TOWN OF SANDWICH

APPLICATION FOR COMMUNITY PRESERVATION FUNDING

GENERAL INFORMATION

Name of Applicant (1): Sandwich Board of Selectmen

Name of Co-Applicant, if applicable: George “Bud” Dunham, Town Manager

Contact Name: George “Bud” Dunham, Town Manager

Mailing Address: Sandwich Town Hall

130 Main Street

Sandwich, MA 02563

Phone Number: (508) 888-5144 E-mail Address: townhall@townofsandwich.net

Project Name: Clark Haddad Memorial Building Historic Preservation Project

Project Location: 16 Dewey Avenue, Parcel ID 74-050 (street address and assessor’s parcel)

CPA Category (circle all that apply): Open Space

Historic Preservation

Community Housing

Recreation

CPA Funding Requested: $1,102,145.00 Total Cost of Proposed Project: $1,102,145.00

(1) If the proposal involves town-owned land, either the applicant or the co-applicant must be the town agency in control of the land.

INFORMATION ABOUT THE PROJECT

Please provide a description of the proposed project. The description should address the following matters.

1. **Goals:** What are the goals of the proposed project?

2. **Community Need:** Why is the project needed? How does it address one or more of the specific criteria identified as Town priorities with respect to the CPA Category or Categories applicable to the Project?

3. **Community Support:** What is the nature and level of support for the project? Include evidence of support, such as letters and petitions.

4. **Budget:** What is the total project budget? How will CPA funds be spent? What are the sources of non-CPA funding for the project?

5. **Timeline and Permits:** What is the schedule for implementation of the project? What permits, if any are needed for the project?

6. **Maintenance:** If ongoing maintenance is required for the project, how will such maintenance be funded?

INFORMATION ABOUT THE APPLICANT

(Required for applicants other than Town departments or agencies).

1. Organizational goals and objectives of applicant.

2. Organizational history of applicant.

3. Resumes of senior officers

4. Names of members of governing board (e.g. directors or trustees)
5. Legal and tax status of applicant
6. Description of previously completed projects similar to proposed project

INFORMATION ABOUT THE PROJECT

1. **Goals:** What are the goals of the proposed project?

   The goal of the project is a complete interior and exterior historic preservation and rehabilitation of the building to make it functional for a variety of public and private uses, such as meetings, lectures, art shows, receptions, etc. The work would be done based on the detailed Assessment Report dated June 25, 2015 completed by the Town’s consultant historic preservation architect Mcginley Kalsow & Associates, Inc., which is attached to this application for reference.

2. **Community Need:**

   The building has been deteriorating for many years and is in desperate need of substantial interior and exterior rehabilitation. Since the building is vacant, vandalism has occurred. As a result, windows have been boarded-up, and the building is becoming unsightly in this historic neighborhood. In addition, there is a need in Town for more public and private meeting and function room space.

3. **Community Support:**

   There is significant community support, as evidenced by the turnout and participation at the May 11, 2015 public forum held at the Town Hall on this potential project and at prior events conducted by the Sandwich Historical Commission.

4. **Budget:**

   The total budget is $1,102,145.00 as per the consultant’s Assessment Report attached to this application. CPA funds will be used for all phases of the work, including: general work and site; exterior envelope repairs and site improvements; structural repairs; interior improvements; survey and site plans; architectural services; and engineering services. There are no specific proposed non-CPA funds associated with this application.

5. **Timeline and Permits:**

   We anticipate finalizing the construction documents, receiving approval from the Old Kings Highway Regional Historic District Committee, and receiving a building permit in time to begin construction in the 3rd quarter (July – September) of 2016. We anticipate that construction should last approximately 8 months.

6. **Maintenance:**

   The building will have new HVAC systems, designed to be simple for multiple users, as well as a new septic system. The interior and exterior of the building will be maintained by the Town’s Public Facilities Director. The exterior landscaping of the property will be maintained by the Town’s DPW Parks Department and the parking lot will be maintained and plowed by the DPW’s Highway Department.
Clark Haddad Memorial Building
Sand Hill School

16 Dewey Avenue
Sandwich, Massachusetts 02563

Assessment Report
June 25, 2015
TABLE OF CONTENTS

• Section 1
  Executive Summary

• Section 2
  Historical Background
  ▪ Report
  ▪ Timeline

• Section 3
  Architectural Assessment
  ▪ Report
  ▪ Photographs

• Section 4
  Structural Assessment
  ▪ Report
  ▪ Photographs
  ▪ Existing framing plans

• Section 5
  Existing Condition Drawings

• Section 6
  Cost Estimate

• Appendix 1
  Hazardous Materials Report
EXECUTIVE SUMMARY

The Clark-Haddad Memorial Building, at 16 Dewey Street, Sandwich was built originally in 1885 as a schoolhouse for children of workers from the Sandwich Glass Factory, and was called the Sand Hill School. Later, it saw use an American Legion post, and was named the Clark-Haddad Memorial Building in memory of Alden Clark and Michael Haddad, men who were the first two residents of Sandwich to give their lives in World War I. The building was also used for a number of community related activities, and its most recent use was for offices of the Sandwich Superintendent of Schools. The building is located within the Old King’s Highway Regional Historic District.

In 2014, the Town of Sandwich commissioned preservation architects and planners McGinley Kalsow and Associates, Inc. to inspect the Clark-Haddad building to provide an assessment report of the building’s condition, to provide existing condition drawings, identify code deficiencies, to prioritize repair recommendations, and establish budget pricing for the repairs. For this assessment, McGinley Kalsow and Associates also engaged structural engineer Arthur MacLeod to provide an assessment of the building’s structural condition.
Historic Background
Introduction

The Clark-Haddad Memorial Building is a wood-framed structure at 16 Dewey Avenue, the outermost edge of the former glassworks factory grounds. The 1½-story structure is sided with clapboards and shingles, with a clipped gable roof and granite block foundation. The materials, however, speak more to the local vernacular of New England.

Originally a two-room schoolhouse, the Clark-Haddad Memorial Building is a piece of Sandwich's industrial revolution, which began in the 1820s with the opening of the first glass factory. This period of development and industry in the agricultural village would last for more than sixty years, and inspire the construction of schools, churches, and housing as the population of Sandwich grew and shifted demographically. When the factory closed and Sandwich returned to its agricultural roots, the Clark-Haddad Building continued to serve the town as an American Legion Hall, kindergarten, and school administration building.
Deming Jarves and The Boston & Sandwich Glassworks Company

Since the establishment of the town in 1637, Sandwich had maintained a sustainable agricultural economy. Farmers in the town raised dairy cows and sheep, feeding them the "salt hay" from the marshes. They also produced corn, oats, rye and wheat. Neighboring towns on the Cape relied on the costal proximity for fishing, but Sandwich's lack of seaport proved an obstacle for the fishing industry to thrive. Farming continued until 1825, when Deming Jarves introduced the Boston & Sandwich Glassworks Company, making Sandwich one of the early industrial villages in Massachusetts.

Prior to the opening of the glass factory in Sandwich, Massachusetts had already seen some of the economic shift brought by the industrial revolution. Boston and neighboring communities, such as Charlestown and Cambridge, had begun producing glass in an urban environment, relying on the influx of Irish and Italian immigrants for labor. Smaller communities north and west of Boston, including Waltham and Lowell, were beginning to flourish industrially as a result of the new textile mills, which had opened by 1820. This was a economically opportune moment for Deming Jarves to open his glass factory in Sandwich.

Deming Jarves was born in 1790 in Boston, the eldest son of a cabinetmaker. He began his career as a dry goods merchant, before becoming clerk at the Boston Porcelain and Glass Company in East Cambridge. When the business collapsed in 1818, Jarves was among those who purchased the buildings and incorporated New England Glass Company, for which he became the agent. This company built the first red lead manufacturing furnace in the United States, and dominated the lead industry for 30 years.

Wishing to expand into his own business, he began buying large amounts of land in Sandwich, between the center of the town and the salt marsh. Contrary to popular belief, the location was not chosen for its ample supply of sand, which was not of the quality the factory needed to produce glass. Instead, it was selected for the proximity to timber and marsh grass, which were used for fuel and packaging material, respectively. In 1825, he opened the Boston & Sandwich Glass Company on this land.

Though Mr. Jarves had an excellent location for an industrial village in Sandwich, the population was not enough to create a workforce for the factory. Like the glass manufacturing in Boston and surrounding communities, he would rely on recent immigrants, mostly of Irish and Italian descent, as a source of labor. He advertised in Boston for "glass men," and the promise of work proved successful. The population of Sandwich reached a high in 1855 with nearly 4,500 people.
Even in the later decline of industry in Sandwich, immigrants would still seek work in Sandwich’s glass factories. Michael Haddad, for whom the Clark-Haddad building would later be named, emigrated from Syria in 1900 with his father, who would become a glass factory worker in Sandwich.

In addition to laborers, Jarves also looked for craftspeople to design stained and novelty glass items. For these opportunities he sought English and Irish glassblowers, who had the best reputation internationally. The mid-19th century also saw a change in the technology of glassmaking, where pressed glass enabled glassmakers to create "lacy" designs in products. The factory continued to expand into the 1860s. It acquired additional land and buildings, as well as a railroad line. The industry peaked just before the Civil War, and would suffer greatly in the few decades afterward. Deming Jarves would eventually leave the Boston & Sandwich Glassworks in 1859. He would continue working on glass in Sandwich, starting a Cape Cod Glassworks in 1864. The Boston & Sandwich Glassworks Company closed in 1888, and the last of the following glass factories in Sandwich was closed in 1907. The area surrounding the original factory became known as Jarvesville.

**Jarvesville and the Sand Hill School**

A number of new buildings were erected near the salt marshes, to accommodate the influx of workers to Sandwich. More than thirty-three tenements were built to house workers. Some single family homes also housed the highest level employees, including Deming Jarves’s brother-in-law, William Stutson, who was appointed clerk. A Roman Catholic Chapel (no longer extant) was also built close the factory, and is considered to be the first of its kind on Cape Cod. Also among this flurry of development was the original schoolhouse.

The extant Sand Hill Schoolhouse, now the Clark-Haddad Memorial Building, was the third school built for the children of the “glass men” in Sandwich. The first was constructed near the intersection of Factory and Jarves Streets in 1828. The school relocated in 1851, to a new building on the site of the Clark-Haddad building. This second schoolhouse, which collapsed in 1884 whilst under repair, was a two-story structure, accommodating a greater number of students than the two-room schoolhouse. This most likely correlates to the success of Boston & Sandwich Glassworks, which reached its peak in 1860 and was closed in the 1880s.

Providing education to immigrant children was an important political topic at the time the original school was constructed. Massachusetts had just extended universal public education to all ages in 1827. While public education advocate (and Massachusetts native) Horace Mann advocated for the secular nature of public schools, the reality of these new institutions was not always the ideal. As Irish immigrants came to Sandwich to work in the glass factories, the increased population meant a greater demand for schooling. This resulted in conflicts between

Figure 4: Sand Hill Schoolhouse c. 1900
the traditional curriculum of the Protestant population and the Catholic factory workers who sought education for their children. This struggle for community control in the schools was pervasive throughout Massachusetts as it handled a changing population. As Sandwich had the highest immigrant population of any town on Cape Cod during the factory years, the Sand Hill School would have likely exemplified these first obstacles in Massachusetts public education.

The Sand Hill School had closed by 1931, when the American Legion began to lease the building. The post was named the Clark-Haddad Memorial Building, as the American Legion Hall before it had been. It would later return to educational use, serving as both a kindergarten and interim junior high school before becoming administrative offices for the school district until 2007.

**Clark, Haddad and The American Legion**

American Legion organizations began in 1919, following the death and destruction of World War I. The organization was extremely active in the 1920s, and the post in Sandwich was chartered almost immediately after the war. World War I claimed 116,000 lives nationally and more than 1,500 lives from Massachusetts. Clark and Haddad were the first two casualties of the war that Sandwich experienced. Newspaper articles indicate that the original American Legion post was named for these men by February of 1920, within two years of their death and only three months of the armistice in November of 1919.
Michael Haddad (1892-1918) was born in Syria, and was the son of a worker in the glass factory. He lived with the McLaughlin Family in Sandwich for most of his adolescence, and continued to live with them after returning from work in Boston. He had shown great pride for what his obituary referred to as his "adopted country," and had enlisted in the U.S. Navy. He died following an operation, which was complicated by pneumonia.

Corporal Alden Clark (1896-1918) was a Sandwich native and the youngest of six children. He grew up attending Sandwich public schools, and left to work in Brockton and Boston after graduating high school. He had spent the six months prior to his death training at Camp Devens, where he contracted an unidentified illness and died several weeks later.

A town meeting vote on March 6, 1950 formally changed the name of the Jarvesville School to the Clark-Haddad Memorial Building.

The American Legion continued the use of the Clark-Haddad Memorial Building until 1972. The American Legion was relocated to 20 Main Street, where they have a larger function space and are capable of accommodating more people than the two-room Clark Haddad. This was essential, as the Post 188 is one of the largest in Massachusetts, hosting almost 900 members. Like the two buildings before it, this new building is also named the Clark-Haddad Post.

**Continued Use**

The Clark-Haddad Building has served Sandwich residents of all ages and interests. In addition to its use as a school building and gathering place for veterans, it has also welcomed health clinics, scouting troops, a gardening club and a Baptist church. The recurring theme in this building’s history is that it has been in service to the Town of Sandwich, whatever its current needs.
1825
Deming Jarves opens Boston & Sandwich Glassworks.

1828
First Sand Hill Schoolhouse is constructed at Factory and Jarves Streets.

1851
First Sand Hill Schoolhouse is razed, and Second Sand Hill Schoolhouse is built at 16 Dewey Avenue.

1885

1888
The Boston & Sandwich Glassworks Co. closes.

1918
Michael Haddad and Alden Clark are Sandwich’s first casualties of World War I.

1931
The American Legion leases the Clark-Haddad Memorial Building.

1950
Jarvesville School is officially named Clark-Haddad Memorial Building by vote at Town Meeting.

1972
The American Legion moves to new building. The Clark-Haddad Memorial Building continues to serve the town for group meetings and school administration.

2007
The school administrative offices leave the Clark-Haddad Memorial Building. The town begins planning future uses for the space.
Architectural Assessment
ARCHITECTURAL ASSESSMENT

SITE

The Clark-Haddad Memorial Building sits on a mostly open .61 acre site. The 16 Dewey Street site at the corner of Dewey Avenue (formerly Factory Street) and Georges Rock Road is zoned R1, medium density residential.

ROOFING, FLASHINGS, GUTTERS, AND DOWNSPOUTS

The existing roof is a fiberglass reinforced three-tab asphalt shingle roof. Its age is unknown, but it appears to be in fair to good condition, and there is not evidence of leaks. The normal life expectancy of an asphalt shingle roof is 25-30 years, so a comprehensive restoration of the building would likely include roof replacement at this point. The roof that is shown in the earliest of the available photographs indicates a wood shingle roof that features a wood cresting ornamentation at the ridge, with wood finials at the gable ends. (see historic photo) While such a ridge treatment was a popular style (see figure 1), it was not durable, as evidenced by the missing “teeth” in the historic photograph. It is likely that the cresting had a very short lifespan.

Gutters and downspouts are a residential quality aluminum with baked enamel (white) finish. The gutters are ogee-shaped, attached to building fascias via a spike-and-ferrule system. The downspouts are corrugated rectangle with aluminum mounting straps. (see photo 5) Generally, these lightweight materials and fastening systems do not provide the long-term durability of other metals and systems, and we don’t normally recommend them for our institutional clients, but they are a popular choice due to price and simplicity of installation.
WOOD SIDING AND TRIM

Again, looking at the historic photo, the building was originally clad with clapboard siding on all elevations. Currently the building features clapboard siding on the front (south) elevation, with cedar shingles used as cladding on the remaining elevations. The shingle condition varies greatly, with those of the east elevation showing the most deterioration (see photo 6) and there is evidence of newer replacements in areas of the north elevation. At the east elevation, one can see where shingles were removed to provide port holes for the installation of foam insulation at the exterior walls. In some locations these port holes have now become nesting spots for birds. There is some localized deterioration of the clapboards on the south elevation (see photos 7 and 8). The current paint is peeling and a restoration should include repainting.

The building still has the wide built-up corner boards, and the wide frieze board, and water table board that are evident in the historic photograph. With the exception of some repairs, these trim boards are most likely original to the building. At the west elevation one can observe a slight bow in the water table trim, indicative of the possible sill deterioration that is discussed in more detail in the attached structural assessment (see photo 5).

By comparing the historic photograph with the building today, there are a number of other obvious changes that have occurred at the building exterior over time. The black and white historic image shows that the clapboards and trim were of different shades; the trim boards being light colored or white, while the clapboards are a darker tone. Window placement, sizes, and details were different in the historical image. The front gable originally featured trim boards that panelized clapboards in a “stick style” treatment. The attic was vented by darker toned louvers. These louvers are stored in the building’s attic, and indicate that their original color was green (see photo 9). The original windows featured shutters, which were most likely painted the same green color. A hip-roofed entry canopy was supported by wood brackets, and overhung the recessed entry doors. These Victorian features with replaced with an entry porch that was built in a classical revival style as part of the 1935 Works Project Administration (WPA) renovations (see photos 10 and 11).

Deteriorated clapboards, shingles, and selective areas of trim should be replaced in a restoration of the building. The decision as to whether to return to all clapboards, and whether to
relocate windows to their original locations is subject to debate, depending on the era that the restoration would be based upon. The current vinyl siding in the front gable should be removed.

The bulkhead structure on the north elevation is very badly deteriorated and if it is decided to keep this exterior access to the basement, then it should be completely rebuilt. (see photo 12). The existing first floor exit door adjacent to the bulkhead is a metal door that is extremely rusted (see photo 13)

WINDOWS

As noted above, the windows have changed in size, location, and number since the building was originally constructed. The windows that exist today appear to be from the 1935 era WPA renovations. Today the windows are in poor condition, and would be much worse if the existing aluminum storm windows had not been added to protect them. The windows have broken glass, missing and deteriorated glazing putty, and have a bowed sill condition that is discussed in more detail in the attached structural assessment (see also photo 14) A wide number of options exist for windows as restoration/repair strategies for the building. The window sash can be restored and improved with new hardware and weatherstripping, window sash only could be replaced, or the entire window could be replaced. Replacements will offer further options to choose from, including material, glazing type, and muntin type and layout. All of this depends on budget and the overall preservation strategy. It should be noted that hazardous materials testing in 2012 identified that the glazing putty contained asbestos, so abatement and legal disposal must be done with whatever treatment option is selected.

INTERIOR

From evidence gathered with minimal destructive investigation, it appears that the building was originally divided into two equal sized rooms by an east-west demising wall that bisected the interior. Today the interior is layered from a series of renovations that correspond with the differing uses that the building has had. The WPA-era renovations changed the entry configuration, and further subdivided the space to add service spaces like pantry, kitchen, and
toilet rooms. Renovations for the school superintendent office use further subdivided the space, adding partitions to create smaller private offices (see photos 15 and 16).

Room finishes have been layered within the building along with the plan revisions. There are three layers of ceiling in the first floor. The original ceiling is lath and plaster applied to ceiling joists. The next ceiling was made of 1” thick wood strapping and wallboard with veneer plaster applied to the original ceiling. The last ceiling is a 2’ x 4’ suspended acoustic ceiling tile grid with lay-in fluorescent light fixtures (see photos 15 and 16) There are older suspended fluorescent light fixtures remaining in the space above the suspended ceiling.

Interior walls feature a painted bead board wainscot with chair rail moulding. There are paneled doors, and kitchenette cabinetry from the 1935 renovation (see photo 19), as well as newer cabinetry from 1980’s renovation (see photos 18 and 20).

Floors are also comprised of a number of layers of finishes. Presently there is carpet, on top of vinyl tile on plywood. We did not confirm via destructive investigation, but the plywood is most likely installed over the original wood flooring. The vinyl tile was identified as asbestos-containing in a 2012 hazardous materials assessment that was done by the Town.

There is a currently a toilet room for each gender, and these also feature a layering of finishes. Presently walls and privacy partitions are faced with plastic laminate, most likely from the 1980’s renovation. Floors are finished with vinyl tiles and linoleum, and the linoleum was identified as asbestos containing in the 2012 hazardous materials assessment. Ceilings are the same suspended acoustical ceiling tile system that is used in the former classrooms. The plumbing fixtures are old, but not of historic significance, and should be replaced when work is done on the building (see photos 22 and 23). As part of any renovation, these toilet rooms should be reconfigured to provide accessibility for all.

**ATTIC**

The building’s attic is unfinished, though its floor is sheathed with board flooring, but not completely (see photo 24). Currently about 8” of chopped cellulose insulation has been loosely blown over the floor boards. The timbers that comprise the roof trusses were used in another structure prior to construction of the school. They exhibit mortise and pin holes that are
irrelevant to the current structure, and there was charring present in one location (see photo 26). A reasonable theory is that some of these timbers may have been used in the previous school building. The attached structural assessment further addresses condition and recommendations regarding attic framing.

**BASEMENT**

There is a full basement under the west half of the building, while the east half features a partially excavated crawl space (see photo 27). The basement is accessed by an interior stair in the southwest corner of the building, and by a bulkhead stair to the exterior on the north side of the building. The basement was used as an activity room during the American Legion’s use of the building. Presently the boiler is located in the basement (see photo 28), and a separate small room houses the alarm and telephone/data panels and the fuel oil tank (see photo 29). The basement ceiling is finished with wall board with plaster. There are vinyl tiles on the floor, that were identified as asbestos-containing in the 2012 report. The pipe insulation that runs in the crawl space was also identified as asbestos containing. These materials will have to be abated as part of any construction project that takes place in the building.
Figure 1: Roof creasing and gable finials were a popular feature for buildings of this era
Photo 1: Current South Elevation

Photo 2: Current East Elevation
Photo 5: Detail photo shows typical aluminum downspout and bow at watertable, West Elevation

Photo 6: Detail showing poor shingle condition at the East Elevation
Photo 7: Clapboard and trim deterioration at the South Elevation

Photo 8: Detail of clapboard and trim condition at South Elevation
Photo 9: Original shutters from the front gable were found in the attic

Photo 10: The 1935 WPA porch
Photo 11: Bronze commemorative plaque from the 1935 renovation

Photo 12: Detail of deteriorated bulkhead access to basement
Photo 13: Detail at rear ramp and exit door

Photo 14: Detail of window on the north wall shows the typical condition of windows (this one has exterior protective boarding) Note deformed window sill indicating possible rot at the wall sill
Photo 15: Current interior view of northwest corner of the building

Photo 16: Current interior view northeast corner of the building
Photo 17: Current interior view south end of the building near men’s toilet room and door to basement stair

Photo 18: Current interior view shows chimney and circa 1980 cabinetry
Photo 19: Detail of built-in cabinetry

Photo 20: Current interior view
Photo 21: Entry corridor from 1935 renovation

Photo 22: Detail at women’s toilet room

Photo 23: Detail at women’s toilet room
Photo 24: Overall view of attic

Photo 25: Detail view in attic shows the front gable with framed openings for louver
Photo 26: Detail view of truss members. Note char on horizontal member.

Photo 27: Basement. Note asbestos-containing floor tiles and pipe wrap.
Photo 28: Boiler.

Photo 29: Fuel oil tank is located in a separate room in the southeast corner of the basement, along with telephone and data panels.
Structural Assessment
March 6, 2015

Douglas Manley  
McGinley Kalsow & Associates, Inc. 
324 Broadway 
PO Box 45248  
Somerville, MA 02145  

Re: Clark-Haddad Memorial Building  
Structural Condition Assessment  

Dear Doug:

At your request, I surveyed the condition of the Clark-Haddad Memorial Building at 16 Dewey Avenue, Sandwich, Massachusetts. The purpose of the survey is to determine the need and recommendation for restoration and repairs to the structure.

BACKGROUN

The Clark-Haddad Memorial Building was built in 1885 as a schoolhouse. This building has also seen use as a legion post, community activities, and as recent as 2007 the office of the School Superintendent. This one-story wood framed building has a finished first floor, a partial unfinished basement, and an unfinished attic. The Town requested this study to propose use options in order to make decisions about the future disposition of the property. Two possible uses considered herein have structural significance. One as an occupied building where the structure needs to meet code loadings. A second where floor framing does not meet code loadings and occupancy is limited by number of occupants.

SURVEY

On February 13, 2015, I visited Clark-Haddad. This was a clear cold day that followed several recent snow storms. The Town had cleared a path to the first floor. The property is located along the outer edges of Sandwich Harbor Marshes. To the north, Cape Cod Bay lies on the far side of these marshes. The front actually faces southwest and is referenced as the south in this report. For this report, north refers to the rear when facing the front of the building. I was able to access all levels of the structure for a visual survey. Attached to this report are three floor framing plans.

Site. The grade is relatively level. The building is partly sheltered from winds by surrounding trees for a distance of several hundred feet. This will meet ASCE-7 Exposure C for wind loading.

Basement. The basement is accessed from a stairway inside the building. One enters the basement into a rectangular utility room about one third the width of the building and the full depth front to back. The floor is concrete. I saw no water on the floor or coming
through the walls. The first floor framing is concealed by a gypsum board ceiling. The wall sills are concealed. In a few areas, I could see stone foundation walls concealed behind wall coverings. On the east side, the crawlspace can be seen for much of the length of this wall. Within the crawlspace, one can see three rows of eight-inch square brick piers supporting timber beams. Within the utility space, two rows of steel pipes support the floor beams.

The air in the crawlspace did not smell of mold or mildew. The wood visible from the vantage of the utility room appeared in good condition. The air was dry as expected at this time of year. However, I did not see evidence of openings to achieve an effective cross ventilation.

**First floor framing.** Joists spanning east-west are flush framed and supported by timber beams spanning north-south. The joists are 3 by 9 spaced at 19 inches spanning about 9.5 feet. Beams are 8 by 9 spanning either 9.75 feet in the crawlspace and 13 feet in the utility room.

On the first floor, one can see many windows where the stools have a crown. These crowns indicate the posts and jamb studs on the sides of the windows have settled relative to the stud framing under the openings.

**Attic Floor framing.** The attic is accessed through a hatch in the first floor ceiling. The attic joists are covered with insulation. Additionally, board flooring covers these joists. The extent of the board flooring is unknown. There are places where it has been removed. The insulation conceals the flooring. The joists are 3 by 10 spaced at 20 inches spanning on average 9.5 feet. These are flush framed and supported by 10 by 10 beams, as seen in one opening we made. These beams are hung from the roof framing with 2 by hangers at the third points of the span from front to rear. Over the central first floor wall spanning front to rear, hangers are absent indicating this is a bearing wall built during original construction.

**Roof framing.** The roof is supported with three intermediate trusses spanning front to rear. These are queen post trusses. Purlins, 6 by 6, along the front and rear roof slopes are supported next to the posts in the trusses. This is a Dutch hip roof where the front and rear slopes rise to a common ridge and the left and right sides end at a small gable wall part way up the roof. This gable wall is supported on a small 2 by 8 purlin. This purlin appears to be supported on rafters that trim the edge of the gable walls and extend from the supporting wall plates to the ridge. All rafters slope up their respective roof areas.

**EVALUATION**

**State Building Code**

The proposed work will need to meet applicable requirements of the Massachusetts State Building Code which is based upon the 2009 International Building Code (2009IBC), the 2009 International Existing Building Code (2009IEBC), and Massachusetts Amendments. The latest Massachusetts Amendments (MA) for Chapter 34: Existing Structures was published April 11, 2014.
The salient requirements of the above Codes will require dangerous conditions to be corrected (Section 1102.2 2009IEBC), floors are to meet code loading requirements except posted reduced loads are permitted (Section 1106.1 2009IEBC).

**Foundation.** Generally the exterior and interior foundation walls appear in good condition. Inside the footprint of the crawlspace, brick piers appear in correct locations.

**Crawlspace.** Crawlspaces can be hostile to wood framed floors as they can hold moisture favorable to many organisms that consume wood. The Code standard is to keep joists at least 18 inches above earth. Here most of the space is about 20 inches clear. The Code calls for natural ventilation on at least three sides with openings preferably near corners to ensure adequate air flow. At present, the natural ventilation conditions are not met.

**First floor framing.** The floor framing appears to be original construction. The brick piers spaced at 9.5 feet within the crawlspace would be original. The pipe columns within the utility room spaced at 13 feet appear as replacements. The joists are adequate to carry live loads close to 300 psf. The mortised beams within the crawlspace have the capacity to carry a live load of 54 psf. Those over the utility room only have a live load capacity of 15 psf because of the longer spans. The use of such robust joists on beams much weaker indicates the original designer made no calculations.

The crown in the window stools indicates framing next to windows is sinking into the wood sills. This is happening on all sides of the building. The scale of the building is not so great that the bearing weight is crushing the wood from overstress. It is more likely the sills have some degree of decay that has reduced its cross grain bearing stress.

The bow in the west wall at the sill suggests the sill is pulling away from the supported floor joists. There is no thrust associated with the geometry of the vertical wall and horizontal floor to cause this. Again, I would attribute this to decay in the wood sill.

**Attic floor framing.** The attic joists are likely covered with board sheathing. Some areas of flooring have been removed most likely by trades accessing electrical wiring. The insulation covering the floor makes walking on it a hazard. The 3 by 10 joists have a live load capacity approaching 300 psf. The beams have a capacity to carry a live load of 38 psf. Again, the disparity is striking. The hangers supporting the ceiling beams are grossly undersized and provide little opportunity to develop adequate connection support. The support of these hangers on single rafters is also dangerously undersized.

**Roof framing.** The roof trusses are adequate to carry a live load of 20 psf on the attic floor. The 6 by 6 purlins on the front and rear slopes have the capacity to carry a snow load of 22 psf whereas the code demand load would be 27 psf. They are undersized. The 2x8 purlins under the gable walls have a capacity to carry a snow load of about 8 psf. These are grossly undersized. The rafters are adequate to carry code loadings.

The reader should bear in mind that allowable stress figures in wood construction are based on trade specifications that have a safety factor of about four. Hence, the framing in this structure has likely seen greater loads in its long history. The greater loads did not collapse the structure, but they are not safe to rely upon for continued use.
RECOMMENDATIONS

Modern materials used to strengthen the structure should be concealed behind traditional materials. In general, the preservation work should meet the guidelines for preservation under The Secretary of the Interior’s Standards for the Treatment of Historic Properties.

Improvements to the structure should take into consideration the removing of dangerous conditions (safety) and removing conditions that will accelerate deterioration (durability) as well as considering uses with limited occupancy or meeting full code load requirements.

The following recommendations are intended to meet the aforementioned needs.

**Crawlspace.** Provide openings in the exterior walls or install mechanical ventilation to move air sufficiently to keep the space dry. The need for ventilation is to reduce moisture during warm seasons when decay causing organisms are active. A mechanical system could dry and recycle the same air to minimize temperature change effects of fresh air.

Ensure the two access areas meet minimum access opening size of 18 by 24 inches.

**First floor framing.** The decay in the foundation sill needs to be abated to prevent further spread into the floor framing and provide adequate support for the walls. This will require carefully lifting (for reuse) skirts on the exterior walls to access compromised wood. The percent of affected framing is unknown as it is concealed. After removing the skirts and sheathing, survey the sills and replace rotted portions. Following replacement of sills, apply Bora-Care wood preservative to all exposed wood before closing up with finishes.

Improve the live load capacity over the utility room by resupporting the beams as the same spacing as the brick piers. This will make the capacity of the floor equal throughout the building. If a code compliant assembly live load of 100 psf is desired, a ¼” thick cover plate added to the tops only would adequately strengthen the beams.

**Attic floor framing.** Add hangers supporting the attic floor beams to reduce support forces by distributing them over more of the supporting roof structure. Where hangers are supported with rafters, add rafters dedicated to supporting hangers. Where hangers are supported by trusses, add truss web members to create more truss panel points to load the trusses without compromising the overall strength of the trusses.

**Roof framing.** At the front and rear roof purlins, sister a LVL to increase capacity. At the 2x8 purlins on the east and west slopes, add several LVL’s to increase capacity. Provide custom steel connections to the 4 by 7 rafters. Add connections to the 4 by 7 rafters to supporting sills.

Sincerely,

Arthur H. MacLeod, P.E., Principal
MacLeod Consulting, Inc.

Attachments: Captioned Photographs and Existing Condition Drawings
1. Roof framing under west end of building. Note two 2x wood hangers, one hanging from the truss and one hanging from a rafter, support beams beneath the insulation which support ceiling joists. The insulation covers board flooring and conceals random openings in the flooring.

2. Framing at hips at ends of Dutch hip walls. A 4x7 rafter supports a 2x8 purlin.

3. The Dutch hip wall is supported on a 2x8 purlin.
4. Roof truss heel bearing on wall plate. Wall plate is lap spliced and tied with two pegs.

5. Openings to investigate the center wall running on a north south axis. There is no beam above the wall. This wall is supporting ceiling joists.

6. A basement at the west end of the building serves as a utility room.
7. Crawlspace under the middle and east side of the building. Generally, the odor is free of any scent of decay. The space does not have adequate cross ventilation.

8. Window stools are crowned because of framing around them settling suggesting the wall studs are sinking into the foundation sills.

9. Another view of a window with a crown in the window stool.
10. More windows with crowning in the window stools.

11. West wall looking south. Picture is rotated on its side. The wall is bowed out at its base.
SETTLEMENT LIKELY FROM ROTTED SILL

8x8 BRICK PIER

3" Ø PIPE SHORE

3x9@13" JOIST

4x4 POST

UNEXCAVATED

CRAWL SPACE 20'x
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

Client Name

HISTORIC FIRST FLOOR PLAN

HISTORIC FIRST FLOOR PLAN

1/8" = 1'-0"
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563
Client Name

EXISTING FIRST FLOOR PLAN

1/8" = 1'-0"
The Clark-Haddad Memorial Building

16 Dewey Ave, Sandwich,
MA, 02563

Date: 04/01/15
Scale: 1/4" = 1'-0"
Drawn By: AR
Reviewed By: DLM
Project No: 1731.00

1/4" = 1'-0" 

HISTORIC SOUTH ELEVATION

A2.1a
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA 02563

Client Name

EXISTING
SOUTH
ELEVATION

A2.1b
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

WEST ELEVATION

AR

Scale: 1/4" = 1'-0"

Date: 04/01/15

Project No: 1731.00

Reviewed By: DLM

Drawn By: AR

Client Name

WEST ELEVATION
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

Client Name

PROPOSED FLOOR PLAN - OPTION A - LECTURER/ MULTIPURPOSE

1/8" = 1'-0"

1

1 PROPOSED FLOOR PLAN - OPTION A - LECTURER/ MULTIPURPOSE

1/8" = 1'-0"

Date: 04/01/15
Scale: 1/8" = 1'-0"
Drawn By: AR
Reviewed By: DLM
Project No: 1731.00

McGinley Kalsone & Associates Inc.
114 Broadway, PO Box 45289
Somerville, MA 02143
617-625-8901 - www.mcginclark.com

PROPOSED FLOOR PLAN - OPTION A - LECTURER MULTIPURPOSE

No. A1.2c
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

Client Name

OPTION A - 3D

A1.2c1
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

PROPOSED FLOOR PLAN - OPTION C - GALLERY
1/8" = 1'-0"
PROPOSED FLOOR PLAN - OPTION C - TABLES & CHAIRS

1/8" = 1'-0"
The Clark-Haddad Memorial Building
16 Dewey Ave, Sandwich, MA, 02563

Client Name

OPTION C - 3D

A2.1e
Cost Estimate
<table>
<thead>
<tr>
<th>WORK ITEMS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Work &amp; Site (G)</td>
<td></td>
</tr>
<tr>
<td>Parking Lot and Driveway</td>
<td>70,000</td>
</tr>
<tr>
<td>Septic System</td>
<td>30,000</td>
</tr>
<tr>
<td>Site Repairs</td>
<td>5,000</td>
</tr>
<tr>
<td>Landscape</td>
<td>5,000</td>
</tr>
<tr>
<td>Asbestos abatement</td>
<td>15,000</td>
</tr>
<tr>
<td>General Demolition (Remove ceilings, light fixtures, carpet, toilet room partitions, etc)</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$155,000</strong></td>
</tr>
<tr>
<td>Exterior Envelope Repairs</td>
<td></td>
</tr>
<tr>
<td>Replace asphalt shingle roof with new wood shingle roof</td>
<td>50,000</td>
</tr>
<tr>
<td>Replace gutters and downspouts</td>
<td>6,000</td>
</tr>
<tr>
<td>Replace wood shingles with new clapboard siding</td>
<td>70,000</td>
</tr>
<tr>
<td>Selective repair/replacement of wood trim</td>
<td>15,000</td>
</tr>
<tr>
<td>Replacement windows</td>
<td>25,000</td>
</tr>
<tr>
<td>Exterior painting</td>
<td>25,000</td>
</tr>
<tr>
<td>Replace exterior doors and hardware</td>
<td>15,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$206,000</strong></td>
</tr>
<tr>
<td>Structural Repairs</td>
<td></td>
</tr>
<tr>
<td>Sill repair / replacement</td>
<td>24,000</td>
</tr>
<tr>
<td>Add vapor barrier at crawl space</td>
<td>3,500</td>
</tr>
<tr>
<td>Add ventilation at crawl space</td>
<td>8,000</td>
</tr>
<tr>
<td>Add reinforcing at 1st floor beams</td>
<td>6,500</td>
</tr>
<tr>
<td>Add hangers in attic to support attic floor / first floor ceiling</td>
<td>5,000</td>
</tr>
<tr>
<td>Modify roof trusses and rafters to accommodate hangers</td>
<td>8,500</td>
</tr>
<tr>
<td>Sister LVLs at front &amp; rear roof purlins</td>
<td>5,000</td>
</tr>
<tr>
<td>Add LVLs at east and west roof purlins</td>
<td>5,000</td>
</tr>
<tr>
<td>Add rafter connections</td>
<td>4,500</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$70,000</strong></td>
</tr>
<tr>
<td>Interior Improvements</td>
<td></td>
</tr>
<tr>
<td>Patching and drywall</td>
<td>40,000</td>
</tr>
<tr>
<td>Interior doors, frames &amp; hardware</td>
<td>10,000</td>
</tr>
<tr>
<td>Refinish wood floors</td>
<td>4,000</td>
</tr>
<tr>
<td>Interior finish carpentry</td>
<td>20,000</td>
</tr>
<tr>
<td>Interior painting</td>
<td>15,000</td>
</tr>
<tr>
<td>Kitchenette</td>
<td>4,000</td>
</tr>
<tr>
<td>New toilet rooms</td>
<td>20,000</td>
</tr>
<tr>
<td>Plumbing and HVAC</td>
<td>60,000</td>
</tr>
<tr>
<td>Electrical and Fire Alarm</td>
<td>40,000</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>15,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$228,000</strong></td>
</tr>
</tbody>
</table>

Sub-Total Construction: $659,000

Contractor’s General Conditions: 82,375
Escalation to mid-point of Construction 3Q2016: 29,655
GC’s fee: 38,552
Estimating Contingency: 80,958
Construction Contingency: 89,054
Architect & Engineering services: 117,551
Survey and Site Plan: 5,000

TOTAL PROJECT COST: $1,102,145
Appendix 1: Hazardous Materials Report
HAZARDOUS MATERIAL INSPECTION

Project: Former School Building

Project Address: 16 Dewey Ave.
Sandwich, MA 02563

Inspection Date (s): April 11, 2012

Inspected By: Richard Charpentier, MA Certification No.: AI 900210

Job Number: 12-0411.1

Report Date: April 20, 2012

Report Requested by: Ted Hamilton
Facilities Director
Phone: 617 479-2424

PURPOSE

The enclosed inspection is two-fold:

(1) To thoroughly inspect the above stated property, where demolition and/or renovations will occur, for the presence of asbestos, including Category I and Category II nonfriable ACM in accordance with the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Standard for Demolition and Renovation as described in 40 CFR Part 61.145 (a).

(2) To collect homogeneous paint chip samples to determine the lead content by % of weight.
INSPECTION PROFILE

The property is a single story wood frame former school building that may be renovated for non-school use by the Sandwich community. This inspection focused on the following suspect asbestos containing building material (SACBM) and paint chips:

- Vinyl Flooring and Associated Mastics
- Suspended Ceiling Tiles
- Window Glazing
- Sheetrock and Joint Compound
- TSI pipe insulation (Basement)
- Paint Chips for Lead

SAMPLING METHOD FOR ASBESTOS

Samples of suspect asbestos containing material (ACBM) were collected in accordance with the EPA NESHAP Standard for Demolition and Renovation as described in 40 CFR Part 61.145, labeled, placed in leak-tight containers and recorded on a ‘Chain of Custody’ (See Appendix A). The Chain of Custody includes the date collected, the location where the sample was taken and the color of the material. The samples were delivered to EMSL Analytical, Inc., in Woburn, MA, for analysis and logged in with the date and time the samples were relinquished by the inspector and received by the laboratory technician.

TESTING PROCEDURE

All samples were analyzed by Polarized Light Microscopy (PLM) Bulk Asbestos Analysis in accordance with ERA 600/M4-82-020 per CFR 763 (NVLAP # 102079-0).

SAMPLING RESULTS

Sampling results are described in two categories: “Friable Asbestos Containing Material” and “Category I and Category II Non-friable Asbestos Containing Material” that is determined to contain equal to or greater than 1% asbestos.

Samples are identified by the following asbestos types: (1) Thermal System Insulation (TSI) which includes any and all material used for heat/cold control, i.e. pipe insulation, boiler or tank insulation, breech insulation, etc.; (2) Surfacing Material (SFM) which includes any and all sprayed-on or troweled-on material, i.e., spray-on insulation, textured paint, stucco, joint compounds, mastics, etc.; (3) Miscellaneous Material (MM) which includes vinyl floor tiles, vinyl sheet goods, duct wrap insulation, wallboard, cementitious materials including transite panels, roofing, etc.

Sample results are reported by sample number, location, sample description, sample color, type of asbestos and % of asbestos content of the homogeneous material represented by the sample.

Eighteen (18) samples were collected and eighteen (18) samples were analyzed.
SUMMARY OF RESULTS

(SEE TABLES on next pages)

A licensed and trained asbestos inspector has made an effort to characterize visible and readily accessible suspect ACBM within the interior/exterior areas of the subject property building using destructive methods. However, no survey can be all encompassing. As such, should construction workers encounter and/or need to disturb product(s) suspected as being ACM, that have not been previously identified or sampled, during any renovation activities in the future, all proper precautions should be taken to ensure these materials are appropriately characterized and handled accordingly.
Table 1
Suspect Homogeneous Asbestos Containing Material Collected

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Location</th>
<th>Description</th>
<th>Color</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk01</td>
<td>Exterior - Right Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk02</td>
<td>Exterior - Left Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk03</td>
<td>Exterior - Cedar Shingles</td>
<td>Tar Paper Under Shingles</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>NB-Bk04</td>
<td>Interior - Throughout</td>
<td>2'x4' Suspended Ceiling Tile</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk05</td>
<td>Interior - Left Side Rooms</td>
<td>12&quot;x12&quot; Floor Tile (Under Beige Carpet)</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>NB-Bk06</td>
<td>Interior - Left Side Rooms</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>NB-Bk07</td>
<td>Interior - Kitchen</td>
<td>12&quot;x12&quot; Floor Tile</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>NB-Bk08</td>
<td>Interior - Kitchen</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>NB-Bk09</td>
<td>Interior - Kitchen</td>
<td>Vinyl Goods (Under Green Floor Tiles)</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>NB-Bk10</td>
<td>Interior - Front Bathroom</td>
<td>Linoleum</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>NB-Bk11</td>
<td>Interior - Throughout</td>
<td>Sheetrock walls, Ceilings</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk12</td>
<td>Interior - Throughout</td>
<td>Joint Compound</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>NB-Bk13</td>
<td>Interior - Side Room w/ Cabinets</td>
<td>Seal Around Flue Vent</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk14</td>
<td>Interior - Basement</td>
<td>12&quot;x12&quot; Floor Tile</td>
<td>Beige</td>
<td></td>
</tr>
<tr>
<td>NB-Bk15</td>
<td>Interior - Basement</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>NB-Bk16</td>
<td>Interior - Basement, Above Boiler</td>
<td>Sheetrock</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk17</td>
<td>Interior - Basement - Throughout</td>
<td>Ceiling Sheetrock</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>NB-Bk18</td>
<td>Interior - Basement - Front of Crawl Space</td>
<td>Pipe and Elbow Insulation</td>
<td>Grey</td>
<td></td>
</tr>
</tbody>
</table>

Highlighted samples indicate asbestos containing material (ACM)

Table 2
Friable Asbestos Containing Material Detected

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Location</th>
<th>Description</th>
<th>Color</th>
<th>Type</th>
<th>% Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk18</td>
<td>Interior - Basement - Front of Crawl Space</td>
<td>Pipe and Elbow Insulation</td>
<td>Grey</td>
<td>TSI</td>
<td>80% Chrysotile</td>
</tr>
</tbody>
</table>
## Table 3

**NON-Friable Asbestos Containing Material Detected**

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Location</th>
<th>Description</th>
<th>Color</th>
<th>Type</th>
<th>% Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk01</td>
<td>Exterior - Right Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td>MM</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk02</td>
<td>Exterior - Left Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td>MM</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk05</td>
<td>Interior - Left Side Rooms</td>
<td>12”x12” Floor Tile (Under Beige Carpet)</td>
<td>Green</td>
<td>MM</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk07</td>
<td>Interior - Kitchen</td>
<td>12”x12” Floor Tile</td>
<td>Green</td>
<td>MM</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk10</td>
<td>Interior - Front Bathroom</td>
<td>Linoleum</td>
<td>Brown</td>
<td>MM</td>
<td>15% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk14</td>
<td>Interior - Basement</td>
<td>12”x12” Floor Tile</td>
<td>Beige</td>
<td>MM</td>
<td>4% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk18</td>
<td>Interior - Basement - Front of Crawl Space</td>
<td>Pipe and Elbow Insulation</td>
<td>Grey</td>
<td>MM</td>
<td>80% Chrysotile</td>
</tr>
</tbody>
</table>
TESTING PROCEDURE FOR LEAD (Pb) IN PAINT CHIPS

Paint chips from various exterior and interior surfaces throughout the building were collected for analysis by using the Flame AAS (SW 846 3050B*/7000B) method for determining the lead content by % of weight.

Sampling results are described by percent of weight (% wt) and are reported by sample number, location, sample description, sample color, location, sample description, and sample color.

Table 1a
Lead (Pb) in Paint Chips Detection

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Location</th>
<th>Description</th>
<th>Color</th>
<th>% wt (Pb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Pb01</td>
<td>Exterior - Front, Right of Entry</td>
<td>Clapboard Paint Chip</td>
<td>White</td>
<td>0.020 %</td>
</tr>
<tr>
<td>NB-Pb02</td>
<td>Exterior - Front, Left of Entry</td>
<td>Clapboard Paint Chip</td>
<td>White</td>
<td>0.017 %</td>
</tr>
<tr>
<td>NB-Pb03</td>
<td>Exterior - Front, Right of Entry</td>
<td>Window Trim Paint Chip</td>
<td>White</td>
<td>0.46 %</td>
</tr>
<tr>
<td>NB-Pb04</td>
<td>Exterior - Front, Right of Entry</td>
<td>Window Sill Paint Chip</td>
<td>White</td>
<td>7.6 %</td>
</tr>
<tr>
<td>NB-Pb05</td>
<td>Exterior - Front, Left of Entry</td>
<td>Window Trim Paint Chip</td>
<td>White</td>
<td>0.033 %</td>
</tr>
<tr>
<td>NB-Pb06</td>
<td>Exterior - Front, Left of Entry</td>
<td>Window Sill Paint Chip</td>
<td>White</td>
<td>1.7 %</td>
</tr>
<tr>
<td>NB-Pb07</td>
<td>Exterior - Right Side of Bldg.</td>
<td>Entry Double Door Paint Chip</td>
<td>White</td>
<td>1.5 %</td>
</tr>
<tr>
<td>NB-Pb08</td>
<td>Exterior</td>
<td>Body Trim Paint Chip</td>
<td>White</td>
<td>16 %</td>
</tr>
<tr>
<td>NB-Pb09</td>
<td>Interior - Entryway</td>
<td>Wainscot Paint Chip</td>
<td>Tan</td>
<td>0.12 %</td>
</tr>
<tr>
<td>NB-Pb10</td>
<td>Interior - Throughout</td>
<td>Wainscot Paint Chip</td>
<td>Green</td>
<td>1.3 %</td>
</tr>
<tr>
<td>NB-Pb11</td>
<td>Interior - Throughout</td>
<td>Walls Paint Chip</td>
<td>White/Green Base</td>
<td>13 %</td>
</tr>
</tbody>
</table>

Highlighted samples indicate Lead (Pb) content greater than 0.5 %

The table below shows the levels of lead in paint, soil, and dust considered hazardous by the U.S. Environmental Protection Agency (EPA):

HAZARDOUS LEVELS OF LEAD

<table>
<thead>
<tr>
<th>Paint</th>
<th>Lab test results of 5,000 ppm (parts per million) or 0.5% or more (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARE SOIL</td>
<td>Lab test results of 400 ppm or more in play areas</td>
</tr>
<tr>
<td>DUST</td>
<td>Dust from floors with 40 micrograms of lead per square foot (40 mg/ft²) or more</td>
</tr>
<tr>
<td></td>
<td>Dust from window sills with 250 micrograms of lead per square foot (250 mg/ft²) or more</td>
</tr>
</tbody>
</table>

Though there are no Lead Statutes and Regulations in the state of Massachusetts for commercial buildings regarding the handling and/or disposal of lead containing material, the following EPA guidelines must be considered prior to disposal of suspect lead containing material:


- Perform TCLP testing prior to disposal.
If lab test results are ≥0.05 % wt, material must be disposed as hazardous material.
If lab test results are <0.05 % wt, Material may be disposed as regular construction debris.
TCLP is one of the Federal EPA test methods that are used to characterize waste as either hazardous or non-hazardous for the purpose of disposal. The TCLP analysis simulates landfill conditions, Over time, water and other liquids permeate through landfills. These liquids often react with the solid waste in the landfill, and may pose public and environmental health risks because of the contaminates it absorbs.

TCLP is an acronym for ‘Toxicity Characteristic Leaching Procedure’ and is performed by environmental testing labs.
APPENDIX A

LABORATORY ANALYSIS
## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

<table>
<thead>
<tr>
<th>Sample</th>
<th>Description</th>
<th>Appearance</th>
<th>% Fibrous</th>
<th>% Non-Fibrous</th>
<th>Asbestos</th>
<th>% Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk01</td>
<td>Exterior; Right Side of Bldg - 6/6 Wood Sash Windows; Glazing</td>
<td>White</td>
<td>98%</td>
<td>Non-fibrous (other)</td>
<td>2%</td>
<td>Chrysotile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk02</td>
<td>Exterior; Left Side of Bldg - 6/6 Wood Sash Windows; Glazing</td>
<td>White</td>
<td>98%</td>
<td>Non-fibrous (other)</td>
<td>2%</td>
<td>Chrysotile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk03</td>
<td>Exterior; Cedar Shingles - Tar Paper under Shingles</td>
<td>Brown</td>
<td>40%</td>
<td>Cellulose</td>
<td>60%</td>
<td>Non-fibrous (other)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fibrous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk04</td>
<td>Interior; Throughout - 2x4 Suspended Ceiling Tile</td>
<td>Gray/White</td>
<td>35%</td>
<td>Cellulose</td>
<td>35%</td>
<td>Min. Wool</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fibrous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heterogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk05</td>
<td>Interior; Left Side Rooms - 12x12 Floor Tile under Beige Carpet</td>
<td>Green</td>
<td>97%</td>
<td>Non-fibrous (other)</td>
<td>3%</td>
<td>Chrysotile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk06</td>
<td>Interior; Left Side Rooms - Associated Mastic</td>
<td>Black</td>
<td>100%</td>
<td>Non-fibrous (other)</td>
<td>None Detected</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk07</td>
<td>Interior; Kitchen - 12x12 Floor Tile under Beige Carpet</td>
<td>Green</td>
<td>97%</td>
<td>Non-fibrous (other)</td>
<td>3%</td>
<td>Chrysotile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Analyst(s)**

Allison Libeskind (18)

Renaldo Drakes, Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. None Detected = <1%.
## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

<table>
<thead>
<tr>
<th>Sample</th>
<th>Description</th>
<th>Appearance</th>
<th>Non-Asbestos</th>
<th>Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk08</td>
<td>Interior; Kitchen - Associated Mastic</td>
<td>Black</td>
<td>100% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>NB-Bk09</td>
<td>Interior; Kitchen - Vinyl Goods; under Green Floor Tiles</td>
<td>Red/Black</td>
<td>60% Cellulose, 40% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>NB-Bk10</td>
<td>Interior; Front Bathroom - Linoleum</td>
<td>White/Green</td>
<td>85% Non-fibrous (other)</td>
<td>15% Chrysotile</td>
</tr>
<tr>
<td>NB-Bk11</td>
<td>Interior; Throughout - Sheetrock Walls, Ceilings</td>
<td>Gray</td>
<td>30% Cellulose, 70% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>NB-Bk12</td>
<td>Interior; Throughout - Joint Compound</td>
<td>White</td>
<td>100% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>NB-Bk13</td>
<td>Interior; Side Room w/ Cabinets - Seal around Flue Vent</td>
<td>White</td>
<td>10% Cellulose, 90% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>NB-Bk14</td>
<td>Interior; Basement - 12x12 Floor Tile</td>
<td>Tan</td>
<td>96% Non-fibrous (other)</td>
<td>4% Chrysotile</td>
</tr>
</tbody>
</table>

**Analyst(s)**

Allison Libeskind (18)

Renaldo Drakes, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. None Detected = <1%.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102.

Initial report from 04/20/2012  14:15:14

Test Report PLM-7.16.0  Printed: 4/20/2012 2:15:14 PM
**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Description</th>
<th>Appearance</th>
<th>Non-Asbestos</th>
<th>Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Bk15</td>
<td>Interior; Basement - Associated Mastic</td>
<td>Black</td>
<td>100% Non-fibrous (other)</td>
<td>None Detected</td>
</tr>
<tr>
<td>131201733-0015</td>
<td></td>
<td>Non-Fibrous Homogeneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk16</td>
<td>Interior; Basement above Boiler - Sheetrock</td>
<td>Brown/White</td>
<td>3% Glass</td>
<td>82% Non-fibrous (other)</td>
</tr>
<tr>
<td>131201733-0016</td>
<td></td>
<td>Fibrous Homogeneous</td>
<td>15% Cellulose</td>
<td></td>
</tr>
<tr>
<td>NB-Bk17</td>
<td>Interior; Basement; Throughout - Ceiling Sheetrock</td>
<td>Brown/White</td>
<td>40% Cellulose</td>
<td>60% Non-fibrous (other)</td>
</tr>
<tr>
<td>131201733-0017</td>
<td></td>
<td>Fibrous Heterogeneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Bk18</td>
<td>Interior; Basement; Front of Crawlspace - Pipe and Elbow Insulation</td>
<td>White</td>
<td>20% Non-fibrous (other)</td>
<td>80% Chrysotile</td>
</tr>
<tr>
<td>131201733-0018</td>
<td></td>
<td>Fibrous Heterogeneous</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Analyst(s)**

Allison Libeskind (18)

Renaldo Drakes, Laboratory Manager or other approved signatory

---

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. None Detected = <1%

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

---

Initial report from 04/20/2012 14:15:14

Test Report PLM-7.16.0 Printed: 4/20/2012 2:15:14 PM

THIS IS THE LAST PAGE OF THE REPORT.
### Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B*/7000B)

<table>
<thead>
<tr>
<th>Client Sample Description</th>
<th>Lab ID</th>
<th>Collected</th>
<th>Analyzed</th>
<th>Lead Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Pb01</td>
<td>0001</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>0.020 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Right of Entry Desc: Clapboard Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb02</td>
<td>0002</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>0.017 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Left of Entry Desc: Clapboard Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb03</td>
<td>0003</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>0.46 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Right of Entry Desc: Window Trim Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb04</td>
<td>0004</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>7.6 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Right of Entry Desc: Window Sill Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb05</td>
<td>0005</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>0.33 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Left of Entry Desc: Window Trim Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb06</td>
<td>0006</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>1.7 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Front, Left of Entry Desc: Window Sill Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb07</td>
<td>0007</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>1.5 % wt</td>
</tr>
<tr>
<td>Site: Exterior-Right Side of Bldg Desc: Entry Double Door Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb08</td>
<td>0008</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>16 % wt</td>
</tr>
<tr>
<td>Site: Exterior Desc: Body Trim Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb09</td>
<td>0009</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>0.12 % wt</td>
</tr>
<tr>
<td>Site: Interior- Entryway Desc: Wainscoat Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB-Pb10</td>
<td>0010</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>1.3 % wt</td>
</tr>
<tr>
<td>Site: Interior- Throughout Desc: Wainscoat Paint Chip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Initial report from 04/20/2012 20:12:43
Attn: Richard Charpentier  
South Shore Environmental  
P.O. Box 9130  
Fall River, MA 02720

Customer ID: SSEV26  
Customer PO: CC 664389  
Received: 04/16/12 9:34 AM  
EMSL Order: 201203776

Fax: (774) 313-8973  
Phone: (774) 313-8973  
Project: Former School Building; 16 Dewey Ave. Sandwich, MA 02563/ Job # 12-0411.1

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B*/7000B)

<table>
<thead>
<tr>
<th>Client Sample Description</th>
<th>Lab ID</th>
<th>Collected</th>
<th>Analyzed</th>
<th>Lead Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB-Pb11</td>
<td>0011</td>
<td>5/18/2011</td>
<td>4/20/2012</td>
<td>13 % wt</td>
</tr>
</tbody>
</table>

Site: Interior- Throughout  
Desc: Walls Paint Chip

Julie Smith - Laboratory Director  
NJ-NELAP Accredited:04653  
or other approved signatory

Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. The QC data associated with these results included in this report meet the method QC requirements, unless specifically indicated otherwise. Unless noted, results in this report are not blank corrected. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03536, NY 10896, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 04/20/2012  20:12:43
APPENDIX B

CHAIN OF CUSTODY
# ASBESTOS BULK SAMPLE CHAIN OF CUSTODY

**Project Name:** Former School Building  
**Client:** Town of Sandwich, MA  
**Project Address:** 16 Dewey Ave., Sandwich, MA 02563

**Inspector:** Richard Charpentier  
**Job #:** 12-0411.1

**TURN-AROUND TIME:** [ ] RUSH  [ ] 24 HOURS  [ ] 48 HOURS  [ ] 72 Hours  [X] 5 Days

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>Sample Number</th>
<th>Sample Location</th>
<th>Sample Description</th>
<th>Color</th>
<th>Footage Amount (SF/LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/16/2011</td>
<td>NB-Bk01</td>
<td>Exterior - Right Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>5/16/2011</td>
<td>NB-Bk02</td>
<td>Exterior - Left Side of Bldg.</td>
<td>6/6 Wood Sash Windows - Glazing</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk03</td>
<td>Exterior - Cedar Shingles</td>
<td>Tar Paper Under Shingles</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk04</td>
<td>Interior - Throughout</td>
<td>2'x4' Suspended Ceiling Tile</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk05</td>
<td>Interior - Left Side Rooms</td>
<td>12&quot;x12&quot; Floor Tile (Under Beige Carpet)</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk06</td>
<td>Interior - Left Side Rooms</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk07</td>
<td>Interior - Kitchen</td>
<td>12&quot;x12&quot; Floor Tile (Under Beige Carpet)</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk08</td>
<td>Interior - Kitchen</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk09</td>
<td>Interior - Kitchen</td>
<td>Vinyl Goods (Under Green Floor Tiles)</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk10</td>
<td>Interior - Front Bathroom</td>
<td>Linoleum</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk11</td>
<td>Interior - Throughout</td>
<td>Sheetrock walls, Ceilings</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk12</td>
<td>Interior - Throughout</td>
<td>Joint Compound</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk13</td>
<td>Interior - Side Room w/ Cabinets</td>
<td>Seal Around Flue Vent</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk14</td>
<td>Interior - Basement</td>
<td>12&quot;x12&quot; Floor Tile</td>
<td>Beige</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk15</td>
<td>Interior - Basement</td>
<td>Associated Mastic</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk16</td>
<td>Interior - Basement, Above Boiler</td>
<td>Sheetrock</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk17</td>
<td>Interior - Basement - Throughout</td>
<td>Ceiling Sheetrock</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Bk18</td>
<td>Interior - Basement - Front of Crawl Space</td>
<td>Pipe and Elbow Insulation</td>
<td>Grey</td>
<td></td>
</tr>
</tbody>
</table>

**Relinquished by:** [Signature]  
**Date:** 4/12/12  
**Received By:** [Signature]  
**Date:** APR 13 2012  
**Time:** 10:40 AM
# Lead Paint Sample Chain of Custody

**Project Name:** Former School Building  
**Client:** Town of Sandwich, MA  
**Project Address:** 16 Dewey Ave.  
**Mass. Inspector Lic. #:** AI 900210 exp: 8/17/2012  
**Job #:** 12-0411.1

**TURN-AROUND TIME:**  
- [ ] RUSH  
- [ ] 24 Hours  
- [ ] 48 Hours  
- [X] 72 Hours  
- [ ] 5 Days

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>Sample Number</th>
<th>Sample Location</th>
<th>Sample Description</th>
<th>Color</th>
<th>Footage Amount (SF/LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/18/2011</td>
<td>NB-Pb01</td>
<td>Exterior - Front, Right of Entry</td>
<td>Clapboard Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb02</td>
<td>Exterior - Front, Left of Entry</td>
<td>Clapboard Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb03</td>
<td>Exterior - Front, Right of Entry</td>
<td>Window Trim Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb04</td>
<td>Exterior - Front, Right of Entry</td>
<td>Window Sill Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb05</td>
<td>Exterior - Front, Left of Entry</td>
<td>Window Trim Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb06</td>
<td>Exterior - Front, Left of Entry</td>
<td>Window Sill Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb07</td>
<td>Exterior - Right Side of Bldg.</td>
<td>Entry Double Door Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb08</td>
<td>Exterior</td>
<td>Body Trim Paint Chip</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb09</td>
<td>Interior - Entryway</td>
<td>Wainscoat Paint Chip</td>
<td>Tan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb10</td>
<td>Interior - Throughout</td>
<td>Wainscoat Paint Chip</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NB-Pb11</td>
<td>Interior - Throughout</td>
<td>Walls Paint Chip</td>
<td>White/Green Base</td>
<td></td>
</tr>
</tbody>
</table>

**Relinquished by:**  
Date: 4/12/12  
Time: 3:44 PM  

**Received By:**  
Date: APR 13 2012  
Time: 5:00 PM  

**Please E-Mail Results to:**  
richard.SSES@comcast.net