

## Overview of Blatt Facility Conditions Study (2015)

### Recommendations

#### High Priority Needs

Roof (4,600 sf)  
Roof joists (inadequate for 23' span over classrooms)  
Water storage and heating/pipe insulation  
Chimney  
Bathroom exhaust systems  
Air flow system (need 250 cfm per classroom)

#### Needs

Wall Insulation/Siding (3,000 sf)  
Windows (36 of them)  
Kitchen exhaust hood/fan/fire suppression system  
Kitchen counters  
Kitchen flooring  
Entry vestibule air locks (2 @ 50 sf, and 100 sf of new construction)  
Lighting fixtures (48)  
Exit signs  
Fire alarm connected to central dispatch

### Notes from September 1, 2015 School Committee Meeting:

CIS Facility Conditions Study: Steve Blatt, David Pinkham and Steve Doel were in attendance to review the facility study that they did at the end of the school year. Steve B. reported that the study was done from a structural/mechanical perspective only, and not from an educational or functional use point of view, so the report is designed to inform the School Committee on the building strengths and needs. Much discussion was held on the study, with major time spent discussing the roof, building envelope, heating/ventilation, and kitchen needs. Some key recommendations offered in the study are as follows:

- Replace the roof with a sealed flat roof
- Structurally reinforce the roof, so that it can bear more weight, and it could be closer to BGS code specifications
- Replace windows, and reduce the number of windows
- Replace the siding and add more/better insulation
- Build entrance vestibules in the front and rear of the building
- Redo the heat and ventilation systems of the building, use more efficient methods
- Add an exhaust fan in the kitchen and add a stove hood, fire suppressor, and also replace the kitchen counters and floor
- Electrically it seems fairly sound, but upgrades could be done
- All exit signs need to be lit up and functioning
- A fire alarm system needs to be set up for the school to a responding unit
- Expansion of the building may be needed for storage/classroom needs

# Chebeague Island School

Chebeague Island, Maine

---

## Facility Conditions Study

Prepared by:

Stephen Blatt Architects

July 21, 2015

**Stephen Blatt**  
Architects

*2015  
Facility Needs  
Report*

DRAFT

# CHEBEAGUE ISLAND SCHOOL FACILITY CONDITIONS STUDY

JULY 21, 2015

We are pleased to submit this report regarding the recommended facility improvements for the Chebeague Island School. Our team of architects and engineers, consisting of Stephen Blatt, AIA (SBA), Darren Commerford, AIA (SBA), Stephen Doel, P.E. (Bennett Engineering), and David Pinkham, P.E. (Pinkham and Greer Consulting Engineers) visited the school June 4th to record observations of the existing conditions. The team toured the facilities with principal Alton Hadley. Additionally, Darren Commerford and David Pinkham returned June 26<sup>th</sup> to further investigate the existing roof structure.

## RECOMMENDED IMPROVEMENTS

### BUILDING ENVELOPE

Roof (Repaired in 2005) The existing roof is in poor condition. [HIGH PRIORITY]

New fully adhered EPDM w/ R-30 Polyisocyanurate insulation – 4,600 sf x \$15/sf = \$69,000

Wall Insulation/Siding – Replacement of existing siding with new fiber cement boards over 1" rigid insulation.

Approximately 3,000 sf x \$10/sf = \$30,000

Windows (Replaced in 2000)

36 windows @ \$750 ea. = \$27,000

SUBTOTAL BUILDING ENVELOPE \$126,000 ✓

### KITCHEN

Provide a UL-listed Class 1 exhaust hood with UL-listed upblast roof fan and wet chemical fire suppression system. \$6,000

New Counters \$4,000

New Flooring \$5,000

SUBTOTAL KITCHEN \$15,000 ✓

### ENTRY-EXIT SYSTEM

Provide vestibules at entries to create energy efficient air-locks.

New vestibules (2) – 50 sf each

100 sf new construction x \$125/sf = \$12,500 ✓

### LIGHTING & ELECTRICAL SYSTEMS

Replace existing fixtures with energy efficient LED fixtures.

48 fixtures @ \$250 = \$12,000

Install lighted exit signs. \$1,000

Provide fire alarm system annunciation to a central dispatch location. \$3,500

SUBTOTAL LIGHTING/ELECTRICAL \$16,500 ✓

### STRUCTURAL SYSTEM [HIGH PRIORITY]

The existing roof joists at the high roof over the classrooms are inadequate for the 23' span.

Cut down the span of the joists by adding beams below the roof joists. The beams would span the length of the classrooms and would bear on posts in the walls between the classrooms. This would require the removal of a strip of ceiling the length of a classroom, adding posts in the walls between rooms, and, more than likely, removing some floor slab to add footings below the floor. It is very unlikely that the existing floor slab would be capable of supporting the post loads. A new soffit would be required in the ceilings under the new beams.

\$28,000 ✓

**MECHANICAL & PLUMBING SYSTEMS [HIGH PRIORITY]**

There is a tankless domestic water heating coil on the boiler and a small 120V instantaneous electric heater for use when the boiler is shut down in warm weather. This instantaneous heater has very little heating capacity and is unlikely to heat water to 115F if normal flow rates occur. Provide and appropriately sized storage type electric water heater for summer use. The existing instantaneous water heater has very limited capacity.

\$1,500

Provide a new double-wall stainless steel chimney.

\$4,000

Provide a water softener.

\$5,000

Insulate existing piping where accessible per the 2009 IECC.

\$4,000

Add mechanical exhaust to the bathrooms with motion detectors for actuation.

\$3,000

A Fantech HRV has been installed and ducted to all occupied spaces. However, based on the size of the supply diffusers, airflows appear to be very low, +- 25-40 cfm each. There is one diffuser in each classroom plus corridors and Multipurpose Room. Current codes would require airflows of approximately 250-300 cfm per classroom. Provide a rooftop ERV to distribute outside air to the occupied spaces to deliver approximately 15-20 cfm / student. Add duct coils for each zone to provide individually controlled heating zones. Remove existing fintube radiation. Estimated cost:

\$100,000

SUBTOTAL MECHANICAL/PLUMBING

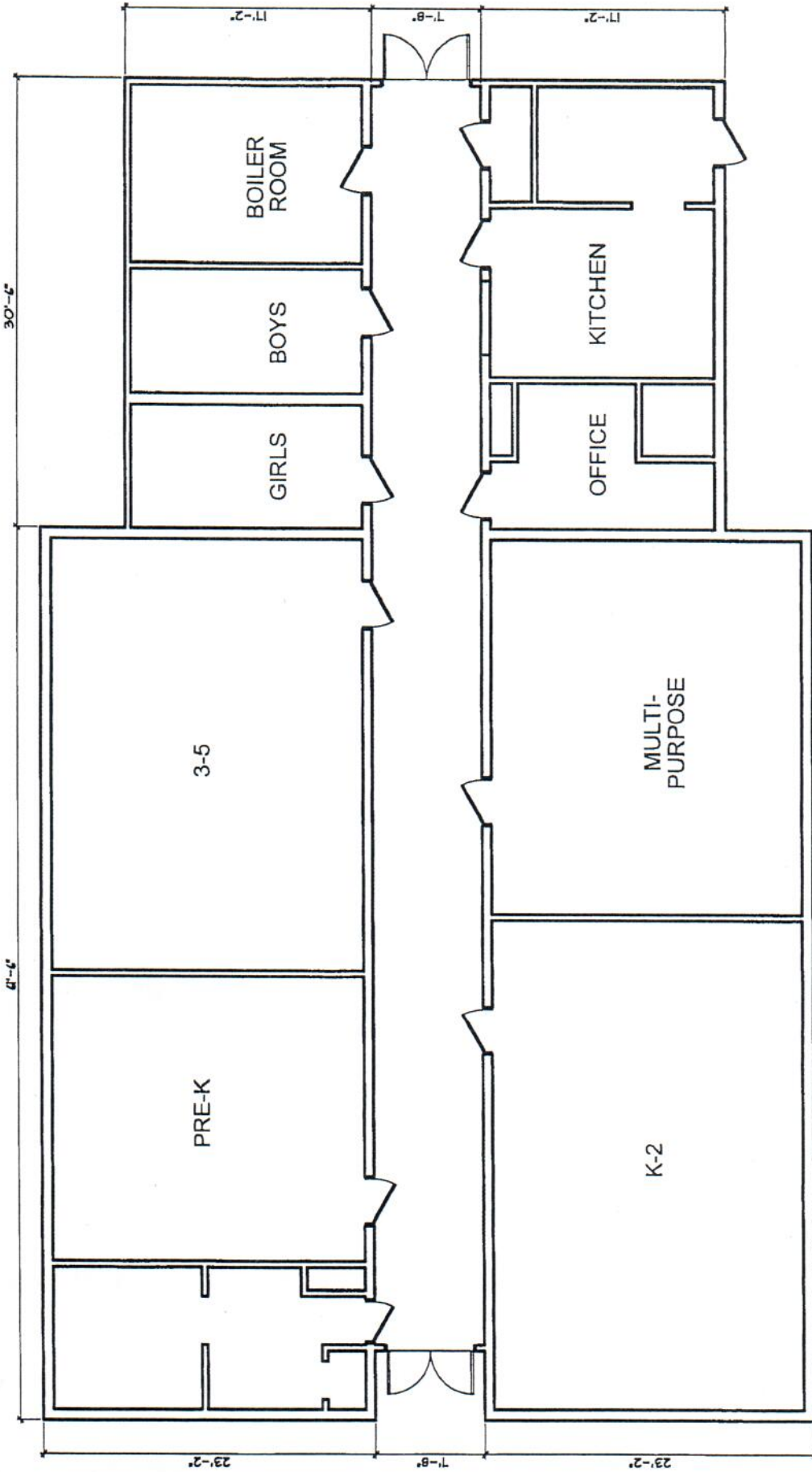
**\$117,500** ✓

TOTAL COST OF RECOMMENDED IMPROVEMENTS

**\$315,500**

SUBTOTAL HIGH PRIORITY ITEMS ONLY

\$214,500



StephensBlatt  
Architects

July 21, 2015

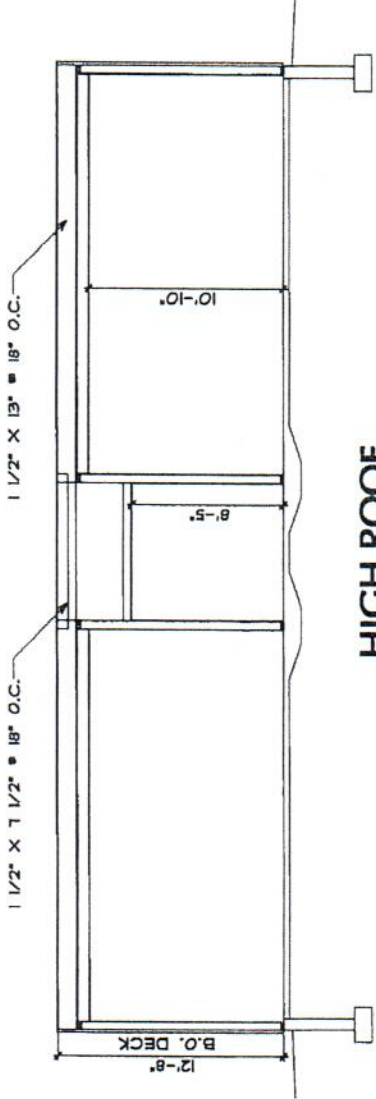


FLOOR PLAN

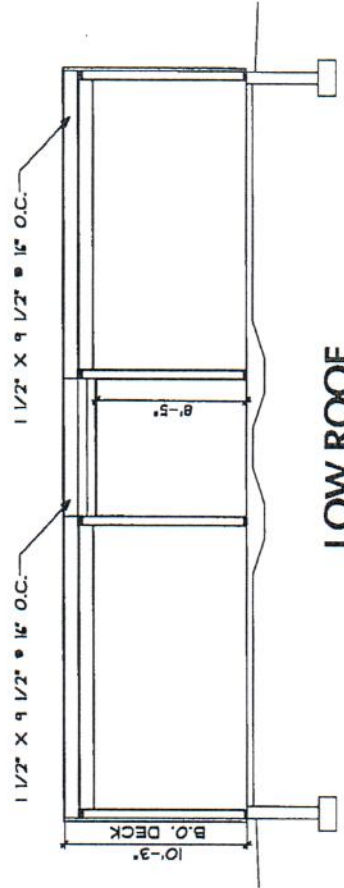


EXISTING CONDITIONS

CHEBEAGUE SCHOOL  
CHEBEAGUE ISLAND, MAINE



HIGH ROOF



LOW ROOF

EXISTING CONDITIONS

CHEBEAGUE SCHOOL  
 CHEBEAGUE ISLAND, MAINE

SECTIONS

