

Agenda 11/12/08
#2

Massachusetts School Building Authority

School District Acton

District Contact William Ryan TEL: (978) 264-4700

Name of School Douglas

Submission Date 11/10/2008

Note

Acton Board of Selectmen Vote scheduled Nov 11th 2008
Acton Public School Committee meeting Vote Scheduled Nov 13th 2008

The following Priorities have been included in the Statement of Interest:

- 1. Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
- 2. Elimination of existing severe overcrowding.
- 3. Prevention of the loss of accreditation.
- 4. Prevention of severe overcrowding expected to result from increased enrollments.
- 5. Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse.
- 6. Short term enrollment growth.
- 7. Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
- 8. Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

Potential Project Scope: Repair Project

Is this SOI the District Priority SOI? YES

The MSBA ID for the District Priority SOI: 2009 Douglas

District Goal for School: Please explain the educational goals of any potential project at this school

The Acton Public School District is committed to replacing the EPDM roofing system at the Douglas Elementary School. \$75,700 of the appropriated budget since 2003 and \$40,700 of the appropriated budget since 2007 has been spent on maintenance and repair of the current out dated roofing system. Making repairs to this system is taking away from other educational programs and various important capital needs. It is the goal of the Acton Public School District with the Douglas Elementary School to replace the EPDM roofing system at the school.

Is this part of a larger facilities plan? NO

If "YES", please provide the following:

Facilities Plan Date:

Planning Firm:

Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 23 students per teacher.

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 22 students per teacher.

Is there overcrowding at the school facility? NO

If "YES", please describe in detail, including specific examples of the overcrowding.

General Description

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site (maximum of 5000 characters):

The Douglas School is located at 21 Elm Street in Acton. The site consists of 33.9 acres that is shared with the Gates Elementary School. The site slopes to wetlands and Fort Pond Brook to the south, with a current 100 ft buffer. The site is bordered by Elm Street to the Northeast, Jefferson Farms condominiums to the Northwest, and the brook to the South and West. The surrounding areas are zoned residential, R-2. There is asphalt paving, curbs, and walkways, and handicap parking and curb-cuts are provided.

BUILDING ENCLOSURE: Please provide a detailed description of the building enclosure, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters):

The Douglas school is a two story building with a one story core wing with two connected postbuilding construction modular buildings. The building is solidly built of brick and concrete with large glass window walls in the classrooms and the connected modular buildings are stick built one in 1999 and the other in 2007.

Age of EXTERIOR WALLS (In Years): 43

Year of Last Repair or Replacement: 1965

Description of Last Repair or Replacement:

Original Construction in 1965

Age of ROOF(In Years): 26

Year of Last Repair or Replacement: 1982

Description of Last Repair or Replacement:

Adhered EPDM roof, installed 1982. The Roof R value when installed was R – 16.7. Old skylights at entry and lobby were roofed over.

Age of WINDOWS(In Years): 43

Year of Last Repair or Replacement: 1982

Description of Last Repair or Replacement:

All remaining window walls are original. However the lower panes were replaced with with metal panels, studs, and insulation.

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems, and any known problems or existing conditions (maximum of 5000 characters):

Mechanical and electrical systems have been updated over the years are in very good working order.

Age of BOILERS(In Years): 1

Year of Last Repair or Replacement: 2008

Description of Last Repair or Replacement:

Replaced original Cleaver Brooks boilers with new Viessmann High Efficiency Condensing boilers as well as domestic hot water system.

Age of HVAC SYSTEM (In Years): 5

Year of Last Repair or Replacement: 2004

Description of Last Repair or Replacement:

Replaced all original univentilators with new variable drive UV with individual environmental controls and programmable thermostats in summer of 2004.

Age of ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM(In Years): 43

Year of Last Repair or Replacement: 2007

Description of Last Repair or Replacement:

Installed additional poles and transformer to support new modular construction off the rear of the building.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters):

Corridor and most classroom floors are 12x12 vct tile with some carpet in offices and few other select classrooms. Wood strip floor in the gymnasium. Ceilings are painted ribbed concrete with adhered tile between ribs, plaster ceilings in bathrooms, and there is exposed conduit on the concrete ceilings. Lighting was upgraded with new high efficiency t-12 Fluorescent lighting summer of 2005. Vertical blinds are used for window treatments. Doors are solid core wood doors and all hardware is a mix of knobs and replacement lever handles. Typical interior walls at corridors, classrooms, and office areas are painted CMU in good condition.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc.:

Art, music, physical education, library, and computer lab are integral parts of the Douglas curriculum. Douglas offers both an art and art history program. The physical education program includes Project Adventure. Our Parent Teacher Organization (PTO) helps fund our library/media center, computer lab, and classroom assistants. The library/media center specialists help students explore literature and research skills. Computer specialists develop and teach an integrated computer curriculum. Classroom assistants help teachers with day-to-day classroom activities.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, and a description of the media center/library (maximum of 5000 characters):

Cafeteria good condition with vct flooring and wood stage approximately 2,474 sq ft. Gymnasium good condition with basketball rims and climbing structure on wall, wood flooring, approximately 2,193 sq ft. 21 classrooms average sq ft approximately 940 sq ft. Computer Lab 560 sq ft.

CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters):

Building was slightly reorganized in 2007 after the construction of a modular building off the rear of the main structure. New modular created two independent 990 sq ft spaces, one is used for Special Education and the other is now the Library / Media Center. There are no current capacity issues.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including if any override or debt exclusion votes were necessary (maximum of 5000 characters):

The Acton Public School system employs multiple Licensed maintenance professionals including a plumber, electrician, and HVAC mechanic. Additionally the Douglas School building is home to two fulltime building custodians forming two shifts who clean and maintain the building on a daily basis. Several capital projects have been undertaken at the Douglas School, including a new roof in 1982, \$221,000 new univentilators in 2004, new modulars constructed in 1999 and 2007, approximately \$32,000 in asphalt repairs in 2008, and \$261,500 new boilers in 2008.

Priority 5

Please provide a detailed description of the energy conservation measures that are needed and include an estimation of resultant energy savings as compared to the historic consumption.

The R-Value of the roofing system originally installed was equal to 16.7, professional engineering services estimates the current roof system R - Value at approximately 12. A new roofing system would create an end result R-Value of approximately 20. Research suggest that a differentiation of R-Value from 12 to 20 could result in a 27% savings in energy costs. The Douglas Elementary School will use on average approximately 26,000 to 31,000 therms of Natural Gas per year to heat the building. We are currently spending about \$.78 per square foot in Natural Gas. Applying this research to the Douglas School suggest that installing a new more efficiient roofing system could reduce Natural Gas use to approximately 19,000 to 23,000 therms per year, which would equate to an estimated \$.57 per square foot.

Priority 5

Please describe the measures the School District has already taken to reduce energy consumption.

- Installed new High Efficiency Condensation Boilers
- Over 2005 to 2006 we instituted a comprehensive awareness program to all employees – Shut lights, computers and other equipment off when not in use.
- Lower building heating temperatures, & where applicable raise cooling temperatures.
- Reschedule night meetings to shut buildings down sooner and or on some evenings.
- Took part in an NSTAR sponsored lighting retrofit program and installed motion sensors.
- Look at non-traditional energy purchasing options.
- Re-examine building heating and cooling occupancy times.
- Turn off domestic hot water heaters on weekends and holidays
- Turn off exhaust fans during unoccupied times
- Installed LED Energy Efficient Exit Signs in School Buildings
- Installed Variable Frequency Drives in School Buildings for Pumps and Air Handlers
- Upgraded HVAC Controls to Digital (DDC) in Multiple School Buildings

Priority 5

Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The Acton Public School District has spent \$75,700 of the appropriated budget since 2003, and \$40,700 of the appropriated budget since 2007 on maintenance and repair of the current out dated roofing system. The current method of band-aiding repairs to this system is financially taking away from other educational programs and various important capital needs.

Please also provide the following:

Age of Roof (Years): 26
 Were any major repairs or renovations of the roof undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the roof: 1982
 Age of Windows (Years): 43
 Were any major repairs or renovations of the windows undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the windows: 1982
 Age of Doors (Years): 43
 Were any major repairs or renovations of the doors undertaken in the past?: NO
 If "YES", please provide the year of the last major repair/renovation of the doors: 43
 Age of HVAC (Years): 5
 Were any major repairs or renovations of the HVAC undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the HVAC: 2004
 Age of Boilers (Years): 1
 Were any major repairs or renovations of the boilers undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the boilers: 2008
 Age of Electrical System (Years): 43
 Were any major repairs or renovations the electrical system undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the electrical system: 2007
 Age of Lighting System (Years): 4
 Were any major repairs or renovations of the lighting system undertaken in the past?: YES
 If "YES", please provide the year of the last major repair/renovation of the lighting system: 2005
 Have the systems identified above been examined by an engineer or other trained building professionals?: YES
 If "YES", please provide the name of the individual and his/her professional affiliation:
 Various
 Please also provide the date of the inspection:: 9/18/2008

Please describe how addressing the system will extend the useful life of the facility that is the subject of this SOI (maximum of 5000 characters):

Replacing the roofing system will seal the building envelop reducing risk of water entrusion into subroofing system and interior walls reducing risks associated with mold growth. Additionally replacing the roofing system would eliminate exorbitant amounts of budget dollars being spent on maintenance and repair of the out-dated system. Removing this financial constraint would create opportunity to address other important capital needs in the DOuglas School building.

Name of School Douglas

Vote

Vote of Municipal Governing Body YES: 1 NO: 1 Date: 11/4/1908

Vote of School Committee YES: 1 NO: 1 Date: 11/4/2008

Vote of Regional School Committee YES: NO: Date:

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

**LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR
(E.g., Mayor, Town Manager, Board of Selectmen)**

Chief Executive Officer

School Committee Chair

Superintendent of Schools

(print name)

(print name)

(print name)

(signature)

(signature)

(signature)

Date

Date

Date

Board of Selectman Vote

Resolved: Having convened in an open meeting on November 17th 2008, the Acton Board of Selectmen of Acton, MA, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent of the Acton Public Schools to submit to the Massachusetts School Building Authority the Statement of Interest Form dated November 10th 2008 for the Douglas Elementary School located at 21 Elm Street which describes and explains the following deficiencies and the priority category for which an application may be submitted to the Massachusetts School Building Authority in the future. This application submitted references Priority 5, the Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse; and hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

Acton Public School Committee Vote

Resolved: Having convened in an open meeting on November 13th 2008, the Acton Public School Committee of Acton, MA, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent of the Acton Public Schools to submit to the Massachusetts School Building Authority the Statement of Interest Form dated November 10th 2008 for the Douglas Elementary School located at 21 Elm Street which describes and explains the following deficiencies and the priority category for which an application may be submitted to the Massachusetts School Building Authority in the future. This application submitted references Priority 5, the Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse; and hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.