# Building Inspection Report

## The Bromfield House - 39 Massachusetts Avenue, Harvard, MA

**Inspection Date:**
02 December 2011

**Prepared For:**
Town of Harvard

**Prepared By:**
Galeota Associates, Inc.
P.O. Box 424
Townsend, MA 01469

(978) 597-1300
(978) 597-1391 Fax

**Report Number:**
120211AM

**Inspector:**
Greg A. Galeota, President

# SUMMARIZATION REPORT FOR

## The Town of Harvard, MA

# AT

## The Bromfield House - 39 Massachusetts Avenue, Harvard, MA

We hope you had the advantage of being present during the inspection. If so, you have a better perspective and more detail that any written report can give.

Your inspection has been done incorporating with the principles and standards developed for professional home inspections by the "**AMERICAN SOCIETY OF HOME INSPECTORS**" and in compliance with the Commonwealth of Massachusetts' ***Rules and Regulations Governing Home Inspectors: 266 CMR 1.00-11.00.*** In addition, during the inspection we have tried to offer constructive suggestions and to answer as many of your questions as we were able. You will, however, recall that we do not move furniture, disassemble equipment or get into dangerous areas, or see behind covered sections.

Due to licensing requirements/restrictions we cannot provide you verbal "ball park" estimates for repairs suggested in this report. Ethically we are not allowed to recommended any specific contractors. We are not contractors or construction estimators therefore we cannot provide written estimates for work suggested in the report.

Your inspector has done his very best for you! He has given his honest, unbiased opinions to the very best of his ability--and that is what you have purchased--nothing else--but alas, he is but human. He is a trained and experienced "***building*** generalist" but neither he nor anyone can be an "expert" in **everything** about a building. Neither does he make any pretensions of either total completeness or infallibility.

However, between your presence during the inspection and this "reminder" report, you should know your building much better. We hope that it has been a useful and educational experience.

Since appliances such as refrigerators, dishwashers, stoves, ovens and disposals are **not** considered mechanicals, they are not inspected and are not part of this report.

We wish you the best of luck!

**GALEOTA ASSOCIATES, INC.**
**P.O. BOX 424, TOWNSEND, MA 01469-0424**
**TELEPHONE: (978) 597-1300**

**YOUR INSPECTOR: Greg A. Galeota, President**

**MA Home Inspector License #: 424**

# Table Of Contents

# Report Overview

## THE BUILDING IN PERSPECTIVE

This is a 100 +/- year old (approximate age) building that has been lacking maintenance somewhat. Apart from the short term need to deal with this lacking maintenance, ***the improvements that are recommended in this report are not considered unusual for a building of this age and location.*** Please remember that there is no such thing as a perfect building.

Time at the Inspection: 2+ hours.

## CONVENTIONS USED IN THIS REPORT

For your convenience, the following conventions have been used in this report.

☒ denotes a major improvement recommendation that is in need of immediate repair.

☒ denotes a observation or recommendation that is considered an immediate safety concern.

☑ denotes improvements that should be anticipated over the short term.

◈ denotes an area where further investigation and/or monitoring is needed. Repairs may be necessary. During the inspection, there was insufficient information. Improvements cannot be determined until further investigation or observations are made.

Please note that those observations listed under "Discretionary Improvements" are not essential repairs, but represent logical long term improvements.

**NOTE:** For the purpose of this report, it is assumed that the building faces west.

## IMPROVEMENT RECOMMENDATION HIGHLIGHTS

The following is a synopsis of the potentially significant improvements that should be budgeted for over the short term. Other significant improvements, outside the scope of this inspection, may also be necessary. Please refer to the body of this report for details and recommendations.

## THE SCOPE OF THE INSPECTION

All components designated for inspection in the ASHI® Standards of Practice are inspected except as may be noted in the "Limitations of Inspection" sections within this report.

This inspection is visual only. A representative sample of building components are viewed in areas that are accessible at the time of the inspection. No destructive testing or dismantling of building components is performed. Not all improvements will be identified during this inspection. Unexpected repairs should still be anticipated. The inspection should not be considered a guarantee or warranty of any kind.

### WEATHER CONDITIONS

Dry weather conditions prevailed at the time of the inspection. The estimated outside temperature was 42 degrees F.

# Structural Components

## DESCRIPTION OF STRUCTURAL COMPONENTS

| | |
|---|---|
| **Foundation:** | •Poured Concrete •Stone •Basement Configuration •Crawl Space Configuration •Crawl Space Access: Exterior •Crawl Space Moisture Barrier: None •Crawl Space Method Of Inspection: Not Inspected- Inaccessible Area |
| **Floor Structure:** | •Wood Floor Joist •Wood Columns •Adjustable Steel Columns •Wood Floor Beams •Board/Plank Sub Floor |
| **Wall Structure:** | •Wood Frame |
| **Ceiling Structure:** | •Joist |
| **Roof Structure:** | •Rafters |
| **Roof Sheathing:** | •Spaced Plank |
| **Attic Access Location:** | •Hallway •Attic Method Of Inspection: Entered - Inaccessible Areas |

## STRUCTURAL COMPONENT OBSERVATIONS

As with most buildings of this age and location, some liberties are taken with good building practice and with the quality of materials employed.

### RECOMMENDATIONS / OBSERVATIONS

☑ Evidence of prior roof leakage was observed on the underside of the roof sheathing. Refer to the Roofing Components section of this report for improvement recommendations. (Photos)

◈ The rafters of the roof structure show evidence of sagging. Strengthening the roof structure would resist further movement. While this improvement is not considered priority, it can often be accomplished without a great deal of difficulty.

◈ Settlement cracks were observed in the foundation walls of the building. This implies that some structural movement of the building has occurred, as is typical of most buildings. This area should, of course, be monitored. The rate of movement cannot be predicted during a one-time inspection.

◈ A portion of the foundation at the rear and right is poured concrete above the fieldstone. (Photo)

☑ Foundation wall mortar joints show evidence of deterioration. It would be wise to consider repointing deteriorated areas in order to improve durability.

⊠ There is extensive corrosion at the adjustable steel support columns. Adjustable steel posts are intended for temporary support and not permanent installation. The adjustable steel support columns should be replaced with concrete filled steel columns. (Photo)

⊠ The main beam, near the boiler, was notched for the chimney connector and for the waste piping. Additional support is necessary in these areas. (Photo)

☑ A cracked floor joist was observed at the rear right corner of the cellar. While cracked joists could be "sistered" or re-supported, this work is not considered high priority. (Photo)

◈ The span of the floor joists appears to exceed the standard for joists of this configuration. While this does not pose a serious short term problem, it may allow for excessive deflection of the joists over time. Resupporting may be desirable.

☒ An unidentified biological substance was observed on pipes, stored items, walls, etc.. in the basement. You may wish to have these conditions further evaluated by an indoor air quality specialist. (Photo)

☑ There was no access to the crawl space/framing under the rear entry hall/room off the kitchen. The window well restricted access to the window opening. ***There is the potential for there to be concealed damage. Further investigation is necessary by a licensed contractor.***

⊠ The basement shows evidence of moisture penetration in the form of: •efflorescence •water staining •wet areas •interior finish damage •dehumidifiers •sump pump installation. ***While it is impossible to predict the severity or frequency of moisture penetration on a one time visit to a building, the visible evidence suggests that basement***

***leakage will be a chronic occurrence.*** Further monitoring of the foundations will be required to determine what improvements will be required. (Photo)

The vast majority of basement leakage problems are the result of insufficient control of storm water at the surface. The ground around the building should be sloped to encourage water to flow away from the foundations. Gutters and downspouts should act to collect roof water and drain the water at least five (5) feet from the foundation, or into a functional storm sewer. Downspouts that are clogged or broken below grade level, or that discharge too close to the foundation, are the most common source of basement leakage. **Please refer to the Roofing and Exterior sections of the report for more information.**

In the event that chronic basement leakage problems are experienced, excavation, dampproofing and/or the installation of drainage tiles may be necessary. Your plans for using the basement may also influence the approach taken to curing any leakage that is experienced. Basement leakage rarely affects the structural integrity of a building. If the leakage can be tolerated, expensive repairs can usually be avoided.

☑ There are two dehumidifiers. These were NOT in use at the time of the inspection. The use of dehumidifiers is strongly recommended.

◈ Proper performance of the sump pump is critical to preventing basement leakage. Sump pumps usually serve to discharge storm water from the perimeter foundation drainage tiles. If the sump pump becomes inoperative, or if the discharge line is broken, damaged or improperly sloped, basement leakage can result. The operation of the sump pump should be carefully monitored. If the sump pump operates regularly, it may be prudent to consider a back up pump, or a battery power supply in the event of a power interruption. Please refer to the "Plumbing" section, where there may be more information on the sump pump. (Photo)

◈ Depending on the location of the building, ground water tables can sometimes influence basement leakage. Ground water levels tend to fluctuate seasonally and during heavy rainfall. It is impossible to predict what influence ground water may have, during a one-time inspection of a building. If ground water levels extend above the height of the basement floor, the performance of the perimeter foundation drainage tile is very important. If ground water fluctuation causes basement leakage, the installation of effective drainage tiles (and sump pumps, in some cases) becomes necessary.

◈ For owners of many older buildings, basement leakage is a way of life. During rainy periods, or during the spring thaw, leakage is experienced. As basement leakage rarely influences the structural integrity of a building, and because basements of older buildings usually remain unfinished, this condition is simply tolerated. Some precautions are, of course, taken to avoid damage to storage and personal belongings.

◈ This building is situated in an area known for termite activity. Termites can do a substantial amount of damage to the wood structural components of a building. Several steps can be taken to reduce the risk of a termite problem. Any form of wood/soil contact should be avoided. Controlling dampness in the soil around the perimeter of a building, including below porches and in crawl spaces, is recommended. Periodic inspections performed by a licensed pest control specialist, is also advisable.

◈ Conditions that are attractive to wood boring insects should be avoided. These conditions include the storage of wood in damp environments, wood/soil contact around the perimeter of the building (decking, siding, etc.), damp soils, leaky roofs, and unventilated spaces (roofs, garages, crawl spaces, etc.).

☑ All wood debris and/or trash should be removed from the crawl space.

☑ There is evidence of vermin activity in the cellar and crawl space. There are professionally set traps. You should verify if the contract is being maintained. There are dead mice in various locations of the basement. The pest control specialist should be consulted in this regard. (Photo)

☑ Insect activity was observed in the attic. Treatment may be desirable. (Photo)

☑ Wood damage was observed on the interior, including, but not limited to, the following areas:

- at the sill above the entry to the bulkhead (Photo)
- at the partition walls (Photo)
- at the stair stringers, treads, etc.. (Photo)
- at the cellar windows (Photo)

***Inspection for wood damage is a visual surface examination. Concealed wood damage may exist. Destructive testing is not performed during a building inspection. It is my recommendation that further examination for concealed wood damage be conducted.***

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF STRUCTURAL COMPONENT INSPECTION

This is a visual inspection only. Assessing the structural integrity of a building is beyond the scope of a typical building inspection. A certified professional engineer is recommended where there are structural concerns about the building. Inspection of structural components was limited by (but not restricted to) the following conditions:

- Structural components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of visible structural components were inspected.
- Furniture and/or storage restricted access to some structural components.
- Concealed foundation walls could not be examined.
- Extensive storage in the basement particularly restricted the inspection.
- Inaccessible floor, wall and roof cavities could not be inspected.
- Insulation in floor cavities restricted the inspection of structural components.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Roofing System

## DESCRIPTION OF ROOFING SYSTEM

**Roof Covering:** •Slate •Metal •Single Ply Membrane •Number of roofing layers observed: One
**Chimneys:** •Masonry •Lined
**Gutters and Downspouts:** •Aluminum •Downspouts Discharge Above Grade
**Method of Inspection:** •Viewed From Ladder At Eave •Viewed With Binoculars

## ROOFING OBSERVATIONS

The roof, roof covering, flashing, soffit areas, gutters and chimney, where present, were inspected from the ground with high powered field glasses.

It is reported that this roof covering is approximately 100+/- years old.

### RECOMMENDATIONS / OBSERVATIONS

- ◈ Normal irregular wave of the roof structure was observed. This condition may exist due to the method of framing acceptable at the time of construction. Further discussion will take place in this report.
- ☑ Slipped, cracked, deteriorated and missing slates were observed. There is evidence of past repairs. The life expectancy of a slate roof can depend on several factors such as the quality of the slate, the slope of the roof (steeper is better), the amount of exposed shingle, and the amount of sun or shade. As with all roofs, annual maintenance is needed. Cracked, deteriorated, or displaced slates should be repaired. As a rule of thumb, replacement of the entire roof covering may be logical if more than ten percent of the roof requires repair. It is recommended that this roof be further evaluated by a competent slater and repairs made, as necessary. (Photo)
- ☑ The metal roof cover at the bay window is fully depreciated and nearing the end of its useful life. Replacement of the roof cover should be expected in the near future. The installation of a rubber membrane should be considered. (Photo)
- ☑ The membrane at the front porch shows evidence of seam failure (the seams of the membrane coming apart). The membrane is in fair condition. Further investigation and repairs are necessary. (Photo)
- ☑ The membrane at the rear entry hall/room off the kitchen is in visually normal condition. This appears to be newer than the front membrane. There is a depression in the roof framing. This may be due to the method of framing. These conditions may reduce the life expectancy of the roof cover. Further investigation is necessary. It may not be practical to improve these conditions until replacement of the roof cover is necessary. (Photo)
- ☑ Tree branches that are in close proximity to the roof should be trimmed.
- ◈ The configuration of the roofing system is susceptible to ice damming. This should be watched for during the winter months. The potential for ice dams can vary with the severity of the winter. Severe ice dams can result in roof leakage, typically near the eaves. Solutions include better attic insulation and ventilation and eave protection below the roof coverings.
- ☒ The masonry chimneys are out of plumb. The chimneys appear to be unlined. The damper at the fireplace could not be opened. Further investigation is necessary by a mason or certified chimney sweep. Refer to the Heating Components section of this report. (Photo)
- ☑ Rain caps and vermin screens should be installed on the masonry chimneys.
- ☑ Signs of irregular uplift were observed at the chimney flashing. Water staining was observed on the framing in the attic. Repairs are necessary by a competent slater, mason or certified chimney sweep. (Photo)
- ☑ The gutters require cleaning and need to be free of debris at all times to allow for proper operation. The majority of the wood damage at the front porch (fascia, posts, decking ,etc..) and entry hall/room off the kitchen is likely due to inadequate gutter maintenance. (Photo)
- ☑ The gutters at the front porch do not appear to have sufficient slope to drain properly. The slope should be adjusted when the gutters are cleaned. (Photo)
- ☑ Loose gutters should be repaired promptly. (Photo)

☑ The downspouts discharge near the foundation. Downspouts should be properly connected and kept in good working order at all times. The use of elbows with conductor pipe extensions or splash blocks is recommended where appropriate. Care should always be taken not to discharge water onto walks, entrances or driveways where freezing could cause a potential hazard. (Photo)

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF ROOFING INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. Roofing life expectancies can vary depending on several factors. Any estimates of remaining life are approximations only. This assessment of the roof does not preclude the possibility of leakage. Leakage can develop at any time and may depend on rain intensity, wind direction, ice build up, etc. The inspection of the roofing system was limited by (but not restricted to) the following conditions:

- The entire underside of the roof sheathing is not inspected for evidence of leakage.
- Evidence of prior leakage may be disguised by interior finishes.
- Portions of the roof were viewed from the ground using binoculars. Some sections of the roof could not be viewed.
- Portions of the roof were viewed from a ladder at the edge of the roof. Some sections of the roof were not in view.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Exterior Components

## DESCRIPTION OF EXTERIOR

| | |
|---|---|
| **Lot Grading:** | •Graded Towards Building |
| **Driveways:** | •Asphalt |
| **Walkways / Patios:** | •Gravel |
| **Retaining Walls:** | •Wood |
| **Porches, Decks, Ramp and Steps:** | •Wood •Concrete |
| **Soffit and Fascia:** | •Wood |
| **Wall Cladding:** | •Wood Siding |
| **Window Frames:** | •Wood •Vinyl |
| **Entry Doors:** | •Wood •Metal •Storm Door(s) |

## EXTERIOR OBSERVATIONS

The exterior of the building has lacked maintenance.

### RECOMMENDATIONS / OBSERVATIONS

☑ Depressions were observed at the foundation. The slope should always be away from the foundation. All depressions should be filled and graded so as to quickly disperse water away from the foundation walls to help prevent possible water penetration into the cellar areas. It is important to practice good water drainage control around any structure at all times. Areas where wood is in contact with the ground are potential candidates for wood rot and/or insect infestation. It is recommended, no wood be in contact with the ground and there be a minimum of 8 inches clearance to untreated wood structural members and 6 inches to any other untreated wood. (Photo)

☑ It is recommended the depressions at the foundation be filled and a crushed stone ribbon installed (out about 18 inches) to help create more clearance between the lower siding/trim and the soil. This will also help promote better drainage away from the foundation. (Photo)

☑ The area between the woods and the rear of the building had standing water and mud at the time of the inspection. Drainage improvements are necessary in this area. A drainage swale (in effect, a wide and shallow ditch) should be created. Drainage swales are intended to divert storm water away from the building and ultimately off the lot. Alternately a curtain drain could be installed. The drain should be arranged to effectively drain water from the rear of the building while resisting clogging. (Photo)

☑ Basement window well(s) should be improved. Window wells protect basement windows from surface water and prevent contact with the soil. Window wells should be kept clear of debris at all times. (Photo)

☑ The bulkhead is in fair to poor condition. The top and doors are bent and are in need of additional support and/or repair. (Photo)

☑ The exterior and interior of the bulkhead are in need of proper surface preparation and painting with a rust inhibitive paint.

◈ It is recommended that snow and ice be removed from the top of the bulkhead during the winter months.

◈ The soil below the driveway has settled and/or heaved. Persisting movement may result in the need for repairs.

☑ The driveway is in need of crack filling to prevent water penetration to the sub base. Freezing and thawing of the sub base can cause a deterioration of the surface. (Photo)

☑ The retaining wall/landscape timbers in close proximity to the building show evidence of substantial wood damage. These conditions are conducive to insect activity. For preventive maintenance, removal and replacement is recommended.

◈ The steps to the front of the porch have been replaced. The framing is pressure treated, The decking is composite. The stair stringers are supported on patio blocks, not footings. These conditions should be monitored for settlement.

- ◈ The steps at the right side of the porch have settled somewhat. If this condition persists, or if the steps become a trip hazard, improvements should be undertaken.
- ☑ The ramp at the right/rear of the building is very narrow. There are no guard rails. The width of the ramp, exterior door and interior door do not appear to meet A.D.A requirements. You should consult the Municipal Building Inspector for A.D.A. requirements. (Photo)
- ☒ There was no access under the front porch. The framing was viewed from the perimeter only. The footings have been replaced. The framing is NOT original to the building. The framing and decking is NOT pressure treated. Felt paper was installed between the tops of the floor joists and the decking to help prevent water penetration and prolong the life of the floor joists. It should be expected that this structure will have a limited life span. Wood damage was observed at the base of the posts at the front right and rear left decking and framing. ***There is the potential for there to be concealed damage. Further investigation and repairs are necessary by a licensed contractor.*** (Photo)
- ☒ The damaged decking at the right side step should be repaired for safety. (Photo)
- ☑ It is recommended that all debris and wood be removed from under the porch.
- ☒ There was no access to the framing at the right side/rear entry. Wood damage was observed at the edge decking and framing near the ramp. Substantial wood damage was observed at the intersection of the porch and rear entry. ***There is the potential for there to be concealed damage. Further investigation and repairs are necessary by a licensed contractor.*** (Photo)
- ☒ There is no step at the door to the rear entry/room off the kitchen. The door is secured and the door knob has been removed. It is recommended these conditions be improved. (Photo)
- ☑ The fascia (the wooden board to which the gutter is typically fastened) shows evidence of wood damage in various locations. Repair or replacement should be undertaken as necessary. (Photo)
- ☒ The siding has indications of cupping, curling, shrinkage and splits. There is substantial wood damage in the left and rear sidewall at the intersection of the porch upper trim and gutters. ***There is the potential for there to be concealed damage. Further investigation and repairs are necessary by a licensed contractor.*** (Photo)
- ☑ The siding and trim are in need of proper surface preparation and the application of surface protection. (Photo)
- ☑ The foundation shrubs and/or trees should be pruned away from the structure to provide for adequate light and air circulation. This will help prevent excess moisture build-up on the structure.
- ☑ As is very typical, the basement windows have been neglected. They should be repaired or replaced as desired. Wood/soil contact should be avoided. (Photo)
- ◈ The exterior door(s) should be trimmed or adjusted, as necessary.
- ☑ Wood damage was observed on the exterior of the building including, but not limited to, the following areas:

**Front**

- at the decking, framing, etc.. at the rear left corner of the porch (Photo)
- at the decking, framing, etc.. at the front right corner of the porch (Photo)

**Right**

- at the sidewall, drip board, frieze board, etc.. at the telephone interface (Photo)
- at the sidewall, drip board, frieze board, etc.. at the bay window (Photo)
- at the cellar window (Photo)
- at the decking at the porch/entry (Photo)

**Rear**

- at the corner board, drip board, frieze board, etc.. at the left (Photo)
- at the cellar windows (Photo)
- at the sidewall at the intersection of the porch upper trim/porch gutter (Photo)
- at the corner board, drip board, frieze board, sidewall, etc.. at the entry hall/room off the kitchen (Photo)
- at the entry to the entry hall/room off the kitchen (Photo)
- at the sidewall at the intersection of the entry hall/room off the kitchen/gutter (Photo)
- at the fascia at the entry hall/room off the kitchen (Photo)

**Left**

- at the cellar windows (Photo)
- at the corner boards, drip boards, frieze boards, etc.. (Photo)
- at the sidewall at the intersection of the porch lower trim/framing (Photo)
- at the sidewall at the intersection of the porch upper trim/gutter (Photo)

***Inspection for wood damage is a visual surface examination. Concealed wood damage may exist. Destructive testing is not performed during a building inspection. It is my recommendation that further examination for concealed wood damage be conducted.***

### DISCRETIONARY IMPROVEMENTS

To reduce the risk of contamination of supply water, installation of anti-siphon devices on exterior hose bibs would be wise.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF EXTERIOR INSPECTION

This is a visual inspection only. The inspection of the exterior was limited by (but not restricted to) the following conditions:

- A representative sample of exterior components was inspected.
- The inspection does not include an assessment of geological conditions and/or site stability.
- Landscape components restricted a view of some exterior areas of the building.
- Access below decks and/or porches was not possible.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Electrical System

## DESCRIPTION OF ELECTRICAL SYSTEM

| | |
|---|---|
| **Size of Electrical Service:** | •200 Amps, 120/240 Volt Main Service |
| **Service Entrance Wires:** | •Overhead •Aluminum |
| **Main Disconnect:** | •Breakers •Located in the cellar •Main Service Rating 200 Amps |
| **Service Ground:** | •Copper •Ground Rod Connection •Bonding Noted |
| **Main Distribution Panel:** | •Breakers (5-220V/16-110V) •Located in the cellar •Panel Rating 200 Amps |
| **Branch/Auxiliary Panel(s):** | •Breakers (1-220V/18-110V) •Located in the cellar |
| **Distribution Wiring:** | •Copper •Tin Coated Copper •Knob & Tube •BX •Romex •THHN |
| **Receptacles:** | •Grounded and Ungrounded |
| **Ground Fault Circuit Interrupters:** | •Electrical Panel •Kitchen |

## ELECTRICAL OBSERVATIONS

Inspection of the electrical system revealed the need for improvements. These improvements should be considered high priority for safety reasons. ***Unsafe electrical conditions represent a shock hazard***. A licensed electrician should be consulted to undertake the improvements recommended below.

Evidence of remodeling or modifications to the electrical system were evident. Inquire with the owner as to their nature and any permits that may have been necessary. Evaluation of permits, identifying the extent of modifications and code compliance are beyond the scope of this inspection.

Ground fault circuit interrupter (GFCI) devices have been provided in some areas of the building. These devices are extremely valuable, as they offer an extra level of shock protection. All GFCI's that were tested responded properly.

### RECOMMENDATIONS / OBSERVATIONS

- ◈ Circuit breakers should be switched "on" and "off" once or twice yearly in order to prevent "welding" of the contacts due to oxidation and/or corrosion. Ground Fault Interrupter Circuits should be tested with test button monthly.
- ☒ Extension cords for the attic lights should not be used as permanent wiring. (Photo)
- ☒ All junction boxes in the basement should be fitted with cover plates, in order to protect the wire connections. (Photo)
- ☒ Knob & tube wiring was observed in the basement and attic. Switches for knob & tube wiring were observed in the living areas. The knob & tube wiring and/or its insulated sheathing is brittle. Areas of the wiring are damaged. Poor connections between newer wiring and the older knob-and-tube wiring were observed. This wiring should be removed and replaced. It is possible that other sections of knob & tube wiring, not visible during the inspection, may also be brittle. Further investigation is necessary by a licensed electrician. (Photo)
- ☒ The installation of ground fault circuit interrupter (GFCI) devices is advisable on exterior, garage, bathroom and some kitchen outlets. Any whirlpool or swimming pool equipment should also be fitted with GFCI's. A ground fault circuit interrupter (GFCI) offers protection from shock or electrocution.
- ☒ It is recommended that fluorescent light bulbs/fixtures be used in closets.
- ☒ An ungrounded three prong outlet was observed at the left wall of the front right room at the second floor. Further investigation and repairs are necessary by a licensed electrician. (Photo)

### DISCRETIONARY IMPROVEMENTS

Grounded outlets may be desirable in some areas where ungrounded outlets exist. This will depend on electrical needs.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF ELECTRICAL INSPECTION

This is a visual inspection only. The inspection does not include low voltage systems, telephone wiring, intercoms, alarm systems, TV cable, timers or smoke detectors. The inspection of the electrical system was limited by (but not restricted to) the following conditions:

- Electrical components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of outlets and light fixtures were tested.
- Furniture and/or storage restricted access to some electrical components.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Heating System

## DESCRIPTION OF HEATING SYSTEM

| | |
|---|---|
| **Primary Energy Source:** | •Oil |
| **Heating System Type:** | •Steam **# Of Zones:** 1 |
| **Heat Distribution Methods:** | •Radiators •Unitary Heaters |
| **Other Components:** | •None |

## HEATING OBSERVATIONS

The boiler is estimated to be 15+ years old. The typical life cycle for a unit such as this is 20-25 years. Some units will last longer; others can fail prematurely. The heating system has been lacking maintenance somewhat.

### RECOMMENDATIONS / OBSERVATIONS

- ◈ The heating system is a steam system. Steam systems require periodic maintenance. The low water cut off control must be drained bi-weekly, during the operating season to remove sludge and debris deposits from the control. Failure to provide this maintenance could cause malfunction of this safety control. It should be clearly understood that boilers have a limited life expectancy and that this unit performed in a satisfactory manner today. (Photo)
- ◈ This boiler is equipped with an automatic water fill control. Water will not have to be added manually, however, periodic check of the sight glass to ensure a 1/2 to 1/3 level from the top of the sight glass should be made. This, of course, indicates the auto-filler is operating properly.
- ☒ ***The chimney connector is NOT connected to the chimney. Combustible gases are entering the building when the system is operating. These conditions were brought to the attention of the Acting School Superintendent at the time of the inspection. These conditions should be repaired immediately by a certified heating technician.*** (Photo)
- ☒ There is not a thimble in the chimney at the chimney connector. The installation of a thimble is recommended. These conditions should be repaired immediately by a certified heating technician. (Photo)
- ☒ The furnace cement at the intersection of the chimney connector and chimney had signs of deterioration and should be replaced. These conditions should be repaired immediately by a certified heating technician. (Photo)
- ☒ The barometric damper is NOT installed on the chimney connector. These conditions should be repaired immediately by a certified heating technician. (Photo)
- ☒ The chimney does not appear to be lined. Further investigation is necessary. If not lined, a stainless steel liner should be installed for improved safety.
- ☒ The damaged clean-out door at the base of the chimney should be replaced. These conditions should be repaired by a certified heating technician. (Photo)
- ◈ Evidence of prior leakage and/or corrosion was observed at various control valves and pipe connections. This is a common condition in older hot water heating systems.
- ◈ The oil tank was manufactured 10/09/2007. (Photo)
- ◈ Oil burners require yearly service by a certified heating technician.
- ☒ Three of the rooms at the second floor are is equipped with electric resistance heat. The units could not be tested at the time of the inspection due to combustible materials on and against the units. It is recommended that you maintain proper clearances between the electric resistance baseboard heat and combustible materials. The units should be tested when the materials are removed. (Photo)
- ◈ No heat source was found at the entry hall/room off the kitchen. If this area proves to be cool, a heat source or some form of supplemental heat should be provided.

Cost estimates from a licensed electrician are recommended for all repairs and replacement of items suggested in this section.

# Insulation / Ventilation

## DESCRIPTION OF INSULATION / VENTILATION

| | |
|---|---|
| **Attic Insulation:** | •Vermiculite |
| **Roof Cavity Insulation:** | •None visible |
| **Exterior Wall Insulation:** | •None visible |
| **Basement Wall Insulation:** | •Fiberglass at the band joist areas |
| **Crawl Space Insulation:** | •None visible |
| **Floor Cavity Insulation:** | •Fiberglass |
| **Air / Vapor Barrier(s):** | •None Visible |
| **Roof / Attic Ventilation:** | •None Visible |
| **Crawl Space Ventilation:** | •No Ventilation Found |

## INSULATION / VENTILATION OBSERVATIONS

Insulation levels are typical for a ***building*** of this age and construction.

### RECOMMENDATIONS / ENERGY SAVING SUGGESTIONS

It is recommended that you contact MASS SAVE at 866-527-7283 or go to www.masssave.com for more information or to schedule a energy audit.

☑ Ideally, the attic access hatch should be insulated.

☑ The level of attic ventilation should be improved. It is generally recommended that one (1) square foot of free vent area be provided for every one hundred and fifty (150) square feet of ceiling area. Proper ventilation will help to keep the building cooler during warm weather and extend the life of roofing materials. In colder climates, it will help reduce the potential for ice dams on the roof and condensation within the attic.

☒ There is vermiculite insulation visible in the attic. There is the potential for vermiculite to be an asbestos containing material. This can only be verified by laboratory analysis which is beyond the scope of this inspection. A specialist should be engaged. The EPA information on vermiculite insulation is available at www.epa.gov/oppt/asbestos/pubs/verm.html. Due to the age of construction, there may be other materials within the building that contain asbestos but are not identified by this inspection report. (Photo)

☑ Ideally, the cellar entry at the base of the bulkhead should have an insulated door for energy efficiency.

☒ Knob & Tube wiring in the basement and attic should not be covered with insulation. Refer to the Electrical Components section of this report. (Photo)

☑ Ventilation of the crawl space is insufficient. One (1) square foot of free vent area should be provided for every five hundred (500) square feet of crawl space. Proper ventilation will help to control humidity and reduce the potential for rot. Crawl spaces can be vented to the building interior or exterior, depending on the configuration of the crawl space.

☑ A moisture barrier should be installed on the crawl space floor.

☑ Insulation improvements to the floor above the crawl space may be desirable.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF INSULATION / VENTILATION INSPECTION

This is a visual inspection only. The inspection of insulation and ventilation was limited by (but not restricted to) the following conditions:

- Insulation/ventilation type and levels in concealed areas cannot be determined. No destructive tests are performed.
- Potentially hazardous materials such as Asbestos and Urea Formaldehyde Foam Insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection.

- An analysis of indoor air quality is beyond the scope of this inspection.
- Any estimates of insulation R values or depths are rough average values.
- No access was gained to the roof cavity of the sloped ceilings.
- Storage in the attic obstructed the view of structural members.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Plumbing System

## DESCRIPTION OF PLUMBING SYSTEM

| | |
|---|---|
| **Water Supply Source:** | •Private Water Supply |
| **Service Pipe to Building:** | •Plastic |
| **Main Valve Location:** | •Basement |
| **Supply Piping:** | •Copper |
| **Waste Disposal System:** | •Private |
| **Drain / Waste / Vent Piping:** | •Plastic •Galvanized Steel •Cast Iron •Copper |
| **Cleanout Location:** | •Basement |
| **Water Heater:** | •**Manufacturer:** A.O. Smith •Approximately 30 gallon capacity •Approximate age: 19+ years •Gas •Location: Basement |
| **Other Components:** | •Sump Pump |

## PLUMBING OBSERVATIONS

The water pressure supplied to the fixtures is reasonably good. A typical drop in flow was experienced when two fixtures were operated simultaneously.

The plumbing fixtures are older. Upgrading fixtures would be a logical long term improvement. In the interim, a higher level of maintenance will likely be required. The plumbing system is showing signs of age. Updating the system will be required over time.

The water heater temperature should be set such that accidental scalding is minimized. Families with small children should be especially aware of this.

### RECOMMENDATIONS / OBSERVATIONS

- ◈ In buildings where a domestic hot water tank is used, either electric, gas or oil, a small amount of water should be drained from the outlet located at the bottom of the tank in order to remove any sediment that may have accumulated.
- ◈ Corrosion on the exterior of the supply piping was observed.
- ◈ If condensation of the cold water piping becomes a problem, this piping could be insulated.
- ◈ The water pump is older. As with any older mechanical device, it is impossible to predict its useful remaining life. (Photo)
- ☒ For the most part, the waste piping is older. It may be prone to unexpected problems. Sections of the waste piping visible in the cellar are in need of replacement at this time. Further investigation and repairs are necessary by a licensed plumber. (Photo)
- ☑ The water heater is an older unit that is fully depreciated and may be approaching the end of its useful life. Water heaters have a typical life expectancy of 7 to 12 years. It would be wise to replace this unit. One cannot predict with certainty when the unit may burst. (Photo)
- ◈ The supply piping shows evidence of corrosion where it meets the water heater. This is a common condition.
- ☑ The sump pump discharges into the septic system. This is NOT an acceptable practice. The sump pump should discharge to the exterior or into a separate drywell. (Photo)
- ☑ The installation of the sump pump should be improved to ensure proper performance.
- ☑ The sump pit should be covered for improved safety.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

## LIMITATIONS OF PLUMBING INSPECTION

This is a visual inspection only. The inspection of the plumbing system was limited by (but not restricted to) the following conditions:

- Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, and beneath the yard were not inspected.
- Water quality is not tested. The effect of lead content in solder and or supply lines is beyond the scope of the inspection.
- An inspection of the well is outside the scope of this inspection.
- An inspection of the sewage system is outside the scope of this inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

# Interior Components

## DESCRIPTION OF INTERIOR

| | |
|---|---|
| **Wall Finishes:** | •Drywall/Plaster |
| **Ceiling Finishes:** | •Drywall/Plaster |
| **Floor Surfaces:** | •Vinyl/Resilient •Wood |
| **Doors:** | •Raised Panel |
| **Window Styles and Glazing:** | •Double/Single Hung •Double Glazed |
| **Fireplace(s):** | •Masonry Firebox |
| **Kitchen Appliances Tested:** | •Not Inspected |
| **Laundry Appliances Tested:** | •Not Inspected |
| **Laundry Facility:** | •None |
| **Other Components Tested:** | •None |

## INTERIOR OBSERVATIONS

On the whole, the interior finishes of the building are considered to be in average condition. Typical flaws were observed in some areas. As is the case in many older buildings, the plaster finishes show signs of weakening. Over time, the plaster begins to bulge as it looses its bond to the wall. While this poses no short term concern, it may become necessary to substantially improve or replace sections of plaster, particularly during redecorating. The windows are good quality.

The flooring system shows evidence of sags and unevenness. Refer to the Structural Components section of this report.

### RECOMMENDATIONS / OBSERVATIONS

- ◈ Signs of settlement and shrinkage cracks were noted on interior walls and ceilings. Repairs should be made as necessary.
- ☒ There is substantial movement of the front wall at the front left room on the second floor. There is a large, uneven gap between the wall and ceiling. ***There is the potential for there to be concealed damage. Further investigation and repairs are necessary by a licensed contractor.*** (Photo)
- ☒ The plaster shows evidence of bulging at the ceiling of the front left room on the second floor. Repairs are necessary for improved safety. (Photo)
- ☑ The ceiling at the entry hall/room off the kitchen shows evidence of staining. The cause of this condition appears to be prior roof leaks and/or ice damming. These conditions are in need of improvement. (Photo)
- ☑ The ceiling under various radiators shows evidence of staining. The cause of this condition appears to be leaky radiator valve stems. Repairs to the radiators and repairs to the floor and ceilings are necessary. (Photo)
- ◈ The floor in various locations has a noticeable squeak.
- ☑ The flooring is damaged at various radiators. Repairs are necessary. (Photo)
- ☑ Doors should be trimmed or adjusted as necessary to work properly. (Photo)
- ◈ The windows are Harvey vinyl replacement windows.
- ☑ The fireplace damper could not be opened at the time of the inspection. Further investigation and repairs are necessary by a mason or certified chimney sweep. (Photo)
- ☒ The fireplace chimney should be cleaned and inspected prior to operation.
- ☒ The openings in the basement stairway railing are large enough to allow a child to fall through. It is recommended that this condition be altered for improved safety. (Photo)
- ☒ Damaged treads at the cellar stairs should be repaired for improved safety. (Photo)
- ◈ The basement stairway is relatively steep. It may not be practical to change this condition. Extreme care should be taken when using this stairway. ***Carelessness could lead to an accident.*** (Photo)

☒ The height of the stairway railing may not be sufficient to prevent a person from toppling over the railing. It is recommended that this condition be altered for improved safety. (Photo)

☒ For improved safety, it is recommended that a handrail be provided for the attic stairway. (Photo)

### Kitchen

- The kitchen sink shows evidence of wear and tear.
- There is evidence of a prior leak below the kitchen sink. This area should be monitored.

☑ The kitchen faucet is leaky. The faucet is in need of replacement. A licensed plumber should be engaged for repairs.

- The kitchen cabinets show evidence of wear and tear.
- The kitchen countertop shows evidence of wear and tear.

### Bathroom(s)

- The basins show evidence of wear and tear.
- The cabinets show evidence of wear and tear.
- The tub has been removed. There is no stall shower.
- The first floor bathroom is equipped with a bathroom exhaust fan.

☑ An exhaust fan that discharges to the building exterior is recommended for the second floor bathroom.

☒ There is carpeting on the floor in the second floor bathroom. These conditions are considered unsanitary. These conditions conceal moisture and lead to wood damage. It is recommended the carpeting be replaced for improved safety. (Photo)

### Laundry

- There are no laundry facilities.

### Other Components

- The smoke detectors and carbon monoxide detectors are not inspected as part of this inspection. It is recommended that the system be further evaluated by the fire department.
- The alarm system was not inspected as part of this inspection. It is recommended that you contact the company that installed the system for evaluation and instructions on use and maintenance.

### Environmental Issues

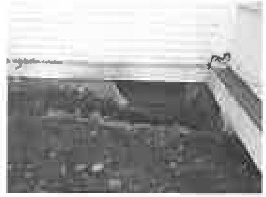
- Radon gas is a naturally occurring gas that is invisible, odorless and tasteless. A danger exists when the gas percolates through the ground and enters a tightly enclosed structure (such as a ***building***). Long term exposure to high levels of radon gas can cause cancer. ***The Environmental Protection Agency (E.P.A.) states that a radon reading of more than 4.0 picocuries per liter of air represents a health hazard.*** A radon evaluation is beyond the scope of this inspection (unless specifically requested). For more information, consult the Environmental Protection Agency (E.P.A.) for further guidance and a list of testing labs in your area.
- Carbon monoxide is a colorless, odorless gas that can result from a faulty fuel burning furnace, range, water heater, space heater or wood stove. Proper maintenance of these appliances is the best way to reduce the risk of carbon monoxide poisoning. For more information, consult the Consumer Product Safety Commission at 1-800-638-2772 (C.P.S.C.) for further guidance. It would be wise to consider the installation of carbon monoxide detectors within the ***building***.
- Lead based paint was in use until approximately 1978. According to the Federal Department of Housing and Urban Development, a lead hazard can be present in a building of this age. An evaluation for lead in paint is beyond the scope of this inspection. ***Galeota Associates, Inc.,*** provides lead paint testing services with a state of the art x-ray fluorescence analyzer. To schedule an inspection to test for the presence of lead paint, or to discuss lead paint inspection procedures contact ***Galeota Associates, Inc.***, at (978) 597-1300. You may also wish to contact the Childhood Lead Poisoning Prevention Program @ (800) 532-9571 for more information.

Cost estimates from licensed contractors are recommended for all repairs and replacement of items suggested in this section.

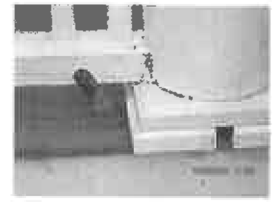
This inspection has been made by applying the best skills possible and represents a true and honest report. The opinions of the inspector are not based on manufacturer's claims and minimum standards, Building Codes, local ordinances of the adequacy of design but are the opinions of the inspectors. This is a limited inspection based on a reasonable amount of inspection time. Although we stand behind the accuracy of all the statements and observations made in this report, we do not provide a general warranty or guarantee of the conditions of the building. *Galeota Associates, Inc.* is not responsible or liable for problems which cannot reasonably be discovered by a limited inspection. I am hopeful that my services have been informational and helpful to you.

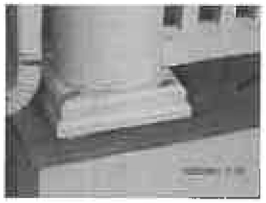

IMG_0786


IMG_0787

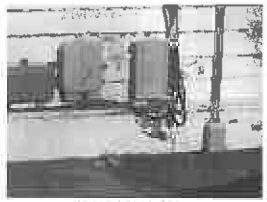

IMG_0788

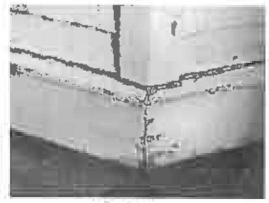

IMG_0789

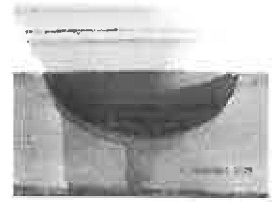

IMG_0790


IMG_0791

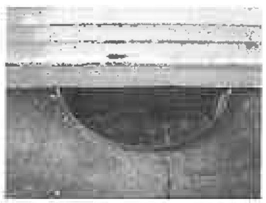

IMG_0792

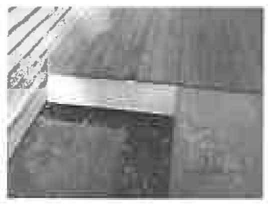

IMG_0793

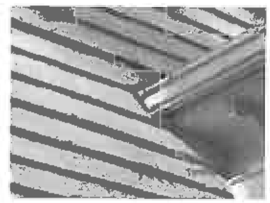

IMG_0794

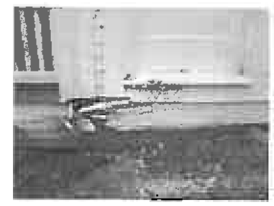

IMG_0795


IMG_0796


IMG_0797

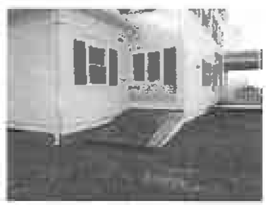

IMG_0798

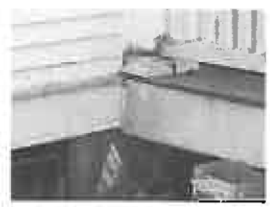

IMG_0799

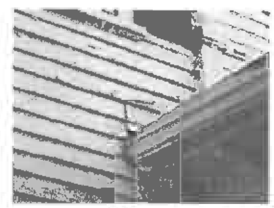

IMG_0800

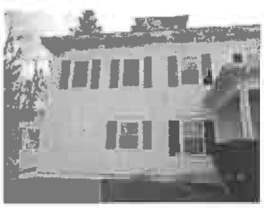

IMG_0801


IMG_0802


IMG_0803

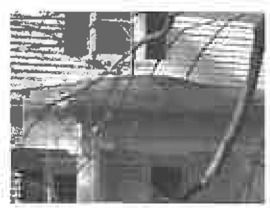

IMG_0804


IMG_0805

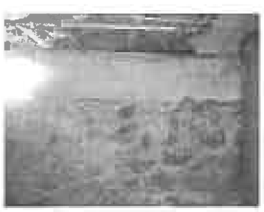

IMG_0806


IMG_0807


IMG_0808


IMG_0809


IMG_0810

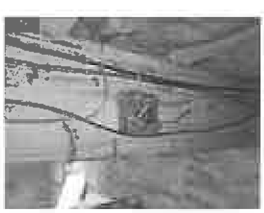

IMG_0811

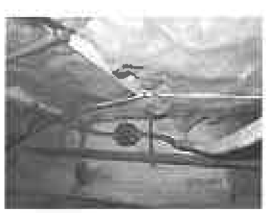

IMG_0812

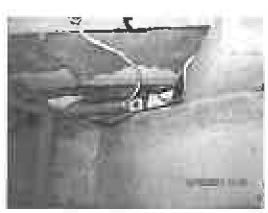

IMG_0813


IMG_0814

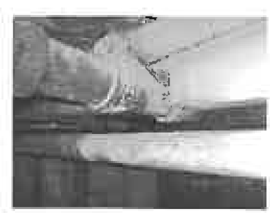

IMG_0815

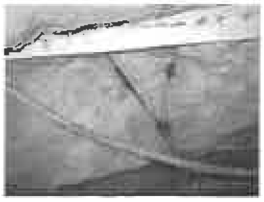

IMG_0816

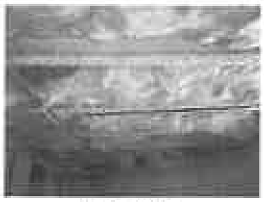

IMG_0817


IMG_0818


IMG_0819


IMG_0820

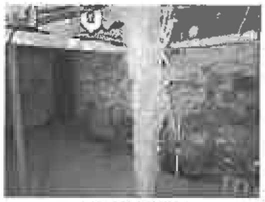

IMG_0821

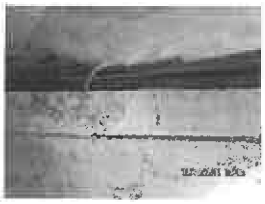

IMG_0822

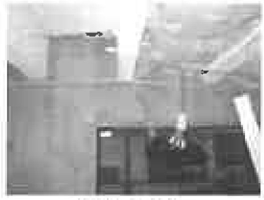

IMG_0823

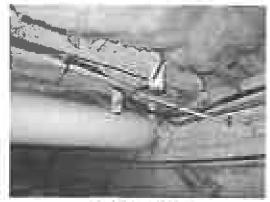

IMG_0824

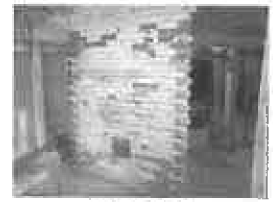

IMG_0825


IMG_0826

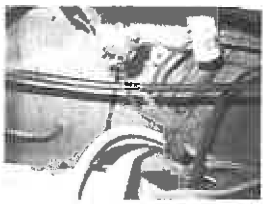

IMG_0828


IMG_0829

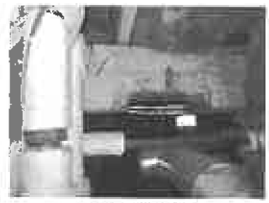

IMG_0830

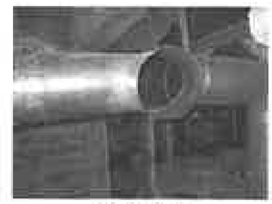

IMG_0831


IMG_0832


IMG_0833


IMG_0834


IMG_0835


IMG_0836


IMG_0837


IMG_0839


IMG_0841


IMG_0842

IMG_0843

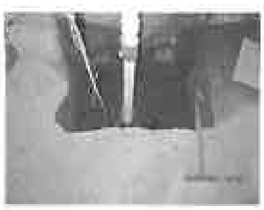

IMG_0845

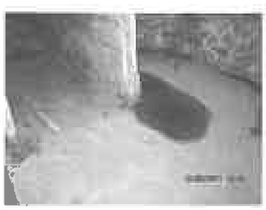

IMG_0846


IMG_0847


IMG_0848

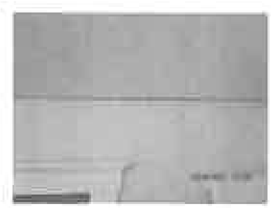

IMG_0849


IMG_0850

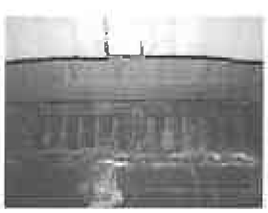

IMG_0851

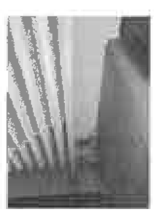

IMG_0852


IMG_0853


IMG_0854


IMG_0855

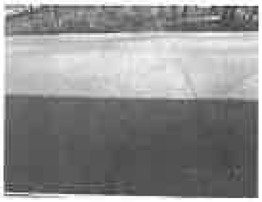

IMG_0856


IMG_0857


IMG_0858


IMG_0859

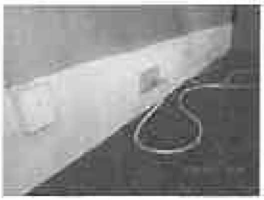

IMG_0860


IMG_0861


IMG_0862

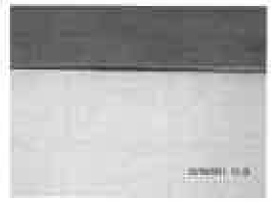

IMG_0863


IMG_0864

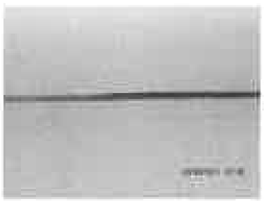

IMG_0865


IMG_0866

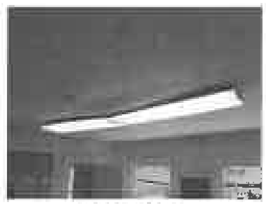

IMG_0867


IMG_0868


IMG_0869

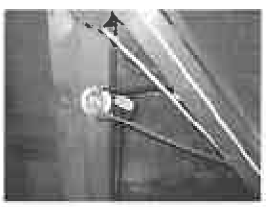

IMG_0870

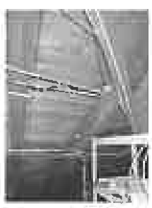

IMG_0871


IMG_0872

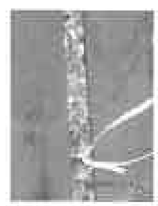

IMG_0873


IMG_0874


IMG_0875

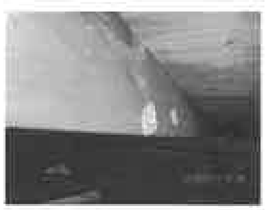

IMG_0876


IMG_0877


IMG_0878


IMG_0879


IMG_0880

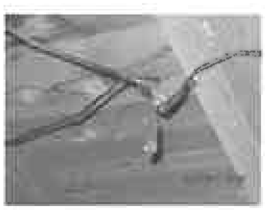

IMG_0881


IMG_0882

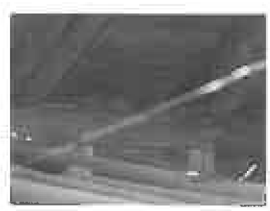

IMG_0883

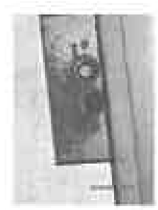

IMG_0884

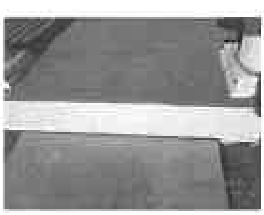

IMG_0885


IMG_0886


IMG_0887


IMG_0888


IMG_0889


IMG_0890