

Town of Freedom

Town Office Feasibility Study

Masonic Temple & Town Office

29 & 33 Old Portland Road

Freedom, New Hampshire

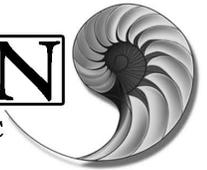


Prepared by

BERGERON
TECHNICAL SERVICES LLC



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Town of Freedom Town Office Feasibility Study

Scoping and Background

The following report, information and the referenced supplemental reports, plans and attachments are included as part of the requested Feasibility Report of the Town of Freedom Town Office Building and Masonic Temple. The purpose and intent of this project was to provide information on the existing buildings and options for the renovation and re-use of one or both buildings. In considering options we looked towards optimizing the use of space, accessibility for all patrons and an overall more efficient, modern Town Office.

To that end and with direction from the Freedom Town Office Advisory Committee, Bergeron Technical Services has performed building inspections, photo documentation, and measurements of the two subject buildings. With the information that was collected on site we were able to develop this report, building and fire code analyses, existing conditions floor plans and elevations, and three schematic design options. This information can be used to inform of the feasibility for the renovation and continued use of the Town Office building and the potential future use of the Masonic Temple as an annex for the Town Offices.

For a reference to the specific directives issued to Bergeron Technical Services for this study a copy of the Freedom Advisory Committee's letter to Bergeron Technical Services outlining the description of work for the Town Office Feasibility Study, dated February 2, 2021, is included with this report.

Existing Buildings - Condition and Code Compliance

Town Office Building

Structural

Foundation

The foundation of the original schoolhouse section of the Town Office building consists of granite slabs around the building's perimeter. The slabs were placed standing on edge, with the long axis horizontal and parallel to the wall that is being supported. The foundation is only one slab in depth, with the slabs placed atop random supportive materials. At the interior of the foundation there is an array of stacked granite and stone piers which support the main beams of the first-floor system. A shallow crawl area under the main floor of the building can be accessed from within the existing furnace pit located in the rear addition of the building. The foundation of the building's rear addition is of cast-in-place concrete frost walls with slab-on-grade cast-in-place concrete floors.

The condition of the foundation is fair. The stacked granite slabs around the perimeter have many areas where large gaps have developed between the slabs where mortar has deteriorated, and seasonal movement has allowed the stacked granite and stone piers to move. This movement is normal on shallow

foundations, heaving in some areas and settling in others. In some cases, settling is such that the foundation is no longer properly supporting the floor beams. The exposed earth floor in the crawl space appears to remain dry, as no signs of regular excessive moisture was noted on the ground or in the exposed wood members of the first-floor framing. The crawl space is quite shallow in some locations with some areas having only one to two inches of airspace between the exposed ground and floor framing, while other areas have close to two feet of height between the soil and the wood framing above.

Frame

Areas where the building framing were visible provided insight into how the Town Office building was originally constructed. These areas include the crawl space and the attic. The crawl space provided a view of the first-floor framing. The first floor has three main 8x10 wood beams running the short dimension of the building (north to south), with 2x10 wood floor joists running the long dimension of the building (east to west). The floor joists are spaced approximately 18 inches on-center and half - mortised into the 8 x 10 structural beams. Our time in the attic provided a view of the wall framing above the second-floor ceiling. Exterior walls are framed of 2x4 wood studs at approximately 2 feet center to center spacing.

The original floor-ceiling assembly that is enclosed above the existing acoustic tile drop ceiling of the first floor was found to have the original finish ceiling materials still in place, preventing observation of the encapsulated floor/ceiling framing. At the rear addition, there are finish materials on the walls and ceiling/roof framing, prohibiting viewing or inspection of the framing materials in these areas.

Roof

The roof framing and configuration of the original schoolhouse portion of the Town Office building was inspected from the attic space, which is accessed from a hatch in the second-floor ceiling above the stair landing. The roof framing is of full sawn 2x6 rafters spaced approximately two feet on-center. The roof sheathing applied to the rafters is of $\frac{3}{4}$ inch native lumber boards, possibly hemlock, of varying widths, between four inches to 8 inches. It appears that more recently the wood boards have been overlaid with (modern) OSB sheathing, likely as an improved base for the installation of the existing roof shingles.

Most of the original structure's roof rafters have 2x6 collar ties, located approximately five feet, ten inches below the roof ridge. Collar ties prevent the gable roof configuration from splaying outward, with the ties on this building being suspended with a 1x6 board from the center of the ridge. Additionally, there are two vertical tension members (also wood boards) connecting the collar ties and rafters to the ceiling joists below. These tension members are common in older buildings, extending down to the upper level ceiling joists, somewhat hanging the upper floor's ceiling from the roof. There are approximately six roof rafters, located at the west gable end of the building that do not have the suspension boards between the collar ties and ceiling joists, this area being above the existing lobby, stairs and tax collector office below. The roof appears in generally good condition, through signs of charring from a previous fire were noted. Many original rafters had been cut and replaced with newer rafters and areas of the roof sheathing have been replaced.

Finishes

Exterior

The building is currently sided with vinyl clapboard siding, which has been applied over existing painted wood clapboards. The front gable dormer, facing the road is sided with painted wood shingles. The exterior trim throughout the structures is painted wood. All roofs, including the vestibule and rear addition roofs are finished with asphalt shingles.

Interior

The interior finishes throughout the building are a mix of older, possibly original finishes, such as the painted wood beadboard wall finish throughout the second story, and contemporary finishes such as the gypsum wall board finish throughout most of the first story. Flooring is generally finished with commercial grade, low nap carpeting. The interior stairs are finished with rubber treads. The ceiling finishes vary throughout, the first-floor ceilings are finished with acoustic tile drop ceiling throughout the areas of the original schoolhouse structure., The rear addition and second floor ceilings have gypsum finishes. A small section of the ceiling within the Tax Collector's office on the second floor is finished with interlocking ceiling tiles, sometimes referred to as Celotex tiles. Finishes range if condition from good to poor.

Windows and Doors

With the exception of the windows installed within the main entry vestibule addition on the roadside of the building, the windows throughout the building are single pane, true divided lite, wood framed windows. Due to age, condition, and lack of energy conservation the windows throughout the building should be replaced with modern energy efficient windows. The building's exterior doors on the first floor are more modern insulated exterior doors, while the exterior door leading to the fire escape on the second floor is an uninsulated solid-core wood door. The doors throughout the building's interior vary in age, style, and condition.

Hazardous Materials

The building was surveyed and tested for hazardous materials by Desmarais Environmental of Barrington, NH. Materials tested for were lead paint, asbestos, and polychlorinated biphenyls (PCBs). All samples tested for asbestos and PCBs were reported as no content or below reportable limits. Lead was detected and reported to be contained in the windows, exterior siding, trim and the horizontal wainscotting on the second floor of the building. Any work that affects these areas and materials will need to be done in a lead-safe manner and any materials disposed of will need to be disposed of as hazardous lead-containing materials in accordance with local and federal laws. For more information on the survey, reports and these hazardous materials, please see the "Asbestos Pb & PCB Survey Report for 33 Old Portland Road, Freedom, NH", dated October 2021 by Desmarais Environmental and included as an attachment to this report.

Building Systems

Mechanical

The building's heat is provided by an oil-fired furnace located within the rear addition on the north side of the building. The furnace is a Thermo-Pride brand and has an input rating of 185,000 Btu. The furnace is supplied oil from an underground oil tank located outside the building to the north of the rear addition.

The furnace heats the building by forced hot air which is distributed throughout the building via metallic and flexible ducts, some of which is exposed and some of which is concealed in areas such as the crawl space and above the drop ceilings. The building is not equipped with central air conditioning and is cooled in the warmer months with in-window A/C units. The building is not provided with mechanical ventilation.

Hot water is provided to the restroom lavatory by a somewhat new Bradford White brand 40-gallon electric water heater which is located in the storage room adjacent to the restroom.

Electrical

The following deficiencies with the building's electrical system were noted:

- The Town Office building electrical system begins with an overhead electrical service to an exterior meter located at the southwest corner of the building, near the main entrance. From the meter, service conductors run to the 100-amp, 20 breaker-space main distribution electrical panel, located within a cabinet at the southwest corner of the lobby, just inside the main entrance to the building. The capacity of the electrical service is likely too small for the existing building both from the perspective of available breaker space and available system ampacity. All available breaker spaces are currently in use.
- There is an insufficient number of outlet/receptacles throughout the building so to allow for powering all equipment and appliances power strips, extension cords and multi adapters have been implemented.
- Branch circuits throughout the building are generally run as nonmetallic (Romex) type cable. In many areas the installations have not been done in compliance with the NEC as the cables are not properly supported and fastened to the structure. Areas where unsupported or poorly supported cabling was noted include above drop ceilings, within the crawl space and in the attic.
- Improperly terminated cables, improperly terminated light fixtures, uncovered and unsupported electric junction boxes were also noted throughout the building during our inspection.

Plumbing

The building is provided domestic water from the Freedom Village water system with the service and water meter located adjacent to the restroom in the main lobby on the first floor of the building. There is currently one restroom in the building, located off the main lobby at the southwest corner of the rear addition. Also noted during the inspection was an abandoned lavatory (sink) in the storage space on the second story.

The Town Office building is served by an onsite subsurface sewage disposal system (septic system). The septic system was inspected by Seth Turner, a State of NH License Septic Evaluator. No major concerns or deficiencies were noted in the report, however, it is important to note that the day before the inspection the septic tank had been pumped, which limits the evaluator's ability to determine the condition of the system as a whole, as they cannot view how well the system is percolating, or how efficiently the system leaches. The inspection also noted that there are trees and shrubs growing on and near the leach field. This vegetation should be removed and a root killing agent applied as the roots can enter and clog the leach field piping, prohibiting the leach field from properly receiving and treating effluent and causing the system to back up and fail. A copy of the Turner septic report is included as part of this report.

Energy Conservation and Efficiency

During our interviews with staff members that regularly work in the building, an inability to reliably regulate temperatures within the building was a common comment. Given the age of the structure and the presence of older, possibly original wall finishes in many areas of the building, the likelihood of significant or properly performing insulation having been installed in these areas is low. Insulation was observed in a few areas that do not have interior finishes. Areas where insulation was noted include spray foam insulation, approximately 6 inches in thickness within the joist bays of the first floor, exposed to the crawlspace. Blown-in cellulose insulation was observed in the ceiling joist bays above the second story ceiling, exposed to the attic area. Insulation within the exterior walls was not noted or viewable, nor was insulation noted or viewable within any walls or rafter bays within the rear addition. The windows throughout the building are quite old and were not constructed with energy conservation in mind. The windows are wood framed, true divided lite, single pane windows, and are quite large and account for a large portion of the exterior wall areas, specifically on the south eave wall. These windows provide poor insulation value with limited ability to keep the heat within the building in the colder months and contribute to heating the building in the warmer months through solar heat gain. Exterior storm windows have been added in what is assumed to be an attempt to provide some thermal value to the windows.

Fire and Life Safety

Means of Egress

The existing Town Office building has three exits on the first-floor level and one exit, and one exit access on the second story. The main entrance/exit is the only legitimate exit from the building. The exit door from the office administrator's office on the first floor is located within a room that is subject to locking and the door is not immediately useable. The stairs leading to grade at the exterior of this door are also rotted and have no exterior landing or legitimate handrails. The third exit door at the first-floor level is from the storage room at the north side of the rear addition. This exit door is not a legitimate exit from any other room or location within the building as means of egress are not permitted to pass through mechanical or storage rooms.

The exit from the second story is located on the easterly gable wall within the Selectmen's office, a wood door leading to an exterior steel fire escape stair. When we first went to open this door it was quite difficult to open from the interior and given the age and condition of the fire escape, we do not have confidence that the fire escape would be structurally sound enough to safely accommodate multiple people exiting the building at once. Additionally, exterior exit stairs are required to be (fire) protected from the interior of the building, and there are multiple unprotected window openings immediately adjacent to the fire escape stair. Should a window in the area of the fire escape become compromised, the fire escape stair would likely become unusable. The exit access from the second floor is by traveling down the existing interior stair, through the lobby and out the main entrance/exit of the building. This is recognized by the building and fire codes as an exit access and not an exit as the stairs are not fully enclosed and separated from the remainder of the building at both building levels and travel through the first story is required prior to reaching the exit itself. It was also noted that there is a metal duct serving the building's heating system installed within the stair's traveled way, along the interior wall. This duct has been wrapped in duct insulation, perhaps to prevent occupants from direct contact with the metal of the duct, however the duct projects into the required stair egress width, which is not permitted by the Life Safety Code.

Protection

The building is equipped throughout with a fire detection and alarm system. The fire alarm system is a relatively new addition to the building as it has been installed since our previous work on this building in 2010. Fire extinguishers are also installed in the building.

The building is not protected by an automatic fire suppression sprinkler system and is not required to be in accordance with NFPA 101 Life Safety Code.

Accessibility

The existing Town Office has limited accessibility for those with disabilities. The upper level of the building is not located on an accessible route as it can only be accessed by the existing set of interior stairs, and so citizens needing to access services from the departments located on the second story need to be assisted on the first floor of the building. The lower level of the building has an accessible entrance with reasonably accessible features. Beginning on the exterior the building entrance is served by a ramp and a level landing at the exterior of the entrance door. The entrance vestibule does not fully comply with the requirements for a fully accessible vestibule. Landings outside lockable doors are required to provide a clear turning space (a circular floor space having a diameter of 60 inches, or five feet), which the existing vestibule does, however in addition to the turning space requirement, two doors in a series are required to provide a minimum of 48 inches of space between the swing of such doors. The existing vestibule configuration provides a space between the swing of the doors of just over two feet.

With the exception of the main entrance doors and the restroom door, the doors throughout the first story are equipped with knob-style door hardware. Doors that are on an accessible route within a building are required to be equipped with hardware that is "close-fist operable". Please note that employee only areas are required to be provided with accessible features as well as areas that are open and useable by the public. Examples of close-fist operable hardware include lever hardware, pull loop hardware, and push paddle hardware.

The restroom located on the first floor meets most accessibility requirements, though it is missing the required 18" vertical grab bar on the sidewall of the water closet (toilet).

Security

The Town Office building does not currently have an active security system of any type. Additionally, beyond the use of doors to provide barriers and privacy between public and staff spaces there are no additional passive safety measures in place. In the event of a person or persons entering the building with the intent to remove or damage Town property or records or attempt to harm a Town employee, there are few deterrents currently in place.

Freedom Masonic Lodge

The Freedom Masonic Lodge is located across the parking area, to the northwest of the Town Office Building. The Masonic Lodge is reported to have been originally constructed as a single-story church, with a choir loft located at the south or roadside end of the building. The second story of this building, which was developed by making substantial modifications to the original single-story church, is currently occupied by the Carroll Lodge #57 Chapter of the Freemasons. The Town of Freedom has recently purchased this building, with the Freemason organization maintaining a lease to occupy the second story of the building and allowing the Town of Freedom the use of the first-floor area of the structure.

The foundation of the Masonic Temple building consists of shallow split granite around the building's perimeter, with 8x8 wood posts and dry-stacked stone supporting the building's floor system at various locations throughout the building's interior.

The first-floor system was inspected from within the crawl space under the building, accessed from an opening through the foundation wall of the north gable end. The first-floor system is constructed of wood members. There are three square milled beams that run the short axis of the building, east to west, spaced at equal intervals. Three-quarter (log) timber joists spaced approximately 3-feet on center span between the beams with the ends of the log joists bearing into mortises that were notched into the tops of the beams. There are multiple locations where original floor system members have been replaced or bolstered using various materials, mostly square milled timbers as either posts or intermediate beams. The floor is sheathed with 1" wood boards of various widths. The condition of the floor system appears sound, with adequate space between the soil and the underside of the wood members. Signs of powder post beetle presence was noted both in the wood members with frass located on the crawl space floor.

Above the first floor the main structure is comprised of heavy-timber bents, six bents in total, spaced along the long axis of the building, including one at each gable end. The interior bents, with the exception of the southernmost, had originally been constructed with a collar tie located approximately 3 feet up the bent's rafters from the eave wall top beam. Evidence of the collar ties, which have been removed, can be seen from within the areas behind the knee walls of the masonic temple. The collar ties were apparently removed to provide sufficient head room for the second story, which was added at some point in the building's history and was not original to the construction on the Masonic Building. Above the ceiling of the second story, in the small attic area, additional alterations to the original bent construction were observed in the removal of the lower sections of the original kingposts which ran as tension members from the roof ridge to support the clear-span collar ties. The sections of the kingposts above the second story ceiling remain, having been cut at the ceiling line. Each post is currently sandwiched between and fastened to two 2x6 ceiling joists on the north and south sides of the posts.

As described earlier, the building was originally designed as a single-story structure with a loft or mezzanine over the entry hall. The second story, where the Masonic Temple room is located, was developed as a later addition or renovation to the building. To create the second story, beams were added at the new upper floor level, running at each of the existing bent locations across the short axis of the building. The underside of these beams can be seen in the community hall on the first story. These beams were installed to support 2 x10 floor/ceiling joists, installed on an approximate 21 inches center to center spacing, running north-south or parallel to the eaves, bearing atop (or over) the beams. Additionally, 1-1/4" steel tension rods were installed at each of the beams, likely in an attempt to offset the splaying of the eave walls/rafters, which had been the purpose of the original collar ties that were removed to

facilitate the installation of the upper, Masonic Lodge level floor. Included as an attachment to this report is a sketch showing the general existing condition of the Masonic Building's structural members.

In addition to the information in this report, please refer to the letter from Bergeron Technical Services addressed to the Freedom Town Office Advisory Committee referencing the Masonic Temple, dated May 12, 2022.

An additional and important item to note regarding the Masonic Temple is the location of the Masonic Temple on the second story of the building. The total area of the main Temple room is 1,253 sq. ft., with a net floor area of the space (actual area where people can occupy) of approximately 1,000 sq. ft. With a code determined occupant load factor of one occupant per 15 square feet the calculated occupant load of the Masonic Temple space is 66 occupants. As the Masonic Lodge is identified by the codes as a space used for gathering of people for civic, social or religious functions and has a calculated occupant load of fifty or more occupants, the Masonic Lodge (upper floor) meets the definition of an assembly use or occupancy (A-2 Occupancy per the International Building Code, and Existing Assembly Occupancy per NFPA 101 Life Safety Code). Both the State Building Code and State Fire Code provide restrictions on which story or level of buildings where assembly occupancies are can be located based on the construction type of the building and whether the building is protected throughout with an automatic fire suppression sprinkler system. As the Masonic Temple is constructed of combustible materials (wood) and the main components of the structure are not protected within fire-resistance rated construction, the construction type of the building is Type V(B) according to the International Building Code and Type V(000) according to NFPA 101 Life Safety Code. Both Codes prohibit non-sprinkler protected assembly occupancies on the second story of buildings of this construction type. As it currently exists and the manner in which this space is used, the second story of the Masonic Temple building is required by both the State of NH Building Code and Fire Code to be protected with an automatic fire suppression sprinkler system, along with the means of egress from the second story. A conversation with the representatives of the Masonic Temple, the Freedom Fire Chief and Building Code Officer may identify a solution to continue the use of the second story as it has historically been used without the need to sprinkler protect the building. One code approved option would be to limit the number of occupants of the Masonic Lodge floor to 49, thus becoming a Group B or Business occupancy, which therefore could remove the requirement for sprinkler protection.

Like the Town Office, this building was also surveyed and tested for hazardous materials by Desmarais Environmental of Barrington, NH. Materials tested for were lead paint, asbestos, and polychlorinated biphenyls (PCBs). All samples tested for PCBs were reported as no content or below reportable limits. The floor tiles located inside the main entry vestibule on the first floor contain asbestos fibers (the tiles contain asbestos, however the adhesive or mastic used to adhere the tiles to the subfloor did not test positive for asbestos). Lead was detected and reported to be contained in the windows, exterior siding, trim, and some interior walls of the building. Any work that affects these areas and materials will need to be done in a lead-safe manner and any materials disposed of will need to be disposed of as hazardous lead-containing materials in accordance with local and federal laws. For more information on the survey, reports and these hazardous materials, please see the "Asbestos Pb & PCB Survey Report for 29 Old Portland Road, Freedom, NH", dated October 2021 by Desmarais Environmental and included as an attachment to this report.

After Bergeron Technical Services inspected the building and noted the roof related structural deficiencies our recommendation is that the Town of Freedom postpone any plans that would renovate the first floor of this building into a use that would include regular occupancy by staff or the public until such time as the structural deficiencies are addressed and corrected. For this reason, the scope of utilizing the first floor of the Masonic building for Town Office uses has been reduced to considering this space in one schematic design for long-term storage only.

Feasibility Study Scoping and Background Information

- Freedom Town Office Advisory Committee Goals and Directives (see attached letter from the Town Office Advisory Committee Chair, dated February 2, 2021).
 - Preserve the first and Second Floor Lobbies
 - Preserve the staircase (existing interior)
 - Maintain the look of the exterior of the building
 - Find alternatives for using the second floor of the Town Office building for more than storage
- Freedom Town Office Advisory Committee Schematic Design Options (as determined at the May 4, 2022, meeting of the Town Office Advisory Committee)
 - Schematic Design Option 1: Maintain all existing offices, storage and uses within the Existing Town Office building, enhancing the safety, useability, and accessibility of the building without expanding the footprint or creating any new foundation systems.
 - Schematic Design Option 2: Maintain all existing offices and uses within the Existing Town Office Building and provide a single location for long-term storage of Town Office documents within the first-floor space of the Freedom Masonic Building.
 - Schematic Design Option 3: Maintain all existing offices, storage and uses within the Town Office Building, while providing the building with a new foundation having a full basement level and replacing the existing rear addition with a newly constructed two-story structure in the same footprint.
- Freedom Town Office Staff Input (see attached document outlining staff interview responses, prepared by Bergeron Technical Services, and dated 11 February 2022)
 - Staff Needs
 - More Space
 - Service Windows/Counters
 - Storage – Expanded, centralized storage and better environmental and security control for files and stored information
 - Staff Wants
 - Single Story Office Area
 - Pest Control
 - Separation of Staff and Public Areas (including separate staff restroom)
 - Staff Break Room
 - Staff Safety Concerns
 - Lack of legitimate emergency exits from both floor levels, specifically the exit through rear of Office Administrators office and the exterior fire escape from the second story
 - Public is easily able to access staff areas making staff and information vulnerable
 - Staff are unable to monitor the Town Office parking area to observe visitors accessing the building

- The upper floor where multiple staff offices are located is not accessible to disabled individuals unable to navigate stairs.
- Staff Interior Environment Notes
 - The existing building has poor indoor air quality
 - The interior environment is not controllable (temperature, humidity, draftiness, light)
- Other Staff Comments/Concerns with existing Town Office
 - Staff offices do not have sufficient sound attenuation and sensitive conversations between staff or staff and the public can be easily heard in other offices/areas
 - The departments on separate floors do not have easy access to each other, specifically Town Administrative Assistant.
 - Access to the site (specifically the steep driveway) is a concern among many staff members

General Design Notes

It is important to state clearly that the schematic plans presented as part of this study are just that, schematic, meaning they are programmatic and simplified, and do not provide specific details of construction for any of the presented designs. Further, these designs are meant to provide the Town of Freedom with a base from which to plan actual design development plans, should the Town choose to continue the use of the existing building or buildings as Town offices and renovate, rehabilitate or alter them for such purposes. These plans are presented such that they can easily be revised and altered during design development. It is also important to note that while certain rooms or areas are shown as being designated for a specific staff member or department, these notations are symbolic and suggestive to illustrate that space is provided for the required number of staff and departments within the proposed designs, though they are based on input from town staff and current use layouts of the Town Office building.

Throughout each of the three schematic designs presented there are common design features. These features are presented in all three schematic designs due to various reasons such as design requirements, building code and/or fire code compliance, Town Office Advisory Committee directive, and/or structural or site constraints. Common design features include:

- Exit and exit access. As directed by the Town Advisory Committee the existing interior stairway has been left intact in each design. In accordance with Section 1203.6 of the International Existing Building Code and Section 43.10.4.7 of NFPA 101 Life Safety Code existing stairways in historic buildings are permitted to be unenclosed, but any doors shall be tight-fitting to prevent the spread of smoke. These code sections permit the existing stair to remain as is and intact without requiring the building to be sprinkler protected, provided doors and openings around the unenclosed stair are designed to prohibit smoke movement.
- The new interior exit stair exists in the same location and configuration in each of the three design options due to many factors including locations of main carrying beams in floors, remoteness from existing stair, and location of existing exit door. A new, improved exterior exit stair or fire escape stair has not been proposed, solely due to the proximity of the Town Office Building to the property line.
- Public spaces on the west end of the building. The areas of the building open to the public remain on the west end of the building as currently configured as this is the side of the building adjacent

to the parking area and already provides convenient circulation to the public between the first story and second story by way of the existing interior stair.

- Replacement Windows. The three schematic designs leave intact most window locations on the south, east and west building elevations. It is the intent for all three of these designs, with the exception of the existing windows located in the main entry vestibule addition, for all existing windows to be replaced with modern, insulated, multipaned, energy efficient windows.

Building Improvements throughout Schematic Designs

The following improvements to the Town Office Building are intended to be applied to each of the schematic designs presented, though due to the schematic nature of the plans these are not specifically depicted or noted.

- Structural
 - In Schematics 1 & 2 Improvement or replacement of the stacked granite foundation and wood/stone piers.
 - In schematic 3 total replacement of the foundation to install a full-height basement in the entire building footprint. This would require lifting the building, excavating, possibly require blasting if ledge if present, and installing a new full-height, reinforced, cast-in-place concrete foundation.
 - Improvements to the first and second floor system main carrying members to level floors, adding members or providing more substantial vertical structural loading down to grade.
- Finishes
 - Repair of vinyl siding where missing or damaged
 - Removal of finishes on the interior including wall, ceiling, and finish flooring.
 - Retain trim, and interior stair finishes.
 - Lead positive finishes to be remediated using lead-safe practices
 - Provide storage areas with fire-rated construction and finishes to better protect Town files and documents.
 - The asbestos containing tiles at the Masonic Temple can be abated and replaced, encapsulated, or maintained to reduce the risk of asbestos fibers becoming airborne (regular waxing of the floor).
- Building Systems
 - Completely replace the electrical system including upgrading and enlarging service equipment in the Town Office Building.
 - Install new, code compliant electrical system throughout the building including efficient LED lighting and increase the number of electrical receptacles throughout the building.
 - Replace existing water service equipment entering the building, locate to a more secure location.
 - Maintenance to the existing septic system, including removal of trees and shrubs on or within 10 feet of the leach field, and application of root-kill agent.
 - Remove the existing oil-fired hot air furnace and install a new efficient HVAC system capable of providing, heating, cooling, ventilation, and humidity control. (This would apply to both buildings in schematic design 2).

- Remove the existing 40-gallon water heater and replace with point-of-use, tankless water heater(s) that heat water on demand. These units do not store hot water; therefore they are not using energy unless hot water is being called for.
- Energy Conservation and Efficiency
 - Many of the building systems improvements will provide additional benefits to the building's energy efficiency and conservation
 - Installation of new spray foam insulation in exterior walls to provide insulation and control air leakage, leading to a more energy efficient building. (Applies to the first level of the Masonic Temple in schematic design 2, including walls, floors and the second floor/ceiling assembly).
 - Installation of air barriers and insulation in the attic above the Town Office original structure and in the rafter bays of the rear addition (schematics 1 & 2)
 - Replacement of all existing single-pane windows with new energy efficient windows
- Fire and Life Safety
 - Reconfiguration of the existing fire alarm system, including upgrading devices and equipment as necessary and adding devices and equipment where necessary. Installation of a new fire alarm system to the Masonic Temple in schematic design 2.
 - Construction of fire barrier walls (1-hour fire-resistance rated) at new exit stair enclosures in the Town Office schematics.
 - Renovate and construct walls and ceiling of proposed storage area in the Masonic Temple building to provide fire separation from the remainder of the building.
- Accessibility
 - Removing changes in floor level within the Town Office building to allow to access to all public and employee areas (excepting storage/mechanical area at the northeast corner of the rear addition in schematics 1 & 2) and reducing the need for space consuming ramps.
 - Installation of a platform lift or LULA (Limited Use/Limited Application) elevator in the Town Office building to provide an accessible route to the second story (and basement level in schematic 3).
 - Increasing access throughout the buildings through removal of barriers including the use of accessible door hardware (lever action, push/pull loop hardware, or panic/fire hardware), provision of accessible service windows, appropriate maneuvering clearances at doors, doorways and landings, accessible clear floor spaces at features and fixtures and clear turning spaces.
- Security
 - Expansion of the existing fire alarm system throughout the building to include security features, such as door alarms, window contacts and motion detection, and possibly video surveillance in public areas, entries, and/or the parking lot.
 - All proposed service windows to be constructed of bullet-resistant glass installed in bullet resistant wall construction.
 - Access controlled doors between public and staff areas.
 - Within the wall cavities below and 2 feet to each side of the service windows install appropriate materials to provide a secure physical barrier around the service window.

Schematic Plans Option One Narrative

The schematic plan for Option One keeps the existing staff and services in the existing Town Office building without providing additional area, either in the Masonic Building or through expansion of the Town Office building. This schematic design works to provide solutions to the major deficiencies and concerns of the existing Town Office in the most reduced scope.

Code Information: In this schematic, the re-use of the existing Town Office without adding onto the structure defines this project as a “Alteration-Level 3”, within the International Existing Building Code (State of NH Building Code), and as a “Reconstruction” within NFPA 101 Life Safety Code (State of NH Fire Code). While changes to the configuration of the building are proposed, the occupancy of the building remains as a Group B occupancy within the State Building Code and an Existing Business Occupancy within the State Fire Code.

As prescribed by the Advisory Committee directive, the lobbies, existing interior stair, and exterior façade of the building remain intact with minimal changes. The uses on the second story of the building remain as is, though the layout of the floor is adjusted to provide safety upgrades and provide greater functionality to staff on this building level.

Included in this design is a legitimate interior exit stair, providing a reliable, safe, interior exit from the second story and a legitimate second exit from the first floor, accessed through a common hallway, instead of an office that may be subject to locking. This stair is remote from the existing interior lobby stair and provides an additional access between the offices located on the first story and second story. The addition of this enclosed stair alleviates a life safety concern for a legitimate exit and secondary means of egress from the second floor of the building.

In order to allow the offices to remain on the second story and the public to access them without barriers this design incorporates a floor-to-floor platform lift to provide an accessible route to the second story, allowing all members of the public to be accommodated to reach the services available on the second floor or attend a Selectmen’s meeting independently. The specifications for the lift shaft were designed using a Savaria Brand Model V-1504, vertical platform lift, Type 1L 36” x 48” cab, which has the capability to be installed within the existing building and meet the floor-to-floor travel distance. This platform lift requires no machine room (self-contained within the lift shaft) and requires single-phase power. In accordance with the State of NH Building Code platform lifts are permitted to be installed as part of an accessible route in existing buildings with a vertical travel distance up to 14 feet. Platform lifts differ from elevators in that their use is specific to handicap individuals and is not meant to be general conveyance to anyone visiting a building. Platform lifts convey individuals vertically using a moveable platform, not a fully enclosed cab, like an elevator.

For security and safety of staff and information three transaction/service windows have been integrated into the design, one located at the Front Desk/Admin office on the main floor, one at the Town Clerk’s Office on the main floor and one at the Tax Collector’s Office on the second floor. Additionally, the number of doors connecting the public spaces on each floor from the staff spaces have been reduced to one each, to provide additional security.

On the first story, the staff offices have been separated, eliminating direct access from other offices, and adding a hallway which leads to the new exit stair enclosure and the existing exit to the rear of the

building. Constructing sound attenuated interior walls between offices will help to reduce noise travel and provide privacy to staff and the public when discussing sensitive matters. The Town Clerk's office is also reduced in overall size while having direct access to the storage area in the rear addition. Another storage area, accessed from the interior hallway is located within the staff area on the main floor. On the westerly end, or parking lot side of the rear addition, two legitimate accessible restrooms have been designed. Adjacent to the restrooms and accessed off the same hallway is the mechanical room in the location of the existing furnace is located. Another small closet is located outside this area, located under the existing stair landing.

On the second floor, the lobby at the top of the stair has been expanded to allow for accessibility for exiting and entering the lift as well as maneuvering through the space. The Tax collector's office is now accessed through a door off the Selectmen's Meeting Room, which is separated from the Lobby by a door for security purposes. Both the Zoning Officer office and Building Code Enforcement office remain on the second floor, though their spaces are slightly expanded. This plan proposes the walls between these offices be full-height walls, to provide greater security and privacy between the offices and Selectmen's meeting room. A small closet off the new exit stair was added as well.

Room by Room Area Comparison: Existing Vs. Schematic Design 1

Room:	Design:	
	Existing	Option 1
<u>First Story</u>		
Front Office/Service	201	125
Town Clerk Office	249	103
Town Admin Office	123	101
Additional Office	117	93
Staff Common Area	0	0
Storage	227	289
Misc Area/Egress	377	531
Restrooms	43	102
Mechanical	57	97
Other		
<u>Second Story</u>		
Tax Collector Office	164	133
Building Code Officer	76	112
Zoning Officer	84	97
Selectmen	403	358
Storage	85	12
Misc Area/Egress	107	292
Restrooms	0	0
Mechanical	0	0
Other	132	0
<u>Basement</u>		
Storage	0	0
Mechanical	0	0
Egress	0	0
<u>Masonic Building</u>		
Storage	0	0
<u>Total Utilized Area</u>	2,445	2,445

Schematic Plans Option Two Narrative

Similar to Option One, the schematic plans for Option Two keep the existing staff and services in the existing Town Office building without providing additional space through expansion of the Town Office building, however this option provides significant space for long-term storage of documents and other items within the adjacent Freedom Masonic Temple building.

Code Information: In the Option Two schematic, the re-use of the existing Town Office without adding onto the structure, defines this project as a “Alteration-Level 3”, within the International Existing Building Code (State of NH Building Code), and as a “Reconstruction” within NFPA 101 Life Safety Code (State of NH Fire Code). While changes to the configuration of the building are proposed, the occupancy of the building remains as a Group B occupancy within the State Building Code and an Existing Business Occupancy within the State Fire Code. The change of the first-floor level of the Masonic Temple from a gathering space and associated kitchen to a storage space defines the work in the Masonic Temple as a change of occupancy, but a change of occupancy that can work favorably. Changing the occupancy of the Masonic Building’s lower level from a Group A-2 occupancy to a Group S-1 occupancy within the State Building Code and from an Existing Assembly Occupancy to a Storage Occupancy within the State Fire Code are steps in a more lenient code direction. The provisions for Group S-1 and Storage occupancies do not require additional, or more restrictive requirements for general life safety features, such as means of egress, fire protection systems or building construction requirements from either of the two codes.

At the Town Office Building, the existing interior stair remains, and the lobbies and exterior façade of the building are slightly altered to allow for altered entrance and circulation. The uses on the second story of the building remain as is, though the layout of the floor is adjusted to provide safety upgrades and provide greater functionality to staff on this building level.

This layout removes a significant amount of storage space from the Town Office building as a large area of the first story of the adjacent Masonic Lodge is now designated for a centralized storage space. Closets to store everyday items and supplies have been incorporated in the Town Office Design.

The same platform lift used in the schematic design Option One is used in schematic design Option Two, though it has been located in a different area of the building. Again, this lift requires no machine room and is capable of floor-to-floor travel distance required in this building and requires only single-phase power.

This design moves the building entrance from the existing location at the southwest end of the building to the south side of the building, where the existing restroom is currently located. This was done to provide a legitimate accessible entry with a minimum ramp area, affecting less of the parking lot. Additionally, this will provide Town Staff with the ability to view patrons arriving in the parking area by relocating the service area to the southwest corner of the building.

This design also works to incorporate security measures for staff, with all staff services available from service windows and limits entry points to staff areas from the first and second floor lobbies. Legitimate accessible restrooms are provided at the north end of the rear addition and the existing storage area in the addition is converted to the mechanical space. As with schematic design Option One, the offices on the first floor are each accessed off a hallway to provide privacy and separation while still being proximate to each other.

The upper story in this design remains used by the same departments and Board of Selectmen. The Zoning Officer and Building Code Enforcement office is combined to one to allow for a combined service window off the elevator landing. The Tax collector's Office remains at the top of the stairs, however the door accessing this office is now located from within the Selectmen's Meeting room and not directly off the service lobby/landing area.

The proposed changes and improvements to the Masonic building include new interior partitions on the first floor to limit access and provide greater security to sensitive information in a building that will be shared with other tenants. A new, dedicated entrance to the first story storage area has been incorporated into the design as well. Replacement of the second story secondary means of egress (currently an exterior metal fire escape at the north gable end), has been included in the schematic design to provide greater life safety to the tenants of the Town of Freedom. The design proposes the removal of the fire escape and replacement with a code compliant wood exterior exit stair. In order to provide a favorable environment for the storage of documents, additional improvements including new insulation in the walls, floor, and floor-ceiling assembly, replacement windows and a new HVAC system capable of temperature and humidity control would be included in this design. While not a code requirement, due to the importance of the documents and information that would be stored in the building this design would also propose a full building, monitored fire detection and alarm system be installed to notify emergency services in the early stages of a fire event within the building.

Room by Room Area Comparison: Existing Vs. Schematic Design 2

Room:	Design:	
	Existing	Option 2
<u>First Story</u>		
Front Office/Service	201	78
Town Clerk Office	249	180
Town Admin Office	123	134
Additional Office	117	198
Staff Common Area	0	0
Storage	227	38
Misc Area/Egress	377	493
Restrooms	43	107
Mechanical	57	148
Other		
<u>Second Story</u>		
Tax Collector Office	164	156
Building Code Officer	76	80
Zoning Officer	84	80
Selectmen	403	374
Storage	85	0
Misc Area/Egress	107	333
Restrooms	0	0
Mechanical	0	0
Other	132	0
<u>Basement</u>		
Storage	0	0
Mechanical	0	0
Egress	0	0
<u>Masonic Building</u>		
Storage	0	1,536
<u>Total Utilized Area</u>	2,445	3,935

Schematic Plans Option Three Narrative

Option Three schematic plans continue to utilize the Town Office building as the sole structure for the Town of Freedom Selectmen, staff, and Town services, however these plans include an extensive expansion of the existing structure through vertical additions. First, the schematics proposed replacing the existing stacked granite and poured concrete foundations with a cast-place-concrete foundation with a full-height basement. This schematic design removes the existing addition off the rear (north end) of the building and replaces it with a new-construction, two-story structure that is more aesthetically similar to the original schoolhouse building.

Code Information: In this schematic, the re-use and renovation of the original schoolhouse portion of the existing Town Office defines this portion of the project as a “Alteration-Level 3”, within the International Existing Building Code (State of NH Building Code), and as a “Reconstruction” within NFPA 101 Life Safety Code (State of NH Fire Code). The proposed basement and total removal and replacement of the rear/north addition defines these portions of the project as “Additions”. Additions must comply with the new building requirements of the International Building Code and NFPA 101 Life Safety Code. While changes to the configuration of the building are proposed, the occupancy of the building remains as a Group B occupancy within the State Building Code. The renovated and altered area of the existing Town Office building to remain may comply with the requirements for an Existing Business Occupancy within the State Fire Code, the new areas, again the basement and rear addition, are required to comply with the requirements of a New Business Occupancy.

The basement area in this design is mainly used for long-term and secure storage, with a small area dedicated to mechanical systems, if necessary. Design of both the construction of the basement and the systems that serve the basement will need to account for this space being used for document storage and the control of moisture and humidity as these conditions can be prevalent in basements and sub-grade building spaces.

Just as in schematic design Option Two, the lobbies and exterior aesthetic remain, although altered, and the existing interior stair remains as is. This schematic design removes the main entrance from the west end of the south eave wall of the building and moves the main entrance to the west wall of the new addition, which due to the site topography allows for greater accessibility without the need for steps and a ramp to access the first-floor level of the building. The entrance vestibule and exterior deck, ramp and stairs are then removed from the design, creating more space in the parking lot.

With the removal of mechanical and large storage space from the first floor of the building to the basement, an area is opened to allow for the staff to have a common area, perhaps a break room or meeting space. A restroom on the first floor is also located in the staff area to provide staff with a separate restroom from the public.

This schematic option differs in vertical accessibility as it now integrates a LULA elevator, not a platform lift. With the addition of the basement level the allowable travel distance for a platform lift will be exceeded with a conveyance serving three floors, requiring an elevator. LULA stands for Limited Use, Limited Application, and these lifts are hybrids of platform lifts and traditional commercial elevators. Similar to platform lifts, LULA elevators are meant solely for use by individuals with disabilities and not a general conveyance. LULAs look more like traditional elevators while generally having smaller footprints

and requiring less impactful structural features, such as pits, overhead hoist clearances and less stringent hoist way construction requirements.

The second story area is expanded in this design as the rear addition becomes two stories. This allows for more versatility in access to the public/lobby area on the upper floor and ability to create a separate service window for Zoning/Building Code Enforcement. With the expanded area at the rear addition the Selectmen's Office/Meeting room increases in size to allow for greater space and flexibility.

Room by Room Area Comparison: Existing Vs. Schematic Design 3

Room:	Design:	
	Existing	Option 3
<u>First Story</u>		
Front Office/Service	201	78
Town Clerk Office	249	171
Town Admin Office	123	226
Additional Office	117	115
Staff Common Area	0	231
Storage	227	0
Misc Area/Egress	377	450
Restrooms	43	198
Mechanical	57	0
Other		
<u>Second Story</u>		
Tax Collector Office	164	226
Building Code Officer	76	164
Zoning Officer	84	147
Selectmen	403	478
Storage	85	20
Misc Area/Egress	107	320
Restrooms	0	0
Mechanical	0	0
Other	132	66
<u>Basement</u>		
Storage	0	1,027
Mechanical	0	228
Egress	0	138
<u>Masonic Building</u>		
Storage	0	0
<u>Total Utilized Area</u>	2,445	4,283

Respectfully submitted to the Town of Freedom Town Office Advisory Committee
For Bergeron Technical Services, LLC


Kate Richardson, C.F.P.S.
Project Manager, ICC Accessibility Inspector/Plans Examiner




Shawn G. Bergeron, Sr., C.F.P.S.
Manager/ICC Certified Building Inspector



ATTACHMENTS-

- Photo Pages of the Town of Freedom Town Office Building and Masonic Temple Building (11 pages)
- Asbestos Pb & PCB Survey Report for 33 Old Portland Road, Freedom, NH", dated October 2021 by Desmarais Environmental
- Asbestos Pb & PCB Survey Report for 29 Old Portland Road, Freedom, NH", dated October 2021 by Desmarais Environmental
- Septic Inspection Report dated 9/3/2021 by Turner Septic Inspections, for 33 Old Portland Road, Freedom, NH 03836
- Letter from the Town Office Advisory Committee Chair, dated February 2, 2021
- Staff Interview Responses document, prepared by Bergeron Technical Services, and dated 11 February 2022
- Letter from Bergeron Technical Services to the Town Office Advisory Committee regarding the Masonic Temple, dated May 12, 2022.
- Sketch entitled, "Freedom Masonic Building, Existing Conditions Structural Cross Section" dated 8-19-2022, prepared by Bergeron Technical Services.
- Copy of Town of Freedom Tax Map 52-A, showing subject properties 18 (Masonic Temple) and 19 (Town Office).

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



South (Road) side of the Town Office Building



West (parking lot) side of the Town Office Building



North side of the Town Office Building



East side of the Town Office Building

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



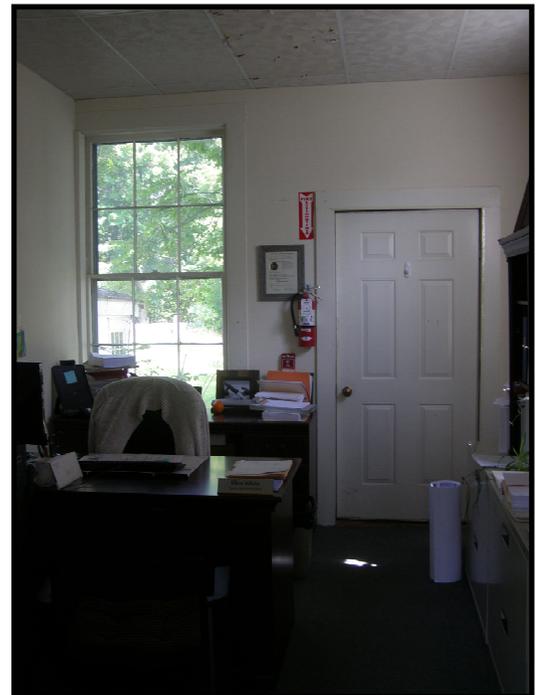
View of the main lobby looking toward the front entrance



The interior stair

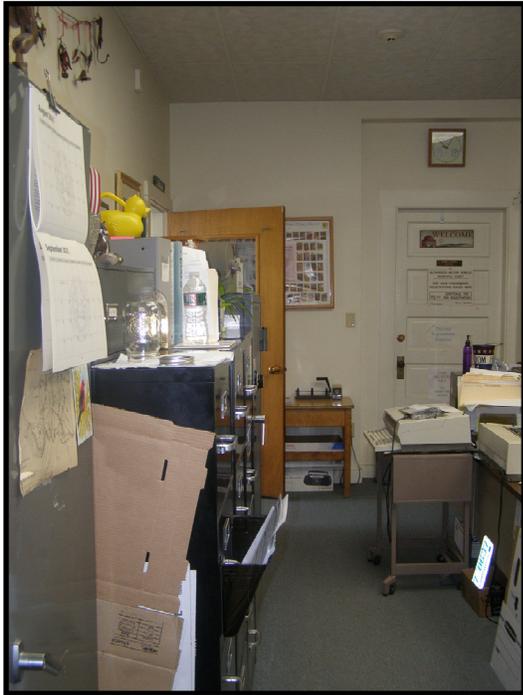


Administrative Assistant's office looking toward service door (Dutch door)



Second first floor exit door to the exterior, located in the Town Administrator's Office

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



Town Clerk's Office looking toward public entrance door



Town Clerk's Office looking toward Town Administrator's Office



Town Office Restroom. 18" vertical grab bar on the sidewall of the toilet required for accessibility is not installed.



Storage/mechanical space at rear addition. Exit door is at left indicated by yellow arrow. Oil-fired furnace is located just to the right of this photo.

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



Second floor stair landing, door leading into the Selectmen's Office and Zoning/Building Code offices. Example of the bead-board wall finish throughout the second story.



Selectmen's office looking toward stair landing.



Selectmen's Office looking at exit door to the exterior metal fire escape.

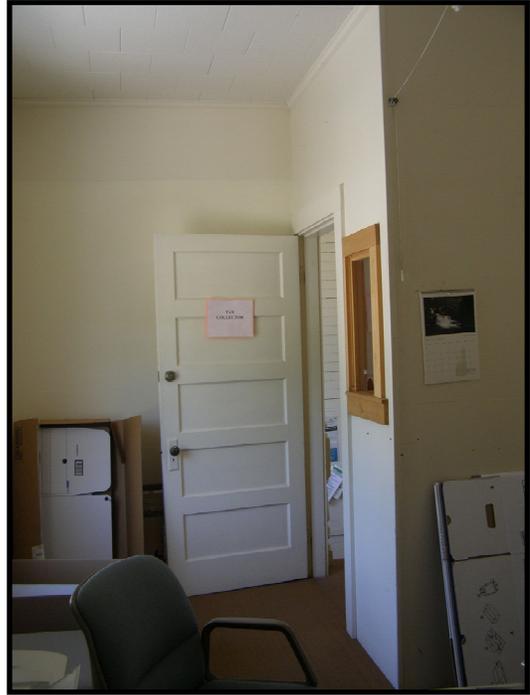


Zoning/Building Code Office partial dividing walls within Selectmen's Office.

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



Attic access hatch in ceiling above the second floor stair landing



Tax Collector's Office looking toward stair landing



Tax Collector's Office looking toward inner office



Inner office looking toward Tax Collector's Office

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road

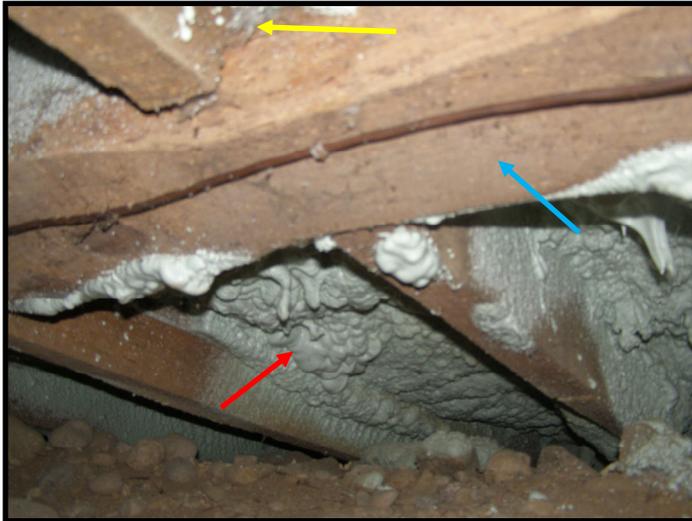


Photo of the first floor system taken from the crawl space. Blue arrow indicates a main carrying beam. The Yellow arrow indicates where the floor joists are 1/2 mortised into the beam. The red arrow indicates where approximately 6" of spray foam insulation has been installed between the floor joist bays.



Photo of the first floor system taken from the crawl space. Blue arrow indicates a stone support. The yellow arrow indicates metal distribution ducting for the oil furnace.

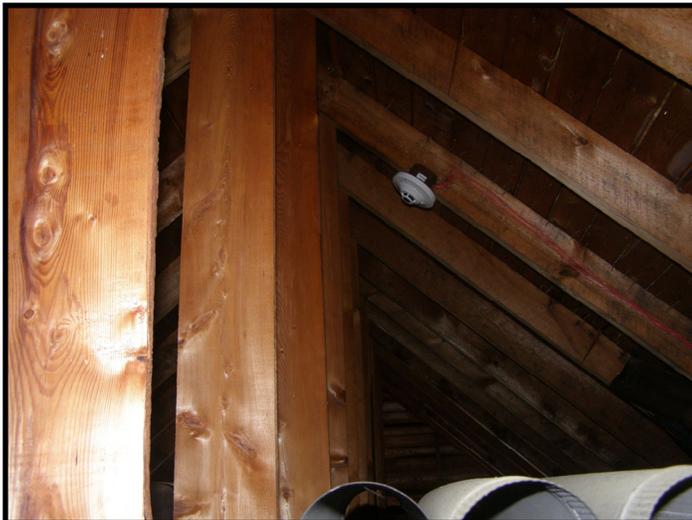


Photo of the attic above the original schoolhouse section of the building.

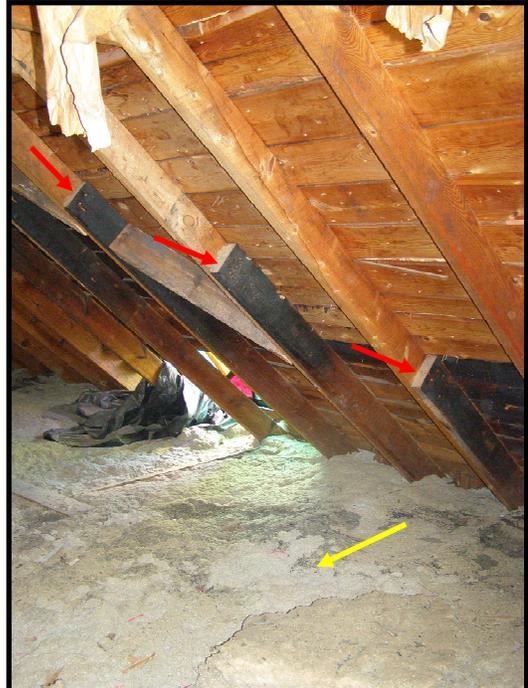


Photo of the attic. Red arrow indicates charred/cut rafters. Yellow arrow indicates blown-in cellulose insulation in the ceiling joist bays

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



South (Road) side of the Freedom Masonic Temple



North side of the Freedom Masonic Temple

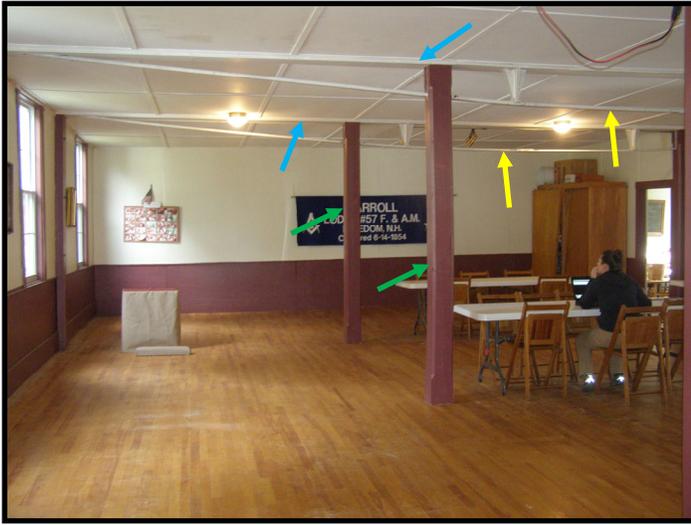


East side of the Freedom Masonic Temple



West side of the Freedom Masonic Temple

Town Of Freedom
Town Office Feasibility Study
 33 Old Portland Road



Existing banquet hall at first floor of Masonic Temple. Blue arrow indicates carrying beams for the second story floor. Green arrow indicates the mid-span columns supporting the floor beams. The yellow arrow indicates the steel tension rods.



Westerly exterior wall of the Masonic Temple, viewed from inside the banquet hall. Signs of wall splaying can be observed at the wall-ceiling intersection.



Masonic Temple looking south toward upper lobby.



Masonic Temple looking north. Emergency exit door leading to exterior metal fire escape indicated with blue arrow.

Town Of Freedom
Town Office Feasibility Study
33 Old Portland Road



Masonic Temple first floor lobby, looking towards the east.
The tile floor in this space has tested positive for asbestos.



Masonic Temple kitchen, serving the first story banquet hall,
looking south.



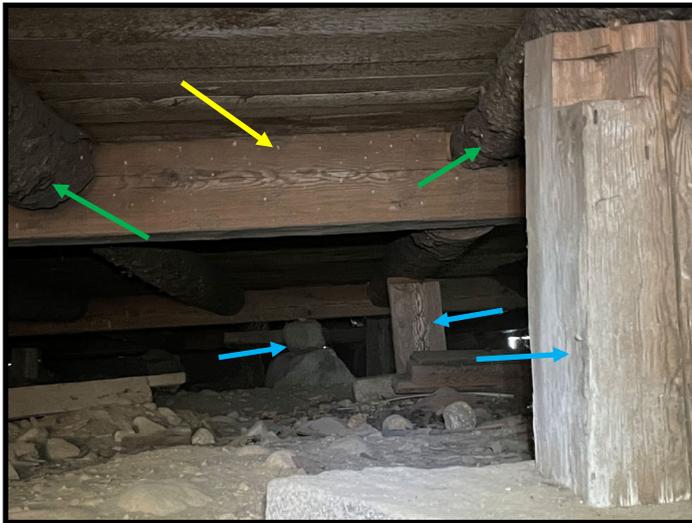
Masonic Temple kitchen, serving the first story banquet hall,
looking north.



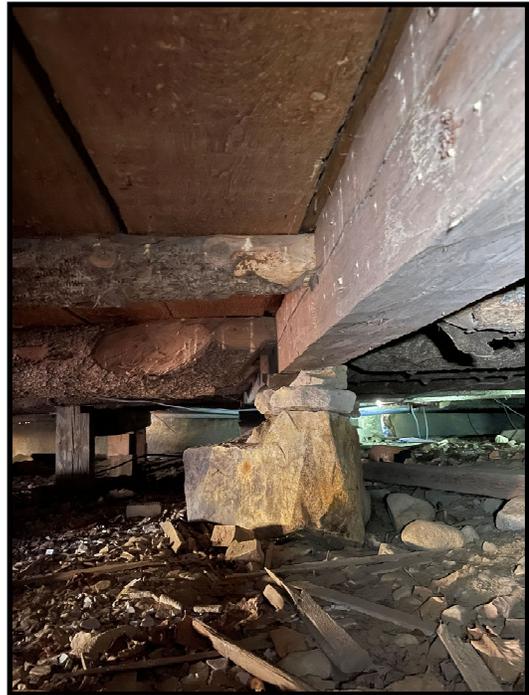
Masonic Temple lounge at the northeast corner of the building,
serving the first story banquet hall.

**Town Of Freedom
Town Office Feasibility Study**

33 Old Portland Road



Masonic Temple crawl space/floor system. Yellow arrow indicates main carrying beam (with powder post beetle frass). Green arrow indicates 3/4 timber joists. Wood post and stone piers can be seen in this photo, supporting both beams and bolstering joists, (blue arrows).



Side view of the timber joist connection to the main beams. The beam is supported by dry-stacked stones. Beyond, light can be seen coming through the granite perimeter foundation, where mortar has deteriorated and fallen away.



Masonic Temple crawl space/floor system. The condition of the crawl space is quite good, dry with sufficient space between the dirt floor and undersides of the wood floor members. This photo also shows an electrical junction box with exposed and unsupported non-metallic wiring.

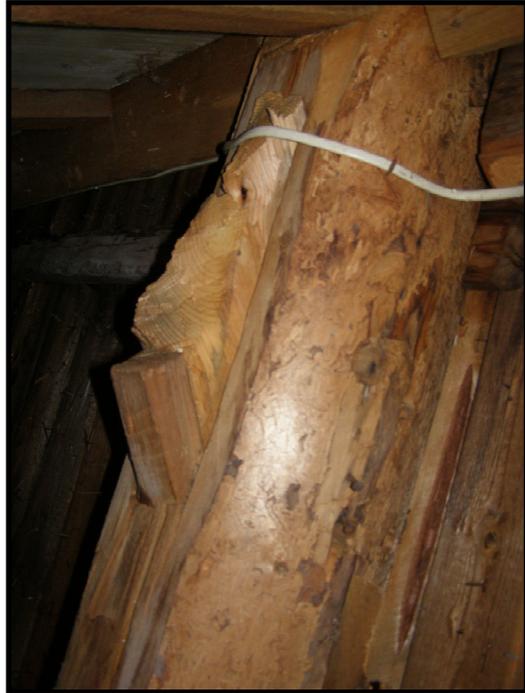


Masonic Temple crawl space/floor system. Yellow arrow indicates where timber joists have been cut/removed and replaced, with new wood posts installed at the joint. Wood posts have moved out of plumb, likely a result of seasonal movement over time.

Town Of Freedom
Town Office Feasibility Study
 33 Old Portland Road



Westerly eave space at second story of Masonic Temple. Evidence of the original arched ceiling can be seen at the end (gable) wall. The original collar tie joint at a bent can also be observed (red arrow). This side of the roof remains sheathed in 1x boards. Additional dimensional lumber bracing has been added to support the roof purlins (blue arrow)



A close view of a joint where an original collar tie member was removed from the bent frame



Attic space above second floor at the Masonic Temple. The king posts are indicated in red, these have been cut off the ceiling level, sandwiched and fastened between the 2x6 ceiling joists.



Easterly eave space at second story of Masonic Temple. The yellow arrow is indicating a hole in the OSB roof sheathing. Additional diagonal bracing has been added to the bent framing between the post and rafter. A section of the top plate has been replaced with dimensional lumber (green arrow).

Photo Page



ASBESTOS PB & PCB SURVEY REPORT



**33 OLD PORTLAND ROAD
FREEDOM, NH**

October 2021

320 Hemlock Lane, Barrington, NH 03825 ph 603-664-5500 www.denvironmental.com

October 27, 2021

On October 7, 2021, Desmarais Environmental, Inc. conducted a non-destructive asbestos, lead and PCB survey and testing of 33 Old Portland Road in Freedom, New Hampshire.

The scope of work covered the entirety of interior and exterior building materials. The purpose of this survey was to determine the presence of asbestos-containing, lead-containing, and PCB-containing materials to ensure compliance with the regulatory requirements to renovate the building.

Reasonable efforts have been made by Desmarais Environmental, Inc personnel to locate and sample suspect asbestos-containing and lead-containing materials (ACM & LCM). However, for any facility, the existence of unique or concealed ACMs and debris is a possibility. In addition, sampling and laboratory analysis constraints typically hinder the investigation. Desmarais Environmental, Inc. does not warrant, guarantee or profess to have the ability to located or identify all asbestos containing materials within the area surveyed.

ASBESTOS BACKGROUND INFORMATION

Asbestos is a term to describe six naturally occurring mineral fibers that are commonly found in a wide array of building construction materials due to the fiber strength and heat resistant properties. When asbestos containing materials become damaged or are disturbed during repair, remodeling or demolition activities; microscopic fibers become airborne. Asbestos fibers are so tiny and light that they can remain airborne for many hours. When inhaled, they can cause health problems. The three (3) most common types of asbestos are chrysotile, amosite and crocidolite. The lesser common types are tremolite, anthophyllite, and actinolite. Nearly 95% of all asbestos in the United States is chrysotile.

The Environmental Protection Agency classifies asbestos-containing building materials (ACBM) into three (3) general categories.

1. Surfacing Materials
 - a. Any material that has been sprayed-on or troweled-on, or otherwise applied to surfaces. Textured ceilings, joint compound, and fireproofing are some examples of surfacing materials.
2. Thermal System Insulation (TSI)
 - a. Any material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior mechanical components designed to prevent heat loss or water condensation.
3. Miscellaneous Materials
 - a. Any material that is not surfacing or thermal system insulation. Floor tiles, ceiling tiles, and transite board are some examples of miscellaneous materials.

The condition of asbestos containing materials is classified according to its friability, the current state of condition and its potential for disturbance. Friability is determined by the ability, when dry, to be crumbled, pulverized, or reduced to powder by hand pressure. The current state of condition is broken up into three categories

1. Significantly Damaged
 - a. Over 10% evenly distributed damage or over 25% of the localized damage.

- 2. Damaged
 - a. Less than 10% evenly distributed damage or less than 25% of the localized damage.
- 3. Good
 - a. No visible damage or very little damage.

The potential for disturbance is categorized by answering three (3) questions with high, moderate or low. The three questions are as follows,

- 1. The potential for contact with the material?
- 2. The influence of vibration on the material?
- 3. The potential for air erosion on the material?

Any question with a high answer shows potential for significant damage, any question answered with moderate shows potential for damage and all questions answered with low shows low potential.

The Environmental Protection Agency established the National Emission Standards for Hazardous Air Pollutants, 40 CFR 61, regulation to require the owner of a demolition or renovation activity and prior to commencement of the demolition or renovation, to thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos. EPA defines a facility as any institutional, commercial, public, industrial, or residential structure, installation or building. It includes any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excludes residential buildings having four or fewer dwelling units.

The State of New Hampshire established Env-A 1800 (Asbestos Management and Control) to better deal with asbestos within residential buildings. Under Env-A 1804.01, the State of New Hampshire requires that the owner/operator of a facility has an asbestos survey completed on the affected portion(s) prior to undertaking any demolition or renovation activity. According to Env-A 1802.31, the State of New Hampshire defines a facility as any institutional, commercial, public, or private building or structure, work place, ship, installation, active waste disposal site, inactive waste disposal site operated after July 9, 1981, or rental dwelling.

Asbestos samples of suspect materials were collected as described below according to type and quantity of material per homogeneous area. A homogeneous area is defined as a suspect material of similar age, appearance, function and texture.

Material	Samples
Miscellaneous materials	One sample per homogeneous area
Surfacing materials	Three samples per homogeneous area
Thermal system insulation	Three samples per homogeneous area

LEAD BACKGROUND INFORMATION

Lead is a naturally occurring element found in small amounts in the earth's crust. While it has some beneficial uses, it can be toxic to humans and animals, causing health effects.

EPA's Lead Renovation, Repair and Painting Rule (RRP) Rule requires that firms performing renovation, repair and painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 be certified by EPA (or an EPA-authorized state), use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices.

There are currently two methods recognized by the EPA for testing paint, which are X-Ray Fluorescence (XRF) analyzation and pain chip sampling followed by analysis by an accredited laboratory. In this case, paint chip sampling was conducted following analysis by Optimum Analytical & Consulting, LLC. Located in Salem, New Hampshire.

The laboratory report is expressed as weight of lead per weight of paint chip. The federal definition of lead-based paint is 0.5% lead or 5,000 milligram of lead per kilogram of paint chips.

POLYCHLORINATED BIPHENYLS (PCBs) BACKGROUND INFORMATION

Polychlorinated Biphenyls (PCBs) were used in the construction, renovation and repair of many buildings, including schools, from the 1950's through the late 1970's. PCBs may be present in products and materials produced before the 1979 PCB ban. PCB's were used in industrial and commercial applications including electrical, heat transfer, and hydraulic equipment. They were also used as plasticizers in paints, plastics and rubber compounds; and in pigments in dyes and some papers. PCBs commonly found in building construction include exterior window and door caulking and expansion joints. Most commercial PCB mixtures are known in the United States by their industrial trade names; the most common name is Aroclor. The primary focus in identifying polychlorinated biphenyls (PCBs) for this survey was in caulk within the buildings in preparation for its renovation or demolition.

LABORATORY ANALYTICAL METHODS

Asbestos

All bulk samples collected were forwarded to Optimum Analytical & Consulting, LLC. located in Salem, New Hampshire. Optimum is a NIST/NVLAP and AIHA-accredited laboratory.

Analyses were performed using standard optical microscopy and petrographic techniques. A representative portion of the bulk sample was placed on a glass slide, immersed and macerated in the appropriate index oils. This was then examined under plane and fully polarized light on the petrographic microscope. The following features were used to identify unknown particles and fibers: Morphology, index of refraction, birefringence, size, color, etc.

Analytical results (compositions and percentages) are listed on the bulk report form attached. For the purpose of these analyses, asbestos determination and identification is based on definitions as set forth in the US. EPA Environmental Monitoring Systems Laboratory TEST METHOD "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," EPA-600/M4-82-020.

Polarized-light microscopy is not consistently reliable in detecting asbestos in floor tiles. Confirmation by Transmission Electron Microscopy is recommended for negative floor tile samples.

Pb

All lead chip samples collected were forwarded to Optimum Analytical & Consulting, LLC. located in Salem, New Hampshire. Optimum forwarded samples to Aerobiology Laboratory. in Pennsauken Township, NJ.

Paint chips were analyzed using Atomic Absorption method SW846-7000B/3051. Results are reported in percent weight of the sample.

PCB

All bulk samples collected were forwarded Phoenix Environmental Laboratories located in Manchester, Connecticut.

Analyses were performed using EPA Method 8082 PCBs by gas chromatography. This method is used to determine the concentrations of PCBs as Aroclors or as individual PCB congeners in extracts from solids. A measured weight of the sample is extracted and analyzed using electron capture detectors (ECD) or electrolytic conductivity detectors (ELCD).

PHOTOS

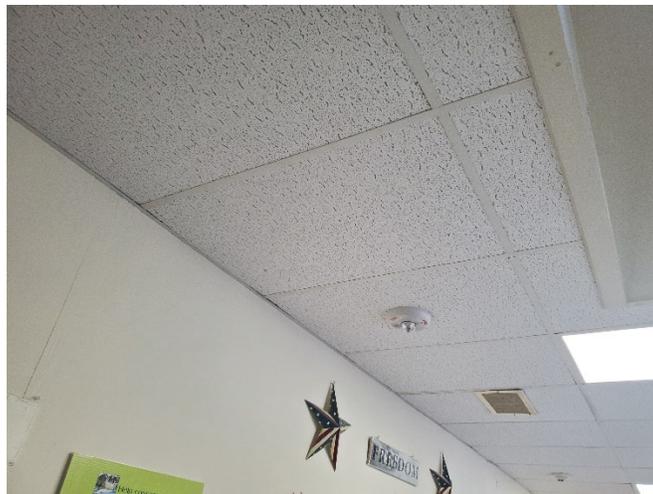




TABLE OF ASBESTOS BULK SAMPLING RESULTS

Sample #	Location	Item	Result
1	Shingle	Roof	None
2	Window Glaze	Original Bldg.	None
3	Window Glaze	Addition	None
4	Window Caulk	Original Bldg.	None
5	Window Caulk	Addition	None
6	Sheetrock Composite	Hall	None
7	Linoleum	Bath	None
8	Adhesive	Bath	None
9	2X4 Ceiling Tile Fissured	Main Office	None
10	2X4 Ceiling Tile Smooth	Main Office	None
11	Tread	Stairs	None
12	Landing	Stairs	None
13	Ceiling Panel	Hall	None
14	Green Cove Base	Hall	None
15	Adhesive	Hall	None

None = No Asbestos Structures Detected

TABLE OF LEAD PAINT CHIP SAMPLING RESULTS

Sample #	Item / Location	Result (%)
1	Siding	8.56
2	Window Casing	11.7
3	Window Casing	1.77
4	Siding	9.77
5	Window Caulk	0.583
6	Window Caulk	0.024
7	Fire Escape	0.474
8	Door Casing	<RL
9	Wainscot	0.143
10	Window Casing	1.12
11	Baseboard	<RL
12	Wall	<RL
13	Wall	<RL
14	Newel Post	0.654
15	Stringer	<RL
16	Window Well	27.1
17	Inv Wains	7.01

<RL = Less Than Reporting Limit

POLYCHLORINATED BIPHENYLS (PCBs) RESULTS

Sample #	Description	Location	Results PPM
PCB 1	Window Caulk Original	Exterior	ND
PCB 2	Window Caulk Addition	Exterior	ND

ND = None Detected

Laboratory Data sheets report on 1,000 $\mu\text{g}/\text{Kg}$ = 1 PPM

Results & Discussion

Asbestos was not identified in any samples collected.

Lead was identified in the windows, exterior siding, trim and horizontal wainscoting on second floor. The legal threshold to consider lead paint leaded is 5%. The entire exterior should be considered lead paint, all windows, and the horizontal wainscoting. Some hidden lead components may exist within the building.

PCB materials above 50 PPM fall under EPA regulations requiring removal or encapsulation. Levels were below detectable limits.

COST ESTIMATE

Item / Location	
Lead remediation varies depending on approach. To completely de-lead the property would likely require siding replacement, window replacement and some interior renovations.	\$150,000-\$300,000

The laboratory reports are presented in Appendix 1.

If you have any questions regarding this report or require additional services, please do not hesitate to contact our office at (603) 664-5500.

Respectively submitted,
Desmarais Environmental, Inc.



Raymond G. Desmarais, CIH, CSP
New Hampshire Licensed Inspector, Management Planner & Designer
New Hampshire License #024-IMD

Appendix 1: Laboratory Reports



Monday, October 18, 2021

Attn: Mr. Ray Desmarais, CIH, CSP
Desmarais Environmental, Inc.
320 Hemlock Lane
Barrington, NH 03825

Project ID: 33 OLD PORTLAND ROAD FREEDOM NH
SDG ID: GCJ54595
Sample ID#s: CJ54595 - CJ54596

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Id Cross Reference

October 18, 2021

SDG I.D.: GCJ54595

Project ID: 33 OLD PORTLAND ROAD FREEDOM NH

Client Id	Lab Id	Matrix
PCB 1	CJ54595	SOIL
PCB 2	CJ54596	SOIL



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

October 18, 2021

FOR: Attn: Mr. Ray Desmarais, CIH, CSP
 Desmarais Environmental, Inc.
 320 Hemlock Lane
 Barrington, NH 03825

Sample Information

Matrix: SOIL
 Location Code: DESMAR
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: LB
 Analyzed by: see "By" below

Date

10/08/21
 10/13/21

Time

8:00
 11:11

Laboratory Data

SDG ID: GCJ54595
 Phoenix ID: CJ54595

Project ID: 33 OLD PORTLAND ROAD FREEDOM NH
 Client ID: PCB 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Extraction for PCB	Completed				10/13/21	X/Q	SW3540C
<u>PCB (Soxhlet SW3540C)</u>							
PCB-1016	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1221	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1232	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1242	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1248	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1254	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1260	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1262	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1268	ND	760	ug/Kg	1	10/14/21	SC	SW8082A
<u>QA/QC Surrogates</u>							
% DCBP	43		%	1	10/14/21	SC	30 - 150 %
% DCBP (Confirmation)	42		%	1	10/14/21	SC	30 - 150 %
% TCMX	34		%	1	10/14/21	SC	30 - 150 %
% TCMX (Confirmation)	35		%	1	10/14/21	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
-----------	--------	------------	-------	----------	-----------	----	-----------

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 18, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

October 18, 2021

FOR: Attn: Mr. Ray Desmarais, CIH, CSP
 Desmarais Environmental, Inc.
 320 Hemlock Lane
 Barrington, NH 03825

Sample Information

Matrix: SOIL
 Location Code: DESMAR
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: LB
 Analyzed by: see "By" below

Date

10/08/21
 10/13/21

Time

8:00
 11:11

Laboratory Data

SDG ID: GCJ54595
 Phoenix ID: CJ54596

Project ID: 33 OLD PORTLAND ROAD FREEDOM NH
 Client ID: PCB 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Extraction for PCB	Completed				10/13/21	X/Q	SW3540C
<u>PCB (Soxhlet SW3540C)</u>							
PCB-1016	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1221	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1232	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1242	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1248	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1254	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1260	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1262	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
PCB-1268	ND	830	ug/Kg	1	10/14/21	SC	SW8082A
<u>QA/QC Surrogates</u>							
% DCBP	44		%	1	10/14/21	SC	30 - 150 %
% DCBP (Confirmation)	41		%	1	10/14/21	SC	30 - 150 %
% TCMX	34		%	1	10/14/21	SC	30 - 150 %
% TCMX (Confirmation)	35		%	1	10/14/21	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
-----------	--------	------------	-------	----------	-----------	----	-----------

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 18, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

October 18, 2021

QA/QC Data

SDG I.D.: GCJ54595

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 596120 (ug/Kg), QC Sample No: CJ44633 10X (CJ54595, CJ54596)										
<u>Polychlorinated Biphenyls - Soil</u>										
PCB-1016	ND	170	94	98	4.2				40 - 140	30
PCB-1221	ND	170							40 - 140	30
PCB-1232	ND	170							40 - 140	30
PCB-1242	ND	170							40 - 140	30
PCB-1248	ND	170							40 - 140	30
PCB-1254	ND	170							40 - 140	30
PCB-1260	ND	170	86	96	11.0				40 - 140	30
PCB-1262	ND	170							40 - 140	30
PCB-1268	ND	170							40 - 140	30
% DCBP (Surrogate Rec)	104	%	81	93	13.8				30 - 150	30
% DCBP (Surrogate Rec) (Confirm)	101	%	80	92	14.0				30 - 150	30
% TCMX (Surrogate Rec)	97	%	99	103	4.0				30 - 150	30
% TCMX (Surrogate Rec) (Confirm)	100	%	109	114	4.5				30 - 150	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 October 18, 2021

Monday, October 18, 2021

Criteria: None

State: NH

SampNo Acode Phoenix Analyte

Criteria

Result

RL

Criteria

RL
Criteria

Analysis
Units

Sample Criteria Exceedances Report

GCJ54595 - DESMAR

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

October 18, 2021

SDG I.D.: GCJ54595

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



Ray Desmarais
Desmarais Environmental, Inc.
320 Hemlock Lane
Barrington NH 03825

Project Reference:
Laboratory Batch #: 2140297
Date Samples Received: 10/12/2021
Date Samples Analyzed: 10/22/2021
Date of Final Report: 10/26/2021

SAMPLE IDENTIFICATION:

Fifteen (15) samples from 33 Old Portland Rd., Freedom, NH project were submitted by Ray Desmarais on 10/12/2021

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinous bound materials may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additionally, there is currently no approved EPA analytical method to reliably confirm vermiculite as non-asbestos containing. Additional analytical methods may be required. Optimum Analytical recommends using Transmission Electron Microscopy (TEM) or other approved methods for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Point Count = .25%, 1000 Point Count = 0.1%; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: 33 Old Portland Rd., Freedom, NH

ORDER #: 2140297
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/22/2021
REPORT DATE: 10/26/2021
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2140297-001 1	Roof Shingle, Black	LAYER 1 100%	None Detected	Fibrous Glass 35% Cellulose Fiber 1% Binder/Filler 64%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-002 2	Original Bldg. Window Glazing, Beige/Black	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-003 3	Addition Window Glazing, Beige/White/Gray	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-004 4	Original Bldg. Window Caulking, Beige/White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-005 5	Addition Window Caulking, Gray/White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-006 6	Hall Sheetrock Composite, Gray Note: No Joint Compound Present	LAYER 1 100%	None Detected	Cellulose Fiber 10% Non-Fibrous Material 90%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-007 7	Bath Linoleum, Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-008 8	Bath Mastic, No Mastic Present Under Linoleum	LAYER 1 100%		



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: 33 Old Portland Rd., Freedom, NH

ORDER #: 2140297
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/22/2021
REPORT DATE: 10/26/2021
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2140297-009 9	Main Office Ceiling Tile, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 65% Fibrous Glass 15% Binder/Filler 20%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-010 10	Main Office LAYER 1 Ceiling Tile, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber 1% Fibrous Glass 97% Non-Fibrous Material 2%
	LAYER 2 Mastic, Tan	LAYER 2 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-011 11	Stairs LAYER 1 Tread, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
	LAYER 2 Adhesive, Tan	LAYER 2 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-012 12	Stairs Landing, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-013 13	Hall Ceiling Panel Wood, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 99% Non-Fibrous Material 1%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-014 14	Hall Cove Base, Blue	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140297-015 15	Hall Adhesive, Tan	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: 33 Old Portland Rd., Freedom, NH

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2140297
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/22/2021
REPORT DATE: 10/26/2021
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
-----------------------------	--------------------------------	----------------------	------------------	-----	----------------------------	-----

**Analyst
Signatory:**
Jamie Noel






OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: 33 Old Portland Rd., Freedom, NH

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2140297
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/22/2021
REPORT DATE: 10/26/2021
ANALYST: Jamie Noel

2140297

Sample Log and Chain of Custody Record

Project: 33 Old Portland Road Freedom NH

Normal Turnaround Please

Sample #	Description	Location	Analysis
1	Shingle	Roof	PLM ASB
2	Window Glaze	Original Bldg	PLM ASB
3	Window Glaze	Addition	PLM ASB
4	Window Caulk	Original Bldg	PLM ASB
5	Window Caulk	Addition	PLM ASB
6	Sheetrock Composite	Hall	PLM ASB
7	Linoleum	Bath	PLM ASB
8	Adhesive	Bath	PLM ASB
9	2X4 Ceiling Tile Fissured	Main Office	PLM ASB
10	2X4 Ceiling Tile Smooth	Main Office	PLM ASB
11	Tread	Stairs	PLM ASB
12	Landing	Stairs	PLM ASB
13	Ceiling Panel	Hall	PLM ASB
14	Green Cove Base	Hall	PLM ASB
15	Adhesive	Hall	

Sampled By:	Ray Desmarais
Shipped To:	Optimum
Received By:	<i>Ray</i> 10/12/21 @ 12:30

Laboratory Report

Contact: Jamie Noel
Client: Optimum Analytical & Consulting, LLC
Address: 85 Stiles Road, Suite 201
 Salem, NH 03079

Batch #: C 308872
Date received: 10/14/2021
Date analyzed: 10/14/2021
Date of report: 10/14/2021

Project # 2140282
P.O.# N/A
Project Site: 33 Old Portland Rd.
 Freedom, NH

AIHA-LAP, LLC Lab ID 102754

Lead Analysis In Paint Using SOP Based on SW846-7000B/3051
 Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 688853	1	10/11/21	Siding	8.56	0.016	Paint+Plaster
C 688854	2	10/11/21	Window Casing	11.7	0.011	Paint+Plaster
C 688855	3	10/11/21	Window Casing	1.77	0.008	
C 688856	4	10/11/21	Siding	9.77	0.005	Paint+Plaster
C 688857	5	10/11/21	Window Caulk	0.583	0.015	Paint+Plaster
C 688858	6	10/11/21	Window Caulk	0.024	0.023	Paint+Caulk
C 688859	7	10/11/21	Fire Escape	0.474	0.021	
C 688860	8	10/11/21	Door Casing	<RL	0.015	
C 688861	9	10/11/21	Wainscot	0.143	0.020	
C 688862	10	10/11/21	Window Casing	1.12	0.057	



Simona Peavey, Tech. Manager Chemistry
Aimee Cormier, Lab Director

Page 1 of 2

Unless otherwise indicated, all samples were received in acceptable condition.
 All results apply only to the samples tested and as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
RL-Reporting Limit(%by weight) Note on units: mg/Kg is the same as ppm by weight.
 RL-Reporting Limit; Defined as the lowest concentration the laboratory can accurately quantitate.
The Report shall not be reproduced except in full without the written approval of the laboratory.
 Please visit our website at www.proscience.net for the current accreditation status.

Laboratory Report

Contact: Jamie Noel
Client: Optimum Analytical & Consulting, LLC
Address: 85 Stiles Road, Suite 201
 Salem, NH 03079

Batch #: C 308872
Date received: 10/14/2021
Date analyzed: 10/14/2021
Date of report: 10/14/2021

Project # 2140282
P.O.# N/A
Project Site: 33 Old Portland Rd.
 Freedom, NH

AIHA-LAP, LLC Lab ID 102754

Lead Analysis In Paint Using SOP Based on SW846-7000B/3051
 Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 688863	11	10/11/21	Baseboard	<RL	0.175	Note 1
C 688864	12	10/11/21	Wall	<RL	0.017	
C 688865	13	10/11/21	Wall	<RL	0.043	
C 688866	14	10/11/21	Newer Post	0.654	0.016	
C 688867	15	10/11/21	Stringer	<RL	0.092	
C 688868	16	10/11/21	Window Well	27.1	0.020	
C 688869	17	10/11/21	Inv. Wains	7.01	0.036	

Note 1: There was not enough sample in the bag required for analysis, therefore the results may not be accurate.

Simona Peavey, Tech. Manager/Chemistry
Aimee Cormier, Lab Director

Page 2 of 2

Unless otherwise indicated, all samples were received in acceptable condition.
 All results apply only to the samples tested and as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
RL-Reporting Limit(%by weight) Note on units: mg/Kg is the same as ppm by weight.
 RL-Reporting Limit; Defined as the lowest concentration the laboratory can accurately quantitate.
The Report shall not be reproduced except in full without the written approval of the laboratory.
 Please visit our website at www.proscience.net for the current accreditation status.

ProScience Analytical Services, Inc.
Chemistry Chain of Custody Record

LABORATORY/HEADQUARTERS
 22 Cummings Park, Woburn, MA 01801
 T:781-935-3212 F:781-932-4857

www.proscience.net
 general@proscience.net

Rush / <6 Hours Turn Around Time Requested

Same Day Next Day 2 Day 3 Day 5 Days

Client Optimum Analytical + Consulting, LLC

Address Street 85 Stiles Rd, Ste 201

Town Salem State/Zip NH 03079

Project Site Line 1 33 Old Portland Rd Project Number 2140282

Line 2 Freedom, NH PO _____

Contact Jamie Noel Phone _____
Kristina Scavilla @optimumanalytical.com FAX _____
Ann Berrigan Alt/Pager _____

NELAC analysis

TYPE OF ANALYSIS (circle)

DUST WIPES	PAINT (0.1 g)	SOIL (1 g)
AIR	TSP	TCLP (100g)
(min)	PM10	Other

Element gravimetric

Pb Cd Cr As Fe

Se Ag Ba Hg

Other (please specify under Comments)

For Laboratory Use

BATCH NUMBER

C 308872

Please use a separate form for each matrix.

QC

ASTM E1792 FOR LABORATORY USE ONLY

Date and Time Sampled	Field I.D.	Sample Description/Location	Air Sampling Information				Wiped area			ANALYSIS				Lab I.D.	
			Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	length (inch)	width (inch)	Area (sq in)	Weight (grams)	Dil'n	AA/ICP Reading		RESULT
10/11/21	1	Siding													688853
	2	Window Casing													54
	3	" "													55
	4	Siding													56
	5	Window CAULK													57
	6	" "													58
	7	Fire Escape													59
	8	Door Casing													60
	9	Wains Cot													61
	10	Window Casing													62

Relinquished By: [Signature] Date: 10/13/21 Time: 2P

Received By: [Signature] Date: 10/14/21 Time: 9:35

Proscience Analytical Services, Inc.
Chemistry Chain of Custody Record

LABORATORY/HEADQUARTERS
 22 Cummings Park, Woburn, MA 01801
 T: 781-935-3212 F: 781-932-4857
 www.proscience.net
 general@proscience.net

Turn Around Time Requested
 Rush / < 6 Hours
 Same Day
 Next Day
 2 Day
 3 Day
 5 Days

Client Optimum Analytical + Consulting, LLC

Address Street 85 Stiles Rd, Ste 201
 Town Salmon State/Zip NH 03079
 Project Number 2140282
 Line 1
 Line 2 Freedom, NH

Contact JAMIE NOEL Phone
KRISTINE SCAVILLA FAX
A-M-BERRIGAN Alt/Pager

NELAC analysis

TYPE OF ANALYSIS (circle)		SOIL (1g)	TCLP (100g)	Other
DUST WIPES	PAINT (0.1g)			
AIR	TSP			
(min)	PM10			

Please use a separate form for each matrix.

Element Pb gravimetric

Cd Cr As Fe

Se Ag Ba Hg For Laboratory Use

Other (please specify under Comments)

QC

BATCH NUMBER
C 308872

Date and Time Sampled	Field I.D.	Sample Description/Location	Air Sampling Information				Wiped area			ANALYSIS			Lab I.D.
			Start Time	End Time	Start Flowrate	End Flowrate	length (inch)	width (inch)	Area (sq in)	Weight (grams)	AA/ICP Reading	RESULT	
			Volume (liters)	Start Flowrate	End Flowrate	length (inch)	width (inch)	Area (sq in)	Weight (grams)	AA/ICP Reading	RESULT		
10/11/21	11	Baseboard											63
	12	wall											64
	13	wall											65
	14	Newel Post											66
	15	Stringer											67
	16	Window Well											68
	17	Inv. Wains											69

Relinquished By: JS Date: 10/13/21 Time: 2:4
 Received By: _____ Date: _____ Time: _____



ASBESTOS PB & PCB SURVEY REPORT MASONIC TEMPLE



**29 OLD PORTLAND ROAD
FREEDOM, NH**

October 2021

320 Hemlock Lane, Barrington, NH 03825 ph 603-664-5500 www.denvironmental.com



October 27, 2021

On October 7, 2021, Desmarais Environmental, Inc. conducted a non-destructive asbestos, lead and PCB survey and testing of 29 Old Portland Road (Masonic Temple) in Freedom, New Hampshire.

The scope of work covered the entirety of interior and exterior building materials. The purpose of this survey was to determine the presence of asbestos-containing, lead-containing, and PCB-containing materials to ensure compliance with the regulatory requirements to renovate the building.

Reasonable efforts have been made by Desmarais Environmental, Inc personnel to locate and sample suspect asbestos-containing and lead-containing materials (ACM & LCM). However, for any facility, the existence of unique or concealed ACMs and debris is a possibility. In addition, sampling and laboratory analysis constraints typically hinder the investigation. Desmarais Environmental, Inc. does not warrant, guarantee or profess to have the ability to located or identify all asbestos containing materials within the area surveyed.

ASBESTOS BACKGROUND INFORMATION

Asbestos is a term to describe six naturally occurring mineral fibers that are commonly found in a wide array of building construction materials due to the fiber strength and heat resistant properties. When asbestos containing materials become damaged or are disturbed during repair, remodeling, or demolition activities; microscopic fibers become airborne. Asbestos fibers are so tiny and light that they can remain airborne for many hours. When inhaled, they can cause health problems. The three (3) most common types of asbestos are chrysotile, amosite and crocidolite. The lesser common types are tremolite, anthophyllite, and actinolite. Nearly 95% of all asbestos in the United States is chrysotile.

The Environmental Protection Agency classifies asbestos-containing building materials (ACBM) into three (3) general categories.

1. Surfacing Materials
 - a. Any material that has been sprayed-on or troweled-on, or otherwise applied to surfaces. Textured ceilings, joint compound, and fireproofing are some examples of surfacing materials.
2. Thermal System Insulation (TSI)
 - a. Any material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior mechanical components designed to prevent heat loss or water condensation.
3. Miscellaneous Materials
 - a. Any material that is not surfacing or thermal system insulation. Floor tiles, ceiling tiles, and transite board are some examples of miscellaneous materials.

The condition of asbestos containing materials is classified according to its friability, the current state of condition and its potential for disturbance. Friability is determined by the ability, when dry, to be crumbled, pulverized, or reduced to powder by hand pressure. The current state of condition is broken up into three categories

1. Significantly Damaged
 - a. Over 10% evenly distributed damage or over 25% of the localized damage.

2. Damaged
 - a. Less than 10% evenly distributed damage or less than 25% of the localized damage.
3. Good
 - a. No visible damage or very little damage.

The potential for disturbance is categorized by answering three (3) questions with high, moderate, or low. The three questions are as follows,

1. The potential for contact with the material?
2. The influence of vibration on the material?
3. The potential for air erosion on the material?

Any question with a high answer shows potential for significant damage, any question answered with moderate shows potential for damage and all questions answered with low shows low potential.

The Environmental Protection Agency established the National Emission Standards for Hazardous Air Pollutants, 40 CFR 61, regulation to require the owner of a demolition or renovation activity and prior to commencement of the demolition or renovation, to thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos. EPA defines a facility as any institutional, commercial, public, industrial, or residential structure, installation, or building. It includes any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative but excludes residential buildings having four or fewer dwelling units.

The State of New Hampshire established Env-A 1800 (Asbestos Management and Control) to better deal with asbestos within residential buildings. Under Env-A 1804.01, the State of New Hampshire requires that the owner/operator of a facility has an asbestos survey completed on the affected portion(s) prior to undertaking any demolition or renovation activity. According to Env-A 1802.31, the State of New Hampshire defines a facility as any institutional, commercial, public, or private building or structure, workplace, ship, installation, active waste disposal site, inactive waste disposal site operated after July 9, 1981, or rental dwelling.

Asbestos samples of suspect materials were collected as described below according to type and quantity of material per homogeneous area. A homogeneous area is defined as a suspect material of similar age, appearance, function and texture.

Material	Samples
Miscellaneous materials	One sample per homogeneous area
Surfacing materials	Three samples per homogeneous area
Thermal system insulation	Three samples per homogeneous area

LEAD BACKGROUND INFORMATION

Lead is a naturally occurring element found in small amounts in the earth's crust. While it has some beneficial uses, it can be toxic to humans and animals, causing health effects.

EPA's Lead Renovation, Repair and Painting Rule (RRP) Rule requires that firms performing renovation, repair and painting projects that disturb lead-based paint in homes, childcare facilities and pre-schools built before 1978 be certified by EPA (or an EPA-authorized state), use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices.

There are currently two methods recognized by the EPA for testing paint, which are X-Ray Fluorescence (XRF) analyzation and pain chip sampling followed by analysis by an accredited laboratory. In this case, paint chip sampling was conducted following analysis by Optimum Analytical & Consulting, LLC. Located in Salem, New Hampshire.

The laboratory report is expressed as weight of lead per weight of paint chip. The federal definition of lead-based paint is 0.5% lead or 5,000 milligram of lead per kilogram of paint chips.

POLYCHLORINATED BIPHENYLS (PCBs) BACKGROUND INFORMATION

Polychlorinated Biphenyls (PCBs) were used in the construction, renovation, and repair of many buildings, including schools, from the 1950's through the late 1970's. PCBs may be present in products and materials produced before the 1979 PCB ban. PCBs were used in industrial and commercial applications including electrical, heat transfer, and hydraulic equipment. They were also used as plasticizers in paints, plastics, and rubber compounds, and in pigments in dyes and some papers. PCBs commonly found in building construction include exterior window and door caulking and expansion joints. Most commercial PCB mixtures are known in the United States by their industrial trade names; the most common name is Aroclors. The primary focus in identifying polychlorinated biphenyls (PCBs) for this survey was in caulk within the buildings in preparation for its renovation or demolition.

LABORATORY ANALYTICAL METHODS

Asbestos

All bulk samples collected were forwarded to Optimum Analytical & Consulting, LLC. located in Salem, New Hampshire. Optimum is a NIST/NVLAP and AIHA-accredited laboratory.

Analyses were performed using standard optical microscopy and petrographic techniques. A representative portion of the bulk sample was placed on a glass slide, immersed and macerated in the appropriate index oils. This was then examined under plane and fully polarized light on the petrographic microscope. The following features were used to identify unknown particles and fibers: Morphology, index of refraction, birefringence, size, color, etc.

Analytical results (compositions and percentages) are listed on the bulk report form attached. For the purpose of these analyses, asbestos determination and identification is based on definitions as set forth in the US. EPA Environmental Monitoring Systems Laboratory TEST METHOD "Interim Method for the Determination of Asbestos in Bulk Insulation Samples," EPA-600/M4-82-020.

Polarized-light microscopy is not consistently reliable in detecting asbestos in floor tiles. Confirmation by Transmission Electron Microscopy is recommended for negative floor tile samples.

Pb

All lead chip samples collected were forwarded to Optimum Analytical & Consulting, LLC. located in Salem, New Hampshire. Optimum forwarded samples to Aerobiology Laboratory. in Pennsauken Township, NJ.

Paint chips were analyzed using Atomic Absorption method SW846-7000B/3051. Results are reported in percent weight of the sample.

PCB

All bulk samples collected were forwarded Phoenix Environmental Laboratories located in Manchester, Connecticut.

Analyses were performed using EPA Method 8082 PCBs by gas chromatography. This method is used to determine the concentrations of PCBs as Aroclors or as individual PCB congeners in extracts from solids. A measured weight of the sample is extracted and analyzed using electron capture detectors (ECD) or electrolytic conductivity detectors (ELCD).

PHOTOS



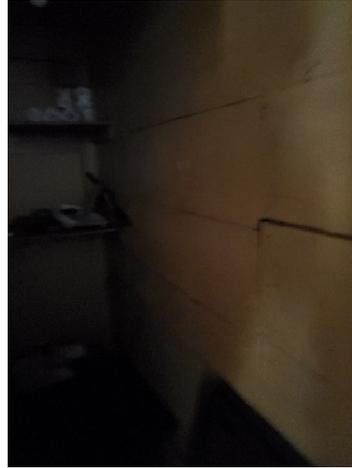


TABLE OF ASBESTOS BULK SAMPLING RESULTS

Sample #	Location	Item	Result
1	Floor Tile	Entry	2% Chrysotile Asbestos
2	Adhesive	Entry	None
3	Linoleum	Men	None
4	Adhesive	Men	None
5	Plaster	Boiler Room	None
6	Plaster	Boiler Room	None
7	Plaster	Boiler Room	None
8	Sheetrock Composite	Entry	None
9	Felt	Boiler Room	None
10	Linoleum	Kitchen	None
11	Adhesive	Kitchen	None
12	Ceiling Panel	2nd meeting Room	None
13	Wall	2nd meeting Room	None
14	Paper under carpet	2nd meeting Room	None

None = No Asbestos Structures Detected

TABLE OF LEAD PAINT CHIP SAMPLING RESULTS

Sample #	Item / Location	Result (%)
1	Window Casing Ext	29.9
2	Fire Escape	1.79
3	Upper Trim	5.62
4	Front Door	3.41
5	Front Door Casing	17.7
6	Window Casing	34.7
7	Wall Brown	0.894
8	Baseboard	25.9
9	Mens Door	0.81
10	No Sample	
11	Wall	0.101
12	Wall red	4.97
13	Wall White	0.165
14	Post	10.2
15	Ceiling	0.165
16	Closet Wall Yellow	24.5
17	Stringer	1.78

18	Tread	0.240
19	Door Casing	9.20
20	Baseboard	5.02
21	Wall	0.295
22	Wall	0.322

<RL = Less Than Reporting Limit

Results & Discussion

Asbestos was identified in the entry floor tile.

Lead was identified in the windows, exterior siding, trim, interior trim, some walls. The legal threshold to consider lead paint leaded is 5%. The entire exterior should be considered lead paint, all windows, and much of the interior paints contain lead. Some hidden lead components may exist within the building.

No suspect PCB materials were observed.

COST ESTIMATE

Item / Location	
Lead remediation varies depending on approach. To completely de-lead the property would likely require siding replacement, window replacement and significant interior renovations. Historical preservation requirements could affect mitigation options to more expensive methods.	\$150,000-\$300,000
Asbestos Floor Tile	\$2,000

The laboratory reports are presented in Appendix 1.

If you have any questions regarding this report or require additional services, please do not hesitate to contact our office at (603) 664-5500.

Respectively submitted,
Desmarais Environmental, Inc.



Raymond G. Desmarais, CIH, CSP
New Hampshire Licensed Inspector, Management Planner & Designer
New Hampshire License #024-IMD

Appendix 1: Laboratory Reports



Ray Desmarais
Desmarais Environmental, Inc.
320 Hemlock Lane
Barrington NH 03825

Project Reference:
Laboratory Batch #: 2140299
Date Samples Received: 10/12/2021
Date Samples Analyzed: 10/25/2021
Date of Final Report: 10/26/2021

SAMPLE IDENTIFICATION:

Fourteen (14) samples from Masonic Temple, Freedom, NH project were submitted by Ray Desmarais on 10/12/2021

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinous bound materials may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additionally, there is currently no approved EPA analytical method to reliably confirm vermiculite as non-asbestos containing. Additional analytical methods may be required. Optimum Analytical recommends using Transmission Electron Microscopy (TEM) or other approved methods for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Point Count = .25%, 1000 Point Count = 0.1%; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: Masonic Temple, Freedom, NH

ORDER #: 2140299
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/25/2021
REPORT DATE: 10/26/2021
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
2140299-001 1	Entry Floor Tile, Beige/Green	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Non-Fibrous Material	1% 97%
	Total % Asbestos:			2.0%	Total % Non-Asbestos: 98.0%	
2140299-002 2	Entry Adhesive, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	2% 98%
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
2140299-003 3	Men Linoleum, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
2140299-004 4	Men Adhesive, No Adhesive Present	LAYER 1 100%				
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
2140299-005 5	Boiler Room LAYER 1 Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	6% 2% 92%
	LAYER 2 Skim Coat/ Coating, Purple	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
2140299-006 6	Boiler Room LAYER 1 Plaster, White	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	6% 2% 92%
	LAYER 2 Skim Coat/ Coating, Purple	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
2140299-007 7	Boiler Room LAYER 1 Skim Coat, Purple	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
	LAYER 2 Plaster, White	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	
	Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%	



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: Masonic Temple, Freedom, NH

ORDER #: 2140299
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/25/2021
REPORT DATE: 10/26/2021
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2140299-008 8	Entry Sheetrock Composite, Gray Note: No Joint Compound Present	LAYER 1 100%	None Detected	Cellulose Fiber 10% Non-Fibrous Material 90%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140299-009 9	Boiler Room Felt, Black	LAYER 1 100%	None Detected	Cellulose Fiber 90% Non-Fibrous Material 10%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140299-010 10	Kitchen Linoleum, Gold	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140299-011 11	Kitchen Adhesive, Note: Insufficient Adhesive for Analysis	LAYER 1 100%		
2140299-012 12	2nd Meeting Room Ceiling Panel, Gray Note: No Joint Compound Present	LAYER 1 100%	None Detected	Cellulose Fiber 10% Non-Fibrous Material 90%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140299-013 13	2nd Meeting Room Wall, Gray Note: No Joint Compound Present	LAYER 1 100%	None Detected	Cellulose Fiber 10% Non-Fibrous Material 90%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
2140299-014 14	2nd Meeting Room Paper Under Carpet, Gray Note: Appears to be Sheetrock	LAYER 1 100%	None Detected	Cellulose Fiber 10% Non-Fibrous Material 90%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%

Analyst Signatory: 
 Kristina Scaviola





OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

CLIENT: Desmarais Environmental, Inc.
ADDRESS: 320 Hemlock Lane
CITY / STATE / ZIP: Barrington NH 03825
CONTACT: Ray Desmarais
DESCRIPTION: PLM Analysis
LOCATION: Masonic Temple, Freedom, NH

ORDER #: 2140299
PROJECT #:
DATE COLLECTED:
COLLECTED BY: Ray Desmarais
DATE RECEIVED: 10/12/2021
ANALYSIS DATE: 10/25/2021
REPORT DATE: 10/26/2021
ANALYST: Kristina Scaviola

2140299

Sample Log and Chain of Custody Record

Project: Masonic Temple Freedom NH

Normal Turnaround Please

Sample #	Description	Location	Analysis
1	Floor Tile	Entry	PLM ASB
2	Adhesive	Entry	PLM ASB
3	Linoleum	Men	PLM ASB
4	Adhesive	Men	PLM ASB
5	Plaster	Boiler Room	PLM ASB
6	Plaster	Boiler Room	PLM ASB
7	Plaster	Boiler Room	PLM ASB
8	Sheetrock Composite	Entry	PLM ASB
9	Felt	Boiler Room	PLM ASB
10	Linoleum	Kitchen	PLM ASB
11	Adhesive	Kitchen	PLM ASB
12	Ceiling Panel	2 nd meeting Room	PLM ASB
13	Wall	2nd meeting Room	PLM ASB
14	Paper under carpet	2nd meeting Room	PLM ASB

Sampled By:	Ray Desmarais
Shipped To:	Optimum
Received By:	<i>RS</i> 10/12/21 @ 12:30

Laboratory Report

Contact: Jamie Noel
Client: Optimum Analytical & Consulting, LLC
Address: 85 Stiles Road, Suite 201
 Salem, NH 03079

Batch #: C 308873
Date received: 10/14/2021
Date analyzed: 10/14/2021
Date of report: 10/14/2021
 Date of revision: 10/27/2021

Project # 2140279
P.O.# N/A
Project Site: 29 Old Portland Rd.
 Freedom, NH Masonic Temple

AIHA-LAP, LLC Lab ID 102754

Lead Analysis In Paint Using SOP Based on SW846-7000B/3051
 Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 688870	1	10/11/21	Window Casing Ext	33.9	0.021	
C 688871	2	10/11/21	Fire Escape	1.79	0.032	
C 688872	3	10/11/21	Upper Trim	5.62	0.043	
C 688873	4	10/11/21	Front Door	3.41	0.018	
C 688874	5	10/11/21	Front Door Casing	17.7	0.015	
C 688875	6	10/11/21	Window Casing	34.7	0.011	
C 688876	7	10/11/21	Wall Brown	0.894	0.017	
C 688877	8	10/11/21	Baseboard	25.9	0.040	
C 688878	9	10/11/21	Mens Door	0.81	0.018	Paint+Wood
C 688879	11	10/11/21	Wall	0.101	0.017	

 Simona Peavey, Tech. Manager Chemistry
 Aimee Cormier, Lab Director

Page 1 of 3

Unless otherwise indicated, all samples were received in acceptable condition.
 All results apply only to the samples tested and as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
 RL-Reporting Limit(%by weight) Note on units: mg/Kg is the same as ppm by weight.
 RL-Reporting Limit; Defined as the lowest concentration the laboratory can accurately quantitate.
The Report shall not be reproduced except in full without the written approval of the laboratory.
 Please visit our website at www.proscience.net for the current accreditation status.

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Contact: Jamie Noel
Client: Optimum Analytical & Consulting, LLC
Address: 85 Stiles Road, Suite 201
 Salem, NH 03079

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Lead Analysis In Paint Using SOP Based on SW846-7000B/3051
 Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 688880	12	10/11/21	Wall Rd	4.97	0.020	
C 688881	13	10/11/21	Wall White	0.165	0.043	
C 688882	14	10/11/21	Post	10.2	0.023	
C 688883	15	10/11/21	Ceiling	0.165	0.032	
C 688884	16	10/11/21	Closet Wall Yellow	24.5	0.043	
C 688885	17	10/11/21	Stringer	1.78	0.024	
C 688886	18	10/11/21	Tread	0.240	0.040	
C 688887	19	10/11/21	Door Casing	9.20	0.017	
C 688888	20	10/11/21	Baseboard	5.02	0.088	
C 688889	21	10/11/21	Wall	0.295	0.033	

 Simona Peavey, Tech. Manager Chemistry
 Aimee Cormier, Lab Director

Page 2 of 3

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Contact: Jamie Noel
Client: Optimum Analytical & Consulting, LLC
Address: 85 Stiles Road, Suite 201
 Salem, NH 03079

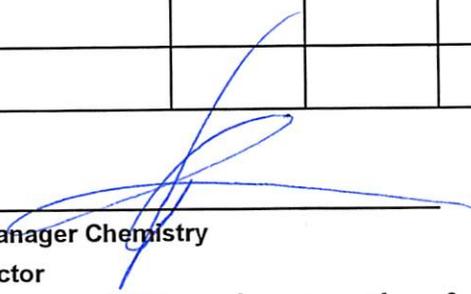
Batch #: C 308873
Date received: 10/14/2021
Date analyzed: 10/14/2021
Date of report: 10/14/2021
 Date of revision: 10/27/2021

Project # 2140279
P.O.# N/A
Project Site: 29 Old Portland Rd.
 Freedom, NH Masonic Temple

AIHA-LAP, LLC Lab ID 102754

Lead Analysis In Paint Using SOP Based on SW846-7000B/3051
 Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 688890	22	10/11/21	Wall	0.322	0.039	Paint+Paper



Simona Peavey, Tech. Manager Chemistry
Aimee Cormier, Lab Director

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 Please visit our website at www.proscience.net for the current accreditation status.

Aerobiology Boston

From: Jamie Noel <jamie.noel@optimumanalytical.com>
Sent: Wednesday, October 27, 2021 8:18 AM
To: Aerobiology Boston; Kristina Scaviola; Ann Berrigan
Subject: RE: C308872 and C308873 Reports 33 Old Portland Rd., Freedom, NH
Attachments: C308873 Report 33 Old Portland Rd., Freedom. NH.pdf

Hi Guys,

Can you amend the report address to **29 Old Portland Road Freedom, NH Masonic Temple?**

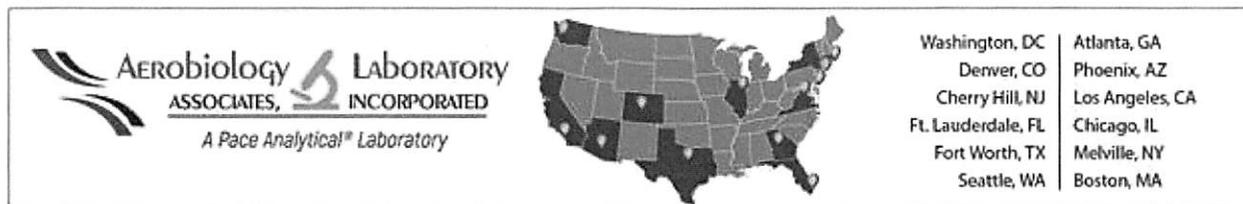
Thank you

From: Aerobiology Boston <boston@aerobiology.net>
Sent: Wednesday, October 20, 2021 3:45 PM
To: Jamie Noel <jamie.noel@optimumanalytical.com>; Kristina Scaviola <kristina.scaviola@optimumanalytical.com>; Ann Berrigan <ann.berrigan@optimumanalytical.com>
Subject: C308872 and C308873 Reports 33 Old Portland Rd., Freedom, NH

Good afternoon:
Your report is attached.
Paula

We appreciate your business!

Aerobiology Laboratory Associates Inc.
22 Cummings Park
Woburn, MA 01801
Lab (781) 935-3212
Fax (781) 932-4857



This e-mail (and the documents accompanying it) is intended only for the use of the individual to which it is addressed. It may contain confidential information, which is privileged belonging to the sender. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution on the contents of this information is strictly prohibited. If you have received this transmission in error, please notify us and destroy this item and its attachments. This e-mail (and the documents accompanying it) is intended only for the use of the individual to which it is addressed. It may contain confidential information, which is privileged belonging to the sender. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution on the contents of this information is strictly prohibited. If you have received this transmission in error, please notify us and destroy this item and its attachments.

Turner Septic Inspections

PO Box 1753 North Conway NH 03860

Septic Inspection Report



Inspection date 9/3/2021

Site Location 33 Old Portland rd.,
Freedom, NH 03836

Weather partly cloudy, 72

Client Bergeron Technical

Mailing Address

Phone 603-356-0022

Email Shawnb@bergerontechnical.com



Design Capacity building was an old school, converted to town offices

Actual number of bedrooms none

Number of Bathrooms one

Year Round or Seasonal Occupation year round, Daytime

Garbage disposal present no

Dishwasher present no

Washing machine present no

Septic Tank

Condition fair, no visible cracks

Intake pipe pvc, good flow

Baffles concrete, fair condition

Tank Type concrete

Tank Capacity 1250 gallon

Access for Tank Cleaning yes

Filter no

Depth to Cover 12"

Liquid Level pumped day before inspection

Solids Level "

Scumm Level "

Distance to Well town water

Pump Station N/A

Tank and Cover
Access to Pump Station
Pump Working
Alarm Float
Pump Float
Effluent Filter
Access for Filter Cleaning
Depth to Cover
Access Riser

Disposal Field

Type of field stone and pipe trenches
Disposal field located yes
Size of field in square feet 42'x25' approximately
Condition of Field leach field was dry, with appropriate signs of use for its age
grown trees present in/above leach field

Additional Comments and Summary

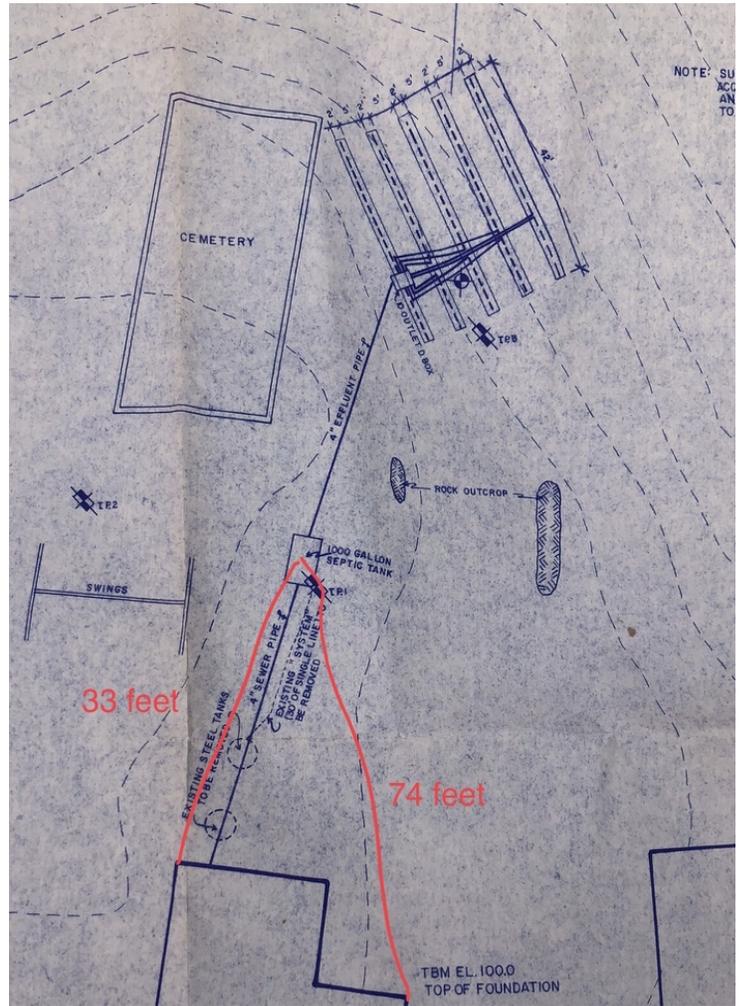
septic system appears in working condition. septic tank was pumped prior to inspection, so system could not be loaded for perc test.

trees in/above leach field should be removed, and Root Kill applied





View from pump out towards the building



Company Disclaimer

All statements are the opinions of Turner Inspections

1. In order to do a thorough inspection of the Subsurface Wastewater Disposal System, Turner Inspections must physically dig up covers on septic tanks and dig inspection holes. These will be conducted with the least disruption of property as reasonably possible.

2. Based upon what we were able to observe and our experience with on-site wastewater technology, we submit this Subsurface Wastewater System Inspection Report based on the present condition of the on-site sewage disposal system. Our company has not been retained to warrant, guarantee, or certify the proper functioning of the system for any period of time in the future. Because of the numerous factors (usage, soils characteristics, previous failures, ground water, etc.) which may affect the proper operation of a septic system as well as the inability of our company to supervise and monitor the use and maintenance of the system, this report shall not be construed as a warranty by our company that the system will function properly for any particular prospective buyer. Turner Inspections disclaims any warranty, either expressed or implied, arising from the inspection of the septic system or this report. We are also not ascertaining the impact the system is having on the ground water.

Inspection Performed by:

Seth Turner of Turner Septic Inspections
 State of NH Septic System Evaluator #0197
 1727 East Conway rd.
 Center Conway, NH 03813

603 307 4973

This report was completed in accordance with minimum reporting criteria. The information contained in this report accurately describes the conditions observed relative to the specific items referenced in this report that existed on the inspection date. I have studied the information contained herein and assert that my assessment is honest, thorough, and to the best of my ability true and correct.

Town Office Advisory Committee
Town of Freedom
PO Box 227
Freedom, NH 03836

February 2, 2021

Mr. Shawn Bergeron
Ms. Kate Richardson
Bergeron Technical Services, LLC
PO Box 241
North Conway, NH 03860

Dear Shawn and Kate,

This is the committee's input into BTS' development of a formal proposal and agreement form between the town of Freedom and BTS to complete a feasibility study for rehabilitation and/or addition to the existing town office. This is the committee's best effort to describe the work. If you find we have left out important activities, please add them and highlight their inclusion for the committee to review.

Warrant Article Language

At the March 10, 2020 town meeting, the Board of Selectmen proposed Article 30 to form the Town Office Advisory Committee. The original article included looking at a new building site, but it was amended to focus only on the existing Town Office. The language is below:

Article 30 (as amended on the floor):

To see if the Town will vote to raise and appropriate the sum of \$40,000 (forty thousand dollars) to conduct a feasibility study for the restoration and/or addition to the existing Town Office and further to create a Town Office Advisory Committee to consider ways to optimize the Town Office space, accessibility and mobility needs with \$40,000 to come from the previously established Municipal Land and Building Capital Reserve Fund. No amount to be raised from taxation. Recommended by the Board of Selectmen 3-0

Committee's Goals for the Town Office Building

Things to Protect

- Preserve the first and second floor lobbies
- Preserve the staircase
- Maintain look of the exterior of the building
- Find alternatives for using the second floor of the town office building for more than storage

Possibilities (Perhaps, in a later phase)

- Replace vinyl siding with clapboards
- Restore cupola

Committee's Options (BTS may propose another option that might meet space needs)

1. Rehabilitate the town office building (only) to meet space needs.
 - a. No ADA provisions for public use of second floor
 - b. Access second floor with elevator or simpler handicapped lift
2. Rehabilitate the town office and the Masonic temple to meet space needs

Project Steps

1. Evaluate structures
 - a. Update analysis of town office building
 - b. Analyze the Masonic temple building
2. Determine base needs and wants
 - a. Interview department heads
 - b. Review with committee
 - c. Consider impact of technology on these needs
 - d. Identify life safety and accessibility requirements for using these buildings
3. Generate preliminary schematics for alternatives (1a, 1b, 2 above and/or a potential BTS alternative) to determine how to meet the needs
4. Jointly (with the committee) create and execute a communications plan for educating the community on needs and alternatives, solicit community input, and build support for the project
5. Develop presentations and host community meetings on alternatives
6. Develop cost estimates for the top 2 alternatives
7. Draft one (preferably) or two warrant articles for the March 2023 town meeting

Timing:

The committee decided to postpone its work for a year to work with BTS. Your current schedule to start in August for a November/December 2021 completion will not give the committee sufficient time to do community outreach, engage the community, and gain support. The committee wants to have the summer months to work with the community. At our January 22 meeting, you said the delay would allow you to start in later spring and complete in the summer. Please specify the detailed schedule that you can meet in your proposal.

If you need any additional information to complete your work, please contact me at annebcunningham@gmail.com or 917-930-3046.

Sincerely,



Anne B. Cunningham
Committee Chair

- **Answers underlined in bold were expressed and emphasized by multiple staff**
- Answers underlined were expressed by multiple staff

Your NEEDS list: What do you need to do your job? (e.g., amount of space, areas for storage, Wi-Fi, number of electrical receptacles) This list can be things you have or do not have currently.

- **More Space**
- Service window/counter
- Better storage solution for records – on site, one area, climate controlled
- Better internet service
- More electrical receptacles

Your WANTS list: Items that would be nice to have to help you do your job and enjoy your space/working environment but are not necessary for you to do your job.

- Single story office area for all staff
- Pest control (hornets and rodents)
- Separate staff & public restrooms
- Breakroom/kitchenette & personal item storage (coats, purses) – Staff room
- Small meeting room with plan table

Is there anything currently missing from your office or workspace that you need to your job effectively?

- **Legitimate, safe, consolidated file storage**
- Easy access to printing and scanning

Is there any feature of your office or workspace that is outdated or that you do not currently need?

100-amp electrical service – larger needed and constantly throwing breakers

What do you enjoy most about the Town Office building? (You can list as many things as you'd like)

- No responses to this question (Several mentions of the building not being ideal for offices)

What bothers you most about the Town Office building? (Again, list as many things as you'd like)

- Does not work effectively as a town office building
- Too much maintenance has been deferred for too long
- Driveway access
- Parking configuration (also parking not defined – no striping)
- Soft, sloping floors

Do you feel the Town office building is safe in the event of an environmental emergency, such as a fire or weather event?

- **All no's – lack of legitimate exits/egress from both floor levels mentioned. Exterior door in Leen's office does not operate as it should, fire escape door is hard to open and no one feels comfortable using the fire escape.**

Do you feel the Town office building is safe in the event of a security emergency (break-ins, theft, staff physical safety)?

- All no's. There is no accountability for access to staff-only areas. (Similarly, no control over sensitive information)
- *There is no legitimate separation of the staff areas from the public areas, and staff are subject to the public without a barrier (service windows desired)*
- *Staff are unable to monitor the parking area and entry door*

Do you feel your office is too difficult to access by the public, adequately accessible by the public or too easy to access by the public?

- *Too accessible at the main floor level and not accessible enough at upper floor (both able-bodied and disabled visitors)*

How do you feel about the interior environment of the building? (Heating, cooling, ventilation, lighting, noise from adjacent areas, noise from the exterior)?

- **Air quality is #1 concern**
- Interior environment is not controllable
- Building in general is drafty – especially near/around windows
- Lighting is insufficient and not adjustable (dimmers would be nice)
- *The second story of the building is warm to hot throughout the year*
- *The interior environment is not suitable for storage of documents and office supplies. Humidity has damaged*
- *High ceilings make climate control difficult and inefficient*

If you regularly work with other Town staff or departments, which?

- *Admin works closely with all departments*
- *Building-zoning work closely together*

Does your office provide you with enough privacy from other staff?

- *Staff can easily hear between adjacent offices*

Does your office provide you with enough accessibility to other staff? If no, which staff members or departments need to be more accessible to you?

- **Departments on separate floors are not easily accessible to each other**

Do you have any other comments you would like to add regarding the Town Office building?

- **Building access – specifically the driveway being so steep**
- Parking is not defined, there have been several incidents
- Floors are soft and sloping – concern over heavy furniture tipping
- *Septic has backed up multiple times in recent history*
- *The flow of the building is not ideal for offices*

- *Upper level needs to be accessible if offices are to remain*

As the people who use the Freedom Town Office the most and are there for extended periods of time, your input is invaluable towards improving the space and functionality of the Town Offices. The following questions relate to the Freedom Town Office Building. We would like to hear your needs and wants relative to the building and its systems. For example:

- The heating, ventilation, and air-conditioning (HVAC) system
 - Electrical system
 - Plumbing system
 - Spaces, areas, and facilities provided to staff and the public in and around the building
 - Special needs or wants that you feel should be provided
1. Your NEEDS list: What do you need to do your job? (e.g., amount of space, areas for storage, Wi-Fi, number of electrical receptacles) This list can be things you have or do not have currently.
 2. Your WANTS list: Items that would be nice to have to help you do your job and enjoy your space/working environment but are not necessary for you to do your job.
 3. Is there anything currently missing from your office or workspace that you need to your job effectively?
 4. Is there any feature of your office or workspace that is outdated or that you do not currently need?
 5. What do you enjoy most about the Town Office building? (You can list as many things as you would like)
 6. What bothers you most about the Town Office building? (Again, list as many things as you would like)
 7. Do you feel the Town office building is safe in the event of an emergency? For example, a fire or weather event?
 8. Do you feel the Town office building is secure, either during or outside of working hours? (break-ins, theft, staff physical safety)
 9. Do you feel your office is too difficult to access by the public, adequately accessible by the public or too easy to access by the public?
 10. How do you feel about the interior environment of the building? (Heating, cooling, ventilation, lighting, noise from adjacent areas, noise from the exterior)?
 11. If you regularly work with other Town staff or departments, which ones?
 12. Does your office provide you with enough privacy from other staff?
 13. Does your office provide you with enough accessibility to other staff? If no, which staff members or departments need to be more accessible to you?
 14. Do you have any other comments you would like to add regarding the possible renovation and continued use of the Town Office building?

Bergeron Technical Contact Information:

Kate Richardson, Project Manager

Ph. 603.356.0022

Email: KateR@BergeronTechnical.com

Town Office Advisory Committee
Anne B. Cunningham, Committee Chair
Town of Freedom
P.O. Box 227
Freedom, NH 03836

BERGERON

TECHNICAL SERVICES LLC



P.O. Box 241
North Conway, New Hampshire 03860

May 12th, 2022

Reference: Masonic Temple

Dear Anne,

Please express our thanks to your committee for taking time to meet with me and Kate last week. From our perspective we felt the meeting was quite productive as both sides were able to bring the other up to speed on their thoughts and findings. This letter is in response to your request to quickly summarize our thoughts about the Masonic Temple.

As we talked about when we met, we inspected the Temple from bottom to top. We started by thoroughly investigating the crawl area beneath the building and completed our efforts up in the attic area.

Beginning beneath the building, we found the floor structure and its supports to be in relatively good condition, particularly when one considers the age of the building. We did note some powder post beetle activity and some vertical supports that need to be improved but nothing that cannot be repaired. Interestingly the crawl area is very dry and appears to have always been that way. In a few concentrated areas beneath the building, we noted piles of wood shavings that may remain from when the building was built. As someone who enjoys working with hand tools, Shawn couldn't help but to think that he may have found the remnants of mortise and tenon joints having been cut by hand tools many years before. It is hard to imagine these shavings would still be as intact as what we found but we have no other explanation! As mentioned, the lowermost floor and its supports are adequate and can be reasonably improved.

Above the lowermost floor, the building's structural abilities deteriorate quickly.

Based on some historical research and conversation with long-term Freedom residents, we learned the original building had been a church and was primarily a single-story of post and beam construction. For the original structure, structural bents were placed perpendicular to the long axis of the building, with the bents being the component that supported the walls and roof. Recall that this had originally been a single-story building – other than the area immediately inside the main (south) entry. Beyond the south entry, to the north, the majority of the building had the main (slightly above grade level) floor, with what was likely a wonderful, vaulted ceiling up to the underside of the gable roof. At the eaves, the transition from the vertical outside walls to the sloped gable roof was transitioned in graceful plaster arches. In its life as a church, there were two components that visually interrupted the floor to ceiling exposure. The first would have been horizontal "collar ties" running laterally from east to west at each structural bent. The second was a "king post" which was a vertical tension member running from the underside of the ridge beam, downward to the center of each collar tie. The king post held the middle of the collar tie from sagging downward as in order for the collar ties to sag, each would have to have pulled the king post, and therefore the roofs ridge beam, downward. The combination of the collar ties and king posts were important as they performed the important function of laterally connecting the eave walls together, holding the two long-axis walls straight and plumb, and also preventing the roof from dropping downward. Unfortunately, when the upper floor was constructed, the collar ties and king posts were likely "in

Page 1 of 3

the way" as their orientation across the narrow dimension of the building and hanging downward from the ridge, probably placed a "head bumper" at each bent. Our belief is that the upper floor was built and then, the collar ties and king posts were removed. With these important structural members removed, there began a slow but likely consistent structural deterioration where the east and west wall splayed outward, and the roof dropped downward. Before the collar ties were removed however, the tradesmen knew that some component was needed to tie the long axis exterior walls together and they attempted to accomplish this task and another, by installing the vertical columns, the lateral support beams (concealed within the floor/ceiling assembly) and lateral tension rods and bridges which can be observed in the main level meeting room. These components were to accomplish two tasks; the first to offset the outward forces on the long axis walls/prevent the roof from dropping downward but also, the beams that are concealed within the ceiling above the tension rods are supporting the second floor's floor joists. These joists represent a more common (by today's standards) "stick built" type of construction as compared to the original post and beam. The floor joists beneath and supporting the Masonic Temple floor are oriented north to south, running parallel to the long axis of the building. These joists are supported at their bearing ends by the concealed beams. Unfortunately, the vertical columns, tension rod ties and concealed beams are either insufficient to offset the structural loads that are applied to them (upper floor live and dead load in addition to splaying forces from roof loads) or their placement is too low which has allowed downward and outward movement despite their presence. The splaying of the long axis (eave) walls and the downward movement of the roof can best be observed from the exterior of the building. The former by viewing down the length of the roof eave from ground level and the latter by viewing up the roof slope from below the eave. In addition to the flawed second-floor construction, various roof related building components from the uppermost roof supporting beam along the east wall to the supportive purlins and roof sheathing have deteriorated with only some having been improved over time. At the east side of the building, the uppermost eave wall support beam has been somewhat repaired and the roofs structural members and sheathing somewhat repaired and replaced. At the west roof slope, the roof sheathing and structural components appear to be original.

What to do from here?

First, please know that Bergeron Technical enjoys the building and its history and we have a long history of helping our clients in saving old structures. Some examples are the Madison Town Hall, the Majestic Theater, the Ossipee Freight House, and the Wolfeboro Freight House. With those examples presented, we have to say we are concerned for the future of this building. The main floor level is structurally adequate for reasonable use however "reasonable" needs to be carefully defined. At the upper floor, from a structural perspective, we are not comfortable with anything more than very light occupancy and any occupancy should be relatively static. A large dance group and observers, for example could be disastrous. Also, the time of year and accumulation of snow and ice on the roof has to be considered. Accumulated snow load will likely be the greatest load the building is normally exposed to and with the moderately rusted and mechanically fastened steel roofing, snow accumulations will likely remain in place longer than what many would expect. Additionally, the building is not heated during the winter which also leads to accumulated snow remaining on the roof. The other structural (roof) condition that has to be considered is unbalanced loads, the transfer of energy laterally across the roof when one side of the roof sheds accumulated snow yet the snow on the opposite side remains.

In addition to structural concerns which are building code items, we also must mention life safety concerns which are fire code related. At the main (grade floor) level there are two exits, the main entry at the south gable and a single door at the southwest corner of the main meeting room. Because these exits are very close to one another it is possible that should one become unavailable for example because of a fire emergency, the other

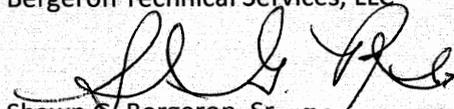
could be unavailable too. At the Masonic Temple level, should the main (south) stairway become unavailable, upper floor occupants would have to use the steel fire escape that is fastened to the north gable end wall. We have little faith that this egress element would remain structurally sound should a few occupants be moving quickly downward. Additionally, in the event of a loss of electrical power, both building levels would be thrown into total darkness as there are no emergency lights.

Let's consider the ultimate questions as we know they are going to be asked:

1. Can this building be saved?
 - Absolutely, Bergeron Technical can help our clients save almost any building.
2. From the structural perspective, which is the place to begin, what would saving this building entail?
 - First, you would have to identify the use of the building and its configuration. Most importantly we need to know if the people of Freedom want to continue with having the two building levels, which we believe is required however, this should be verified.
 - The second step would require a detailed structural documentation of all building components and a determination of which ones can be saved, which ones need to be improved and which ones will need to be replaced. This will require an in depth and somewhat destructive structural analysis and detailing of the building's structural components which would lead to the development of a structural improvement plan. This plan would be based on the requirements of the International Existing Building Code, not the International Building Code as this would be the rehabilitation of an existing structure.
3. Is it "worth it" to save this building?
 - Only the people of Freedom can answer this question. The more in-depth structural review and plan will cost at least twenty-thousand dollars and perhaps more. When that's complete, you would only have the plan to make the necessary improvements.
 - Implementation of the structural improvement plan, even with us not knowing what that will entail at this time, could cost a lot of money. With approximately 2,200 square feet of building to structurally improve, at \$75.00 per square foot for improvements (which may be low in this current construction-cost environment) the cost would be one hundred sixty-five thousand dollars.
4. Then, with the structural improvements having been completed, the building will still need improvements to its electrical, plumbing and heating systems along with improvements to handicap accessibility and means of egress.

Thank you for asking Bergeron Technical to assist in this important study. Please know that we want to help the people of Freedom make informed decisions so don't hesitate to ask questions. We will do the best we can to answer them accurately.

Sincerely,
Bergeron Technical Services, LLC

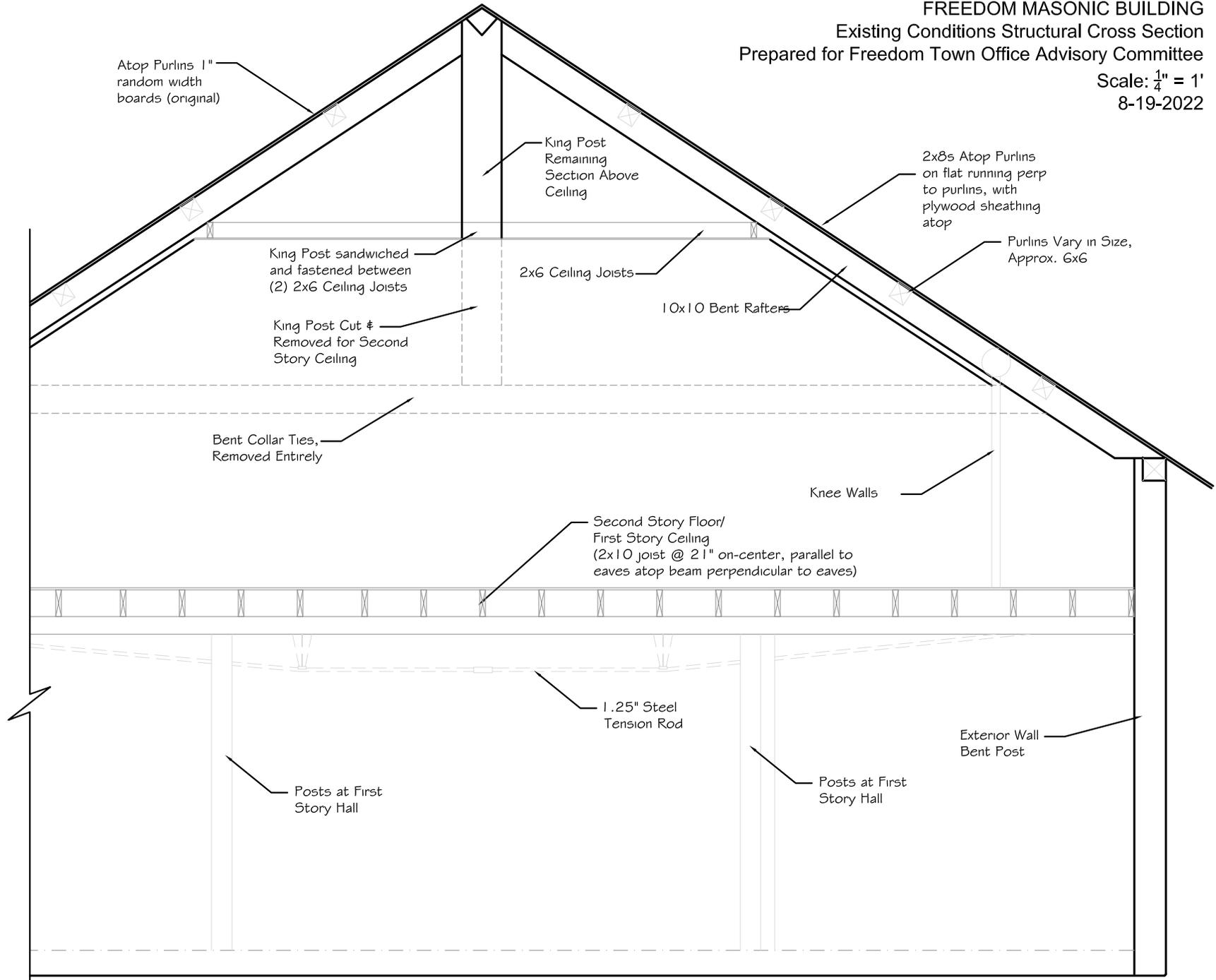

Shawn G. Bergeron, Sr.
Manager/Owner



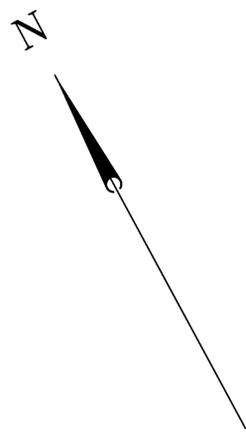

Katharine M. Richardson
Project Manager/Owner



FREEDOM MASONIC BUILDING
Existing Conditions Structural Cross Section
 Prepared for Freedom Town Office Advisory Committee
 Scale: $\frac{1}{4}'' = 1'$
 8-19-2022

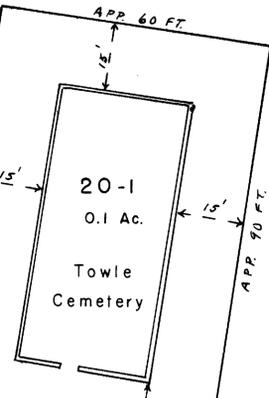


Cross Section View Looking To North Gable Wall

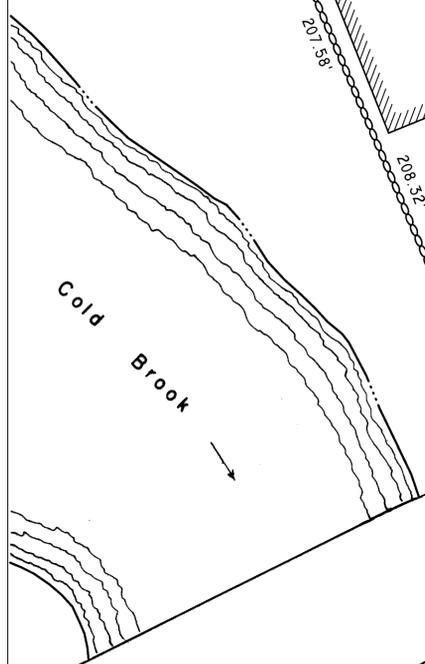


Map 8, Lot 41

Map 52
Lot 20



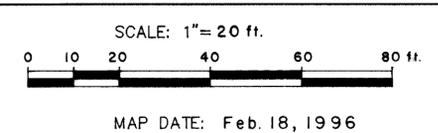
Map 52
Lot 20



OLD PORTLAND ROAD

HEB Engineers, Inc.			
NO.	REVISION	DATE	BY
4	BLA between Lot 13 & 14	01/30/17	JLT
3	Updated edge of river, standard line types	10/22/10	BCL
2	Updated adjacent Map and Lot numbers	02/29/08	BSG
1	Added precinct building 14-A	06/01/06	MAD

LEGEND
 9 TAX MAP LOT NUMBERS
 ORIGINAL SUBDIVISION LOT NUMBERS
 21 ADJACENT MAPS
 FOR ASSESSMENT PURPOSES
 NOT TO BE USED FOR CONVEYANCES



REVISED TO APR. 01, 2017
 BY: HEB ENGINEERS, INC.
 P.O. BOX 440, NORTH CONWAY, NH
 03860 (603) 356-6936
 PREPARED BY
ROGER S. BURNELL, CONWAY, N.H.

PROPERTY MAP
TOWN OF FREEDOM
 CARROLL COUNTY, NEW HAMPSHIRE

52-A
 MAP NO.