### **CLARK HOUSE - BUILDING STUDY**

submitted to the:

### TOWN OF PENFIELD, NY

December 2020







NEW YORK

### PENFIELD CLARK HOUSE **BUILDING STUDY**

December 2020

### INDEX

1. **EXECUTIVE SUMMARY** BACKGROUND PROCESS SUMMARY OF RECOMMENDATIONS NEXT STEPS

#### APPENDIX 2.

**EXISTING CONDITION DRAWINGS** SCHEMATIC FLOOR PLAN DRAWINGS SCHEMATIC-LEVEL CODE REVIEW STRUCTURAL REPORT MECHANICAL & ELECTRICAL REPORT ASBESTOS SURVEY LEAD ASSESSMENT



### PENFIELD CLARK HOUSE NEW YORK BUILDING STUDY

November 2020

### 1. EXECUTIVE SUMMARY

BACKROUND

PLAN Architectural Studio, PC (PLAN Studio) was commissioned by the Town of Penfield to perform a Study for the existing Clark House building (former clubhouse for the former Shadow Pines golf course).

The purpose of the Study is to assess the existing building for use as a restaurant tenant. The primary focus for the Study is to identify potential building code and remedial renovation work required.

According to the book *Images of America: Penfield* by Martin M. Wamp (with support from Kathy Kanauer from the Penfield Local History Room, and others), the Clark House was built circa 1832. In 1985 the property was purchased to become the Shadow Pines golf course. The house was dubbed the 'Clark House' and renovated as a clubhouse and restaurant. In 1986 it became a local Penfield Landmark.

The Town of Penfield took ownership of the property in 2018. The golf course is now slated for park usage and a master plan has been developed. The Town plans to maintain ownership of the Clark House and lease the building to a restaurant tenant.

Note: For a more detailed synopsis of the Clark House history please refer to the General Information section of the Structural Report.

**PROCESS** The Study process included a Building Assessment involving Architectural, Structural, Mechanical and Electrical Inspection and Conditions Report. Existing Conditions were documented and formatted into CAD floor plans and exterior elevations. In addition, a Schematic-Level NYS Building Code Review was performed.

> Hazardous Material Surveys for asbestos and lead-containing materials were also provided to our team from the Town.

Based upon the field inspections, reports, code review and hazardous material surveys, a summary of findings and recommendations was developed.

This summary has been organized based upon discipline and relative priority (from highest to lowest). We highly recommend that structural, life safety and code items be addressed first. It should be noted that, dependent upon the lease terms, some of these items can be addressed by either the Town (Building Owner) or the Tenant.

### SUMMARY OF RECOMMENDATIONS

ARCHITECTURAL The following architectural items are

recommended to be addressed:

### 1) Provide Code Compliant Accessible

**Ramp:** In order to provide a Code-Compliant Accessible Entrance, it is recommended that the existing ramp at the north entrance be renovated. The slope of the ramp shall note exceed 1:12. If it does it must be replaced with a compliant slope. The existing railings should be replaced with new code compliant railings (i.e. correct height, extension length, etc.). Stainless steel railings are recommended. Refer to the Code Review and the structural concrete slab recommendations for additional information.

2) Provide Code Compliant Accessible Toilet Rooms: In order to provide Code-Compliant Accessible Toilet Rooms, it is recommended that the first floor toilet rooms be renovated and reconfigured. Refer to the Concept First Floor Plan for a potential layout that could address both accessibility and the fixture count required by the projected occupant load. Refer to the Code Review for additional information. It is recommended that the basement area toilet rooms also be renovated, however access to the basement should be limited to staff only (not for public access).

3) Provide Code Compliant Kitchen & Dining Areas: The ultimate layout for the kitchen and dining areas will be determined by the tenant. Once a layout and design has been developed it will be required to be compliant with the Building Code as well as with the County Health Department. Refer to the HVAC Recommendations for additional

information regarding kitchen exhaust and makeup air.

**4) Replace Deteriorated Siding &Trim:** All Deteriorated trim boards, drip caps, casings, and clapboards (especially those at or near grade, i.e. skirt boards) should be replaced with cellular PVC, cement-fiber, or similar rot/insect-resistant trim materials. Stainless steel screws should be used to fasten all trim and finishes at or near grade. Refer to structural recommendations for sill beam/plate work.

### 5) Repair Wood Porch Structures:

The south and southeast exterior porch structures require shoring and repair. This work should be done in conjunction with the porch foundation work. Refer to structural recommendations for sill wood porches.

### 6) Roof Replacement:

The asphalt shingle roof appears to be in fair condition, however there is visible deterioration and moss accumulation. In addition, the second floor dormers are cut into the main gable roof and create moisture/flashing concerns. These areas have sheet asphaltic roofing. It is recommended that the entire roof be replaced, any/all damaged roof deck be replaced, and the dormer areas (and all other valleys and cricketed areas) be thoroughly waterproofed and flashed. Proper roof ventilation should also be addressed. It is recommended that an architectural asphalt shingle roofing system (with a min. 40-year warranty) be installed. In addition, during roof replacement, an effort should be made to retrofit the existing roof insulation in the most feasible manner towards the current code-compliancy (R-38) with the NYS Energy Conservation Code.

### 7) Repair/Replace Windows:

The existing windows are of various vintage, type and condition. Some of the window shutters are in poor condition. It is recommended that the original windows be restored. At these locations interior storms with magnetic attachment should be considered to increase the insulation value. Newer windows can be replaced over time as needed. When this work is done they should be replaced with windows that match the original windows aesthetically, and comply with the current

NYS Energy conservation Code. All damaged wood shutters should be repaired or replaced to match the existing shutters.

### **STRUCTUAL** The following structural items are recommended to be addressed:

**1) Sill Beams and Sill Plates**: Replace all rotting/damaged sill-beams and sill-plates with same-depth Parallam structural members. Pressure-treated plates and/or pressure-treated structural members may also be used in appropriate locations.

**2)** Column Replacement: Replace rusted pipe columns and all temporary jack-posts with new steel pipe columns having plates at top and bottom for proper attachment to the structure above and below. The new columns will need to be supported on new concrete footings.

**3) Concrete Slabs**: Cracked concrete pads and slabs should be replaced with appropriate depth 4,000 psi reinforced concrete on properly compacted fill. Care should be taken that snow removal techniques be used that do not involve the use of sodium chloride which will damage exterior concrete surfaces and rust iron railings.

**4) Wood Porches:** The existing wood porches are each near, or at, grade and should be replaced using full-perimeter block foundations to a minimum depth of 48" (or to the depth of undisturbed soil near the basement foundations). See concrete-slab recommendations. For the appearance of wooden porch floor-boards, a stamp may be used with colored concrete, or, possibly, the concrete pads may be surfaced with a material such as composite decking (i.e. Trex).

**5) Repair or Replace Railings:** Sand, scrape, and re-paint all existing rusted cast-iron railings, posts, and fastenings. Alternatively, railings can be replaced with new galvanized steel railing systems.

**6) Masonry Repointing:** Repoint block and re-grout stone masonry where required. Replace damaged or missing stone in kind. Mortar to match existing.

7) Divert Storm Water: At exterior stairs, efforts should be made to channel the

downspout water away from the foundations, perhaps draining it under the driveway to a drywell in the yard, if at all possible.

**8)** Forensic Structural Investigations: There are also some forensic structural investigations that should be performed in order to: 1) pinpoint and deal with the source of water on the east side of the original basement; 2) to assess the support of the Bar/Dining Rooms over the central crawl space; and 3) address the flexural/movement problems found in the Pro Shop ceiling/roof assembly and several nearby ceilings on the west side of the building.

HAZARDSOUSThe following hazardous material items are<br/>recommended to be addressed:

### 1) Abate Plaster Soffit at Patio:

Based upon the hazardous material survey provided by the Town, the plaster soffit at the patio roof is asbestos-containing. This plaster should be legally abated by a NYS Certified Asbestos Abatement Contractor and a new finish material (i.e. exterior grade gypsum board or other soffit material) should be installed.

### 2) Lead-Safe Practices:

Per the Lead-Based Paint Assessment Report provided by the Town, there are existing materials that have been found be lead-containing (both interior and exterior). Any/all contractors doing work that would disturb and/or remove lead-based paint should follow lead-safe construction practices.

**HVAC** The following HVAC items are recommended to be addressed:

1) Kitchen Exhaust System: The commercial kitchen hood and exhaust fan should be replaced with a new unit that meets the tenant's cooking requirements. Makeup air must be provided with such a system, but may be by a packaged makeup air unit or simply by a gravity opening such as a louver with a motorized damper, which appears to be the system in the existing kitchen. Typically in this climate, a makeup air unit with heating is provided. This unit would directly supply tempered makeup air to the kitchen to keep staff comfortable. The existing furnace system (with new equipment) that provides

comfort conditioning to the kitchen would remain for heating and cooling during normal operating conditions.

2) Dedicated Outdoor Air Unit (Ventilation):

To accommodate the significant ventilation requirement, a dedicated outdoor air system (DOAS) is recommended for serving the main open dining and bar area. Mechanical Code requires approximately 0.71 CFM/sf (dining area) and 0.93 CFM/sf (bar/cocktail area) for spaces of this nature, though these quantities may be reduced slightly if occupant density is less than 70 people/1000 sf (dining area) and 100 people/1000 sf (bar/cocktail area). The DOAS unit would be located outside, be ducted directly to the occupiable space, and operate only during business hours. Note that contiguous space, such as the open two-story dining/bar area, can receive ventilation air from one or multiple locations, provided the total ventilation requirements are met. The DOAS unit can also provide ventilation for either or both of the separated dining rooms as well.

3) Furnace systems: A new, high efficiency (95% AFUE or greater) condensing gas furnaces should replace the existing units. The ductwork would be reused, and airflow should approximately match existing systems to maintain air throw and distribution throughout the building. MERV 13 filters would be installed in a 4" filter housing. New condensing units with new linesets (as required due to new refrigerant being used) and new cooling coils would update an old technology with more efficient, reliable, and guieter cooling. New thermostats may be required, especially for multi-stage or modulating heating or cooling. Thermostats would be seven-day programmable. Since the occupancy is expected to be similar, the heating and cooling capacities of the systems do not need to change.

**4) General Exhaust Fans:** Exhaust fans for toilet rooms, custodial closets, and other small spaces would be ceiling-mounted and ducted directly outdoors. Existing fans in toilet rooms would be replaced by multispeed units with electronically commuted motors that automatically adjust fan speed based on occupancy.

**5) Registers, Grilles and Diffusers:** Registers, grilles, and diffusers would

replace existing air terminals in type and size. New terminals for supply air would include operable dampers for volume control.

6) Ductwork: New ductwork, as required, shall be designed and installed to SMACNA standards per the latest version of HVAC Duct Construction Standards, Metal and Flexible. Ductwork shop drawings shall be supplied for review prior to any fabrication or installation. All systems shall be fully ducted from the equipment out to the registers, grilles and diffusers.

**7) Insulation:** Supply and Outside Air ductwork in mechanical plenums; and Supply, Return and Ventilation ductwork in unconditioned spaces shall be insulated to NYS Energy Code requirements: R-6; 1 ½" thickness fiberglass insulation with continuous all service jacket to provide vapor barrier. Duct board will be used for ductwork exposed in mechanical equipment rooms, duct wrap for concealed ductwork in shafts or above ceilings. Exterior ductwork (for DOAS) will be insulated with R-12 duct board and rigid weatherproof jacket.

### PLUMBING & FIRE PROTECTION

panel.

1) Sprinkler Riser: Provide the existing sprinkler riser with (1) flow, (1) tamper, and (1) pressure switch. Each one of these shall be wired to the fire alarm control

The following Plumbing & Fire Protection

items are recommended to be addressed:

**2) Plumbing Fixtures:** Provide new ADA compliant plumbing fixtures in the public restrooms. Water closets shall be vitreous china, floor mounted with sensor operated flush valve. Urinals shall be wall-hung, vitreous china with sensor operated flush valves. Lavatories shall be vitreous china with single lever faucet. All fixtures, faucets, flush valves shall be of the water saving type.

**3) Replace Boiler:** Replace the existing gasfired domestic water boiler with a new, 95% AFUE gas-fired domestic water boiler. The pump and piping between the boiler and existing storage tank shall also be replaced. Set the storage tank to 140°F. Mix down the 140°F hot water with domestic cold using a thermostatic mixing

valve. Set the mixing valve outlet to  $105^{\circ}$ F and connect to existing hot water piping serving the bathrooms. Bypass the mixing valve with  $140^{\circ}$ F hot water and connect to existing domestic hot water piping serving the kitchen.

**4) New Domestic Hot Water Recirculation System**: Provide a new domestic hot water recirculation system for the building for both the 105°F and 140°F domestic hot water systems. Each recirculation system shall include an in-line pump, balance valves as required, an aquastat, and automatic time clock to meet Energy Code requirements.

**5) Insulation:** Insulate all existing to remain and new domestic water piping, fittings, and valves per the New York State Energy Conservation Construction Code.

6) Sanitary Scope: Scope existing sanitary sewer system to determine sizing, inverts, and condition. Confirm location and size of grease interceptor and have it cleaned.

**ELECTRICAL** The following Electrical items are recommended to be addressed:

1) New Fire Alarm System: Provide a new point addressable fire alarm system throughout the building. The fire alarm system shall consist of the following.

**2) Branch Circuit Panels:** Provide additional branch circuit panels as needed to accommodate the proposed loads for the new tenant.

**3) New Wiring:** Provide new wiring devices and branch circuits as required to connect all new equipment, and coordinate with the proposed layout of the new tenant. All branch circuit home runs to panelboards shall be in EMT conduit. Wiring from the ceiling space to the devices may be Type AC or MC cable and may be run horizontally in the walls.

**4) Interior Lighting Replacement:** All existing lighting shall be replaced with LED lighting with dimming capabilities. These luminaires shall be controlled by a Lighting Control Panel. Individual zones shall be dimmed to provide the proper lighting level. Lighting in offices, kitchen, toilet rooms, storage rooms, and non-public spaces shall be controlled by occupancy

sensors.

**5) Exterior Lighting Replacement:** All exterior lighting shall be replaced with LED lighting. These luminaires shall be controlled by a Lighting Control Panel.

# **NEXT STEPS** Based upon the building assessment and recommendation the following next steps are recommended (Note: these recommendations are for the Town's consideration only):

1) Construction Cost Estimation: Provide this Study to a Construction Manager (CM) to generate accurate Construction Cost estimates to address the recommended remediation items. The CM should provide a walkthrough of the building to better understand the existing conditions. The CM should provide a cost breakdown of each individual item. It should be noted that some items will require place-keeper rough-order-of-magnitude (ROM) costs (i.e. kitchen renovations) until the final design has been determined by the Tenant.

### 2) Lease Terms and Responsibilities:

Exhibits should be developed that determine what items will be addressed by the Town (Building Owner) and what items will be the responsibility of the Tenant.

**3) Permit Documents:** Once the lease terms are established and the Town has provided the building owner's improvements, the Tenant would have Permit Documents developed that exhibit their proposed design and codecompliancy.

PLAN Studio and our consultants would be available to answer any questions that the Town or the Town's CM may have regarding the recommendations in this Study.



### NEW YORK

### PENFIELD CLARK HOUSE **BUILDING STUDY**

December 2020

#### 2. APPENDIX

On the following pages please find the following documents attached:

EXISTING CONDITION DRAWINGS SCHEMATIC DRAWINGS

STRUCTURAL REPORT

MECHANCIAL & ELECTRICAL REPORT

ASBESTOS SURVEY

LEAD ASSESSMENT





























## CODE PLAN LEGEND

----- APPROX. EXIT TRAVEL DISTANCE



FE

EXIT

PROPOSED FIRE EXTINGUISHER LOCATION, VERIFY EXACT LOCATIONS WITH THE BUILDING INSPECTOR & FIRE MARSHALL.



NOT FOR CONSTRUCTION



625 Panorama Trail, Suite 2210 Rochester, NY 14625 Phone: 585.385.7630 Fax: 585.385.6386 www.tse123.com

November 5, 2020

Mr. Christopher P. Lopez, AIA, NCARB, AICP PLAN Architectural Studio, PC 250 South Avenue, Suite 100 Rochester, NY 14604

Re: **The Clark House: Level 1 - Structural Engineer's Report** 600 Whalen Road (original address: 1960 Clark Road) Penfield, NY 14526

Dear Chris:

Per your request, on October 16, 2020, our office performed a structural inspection of the former Shadow Pines Golf Course Restaurant/Pro Shop facility at the above-referenced address. TSE's task was to document any discernable foundation, wall, floor and/or roof structural issues for The Clark House, along with any other visible concerns regarding the former golf clubhouse/restaurant building. Our walk-through inspection is one part of your ongoing Level 1 Study being done for the Town of Penfield in order to determine the most feasible use(s) for the property as a whole. Our assessment of the structural condition of the subject building and our recommendations for repair are contained in the following Engineer's Report:

### THE CLARK HOUSE: STRUCTURAL CONDITIONS REPORT

### General Information

The Alpheus Clark House was constructed circa 1832 on the north side of Clark Road at the corner of Whalen Road for Mr. Clark, an early Penfield distiller. The property is extensive and contains a tiny cemetery where the first owner of the property, a Revolutionary war veteran and his family, are interred. The original 2-story wood-framed house, with stone basement is a simple and graceful 5-bay federal-style residence with center entrance. The center portico at the main entrance, was completed at the end of the project as local styles began to change; consequently, the portico and the porches on the gabled ends of the house were constructed in the newer Greek-Revival style. (The west-end porch has since been enclosed and is now a part of the extended living room.) The approximate footprint of the early house was 770 sq. ft. (1,070 sq. ft., including the porches).

What appears to be the very first addition to the house, is a 2-story tee, approximately 12'-8" x 22', in the Federal style, and centered on the north facade. This addition has since been altered and extended several times. The east side of the original tee has grown in increments, and is now covered by a roof that sweeps down from the ridge, covering later 1-story additions along Whalen Road. The original second-floor windows on the east side have been pushed further east to become dormers helping to light the second level. The lower-level west side of the tee addition was also bumped out to the west, but not as far as the addition on the east side. Consequently, the first-floor west-addition did not impact the original second floor wall, windows, or roof slope. Later, the building was extended again to the north, and, in the golf club-era, the early additions became part of the Bar/Dining rooms on the first floor and the Club Room upstairs. This room had openings in the second floor allowing an overlook into the dining room below. All of these additions/extensions, including the first, were constructed over crawl space.





The house remained in the Clark Family until the late 1800's when it was sold for debt. The building ceased to be a single- family residence in 1920 when the property was acquired by the Dolomite Corporation. Dolomite used the former Clark property to establish the Shadow Pines Golf Course in 1929, providing a buffer between their quarry, just east of Whalen Road, and the existing community to the west of the new golf course. (Shadow Lake Golf Course on the east side of the quarry was established at the same time, for the same purpose.) The former Clark House became a club house/restaurant for Shadow Pines course. The pro shop, locker rooms, patios, dining rooms, bars, kitchen, and a new, north-end basement below, were installed, including and extending the earlier, colonial-style additions at the rear of the house. The final one and a half-story traditional-style addition (with basement), built during the golf-club years, included a new pro shop with new locker rooms in the basement on the NW side, an extension to the kitchen on the NE side, and a new main entrance, with porch and handicapped ramp, facing the patrons' parking lot to the north. A meeting room and office at the north end of the upper level were also added in this final expansion. The footprint of the current building is approximately 6,400 sq. ft.



Aerial view of the Clark House ca. 2018. Note that Clark Road (south) is at the bottom of this photo.

In 2000 Dolomite-Oldcastle sold their holdings in Penfield, leaving the future of the Clark House/Shadow Pines property in doubt. After a public referendum in 2018, the golf course was acquired by the Town of Penfield to be used for recreational purposes, with the possible of the rehabilitation of the clubhouse building as a future community center. Note that the Clark House building has long been listed on New York's Historic Building Survey, and, in 2018, was designated a Local Historic Landmark by the Town of Penfield. It is not listed on the National Register of Historic Places.

### **Observations/Findings**

EXTERIOR:

A. <u>North Façade</u>





North Facade: the primary entrance to the former Golf Club from the parking lot.

- We observed cracks in the concrete slab forming the stoop of the covered, Main-Entry Porch on the north side. The corner-post trim is deteriorating at the bases. The paint is also peeling on the clapboards/trim of the entranceway just above the stoop slab. The cast-iron railings around the porch and the ramp are also beginning to rust. (see Photos 3 & 4, below)
- 2. Stair C (roofed, open to the exterior), leading down to a basement entrance, exhibits similar deterioration at the bases of its porch posts and rusting at its cast iron railings, as does the nearby Main Entry Porch. Also, the downspout attached to the eastern-most post has been cut short, dumping water into the constricted area between the foundation and the adjacent ramp, contributing to the deterioration of the existing finishes. In time, this will damage the foundation walls of both. (see Photo 5 below)



Photo 3 Cracks in concrete slab at the north entrance porch.





Photo 4 NE post-base and nearby railing.



Deteriorating base at east-end column supporting roof over Stair C areaway to basement.

### B. West Facade



Photo 6 West Facade: note Pro Shop, at left, with bay window.







Photo 7

West Facade: note Patio (center) and the original Clark House, at right, with one-story enclosed porch at the gable-end.

- 1. The outside (west) wall of uncovered Stair D, leading to the Basement Locker Rooms requires the scraping of loose paint and repointing of the exposed concrete blocks (including the cap blocks.) The first few feet of the west foundation wall, just south of the NW corner of the Pro Shop also requires scraping and repointing. (see Photo 8 below)
- A portion of the wood sill plate, as well as its trim board with projecting drip at the base of the wood-framed west wall of the Pro Shop above Areaway Stair D is rotting. (see Photo 9 below)
- 3. Further on, the sill plate at the base of the west wall of the Pro Shop, beginning just south of the bay window, and extending around the corner to the south is also rotting. The wood-frame surround for a former metal chimney installed on the west wall is also deteriorating at the base. (see Photos 10 & 11 below)
- 4. The roof over the West Patio (above the French doors leading from the first-floor Bar/Restaurant) is sagging in the center. (see Photo 12 below) Reinforcement of roof members, will be required.
- 5. The brick chimney on the north wall (west side) of the original Clark House is beginning to exhibit weathering at the top. Install a new shield over the chimney cap to protect the masonry and keep out the elements. (see again, Photo 7 below)



 Photo 8
 Image: Close-up of outer Stair D foundation wall (located at NW corner of Pro Shop). Stairway leads to Basement Locker Rooms, etc.





View of rotting sill-plate and trim at west wall of Pro Shop above Stair D.



Photo 10 Deteriorating sill plates and trim at bump-out on west wall of Pro Shop near SW corner.



The sill-plate and trim is also rotting as far as the doorway at the south Pro Shop wall where it abuts the patio. Note that the bases of the patio posts are also deteriorating.





Photo 12

View of the roof over the Patio (at the west wall of the central Bar/Dining Room) showing the sag in the center of the roof.

### C. South Façade



Photo 13

South Facade of the original Clark house from Clark Road. Note entrance portico, at center.

- 1. The concrete-block foundation under the former unexcavated west-end porch, which became the west end of the golf club Living Room, requires repointing on the south. (see Photo 14 below)
- 2. The stone foundation wall on the south side of the original 1832 basement appears to be in fairly good condition, but the timber sill-beam resting on it is rotting at the SW corner. The deteriorating beam has adversely affected the attached trim and nearby clapboards, as well. **(see Photo 15 below)** The sill beam should be removed and replaced
- 3. There are gaps in the mortar between the foundation stones on the south façade which have been filled with expanded foam. This material should be removed and these areas should be repaired using standard masonry practices. There may be a need to insert replacement stones in the larger gaps, if required. (see Photo 16 below)
- 4. The entrance portico the wood floor is rotting, the floor boards are wobbly. The column base trim is also deteriorating. (see Photos 17 & 18 below)







Photo 14

SW corner of Clark House foundation (at former open porch, now a part of the Living Room). Note concrete block is in need of repointing; sill trim is beginning to deteriorate, especially at the corner.



Photo 15

SW corner of original 1832 Clark House stone foundation. Rotting timber sill-beam ,trim, and clapboard at corner. Base of the First-Floor corner-post in this location may also be deteriorated.



 Photo 16
 Image: Continuation of south wall of original stone foundation. Note entrance portico, at right. note that drip-edge above trim is catching water.



Page 8 of 24



Photo 17 South entrance portico looking west. Notice poor condition of the portico floor.



Photo 18 Close-up of SW column-base at entrance portico.

### D. East Façade



Photo 19 East Facade of the original Clark House with attached east-end open porch in center of photo; the successive additions are to the right.





East Facade from the NE, showing the later additions to the original house (North Entry at far right.)

- 1. TSE found that the wooden porch-floor at the east-end of the original house, and the foundations below the wood columns are beginning to fail. (Note that there is a former areaway leading to the basement below the porch structure in the north corner,) The columns and roof/ceiling assembly of the east porch appear to be in good condition, however. (see Photos 21 & 22 below)
- 2. The timber sill-beam along the east wall of the central Bar/Dining Room is rotting due to exposure to ground moisture, weather, and snow accumulation. (see Photo 23 below)
- 3. The sill-beams and plates along the rest of the east foundation wall further north, also appear to be deteriorating at all of the successive additions. (see Photo 24 below)



Photo 21

Open porch on the east end of House exhibits a failing floor structure and unstable column foundations. Note bench structure covering former areaway opening to basement.





Photo 22 View of the east-end wooden porch posts and ceiling looking north.



Sill beam is rotting along the east wall of the Bar/Dining Room. Expanded foam has been used to fill crevices.



Close-up of rotting sill-plate and trim in contact with ground near the NE end of the building. Note mildew on clapboards.



### INTERIOR:

### **Original Basement**

- 1. TSE found the stone foundation wall of the original basement to be in good condition. (see Photos 25 & 26 below)
- 2. The pipe column east of the basement stair and the jack post located further east in the original basement, support a central wood beam. Both columns are rusting at their bases. (see Photos 27, 28, & 29 below)
- 3. The storage room in the basement addition on the north-east side of the house has a very wet floor. The cause of this standing water remains to be verified. This is a critical investigation since the jack posts here were found to have rusted bases (as were those nearby: see item 2, above). A crock/sump pump with under-slab drains in this area may be required to protect the structure on this end of the basement. Please note that the floor at the west end of the basement, which has an existing, sump-crock, appeared to be dry. (see Photos 30, 31, & 32 below).
- 4. The crawl space under the center Bar/Dining Room floor is supported by an eclectic variety of posts and beams added as a result of the numerous growth spurts of the building during the 20<sup>th</sup> century. These are visible from the areaway openings found in the basement storeroom addition. These crawl-space posts and foundations will need to be assessed for possible reinforcement and/or replacement in the next level of study. (see Photos 33 & 34 below)



Photo 25

View of original stone foundation wall in basement (south center) looking east.



 Photo 26
 Image: Constraint of the photo in the floor of the photo.





Photo 27 Rusting base of pipe column east of Stair A.



Photo 28

View of east-end of Clark House basement. Note door to former areaway in end wall and jackpost supporting wood beam near chairs in background.



Photo 29 Closeup of rusting jack-post base. Post pictured above in Photo 28.





Photo 30 Jack-post with rusted base just inside basement storeroom doorway.



Photo 31 Water on floor at entrance to basement storeroom.



Photo 32 Storeroom floor looking north showing standing water.





### Photo 33

View of crawl space under center Bar/Dining Room looking north from streroom. Note wood post and beam on block footing. Foundation of the nearby pipe column is in doubt.



### Photo 34

View of same crawl space looking west from storeroom. Note pipe column and wood post (with shim).

### North Basement

- 1. TSE found the concrete-block foundation walls of the basement under the later additions at the north end of the facility to be in good condition; including the retaining walls on either side of Stairway C. (see Photos 35, 36, & 37 below)
- 2. The concrete floor-slab of the North Basement was dry throughout, and appeared to be in good repair, as did the steps of Stair C. (see Photo 38, and see again: Photos 35, 36, & 37 below)
- 3. Due to the requirement for fire-rated ceilings over most of the North Basement rooms, the wooden first-floor structure was only completely visible for inspection above the storage room next to Stair C and the storage closet along the north hallway wall (the Kitchen Receiving area and the North Entry Vestibule are above them). Based upon what we were able to inspect, the first-floor structure of the latest addition appears to be in very good condition. (see Photo 39; see again Photo 35 below)






Photo 35 View looking east in storage/mechanical area of basement next to Stair C.



Photo 36

View of Stair C steps and foundation walls looking east from open North Basement door.



 Photo 37

 View of concrete block wall in interior basement storage room looking south (next to Stair B).



Torchia Structural Engineering & Design, P.C.



#### Photo 38

Looking west from storage room into basement hallway south of Locker Rooms, leading to Stair D.



Photo 39

View from storage closet next to North foundation wall, looking up at wood first-floor structure of the North Vestibule), overhead.

#### First Floor

- 1. The First-floor Level of the original Clark House, including the Living Room extension to the west, appears to be in good condition. TSE noted only two potential problem-areas: a high spot in the central hallway floor near the SE corner of the hall closet (next to the cased opening to the Dining Room), possibly due to a post very close underneath in the basement (see Photo 40 below); and, a drop at one side of the header over the north doorway of the Dining Room (leading to the central Bar/Dining Rooms of the golf club). (see Photo 41 below) This drop down on the left side may be due to the removal in the past of a portion of the foundation below, when the basement storeroom was added to the north.
- 2. The interior of the central Bar/Dining Rooms of the facility exhibited no areas of structural concern that were identifiable in our walk-thru inspection.
- 3. In the pro Shop, two vertical cracks have appeared in the west wall over the bay-window opening. These seem to be caused by settlement or deflection of the structural members. The cracks are located near each end of the projecting bay and each also run horizontally to the corner of the opening, along the edges of the soffit. (see Photos 42 & 43 below) There is a crack in the drywall soffit over the bay, as well, approximately ¼ of the distance from the

Torchia Structural Engineering & Design, P.C.



south end. Also, note the nearby crack in the ceiling above the north end of the bay window in **Photo 43**, which is further discussed in item 4 below.

- 4. We found two long cracks in the vaulted ceiling of the Pro Shop. Each crack flanks the bay window. The cracks extend almost all of the way across the ceiling from the west to the east side of the pro shop. (see Photo 44 below)
- 5. The ceiling in the Men's Room next to the Pro Shop has been damaged by a water leak. (There is a mechanical room overhead.) The water leak, here, is dangerous in that it is near an electrical fixture, **(see Photo 45 below)**
- 6. We found cracks in the ceiling on both sides above the south opening to the Foyer (near Stair B). (see Photo 46 below) These cracks may also be a part of the Pro Shop roof movement since the ridge ends on the level above, almost directly over the center of the south entrance to the Foyer on the first floor.
- 7. A 36" long ceiling crack was observed in the ceiling above the Hallway next to Stair B where it ascends to the second floor. (see Photo 47 below)
- 8.



View of the center, first-floor Hallway of the original Clark House at the high-spot in the floor.



View looking north from the Clark House Dining Room into the central Bar/Dining Room of the Golf Club. Note that the header above the door drops to the left.





Photo 42

Crack above the bay window in the Pro Shop. View at the south end of the window, looking west.



Photo 43

Similar crack above the bay window at the north end of the bay window. Note off-set ceiling crack above.



Crack in ceiling at north end of bay looking toward east wall of Pro Shop. (A similar crack has appeared at the south end of the bay window, also).



Torchia Structural Engineering & Design, P.C.



Photo 45 View of water damage to Men's Room ceiling.



Photo 46

View of L-shaped crack in Foyer ceiling, looking east. (Entrance to Kitchen, at right.) Note: there is also a straight-line crack in the ceiling on the opposite side of the Foyer.



 Photo 47

 View of crack in the first-floor ceiling next to Stair B.

Torchia Structural Engineering & Design, P.C.



#### Second Floor

- A number of vertical cracks appear on the west, sloped ceiling of the Club Room; above and east of the storage area door. (see Photo 48 below) More extensive horizontal and vertical cracking is visible in the same sloped ceiling further to the south. (see Photo 49 below) Note that the sloped ceiling in question follows the underside of the roof, continuing down over the storage room behind the west wall of the Club Room.
- 2. The two large openings in the Club Room floor at the second level may, or may not remain open, once the final decision regarding re-purposing of this building is made. (see Photos 50 and 51 below)
- 3. The East and West Dining Rooms on either side of Stair A, on the second floor of the original Clark House appear to be in good repair (see Photo 52) One small problem area should be investigated further in Level 2: the floor slopes slightly toward the front (south) wall for a short distance on the east side of a 30" +/- long N/S support that aligns with the west side of the Stair A and Living Room wall below.
- 4. There is a crack in the ceiling in the Office along the line where the flat ceiling meets the sloped ceiling. **(see Photo 53)**



Photo 48

Cracks in the sloped ceiling next to the west wall of the second-floor Club Room (near storeroom door).



 Photo 49
 Extensive cracking in the same sloped ceiling (taken further south of Photo 48), looking NW toward head of Stair B.







Photo 50

View looking north into Club Room from the East Dining Room of Clark House on the secondfloor. Note the opening to the first-floor at center and the dormer alcoves, to the right.



Photo 51

View of Club Room looking north from Stair A, Note both of the existing openings in the second floor on the right side of the photo.



Photo 52 The West Dining Room of the Clark House, looking SW.

Torchia Structural Engineering & Design, P.C.





#### Photo 53

Crack in the ceiling of the second-floor Office, where the flat ceiling meets the sloped ceiling on the north side of the room.

#### Conclusions/Recommendations for Repair

Based on our recent inspection, upon standard engineering principles, and 30 years of professional practice, it is TSE's opinion that the the frame structure, the foundations, and the basement of the Shadow Pines Golf Club building are in generally good condition, with the exception of some problem areas due to the building's age and/or the dissipation/collection of storm water.

- Cracked concrete Pads and slabs should be replaced with appropriate depth 4,000 psi reinforced concrete on properly compacted fill. Care should be taken that snow removal techniques be used that do <u>not</u> involve the use of sodium chloride which will damage concrete surfaces and rust iron railings.
- Use s/s screws to fasten all trim and finishes at or near near grade.
- Sand, scrape, and re-paint all rusted cast-iron railings, posts, and fastenings.
- Replace all rotting/damaged sill-beams and sill-plates with same-depth Parallam structural members. Pressure-treated plates and/or pressure-treated structural members may also be used in appropriate locations.
- Deteriorated trim boards, drip caps, casings, and clapboards at, or near, grade should be
  replaced with Hardi-Plank or similar cementitious trim materials that do not rot. Sawdustresin trim materials such as Azek products, or equal, may also be used in areas where
  fire-resistance ratings are not required. All of the products mentioned are capable of
  being shaped or installed using standard wood-working methods, as required, and can
  match the traditional components used in this building.
- The existing wood porches are each near, or at, grade and should be replaced using fullperimeter block foundations to a minimum depth of 48" (or to the depth of undisturbed soil near the basement foundations). See the first bullet-point above for concrete-slab recommendations. For the appearance of wooden porch floor-boards, a stamp may be used with colored concrete, or, possibly, the concrete pads may be surfaced with a material such as Trex.
- Repoint block and re-grout stone masonry where required. Replace damaged or missing stone in kind. Mortar to match existing.
- At exterior Stair C, an effort should be made to channel the downspout water away from the foundations, perhaps draining it under the driveway to a drywell in the yard, if at all possible.
- Replace rusted pipe columns and all temporary jack-posts with new steel pipe columns having plates at top and bottom for proper attachment to the structure above and below. The new columns will need to be supported on new concrete footings.

There are also some forensic structural investigations to be done in order to: 1) pinpoint and deal with the source of water on the east side of the original basement; 2) to assess the support of the Bar/Dining Rooms over the central crawl space; and 3) address the flexural/movement problems



found in the Pro Shop ceiling/roof assembly and several nearby ceilings on the west side of the building.

- Examine east basement and crawl space to determine possible sources of standing water. Install crock and sump pump, if required, and connect to dry-well, as storm sewer is probably not available.
- Further inspect/analyze arrangement of existing footings and columns supporting the first floor in the central crawl spaces to assess their structural integrity. Analyze floor-framing to assess ability to support the required100 psf live-load.
- Examine roof/ceiling assembly over Pro Shop and the west side to the center N/S roof ridge. We believe the ridge over the Pro Shop may be dropping, causing the finishes to flex and crack. This may be due to an inadequacy in either the ridge beam, or the intermediate beams, and/or the header above the bay-window opening. This situation requires further study of the existing roof's structural system to determine the cause of the roof movement. Only then, can the appropriate roof structure reinforcement be designed.
- Assessments of causes and fixes for high spots, low spots, and sags in the floors and patio roof can better be determined once the existing structure is assessed (including removal of finishes where necessary). This is also true for assessment of causes and fixes at sags and cracks in the second-floor level ceilings so that roof structural problems can be separated from mere cosmetic issues.

Please note that this was a one-time walk-through inspection, only. We were not able to access the underside of the roof deck during our walk-through. It is, therefore, understood, and agreed, that this inspection was a visual examination only, and that it is limited to visual observations of apparent conditions existing at the time of inspection. If you have any questions, or if we can be of any further assistance regarding this matter, please contact us at 585-385-7630.

Sincerely,



Carmine Torchia, P.E. TORCHIA STRUCTURAL ENGINEERING & DESIGN, PC.

CT/av/jy

See Attached Photographs 1-53



#### I. OVERVIEW

- A. The Town of Penfield has recently purchased the Clark House, the former clubhouse of the Shadow Pines Golf Course. The town has requested a Condition Study be performed to determine the upgrades required to lease this space to a local restaurant/bar.
- B. The existing Clark House has a main floor that previously served as a pro shop, restaurant, bar, and kitchen. The second floor provided additional dining. Also, the facility has two separate, unconnected basement spaces for utilities and storage.

#### II. HVAC DESIGN PARAMETERS AND SYSTEM DESCRIPTION

#### A. CODES AND STANDARDS

- 1. All engineering design and construction work will comply with the current editions of the following codes and standards:
  - a. 2020 Building Code of New York State
  - b. 2020 Existing Building Code of New York State
  - c. 2020 Mechanical Code of New York State
  - d. 2020 Energy Conservation Code of New York State
  - e. 2020 Fire Code of New York State
  - f. 2020 Fuel Gas Code of New York State
  - g. New York State Health Code (10NYCRR)
  - h. All applicable chapters of NFPA, including, but not limited to:
    - 1) NFPA 90A Air Conditioning and Ventilation Systems.
    - 2) NFPA 101 Life Safety Code 2000 (NYS DOH, JCAHO, CMS).
  - i. Applicable ASHRAE, SMACNA, ANSI and ARI Standards.

#### B. DESIGN PARAMETERS

- 1. Outdoor and Ambient Conditions:
  - a. Summer: 89°F DB/73°F WB outdoor and 72-75°F DB and a maximum of 60% RH indoor.
  - b. Winter: 3°F outdoor and 72-75°F DB indoor

# C. EXISTING HVAC SYSTEMS AND EQUIPMENT

- 1. General:
  - a. The comfort conditions for this facility are currently provided by local zoned gas-fired furnace systems with split-DX cooling. These units are ducted to spaces via floor, wall, or ceiling grilles and diffusers. No mechanical ventilation appears to be provided.



Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020



b. A commercial exhaust hood system exists in the kitchen. No makeup air unit is present.



c. All mechanical units appear to be nearing the end of their expected lifespan. Particularly, condensing units on the exterior are covered in rust.



#### D. RECOMMENDED HVAC SYSTEMS

1. Furnace systems:

New, high efficiency (95% AFUE or greater) condensing gas furnaces would replace the existing units. The ductwork would be reused, and airflow should approximately match existing systems to maintain air throw and distribution throughout the building. MERV 13 filters would be installed in a 4" filter housing.

New condensing units with new linesets (as required due to new refrigerant being used) and new cooling coils would update an old technology with more efficient, reliable, and quieter cooling.

New thermostats may be required, especially for multi-stage or modulating heating or cooling. Thermostats would be seven-day programmable.

Since the occupancy is expected to be similar, the heating and cooling capacities of the systems do not need to change.

2. Kitchen Exhaust System:

The commercial kitchen hood and exhaust fan would be replaced with a new unit that meets the tenant's cooking requirements. Makeup air must be provided with such a system, but may be by a packaged makeup air unit or simply by a gravity opening such as a louver with a motorized damper, which appears to be the system in the existing kitchen.

Typically in this climate, a makeup air unit with heating is provided. This unit would directly supply tempered makeup air to the kitchen to keep staff comfortable.

The existing furnace system (with new equipment) that provides comfort conditioning to the kitchen would remain for heating and cooling during normal operating conditions.

3. Dedicated Outdoor Air Unit:

To accommodate the significant ventilation requirement, a dedicated outdoor air system (DOAS) is recommended for serving the main open dining and bar area. Mechanical Code requires approximately 0.71 CFM/sf (dining area) and 0.93 CFM/sf (bar/cocktail area) for spaces of this nature, though these quantities may be reduced slightly if occupant density is less than 70 people/1000 sf (dining area) and 100 people/1000 sf (bar/cocktail area).

The DOAS unit would be located outside, be ducted directly to the occupiable space, and operate only during business hours. Note that contiguous space, such as the open two-story dining/bar area, can receive ventilation air from one or multiple locations, provided the total ventilation requirements are met. The DOAS unit can also provide ventilation for either or both of the separated dining rooms as well.

• The DOAS shall include Dx evaporator coils, digital scroll or inverter duty compressors and condenser, hot gas reheat coil, SS indirect natural gas fired heat exchanger, filters, supply fan, exhaust fan, total enthalpy recovery system, and unit controls.

- Insulated cabinet with thermal breaks between interior and exterior panels
- Insulated, stainless steel, sloped drain pan under cooling coils.
- MERV 8 filter bank
- Internal vibration isolation for all rotating or reciprocating components
- Packaged controls, including capability for discharge temperature control

In lieu of a DOAS unit, ventilation air can be ducted directly to the return ducts for furnaces serving these spaces, though these systems are not designed to handle large portions of raw outdoor air. If this strategy is chosen, outdoor air should be tempered before mixing with the furnace return air. Additionally, the added load of ventilation air will likely overwhelm the capacity of the furnace systems, and they may need to be upsized.

Other areas, such as the existing office space and pro shop, would receive ventilation through the associated furnace system, since required quantities are much lower. New ductwork from the exterior would tie into existing return ductwork.

4. General Exhaust Fans:

Exhaust fans for toilet rooms, custodial closets, and other small spaces would be ceiling-mounted and ducted directly outdoors. Existing fans in toilet rooms would be replaced by multi-speed units with electronically commuted motors that automatically adjust fan speed based on occupancy.

5. Registers, Grilles and Diffusers:

Registers, grilles, and diffusers would replace existing air terminals in type and size. New terminals for supply air would include operable dampers for volume control.

Supply Diffusers:

General Acoustic Ceilings:

- Plaque style, 4- way blow, painted steel with rear boot suitable for round duct connections
- Multi-row Linear Diffusers with pre-engineered insulated rear duct connection plenum and 180 degree discharge direction adjustment. Utilize for locations requiring perimeter heating.

Gypsum walls and ceilings:

- Dual-deflection blades (front set oriented in the larger dimension)
- Key-operated adjustable damper

Floors:

- Dual-deflection blades (front set oriented in the larger dimension)
- Heavy-duty frames specifically designed for installation in floors with potential foot traffic.
- Key-operated adjustable damper

Exhaust and Return Grilles:

- Aluminum grilles with fixed blades at <sup>1</sup>/<sub>2</sub>" spacing and 45 degree deflection.
- Oversize grilles as required to minimize cut sections of acoustic tiles in grid ceiling locations.
- 6. Ductwork:

New ductwork, as required, shall be designed and installed to SMACNA standards per the latest version of HVAC Duct Construction Standards, Metal and Flexible. Ductwork shop drawings shall be supplied for review prior to any fabrication or installation. All systems shall be fully ducted from the equipment out to the registers, grilles and diffusers.

Pressure Classes:

- Return and Exhaust/Relief: -2" WG
- Supply:

0	Furnace Systems:	2" WG
0	DOAS Unit:	2" WG

Seal Class:

SMACNA Type A: Longitudinal seams and transverse joints in nonwelded ductwork to be sealed with duct joint sealant.

Material:

Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020

> Galvanized Sheet Steel: Comply with ASTM A 653/A 653M. Galvanized Coating Designation: G60. Finishes for Surfaces Exposed to View: Mill phosphatized

#### Sizing:

Supply, return, general exhaust and relief distribution ductwork will be sized for a maximum velocity of 1,500 FPM flow velocity. Size supply ductwork for a maximum of 0.1"/100' air friction loss and exhaust, return and relief ductwork for 0.08"/100'

7. Insulation:

Supply and Outside Air ductwork in mechanical plenums; and Supply, Return and Ventilation ductwork in unconditioned spaces shall be insulated to NYS Energy Code requirements: R-6; 1 <sup>1</sup>/<sub>2</sub>" thickness fiberglass insulation with continuous all service jacket to provide vapor barrier

Duct board will be used for ductwork exposed in mechanical equipment rooms, duct wrap for concealed ductwork in shafts or above ceilings.

Exterior ductwork (for DOAS) will be insulated with R-12 duct board and rigid weatherproof jacket.

#### III. PLUMBING AND FIRE PROTECTION DESIGN AND SYSTEM DESCRIPTION

#### A. CODES AND STANDARDS

- 1. All engineering design and construction work will comply with the following codes and standards:
  - a. 2020 Building Code of New York State.
  - b. 2020 Plumbing Code of New York State.
  - c. 2020 Fire Code of New York State.
  - d. 2020 Energy Conservation Construction Code of New York State.
  - e. NFPA 13 Installation of Sprinkler Systems.
  - f. NFPA 101 Code for Safety to Life from Fire in Buildings and Structures.
  - g. Other NFPA Standards as required.
  - h. OSHA rules and regulations.

- i. Americans with Disabilities Act (ADA).
- j. NFPA 241 Standard for Construction, Alteration and Demolition Operations.
- k. Underwriters Laboratories, Inc. (UL).

#### B. EXISTING DOMESTIC WATER AND FIRE PROTECTION SERVICES

1. The building is currently served by a 2" copper domestic water service. Both the RPZ and the water meter were not located at the service entrance in the south basement, which indicates they are located out on the site either in a vault or in a hot box. The domestic water service is adequately sized for the proposed use of the building.



Incoming Domestic Water and Fire Services

2. A 4" steel fire service currently serves the building and enters via the south basement. The backflow preventer is out on the site in the hotbox or vault, but a single check valve is located inside. The fire service is adequately sized for the proposed used of the building.

#### C. EXISTING DOMESTIC COLD AND HOT WATER DISTRIBUTION SYSTEMS

1. The domestic hot water system is currently comprised of a gas-fired boiler and an 80 gallon storage tank located in a storage room in the north basement's northeast corner. There is currently no domestic hot water recirculation system. The storage tank is adequately sized for the proposed use of the building and is in good condition. The boiler is 14 years old and appears to be on the verge of needing to be replaced.

Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020



Lochinvar Boiler



How Water Storage Tank (right) and Water Softener System (left)

2. All existing domestic water piping is uninsulated. Current code requires all domestic water distribution piping be insulated based on the water temperature and size of the piping.

#### D. EXISTING SANITARY SEWER SYSTEM

- 1. The building's sanitary system is likely sized adequately for the proposed use of the building. We would recommend having the system scoped to confirm the size, inverts, and condition of the system.
- 2. The commercial kitchen should be provided with a grease interceptor to handle all locations that receive grease-laden waste. A grease interceptor was not seen on site. We recommend it be located and subsequently cleaned.

#### E. EXISTING FIRE SPRINKLER SYSTEM

1. The building's fire protection system is a dry pipe system fed using (1) 4" riser check valve and an air compressor. The main drain is routed to the sump located in the northwest corner of the room. There are currently no tamper, flow, or pressure switches on the existing riser check valve. One of each should be added and wired to the building's fire alarm system.



Fire Protection System Riser Check Valve and Gate Valve

Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020



Fire Protection Air Compressor

2. The building is currently served by a mixture of upright, sidewall, and recessed sprinkler heads. Currently, the existing exterior projections are not provided with sprinkler coverage. If the exterior canopies, decks, etc. are constructed of noncombustible, limited-combustible, or fire retardant-treated wood as defined in NFPA 703, sprinkler coverage can be omitted.

#### F. RECOMMENDATIONS

- 1. Replace the existing gas-fired domestic water boiler with a new, 95% AFUE gasfired domestic water boiler. The pump and piping between the boiler and existing storage tank shall also be replaced. Set the storage tank to 140°F. Mix down the 140°F hot water with domestic cold using a thermostatic mixing valve. Set the mixing valve outlet to 105°F and connect to existing hot water piping serving the bathrooms. Bypass the mixing valve with 140°F hot water and connect to existing domestic hot water piping serving the kitchen.
- 2. Provide a new domestic hot water recirculation system for the building for both the 105°F and 140°F domestic hot water systems. Each recirculation system shall include an in-line pump, balance valves as required, an aquastat, and automatic time clock to meet Energy Code requirements.
- 3. Insulate all existing to remain and new domestic water piping, fittings, and valves per the New York State Energy Conservation Construction Code.

- 4. Scope existing sanitary sewer system to determine sizing, inverts, and condition. Confirm location and size of grease interceptor and have it cleaned.
- 5. Provide new ADA compliant plumbing fixtures in the public restrooms. Water closets shall be vitreous china, floor mounted with sensor operated flush valve. Urinals shall be wall-hung, vitreous china with sensor operated flush valves. Lavatories shall be vitreous china with single lever faucet. All fixtures, faucets, flush valves shall be of the water saving type.
- 6. Provide the existing sprinkler riser with (1) flow, (1) tamper, and (1) pressure switch. Each one of these shall be wired to the fire alarm control panel.

#### IV. ELECTRICAL DESIGN AND SYSTEM DESCRIPTION

#### A. CODES AND STANDARDS

- 1. All engineering design and construction work will comply with the following codes and standards.
  - a. 2018 International Building Code
  - b. 2018 International Existing Building Code
  - c. 2018 International Energy Conservation Code
  - d. 2018 International Fire Code
  - e. All applicable chapters of NFPA, including, but not limited to:
    - 1) NFPA 70 National Electrical Code
    - 2) NFPA 72 National Fire Alarm Code
    - 3) NFPA 101 Life Safety Code
- 2. Americans with Disabilities Act.
- 3. Underwriter's Laboratory (UL).

#### B. EXISTING SERVICE ENTRANCE AND POWER DISTRIBUTION

- 1. The building shall be served with a 208Y/120 volt, 400 ampere, three phase, four wire electric service. This service is sized adequately for the proposed use of the building.
- 2. In the South Basement, the electric service enters a utility owned CT cabinet. The service entrance feeder then runs to the adjacent 400A-3P, service entrance rated, 400A-3P main enclosed circuit breaker. This main circuit breaker then

Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020

feeds the Main Distribution Panel, MDP. The CT cabinet, Main Circuit Breaker, and MDP are in good condition and may be reused. The MDP is a Square D I-Line distribution panel.



400A-3P Service Entrance Main Circuit Breaker

Town of Penfield Clark House T.E. Project No. 20198 November 13, 2020



Square D I-Line Main Distribution Panel, MDP.

- 3. The Main Distribution Panel serves several additional panels, including three panels in the North Basement and two panels in the South Basement. These panels are in fair to good condition and can be reused.
- 4. The existing MDP is full and has not space for any additional distribution circuit breakers. There is an existing 200A-3P circuit breaker that feeds the Cart Barn. This circuit breaker is in the "Off" position.
- 5. These panels shall be used to feed all new loads in the space. There are several panels that are 208/120 volt, single phase, three wire. Three phase loads cannot be fed from these panels. Additional panels can be added as necessary to support the required loads.
- 6. The following is a list of the panels present in the building.

- 1) In the South Mechanical Room, in addition to the MDP, there is a three phase panel that serves the HVAC equipment and a single phase panel that serves miscellaneous loads.
- 2) There is an existing Kitchen Panel. This panel serves all loads in the kitchen and a number of loads in the bar and dining area. This panel is in good condition and may be reused.
- 3) In the North Basement, there are three panels. One panel has a 225A-3P main circuit breaker and is in good condition. There are also two additional load centers that are single phase, three wire. These panels are in fair condition.

#### C. EXISTING EXIT AND EGRESS LIGHTING

- 1. Exit luminaires consist of plastic LED exit luminaires with battery integral backup. Many of these luminaires are missing, damaged, or not functional. We recommend all exit luminaires be replaced.
- 2. Emergency egress luminaires consist of wall mounted devices with battery backup. Many luminaires are antiquated and not functional. We recommend all emergency egress luminaires be replaced.
- 3. Current code requires all building exterior egress paths be illuminated by fixtures connected to a battery or emergency source. None of the existing exterior egress paths are provided with emergency lighting.

#### D. EXISTING WIRING DEVICES AND BRANCH CIRCUIT WIRING.

- 1. Wiring devices are located throughout the space. Many can be reused or can be replaced in the existing outlet box.
- 2. Existing branch circuit wiring consists of Type AC or MC cable. This type of wiring is acceptable. Wiring from existing wiring devices may be reused.
- 3. New wiring may be Type AC or MC cable.

#### E. EXISTING LIGHTING

- 1. All existing lighting throughout the building are either T12 fluorescent, T8 fluorescent, or incandescent. These luminaires are antiquated, in fair to poor condition, inefficient, and many are not functional. We recommend all luminaires, including luminaires in the basement, be replaced with LED luminaires.
- 2. All exterior lighting is period style lanterns with incandescent lamps. These luminaires do not have emergency egress capabilities. We recommend all the exterior luminaires be replaced.

#### F. FIRE ALARM SYSTEM

- 1. The building appears to have a fire alarm system, but we could not locate the main fire alarm control panel.
- 2. There is one smoke detector in the North Basement, one heat detector in the kitchen and two smoke detectors on the second floor. The smoke detectors appear to be system type smoke detectors.
- 3. There are no fire alarm notification appliances anywhere within the building.
- 4. We recommend all fire alarm devices be removed and replaced with a new point addressable fire alarm system.

#### G. EXISTING SPECIAL SYSTEMS

1. The South Basement has a plywood telephone terminal board located adjacent the electric service. The telephone and CATV service from Frontier and Spectrum terminate at this telephone terminal board. The existing multi-pair telephone cable and the CATV coaxial cable entering the building may be reused. All existing telephone and CATV equipment and cabling after the utility demarcation point is antiquated and should be removed.



Telephone and CATV Service Entrance Equipment.

- 2. There is existing voice/data wiring running up to a rack location on the second floor. This cable is older and should not be reused. We recommend all new Category 6voice/data wiring be provided as part of the buildout.
- 3. Voice and data cabling will be Category 6, plenum rated.
- 4. All existing coaxial cable for cable TV wiring shall be removed and replaced with new RG6/U coaxial cable.

#### H. RECOMMENDATIONS

- 1. Provide additional branch circuit panels as needed to accommodate the proposed loads for the new tenant.
- 2. Provide new wiring devices and branch circuits as required to connect all new equipment, and coordinate with the proposed layout of the new tenant. All branch circuit home runs to panelboards shall be in EMT conduit. Wiring from the ceiling space to the devices may be Type AC or MC cable and may be run horizontally in the walls.
- 3. All existing lighting shall be replaced with LED lighting with dimming capabilities. These luminaires shall be controlled by a Lighting Control Panel. Individual zones shall be dimmed to provide the proper lighting level.
- 4. All exterior lighting shall be replaced with LED lighting. These luminaires shall be controlled by a Lighting Control Panel.
- 5. Lighting in offices, kitchen, toilet rooms, storage rooms, and non-public spaces shall be controlled by occupancy sensors.
- 6. Provide a new point addressable fire alarm system throughout the building. The fire alarm system shall consist of the following.
  - a. Fire alarm control panel located in the main entrance vestibule.
  - b. Manual fire alarm pull stations at all exit doors.
  - c. Smoke detectors will be provided in all corridors, communications equipment rooms, and mechanical rooms.
  - d. Heat detectors will be provided in the kitchen.
  - e. Duct smoke detectors will be provided at all air handling units with an air flow in excess of 2,000 cfm.
  - f. Audible visual notification appliances will be provided at the ends of all corridors

- g. Visual notification appliances will be provided in corridors and in all common spaces including toilet rooms, lobbies, restaurant, and bar areas.
- h. All air handling units in excess of 2,000 cfm shall shut down upon activation of the fire alarms system.
- i. Connect fire protection system tamper and flow switches that are provided by the Fire Protection Contractor.

February 8, 2018



# Survey For Asbestos Containing Materials

1960 Clark Road and 745 Whalen Road Penfield, New York

Prepared for:

MR. BRYAN A. BAYER, PWS, CE C&S COMPANIES 499 Col. Eileen Collins Boulevard Syracuse, New York 13212



Prepared by:

HSE CONSULTING SERVICES, LLC 8636 Brewerton Road Cicero, New York 13039 (315) 698-1438 FAX (315) 698-1441 www.hseconsultingservices.com © Copyright 2018 HSE Consulting Services, LLC



# **Table of Contents**

1.0	PROJECT PERSONNEL 1			
2.0	INTRODUCTION			
3.0 3.1 3.2 3.3 3.4 3.5	BACKGROUND INFORMATION       2         Health Effects       2         Federal and State Asbestos Regulation Summary       2         US Occupational Safety and Health Administration (OSHA)       2         US Environmental Protection Agency (EPA)       3         New York State Department of Labor (DOL)       4			
4.0 4.1 4.2	METHODOLOGY			
5.0 5.1	DISCUSSION			
6.0	CONCLUSIONS / RECOMMENDATIONS			
Appendix 1 Site Location Map				
Appendix 2 Project Diagrams				
Appendix 3 Project Photographs				
Appendix 4 Homogenous Area Listing				
Appendix 5 NYSDOL Firm Asbestos Handling License				
Appendix 6 NYSDOL Asbestos Inspector Certification Documentation				
Appendix 7 Laboratory Analysis Reports & Chain-of-Custody Records				
Appendix 8 NYSDOH ELAP Certificates of Approval				



# 1.0 PROJECT PERSONNEL

NAME	TITLE	AFFILIATION
Bryan A. Bayer	Managing Environmental Scientist	C&S Companies
Douglass B. Selover	Asbestos Inspector	HSE Consulting Services, LLC
Chad C. Gable	Project Manager	HSE Consulting Services, LLC
Matthew D. Brown	Asbestos Analyst	HSE Consulting Services, LLC
Kelly Nuccio	Asbestos Analyst	HSE Consulting Services, LLC
Daniel R. Hoosock	Vice President	HSE Consulting Services, LLC
Brian C. King, ClH	President	HSE Consulting Services, LLC



#### 2.0 INTRODUCTION

In accordance with a request made by Mr. Bryan A. Bayer, Managing Environmental Scientist for the C&S Companies, HSE Consulting Services, LLC (HSE) has completed an asbestos survey for structures located at 1960 Clark Road and 745 Whalen Road in the Town of Penfield, Monroe County, New York.

The survey was conducted for the purpose of identifying asbestos containing materials (ACM) that may be disturbed during future renovation, repair or demolition activities performed on the structures.

A Site Location Map depicting the location of the properties within the Town of Penfield is included as Appendix 1 of this report. Representative photographs taken during survey activities are provided in Appendix 3.

Douglass B. Selover and Chad C. Gable of HSE, a New York State Department of Labor (NYSDOL) certified Asbestos Building Inspectors, performed the asbestos survey on January 16 & 17, 2018 in general conformance with the requirements of Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York (commonly cited as Code Rule 56).

#### 3.0 BACKGROUND INFORMATION

#### 3.1 Health Effects

Asbestos, a naturally occurring fibrous mineral silicate, was used extensively in building products from the early 1900's to the late 1970's. Asbestos was primarily used for thermal and acoustical insulation, fireproofing and decorative purposes. When these materials deteriorate or are disturbed they may release microscopic fibers into the air where humans may readily inhale them. Once airborne, the fibers may remain suspended for extended periods due to their small size and aerodynamic shape.

Extensive medical evidence has shown that the inhalation of asbestos can cause asbestosis, lung cancer, pleural and peritoneal mesothelioma (cancer of the lining of the lungs and stomach, respectively) and gastrointestinal cancer. These diseases have a latency period of between ten (10) and forty (40) years and are usually fatal. The risk of disease is directly

related to the amount of exposure (each exposure accumulates in the body). This is referred to as a dose-response relationship. Presently, medical models rely on the data gained from patients exposed to high occupational levels of asbestos fiber. Extrapolations are made to estimate the risk of disease at lower levels. However, there is no evidence of a threshold exposure level below which the risk of cancer is not increased.

# 3.2 Federal and State Asbestos Regulation Summary

Governmental authorities on both the state and federal level have promulgated asbestos regulations. The US Occupational Safety and Health Administration and the US Environmental Protection Agency are the major regulators on the federal level.

# 3.3 US Occupational Safety and Health Administration (OSHA)

OSHA has established regulations for general industry (see title 29 of the Code of Federal Regulations (CFR) Part 1910, section 1001 (cited as 29 CFR 1910.1001)) and the construction industry (29 CFR 1926.1101). Separate standards for general industry and the construction



industry, including demolition and renovation projects, were developed in recognition of the inherent differences between the industries. Both of these standards, which became effective in October of 1994 and required full compliance by February of 1995, may be applicable at a given time depending on the activities being conducted. These standards, which are primarily concerned with occupational exposures to asbestos, have established a permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter of air (f/cc) based on an eight hour time weighted average (TWA). An excursion limit of 1 f/cc for a thirty (30) minute TWA was also established. The general industry standard also mandates exposure monitoring and employee observation, the establishment of regulated areas, methods of compliance, respiratory protection, protective work clothing and equipment, hygiene facilities and practices, hazard communication, housekeeping practices, medical surveillance and recordkeeping.

The construction industry standard applies to all employees performing work for construction, alteration, and/or repair including painting and decorating regardless of place of employment. More specifically, the standard regulates asbestos exposure including but not limited to the following work:

- Demolition or salvage of structures where asbestos is present.
- Removal or encapsulation of materials containing asbestos.
- Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, which contain asbestos.
- Installation of products containing asbestos.
- Asbestos spill/emergency cleanup.
- Transportation, disposal, storage, containment and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed.

The construction standard also specifies requirements for multi-employer work sites, regulated areas, exposure assessments and monitoring, methods of compliance, respiratory protection, protective clothing, hygiene facilities and employee practices, communication of hazards, housekeeping, medical surveillance, recordkeeping and competent persons.

#### 3.4 US Environmental Protection Agency (EPA)

The EPA primarily regulates atmospheric asbestos emissions and asbestos in schools (see 40 CFR Part 61 - Subpart M and 40 CFR Part 763 – Subpart E, respectively). The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR Part 61, Subpart M) must also be considered. These regulations:

- Require facility inspections.
- Define regulated asbestos-containing material as follows: Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.



Note: Friable asbestos material means any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Category I non-friable ACM means asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos. Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

- Specify methods for controlling fiber release during renovation and demolition projects.
- Require personnel training.
- Delineate methods of transportation and disposal for ACM/PACM including "cradle to grave" manifesting.
- Include notification requirements. (i.e. The EPA's regional office must be notified in writing if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or at least 1 cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously.
- To determine whether this section applies to planned renovation operations involving individual nonscheduled operations, predict the combined additive amount of RACM to be removed or stripped during a calendar year of January 1 through December 31.

40 CFR Part 763 – Subpart E (the Asbestos-Containing Materials In Schools Rule), which was promulgated under the Asbestos Hazard Emergency Response Act (AHERA), is important in that the OSHA regulations incorporate requirements for training of employee's, air monitoring protocols for certain activities, conducting building surveys, and bulk sampling of ACM. Also, the EPA NESHAPS for asbestos incorporates analytical techniques described in these regulations. Additionally, the New York State Department of Labor's (NYSDOL) asbestos regulations incorporate the training requirements contained in these regulations.

It should also be noted that the US Department of Transportation (DOT – see 49 CFR parts 171 and 172) regulates the transportation of asbestos- containing waste material and requires waste containment and shipping papers.

3.5 New York State Department of Labor (DOL)

The New York State Department of Labor's (NYSDOL) asbestos regulations (see Part 56 of Title 12 NYCRR – commonly referred to as Code Rule 56) are designed to protect the public from asbestos exposures. They require training of persons employed to design, implement or inspect asbestos projects and those who supervise or employ them, certification of individuals involved in asbestos projects and licensing of asbestos abatement contractors. Standard work practices, materials and equipment, air monitoring, engineering controls, building surveys, record keeping and compliance/enforcement criteria have also been established. NYSDOL notification is required before the initiation of large asbestos projects. The regulations designate projects that disturb amounts of ACM equal to or exceeding 160 square feet or 260 linear feet as large asbestos abatement projects. Projects involving the disturbance of between 10 square feet and 160 square feet or between 25 linear feet and 260 linear feet of ACM are



designated as small asbestos abatement projects. Projects involving 10 square feet or less or 25 linear feet or less of ACM are designated as minor asbestos abatement projects. The level of regulation is adjusted progressively with each project designation.

It should be noted that the NYS Department of Health (DOH) has also promulgated regulations with respect to asbestos-containing material. The DOH accredits asbestos safety training programs, licenses analytical laboratories and monitors the quality of these endeavors.

# 4.0 METHODOLOGY

A thorough visual inspection was conducted to identify materials with the potential to contain asbestos. Bulk samples of identified suspect materials were then collected from representative locations in general conformance with Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York (Cited as 12 NYCRR Part 56). The samples were transported with chain-of-custody documentation to HSE's laboratory in Cicero, New York for analysis. Samples with multiple layers were separated in either the field or the laboratory, if possible, and the layers were analyzed individually. The New York State Department of Health's (NYSDOH) has accredited HSE's asbestos laboratory under the Department's Environmental Laboratory Approval Program (ELAP).

#### 4.1 Friable Sample Analysis

Friable and non-friable bulk samples were analyzed for asbestos content using Polarized Light Microscopy and Dispersion Staining techniques (PLM/DS) in accordance with New York State Department of Health (NYSDOH) Method 198.1. Laboratory results are reported as percent asbestos including an estimate of the amount of each type of asbestos present (e.g. chrysotile, Amosite, Crocidolite, Actinolite, Anthophylite). The types and percentages of other nonasbestos fibers identified during the analytical procedure are also reported when feasible.

# 4.2 Non-friable Organically Bound (NOB) Sample Analysis

Non-Friable Organically Bound (NOB) materials (e.g. floor coverings, mastic, etc.), or acoustical ceiling tiles containing cellulose, were analyzed in accordance with NYS DOH Methods 198.6 and 198.4. NOB analyses were completed as follows:

All extraneous materials (e.g. wax and polish) were removed prior to the sample preparation. Approximately 100-500 milligrams of the NOB was shaved into a tared crucible and weighed. The sample was placed in a muffle furnace at 480°C until the mass stabilized (1-12 hours). The sample was then cooled in a desiccator and re-weighed to calculate the percentage of organic loss. The residue was placed in a crucible with 0.5 milliliters of 0.1 micron filtered water and 2 to 5 ml of concentrated hydrochloric acid (HCl). After 15 minutes the residue was diluted with 0.1 micron filtered distilled water and poured into a filtration apparatus loaded with a 0.4 micron polycarbonate filter. A vacuum was then applied. The crucible was rinsed a second time. When filtration was complete, the filter and residue were carefully transferred to a clean, tared plastic Petri dish and allowed to dry to a stable mass under a heat lamp. The filter and Petri dish was weighed to calculate the percent of mineral carbonate loss. If the residual mass was less than or equal to one percent (1%) of the sub-sample's original mass, analysis was terminated and the sample was reported as non-ACM. If the mass was greater than 1% of the sub-sample's original mass, a PLM analysis, and the overall percentage of asbestos in the sample



was calculated to be greater than 1%, the material was considered to be ACM. If the mass of the residue discussed above was greater than 1% and asbestos was not detected as a result of completed gravimetrically reduced PLM analysis, the residue was submitted for analysis by Transmission Electron Microscopy (TEM). If TEM analysis indicated that the quantity of asbestos in the sample was less than or equal to 1 % the material was determined to be non-ACM. If TEM analysis indicated that quantity of asbestos in the sample was greater than 1% the material was identified as ACM.

# 5.0 DISCUSSION

5.1 1960 Clark Road (Clark House, Golf Cart Barn, Large Barn)

A total of seventy-nine (79) bulk samples were collected as part of the completed asbestos survey (HSE Sample ID's CG11618-1 through CG11618-63, CG11718-1 through CG11718-12 and CG11718-33 through CG11718-36). A total of thirty-five (35) PLM analyses, fifty-three (53) NOB analyses and fifty-three (53) TEM analyses were performed. Copies of the laboratory analysis reports and chain-of-custody records for samples collected as part of the completed survey are included in Appendix 7 of this report.

5.2 745 Whalen Road (Maintenance Barn)

A total of twenty (20) bulk samples were collected as part of the completed asbestos survey (HSE Sample ID's CG11718-13 through CG11718-32). A total of six (6) PLM analyses, fourteen (14) NOB analyses and fourteen (14) TEM analyses were performed. Copies of the laboratory analysis reports and chain-of-custody records for samples collected as part of the completed survey are included in Appendix 7 of this report.

# 6.0 CONCLUSIONS / RECOMMENDATIONS

Current New York State Department of Labor (NYSDOL) and United States Environmental Protection Agency (USEPA) regulations define materials which contain greater than onepercent (> 1 %) asbestos to be regulated ACM. Based on the results of the laboratory analyses performed for samples collected as part of the completed asbestos survey the following asbestos containing materials (ACM) were identified.

TABLE 1					
Summary of Identified Asbestos-Containing Materials					
Clark House					
1960 Clark Road Denfield NV					

MATERIAL	LOCATION(S)	QTY <sup>(2)</sup> (ft <sup>2</sup> or lf) <sup>(1)</sup>	FRIABILITY <sup>(3)</sup> (F, NF, NOB)	CONDITION		
Yellow Plaster Material*	Ceiling of Patio Cover	200 ft <sup>2</sup>	NF	Fair		
Window Glaze	1 <sup>st</sup> and 2 <sup>nd</sup> Floor throughout	1,375 lf (27 ft <sup>2</sup> )	NOB	Fair		

\* - The material, as sampled reflected asbestos levels at .05% and 1.0%. Additional sampling and analysis would likely result in asbestos levels above the >1% identified in the NYSDOL and EPA Regulations. Therefore the material was identified as ACM.


# TABLE 2

## Summary of Identified Asbestos-Containing Materials

### Maintenance Barn

### 745 Whalen Road, Penfield, NY

MATERIAL	LOCATION(S)	QTY <sup>(2)</sup> (ft <sup>2</sup> or lf) <sup>(1)</sup>	FRIABILITY <sup>(3)</sup> (F, NF, NOB)	CONDITION
Window Glaze	North and East Exterior	18 lf (<1 ft <sup>2</sup> )	NOB	Fair

1) ft<sup>2</sup> = square feet, lf = linear feet, ft<sup>3</sup> = cubic feet

2) Dimensions and quantities are estimates and shall be verified by abatement contractors.

3) F = Friable, NF = Non-friable, NOB = Non-friable organically bound

Subpart 56-5.1(g) also requires that one (1) copy of the results of the building/structure asbestos survey shall be immediately transmitted by the building/structure owner as follows:

- 1) One copy of the completed asbestos survey shall be sent by the owner or their agent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling or repair work under applicable State or local laws.
- 2) The completed asbestos survey for controlled demolition (as per Subpart 56-11.5) or pre-demolition asbestos projects shall also be submitted to the appropriate Asbestos Control Bureau district office.
- 3) The completed asbestos survey for controlled demolition (as per Subpart 56-11.5) or pre-demolition asbestos projects shall also be submitted to the appropriate Asbestos Control Bureau district office.

The completed asbestos survey shall be kept on the construction site throughout the duration of the asbestos project and any associated demolition, renovation, remodeling or repair project. To the best of our knowledge and belief there are no additional asbestos containing materials associated with the structures located at 1960 Clark Road and 745 Whelan Road in the Town of Penfield, New York.

HSE appreciates the opportunity to provide asbestos survey services for this project to you and the C&S Companies. Please do not hesitate to contact me at your convenience if you have any questions or require additional information regarding this report.

Respectfully Submitted By: HSE CONSULTING SERVICES, LLC

Douglass B. Selover, ASP

Project Manager T:\reports\ih\C&S Engineers\Shadow Pines Golf Course\Asbestos Survey Report rev 1.docx



Appendix 1 Site Location Map



# **Site Location Map**

# 1960 Clark Road and 745 Whalen Road Penfield, New York





Appendix 2 Project Diagrams







Appendix 3 Project Photographs



## **ASBESTOS SURVEY PHOTO DOCUMENTATION**

Clark House, Golf Cart Barn, Large Storage Barn 1960 Clark Road Penfield, New York















#### **ASBESTOS SURVEY PHOTO DOCUMENTATION**

Maintenance Barn 745 Whalen Road Penfield, New York











**Appendix 4** Homogenous Area Listing



# PRE-RENOVATION ASBESTOS SURVEY Homogenous Area Listing

# Clark House 1960 Clark Road Penfield, New York 14625

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
Yellow Mastic under Green Carpet	No
Yellow Mastic under Dark Green Carpet	No
Yellow Mastic under Blue I/O Carpet	No
1x1 Fissured Ceiling Tile	No
Surface/Base Plaster	No
Joint Compound	No
Joint Tape	No
Drywall	No
2x2 Ceiling Tile	No
Door Caulk	No
Window Glaze	Yes
Black Shingle	No
Roof paper Under Black Shingle	No
Yellow Plaster Material	Yes

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
Yellow Mastic under Gray Carpet	No
Yellow Mastic under 2x2 Dark Gray Carpet	No
Yellow Mastic under Brown Carpet	No
Brown Cove Base with Mastic	No
Black Cove Base with Mastic	No
Tan Cove Base with Mastic	No
Gray Cove Base with Mastic	No
Dark Gray Cove Base with Mastic	No
Joint Compound (Basement)	No
Joint Tape (Basement)	No
Drywall (Basement)	No
Black Shingle	No
Ice Guard under Black Shingle	No



# PRE-RENOVATION ASBESTOS SURVEY Homogenous Area Listing

Golf Cart Barn 1960 Clark Road Penfield, New York 14625

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
Black Shingle	No
Roof Paper under Black Shingle	No

## Large Barn 1960 Clark Road Penfield, New York 14625

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
Black Shingle	No
White Shingle	No



# PRE-RENOVATION ASBESTOS SURVEY Homogenous Area Listing

## Maintenance Barn 745 Whelan Road Penfield, New York 14526

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
Joint Compound	No
Joint Tape	No
Drywall	No
Black Shingle	No
Black Shingle	No
Roof Paper	No

HOMOGENOUS AREA (Material)	ACM Present? (> 1%)
2x4 Fissured Ceiling Tile	No
2x2 Ceiling Tile	No
Yellow Mastic under Brown Carpet	No
Window Glaze	Yes
Window Caulk	No

**NOTE:** Any non-friable organically bound (NOB) materials listed above as containing less than one percent (< 1%) asbestos, if applicable, were confirmed to be non-asbestos containing by Transmission Electron Microscopy (TEM) analysis in accordance with New York State Department of Health (NYSDOH) Environmental laboratory Approval Program requirements.



Appendix 5 NYSDOL Firm Asbestos Handling License New York State – Department of Labor Division of Safety and Health License and Certificate Unit State Campus, Building 12 Albany, NY 12240

#### ASBESTOS HANDLING LICENSE

HSE Consulting Services, LLC 8636 Brewerton Road Cicero, NY /13039

FILE NUMBER: 09-50181 LICENSE NUMBER: 501811 LICENSE CLASS: RESTRICTED DATE OF ISSUE: 12/28/2017 EXPIRATION DATE: 01/31/2019

Duly Authorized Representative - Brian C King:

ME

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

SH 432 (8/12)

Eileen M. Franko, Director

For the Commissioner of Labor



# Appendix 6 NYSDOL Asbestos Inspector Certification Documentation



## ASBESTOS INSPECTOR CERTIFICATION DOCUMENTATION

#### **PROJECT NAME**

Asbestos Survey 1960 Clark Road & 745 Whalen Road Penfield, New York

#### **CLIENT NAME**

**C&S** Companies 499 Col. Eileen Collins Boulevard Syracuse, New York 13212

#### **SURVEY DATE**

January 16 & 17, 2018

#### **ASBESTOS INSPECTOR**

**Douglass B. Selover** NYSDOL Certificate Number 11-07636 Expires 04/30/2018

Chad C. Gable NYSDOL Certificate Number 12-10911 Expires 02/28/2018



613216216614614211713018653991 RYEG HAZ HAIR BRO BOT 5' 09"

2

IF FOUND RETURN TO: NYSDOL - LEC UNIT ROOM 161A BUILDING 12 STATE OFFICE CAMPUS ALBANT NY 12240





Appendix 7 Laboratory Analysis Reports & Chain-of-Custody Records

Consulting Set	vices, LLC														OSHA	Asbestos / I Complianc	Air Quality ead / Mold e / Training al Services
			4	<b>ASBES</b>	TOS	ANAL	[ SIS ]	REPO	RT								
C&S Companies 499 Col. Fileen Coll	ins Blvd		No	n-Gra	vimetr	ically ]	Reduc	ed Sa	mples						Tuesday	, Januar	/ 23, 2018
				Analy	'sis Meth NYS DO	Od - NY S	state EL ID #119	AP 198. 73	_				Batch	Mumb Decent	er: ed:		8381
Syracuse Attention: Bryan Be	NY 13212 iyer	<u>م</u>	roiect #	1960	Clark R	<u>ب</u>							Date ( Sai	Collecte Dollecte	ad: By:	Doi	1/10/2018 1/16/2018 1g Selover
Page 1 of 4			roject N	Tame: ]	Penfiel	d, NY								I	1		)
Lab ID Sample ID 70243 CG11618-13-1	Color White	Total % Asbestos NAD	WW WW	CH %	cr %	%T	% AC	% W	CE %	• MV	% 2M	SY ]	。 8 HH	0 0	her Type	%Non- Fibrous Material 100	Date Analyzed 1/18/2018
70244 CG11618-13-2	Gray	NAD							TR							100	1/18/2018
70245 CG11618-14-1	White	NAD			-						a second de la companya de		ente mor - une schedule		an a	100	1/18/2018
70246 CG11618-14-2	Gray	QAN							TR							100	1/18/2018
70247 CG11618-15-1	White	NAD														100	1/18/2018
70248 CG11618-15-2	Gray	NAD							TR							100	1/18/2018
70249 CG11618-16-1	White	NAD														100	1/18/2018
70250 CG11618-16-2	Gray	NAD							TR							100	1/18/2018
70251 CG11618-17-1	White	NAD														100	1/18/2018
70252 CG11618-17-2	Gray	NAD							TR							100	1/18/2018
70253 CG11618-20	White	UAD														100	1/18/2018
Abbreviations: AM - Amosite CH - Chrysotile CR - Crocidolite	TM - Tremolite AC - Actinolite AN - Anthophyllite	CE - <b>Ce</b> MW - M GW - G	llulose lineral W lass Woo		о-о - НН - ХS	Synthetic Horse Ha ther	.11	TR . NAJ SAF	- Trace as D- No As P - Stop	sbestos ( bestos I at First	letected )etected Positive	at <1% (not an	alyzed)	N/A - NA NA -	- Not Appl - Not Avail ufficient Sa	iicable able mple for ∕	malysis
8636 Brewerton Ros Cicero, New York 13	10 1039		The re	sults pe	rtain oi	uly to th	e samp	les in	this rep	ort.			Ч Ж М	# (315) c # (315) w.hsecc	698-1438 ) 698-144 onsultings	3 11 ervices.c	E.

Consulting Ser	vices, LLC														OSHA E	sbestos / L Compliance nvironment	Air Quality ead / Mold • / Training al Services
			•	SBES	TOS	ANAL	<b>SIS</b>	REPO	RT								
&S Companies			No	n-Gra	vimetn	ically ]	Reduc	ed Sa	mples						Tuesday,	January	, 23, 2018
99 Col. Eileen Coll	lins Blvd			Analy	sis Meth NYS DO	od - NY S	State EL ID #119	AP 198. 73	-				Batc]	Numbe	:	·	8381
yracuse	NY 13212							2					Date	Collecte	q; q;		1/16/2018 1/16/2018
Attention: Bryan Bi	ayer		roject #	1960	Clark R	td.							Sa	mpled B	y:	Dou	ig Selover
Page 2 of 4		4	roject N	ame:	rennel	a, NY											
ab ID Sample ID	Color	Total % Asbestos	% AM	CH %	% Å	% MI	AC %	%NAN	CE %	% WM	%E	% I	× H	% 0	ter Type	%Non- Fibrous Material	Date Analyzed
)254 CG11618-21	White	NAD							100								1/18/2018
0255 CG11618-22	Gray/Tan	NAD							20		TR					80	1/22/2018
0256 CG11618-23	White	UAD														100	1/22/2018
0257 CG11618-24	White	NAD							100								1/22/2018
0258 CG11618-25	Gray/Tan	UAD							20		TR					80	1/22/2018
)259 CG11618-26	White	NAD									il.		-			100	1/22/2018
)260 CG11618-27	White	NAD							100								1/22/2018
0261 CG11618-28	White/Tan	NAD							15							85	1/22/2018
0262 CG11618-29	White	UAD														100	1/22/2018
)263 CG11618-30	White	NAD							TR							100	1/22/2018
)264 CG11618-43	White	DAD														100	1/22/2018
bbreviations: M - Amosite H - Chrysoria	TM - Tremolite AC - Actinitie	CE - Ce	llulose	-	SΥ	Synthetic		AT 3	- Trace a	sbestos	letected	at <1%		N/A	- Not Appli	icable	
<ul> <li>Crocidolite</li> </ul>	AN - Anthophyllite	GW - GW	lass Woo	ō	- UU	HOTSE Ma ther	Ħ	SAI	P - Stop	sbestos J at First	Detected Positive	(not an	alyzed)	- AN *Insu	Not Availa ifficient Sar	ıble mple for A	nalysis
			The re	sults pe	rtain o	aly to th	e samj	oles in	this rep	ort.							

8636 Brewerton Road Cicero, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

ABBESTOS ANALYSIS REPORT       Tuesday, January 3, 2018         AIN CATAVINET CANALYSIS REPORT       Tuesday, January 3, 2018         AIN CATAVINET CANALYSIS REPORT       Tuesday, January 3, 2018         AIN Same ELAP 10 #11973       Batch Number: Analysis Method-NY Same ELAP 10#11973         Analysis Method-NY Same ELAP 10#11973       Batch Older Kal.         Vision Cark Ral.         Project # 1960 Clark Ral.         Project # 1960 Clark Ral.         Project # 1960 Clark Ral.         Date Collected:       1/16/2018         Project # 1960 Clark Ral.         Project # 1960 Clark Ral.       R	Sarvices, LLC														I I I	Asbestos / L( Compliance	Air Quality aad / Mold / Training Il Services
Intercursing reduced Samples       Trestay: January 3.201         Analysis Method - NY State ELAP 108.1       Tates Analysis Method - NY State ELAP 108.1         Analysis Method - NY State ELAP 108.1       Batch Number: Analysis Method - NY State ELAP 108.1         Project # 1960 Clark Rd.       Date Received:       1/16/2018         Project # 1960 Clark Rd.         Project # 1960 Clark Rd.         Project # 1960 Clark Rd.       Sampled BY:       Doug Selover         NAD       Mathod       Sampled BY:       Doug Selover         NAD       Mathod       Mathod       Mathod       1/16/2018         NAD       NAD       Mathod       Mathod       Mathod       1/16/2018         NAD       NAD       Mathod       Mathod       1/16/2018       1/16/2018         NAD       NAD       Asbestos       Amathod       Mathod       1/16/2018         NAD       NAD       Asbestos       Amathod       Mathod       1/16/2018         NAD       NAD       Asbestos       Mathod       1/16/2018       1/16/2018         NAD       NAD       Asbestos       Mathod       1/16/2018       1/16/2018         NAD       NAD			V	SBES	TOS /	ANAL	<b>XSIS</b>	REPC	RT								
12       Analysis Method - NY State ELAP 19:1       Batch Number:       838.         NYS DOH ELAP ID #11973       Date Received:       1/16/2018         NYS DOH ELAP ID #11973       Date Received:       1/16/2018         Project # 1960 Clark Rd.       Paice Collected:       1/16/2018         Project # 1960 Clark Rd.       Project # 1960 Clark Rd.       Paice Collected:       1/16/2018         Abbestos       Ma       %       %       %       %       %       %       %         NAD       NAD       M       M       %			Noi	n-Gra	vimetr	ically	Redu	ced Sa	mples						Tuesday	, January	23, 2018
12       Project # 1 Ioh Clark Rd.       Inde Collected:       I/10/2018         Project Name: Penfield, NY       Project Name: Penfield, NY       Sampled By:       Due Sclower         Project Name: Penfield, NY       Project Name: Penfield, NY       Sampled By:       Due Sclower         Abbesios       Am       CH       Am       AC       Am       CB       May       Material       I/10/2018         NAD       NAD       CH       Am       AC       Am       CB       May       Gm       Material       I/10/2018         NAD       NAD       N       AD       SY       HH       O       Inter Type       Material       Amalyzed         NAD       NAD       NAD       NAD       NAD       NAD       NAD       SY       HH       O       I/12/2018         NAD       NAD       NAD       NAD       NAD       NAD       SY       I/12/2018       I/12/2018         NAD       NAD       NAD       NAD       NAD       NAD       SY       I/12/2018       I/12/2018         NAD       NAD       NAD       NAD       NAD       NAD       NAD       I/12/2018       I/12/2018         NAD       NAD       NAD       NAD </td <td></td> <td></td> <td></td> <td>Analy</td> <td>sis Meth</td> <td>od - NY</td> <td>State El ID #116</td> <td>AP 198</td> <td>.1</td> <td></td> <td></td> <td></td> <td>Bat</td> <td>ch Nu</td> <td>imber:</td> <td></td> <td>8381</td>				Analy	sis Meth	od - NY	State El ID #116	AP 198	.1				Bat	ch Nu	imber:		8381
Project # 1960 Clark Rui.Project # 1960 Clark Rui.Project # I Job Clark Name:Prantick Name:Prantick Name:Prantick Name:Project Name:Prantick Name:Prantick Name:Prantick Name:Prantick Name:AbbestosMabMaMayMayMatrixMatrixAbbestosMabName:MatrixMatrixMatrixNADName:Name:Name:Name:Name:Name:NADName:Name:Name:Name:Name:Name:Name:NadName:Name:Name:Name:Name:Name:Name:NadName:Name:Name:Name:Name:Name:Name:Name:NadName:Name:Name:Name:Name:Name:Name:Name:Name:Name:NadName:Name:Name:Name:Name:Name:Name:Name:Name:Name:Name:Name:Name:Name:NadName:	12			4				C.					Date	e Kec e Coll	ected:		/16/2018 /16/2018
Internet, Yeinthed, NY           Total %         %		Pro	oject #	1960	Clark R	d.							02	ample	ed By:	Dou	g Selover
		PTC 1	oject N	ame: ]	Pentiel(	d, NY										12/0	
n NAD       100       122/2018         n NAD       20       122/2018         NAD       20       1/22/2018         NAD       100       1/22/2018         NAD       100       1/22/2018         NAD       100       1/22/2018         NAD       100       1/23/2018         NAD       20       TR       80       1/23/2018         NAD       100       7R       80       1/23/2018         NAD       100       7R       1/23/2018       1/23/2018         NAD       100       1/23       1/23/2018       1/23/2018         NAD       100       1/2       1/23/2018       1/23/2018         NAD       110       1/2       1/23/2018       1/23/2018         NAD       110       1/2       1/23/2018       1/23/2018         NAD       110       1/2       1/23/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018       1/23/2018         NAD       100       1/10       1/23/2018       1/23/2018         NAD       100       1/23/2018		Total % Asbestos /	% WW	CH %	% CR	%U	AC %	%NA	CE %	% MM	GW %	% SY	%	%0	Other Type	%Non- Fibrous Material	Date Analyzed
n         NAD         20         1/22/2018           NAD         1/20         1/22/2018           NAD         1/0         1/23/2018           NAD         1/0         1/23/2018           NAD         1/0         1/23/2018           NAD         20         TR         80         1/23/2018           NAD         20         TR         80         1/23/2018           NAD         1/0         TR         80         1/23/2018           NAD         1/0         TR         80         1/23/2018           NAD         1/0         1/0         1/23/2018         1/23/2018           NAD         1/0         1/1         1/1         1/23/2018         1/23/2018           NAD         1/1         1/1         1/1         1/1         1/23/2018         1/23/2018           NAD         NAD         TR         TR         1/1         1/23/2018         1/23/2018           NAD         NAD         1/10         1/23/2018         1/23/2018         1/23/2018           NAD         NAD         TR         TR         1/1         1/23/2018         1/23/2018		NAD							100								1/22/2018
NAD       100       123/2018         NAD       100       1/23/2018         NAD       20       TR       80       1/23/2018         NAD       20       TR       80       1/23/2018         NAD       100       7       80       1/23/2018         NAD       100       7       80       1/23/2018         NAD       100       1       1/23/2018       1/23/2018         NAD       100       1       1/23/2018       1/23/2018         NAD       100       1/2       1/23/2018       1/23/2018         NAD       1/5       TR       85       1/23/2018         NAD       1/8       7       1/23/2018       1/23/2018         NAD       1/3       1/3       1/3       1/3       1/3         NAD       1/3       7       1/3       1/2       1/2       1/2         NAD       1/3	ų	NAD							20							80	1/22/2018
MAD         100         1/23/2018           NAD         20         TR         80         1/23/2018           NAD         20         TR         80         1/23/2018           NAD         100         100         1/23/2018         1/23/2018           NAD         100         100         1/23/2018         1/23/2018           NAD         115         TR         85         1/23/2018           NAD         178         1         1/23/2018         1/23/2018           NAD         115         TR         85         1/23/2018           NAD         TR         1         1/23/2018         1/23/2018           NAD         TR         1         1/23/2018         1/23/2018           NAD         TR         1         1/23/2018         1/23/2018           NAD         1         1         1/2         1/23/2018 <td></td> <td>NAD</td> <td></td> <td>100</td> <td>1/23/2018</td>		NAD														100	1/23/2018
Image: NAD       20       TR       80       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       100       1/5       TR       85       1/23/2018         NAD       1/5       TR       85       1/23/2018         NAD       1/5       TR       85       1/23/2018         NAD       TR       1/5       TR       1/2         NAD       TR       1/5       TR       1/2         NAD       TR       1/2       1/2       1/2         NAD       TR       1/0       1/2       1/2         NAD       TR       TR       1/0       1/2         NAD       TR       TR       1/0       1/2		NAD							100								1/23/2018
NAD       1/23/2018         NAD       100         NAD       100         NAD       15       1/8         NAD       15       1/8       1/23/2018         NAD       17       1/3       1/33/2018         NAD       100       1/33/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       18       178       1/23/2018	an	NAD							20		TR					80	1/23/2018
NAD         100         1/23/2018           NAD         15         TR         85         1/23/2018           NAD         TR         85         1/23/2018         1/23/2018           NAD         TR         TR         1/23/2018         1/23/2018           NAD         TR         TR         1/23/2018         1/23/2018           NAD         TR         TR         TR         1/23/2018		NAD														100	1/23/2018
NAD       15       TR       85       1/23/2018         NAD       TR       100       1/23/2018         NAD       100       1/23/2018       1/23/2018         NAD       TR       TR       1/23/2018         NAD       TR       1/23/2018       1/23/2018		NAD							100								1/23/2018
NAD         TR         100         1/23/2018           NAD         100         1/23/2018         1/23/2018           NAD         TR         TR         TR         1/23/2018	q	NAD							15		TR					85	1/23/2018
NAD         100         1/23/2018           NAD         TR         TR         1/00         1/23/2018		NAD							TR							100	1/23/2018
NAD TR TR TR 100 1/23/2018		NAD							100								1/23/2018
		NAD							TR		TR					100	1/23/2018

8636 Brewerton Road Cicero, New York 13039

The results pertain only to the samples in this report.

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

Sarvices, LLC
Consulting

Air Quality Asbestos / Lead / Mold OSHA Compliance / Training Environmental Services

# ASRESTOS ANALYSIS REPORT

			4														
C&S Companies			No N	n-Gra	vimetr	ically ]	Reduc	ed Sa	mples						Tuesday	, January	23, 2018
499 Col. Eileen Collins Blvd				Analy	sis Meth	KN - bo	State EL	AP 198.	-				Batc	h Nur	nber:		8381
				~	INS DO	H ELAP	ID #119	73					Date	Rece	ived:		/16/2018
Syracuse NY 132	212												Date	Colle	cted:	, , , ,	/16/2018
Attention: Bryan Bayer		Ц	roject #	1960 (	Clark R	q.							Ň	Imple	d By:	Dou	g Selover
Page 4 of 4		H	roject N	[ame: ]	Penfield	I, NY											
)		Total %	%	%	%	%	%	%	%	%	%	%	%	%	Other Tyne	%Non-	Date
Lab ID Sample ID Color		Asbestos	AM	CH	IJ	TM	AC	AN	CE	MM	GW	SY	HH	0	Alt mmo	Fibrous Material	Analyzed
70276 CG11618-62 Yellow		0.5		0.5					TR							99.5	1/23/2018
70277 CG11618-63 Yellow		1		÷					TR							66	1/23/2018
Reviewed and Approved By (a	and for q	uestions r	egardir	lg this 1	ceport)		l	Ŵ		A							
, 8 9	•		)	D		Eric	Monse	m. Tec	hnical	Direc	for						

Abbreviations:

AM - Amosite CH - Chrysotile CR - Crocidolite

AC - Actinolite AN - Anthophyllite TM - Tremolite

CE - Cellulose

HH - Horse Hair SY - Synthetic 0 - Other

TR - Trace as bestos detected at <1%

N/A - Not Applicable NA - Not Available \*Insufficient Sample for Analysis

www.hseconsultingservices.com

Ph # (315) 698-1438 Fax # (315) 698-1441

NAD- No Asbestos Detected SAFP - Stop at First Positive (not analyzed)

The results pertain only to the samples in this report. MW - Mineral Wool GW Glass Wool

8636 Brewerton Road Cicero, New York 13039

Air Quality os / Lead / Mold liance / Training mental Services		ary 23, 2018	8382	1/16/2018	1/16/2018	Joug Selover	D		Date	Analyzed	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	n floor method
Asbest OSHA Comp Environ		esday, Janu							Total %	Asbestos	UAD	<b>UAD</b>	NAD	NAD	UAD	NAD	CIAN	NAD	UAD	NAD	NAD	n-ACM) ting asbestos i cently the only
		Tu	Batch Number:	Date Received:	Date Collected:	Sampled Bv:				pe % Type												-ACM) preted as being no ntly reliable in detec n microscopy is curr
	ial				920 I				EM ANALYSIS	% Type % Ty	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	iterpreted as being non esults must not be inter croscopy is not consister ive transmission electrol d as non-ACM.
	<b>VSIS REPORT</b> duced Samples ly Bound Mater	Y State ELAP 198.6	o ID #11973	Y State ELAP 198.4	(SDOH ELAP ID #10					e % Type	Z	Z	Z	N	Ż	N	N	Z	N	N	Ŋ	alyzed must not be in s with inconclusive rust. (Polarized-light mid nd materials. Quantitat be considered or treated tupples in this repo
	ESTOS ANAL) vimetrically Re iable Organical	Analysis Method - N	NYS DOH ELAF	Analysis Method - N	lysis Performed by NV		k Rd.	eld, NY	LYSIS	lype % Typ												l at less than 1%. lysis (Samples not an tos Detected (Sample med per client's reque iable organically bour e if this material can b e if this material can b
	ASB Gra Non-Fr	PLM		TEM	TEM Anal		1960 Clar	Vame: Penfi	PLM ANA	%	UAD	NAD	NAD	QAN	NAD	NAD	NAD	UAD	NAD	NAD	NAD	oestos detected ample for ana ive, No Asbes sis not perfor similar non-fr ed to determin c results per
							Project #	Project <b>N</b>	%	Residue	37.0	33.7	35.3	31.3	35.7	36.9	40.5	38.1	39.0	38.5	45.3	TR - Trace ask *Insufficient s *** - Inconclusi ***TEM analy coverings and that can be use NOTE: The
			lvd		13212					Color	Tan	Tan	Tan	Tan	Tan	Tan	Tan	Tan	Tan	Tan	Brown	Applicable Available Asbestos Detected p at First Positive it analyzed) kequired idue Remaining
Litting Services. L		anies	ileen Collins B		ΝΥ	Bryan Bayer		ge 1 of 4		mple ID	311618-1	<b>J</b> 11618-2	311618-3	311618-4	311618-5	311618-6	311618-7	311618-8	311618-9	311618-10	511618-11	ons: N/A - Not / e NA - Not / te NAD - No te NAD - No te SAFP - Str e (nt e (nt r) /lite NR - Not Res
		C&S Comp	499 Col. Eı		Syracuse	Attention:		Pa		Lab ID Sa	70278 CC	70279 CC	70280 CC	70281 CC	70282 CC	70283 CC	70284 CC	70285 CC	70286 CC	70287 CC	70288 CC	Abbreviati AM - Amosite CH - Chrysotil CR - Crocidoli CR - Tremolit AN - Anthophy AN - Anthophy

# 8636 Brewerton Road Cicero, New York 13039

•

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

	uting Bervices.												Ast OSHA Co	Air Quality estos / Lead / Mold mpliance / Training ronmental Services
C&S Comp	anies			ASBE Gravi Non-Frial PLM A	STOS A metrica ble Org nalysis Me	INALY NALY Ily Red anically anically	SIS RE inced St y Bounc State EL	PORT amples d Mate	rial				Puesday, Ja	102,23,2018
499 Col. Ei	leen Collins	Blvd			NYS DC	HELAP ]	ID #11973	~			Batch	Number		8382
ζ	,			TEM An	ıalysis Me	thod - NY	State ELA	AP 198.4			Date	Received	<u>.</u>	1/16/2018
Syracuse Attention:	NY Brvan Bavei	13212 r		TEM Analysi	s Perform	ed by NYS	SDOH EL	AP ID #1	0920		Date (	Collected	* •	1/16/2018
			Project #	1960 Clark I	Rd.						Sal	npied by	K*	Doug Selover
Pa	ge 2 of 4		Project N¿	ame: Penfield	l, NY									
			%	<b>PLM ANALY</b>	SIS				EM ANALY	VSIS			Total %	Date
Lab ID Sai	mple ID	Color	Residue	% Tyr	е %	Type	%	Type	% Type	%	Type	% Type	Asbestos	Analyzed
70289 CG	311618-12	Brown	45.7	NAD				~	IAD				DAD	1/18/2018
70290 CC	711618-18	Tan	25.2	NAD					IAD				UAD	1/18/2018
70291 CG	311618-19	Tan	24.8	NAD				~	IAD				<b>UAD</b>	1/18/2018
70292 CG	311618-31-1	Brown	3.0	NAD				4	IAD				CLAN	1/18/2018
70293 CG	11618-31-2	Off-White	21.5	NAD									NAD	1/18/2018
70294 CG	11618-32-1	Brown	2.1	NAD					[AD	[			UAD	1/18/2018
70295 CG	311618-32-2	Off-White	20.3	NAD				4	IAD				NAD	1/18/2018
70296 CG	11618-33	Tan	40.5	QAN				4	IAD				UAD	1/18/2018
70297 CG	11618-34	Tan	36.8	NAD				4	IAD			-	UAD	1/18/2018
70298 CG	11618-35-1	Off-White	1.3	NAD				4	(AD				NAD	1/18/2018
70299 CG	11618-35-2	Off-White	0.6	NR					NR				NR	1/18/2018
Abbreviatio	:SU(													
AM - Amosite CH - Chrysotil CR - Crocidolit TM - Tremolite AC - Actinolite	N/A - No NA - Not NA - Not SAFP - S	tt Applicable t Available o Asbestos Detected (top at First Positive not analyzed)	TR - Trace asbe *Insufficient sar *** - Inconclusiv ***TEM analysi coverings and si	stos detected at mple for analysi e, No Asbestos is not performed milar non-friab	less than is (Sample Detected d per clien ie organic	1%. es not anal (Samples t's request. ally bound	lyzed mus with inco . (Polarize I materials	tt not be j nclusive d-light m	interpreted a results must icroscopy is i tive transmis	as being r not be in not consis ssion elect	non-ACM terpretec stently rel- tron micro	() I as being lable in der sconv is c	non-ACM) tecting asbest	s in floor No method
AN - Anthophy	/llite NR - Not <1.0% Re	t Required ssidue Remaining	that can be used	l to determine if	this mater	rial can be	considere	d or treat	ed as non-AC	CM.				
			INCIT: THE	results perta	m ound o	o une san	upies in	unis rep	OIT.					
8636 Brev Cicero Ne	verton Road	σ									<u>ה</u> ת	1 # (315) × # (315)	698-1438 698-1441	

UICEIC, INEW TOIN 13038

www.hseconsultingservices.com

*	Consulting	Services. LL	0										Asbe OSHA Con Envir	Air Quality stos / Lead / Mold pliance / Training inmental Services
					ASBEST Gravime Non-Friable	OS AN etricall Organ	ALYS y Redu	IS REP (ced San Bound 7	ORT Iples Materia					
C&S C	ompanies				PLM Analy	ysis Meth	od - NY S	State ELAP	198.6			Π	uesday, Jan	uary 23, 2018
499 Co	l. Eileen C	Collins B1	pvl		Z	HOG SY	ELAP II	) #11973			В	atch Number		8382
i					TEM Analy	sis Meth	od - NY S	tate ELAP	198.4		Д	ate Received		1/16/2018
Syracu	se vn: Berge	NY Bayer	13212		TEM Analysis P	erformed	by NYSI	OH ELAP	ID #1092	6	D	ate Collected:		1/16/2018
Innonte	JII. DIYa	li Dayer		Project #	1960 Clark Rd.							Sampled By		Doug Selover
	Page 3 o	f4		Project Na	ame: Penfield, 1	λλ								
	)			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FLM ANALYSI				TEM	ANALYSI	S		Total %	Date
Lab ID	Sample II	D	Color	Residue	% Type	%	Type	% T <sub>3</sub>	pe %	Type	% Typ	e % Type	Asbestos	Analyzed
70300	CG11618	3-36-1	Off-White	6.0	NR				NR				NR	1/18/2018
70301	CG11618	3-36-2	Off-White	2.3	NAD				NAL				UAD	1/18/2018
70302	CG11618	3-37-1	Gray	2.0	NAD				NAL				NAD	1/18/2018
70303	CG11618	3-37-2	Tan	20.3	NAD				NAL				DAD	1/18/2018
70304	CG11618	3-38-1	Gray	1.3	UAD				NAL				DAD	1/18/2018
70305	CG11618	3-38-2	Tan	22.0	NAD				NAL				QĂN	1/18/2018
70306	CG11618	3-39-1	Gray	16.2	UAD				NAL				UAD	1/18/2018
70307	CG11618	3-39-2	Yellow	0.0	NAD				NAL				DAD	1/18/2018
70308	CG11618	3-40-1	Gray	14.6	NAD				NAI				NAD	1/18/2018
70309	CG11618	3-40-2	Yellow	6.6	NAD				NAL				NAD	1/18/2018
70310	CG11618	3-55	White	4.8	NAD				NAL				NAD	1/18/2018
Abbrev AM - Am CH - Chr CR - Croc CR - Croc TM - Trer AC - Acti	iations: sotile 1 idolite 2 nolite 2 nolite 5	N/A - Not A NA - Not A NAD - No 4 SAFP - Stor (not VR - Not Re vIR - Not Re	Applicable vailable Asbestos Detected p at First Positive t analyzed) equired due Remaining	TR - Trace asbe *Insufficient sai ** - Inconclusiv ***TEM analys coverings and si that can be used NOTE: The	estos detected at les mple for analysis ( ve, No Asbestos De is not performed p imilar non-friable ( 1 to determine if thi results pertain (	ss than 1% Samples Stected (S er client's organicall is materia only to	6. <b>not analy</b> amples w request. ( y bound i y bound i can be c the sam	zzed must n vith inconcl (Polarized-1 materials. Q onsidered c onsidered c	ot be inte lusive resu ight micro uantitative r treated a is report	rpreted as l lts must no scopy is not transmissic s non-ACM.	eing non- t be interp consistent n electron	ACM) reted as being r ly reliable in det microscopy is cr	on-ACM) scting asbesto: irrently the on	in floor y method
8636	Brewerton	Road										Fax # (315)	898-1441	

Cicero, New York 13039

Fax # (315) 698-1441 www.hseconsultingservices.com

Consulting Services. LLC	C&S Companies 499 Col. Eileen Collins Blvd

		lary 23, 2018	8382	1/16/2018	1/16/2018	Joing Caloring	Jourg Bollover		Date	Analyzed	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018	1/18/2018
		sday, Janu				F	-		Total %	Asbestos	NAD	UAD	1.2	NAD	UAD	UAD
		Tue	Batch Number:	Date Received:	Date Collected:	Samuled Rv.	· for portions			ype % Type					-	
									SIS	% T <sub>3</sub>	E					
	I				0				ANALYS	Type			CH	•		
RT	ples lateria	98.6		98.4	D #1092				TTEM	e %	NAL	NAL	1.2	NAL	NAD	NAL
REPO	I Samp und M	ELAP 1	[973	ELAP 19	ELAP II					Typ						
[SIS]	Juced y Boy	Y State	ID #11	/ State	HOUS					%					)	
VALN	ly Red nicall	N - pot	I ELAP	(N - po	l by NY					Type					}	
<b>JS A</b>	bricall Orga	sis Meth	S DOF	is Meth	rformed			Y		%						
BEST	avimet riable	M Analy	ñ	M Analys	alysis Pe		ark Rd.	field, N	ALYSIS	Type						
<b>ASI</b>	Gr Non-F	PLI		TEN	TEM An		1960 Cla	ame: Pen	PLM AN	%	NAD	NAD	NAD	UAD	NAD	NAD
							Project #	Project N	%	Residue	8.2	6.4	23.6	57.1	55.4	55.1
			q		13212					Color	White	White	White	White	White	White
		Se	I Collins Blv		λλ	van Bayer		l of 4		B	18-56	18-57	18-58	18-59	18-60	18-61
		mpanie	. Eileer		Ð	n: Bry		Page 4		Sample	CG116	CG116	CG116	CG116	CG116	CG116
		C&S Cc	499 Col		Syracus	Attentio				Lab ID	70311	70312	70313	70314	70315	70316

Reviewed and Approved By (and for questions regarding this report):

Eric Monsen, Technical Director

# Abbreviations:

AM - Amosite CH - Chrysotile CR - Crocidolite TM - Tremolite AC - Actinolite	N/A - Not Applicable NA - Not Available NAD - No Asbestos Detected SAFP - Stop at First Positive (not analyzed)
AN - Anthophyllite	NR - Not Required
	<1.0% Residue Remaining

coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method

that can be used to determine if this material can be considered or treated as non-ACM.

NOTE: The results pertain only to the samples in this report.

\*\*\*TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable in detecting asbestos in floor

\*\* - Inconclusive, No Asbestos Detected (Samples with inconclusive results must not be interpreted as being non-ACM)

\*Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)

TR - Trace asbestos detected at less than 1%.

Cicero, New York 13039 **8636 Brewerton Road** 

www.hseconsultingservices.com Fax # (315) 698-1441 Ph # (315) 698-1438

Air Quality Asbestos / Lead / Mold OSHA Compliance / Training Environmental Services

Consulting Services. LL							-	Asbestos / I SSHA Complianc Environmeni	Air Quality ead / Mold s / Training al Services
			ASBESTOS AN Gravimetrically Friable	ALYSIS RJ Reduced S Material	<b>EPORT</b> amples				
C&S Companies			PLM Analysis Metho	od - NY State EI	AP 198.6		Tu	esday, Janua	ry 23, 2018
499 Col. Eileen Collins Bl	vd.		HOG SAN	ELAP ID #1197	3		Batch Number:		8383
			TEM Analysis Metho	d - NY State EL	AP 198.4		Date Received:		1/16/2018
Syracuse NY	13212	L	<b>FEM Analysis Performed</b> t	by NYSDOH EI	AP ID #10920		Date Collected:		1/16/2018
Attention: Bryan Bayer							Sampled Bv:	Ĩ	oug Selover
		Project # 19	060 Clark Rd.					1	
Page 1 of 1		Project Nam	ie: Penfield, NY						
		%	LM ANALYSIS		TEM A	NALYSIS		Total %	Date
Lab ID Sample ID	Color	Residue	% Type %	Type %	Type %	Type %	Type % Type	Asbestos	Analyzed
70317 CG11618-41	Gray	37.9 I	UAD	3	NAD	······································		DAD	1/18/2018
70318 CG11618-42	Gray	34.8 I	<b>VAD</b>		NAD			NAD	1/18/2018
Reviewed and Approved B	y (and for quest	ions regarding	this report):	V	1				
4	4	5	Eric	: Monsen, Te	chnical Dire	ctor		Ì	

# Abbreviations:

N/A - Not Applicable NA - Not Available	SAFP - Stop at First Positive	(not analyzed)	NR-Not Required
AM - Amosite CH - Chrysotile	UK - Urocidolite TM - Tremolite	AC - Actinolite	AN - Anthophyllite

\*\*\*TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method

that can be used to determine if this material can be considered or treated as non-ACM.

NOTE: The results pertain only to the samples in this report.

\*\* - Inconclusive, No Asbestos Detected (Samples with inconclusive results must not be interpreted as being non-ACM)

TR - Trace asbestos detected at less than 1% \*Insuffient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)

8636 Brewerton Road Cicero, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

For Lab Use Only	8361 70243 - 70277 Batch # 8382 70278 - 70216	8383 70317-70318	Contact: Row D	"hone/Fax:	J-mail:	For Lab Use Only	ayers Analysis Method Lah ID	Q 198.6 70278	70279	70280	70281	76282	70283	702.84	70285	70280	70287	70288	70289	-2 1176.1196.1 70243 /70244	1 70245/70246	SHZOL/LHZOL /	102202/10220	10251 /70252	967.02 0.01	167.02	1 170.1 70253		Date	1/16/15 CT3	11101 5 100	1/1/6/18 110.00	Standard (5 Dav)
/Surface Cant T	vourtace Sample Log	Page 1 o Fy	Client Name: C+5 COWDAULCS	Address: 499 Cd. Eleen Collins Richt	5404018 NY 13713		Type I	10 LOUD MAGIC CARGER GREEN CASH	n 11 11 11 11	11 11 11 11 11	I II N BAT. U	1 1 1 1 1 1 1	il li li Rhing TID mich	ון ת ת ת ת ני וי	Clangegline Ernel Garrin 121 al	$n + \frac{1}{r}$	Brn u a u	the de the de	1-5 Kein + BASE nearly - 3		1 - 11 11 -17 -17			40 lever AMSS ic condun ox Sme 242 and	$\eta$ $\eta$ $\eta$ $\eta$ $\eta$	Joint Conto	NOB=Non-Friable Organically Bound		) Signature	and he	and the flat	TOUL TO A HAME - 10	2 Hour 1 48 Hour 1 72 Hour
Consulting Services #1.6	8636 Brewerton Road, Cicero, NY 13039 Phone: 315-698-1438 / Fax: 315-698-1441	Project Name: A. C. C.	Project Address: 19/0 1/2010	Pantalal 211	har and and	Sample No. Sample Location	CG11618-1 5 Selt RW 104	& NE CORNER RAN 101	8 5E 11 11 10g	7 WE 4 4 105	3 MUU 4 11 12	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/ UE 4 " 109	a new u left	1, 100 Sele 4 104	10 Mac 11 a 11		13 5 5 5 11 11	14 11 1 1 10 10 10 10 10 10 10 10 10 10 10	In a loi	10/2012 11 11 201			VV 1935 11 10 100	V 2014F 11 11 400	Sample Types: ASBESTOS: F= Friable NE-N-	Chain of Cha	Print Name	Sampled by: Doug Seloner	Kelinquished by: Deck Defen	received at Lab by: 1xelly NUCUD	Autraround Lime: D RUSH (Specify): D 12 F	

For Lab Use Only 8381 70243-70277 atch# 8382 70276-70316	8383 70317 - 70318 ontact: Beythed Bryev hone/Fax:	For Lab Use Only	ayers Analysis Method Lab ID	70254	70250	70257	70258	70259	70260	70261	70262	1981-11901 7070 12020	70201 1010 10202 1023	0 198.10 70.201	70297	2 1198.61 198.6 76298 170799	1 70300/70301	1 70302 70303	1 70304/70305	1 10306/70367	1 1 10308 / 76309		Date	1/10/18 8:30	1/16/18 12:50	0021 911,110	Standard (5 Dav)
Surface Sample Log	Page $2 a f = 4$ Client Name: C+5 CMD4VIC5 Address: 499 Cd. Eileen College Red P Synderse: NY 1.3712 F	Samula Description	Jour train	dry un All	Tour chad	day in the	Sout Coast	1' 2420	Deg leal	Jeri'A CANSO	ben ward	-BIM Care 6455 42 MASLIC-2		4 Plicer ANSAIC LINGA RIN Cat		1-11 COLE DASE 12 DAAS/12-2 (5	$- \mathcal{V}(\mathcal{L}_{dhr.}, \mathcal{L}_{l}, \mathcal{L}_{l})$	$1 - l_i  u_i  u_i  -\gamma$	- Cy, Ay 11 1, -2	1- ri ri n -2	08=Non-Friable Organically Bound	0; · · · //	orgnantre/	AN AND	1111 - JC AL	IT = 24 Hour = 48 Hour = 72 Hour &	
Consulting Services, ft C 8636 Brewerton Road, Cicero, NY 13039 Phone: 315-698-1438 / Fax: 315-698-1441	Project Name: A5 615 405 SAW ALMS Project Address: 1960 CARK P.	Sample No. Sample Location	CG11618-2115E side RM 207	8 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	24 5 11 11 10 11	St h u u u	26 5 E 4 4 108			4 m / 1 m - 1 - 10-4	2010 - 104	32/2F 4 41 B	3390 11 11 11	34 Sw 11 11 11	35 MW 11 41 87	36 11 11 4 87	32 M 10 10 BS	1 38 X 14 11 14		Sample Types: ASBESTOS: F= Frishle NE-No- F-11	MOLD: T-Tape Lift S-Swab	Constant vi Custody Print Name	Dativity of Deve Selecton	Densitied at 1.1.1	Timmarchind Times - Medly Nu (COU)	The summary sums. In KUSH (Specify): n 12 Hor	

For Lab Use Only \$381 70243.70277 \$1# \$382 70276-70316	8383 70317-70318 lact: Beyther Byteer	ail: For Lah Dae Only.	ars Analysis Method Lab ID	198.60-F 70317	198.1 70244	70202	70267	70268	70270	70271	70272	DL 202	L 70275	198.6 70310	70311	70313	70314	70315		1/1/// Ors	Undrey Ricon	1/1/1/18 1700 andard (5 Davi
Surface Sample Log	Page 3 or 4 Client Name: C+5 COMDANICS Con Address: 499 Cd. Eileen Collens Rich Pho	SYPACULE NY 13213 E-m	Sample Description Type Lay	243 C4	Joint CNILP	Dity well	JERNY FLAG	Dry wight	Jou ket courd		Juit Chisc	u gape	done chall	n u	cuindres gue	Ciulue Park	Cicling U	B=Non-Friablé Organically Bound	Signature //	flag belg	Were held	IL D 24 Hour D 48 Hour D 72 Hour & St
Consulting Services, LLC 8636 Brewerton Road, Cicero, NY 13039 Phone: 315-698-1438 / Fax: 315-698-1441	Project Name: Actor SANALMG Project Name: Actor CARE El	Sample No	CG116/8-41 Center PM RI	4 2 K K D 4 1 1 21	$\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$	45 " " " " "	4 7 11 11 11 11 11	$\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{3}}{\sqrt{3}}$	50 4 4 4 h	51a a a a a	5 2 1, u u BRI	54 k u u u	55 5 EXT DARE RM 105	56 N $11$ $u$ $11$ $101$	5 8 05 11 11 1000 11 105	54 SE 11 deele carn	Sample Types: ASBESTOS: P= Frishle MR. N.	Chain of Cristody. 1-Tape Lift S-Swab	Sampled by:	Relinquished by: Deby Color	Received at Lab by: Kelly Willin	Lurnaround Time:   CRUSH (Specify): D 12 Hou

For Lab Use Only         Batch # \$381       70243-70274         Batch # \$382       70275-70314         \$363       70317-70314         Contact:       Derified         Phone/Fax:       Phone/Fax:	E-mail: For Lab Use Only Layers Analysis Method Lab ID () 198,1 703/16 198,1 70270 70277	Date Time 11/16/15 2:30 11/16/19 1700
Surface Sample Log Page 4 of 4 Client Name: C+5 Conparance Address: 4797 Col. Eller Collinis Ricd	Servence NY 13113 Sample Description Type Cellen Control in Belletten in U	Lighture Line Control Control Line 10, Line Control 124 Hour D 48 Hour D 72 Hour V
Phone: 315-698-1441 Bulk/Sarveas, t.Lo 8636 Brewerton Road, Cicero, NY 13039 Phone: 315-698-1441 Date: /-/(-/8 Project Name: A6, PS, Fost Sany Marg Project Name: A6, PS, Fost Sany Marg	Sample No. Sample Location CC 116/3 - C) SE EKt. Deel En. 11 3 11 11 11 11 3 11 11 11 11 3 11 11 11 11 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Sampled by: Boug Science Science Selecter Selecter Science at Lab by: Dury Science at Lab by: Kelly NU.Cuo Unaround Time: DRH (Specify): D 12 Hour

ASBESTOS ANALYSIS REPORT ASBESTOS ANALYSIS REPORT Friday, Jamary 26, 20 an Collina Blvd NY 13212 TA Analysis Method - NY State ELAP 198.4 NY 13212 TA Analysis Method - NY State ELAP 198.4 NY 13212 TA Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NY 13212 TAM Analysis Perimed by NY SOH ELAP 198.4 NAD 707 000 NAD NAD NAD NAD NAD NAD 119200 NAD 119200 1718-6 Black 10.0 NAD NAD NAD NAD NAD 119200 1718-6 Black 20.0 NAD NAD NAD NAD NAD 119200 1718-8 Black 20.0 NAD NAD NAD NAD NAD 119200 1718-1 Black 20.0 NAD NAD NAD NAD NAD 119200 1718-1 Black 20.0 NAD NAD NAD NAD NAD NAD 119200 1718-1 Black 20.0 NAD	Insulting Bervices. LLC											Asb OSHA Co Envli	Air Quality sstos / Lead / Mold npllance / Training onmental Services
PLM Analysis Method. NY State ELAP 198,5       Friday, January 26, 20         NY       13212       NYSOOH ELAP 19,1973       Batch Number:       83         NY       13212       TEM Analysis Method. NYSOOH ELAP 19,94       Date Received:       1/17/20         1Bayer       TEM Analysis Performed by NYSOOH ELAP 19,94       Date Received:       1/17/20         1Bayer       Project # 1060 Clark       Sampled By:       Doug Selon         12       Project # 1060 Clark       NAM       Sampled By:       Doug Selon         13       Project # 1060 Clark       NAM       NAM       NAM       NAM         19       Black       372       NAD       NAD       NAD       NAD       NAD         2       Black       372       NAD       NAD       NAD       NAD       NAD       1/19/201         3       Black       23       NAD       NAD       NAD       NAD       1/19/201         4       Black       33       NAD       NAD       NAD       NAD       1/19/201         5       Black       33       NAD       NAD       NAD       1/19/201         6       Black       33       NAD       NAD       NAD       1/19/201			AS) Gr Non-F	BEST( avimet riable	NS AN ricall Organ	IALYS y Redu nically	IS RE ced Sa Bound	PORT amples I Matel	lal				
Ollins Blvd         NYS DOH ELAP ID #11973         Batch Number:         833           NY         13212         TEM Analysis Mohod. NY Sine ELAP ID #11973         Date Received:         1/1720           NY         13212         TEM Analysis Mohod. NY Sine ELAP ID #11973         Date Received:         1/1720           NY         13212         TEM Analysis Ferformed by NYSDOH ELAP ID #11993         Date Received:         1/1720           Project # 1960 Clark         Project # 1960 Clark         NMA         Date Received:         1/1720           Project Manne: Penfield, NY         Project Nanne: Penfield, NY         Sampled By:         Doug Selox           0         Color         Residue $%_{-}$ Type $%_{-}$ Type $%_{-}$ Type           1         Black         37.2         NAD         NAD         NAD         NAD           1.9         Black         35.9         NAD         NAD         NAD         1/19201           1.9         Black         35.9         NAD         NAD         NAD         1/19201           1.9         Black         35.9         NAD         NAD         NAD         1/19201           1.9         Black         35.9         NAD         NAD         NAD         NAD			PL	M Analy	is Meth	NV - bo	state EL	AP 198.6				Friday, Jar	uary 26, 2018
NY     13212     TEM Analysis Performed by NYSOH ELAP 198.4     Date Received:     1/1720       1Bayer     TEM Analysis Performed by NYSOH ELAP 10 # 10920     Date Collected:     1/1720       1Bayer     Project # 1960 Clark     Date Collected:     1/1720       12     Project Marne: Perfield, NY     NAD     Type % Type	Collins Blvd			ŝ	HOU S	ELAP II	#11973				Batch Number		8392
NY       13212       TEM Analysis Performed by NYSDOH ELAP ID #10920       Date Collected:       1/17/20         n Bayer       Project # 1960 Clark       Sampled By:       Doug Selov $f2$ Project # 1960 Clark       Sampled By:       Doug Selov $f2$ Project # 1960 Clark       NAD       TEM ANALYSIS       Doug Selov $f2$ Project # 1960 Clark       NAD       TEM ANALYSIS       Doug Selov $f2$ Project Name: Penffeld, NY       NAD       TEM ANALYSIS       Date Collected:       1/19201 $6$ Black       37.2       NAD       NAD       NAD       NAD       1/19201 $6$ Black       37.2       NAD       NAD       NAD       NAD       1/19201 $6$ Black       23       NAD       NAD       NAD       NAD       1/19201 $6$ Black       39.7       NAD       NAD       NAD       1/19201 $6$ Black       35.8       NAD       NAD       NAD       1/19201 $6$ Black       39.7       NAD       NAD       NAD       1/19201 $6$ Black       35.8       NAD       NAD			TEI	M Analys	is Metho	S YN - bo	tate EL/	LP 198.4			Date Received		1/17/2018
Froject # 1960 Clark       Description       Description <thdescript< td=""><td>nY 13212 n Bayer</td><td></td><td>TEM Ar</td><td>ıalysis Pe</td><td>formed</td><td>by NYSI</td><td>OH EL</td><td>AP ID #1(</td><td>920</td><td></td><td>Date Collected:</td><td></td><td>1/17/2018</td></thdescript<>	nY 13212 n Bayer		TEM Ar	ıalysis Pe	formed	by NYSI	OH EL	AP ID #1(	920		Date Collected:		1/17/2018
r/2       Froger Nature Ferniced, NY         0       Color       Residue       %       Type       %       Type       %       Type       %       NaD       1/19/201         2:1       Black       37.2       NAD       NAD       NAD       1/19/201         3:2       Black       37.2       NAD       NAD       NAD       1/19/201         3:4       Black       23.7       NAD       NAD       NAD       1/19/201         3:5       Black       29.0       NAD       NAD       NAD       1/19/201         3:5       Black       29.0       NAD       NAD       NAD       1/19/201         3:5       Black       19.2       NAD       NAD       NAD       NAD       1/19/201         3:5       NAD       NAD       NAD       NAD       NAD       NAD       1/19/201         4:0       Black       19.2       NAD       NAD       NAD       NAD       1/19/201         5:1       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         6:10       Black       19.2       NAD       NAD       NAD       NAD       1/19/201		Project #	1960 Cl	ark F 14 V							outine of the second		LOUE JOIN
%         PLM ANALYSIS         Total %         Date           D         Color         Residue $%$ Type $%$ Type $%$ Type $Abbestos$ Abbestos         Abb         Abb         Abb         Abb         Abb         Abb         Abb         Abb         Abb </td <td>of 2</td> <td>Project Na</td> <td>ime: ren</td> <td>rield, N</td> <td>Y</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>	of 2	Project Na	ime: ren	rield, N	Y				-				
D         Color         Residue         %         Type		%	PLM AN	ALYSIS				I	EM ANAL	XSIS		Total %	Date
8-1       Black       37.2       NAD       NAD       NAD       1/19/201         8-2       Black       1.0       NAD       NAD       NAD       NAD       1/19/201         8-3       Black       35.9       NAD       NAD       NAD       NAD       1/19/201         8-4       Black       22.7       NAD       NAD       NAD       NAD       1/19/201         8-5       Black       29.0       NAD       NAD       NAD       NAD       1/19/201         8-6       Black       19.2       NAD       NAD       NAD       NAD       1/19/201         8-7       Black       39.7       NAD       NAD       NAD       NAD       1/19/201         8-9       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         8-10       Black       1.5       NAD       NAD       NAD       NAD       1/19/201         8-10       Black       1.5       NAD       NAD       NAD       NAD       NAD       1/19/201         8-10       Black       1.5       NAD       NAD       NAD       NAD       NAD       NAD       NAD       NAD       NAD	ID Color	Residue	%	Type	%	Type	%	Type	% Type	%	Type % Type	Asbestos	Analyzed
18-2       Black       1.0       NAD       NAD       NAD       NAD       1/19/201         18-3       Black       35.9       NAD       NAD       NAD       NAD       1/19/201         18-4       Black       22.7       NAD       NAD       NAD       1/19/201         18-5       Black       29.0       NAD       NAD       NAD       1/19/201         18-6       Black       19.2       NAD       NAD       NAD       1/19/201         18-7       Black       39.7       NAD       NAD       NAD       1/19/201         18-8       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-9       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-10       Black       3.5       NAD       NAD       NAD       NAD       NAD         18-11       Black       3.5       NAD       NAD       NAD       NAD       NAD         18-11       Black       15.4       NAD       NAD       NAD       NAD       NAD         18-10       Black       15.4       NAD       NAD       NAD       NAD	18-1 Black	37.2	NAD					z	AD			NAD	1/19/2018
18-3       Black       35.9       NAD       NAD       N19/201         18-4       Black       2.7       NAD       NAD       NAD       N19/201         18-5       Black       2.9       NAD       NAD       NAD       NAD       1/19/201         18-6       Black       19.2       NAD       NAD       NAD       NAD       1/19/201         18-7       Black       39.7       NAD       NAD       NAD       NAD       1/19/201         18-8       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-9       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-10       Black       15.4       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       15.4       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       15.4       NAD       NAD       NAD       NAD       NAD         18-11       Black       15.4       NAD       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       15.4       NAD <td< td=""><td>18-2 Black</td><td>1.0</td><td>NAD</td><td></td><td></td><td></td><td></td><td>z</td><td>AD</td><td></td><td></td><td>NAD</td><td>1/19/2018</td></td<>	18-2 Black	1.0	NAD					z	AD			NAD	1/19/2018
[8-4]       Black       22.7       NAD       NAD       1/19/201         [8-5]       Black       29.0       NAD       NAD       1/19/201         [8-6]       Black       19.2       NAD       NAD       1/19/201         [8-7]       Black       19.2       NAD       NAD       1/19/201         [8-7]       Black       39.7       NAD       NAD       1/19/201         [8-9]       Black       2.3       NAD       NAD       1/19/201         [8-9]       Black       3.5       NAD       NAD       1/19/201         [8-10]       Black       1.5,4       NAD       NAD       1/19/201         [8-11]       Black       1.5,4       NAD       NAD       1/19/201         [8-11]       Black       1.5,4       NAD       NAD       1/19/201         [8-11]       Black       1.4,9       NAD       NAD       1/19/201         [8-11]       Black       1.4,9       NAD       NAD       1/19/201         [8-11]       Black       1.4,9       NAD       NAD       NAD       1/19/201         [8-11]       Black       1.5,4       NAD       NAD       NAD       NAD <td>18-3 Black</td> <td>35.9</td> <td>DAD</td> <td></td> <td></td> <td></td> <td></td> <td>z</td> <td>AD</td> <td></td> <td></td> <td>NAD</td> <td>1/19/2018</td>	18-3 Black	35.9	DAD					z	AD			NAD	1/19/2018
[8-5       Black       29.0       NAD       NAD       NAD       1/19/201         [8-6       Black       19.2       NAD       NAD       NAD       NAD       1/19/201         [8-7       Black       39.7       NAD       NAD       NAD       NAD       1/19/201         [8-8       Black       2.3       NAD       NAD       NAD       NAD       1/19/201         [8-9       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         [8-10       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       1.5.4       NAD       NAD       NAD       NAD       NAD       1/19/201         [8-10       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         [8-10       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         [8-10       Black       1.5.4       NAD       NAD       NAD       NAD       NAD       NAD       NAD       NAD	18-4 Black	22.7	UAD					Z	AD			NAD	1/19/2018
18-6       Black       19.2       NAD       NAD       NAD       1/19/201         18-7       Black       39.7       NAD       NAD       NAD       NAD       1/19/201         18-8       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-9       Black       3.5       NAD       NAD       NAD       NAD       1/19/201         18-10       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         18-10       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       1.5.4       NAD       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       1.5.4       NAD       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       NAD       NAD       NAD       1/19/201         18-11       Black       1.8       Not Adminetitititititititititititititititititit	18-5 Black	29.0	NAD					z	AD			NAD	1/19/2018
[8-7       Black       39.7       NAD       NAD       1/19/201         [8-8       Black       2.3       NAD       NAD       NAD       1/19/201         [8-9       Black       2.3       NAD       NAD       NAD       1/19/201         [8-10       Black       15.4       NAD       NAD       NAD       1/19/201         [8-11       Black       15.4       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       15.4       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       15.4       NAD       NAD       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       1.5       NAD       NAD       NAD       NAD       1/19/201         [8-10       Black       1.5       NAD       NAD       NAD       NAD       1/19/201         [8-11       Black       1.5       NAD       NAD       NAD       NAD       1/19/201         [8-10       NA-Not Available       1.5       NAD       NAD       NAD       NAD       NAD       NAD         [8-10       NA - Not Available       Trace asbe	l 8-6 Black	19.2	NAD					Z	AD			NAD	1/19/2018
8-8       Black       2.3       NAD       NAD       1/19/201         8-9       Black       3.5       NAD       NAD       NAD       1/19/201         8-10       Black       15.4       NAD       NAD       NAD       1/19/201         8-11       Black       1.5.4       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       4.9       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       4.9       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       4.9       NAD       NAD       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       4.9       NAD       NAD <t< td=""><td>l8-7 Black</td><td>39.7</td><td>NAD</td><td></td><td></td><td></td><td></td><td>z</td><td>AD</td><td></td><td></td><td>NAD</td><td>1/19/2018</td></t<>	l8-7 Black	39.7	NAD					z	AD			NAD	1/19/2018
8-9       Black       3.5       NAD       NAD       NAD       1/19/201         8-10       Black       15.4       NAD       NAD       NAD       1/19/201         8-11       Black       1.5       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       1.5       NAD       NAD       NAD       NAD       NAD       1/19/201         8-11       Black       4.9       NAD       NAD<	.8-8 Black	2.3	NAD					Z	AD			NAD	1/19/2018
18-10       Black       15.4       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       NAD       1/19/201         18-11       Black       4.9       NAD       NAD       NAD       NAD       1/19/201         NA - Not Available       **       **       **       **       **       **       1/19/201         NAD - No Asbestos Detected       **       **       **       **       **       **       **         NAD - No Asbestos Detected (Samples not analyzed must not be interpreted as being non-ACM)       **	18-9 Black	3.5	NAD					Z	AD			<b>UAD</b>	1/19/2018
18-11       Black       4.9       NAD       NAD       NAD       1/19/201         N/A - Not Applicable       TR - Trace asbestos detected at less than 1%.       NA       NA       NA       NA       NAD       NAD       NAD       NAD       1/19/201         NA - Not Available       *Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)       *Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)       *Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)       NAD	18-10 Black	15.4	NAD					Z	AD			NAD	1/19/2018
<ul> <li>N/A - Not Applicable</li> <li>TR - Trace asbestos detected at less than 1%.</li> <li>NA - Not Available</li> <li>*Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)</li> <li>NAD - No Asbestos Detected</li> <li>SAFP - Stop at First Positive</li> <li>***TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-ACM)</li> </ul>	18-11 Black	4.9	NAD	1.1				N,	AD			NAD	1/19/2018
	N/A - Not Applicable NA - Not Available NAD - No Asbestos Detected SAFP - Stop at First Positive (not analyzed) NR - Not Required <1.0% Residue Remaining	TR - Trace asbe *Insufficient sat ** - Inconclusiv ***TEM analys coverings and si that can be used	stos detect nple for au e, No Asb is not perfi inilar non- to determ	ed at less halysis (S estos Det ormed pe friable of ine if this	than 1% amples   ected (S client's ganicall materia	6. not analy amples w request. ( y bound 1 l can be c	zed mus tith inco Polarize naterials onsidere	t not be i nclusive 1 d-light mi Quantita d or treate	aterpreted esults mus croscopy is five transm d as non-A	as being t not be i i not cons ission ele CM.	non-ACM) interpreted as being n sistently reliable in det ectron microscopy is cu	on-ACM) ceting asbesto rrently the or	s in floor ly method

3636 Brawerton Road Cicaro, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

×	Consulting Servic																Ast OSHA Co Envi	Air Quality sstos / Lead / Mold npliance / Training onmental Services	>
						A	SBEST ravime Friable	OS AI trical Orga	VALY ly Rec nicall	SIS R luced S y Bour	EPOR Sample	T Ss terial							
C&SC	ompanies					<u>e</u> ,	LM Analy	sis Met	N - por	State E	LAP 198	9					Friday, Ja	uary 26, 2018	00
499 Co	l. Eileen Collii	ins Blv	pv				Z	YS DOF	I ELAP	ID #119'	73				Batch ]	Number		8392	
						Ţ	EM Analy	sis Meth	γN - bo	State EI	AP 198.	4			Date R	eceived		1/17/2018	00
Syracus	se l	λŃ	132	12		TEM A	nalysis P	erformed	l by NY	SDOH E	LAP ID #	<b>¢</b> 10920			Date Co	ollected:		1/17/201	8
Attention	on: Bryan Ba	ayer			Project #	1960 C	lark								Sam	pled By:		Doug Selove	H
	Page 2 of 2				Project Na	ame: Pe	nfield, l	٨Y											
					%	PLM AI	VALYSIS					TEM A	NALYSI	S			Total %	Date	
Lab ID	Sample ID		Col	or	Residue	%	Type	%	Type	%	Type	%	lype	% T	/pe %	Type	Asbestos	Analyzed	
70396	CG11718-12		Bla	ck	1.9	NAD						NAD					UAD	1/19/2018	
70397	CG11718-33		Bla	ck	6.1	TR	CH					NAD					TR	1/19/2018	
70398	CG11718-34		Bla	ck	9.2	Ä	CH					IR	E				TR	1/19/2018	
70399	CG11718-35		Bla(	ck	2.3	NAD						NAD					NAD	1/19/2018	
70400	CG11718-36		Bla	ck	5.1	H.	CH					NAD					TR	1/25/2018	
Reviewe	d and Approv	ved Bv	v (an	d for anesti	ons regardi	no this	renort)		V	$\ $	A								
						9 9	(A TADAT	- -	ic Mo	nsen, ]	<b>Technic</b>	al Dire	etor				ĩ		

# Abbreviations:

N/A - Not Applicable NA - Not Available NAD - No Asbestos Detected	SAFP - Stop at First Positive (not analyzed)	NR - Not Required <1.0% Residue Remaining
AM - Amosite CH - Chrysotile CR - Crocidolite	TM - Tremolite AC - Actinolite	AN - Anthophyllite

\*\*\*TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-ACM.

NOTE: The results pertain only to the samples in this report.

\*\* - Inconclusive, No Asbestos Detected (Samples with inconclusive results must not be interpreted as being non-ACM)

\*Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)

TR - Trace asbestos detected at less than 1%.

8636 Brewerton Road Cicero, New York 13039

Pin # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

For Lab Use Only	atch # 8392		ontact: Review Rund	ione/Fax:	mail:	For Lab Use Only	ivers Analysis Method Lab ID	0 198.6 70385	70356	70387	70386	70389	70390	7039/	70392	70393	70394	70395	70396	70397	70398	70399	4 70200					Date Time	02.2 8/41/1	1/1/1/8 16:00	111718 1600	(ve(1 C) products
Surface Comula I	B B		Client Name: C+5 CONDAVICS C	MA Address: Ygg Col. Eileen Collens Rich PI	SYCHERE NY 13213 E.		Dample Description Type Lt	BU Shingle	RIL I DATEN	WE INWALC	all du t	Prol 100 and	RIK Stinds	Price Is.	RIC de 11	Rone NAM	RIV Shere Low Day	Dur Onwale	181/c < 1: 1:	1 71 71 71	Rib II	12 47. L				VOB=Non-Friable Organically Bound		Dignature	all support	Inous and war	our a 24 Hour a 48 Hour a 77 Hour ~	
Consulting Services (1) C	8636 Brewerton Road, Cicero, NY 13039 Phone: 315-698-1438 / Fax: 315-698-1441	Printer Name: 1.1.4	Project Address: 1744-14-14-14-14-14-14-14-14-14-14-14-14-1	Particles Alex	La providence	Sample No. Sample Location	CG 11018-1 NF oct Bar 112	CGIPTR & U U U	1 3 New li 11 1151	Y NW " U	5 SW & a u	6 41 4 4 4	7 MUS 11 4 113	3 hues is 11 113	9 SE & CANT Davi	lo n n n	is a a a	V 12 11 11 11 11 1	6 G/1718-33 NE 11 CI BANN	34 is is 1/ li	35 New 11 11 li	W 36 it i, it II		X	Sample Types: ASBESTOS: P. T. I.	MOLD: T=Tape Lift S=Swab	Chain of Custody Print Name	Sampled by: Drug Sebury	Kelinquished by: Dut Silvieu	Neverved at Lad by: Kelly 'NUCCNO	unation 1 me: ] D KUSH (Specify): D 12 H	

	ices, LLC
N	sulting Serv
	Con

Air Quality Asbestos / Lead / Mold OSHA Compliance / Training Environmental Services

Tuesday, January 23, 2018

# **ASBESTOS ANALYSIS REPORT**

i	Samples
	Reduced
	strically
•	Fravime
ļ	

Analysis Method - NY State ELAP 198.1

499 Col. Eileen Collins Blvd

C&S Companies

499 Col. Elleen Collins Bivd			Analy	sis Meth	YN - bo	State EL	AP 198.	1				Batc	h Numbe	r:		8393
			-	VYS DO	H ELAP	ID #119	73					Date	Receive	÷;;		/17/2018
Syracuse NY 13212												Date	Collecter	. <u></u>		8102/21/
Attention: Bryan Bayer	f	1 4 :	11 37 2				ĥ					Ň	impled B	: :>	Dou	e Selover
		roject #	W C+/	/ nalen .	KQ M18	aintane	nce Ba	II					•			D
Page 1 of 1	Å,	roject <b>N</b>	Tame: ]	Penfiel	d, NY											
		•													0/ Ninn	
	Total %	%	%	%	%	%	%	%	%	%	%	%	% Oth	er Type	Fibrone	Date
Lab ID Sample ID Color	Asbestos	AM	CH	IJ	ΤM	AC	AN	E	МW	GW	ΧS	HH	0	4	Material	Analyzed
70401 CG11718-13 White	UAD							TR							100	1/23/2018

2018 1/23/2018 1/23/2018 1/23/2018 1/23/2018 1/23/2018 100 80 \$ TR Ĕ 100 TR 100 20 12 NAD NAD NAD NAD NAD Gray/Tan Gray/Tan White White White CG11718-14 CG11718-15 CG11718-16 70406 CG11718-18 CG11718-17 70401 CG11' 70402 70403 70404 70405

Eric Monsen, Technical Director Reviewed and Approved By (and for questions regarding this report);

# Abbreviations:

AM - Amosite CH - Chrysotile CR - Crocidolite

AC - Actinolite AN - Anthophyllite TM - Tremolite

MW - Mineral Wool GW - Glass Wool CE - Cellulose

HH - Horse Hair SY - Synthetic

0 - Other

NAD- No Asbestos Detected SAFP - Stop at First Positive (not analyzed) TR - Trace as bestos detected at <1%

NA - Not Available \*Insufficient Sample for Analysis N/A - Not Applicable

Fax # (315) 698-1441 Ph # (315) 698-1438

www.hseconsultingservices.com

The results pertain only to the samples in this report.

Cicero, New York 13039 8636 Brewerton Road

Air Quality Asbestos / Lead / Mold OSHA Compliance / Training Environmental Services		ursday, January 25, 2018	8394	1/17/2018	1/17/2018	Doug Selover	)		Total % Date Ashestos Analvzed	MADE NOTON 1 100000	NAD 1/19/2018	TR 1/19/2018	1.1 1/19/2018	NAD 1/19/2018	NAD 1/19/2018		on-ACM) ecting asbestos in floor arrently the only method					
		Th	Batch Number:	Date Received:	Date Collected:	Sampled By:			E	% Type % Type												eing non-ACM) be interpreted as being n consistently reliable in det n electron microscopy is cu
	PORT imples I Material	AP 198.6		Р 198.4	AP ID #10920				TEM ANALYSIS	Type % Type		UAD	<b>UAD</b>	DAD	DAD	NAD	TR CH	1.1 CH	UAD	NAD		t not be interpreted as by nclusive results must not d-light microscopy is not Quantitative transmission d or treated as non-ACM.
	S ANALYSIS RE ically Reduced Sa Drganically Bound	s Method - NY State ELA	S DOH ELAP ID #11973	s Method - NY State ELA	formed by NYSDOH ELA		Maintanence Barn		20 11	% Type %												than 1%. Imples not analyzed mus cted (Samples with incou- client's request. (Polarize ganically bound materials material can be considere
	ASBESTO Gravimeti Non-Friable (	PLM Analysi	NYS	TEM Analysis	TEM Analysis Perf		745 Whalen Rd	auuc. r curiciu, IN	PLM ANALYSIS	% Type	NAU	NAD	NAD	NAD	NAD	DAD	TR CH	TR CH	DAD	NAD		estos detected at less i mple for analysis (Sa ve, No Asbestos Dete sis not performed per similar non-friable org d to determine if this i
							Project #	E. mainting	Reidue	Treatme	23.4	30.0	7.8	63.7	12.6	1.5	12.0	12.3	1.2	1.2		TR - Trace asibe *Insufficient sai d ** - Inconclusiv ***TEM analys coverings and s that can be used
			Blvd		13212	L			2	Color	Black	Black	Black	Black	Black	Black	White	White	White	White		t Applicable t Available lo Asbestos Detecte Stop at First Positive not analyzed) t Required
orrsulting Services.		mpanies	<b>Eileen</b> Collins		λN	1: Bryan Baye		Page 1 of 2		Sample ID	CG11/18-21	CG11718-22	CG11718-23	CG11718-24	CG11718-25	CG11718-26	CG11718-27	CG11718-28	CG11718-29	CG11718-30	ttions:	site N/A - N/ otile NA - No Jolite NAD - N olite SAFP - { olite SAFP - { (
		C&S Coi	499 Col.		Syracuse	Attentior					/040/	70408	70409	70410	70411	70412	70413	70414	70415	70416	Abbrevia	AM - Amos CH - Chrys CR - Crocic TM - Tremc AC - Actinc AN - Antho

8636 Brewerton Road Cicaro, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com
Constitute	Services, LLC		Air Quality Asbestos / Lead / Mold OSHA Compliance / Training Environmental Services
		ASBESTOS ANALYSIS REPORT Gravimetrically Reduced Samples Non-Friable Organically Bound Material	
C&S Companies		PLM Analysis Method - NY State ELAP 198.6	Thursday, January 25, 2018
499 Col. Eileen (	Collins Blvd	NYS DOH ELAP ID #11973 Batch Ni	ıber: 8394
		TEM Analysis Method - NY State ELAP 198.4 Date Rec	ved: 1/17/2018
Syracuse	NY 13212	TEM Analysis Performed by NYSDOH ELAP ID #10920 Date Coli	sted: 1/17/2018
Attention: Brya	n Bayer	Sampl	By: Doug Selover
		Project # 745 Whalen Rd Maintanence Barn	•
Page 2 o	ıf 2	Project Name: Pentield, NY	
		% PLM ANALYSIS TEM ANALYSIS	Total % Date
Lab ID Sample I	D Color	Residue % Type % Type % Type % Type %	lype Asbestos Analyzed
Reviewed and Ap	proved By (and for que	stions regarding this report):	
		Eric Monsen, Technical Director	
Abbreviations:			
AM - Amosite CH - Chrysotile CR - Crocidolite	N/A - Not Applicable NA - Not Available NAD - No Asbestos Detected	TR - Trace asbestos detected at less than 1%. *Insufficient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM) ** - Inconclusive. No Asbestos Detected (Samnles with inconclusive results must not be interpreted as	ing non-ACM)
TM - Tremolite AC - Actinolite	SAFP - Stop at First Positive (not analyzed)	***TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable coverings and similar non-friable organically bound materials. Onantitative transmission electron microscop	n detecting asbestos in floor
AN - Anthophyllite	VR - Not Required	that can be used to determine if this material can be considered or treated as non-ACM.	זא כמווביוויל מיב סווול ווובמוסח
v	<1.0% Residue Remaining	NOTR. The remite weatons outsite the commuter in this second	

AM - Amosite	N/A - Not Applicable
CH - Chrysotile	NA - Not Available
CR - Crocidolite	NAD - No Asbestos D
TM - Tremolite	SAFP - Stop at First P
AC - Actinolite	(not analyzed)
AN - Anthophyllite	NR - Not Required
	<1.0% Residue Remai

NOTE: The results pertain only to the samples in this report.

3636 Brewerton Road Cicero, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

Consulting Services. L														Asbestos OSHA Compliar Environme	Air Quality Lead / Mold ce / Training ital Services
			ASI Gr	<b>BESTC</b> avimet	S AN rically riable	ALYS Redu Mater	IS RE ced S <sub>i</sub> ial	PORT							
C&S Companies			PLI	M Analys	is Metho	d - NY S	state EL.	AP 198.6					Th	ursday, Janu	ary 25, 2018
499 Col. Eileen Collins B	lvd			λλ	S DOH	ELAP ID	2611#0				I	3atch ]	Number:		8395
			TEN	Analysi	s Metho	- NΥ S	tate EL/	NP 198.4			Ι	Date R	eceived:		1/17/2018
Syracuse NY	13212		TEM An	alysis Per	formed l	y NYSD	OH EL.	4P ID #1(	920		Ц	ate Co	ollected:		1/17/2018
Attention: Bryan Bayer		Project #	745 Whe	ilen Rd.	- Main	anence	Bar					Sam	pled By:	Π	oug Selover
Page 1 of 1		Project N	ame: Pen	field, N	Y		1								
		%	PLM AN	ALYSIS				L	EM AN	ALYSIS				Total %	Date
Lab ID Sample ID	Color	Residue	%	Type	%	Type	%	Type	T %	ype 9	6 Ty	pe %	Type	Asbestos	Analyzed
70417 CG11718-19	Gray	63.4	NAD					Z	AD					NAD	1/19/2018
70418 CG11718-20	Gray	67.6	NAD					z	AD					NAD	1/19/2018
70419 CG11718-31	Gray	31.1	NAD					Z	AD.					NAD	1/19/2018
70420 CG11718-32	Gray	33.8	QNN					z	AD					QIAN	1/19/2018
Reviewed and Approved 1	By (and for que	estions regard	ing this r	eport):		v	V		A						
		)	1	•	Eric	Monse	en, Tei	hnical	Direct	L L			N)	a) I	

## Abbreviations:

N/A - Not Applicable	NA - Not Available	NAD - No Asbestos Detected	SAFP - Stop at First Positive	(not analyzed)	NR-Not Required	
AM - Amosite	CH - Chrysotile	CR - Crocidolite	TM - Tremolite	AC - Actinolite	AN - Anthophyllite	

**\*\*\***TEM analysis not performed per client's request. (Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-ACM.

NOTE: The results pertain only to the samples in this report.

\*\* - Inconclusive, No Asbestos Detected (Samples with inconclusive results must not be interpreted as being non-ACM)

TR - Trace asbestos detected at less than 1% \*Insuffient sample for analysis (Samples not analyzed must not be interpreted as being non-ACM)

> 8636 Brewerton Road Cicero, New York 13039

Ph # (315) 698-1438 Fax # (315) 698-1441 www.hseconsultingservices.com

	For Lab Use Only	Batch # 8394 70407- 70416	8345 70417- 70420	Contraction 2	Phone/Par. ORUMAC 64500	3-mail:	For Lab Use Only	Layers Analysis Method Lah ID	198.1 74411	20H07	70102	Cat al	FUF 01	Calaz	90601 X	140.651 70417	81h 92 70 H18	TO407 70407	70408	70409	alhoz .	11/201	70412	EIHOL	h1h0L	TUHIS	V 704110	198.6-5 70419	V V 10420		Date 1	///// Time	11, 30	111110 16:00	Ctrade 1 (1) (1) (1000
	Surface Sample Log	0		Client Name: C+5 Crun Aerice	Address: 499 Col. Cileon Collins River	SYPACUE NY 13712 I		Sample Description Type I	JOINT OMEN	tape	1X4 10 verl	TOLIN AND CANAD P.	" The "	dry will	SKY EISENAL OF	ef 11 11	B(K Shinele	whit ut	Revel Durow	RIAP V Shink 10	a. 4. 11	Parl and	() Star (Seling)	11 111 114CC	11 PANSAV	(1 CAS/1/	343 07	11 II	B=Non-Friable Organically Bound		Signature	Wey al	he when	ling whit	D 24 Hour D 48 Hour D 72 Hour K
N N N N	8636 Brewerton Road, Cicero, NY 13020	Phone: 315-698-1438 / Fax: 315-698-1441 Date:	Project Name: A.L. L	Project Address: 722-65-705 SANALung	Particles (2) applied Ed! Mint BAN	A harder ha k	Sample No. Sample Location	66 11918-13 500 CONNUM RAN	6611718/4 11 11 11 11 11	15 11 11 11 11	16 35 11 11 5	1/2 11 11 12	18 11 11 11 11	19 51 11 11	20 x 1 2 0	1 11 Cut 11	4, N Efteven Revel			27 NW 11 11	× × × × × × × × × × × × × × × × × × ×	× 6 (1 11 11	27 N " Lennder	A B NE II II	& 7 NE " II	30 36 4 LI	1) 31 12 CHU CI BUN Laft	Sample Types: ASRESTOS: T. S. B. A.C. V.	MOLD: T-Tape Lift S=Swah	Chain of Custody Print Name	Sampled by: Deve Schon 4 11	Relinquished by: Deby School	Received at Lab by:   Welly NULLE	Turnaround Time: [a RUSH (Specify):	



**Appendix 8** NYSDOH ELAP Certificates of Approval



NEW YORK STATE DEPARTMENT OF	HEALTH
WADSWORTH CENTER	1



Expires 12:01 AM April 01, 2018 Issued April 01, 2017

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. BRIAN C. KING HSE CONSULTING SERVICES, LLC 8636 BREWERTON ROAD CICERO, NY 13039

NY Lab Id No: 11973

is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved subcategories and/or analytes are listed below:

Misophaneous

3

Asbestos in Friable Material

Asbestos in Non-Friable Material-PLM

itom 198.1 of Manual EPA 600/M4/82/020 Item 198.6 of Manual (NOB by PLM)

Serial No.: 56294

Property of the New York Stale Department of Health. Conflictees any valid only at the address shown, must be complicately posted, and are printed on secure paper. Conflicted accredition departule on successful angoing posted patient in the Program. Construction are urged to cell (518) 495-5570 to vorify the laboratory's encoditation atous.

Page 1 of 1

February 8, 2017



#### **Report of Findings for** Lead-Based Paint Assessment

Shadow Pines Golf Course 1960 Clark Road and 745 Whalen Road Penfield, New York 14625

Prepared for:

**Bryan A. Bayer, PWS, CE** C&S Companies 499 Col. Eileen Collins Boulevard Syracuse, New York 13212



Prepared by:

#### HSE CONSULTING SERVICES, LLC

8636 Brewerton Road Cicero, New York 13039 (315) 698-1438 FAX (315) 698-1441 www.hseconsultingservices.com © Copyright 2018 HSE Consulting Services, LLC



#### **TABLE OF CONTENTS**

1.0 PROJECT SUMMARY
2.0 INTRODUCTION
3.0 METHODOLOGY
3.1 Room Equivalents2
3.2 Building Components
3.3 Substrates
3.4 Testing Combinations
3.5 Room Equivalent and Building Side Designations3
3.6 X-ray Fluorescence (XRF) Assays
4.1 X-ray Fluorescence (XRF) Results4
<u>Positive Results</u> 4
TABLE 1 - Positive XRF Assay Summary - Club House 5
<u> TABLE 2 – Positive XRF Assay Summary - Barn</u> 6
<u> TABLE 3 – Positive XRF Assay Summary - Golf Cart Barn</u> 6
<u> TABLE 4 – Positive XRF Assay Summary – Maintenance Barn (745 Whalen Rd.)</u> 6
Inconclusive Results
TABLE 1 - Inconclusive XRF Assay Summary - Club House
<u> TABLE 2 – Inconclusive XRF Assay Summary - Barn</u> 7
<u> TABLE 3 – Inconclusive XRF Assay Summary - Golf Cart Barn</u> 7
TABLE 2 - Inconclusive XRF Assay Summary - Maintenance Barn (745 Whalen Rd.) 7   5.0 CONCLUSIONS 7
Appendix 1

Site Location Map Appendix 2

Project Diagram Appendix 3

Lead-Based Paint Activities Appendix 4

LBP Risk Assessor Certification Documentation Appendix 5

XRF Data Summaries Appendix 6

(Innov-X LBP4000) Performance Characteristic Sheet



#### 1.0 PROJECT SUMMARY

#### PROJECT INFORMATION Lead-Based Paint Assessment: Club House, Barn, Cart Bar

Lead-Based Paint Assessment: Club House, Barn, Cart Barn and Maintenance Barn, 1960 Clark Road and 745 Whalen Road, Penfield, New York 14625. Testing included all components that would potentially be disturbed as part of building renovations to the interior and exterior.

#### **PROPERTY DESCRIPTION**

The former Shadow Pines Golf Course consists of a Club House, Barn and Golf Cart Barn located at 1960 Clark Road in Penfield, New York. A Maintenance Barn associated with the Golf course is located at 745 Whalen Road in Penfield, New York.

CLIENT	OWNER
C&S Companies 499 Col. Eileen Collins Boulevard Syracuse, New York 13212	The Dolomite Group
INSPECTION DATES	
January 16 and January 17, 2018	
LEAD-BASED PAINT ACTIVITIES FIRM	LBP INSPECTORS/RISK ASSESSORS
HSE Consulting Services, LLC 8636 Brewerton Road Cicero, New York 13039 (315) 698-1438 EPA Certification No. NY-15870-3 Expires: November 13, 2019	Chad C. Gable EPA Certification: LBP-R-I161580-1 (Risk Assessor Exp. 4/5/19)
TESTING METHODOLOGY	
Visual Inspection, X-ray Fluorescence (XRF) Assa	ays
INSTRUMENTATION	
Innov-X Systems, Inc. XRF Analyzer Model No. LBP4000 / Serial No. 11922	Inconclusive Range: 0.6 – 1.1 mg/cm <sup>2</sup> Substrate Corrections: None
QUALITY ASSURANCE	
Instrument Standardization per manufacturer' was completed, and at intervals of no more tha	s recommendations, 3 calibration checks before and after testing n 4 hours.
LBP SURVEY RESULTS SUMMARY	
The results of this testing indicate that various any planned renovations at Shadow Pines Golf 1.0 mg/cm <sup>2</sup> or within the inconclusive range of	paint or coatings on components that may be disturbed as part of Course have lead concentrations that are greater than or equal to f the XRF used to perform the inspection. Therefore, the paint and

any planned renovations at Shadow Pines Golf Course have lead concentrations that are greater than or equal to 1.0 mg/cm<sup>2</sup> or within the inconclusive range of the XRF used to perform the inspection. Therefore, the paint and coatings associated with these components is classified as lead-based paint (LBP). The testing performed by HSE was intended to provide information relevant to the Occupational Safety and Health Administration's (OSHA) construction standard for lead (29 CFR 1926.62).



#### 2.0 INTRODUCTION

In accordance with a request made by Bryan A. Bayer, PWS, CE, HSE Consulting Services, LLC (HSE) has completed lead-based paint (LBP) testing for multiple buildings associated with the former Shadow Pines Golf Course located at 1960 Clark Road and 745 Whalen Road in Penfield, New York 14625. The following buildings were included in the scope of testing:

- Club House (Alpheus Clark House) at 1960 Clark Road
- Barn at 1960 Clark Road
- Golf Cart Barn at 1960 Clark Road
- Maintenance Barn at 745 Whalen Road

The purpose of the completed assessment was to assess painted or coated building components that would potentially be disturbed as part of possible renovations of the interior and exterior of the buildings.

HSE has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 (EPA Certification #NY-15870-1, expires November 13, 2019).

United States Environmental Protection Agency (USEPA) certified Risk Assessor Chad C. Gable (USEPA Certification No. LBP-R-I161580-1, expires April 5, 2019) of HSE performed the LBP testing on January 16 and 17, 2018.

A Site Location Map indicating the general location of the property within the Town of Penfield is included as Appendix 1. Project diagrams depicting the layouts of the various structures are provided as Appendix 2.

#### 3.0 METHODOLOGY

LBP testing efforts were performed in general conformance with Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing and 40 CFR 745.227. The testing performed by HSE was primarily intended to provide information relevant to the Occupational Safety and Health Administration's (OSHA) construction standard for lead (29 CFR 1926.62).

#### 3.1 Room Equivalents

The Risk Assessor conducted an initial visual inspection of each room or area to identify room equivalents, painted or coated building components, substrates and potential testing combinations. A room equivalent is an identifiable part of a residence, such as a room, a house exterior, a foyer, staircase, hallway or an exterior area (e.g. play areas, painted swing sets, painted sand boxes, etc).



#### 3.2 Building Components

Building components are specific design or structural elements or fixtures of a building or residential dwelling that are distinguished from others by form, function, and location and may include, but are not limited to: interior components such as ceilings, crown moldings, walls, chair rails, doors, door trim, floors, fireplaces, radiators and other heating units, shelves, shelf supports, stair treads, stair risers, stair stringers, newel posts, railing caps, balustrades, windows and trim including sashes, window beads, jambs, or stools and troughs, built-in cabinets, columns, beams, bathroom vanities, air conditioners and exterior components such as painted roofing, chimneys, flashing, gutters and downspouts, ceilings, soffits, fascia, rake boards, corner boards, doors and door trim, fences, floors, joists, lattice work, railings and railing caps, siding, handrails, stair risers and treads, stair stringers, columns, balustrades, window sills or stools and troughs, casings, sashes, and wells, etc.

#### 3.3 Substrates

The substrate is the material underneath the paint or coating on a building component. Substrates are classified into one of six types including brick, concrete, drywall, metal, plaster or wood. If a painted substrate is encountered that is different from the listed substrate categories, the listed substrate that is most similar in density and composition is selected. For components that have layers of different substrates, such as plaster over concrete, the substrate immediately adjacent to (underneath) the painted surface is used.

#### **3.4 Testing Combinations**

A testing combination is a unique combination of room equivalent, building component type and substrate. Visible color is not considered to be an accurate predictor of painting history and is not included in the definition of testing combination. Certain building components that are adjacent to each other and not likely to have different painting histories can be grouped together into a single testing combination. Examples of grouped testing combinations include the following:

- Window casings, stops, jambs and aprons
- Interior window mullions and window sashes
- Exterior window mullions and sashes
- Door jambs, stops, transoms, casings and other door frame parts
- Door stiles, rails, panels, mullions and other door parts
- Baseboards and associated trim
- Painted electrical sockets, switches or plates

#### 3.5 Room Equivalent and Building Side Designations

Room equivalents are identified by a number or use pattern. Room 1 is the first room on the floor that is entered. Rooms are then consecutively numbered or identified clockwise. Where more than one area exists, the rooms are identified as Room 1, Room 2, Room 3, etc.

Lead-Based Paint Assessment

Shadow Pines Golf Course



Perimeter wall sides are identified with the letters A, B, C and D. Side A is the side of the room or area that faces Clark Road or Whalen Road. Sides B, C and D are identified clockwise from Side A as one faces the building; thus Side B is to the left of Side A, Side C is across from Side A, and Side D is to the right of Side A.

#### 3.6 X-ray Fluorescence (XRF) Assays

Subsequent to identifying components of concern where either paint or other suspect coating was present, the Risk Assessor performed X-ray fluorescence (XRF) assays. The HUD/EPA standard for lead-based paint of 1.0 milligram per centimeter squared (mg/cm<sup>2</sup>), as defined by Title X of the 1992 Housing and Community Development Act, was used as the criteria to determine whether or not a paint or coating on a surface was classified as lead-based paint. Paint or coatings containing lead in concentrations equal to or greater than 1.0 mg/cm<sup>2</sup> are classified as lead-based paint.

The XRF analyzer used to perform LBP testing was an Innov-X Systems, Inc. Model LBP4000 unit with a serial number of 11922. Instrument standardizations were performed according to the manufacturer's requirements and three (3) calibration checks were performed before, during, and after testing efforts as required by applicable regulations and guidance. Instrument calibration checks were performed at intervals of no more than four hours during testing efforts.

The Innov-X Model LBP4000 has an inconclusive range of 0.6 to 1.1 milligrams per square centimeter (mg/cm<sup>2</sup>). Readings above the upper limit of the inconclusive range are considered positive, while readings below the lower limit of the inconclusive range are considered negative. Readings within the inconclusive range (including its boundary values) are classified as inconclusive. All inconclusive readings must be assumed to be positive or confirmed by paint chip sampling and analysis.

#### 4.0 DISCUSSION

HSE performed a total of four (4) instrument standardizations, fifteen (15) calibration checks, and three hundred eight (308) component XRF assays. The results of this testing are summarized as follows:

#### 4.1 X-ray Fluorescence (XRF) Results

#### **Positive Results**

XRF analysis determined that various components tested indicated levels above the inconclusive range (0.6 to 1.1 mg/cm<sup>2</sup>) and are definitively <u>positive</u> for lead based paint.

The tables below summarize the positive results of the XRF sampling conducted during the assessment.



COMPONENT	SUBSTRATE	LOCATION
Baseboard	Wood	Rooms 1, 2 and 4
Cabinet Door Ext	Wood	Rooms 4 and 12
Cabinet Ext	Wood	Room 12
Cabinet Int	Wood	Room 4
Ceiling	Stucco	Exterior D Side
Ceiling Beam	Wood	Exterior D Side
Chair Rail	Wood	Rooms 1, 2 and 4
Chimney	Brick	Exterior B Side
Column	Wood	Exterior B and D Sides
Crown Molding	Wood	Rooms 2 and 4
Door	Wood	Rooms 1, 13 and Exterior A Side
Door Casing	Wood	Rooms 2, 4 and 13
Door Jamb	Wood	Rooms 1 and 13
Fascia	Wood	Exterior
Fireplace	Wood	Room 2
Railing	Wood	Room 1
Shelf	Wood	Rooms 2 and 4
Siding	Wood	Exterior
Spindle	Wood	Room 1
Stair Riser	Wood	Room 1
Stair Stringer	Wood	Room 1
Threshold	Wood	Room 1
Wall Trim	Wood	Rooms 2 and 4
Window Casing	Wood	Rooms 1, 2, 4, 12, 13 and Exterior
Window Sash	Wood	Rooms 1, 12, 13 and Exterior
Window Sill	Wood	Rooms 2, 12, 13 and Exterior
Window Trim	Wood	Room 10
Shutter	Wood	Exterior

#### **TABLE 1 - Positive XRF Assay Summary - Club House**



#### TABLE 2 – Positive XRF Assay Summary - Barn

COMPONENT	SUBSTRATE	LOCATION
Siding	Wood	Exterior

#### TABLE 3 – Positive XRF Assay Summary - Golf Cart Barn

COMPONENT	SUBSTRATE	LOCATION
No Positive Results	N/A	N/A

#### **TABLE 4 – Positive XRF Assay Summary – Maintenance Barn (745 Whalen Rd.)**

COMPONENT	SUBSTRATE	LOCATION				
Wall	Wood	Room 2				
Window Jamb	Wood	Room 2				
Window Sash	Wood	Room 2				
Window Sill	Wood	Room 2				

#### Inconclusive Results

Several XRF assays were within the inconclusive range (0.6 to 1.1 mg/cm<sup>2</sup>) for the LBP testing and should be considered positive for lead based paint unless confirmed otherwise by paint chip sampling and analysis.

The tables below summarize the inconclusive results of the XRF sampling conducted during the assessment.

COMPONENT	SUBSTRATE	LOCATION
Cabinet Int.	Wood	Room 3
Wall	Plaster	Room 4
Window Sill	Wood	Room 4

#### TABLE 1 - Inconclusive XRF Assay Summary - Club House



#### TABLE 2 – Inconclusive XRF Assay Summary - Barn

COMPONENT	SUBSTRATE	LOCATION
Foundation	Concrete	Exterior

#### TABLE 3 – Inconclusive XRF Assay Summary - Golf Cart Barn

COMPONENT	SUBSTRATE	LOCATION
No Inconclusive Results	N/A	N/A

#### TABLE 2 - Inconclusive XRF Assay Summary - Maintenance Barn (745 Whalen Rd.)

COMPONENT	SUBSTRATE	LOCATION
Window Jamb	Wood	Exterior
Window Sash	Wood	Exterior

#### 5.0 CONCLUSIONS

The results of the completed testing indicate that lead in amounts greater than or equal to 1.0  $mg/cm^2$  in paint was found on various building components tested. Several XRF assays were within the inconclusive range (0.6 to 1.1  $mg/cm^2$ ) for the LBP and should be considered positive for lead based paint unless confirmed otherwise by paint chip sampling.

It is important to note that OSHA does not have a threshold limit (e.g. concentration of lead) at which the Lead in Construction Standard is applicable. OSHA has taken the conservative position that if any lead is present, there is an inherent potential for employee exposure to airborne lead during certain work activities.

Please do not hesitate to contact HSE if you have any questions or require additional information regarding this report.

Respectfully Submitted By: HSE CONSULTING SERVICES, LLC

Chad C. Gable EPA Risk Assessor Certification LBP-R-I161580-1

C:\Users\Chad Gable\Desktop\LBP Testing Report, Shadow Pines Golf Course, Penfield, NY..docx

Lead-Based Paint Assessment

Shadow Pines Golf Course



#### Appendix 1

Site Location Map



#### Site Location Map

Shadow Pines Golf Course 1960 Clark Road and 745 Whalen Road Penfield, New York 14526







#### Appendix 2

Project Diagrams















#### Appendix 3

Lead-Based Paint Activities Firm Certification



Issued On



#### Appendix 4

LBP Risk Assessor Certification Documentation

United States Environmental Protection Agency Pesticides & Toxic Substances Branch All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as: John Gorman, Chief In the Jurisdiction of: This certification is valid from the date of issuance and expires April 05, 2019 This is to certify that WITED STAX Chad C Gable **Risk Assessor** LBP-R-I161580-1 March 22, 2016 Certification # Issued On



#### Appendix 5

**XRF Data Summaries** 



January 16, 2018

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

Natac	NOICO																													
ph Conc		1 0	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	0.00	0.00
Docult	DACC		Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative
Condition		• .	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
Color			Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	White	White	Varnish	Varnish	Beige	Varnish	Varnish	White	Brown	Varnish	Tan	Varnish	Varnish	Varnish	White	White	White	White	White	White	White
Suhctrate			Mood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Drywall	Wood	Wood	Metal	Wood	Wood	Drywall	Metal	Wood	Drywall	Wood	Wood	Wood	Drywall	Metal	Metal	Wood	Wood	Drywall	Drywall
Component			WINDOW SIII	Baseboard	Door	Door Casing	Cabinet Door Ext	Cabinet Ext	Cabinet Door Ext	Ceiling	Wall	Cabinet Door Ext	Cabinet Ext	Wall Panel	Door	Door Casing	Ceiling	Door	Door Jamb	Wall	Baseboard	Door	Door Casing	Ceiling	Door	Door Jamb	Door Casing	Window Trim	Wall	Ceiling
Side	5		ر	U	ß	ß	۷	۷	D	1	ß	B	В	U	D	D	ı	U	U	C	U	۷	۷	ı	C	U	C	۵	۵	ř
Room	Standardization		KOOM Y	Room 9	Room 9	Room 9	Room 9	Room 9	Room 9	Room 9	Room 8	Room 8	Room 8	Room 8	Room 8	Room 8	Room 8	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 10	Room 11	Room 11
Floor		+, -	IST	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Reading	1	4 C	7	რ	4	S	9	7	00	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

## Page 1 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																													
	Pb Conc.	0.00	0.03	0.00	0.00	0.00	2.69	3.59	5.00	2.80	2.43	0.00	4.20	3.74	5.00	0.00	2.14	3.03	5.00	0.00	0.00	0.08	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	Result	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
	Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Peeling	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
	Color	White	White	White	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Varnish	White	White	White	White	White	White
	Substrate	Metal	Metal	Metal	Plaster	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Metal	Metal	Metal	Wood	Wood	Wood	Wood	Wood	Drywall	Wood
	Component	Pipe	Post	Wall	Wall	Baseboard	Window Sash	Window Sill	Window Casing	Cabinet Door Ext	Cabinet Ext	Wall	Window Sash	Window Sill	Window Casing	Chair Rail	Door	Door Casing	Door Jamb	Ceiling	Wall Vent	Door	Door Jamb	Railing	Spindle	Door	Door Casing	Baseboard	Wall	Closet Door
- 15	Side	ı	ı	B	A	A	A	٩	A	٨	A	B	B	8	8	В	8	В	B	I	В	D	D	D	D	A	٨	A	٨	B
4	Room	Room 11	Room 11	Room 11	Room 12	Room 12	Room 12	Room 12	Room 12	Room 12	Room 12	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 13	Room 14	Room 14	Room 14	Room 14	Room 14
1.00	HOOL	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
:	Keading	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58

### Page 2 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																													
-	Pb Conc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	Result	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
- 1111	Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Poor	Intact	Intact	Intact	Intact	Intact
-	Color	White	White	White	White	White	White	Off White	Off White	Off White	Varnish	Varnish	White	Off White	Off White	Off White	Varnish	Brown	Brown	Green	White	White	White	White	Grey	Grey	White	Brown	Brown	Tan
	Substrate	Wood	Wood	Wood	Wood	Drywall	Metal	Metal	Drywall	Wood	Wood	Wood	Drywall	Drywall	Metal	Drywall	Wood	Metal	Metal	Drywall	Wood	Wood	Wood	Wood	Concrete	Concrete	Drywall	Metal	Metal	Metal
	Component	Door	Window Casing	Window Jamb	Window Sill	Ceiling	Door	Door Jamb	Wall	Baseboard	Window Sash	Window Casing	Ceiling	Ceiling	Pipe	Wall	Floor	Door	Door Jamb	Wall	Wall Panel	Shelf Support	Door Casing	Door Jamb	Floor	Floor	Wall	Door	Door Jamb	Door
- F - F	Side	8	C	U	U	ı	A	٨	٨	٨	В	В	ı	ı	ı	В	1	A	А	8	A	A	8	B	ļ	I	A	U	U	A
	KOOM	Room 14	Room 14	Room 14	Room 14	Room 14	Room 15	Room 15	Room 15	Room 15	Room 15	Room 15	Room 15	Room 16	Room 16	Room 16	Room 16	Room 17	Room 17	Room 17	Room 18	Room 19	Room 19	Room 19	Room 19	Room 20	Room 20	Room 20	Room 20	Room 21
Floor.	FIOOL	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement
Deedlan	Keading	59	60	61	62	63	64	65	99	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87

### Page 3 of 9

	1
-	ų
~	E
	R
-	ł
	ž
~	R
	þ
S	ŝ
ŝ	Ĩ
тí	i
	ł
S	ł
LA LA	k
-	J
	3
	ŝ
	l
<u> </u>	l
~	ĩ
	k
-	1
	N
ο.	k
$\frown$	á
ш	g
(A)	
-	
	I
-	1
ш.	1
1	f
$\mathbf{O}$	f
	1
	8
1.1	1
يعد	1
	1

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

Notes																					Shutter								
Ph Conc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.03	0.04	3.75	3.04	1.85	5.00	3.47	2.85	4.38	2.85	3.81	0.00	0.00	0.00
Result	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Negative	Negative	Negative
Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Cracked	Cracked	Cracked	Cracked	Intact	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Intact	Intact
Color	Tan	Beige	Grey	Green	Varnish	Varnish	Tan	Brown	Brown	Green	Varnish	Varnish	Tan	White	White	Brown	White	White	White	White	Green	Varnish	White	White	White	White	White	White	White
Substrate	Metal	Drywall	Concrete	Drywall	Wood	Wood	Metal	Metal	Metal	Drywall	Wood	Wood	Metal	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Brick	Wood	Wood	Wood	Wood	Wood	Wood
Component	Door Jamb	Wall	Floor	Wall	Cabinet Door Ext	Cabinet Ext	Wall Panel	Door	Door Jamb	Wall	Cabinet Door Ext	Cabinet Ext	Wall Panel	Shelf	Shelf Support	Ceiling Beam	Wall Panel	Door	Window Sash	Window Sill	Window Trim	Siding	Chimney	Window Casing	Window Sill	Column	Ceiling Beam	Door	Door Casing
Side	A	۷	۷	۷	U	U	U	D	D	A	U	U	C	8	В	,	A	٨	۷	۷	۷	۷	В	B	В	B	B	B	8
Room	Room 21	Room 21	Room 21	Room 22	Room 22	Room 22	Room 22	Room 22	Room 22	Room 23	Room 23	Room 23	Room 23	Room 24	Room 24	Room 19	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior
Floor	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Reading	88	89	06	91	92	93	94	95	96	97	98	66	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116

### Page 4 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																													
	Pb Conc.	0.00	0.00	0.00	ſ	ı	1.01	1.01	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	1.91	1.77	0.03	0.07	3.17	4.23	3.04	4.99	4.25	1.00	1.03
	Result	Negative	Negative	Negative	) '	PASS	Positive	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Negative	Positive	Positive	Positive	Positive	Positive	Positive	Positive
- 10 - F	Condition	Intact	Peeling	Peeling	)	ı	Peeling	Peeling	Peeling	Intact	Intact	Intact	Intact	Intact	Cracked	Cracked	Intact	Intact	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked
	Color	White	White	White	ı	ı	White	White	White	White	White	White	White	Black	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White
	Substrate	Wood	Stucco	Concrete	ı	ł	Concrete	Concrete	Concrete	Wood	Wood	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood
· · · · · · · · · · · · · · · · · · ·	component	Siding	Ceiling	Wall		·	Wall	Wall	Wall	Door	Door Casing	Siding	Column	Railing	Window Casing	Window Sill	Ceiling	Fence	Siding	Fascia	Window Sash	Window Casing	Window Sill	Ceiling	Column	Ceiling Beam	Window Casing	Window Sill	Window Sill	Window Sill
Cida	Side	Β	В	в	ł	ı	8	8	8	U	U	U	C	U	υ	J	υ	D	D	D	۵	D	D	۵	D	٥	D	D	D	D
Doom	HOOM	Exterior	Exterior	Exterior	Standardization	Standardization	Calibration	Calibration	Calibration	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Calibration	Calibration
Eloor	LIOOL	1st	1st	1st	I	ı	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Dooding	Reduing	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145

Page 5 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																													
	Pb Conc.	1.10	ı	1.02	1.00	1.03	0.22	0.35	4.20	1.44	3.91	0.07	3.01	0.00	0.05	1.14	2.42	4.96	0.59	4.07	3.77	1.99	0.00	0.00	0.00	2.24	0.01	0.10	0.03	5.00
	Result	Positive	PASS	Positive	Positive	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Positive	Negative	Negative	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Positive
	Condition	Cracked	,	ı	ı	ı	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
-	Color	White	ı	ı	ı	ı	Off White	Off White	Off White	Off White	Off White	Off White	Off White	Beige	Off White	Off White	Off White	Off White	Brown	Off White	Off White	White	Varnish	White	Varnish	Blue	Brown	Varnish	White	White
	Substrate	Wood	I	ı	ı		Wood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Plaster	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Mood	Wood	Wood
	component	Window Sill	ŗ	ı	,	,	Door	Door Casing	Window Sash	Window Casing	Door	Door Casing	Door Jamb	Wall	Wall	Chair Rail	Baseboard	Stair Riser	Stair Tread	Stair Stringer	Spindle	Railing	Railing	Ceiling	Floor	Threshold	Shelf	Door	Window Sash	Window Casing
Cide	Side	D	ı	л	Ĩ	ĩ	A	A	٨	۷	D	D	D	D	D	D	D	B	В	В	B	В	В	·	I	A	D	U	A	A
Doom	LIDON	Calibration	Standardization	Calibration	Calibration	Calibration	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 1	Room 2	Room 2
Elant	IOOL	1st	T	ł		ı	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Doading		146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174

### Page 6 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																													
	PD CONC.	4.45	2.88	0.08	4.72	5.00	4.20	0.00	5.00	5.00	3.38	0.01	5.00	0.75	1.00	2.28	2.36	2.51	1.50	1.22	1.85	3.40	3.01	0.00	0.00	0.01	0.01	0.00	0.29	0.03
Received.	Result	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Positive	Negative	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Condition.	Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
Color		White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish
Cubatanta	albitcut	Mood	Wood	Plaster	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Plaster	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Wood	Wood
Commont		WINDOW SIII	Wall Trim	Wall	Baseboard	Crown Molding	Chair Rail	Door	Door Casing	Fireplace	Shelf	Window Sash	Window Casing	Window Sill	Wall	Wall Trim	Baseboard	Crown Molding	Chair Rail	Door Casing	Cabinet Door Ext	Cabinet Int.	Shelf	Wall	Chair Rail	Wall Panel	Door	Door Casing	Cabinet Door Ext	Cabinet Int.
Sido	2000	A	۷	۷	٨	۷	В	U	C	C	С	٩	٨	۷	۷	۷	۷	۷	В	В	В	В	В	٨	٨	A	A	A	A	A
Room	Boom J		Room 2	Room 2	Room 2	Room 2	Room 2	Room 2	Room 2	Room 2	Room 2	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 4	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3
Floor	1c+	IST	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Reading	175	C/T	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203

### Page 7 of 9
Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018

	Notes																	<b>Bar Sides</b>	Bar Top		Bar Top									
i	Pb Conc.	0.05	0.06	0.00	0.07	0.02	0.02	0.06	0.00	0.00	0.00	0.55	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
3	Result	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
	Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
	COIOT	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Pink	Varnish	Varnish	White	Varnish	Varnish	Varnish	Varnish	Beige	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish
e.t.t.t.	Substrate	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood
Commente	component	Shelf	Fireplace	Crown Molding	Window Sash	Window Casing	Window Sill	Baseboard	Door	Door Casing	Cabinet Door Ext	Cabinet Int.	Shelf	Cabinet Door Ext	Ceiling	Ceiling Beam	Column	Wall Panel	Shelf	Wall	Wall Panel	Chair Rail	Door	Door Casing	Cabinet Door Ext	Shelf	Cabinet Ext	Door	Door Jamb	Shelf
Cido	Dide	A	A	A	В	В	В	В	U	U	D	D	D	D	ı	I	ı	I	I	٨	٨	A	۷	۷	В	B	в	U	C	D
Beem	KUOIII	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5
Floor	LIQUE	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Donding	Sunpau	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232

## Page 8 of 9

Shadow Pines Golf Course Club House 1960 Clark Road Penfield, New York 14526 January 16, 2018 

Notes																								
Pb Conc.	0.01			0.01		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Result	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
Color	Varnish	Varnish	Varnish	Varnish	White	White	Varnish	Tan	Varnish	Varnish	Tan	Varnish	Varnish	White	Varnish	Varnish	Varnish	Varnish	Varnish	Varnish	Green	Varnish	Varnish	White
Substrate	Wood	Wood	Wood	Wood	Wood	Drywall	Mood	Drywall	Wood	Wood	Metal	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Drywall
Component	Shelf Support	Railing	Stair Tread	Stair Stringer	Spindle	Ceiling	Crown Molding	Wall	Door	Door Casing	Wall Panel	Cabinet Door Ext	Cabinet Ext	Ceiling	Door	Door Casing	Window Sash	Window Sill	Chair Rail	Wall Panel	Wall	Cabinet Door Ext	Cabinet Ext	Ceiling
Side	D	D	D	D	D		ı	A	A	٨	٨	В	В	ı	A	٩	A	A	A	A	A	В	В	ı
Room	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 5	Room 6	Room 6	Room 6	Room 6	Room 6	Room 6	Room 6	Room 7	Room 7	Room 7	Room 7	Room 7	Room 7	Room 7	Room 7	Room 7	Room 7
Floor	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
Reading	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256

## Page 9 of 9



January 17, 2018

Shadow Pines Golf Course Barn, Golf Cart Barn and Maintenance Barn 1960 Clark Road and 745 Whalen Road Penfield, New York 14526 January 17, 2018

	Notes	•						Cart Barn	Cart Barn	Cart Barn	Cart Barn	Cart Barn	Cart Barn	Cart Barn	Cart Barn	Cart Barn	Barn	Barn	Barn	Barn	Barn	Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn
	Pb	0	0	ı	0.99	0.99	0.97	0	0	0	0	0	0	0	0	0	0	0	3.43	0	0	1	0	0	0	0	0.06	2.4	1.3	2.71	2.92	0.16
	Result	Negative	Negative	PASS	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Negative	Negative	Positive	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Positive	Negative
	Condition	Intact	Intact	ı	ı	ı	ł	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Peeling	Peeling	Peeling	Peeling	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact
	Color	Tan	Varnish	ı	ı	ı	ı	White	White	White	White	White	White	White	Beige	Beige	White	Green	White	White	White	White	Green	Green	White	White	Green	White	White	White	White	White
	Substrate	Drywall	Wood			•	ı	Wood	Wood	Wood	Metal	Metal	Wood	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Concrete	Metal	Metal	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Metal
	Component	Wall	Window Sash	ı	ı			Column	Ceiling Beam	Ceiling	Overhead Door	Door	Door Casing	Fascia	Fence	Post	Door	Door Trim	Siding	Overhead Door	Door Casing	Foundation	Door	Door Jamb	Wall	Overhead Door	Wall Panel	Window Sash	Window Sill	Window Jamb	Wall	Overhead Door
	Side	υ	U	ı	ı	ı	ı	A	A	٨	A	A	۷	۷	٥	D	۷	۷	A	в	8	в	A	۷	۷	υ	۵	۷	٨	A	A	A
	Room	Room 9	Room 9	Standardization	Calibration	Calibration	Calibration	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Room 1	Room 1	Room 1	Room 1	Room 1	Room 2	Room 2	Room 2	Room 2	Room 2
1	Floor	1st	1st	ı	0	ı	·	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
:	Reading	Ч	2	ო	4	S	9	7	ø	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

### Page 1 of 3

Shadow Pines Golf Course Barn, Golf Cart Barn and Maintenance Barn 1960 Clark Road and 745 Whalen Road Penfield, New York 14526 January 17, 2018

	Notes	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	<b>Maint Barn</b>	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	Maint Barn	<b>Maint Barn</b>				
	Pb	0.04	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0	0	0	0.64	0.67	0	0	0
	Result	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
	Condition	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Poor	Poor	Intact	Intact	Poor	Poor	Poor	Poor	Poor
	Color	Grey	Grey	Grey	Varnish	Varnish	Varnish	Varnish	White	White	White	Green	White	White	White	White	White	White	White	White	White	White	White	White	White	Beige	Beige	White	White	Green	Green	White
	Substrate	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Wood	Wood	Drywall	Wood	Wood	Wood	Metal	Metal	Wood	Wood	Metal	Metal	Wood
	Component	Wall	Ceiling	Door	Wall	Cabinet Ext	Shelf	Door	Door Casing	Door Jamb	Wall	Door	Door Casing	Door Jamb	Baseboard	Wall	Cabinet Door Ext	Cabinet Ext	Window Sash	Window Sill	Window Casing	Wall	Baseboard	Door Jamb	Door Casing	Door	Door Jamb	Window Sash	Window Jamb	Door	Door Jamb	Fence
	Side	U	I	A	A	A	A	A	٨	A	D	۵	۵	D	D	D	D	۵	۷	۷	۷	۷	в	٨	۷	۷	۷	A	A	۷	A	۵
	Room	Room 2	Room 2	Room 2	Room 3	Room 3	Room 3	Room 3	Room 3	Room 3	Room 4	Room 4	Room 4	Room 4	Room 4	Room 5	Room 5	Room 5	Room 6	Room 6	Room 6	Room 6	Room 6	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior
	Floor	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
:	Reading	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62

### Page 2 of 3

Shadow Pines Golf Course Barn, Golf Cart Barn and Maintenance Barn 1960 Clark Road and 745 Whalen Road Penfield, New York 14526 January 17, 2018

	Notes	Maint Barn		Dorra		Darn	Barn	Rarn	
	Pb	c		<b>o</b> c	<b>o</b> c	۰ ر	7.UZ	4 <del>.</del>	4
	Result	Negative	Nagativa	Negative	Nocativo	Docitivo	Positiva	Positive	
State and	Condition	Rusted	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked	
	Color	Brown	Green	Green	Green	Green	Green	Green	
	Substrate	Metal	Wood	Wood	Mood	poor.	Wood	Wood	
A LUMBER OF A LUMBER OF A	component	Post	Window Sash	Window Sill	Window Casing	Window Casing	Window Casing	Window Casing	I
	Side	1	B	В	۵	ш	B	В	
Doom	RUOIII	Room 2	Exterior	Exterior	Exterior	Calibration	Calibration	Calibration	
LOOL	IOOI	1st	1st	1st	1st	1st	1st	1st	
Razding	Simpon	63	64	65	66	67	68	69	



#### Appendix 6

Performance Characteristic Sheet (Innov-X LBP4000)

#### **Performance Characteristic Sheet**

EFFECTIVE DATE: December 1, 2006

**EDITION NO.: 1** 

#### MANUFACTURER AND MODEL:

Make:	Innov-X Systems, Inc.
Models:	LBP4000 with software version 1.4 and higher
Source:	X-ray tube

#### FIELD OPERATION GUIDANCE

#### **OPERATING PARAMETERS**:

Inspection mode, variable reading time.

#### XRF CALIBRATION CHECK LIMITS:

#### 1.0 to 1.1 mg/cm<sup>2</sup> (inclusive)

#### SUBSTRATE CORRECTION:

Not applicable

#### INCONCLUSIVE RANGE OR THRESHOLD:

INSPECTION MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm <sup>2</sup> )
Results not corrected for substrate bias on any	Brick	0.6 to 1.1
substrate	Concrete	0.6 to 1.1
	Drywall	0.6 to 1.1
	Metal	0.6 to 1.1
•	Plaster	0.6 to 1.1
	Wood	0.6 to 1.1

#### BACKGROUND INFORMATION

#### **EVALUATION DATA SOURCE AND DATE:**

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

#### **OPERATING PARAMETERS:**

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

#### **XRF CALIBRATION CHECK:**

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

#### SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm<sup>2</sup> for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm<sup>2</sup> at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a <u>bare</u> substrate area covered with the NIST SRM paint film nearest 1 mg/cm<sup>2</sup>. Repeat this procedure by taking three more readings on a second <u>bare</u> substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

<u>For each substrate type</u> (the 1.02 mg/cm<sup>2</sup> NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th Reading) / 6 - 1.02 mg/cm<sup>2</sup>

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

#### **EVALUATING THE QUALITY OF XRF TESTING:**

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

#### **TESTING TIMES:**

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm<sup>2</sup> Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

T	Testing Times Using Variable Reading Time Inspection Mode (Seconds)											
		All Data		Median for la	ooratory-measure (mg/cm <sup>2</sup> )	d lead levels						
Substrate	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb						
Wood, Drywall	2.1	2.3	5.4	2,2	5.4	2.2						
Metal	2.6	3.2	5.3	2.7	5.1	5.1						
Brick, Concrete, Plaster	3.1	4.0	5.7	3.2	4.0	5.9						

#### **CLASSIFICATION OF RESULTS:**

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm<sup>2</sup>, the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm<sup>2</sup>, is classified as 1.0 mg/cm<sup>2</sup>, or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE:	2.5% (2/80)
FALSE NEGATIVE RATE:	1.9% (4/212)
INCONCLUSIVE RATE:	16.4% (48/212)

#### **DOCUMENTATION:**

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.