

Massachusetts School Building Authority

School District Nashoba

District Contact Michael Wood TEL: (978) 779-0539

Name of School Nashoba Regional

Submission Date 1/6/2012

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- ⓑ The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- ⓑ The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- ⓑ The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for a portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- ⓑ The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students.
- ⓑ After the district completes and submits this SOI electronically, the district must sign the required certifications and submit one signed hard copy of the SOI to the MSBA, with all of the required documentation described under the "Vote" tab, on or before the deadline.
- ⓑ The district will schedule and hold a meeting at which the School Committee voted, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI.
- ⓑ The district will schedule and hold a meeting at which the City Council/Board of Aldermen, Board of Selectmen/equivalent governing body voted, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI.
- ⓑ On or before the SOI deadline, the district will submit the minutes of the meeting at which the School Committee votes to authorize the Superintendent to submit this SOI. The MSBA's vote template, which contains specific reference to the school and the priorities for which the SOI is being submitted, will be used, and the minutes will be signed by the Chair.
- ⓑ The district has arranged with the City/Town Clerk to certify the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body to authorize the Superintendent to submit this SOI. The district will use the MSBA's vote template and submit the full text of this vote, which will specifically reference the school and the priorities for which the SOI is being submitted, to the MSBA on or before the SOI deadline.
- ⓑ The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all of the required vote documentation and certification signatures in a format acceptable to the MSBA.

**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

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Name of School Nashoba Regional

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Note

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 school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
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: Science Lab

Is this SOI the District Priority SOI? YES

School name of the District Priority SOI:

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

The goal of this project is to modernize the science labs to meet twenty-first century standards. We have ten rooms that have been identified as science lab spaces, however, they have not been modernized since they were built in 1960 and 1970 respectively.

District's Proposed Schedule: What is the District's proposed schedule to achieve the goal(s) stated above?

The district plans to ask for funding in May 2012 with anticipated groundbreaking in July 2012. The school committee will vote in March 2012.

Is this part of a larger facilities plan? YES

If "YES", please provide the following:

Facilities Plan Date: 3/10/2008

Planning Firm: Lamoreux and Pagano

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:

This plan looked at adding academic space and renovation of the science labs, offices for the regional school district and possible site renovations impacted by any additions.

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 16 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 14 students per teacher

Is there overcrowding at the school facility? YES

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

The science labs are overcrowded, often having more than the 24 lab seats available. The cafeteria is also overcrowded.

Has the district had any recent teacher layoffs or reductions? NO

If "YES", how many teaching positions were affected? 0

At which schools in the district?

Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

Has the district had any recent staff layoffs or reductions? NO

If "YES", how many staff positions were affected? 0

At which schools in the district?

Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

Does not apply.

Please provide a detailed description of your most recent budget approval process including a description of any budget reductions and the impact of those reductions on the district's school facilities, class sizes, and educational program.

The district passed its FY 12 budget in all three towns at the annual town meeting in May 2011. It was a level services budget growing only 2.12%.

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

The original building opened in September of 1961. There was an academic wing built in 1970 that also added a gymnasium and a library area. In 2002 gym space was reconfigured and an auditorium was added, along with administrative offices and a new facade. Some of the building infrastructure was also updated such as the boilers, hot water system, and air handling equipment.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

194500

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 site is 47 acres. There are approximately 500 parking spots. There is a waste water treatment plant on site. There is one storage building and one small trailer used for concessions. Stadium seating was added in 2004 to meet handicap accessibility codes, however, the fields have not been addressed since 1970.

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

The building is steel and concrete block construction with a brick facade. The window systems are insulated glass in classrooms and plate glass single pane in hallways and common areas. The roof systems are both PVC (sonofil) and rubber roofing with stone ballast. Current envelop issues include roof leaks in the ballast roof areas, lack of insulation in outside walls, heat loss in single pane windows, and settlement in the North West corner of the building.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS ? NO

Year of Last Major Repair or Replacement: 0

Description of Last Major Repair or Replacement:

Has there been a Major Repair or Replacement of the ROOF? YES

Year of Last Major Repair or Replacement: 2002

Type Of ROOF: PVC and Asphalt Shingles

Description of Last Major Repair or Replacement:

PVC roof over about 1/3 of the roof plus shingled roof over two main classroom corridors.

Has there been a Major Repair or Replacement of the WINDOWS? YES

Year of Last Major Repair or Replacement: 2002

Type Of WINDOWS: double pane windows

Description of Last Major Repair or Replacement:

Double pane windows where installed in most classroom areas single pane plate glass remains in most common areas.

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).

In general the mechanical systems work well. We do have issues with domestic hot water circulation and frozen pipes. The building automation system is two generations old and eventually needs to be updated which will involve replacing the main controller and all sub-controllers in the building.

Has there been a Major Repair or Replacement of the BOILERS? YES

Year of Last Major Repair or Replacement: 2002

Description of Last Major Repair or Replacement:

Two boilers were replaced with Weil McLean section boilers and Powerlame burners

Has there been a Major Repair or Replacement of the HVAC SYSTEM ? YES

Year of Last Major Repair or Replacement: 2002

Description of Last Major Repair or Replacement:

Most roof top and air handling units were replaced. The system is a mix of radiant hot water and hydro air with DX cooling

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES

Year of Last Major Repair or Replacement: 2002

Description of Last Major Repair or Replacement:

The main switch gear was replaced including transformers and some distribution panels.

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).

The building interior mostly block wall with VCT floor tile and hung acoustical ceiling. There are areas of the building with terrazzo floors and exposed concrete ceilings. The lighting is primarily t8 fluorescent.

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. (maximum of 5000 characters).

We can not offer science labs for all of our science course due to a lack of space and the conditions of existing spaces.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description of 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).

The majority of classrooms are approximately 750 square feet. The art room and the actual science labs are approximately 1000 square feet. Five of the science labs were built in 1970. The remaining labs are original to the 1960 wing. A few of the science labs have exhaust fans but not all. They are not interchangeable for the different labs needed.

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).

The labs are overcrowded, many having over the 24 available seats. The cafeteria is also overcrowded. In both situations administration has managed the circumstances. For science, they have reduced the number of classes that offer labs and/or reduced the number of labs for courses. They have added a fourth lunch period to make a seat available for every person in the cafeteria.

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 any override or debt exclusion votes that were necessary (maximum of 5000 characters).

The district maintains the building using best maintenance practices. Smaller repairs such a door maintenance, filter changes, floor care, painting, and work orders are done in house. The district has a scheduled maintenance program and funds annual repairs for all systems. Larger projects such as well repairs, roofing, and windows are bid out to vendors. The budget for capital repairs for the high school has not required an override or debt exclusion.

Priority 5

Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.

Nashoba Regional High School underwent infrastructure updates in 2002. The boiler system and air handling system was replaced. The mechanical systems are in good repair and function well. The building automation system was also installed at the time. This system is an Automated Logic system and is currently two generations old. Parts for this system are being discontinued and a full system replacement will be necessary in the the near future. This will be a significant project as all controllers and sub controllers will need to be replaced in the entire building.

The school has several sections of rubber roof with stone ballast. These roof areas are out of warranty and will need to be replaced in the next 5-10 years. The roof has recurring leaks in several areas of the ballast roof.

The windows in parts of the school are large plate glass windows. These windows are both inefficient and dangerous. We have been replacing several per year, but a new thermally broken system needs to be installed for safety and for heat loss.

Priority 5

Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.

Roof and window repairs are patched or replaced as needed.

Components to the building management system are replaced as they break. The replacements are in kind if parts are available or upgraded if the parts are not available.

Priority 5

Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above 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.

Roof leaks have a direct impact to the educational programs by creating a situation where affected areas are not able to be used during a leak. The areas are either blocked off or disrupted until the leak is able to be fixed.

Window issues impact the education programs in two ways: they create uneven heating and create a safety challenge. The single pane windows are very inefficient and create cold areas in the school. The safety issue is a concern if someone gets bumped or pushed into the glass. Two years ago two students were playing in the hall and one student got bumped into the glass. The glass broke on the second story leaving a 4' by 6' opening on the second floor. One student was cut on the hand by the glass and got stitches.

The building automation issue has an impact to the heating and cooling of the school. When a unit fails it impacts 5-10 classrooms as many of the classrooms are heated/cooled by the same air handler. Depending on the availability of the parts this can sometimes be a week before a part is received.

Please also provide the following:

Have the systems identified above been examined by an engineer or other trained building professional?: YES

If "YES", please provide, the name of the individual and his/her professional affiliation::

Suburban Glass and Mirror

The date of the inspection:: 8/1/2011

A summary of the findings::

The recommendation was to replace the plate glass windows with a thermally broken double pane window. Ballast roof systems need to be replaced in the near future.

Priority 7

Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

We do not have sufficient space, nor types of space for our science program. The space has not been touched in over 40 or 50 years and needs exhaust fans, chemical shower units, science lab units for students to perform experiments and the flexibility of each space to relax the burden on the schedule.

Minimum for safety and transferability of science labs:

Need: All science labs should have fully functioning hoods and fans. Ideally more would have stanchions built into the lab tables for physics.

Current state: we only have 1 small partially functioning hood and not all rooms have fans. A few have red buttons that indicate fans, but they are not connected to anything. Not all gas lines function. Many lab desks are damaged or askew. The refrigerator for perishable lab supplies is on its last legs. Eyewashes and showers are not testable as they drain directly to the floor (no drain).

Reason: labs which require the use of anything that produces gas, dust or fumes are limited including chemical reactions in chemistry, chromatography in Biology. Particles in the air also are a potential allergen and/or irritant.

Priority 7

Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

At this time, we have started to reduce the number of sections that offer labs.

Short term to enable reasonable lab consistency across the curriculum.

Need: an additional science classroom and upgrades to two classrooms to accommodate larger class sizes.

Current state: We have one less lab classroom than science teacher.

Reason: The current rovers have been physics teachers. A cart with a roving chemistry/biotech teacher moving through the halls with students between science classes would violate most safety regulations. Even so, many physics labs are not done given the time to transport equipment from room to room and re-set-up the experiment. Also energy related physics labs with flammable materials are eliminated.

Priority 7

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.

In some cases it means that students will only receive one science class in their four years of study that has additional lab time attached to it. This may impact college entrance.

Longer term to provide state of the art science instruction:

Need: three additional classrooms:

- Engineering Design Center: fully equipped for robotics and technology including fully functioning computers and probes. Probes are also used in Biology, Chemistry, Anatomy and Physiology, but the use can be limited by set-up time. We could ask Ioannis Miaoulis of the Museum of Science to assist in the design he initially proposed.
- One fully equipped Biotechnology lab with an autoclave.
- One Advanced Chemistry Lab with 8 fume heads allowing all experiments to be done using hoods and removing the potential for student lung damage. This would also be useful for Forensics.

Science Lab Initiative

CERTIFICATION

- Ⓔ The district is submitting this SOI, in part or wholly, to assist with the replacement, renovation, or modernization of science laboratory facilities.
- Ⓔ The district acknowledges that the MSBA will not consider an SOI for the 2012 Science Lab Initiative if the school facility identified in the SOI also has facility needs that are greater in scope than a project consisting of a roof, window, boiler, HVAC, and/or ADA-related repair and/or replacement.
- Ⓔ Except for the condition of its science lab(s), the school facility is structurally, functionally, and educationally sound and has no other known deficiencies, except for minor repairs as noted in this SOI, particularly under Priority 5; and the building systems are operational, safe, and adequate for the delivery of the required educational program.
- Ⓔ The school facility has been and will remain in use as a public school, serving public school students in grades 9, 10, 11, and/or 12 for the useful life of a science lab renovation, modernization, or replacement project.
- Ⓔ The school facility has sufficient space to deliver its required educational program.
- Ⓔ The need for renovation, modernization, or replacement of the science lab(s) is not the result of neglect or the lack of routine or capital maintenance by the district.
- Ⓔ The district acknowledges and agrees to abide by all federal and state laws and all rules, regulations, policies, and guidelines of the MSBA, and the district agrees to use the MSBA's Science Lab Initiative pre-qualified OPMs and designers.
- Ⓔ The district has the ability to raise the local contribution required to fund the district's share of the project in a timely manner.
- Ⓔ The project schedule will have a deadline for substantial completion prior to September 2013.
- Ⓔ The district acknowledges and agrees that it has no entitlement to funds and the awarding of a grant(s), if any, is at the sole discretion of the MSBA.

Questions:

Please provide a detailed description of the school's existing science laboratory facilities, including prep and chemical storage components. Please include a description of deficiencies in these facilities that require replacement, renovation, or modernization.

The science labs are original to the building (1960) or added during a 1970 addition. There is limited storage for every lab, limited exhaust, limited flexibility in the types of labs offered in each room. In some rooms, the science tables don't have gas or water hookups. In others, there is not enough electricity to each table. In some, only the teacher's demonstration table has all elements to conduct a lab.

Please describe any measures the school has already taken to mitigate the deficiencies described in Question 1 above.

In 2008 we did pursue a study by Lamoureaux and Pagano of Worcester to learn how we could mediate the issues.

Please provide a detailed explanation of the impact of the deficiencies described in Question 1 above on your district's science curriculum. Please include specific examples of how the science laboratory facilities prevent the district from delivering its educational program and how students and/or teachers are directly affected by the deficiencies in the existing science laboratory facilities.

At this time, we are reducing the number of sections of each course that have additional lab time attached. We simply don't have the rooms for all students to take a lab in addition to the actual course.

Please describe how addressing the deficiencies with the science laboratory facilities identified in Question 1 above will extend the useful life of the school facility that is the subject of the SOI and how it will improve your science curriculum and overall educational program.

If we are able to add science lab space by renovating existing classrooms and retrofitting other rooms, we can have laboratories attached to each science class that requires one.

Vote

Vote of Municipal Governing Body YES: NO: Date:

Vote of School Committee YES: NO: Date:

Vote of Regional School Committee YES: 7 NO: 0 Date: 1/5/2012

Required Form of Vote

The following Form of Vote should be used by both the City Council/Board of Aldermen, Board of Selectmen/equivalent governing body AND the School Committee in voting to approve this Statement of Interest.

If a regional school district, the regional school committee should use the following Form of Vote.

Resolved: Having convened in an open meeting on _____, the _____ *[City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body, School Committee]* of _____ *[City/Town/School District]*,

in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated _____ for the _____ *[Name of School]* located at

_____ *[Address]* which describes and explains the following deficiencies and the priority category(s) for which

_____ *[Name of City/Town/District]* may be invited to apply to the Massachusetts School Building Authority in the future

_____ *[Insert a description of the priority(s) checked off on the Statement of Interest and a brief description of the deficiency described therein for each priority];* and hereby further specifically

acknowledges that by submitting this Statement of Interest, 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

_____ *[Name of City/Town/District]* to filing an application for funding with the Massachusetts School Building Authority.

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