significance

1852 - Present

Significant Dates

May 31, 1852 Dedication of building
March 16, 1891 Became town high school
Summer 1896 Interior altered

Significant Person

(Complete if Criterion B is marked above)

Cultural Affiliation

Euro-American

Architect/Builder

Bean, Daniel G.

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

Massachusetts Historic Commission MACRIS BIL 46

Howe School
Name of Property

Middlesex, Massachusetts
County and State

10. Geographical Data

Acreage of Property "one acre more or less"

UTM References See continuation sheet.
(Place additional UTM references on a continuation sheet)

1. 19	313620	4714460	3.		
Zone	Easting	Northing	Zone	Easting	Northing
2.			4.		
Zone	Easting	Northing	Zone	Easting	Northing

___ See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.) See 10A of continuation sheets.

Boundary Justification See 10B of continuation sheets.
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Debra D. Fox

organization _____ date May 30, 2000

street & number 7 Brentham Road telephone 978-663-9705

city or town North Billerica state MA zip code 01862

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A USGS map (7.5 or 15 minute series) indicating the property's location.
- A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white** photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items) - Assessors Maps (2)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name Town of Billerica

street & number 365 Boston Road telephone _____

city or town Billerica state MA zip code 01821

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503. NPS Form 10-900 OMB No. 1024-0018

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Howe School
Middlesex County
Massachusetts

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The Howe School is a two-story Greek Revival brick building on the east side of Boston Road, north of the Billerica Common. Built in 1852 with land and money donated from the estate of Dr. Zadok Howe, it has served the town's educational needs in various forms, as it will continue to do in the future as a town museum. Except for changes to chimneys, fencing, landscape, and the addition of a rear fire escape, the school has seen little exterior alteration since 1852. (See Figures 2 and 4.)

Today, Boston Road (Route 3A), a main road between Boston and New Hampshire, is much busier. The section where the school is located remains relatively residential as it is now part of the Billerica Center Historic District. Diagonally across the street is another former public high school, Howe High School. Built in 1914, it is currently used as the Town Hall for Billerica. The present Billerica Memorial High School is behind the Town Hall, with access from Boston Road. To the south is a retirement community called Danforth Village, built in 1995. The office/club house is a single story clapboard building that faces Boston Road. The rest of the development contains attached town houses with separate garages and entrances in the back of the property. To the north and across the street (west) are large 19th century single family homes.

The Old Howe School stands in the middle of its lot with a paved driveway on both the north and south sides of the building, ending in a parking lot at the bottom of an incline. Rectangular in shape, the building is approximately 62' x 40'. The foundation consists of large rectangular granite blocks cut to fit between basement openings on the north and south facades, solid granite on both sides of the front entrance on the west façade and, on the east, there is brick to the ground except for one large granite block as a door sill. Basement openings originally consisted of four rectangular-paned wood windows with granite lintels. (Photo 1)

The north and south facades are identical: common bond brick with two stories of five symmetrical bays with 12 over 12 wood windows. Ten windows on the top floor of both facades have been replaced recently to replicate the previously existing windows. (Photos 1 and 2) It is doubtful that those replaced windows would have been original, but there were 12 over 12 windows in the Hazen History of Billerica photograph (Figure 2). Large cut brownstone serves as lintels and sills on the west, north, and south facades, and granite on the east façade. The top story window lintels are part of a brick frieze that rises to a dentiled cornice which continues under the eaves around the building. (Photo 3)

The east façade or rear of the building shows the full four stories, basement to attic. The one attic window is currently boarded up and the remaining four windows are the same dimensions as the north and south windows. The rear window sash has been altered and all have different configurations. A metal fire escape has been installed beginning at the upper left hand window. It blocks what was once an exit from the basement and this exit has been bricked in. At the Northeast corner is a second door opening with a granite lintel and sill which remains functional although it now has a replacement door. The dentiled brick cornice and frieze continues around the building under the open gable and creates returns to give the effect of an open pediment. The major change to this elevation has been the addition of an exterior brick chimney that breaks through the eaves and dentils. (Photo 3) The photo from Hazen (Figure 2) shows two interior chimneys on the south slope of the roof. It is impossible to tell from the Hazen photo if there were also two chimneys on the north façade, but there most likely were.

The west façade is the main entrance to the building. Raised brick-work creates four pilasters across the front, with the brick on each side of the entrance continuing past second floor windows through the entablature to create an arch over the attic window. Second floor paired windows and the attic window are arched with raised arched hooded lintels on all three windows. This decorative element of arched and hooded windows along with the dentils is a feature of Italianate

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architecture. A brick fascia and dentils complete the entablature. Under the windows is a two piece granite band with the words "Howe School" engraved into it. (Photo 4)

Barely noticeable in the Hazen photo (Figure 2) and in an 1870's graduation photo (Figure 4) is a wrought iron decorative balustrade over the paired front windows. This grill is now in the second floor hallway.

The front entrance has the most changes. Three granite steps still lead to the front entrance and the original brownstone still surrounds the entry in a traditional Greek Revival style though it is deteriorating. All that remains of the exterior doorway are a seven-paned transom window and its wood frame. The vestibule has been paneled and the current door has five-paned sidelights and a three-paned late 20th Century door.

The roof, originally slate, remains slate, although it has been replaced due to general failure and the patching and puncturing needed for the various ventilation systems installed throughout the building's history. Currently, there is one chimney on the center peak toward the front of the building and a metal vent toward the back. (Photo 1) This metal vent appears in the Hazen photo of the school (Figure 2) and in the graduation photo (Figure 4), and could possibly be the original Emerson ejecting ventilator.

The interior was not spared from alterations as the exterior has been. The first floor, now housing the Billerica Food Pantry, was not available to photograph except from outside the glass door. Plywood paneling, dropped ceilings, recessed lighting, and interior drywall were added when the building housed the Superintendent of Schools. This is still evident in the food pantry.

Originally, there were two sets of stairs to the second floor. The one on the right remains, while the one on the left has been cut off and blocked in on the second floor. The remaining staircase has elaborate turned spindles with a railing and newels at every turn of the stairs. It remains unpainted. The stairs are well worn but are original. Along the walls is painted tongue-in-groove wainscoting. (Photo 5)

Two right turns on the stairway conclude at the arched windows facing Boston Road. Decorative arched wood moldings frame the windows. A wall and doorway between the windows separates the hallway into two rooms (separate boys and girls entrances), with remnants of coat hooks still evident on the walls. The paneling from the stairwell is continued into the hallway.

What had once been the main classroom on the second floor has been divided into one large room on the south side and three smaller rooms on the north. The walls of one of the small rooms has been decorated with pictures and artifacts of old schools. The other two small rooms are used for storage, and the larger room contains artifacts and papers that will be used in the Billerica Museum. Remnants from the occupancy of the Superintendent of Schools include dropped panel ceiling lights and plywood paneling over original plaster and wainscoting.

However, some original elements remain such as window and door moldings, coat hooks, an air vent cover and wood flooring. The window moldings are very wide on the right and left sides of every window to allow for interior shutters. Once opened, the shutters would be turned outward to rest against the moldings. These interior shutters no longer exist.

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The staircase to the attic is unfinished, although the walls have been plastered to the top of the staircase. The attic walls have not been plastered, and the brickwork is exposed under both gables. The brick arch and cornice are clearly visible over the west-facing arched attic window.

The roof rests on three 2" x 6" cross beams which have been placed into north and south-running horizontal wood plank walls. Each plank is approximately six inches wide by six feet long, and both north and south walls run the length of the building. Two square beams are notched into the cross beams and run east/west approximately one foot above the plank walls. The trusses are 2" x 4" 's and span the roof at twelve foot intervals. They are mitered at the peaks, and are holding up the horizontal wood plank roof. The trusses slope to the top of the brickwork on the north and south facades of the building, which is the attic floor. The two interior plank walls appear to be free-standing and are probably original since their size, shape, and color match the wood of the inside of the roof. The floor of the attic is also wood, with boards of differing widths.

The basement can be accessed by two staircases on the opposite ends of the first floor front hall way. In the center of the basement is a wall of horizontal planking and stud beams similar to the ones in the attic. This wall and beams surround four painted granite pillars, and appear to support the first floor. The inside of the foundation is painted brick and dry-laid fieldstone. The walls are all painted white.

The ceiling is plaster over lath. No cross beams are evident. On the north and south sides are bricked spaces with cast-iron doors, evidence of previous heating systems, possibly connected to the earlier chimneys.

The basement was originally used as a toilet facility for students, and some stall sections remain. Asking a teacher permission to "go to the basement" was a common euphemism for using the bathroom in New England schools until at least the middle of the 20th Century.

A temporary heating system of propane was recently installed due to the failure of the last furnace. Pipes were placed through the wall on the north façade, but the bricks will be replaced when a more permanent system is installed.

The front, or west façade, of the Howe School has had recent landscaping changes. Since the original photos were taken for this project in October 1999, the bushes and a large maple tree have been removed, returning the building's appearance to one that more closely resembles the ones in Figures 2 and 4. (Photo 4)

The Howe School, at first glance, is a remarkable example of mid-19th Century Greek Revival architecture, virtually intact since 1852. This is evident from its symmetrical facades, rectangular massing, gable entrance, pilasters, lintels and sills, cornice, and entablature. However, on closer examination, signs of the coming importance of Italianate design is visible in the decorative dentils, arched and hooded windows with wrought-iron balustrade (now removed), and the raised brick arch over the third story window.

While the interior has suffered more alterations than the exterior of the building, most changes have been cosmetic and can be reversed, by removing plywood, dropped acoustic ceilings, and room divisions of dry-wall. The Howe School has been an important piece of the architectural character of Billerica since 1852. With its planned reincarnation as the Billerica Museum, it should be restored to its former glory on Boston Road.

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The Howe School, originally Howe Academy, built in 1852 on Boston Road in Billerica, Massachusetts, is a two story late Greek Revival brick school house with some Italianate features. It is one of the few brick Greek Revival school houses in the state with an unaltered exterior condition and has had a long, and continuing, history as an educational facility. Beginning with a generous bequest in Dr. Zadok Howe's will of May 1851 for a young men's college-preparatory academy to its present use as a food pantry, it has had a prominent place in Billerica life. As the future home for the Billerica Museum, it will continue to remain central to the community.

Billerica, Massachusetts, in the early 19th Century was primarily a farming community, northwest of Boston. Originally larger than its present size, sections of Billerica were used to form parts of the towns of Bedford, Wilmington, Carlisle, and Tewksbury.¹ By this time, the town already had a distinguished history due to its citizens' participation in the conflict for independence from England.

Most Massachusetts towns in the first decades of the 19th Century divided themselves into small school districts, with each district erecting its own school building. An example is the neighboring town of Carlisle, which was divided into six school districts. Between 1818-1840, five of the districts got a new school.²

According to town historian, Henry Hazen, Billerica had squadrons previous to the district system, but he wasn't aware of when the changeover had occurred. The town eventually took over all school management from the districts "seeking more harmonious and efficient management."³ It appears that early "public" school buildings were more functional than comfortable for students and teachers. Very few of these early buildings have survived because they were small and simply constructed. Parents were more concerned that their children get a qualified teacher and some books than a state-of-the-art facility.

Early Private Schools in Billerica

The Howe School was not the first private academy in Billerica. The first was Pemberton Academy, established by the distinguished first principal of Phillips Academy in Andover, Mr. Pemberton, teacher to James Madison and Aaron Burr. For both boys and girls, the Academy survived for 14 years, sending many young men to Harvard and distinguished careers.⁴

A second private school was established by Bernard Whitman and his sister Bathsheba. In 1820, it became Billerica Academy with many distinguished trustees including Dr. Zadok Howe. However, "it lacked the pecuniary foundation needful for permanence and its career closed in 1836."⁵

Reverend Mr. Stearns ran the third private school in Billerica. His classes were conducted in the vestry of the Congregational Church where he was pastor.⁶ As with most early school buildings and instructional sites, none of these buildings had the physical permanence and monetary backing that the Howe School would have.

¹ Hazen, Reverend Henry. History of Billerica 1653-1883. Boston: A. Williams and Co., The Corner Bookstore 1883. Reprinted by Howard A. Doyle, Cambridge, MA 02139. 1973. pp. 217-225.

² Bull, Sidney A. History of the Town of Carlisle. The Murray Publishing Company, Cambridge, MA 1920. pp. 55-57.

³ Hazen, p. 256.

⁴ Hazen, p. 257.

⁵ Hazen, p. 257.

⁶ Hazen, p. 258.

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Dr. Howe and His Vision

Dr. Zadok Howe came to live in Billerica in 1816. He was born in Bolton, Connecticut in 1777 to Zadok and Rachel Howe, who also had two other sons and a daughter. After an apprenticeship as a watchmaker, he changed careers and went to Dartmouth College, earning a medical degree in 1809. Records show he started practicing medicine in 1802, before he graduated. By the time he moved to Billerica in 1816, he had had 14 years of medical experience from previous practices in Concord, New Hampshire and Franklin, Massachusetts.

By all accounts, Dr. Howe was respected far and wide for sound judgement and surgical skills, articles in many medical publications, and by holding positions of responsibility with medical societies, such as the Presidency of the Massachusetts Medical Society in 1847. Sadly for his many patients and friends, he developed cardiac problems and died on March 8, 1851.⁷

His last will and testament, written in his own words, designated the use of the Everett lot (which he had purchased for this purpose) and the appointment of six trustees "for an academy for the education of youth...The school is not intended for the admission of small children, but for instruction in the higher branches of English education and such other studies as are required of young men preparatory to entering College." During the first trustees meeting, a second paper of Dr. Howe's was read to those present, stating "I hope that the Trustees before proceeding to build, will procure an accurate plan of the school house from a scientific Architect... I should prefer the taste of a good Architect to that of any board of Trustees... In as much as it is desirable the building should be an ornament to the village. I should apply to the Boston School Committee to recommend a suitable architect for the purpose and abide by his taste."⁸

Frederick Emerson

The man from the Boston School Committee who became the consultant was Frederick Emerson (1789 – 1857). Emerson was from the branch of the Massachusetts Emerson family who emigrated to Ipswich from Lincolnshire, England. Over five generations the family moved from Ipswich, to Haverhill, to Hampstead, New Hampshire where Frederick was born on November 28, 1789. The Hampstead Emersons, one of three original founding families, were very prosperous, running a cider and corn mill and a spring for medicinal water.

Frederick does not appear to have attended college, but he taught school and was a member of the Boston School Committee from Ward 5. He was also noted for writing "The North American Arithmetic" textbooks, and for the invention of a ventilation system specific to the needs of schools.

Public school education had been a hotly debated subject in Boston and most of Massachusetts since the 1830's. One early issue was the education of free blacks. It was through the efforts of Alderman Samuel Eliot and School Committee Member Frederick Emerson that the City Council designated funds for a new school building for free blacks "not far from the African Church".⁹

One city in Massachusetts that installed Emerson's ventilating systems was nearby Lowell. The 23rd Annual School Committee Report for 1848 discussed "the continual improvements that are made in the mode of warming (school) houses, and the increased importance which is attached to having a pure atmosphere to breathe... Emerson's ventilator

⁷ "Billerica". Magazine published in Billerica, July 1914, "Life of Dr. Zadok Howe".

⁸ "Billerica". Magazine published in Billerica, August 1914, "Life of Dr. Zadok Howe".

⁹ Schultz, Stanley K. The Cultural Factory: Boston Public Schools 1789 – 1860. Oxford University Press, 1973. P 169.

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has been put up in all (school) houses that have been erected during the year and also in several older buildings."¹⁰

Known today as the Father of Public Education, Horace Mann was quite a controversial figure by the 1840's. His new ideas stressed first engaging a child's interest, and then getting him to do his work. He believed in kindness over discipline.¹¹ When he became the Secretary of the Massachusetts State Board of Education, he fired the more traditional school masters, one of whom was Frederick Emerson. Emerson held a grudge which only worsened when Mann refused to continue use of the "North American Arithmetic" texts in the schools.¹² Emerson charged that Mann had previously promised his endorsement and the disagreement continued into the House of Representatives.¹³

By the 1850's, Frederick Emerson, from a prominent New Hampshire family, was a member of the Boston School Committee, involved in educating free blacks, a textbook author, a former school master, and was publicly involved with Horace Mann. Additionally, as the inventor of a school ventilation system, he was an obvious choice as consultant for the proposed Howe Academy.

Henry Bernard and School Architecture

Henry Bernard, Superintendent of Schools for Connecticut, and first National Commissioner of Education, wrote extensively about school architecture and education in School Architecture: Contributions to the Improvement of School Houses in the U. S.. Bernard felt

"to make an edifice good for school purposes, it should be built for children at school, and their teachers, for children differing in age, sex, size, and studies, and therefore requiring different accommodations; for children engaged sometimes in study and sometimes in recitation; and at all times supplied with pure air to breathe; for children to occupy it in the hot days of summer and the cold days of winter ..."¹⁴

Bernard included the ventilation system of Frederick Emerson in his book. In his plan, Emerson used two ventilators – an Ejector and an Injector – one to withdraw impure air and the other to introduce fresh air. "These ventilators are not dependent on a vane, but perform their office without changing position." Each injecting ventilator was mounted on a tube, or ventiduct, which went through the building roof into the room below, and into the furnace. Cold air coming in would warm before entering the room. The ejecting ventiduct was across the room from the stove and went from ceiling to floor. It had openings at each end, for air to get out. The ejector could function by itself but Emerson recommended using both parts of his system. According to Barnard, "he enforces his views on this point by refusing to allow his ventilators to be put upon any school house that is not by some means supplied with fresh warm air."¹⁵

Barnard was interested in more than ventilation systems for schools. His book included details of what buildings should look like – from desk details to what trees to plant in the school yard. One of his examples of a floor plan for an

¹⁰ "23rd Annual Report of the School Committee of the City of Lowell", Year Ending 12-31-1848. Lowell: James Atkinson, City Printer, 1848. p. 12.

¹¹ Katz, Michael. *The Irony of Early School Reform: Education Innovations in Mid-19th Century Massachusetts*. Beacon Press, Boston 1968. p. 140.

¹² Schultz, p. 147.

¹³ Massachusetts Historical Society, 1154 Boylston Street, Boston 02215. Correspondence between Loren Norcross and Horace Mann concerning Frederick Emerson and the Boston School Committee, March 1846.

¹⁴ Barnard, p. 7.

¹⁵ Barnard, p. 144.

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intermediate school has separate staircases for girls and boys with closets under the stairs. There is still evidence of this layout in the Howe School today. While none of the engravings in his book are copied exactly in the Howe School, Barnard's Example #4 is strikingly similar (see Figure 1).¹⁶ While no plans exist proving that the Howe School used Emerson's ventilation system, a photo of the school from Hazen's History of Billerica (see Figure 2) shows part of an exhaust system behind the left chimney that resembles Emerson's ejecting ventilator (see Figure 3).

The most important issue addressed by early educational reform in regard to the Howe School had become how school architecture could affect children and their ability to learn. There were two visible and vocal education advocates in New England. One, again, was Horace Mann, who in his 1846 Report from the Secretary of Education wrote "In 1837, not one third part of the Public school-houses in Massachusetts would have been considered tenable by any decent family, out of the poor house, or in it."¹⁷ The other was Henry Barnard whose book on school architecture was so widely used it went through six editions from 1841 to 1854. He became concerned with school architecture because "go where he would in city or country, he encountered the district school-house, standing in disgraceful contrast with every other structure designed for public or domestic use."¹⁸ Barnard's book describes problems in various states, then addresses how to solve some of the problems. Mann wrote in the Introduction to School Architecture that he (Barnard) "embodied the result of much observation, experience and reflection, in a manner so systematic and practical as to meet the wants of all who may have occasion to superintend the erection, alteration, or furnishing of school houses."¹⁹

By the third edition of School Architecture in 1848, Barnard republished his original essays and was able to add plans and descriptions of school houses actually built under his direction in Connecticut, Rhode Island, New York, and Massachusetts. Also included were numerous furnace and ventilation systems, including the one invented by Frederick Emerson, "which is acquiring very general use in that city (Boston) and its vicinity."²⁰

Emerson died on April 26, 1857 in Boston from consumption. It is interesting to speculate that his concern for breathing pure air was a direct result of his own illness.

Greek Revival Schools in Massachusetts

Throughout the 1830's, 40's, and 50's, education and school buildings became topics of great importance in Massachusetts, spurred on by men like Henry Barnard and Horace Mann. Just as the need for schools grew in Billerica, other Massachusetts towns also began building schools as populations expanded. Greek Revival architecture, popular in the eastern United States at this time, became a style easily adaptable as school buildings.

While many of these school buildings no longer exist, many of them were respected in their communities and remain today in various incarnations. The Massachusetts Historic Commission inventory file lists 47 existing Greek Revival school houses originally built between 1798 and 1860. Many of these are not brick, others are smaller than two full stories. A few were built as town halls but became schools. Some have been altered beyond recognition.

¹⁶ Barnard, pp. 238 – 239.

¹⁷ Barnard, Henry, LL.D. Superintendent of Schools in Connecticut. School Architecture; or Contributions to the Improvement of School Houses in the U.S. Cincinnati: Publisher H. W. Derby & Co.. New York: J. C. Derby, 8 Park Place. Boston: Phillips, Sampson & Co. 6th Edition. 1854. p. 16.

¹⁸ Barnard, p. 7.

¹⁹ Barnard, p. 6.

²⁰ Barnard, p. 144.

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Of 43 files that were examined, four schools stand out as being of similar quality and massing as the Howe School. The first one is in Haverhill, built in 1856 by Joseph R. Richards. It is built into a hill, and the slope has the building start at the second story and expanding to three. It has detailing that mixes Italianate and Romanesque elements with Greek Revival.²¹

The second building is in Shirley. It is brick, 2 1/2 stories with a gable-end entry with brick dentils and brackets, and was built in 1855.²² The third building, in Shrewsbury, is brick, 2 stories, built in 1830. It has entrances on both the gable end and the side, with brick pilasters, a recessed entry and a defined entablature.²³ The 4th school is in Lowell. Built in 1848, it is the Colburn School, designed by architect Jacob Graves. The entrance is on the long side, but it has brick dentils in the entablature, a circular window and recessed rectangular panels.²⁴

The Howe School is not the only existing 19th Century two story brick school building in Massachusetts. However, it remains in a condition unlike most other schools—unaltered. Its detail is not unique, yet it is a striking building in its design. These things make it significant architecturally.

Building the Howe School

The architect selected to design the Howe Academy was a man from Lowell, Daniel G. Bean.²⁵ Little information is available about D. G. Bean. Born in 1808 in Solon, Maine, by 1851, he had an architectural practice in an office on Fletcher Street in Lowell. He designed the J. C. Ayres Building in Lowell in 1852, and by 1853, his practice had moved to 48 Central Street in Lowell into offices previously occupied by prominent Lowell architect James Rand. There were no other city directory listings for him, and the Massachusetts American Institute of Architects has no information about him. Bean died on July 17, 1863 of phlebitis, in Lowell.²⁶

The Building Committee of the Howe School consisted of Billerica Selectman William H. Odiorne (executor of Howe's will), G. H. Whitman, James R. Faulkner - three of the seven trustees of the school. Although the Trustees of the Howe School organization still function, with new members appointed as needed, no correspondence is known to exist between Emerson or Bean and the Trustees which would shed light on how Bean and Emerson were selected. Frederick Emerson was probably chosen by the trustees due to his visible activities in Massachusetts as an educator and ventilator inventor. As for Daniel Bean, he might have been known by a wealthy Billerica citizen, Joshua Bennett, through a connection with the J. C. Ayres Building in Lowell, but this could not be verified. Records do exist to confirm that work began on June 17, 1851 with blasting and laying of the foundation by Benjamin Heald, a resident of Billerica and future Selectman²⁷, and construction by Mr. Brackett, a contractor.²⁸

As the school was being built, trustees were incorporated, by-laws were adopted, and regulations were written: "applicants must be 12 years old, and have two certificates, one of vaccination and the other of 'moral and orderly

²¹ Massachusetts Historical Commission Survey File HVR.253.

²² MHC Survey File SRL.198.

²³ MHC Survey File SRW.2.

²⁴ MHC Survey File LOW.1222.

²⁵ Billerica Magazine, August 1914.

²⁶ Lowell Sun, "Obituary for D. G. Bean", July 18, 1863.

²⁷ Hazen, p. 307.

²⁸ Billerica Magazine, August 1914.

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behavior.' Preparation was required in 'writing, reading, arithmetic, orthography, grammar, including parsing, and some progress in elementary geography.'²⁹

The Howe School Opens

On May 31, 1852, exercises were held for the dedication of the Howe School, with prayers, songs, addresses, and the reading of Dr. Howe's will. When classes began, there were 52 pupils, more girls than boys, enrolled under principal William C. Grant and his assistant Elizabeth Rogers.³⁰ It is now believed that Dr. Howe did not anticipate the desire by girls to continue their education when he specified in his will that the school be for boys.

At the end of every school year, medals and awards were given out for special efforts and a party or "social levee" took place after the presentations. In 1866, the first formal graduation took place, with three students. By 1872 there were 634 students, 365 girls, 269 boys. Figure 4 is an undated photo, probably from the 1870's, showing both male and female graduates and teachers.

"Of the fifty state academies, this is the eighth best endowed, and nearly free (\$2.00 room charge). Neighboring towns are deeply interested in its standing and advantages. Bequests for their children amount to \$33,000. Several families combining might by turns, transport scholars, saving board and affording healthful recreation, or board can be had near the seminary. The parents are earnestly desired to keep their sons and daughters, continuously at the academy three years to complete the course of study."³¹

A directory compiled in 1897 lists all graduates, their birth, marriages, occupations, and deaths where available. Students came from all over Massachusetts and a few neighboring states, just as Dr. Howe had envisioned. Many of these students became respected citizens of their towns, and many of the girls became teachers in the growing Billerica school system.³²

One of these graduates was Charles Kolrausch, Class of 1862. He was a state legislator from 1891-97, a town selectman for five years, and spent 36 years as the town meeting moderator. His brother Matthew, class of 1877, was involved in the family woolen mill. He invented and patented a scouring and fulling machine. Other graduates include Moses Parker, Class of 1856 who went on the Harvard and medical school in Vienna and France. He was a surgeon in the Civil War and later became one of the Howe School trustees. Annie M. Page, Class of 1866, was assistant principal of the school from 1871-75. Joseph Talbot, Class of 1884, was part of the Talbot Mill family from North Billerica, where he served as Treasurer and assistant superintendent of the company. John Elliott Bowman went on to Boston University School of Theology and became a Congregational minister. He is responsible for compiling the definitive list of burials in the Billerica Cemetery (1686 – 1898) still used by the New Hampshire Genealogical and Historical Society in Concord and finding the oldest headstone, of John Rogers (1686).

²⁹ Ibid.

³⁰ Billerica Magazine, October 1914.

³¹ 3rd Catalogue of Howe School, Billerica, Massachusetts with the Dedicatory Address delivered May 31st 1852. Lowell, Massachusetts: Stone & Huse, 21 Central Street, Book Printers, 1872. p. 28.

³² Catalogue of the Officers and Students of the Howe High School of Billerica, Massachusetts. Jones, Albert M., Principal. June 1897. pp. 36-65.

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The Howe School continued privately until 1891. That year, the State Legislature enacted special legislation (Chapter 246, Acts 1891) requiring towns with family size above a prescribed number to provide a free High School program. Billerica could be exempted if the Howe Trustees allowed town children to attend without tuition. This was done, with the Trustees maintaining direction of the school until 1897. At that time, the Howe School became Howe High School.

By the early decades of the 20th Century, it became obvious that the Howe High School was too small to remain the town high school and the new Howe High School was erected diagonally across Boston Road from the old school and dedicated on December 8, 1916. Although the Trustees are still active, the building now remains in the hands of the Town of Billerica. After this time (1916), the old Howe School building met whatever need the town had for grade school space. For example, for many years it housed only the 5th grade students. Eventually, it held offices for the Superintendent of Schools.

Today, the first floor of the school building houses the Billerica Food Pantry. When a suitable relocation site is made available to them, the Billerica Museum Committee will restore the building as a museum of the school and the town.

Its importance lies also in how this building is a piece of the fabric that makes up the history of education in Massachusetts. The influences of Henry Barnard and Frederick Emerson, men at the vanguard of combining health and education with school design, resulted in a country school that was exceedingly modern for its time. The Howe School today represents the combination of an outstandingly designed building in its original form with its future use as a museum, reflecting the changing educational needs of the citizens of Billerica.

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10A – Verbal Boundary Description¹

A parcel of land situated in Billerica aforesaid on the east side of the main street leading from said Everett dwelling house, to the house of William Blanchard, containing one acre more or less bounded as follows,

viz beginning at the stake by the wall two rods and one foot from the north side of said Everett's old barn, thence running in a northerly direction by said wall eight rods to a stake, thence easterly twenty rods to a stake and stones, thence westerly twenty rods to the bounds first mentioned.

10B – Boundary Justification

The boundary description includes the entire lot on which the building now stands.

¹ Lowell Registry of Deeds, Book 18, Page 271, 1848.









