



LIMITED INDOOR AIR QUALITY (IAQ) and MICROBIAL ASSESSMENT REPORT



Project Location:

Main Office (Building 1), Classrooms (Building 2) and Cafeteria (Building 3)
Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168

Client:

Kimberly Bonfield
Director of Human Resources/Finance
Reading Edge Academy, Inc.
248 North Samsula Drive
New Smyrna Beach, Florida 32168

EMS Project No.: 24235.00

Survey Date: November 26 and 27, 2024

Report Date: December 13, 2024

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1.0 INTRODUCTION

On November 26 and 27, 2024, at the request of Ms. Kimberly Bonfield, Director of Human Resources/Finance for Reading Edge Academy, Environmental Management Services, Inc. (EMS) conducted a limited indoor air quality (IAQ) and microbial assessment at the above-referenced Samsula Academy educational facility located at 248 North Samsula Drive in New Smyrna Beach, Florida. This assessment was conducted in response to concerns regarding moisture intrusion and possible microbial amplification within buildings 1,2 and 3 which house the main offices, classrooms and cafeteria respectively. The purpose of this assessment was to identify moisture-impacted building materials and possible microbial amplification that may be present within the interior of these occupied spaces.

2.0 SCOPE OF WORK

Chip Gruber, a Certified Industrial Hygienist (CIH) and Florida-licensed mold assessor, visited the above-referenced site to conduct a limited indoor air quality and microbial assessment within the Eye Associates of Pinellas at Opti Mart business location. EMS employed an environmental sampling strategy that consisted of visual observations, photographic documentation, the measurement of indoor air quality comfort parameters, and the evaluation of potential microbial populations in the air and on latent surfaces. The investigative methods and analytical results are described in the following sections. Mr. Gruber's applicable licensing and certifications are presented in **Appendix D**.

3.0 METHODOLOGY

The indoor air quality assessment was performed based on visual and olfactory observations and the collection of scientific data regarding microbial populations in outdoor and indoor air samples.

3.1 Visual and Olfactory Observations

EMS assessed the visual condition of areas of concern using experience-based knowledge regarding potentially poor IAQ factors such as water damage, water staining, visible mold growth, odors, rusted metal, peeling and/or bubbling of finished material surfaces, discoloration, and other conditions.

3.2 Indoor Air Quality Comfort Parameters

Indoor air quality (IAQ) comfort parameters were monitored as a means of evaluating basic air quality. Parameters measured included air temperature, relative percent humidity, and carbon dioxide concentrations. Standards set for each IAQ constituent sampled with the TSI Q-Trak are listed and described below in **Section 5.0**.

3.3 Air Sampling for Non-Viable Mold Structures

The Spore Trap Air Sampling Cassette is a sampling device designed for the rapid collection and analysis of a wide range of airborne aerosols. These include fungal spores, pollen, insect parts, skin cell fragments, fibers, and inorganic particulates. Air enters the cassette, the particles become impacted on the sampling substrate, and the air leaves through the exit orifice. The airflow and patented cassette housing are designed in such a way that the particles are distributed and deposited equally on a special glass slide contained in the cassette housing called the "trace." The cassette is designed to operate at a recommended flow rate of 15 liters per minute (lpm), which is field calibrated prior to sample collection and validated post-collection. Results are reported as spores per cubic meter (spores/m³).

3.4 Swab Sampling for Non-Viable Mold Structures

The collection of swab samples was used for the rapid analysis of mold species present on surfaces within the spaces. These include fungal spores, pollen, insect parts, skin cell fragments, fibers, and inorganic particulates. Swabs are collected as "composite" samples, whereby the swab will be swiped across several homogenous surfaces. Results are a representation of the mold species found to be present on each type of surface where a sample is collected. Swab samples are not meant to represent or infer what potential

spore concentrations in the air may be. Swab sample results are reported as surface concentrations being rare, medium, or high.

4.0 LIMITATIONS

The scope of work performed was concentrated on potential moisture and microbial-related issues on the interior of buildings 1,2 and 3 of the Samsula Academy located in New Smyrna Beach, FL.

5.0 ASSESSMENT CRITERIA

This section identifies the IAQ criteria used for the evaluation of site-specific data collected during the recent assessment.

5.1 Visual and Olfactory Observations

Visual and olfactory observations are subjective and open to interpretation by others. EMS considers general housekeeping, cleanliness, odors, and other signs of moisture-related issues during walk-through IAQ assessments.

5.2 Indoor Air Quality Comfort Parameters

Recommended Temperature Standards

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) recommends a summer indoor temperature range between 73.0 degrees Fahrenheit (°F) and 79.0°F. During the winter months, ASHRAE suggests a range between 68.5°F and 76.0°F. This reference is taken from *ASHRAE Standard 55-102, Thermal Environmental Conditions for Human Occupancy*.

Relative Humidity Recommended Standards

ASHRAE acceptable ranges of operative temperature (a combination of air and radiant temperatures) are for relative humidity levels between 30% and 60%. Indoor humidity levels in excess of 60% can support fungal growth; therefore, ASHRAE recommends that indoor relative humidity be maintained below 60%. There is no recommended lower level of humidity for achieving thermal comfort; however, as dry conditions can lead to increased static electricity and health problems, such as skin irritation, the relative humidity should be greater than 30%.

Carbon Dioxide Recommended Standard

ASHRAE recommends a carbon dioxide concentration of 700 plus the outdoor concentration. The reference to the recommended ASHRAE Standards for carbon dioxide was taken from the ASHRAE 62 Standard, Ventilation for Acceptable Indoor Air Quality. Outdoor concentrations of carbon dioxide typically range between 350 and 450 parts per million (ppm).

6.0 RESULTS AND EVALUATION

This section presents site-specific visual and olfactory observations, air comfort parameter measurements, and the results of air and composite swab sampling conducted on November 26 and 27, 2024, at the Samsula Academy located on 248 North Samsula Drive in New Smyrna Beach, Florida.

6.1 Visual and Olfactory Observations

Visual and olfactory observations were made and documented during the site visit on November 26 and 27, 2024. A photographic log produced from photos collected during the site visit is provided in **Appendix A**. Notable visual and olfactory observations by section are presented in **Table 1** below.

TABLE 1: VISUAL AND OLFACTORY OBSERVATIONS

Location	Parameters	
	Observations	Olfactory
Building 1 Main Office	<ul style="list-style-type: none"> • Roof leaks with wall and ceiling damage in Conference room and Media room. • Water catch bucket and water staining on countertop in Northeast corner of Conference room (under ceiling damage). • Damage on interior walls associated with roof leaks, envelope deficiencies and window leaks (see moisture map and photolog). • Active diffuser above Conference room drop ceiling (sweating onto ceiling tile). • Significant casting and microbial amplification on HVAC supply diffusers. • Water staining on hard deck ceiling around diffusers in Media room. • Poorly sealed duct/insulation to supply and return boxes. • Water stained ceiling tiles. • Above ceiling line leak in middle office of North South hall. • Evidence of water leak above ceiling in first room to South in main office building. • Evidence of prior drip pan leak above Break room ceiling. • Elevated moisture detected in interior walls. • Microbial growth on ceiling of office behind Media room stage. • High humidity. • Tower fans and air purifiers observed throughout. • Significant structural cracking on West side of Art room. • Poorly sealed exterior door (daylight visible) • Exterior cracking. • Sealing deficiencies and wood rot around exterior windows (interior and exterior) • Missing roof shingles. 	<ul style="list-style-type: none"> • N/A

TABLE 1: VISUAL AND OLFACTORY OBSERVATIONS		
Location	Parameters	
	Observations	Olfactory
Building 2 Classrooms	<ul style="list-style-type: none"> Leaks around rain leaders deck penetrations throughout. Water stained ceiling tiles Water stains in light lenses Structural cracking in the interior Northwest corner of the Northeast classroom of South classroom pod. Evidence of roof leaks and possibly unsealed mechanical fasteners 	<ul style="list-style-type: none"> N/A
Building 3 Cafeteria	<ul style="list-style-type: none"> Significant structural cracking on exterior including cross block cracking and evidence of spalling. Damage on interior walls associated with roof leaks, envelope deficiencies and window leaks (see moisture map and photolog). Peeling vinyl cove base in Southwest room off of Kitchen with microbial amplification behind cove base. Possible microbial amplification on North wall behind stage. Poorly sealed exterior door seals (daylight visible) and evidence of water coming in under doors. Evidence of roof leaks throughout. Water stained and bowed ceiling tiles throughout. Sealing deficiencies and wood rot around exterior windows (interior and exterior). Significant casting and microbial amplification on HVAC supply diffusers with rust. 	<ul style="list-style-type: none"> N/A

6.2 Indoor Air Quality Comfort Parameters

Measurements of indoor air quality comfort parameters recorded during the November 26 and 27, 2024, site visit are summarized in **Table 2** below.

TABLE 2: INDOOR AIR QUALITY COMFORT PARAMETERS			
BUILDING 1			
Location	Parameter		
	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)
Exterior 1	79.2	45.3	500
Conference Room (1 st room on right inside main entry)	66.3	70.0	690
Main Entrance Hall	65.1	72.4	629
Reception Desk	65.6	70.5	625

TABLE 2: INDOOR AIR QUALITY COMFORT PARAMETERS			
BUILDING 1 CONTINUED			
Location	Parameter		
	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)
Office Off Reception Desk	65.6	66.9	634
Middle Office in North-South Hall	64.7	68.4	628
Break Room	64.9	67.5	623
Media Room	66.1	71.9	621
Office Behind Media Room	66.8	71.0	601
Art Room	64.6	62.9	576
BUILDING 2 – SOUTH CLASSROOM POD			
Southwest Classroom	70.6	50.4	599
Northeast Classroom	69.3	50.6	533
Southeast Classroom	69.4	50.9	531
Northwest Classroom	69.2	50.6	539
BUILDING 2 – NORTH CLASSROOM POD			
Southwest Classroom	70.5	52.6	570
Northeast Classroom	69.1	54.4	562
Southeast Classroom	69.8	51.9	562
Northwest Classroom	69.3	54.1	548
BUILDING 3			
Cafeteria Middle	66.9	58.7	574
Cafeteria South End	68.9	55.1	552
Cafeteria North End	67.2	57.8	546
PE Office (Northeast corner of building)	66.5	58.3	580
Cafeteria Manager Office (off Kitchen)	66.5	60.7	629
Cafeteria Prep Area (by sinks)	69.8	55.5	616
Exterior 2	69.4	63.1	462
ASHRAE Recommended Standards/Limitations			
Summer: 73 - 79°F		30 – 60%	< 1,181 ppm
Winter: 68.5 - 76°F			

EXPLANATION:

°F = degrees Fahrenheit % = percent ppm = parts per million

Based on the site-specific air comfort monitoring data, the air comfort parameters measured throughout the building two were generally within recommended range. The air comfort parameters measured in buildings

one and three indicated humidity levels that are above the recommended upper range and temperature levels below the lower recommended range.

It should be noted that humidity levels greater than 60% provide an environment that is favorable for mold amplification and results in increased dry time for porous, moisture-impacted materials.

6.3 Results of Air and Swab Sampling for Non-Viable Mold Structures

While on site, EMS collected a total of seventeen air samples; fifteen samples were collected from the building interiors, and two samples were collected from the building exterior for comparison purposes. In addition, EMS also collected a total of nine composite swab samples from a variety of substrates within the building.

All samples were transported under chain-of-custody to Eurofins, an American Industrial Hygiene Association (AIHA) accredited laboratory in Orlando, Florida, for analysis of fungal spores and particulates by optical microscopy. Laboratory analytical reports are provided in **Appendix B** and are summarized in **Tables 3 and 3a** below.

TABLE 3: AMBIENT AIR SAMPLE RESULTS SUMMARY				
Sample ID No.	Location	Sample Type	Total Concentration (spores/m ³)	Predominant Genera (spores/m ³)
SA-A-1	Exterior Pre	Spore Trap Air	1,500	Ascospores 100 Basidiospores 850 Cladosporium 53 Other Brown 13 Aspergillus/Penicillium 480 Pithomyces 13 Smuts, Periconia, Myxomycetes 13
SA-A-2	Conference Room Building 1 (1 st room on right inside main entry)	Spore Trap Air	760	Ascospores 53 Basidiospores 160 Cladosporium 53 Other Brown 27 Aspergillus/Penicillium 470*
SA-A-3	Reception Desk Building 1	Spore Trap Air	370	Basidiospores 320 Aspergillus/Penicillium 53
SA-A-4	Middle Office in North-South Hall of Building 1	Spore Trap Air	810	Basidiospores 800 Curvularia 13
SA-A-5	Room Behind Stage in Media Room Building 1	Spore Trap Air	480	Basidiospores 430 Aspergillus/Penicillium 53
SA-A-6	Break Room Building 1	Spore Trap Air	560	Basidiospores 430 Curvularia 13 Aspergillus/Penicillium 110 Smuts, Periconia, Myxomycetes 13

TABLE 3: AMBIENT AIR SAMPLE RESULTS SUMMARY				
Sample ID No.	Location	Sample Type	Total Concentration (spores/m ³)	Predominant Genera (spores/m ³)
SA-A-7	Media Room Building 1	Spore Trap Air	590	Basidiospores 530 Aspergillus/Penicillium 53
SA-A-8	Art Room Building 1	Spore Trap Air	320	Basidiospores 320
SA-A-9	Cafeteria Building 3	Spore Trap Air	320	Basidiospores 210 Aspergillus/Penicillium 110
SA-A-10	PE Office (Northeast corner of building) Building 3	Spore Trap Air	150	Basidiospores 53 Epicoccum 13 Other Brown 13 Aspergillus/Penicillium 53 Smuts, Periconia, Myxomycetes 13
SA-A-11	Cafeteria Manager Office (off Kitchen) Building 3	Spore Trap Air	210	Basidiospores 160 Aspergillus/Penicillium 53
SA-A-12	Southwest Classroom South Pod Building 2	Spore Trap Air	160	Basidiospores 110 Aspergillus/Penicillium 53
SA-A-13	Northeast Classroom South Pod Building 2	Spore Trap Air	110	Basidiospores 110
SA-A-14	Northwest Classroom South Pod Building 2	Spore Trap Air	53	Basidiospores 53
SA-A-15	Southeast Classroom South Pod Building 2	Spore Trap Air	210	Basidiospores 210
SA-A-16	Southwest Room (West of kitchen) Building 2	Spore Trap Air	1,500	Ascospores 110 Basidiospores 480 Aspergillus/Penicillium 950
SA-A-17	Exterior Post	Spore Trap Air	1,100	Basidiospores 1,000 Curvularia 13 Epicoccum 13 Spegazzinia 13

* - Indicates clumping or long chain structures observed which is indicative of active growth

TABLE 3a: COMPOSITE SWAB SAMPLE RESULTS SUMMARY			
Sample ID No.	Location	Sample Type	Relative Spore Concentrations by Species Direct Examination
SA-SW-1	Diffusers Office Side of Building 1	Composite Swab	Cladosporium – Very High Aspergillus/Penicillium - Low
SA-SW-2	Horizontal Surfaces Office Side of Building 1	Composite Swab	Brown Hyphae - Rare
SA-SW-3	Southeast Corner of Media Room at Wall Damage Building 1	Composite Swab	Aspergillus/Penicillium – High
SA-SW-4	Diffusers in Conference Room Building 1 (1 st room on right inside main entry)	Composite Swab	Cladosporium – High
SA-SW-5	Diffusers and Ceiling in Room Behind Stage in Media Room Building 1	Composite Swab	Cladosporium – Very High
SA-SW-6	Diffusers in Art Room Building 1	Composite Swab	Cladosporium – Rare
SA-SW-7	Horizontal Surfaces in Art Room Building 1	Composite Swab	Curvularia - Low
SA-SW-8	Diffusers in South Classroom Pod Building 2	Composite Swab	Cladosporium - High Curvularia - Low
SA-SW-9	Diffusers in North Classroom Pod Building 2	Composite Swab	Cladosporium – Very High

Depositing Level Definitions: 0 - <1+ Rare; 1+ Low; 2+ Moderate; 3+ High; 4+ Very High

Review of the November 26 and 27, 2024, data presented in **Table 3** and **Table 3a** above indicates that outside air samples ranged between 1,100 and 1,500 fungi spore counts per cubic meter of air (m³), while the air samples collected from the building interior ranged between 53 and 1,500. While many of the identified spore species are typical of the exterior environment, significantly elevated levels of Aspergillus/Penicillium, which was found in the room to the Southeast of the kitchen, is typically an indicator of a moisture impact issue with associated microbial amplification.

Swab samples collected indicated high to very high spore depositing of Cladosporium throughout the areas tested. Additionally, elevated depositing of Aspergillus/Penicillium was found in the swab collected from the damaged wall area of the Building 1 Media Room.

7.0 **CONCLUSIONS**

With the compilation of observations and sampling data from the site visit conducted on November 26 and 27, 2024, EMS offers the following conclusions:

EMS concludes that building envelope conditions as well as HVAC deficiencies are resulting in moisture intrusion, microbial amplification and damage to interior building materials. It is believed that if these conditions are left unresolved that the microbial amplification and building materials damage will be exacerbated.

EMS concludes that there is evidence of moisture intrusion in nearly all areas evaluated with microbial amplification detected in the air samples for the conference room and the room to the West of the kitchen. In addition, microbial amplification was detected on a number of HVAC system diffusers and in areas of known water intrusion.

EMS further concludes that the HVAC system(s) which service the building 1 main office areas is not providing adequate dehumidification. The high humidity throughout the building the space indicates that moisture is being introduced into the structure and may be aiding in the ongoing facilitation of microbial growth. Observations of what appears to be an operational diffuser above the drop ceiling of the conference room also suggests that there may be legacy duct work that has not been correctly abandon. Water impacts from the diffuser appeared to and active and long term condition. It should be noted that while the humidity measurements collected in the building 2 cafeteria did not exceed the upper range, the humidity was in the upper end of the range.

8.0 **RECOMMENDATIONS**

EMS makes the following recommendations, which are offered as general actions to be taken to correct the deficiencies observed.

To be performed by a Florida licensed roofing contractor:

- It is recommended that a certified thermographer be used to perform a scan of all roof coverings and membranes to determine if there is water entrapment and/ or leaks around roof deck penetrations. The evaluation should also include laps, caps, and seals. Make repairs as required.
- It is recommended that any roof repairs be validated using ASTM water testing standards.
- It is recommended that all roof flashing be evaluated for proper installation and sealing. Make repairs as required.

It is recommended that Florida licensed general contractor (GC) evaluate the exterior building envelope for needed repairs and waterproofing.

- It is recommended that exterior cracks (inclusive of structural cracks), damage, areas of rust bleeding through the stucco and areas of prior repairs and infills be evaluated for repair and water proofing.
- It is recommended that all window to frame and window frame to building connections be evaluated for proper sealing and wood rot. Repairs and/or resealing are to be completed as required.
- It is recommended that all above ceiling rain leaders be inspected for cracks and proper installation.
- It is recommended that the window evaluation as well as any resealing efforts be validated using ASTM water testing standards while the interior wall cavity is exposed during remediation activities.
- It is recommended that all exterior door seals be evaluated for wear, damage and seal integrity with repair or replacement performed as required.

To be performed by a Florida-licensed, NADCA-certified commercial mechanical contractor:

- Evaluate the current use and capability of the HVAC system(s) servicing buildings 1 and 3 against the design specifications. Evaluation should include an assessment of the system's temperature control and dehumidification capability in maintaining humidity levels below 60% and optimally between 30 and 50%.

- Evaluate legacy ductwork which remains operational and correctly abandon as needed.
- Evaluate the above ceiling line set insulation leak/sweat in middle office of building 1. Evaluate above ceiling line set insulation in all three buildings for proper insulation.
- Evaluate all duct work for proper insulation, proper sealing of insulation and proper sealing of duct and insulation connections. Insulate and/or make repairs as required. Any water impacted duct insulation resulting in reduced R value is to be replaced.
- Following NADCA protocol, clean and sanitize all HVAC system(s). This should include drip pans, spiral fans, AHU interiors and exteriors, ducts, coils, gaskets, diffusers, and return grills and vanes. Any internally lined ducts and/or duct board are to be additionally encapsulated. Any return or supply grills that cannot be cleaned are to be replaced.

To be performed by a Florida licensed mold remediator:

- Replace all water impacted ceiling tiles once above ceiling sources of water intrusion have been corrected.
- Place the building 1 conference room, building 1 media room inclusive of the back office, the room to the West of the kitchen in building 3 and all areas where moisture is indicated on the attached moisture maps under a HEPA-filtered, exterior exhausted, negative pressure containment. Containments are to maintain a negative pressure of at least $-.02$ " WC pressure or a minimum of 6 complete air changes per hour (by calculation). HEPA filters and pre-filters are to be changed a minimum of twice daily. Containments along exterior walls with elevated moisture are to be set a minimum of 6' off the wall to account for spaces required to perform work.
- Bag all single-layer textile soft goods and remove from containment for professional cleaning. Bags are to be goosenecked, HEPA vacuumed, and wet wiped using Bioesque anti-microbial or an EPA-approved equivalent prior to removal from containment.
- All multi-layer textile items are to be wrapped in 6 mil poly, securely sealed, and removed from containment to be dispositioned for professional cleaning or disposal. Poly-wrapped items are to be HEPA vacuumed and wet wiped using an EPA-approved antimicrobial prior to removal from containment.
- All non-porous hard goods, fixturing, and furniture shall be HEPA vacuumed and wet wiped, using Bioesque or an equivalent EPA-approved antimicrobial, and re-vacuumed. Items are to be wrapped in 6 mil poly, securely sealed, and removed from containment. Items shall remain outside of the contained space until such time as remediation has been completed with acceptable post-remediation air verification results.
- Scrape and moisture impacted and failing plaster and/or remove drywall and insulative materials as indicated on the attached moisture maps. Affected materials are to be placed into poly bags and secured by goose necking and taping. Poly bags are to be HEPA vacuumed and wet wiped using Bioesque anti-microbial or an EPA-approved equivalent prior to removal from containment.
- After removal, evaluate and open cavities, including insulation, studding, and remaining wall board for moisture damage and microbial amplification, which may require additional removal.
- Perform structural drying as required.
- HEPA vacuum all exposed components, sanitize by wet wiping with Bioesque antimicrobial or an EPA-approved equivalent, and re-vacuum.

- Using Bioesque Lubrizol-certified encapsulant or equivalent, encapsulate all exposed raw wood and any wall cavity structural components that are visible due to drywall removal as well as and plaster that remains around the impacted areas.
- Build back or finalize repairs as required.
- Perform a final top-down cleaning of all surfaces inside containment by HEPA vacuuming, followed by wet wiping using Bioesque antimicrobial (or an EPA-approved equivalent) and a second vacuuming.
- Flooring inside the contained areas are to undergo a high heat cleaning of not less than 160 degrees using Bioesque antimicrobial or an EPA-approved equivalent. Cleaning to be performed in a “back out” manner to avoid cross-contaminating cleaned and sanitized flooring.
- Allow containment air to scrub through HEPA filtration for a minimum of twenty-four hours prior to performing post-remediation air verification testing.
- Based upon the onsite observations, it is further suggested that the following areas undergo a top down cleaning and sanitization. This is to be accomplished by HEPA vacuuming, followed by wet wiping using Bioesque or an equivalent EPA-approved antimicrobial, followed by a second vacuuming of all surfaces.
 - All offices and the break room in building 1
 - The Art room in building 1
 - All ancillary rooms in the Northeast side of building 3
 - PE office in the Northwest corner of building 3
 - Cafeteria managers office
 - All classrooms in building 2
- Perform a high-heat cleaning of not less than 160 degrees of all flooring using Bioesque antimicrobial or an EPA-approved equivalent. Cleaning to be performed in a “back out” manner to avoid cross-contaminating cleaned and sanitized flooring.

Should you require guidance in implementing these recommendations, EMS is prepared to provide guidance specifications to implement these efforts. EMS recommends that, as these efforts are completed, proper visual and air clearance protocols be instituted to confirm the successful conclusion of the recommended activities.

Should site conditions change from those observed and tested on the date specified herein, further testing may be necessary to verify the quality of indoor air and the suitability of the building for occupancy.

9.0 MOLD DISCLAIMER

Please note that the work recommended when completed may not eliminate all sources for potential mold growth associated with the target buildings. Signs of mold may or may not develop in this building in the future for reasons other than those described herein. Mold amplification, which is visible to the unaided eye, may be a recurring event due to a number of causes and may affect other areas of these buildings. Improper or incomplete preventive maintenance, product deterioration, moisture problems (condensation, plumbing leaks, etc.), weather events, and building usage may also contribute to mold amplification.

END OF REPORT

APPENDIX A

Photographic Log



PHOTOGRAPHIC LOG

Project Location: Samsula Academy – New Smyrna Beach, FL

Work Area: Buildings 1,2 and 3

Date (s): November 26 and 27, 2024

EMS Project #: 24235.00

	<p>Photo 1 - Main office building-building 1.</p>
	<p>Photo 2 - Significant roof damage-building 1.</p>



Photo 3 -
Infill and exterior
cracking on front
elevation-building
1.



Photo 4 -
Infill and exterior
cracking at
Southeast corner
of building 1 break
room (interior
damage).



Photo 5 -
Exterior wall
cracking and
window seal
deficiencies-
building 1.



Photo 6 -
Window seal
deficiencies and
wood rot- building
1.



Photo 7 -
Window seal
deficiencies and
wood rot-building
1.



Photo 8 -
Exterior cracking
on main office
exterior-building 1.



Photo 9 - Exterior cracking on main office exterior-building 1.

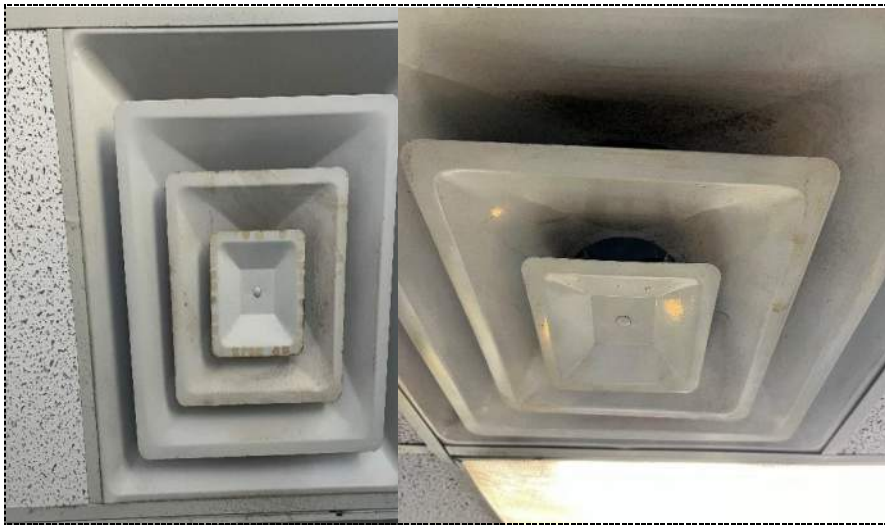


Photo 10 - Casting and possible microbial amplification on diffusers throughout admin area-building 1.



Photo 11 - Casting and possible microbial amplification on diffusers throughout admin area-building 1



Photo 12 -
Poorly sealed duct
to diffusers
connection-
building1.



Photo 13 -
Evidence of roof
leaks, wall damage
and possible
microbial
amplification
above ceiling in
first office on
South side of
building 1.



Photo 14 -
Wall damage and
possible microbial
amplification
above ceiling in
first office on
South side of
building 1.



Photo 15 - Evidence of above ceiling leak in center office in hallway leading to break room in building 1.



Photo 16 - Source of above ceiling leak in center office in hallway leading to break room in building 1..



Photo 17 - Break room building 1.



Photo 18 -
Slight water
staining on ceiling
tile below air
handler in break
room -building 1.



Photo 19 -
Wall damage in
Southeast corner
of break room
corresponding to
Southeast exterior
infill-building 1.



Photo 20 -
Evidence of water
intrusion and wall
damage along
exterior wall on
admin side of
building 1.



Photo 21 -
Evidence of water intrusion and wall damage along exterior wall on admin side of building 1.



Photo 22 -
Evidence of water intrusion and wall damage along exterior wall on admin side of building 1.



Photo 23 -
Evidence of water intrusion and wall damage along exterior wall on admin side of building 1.



Photo 24 - Evidence of water intrusion and wall damage along exterior wall on admin side of building 1.



Photo 25 - Entry to front building 1 front Northeast conference room (as noted on map).



Photo 26 - Water stained ceiling tiles in the conference room-building 1.



Photo 27 - Possible active and sweating diffuser above the drop ceiling in conference room-building 1.



Photo 28 - Impacted ceiling tiles below the above ceiling diffuser in conference room – building 1.



Photo 29 - Casting and possible microbial amplification on diffusers in conference room-building 1.



Photo 30 - Poorly sealed diffusers in conference room - building 1.



Photo 31 - Collapsed ceiling tile with catch bucket and water staining on countertop in conference room - building 1.



Photo 32 - Collapsed ceiling above drop ceiling with evidence of roof leak in conference room - building 1.



Photo 33 -
Entrance to Media
room-building 1.



Photo 34 -
Media room-
building 1.



Photo 35 -
Media room-
building 1

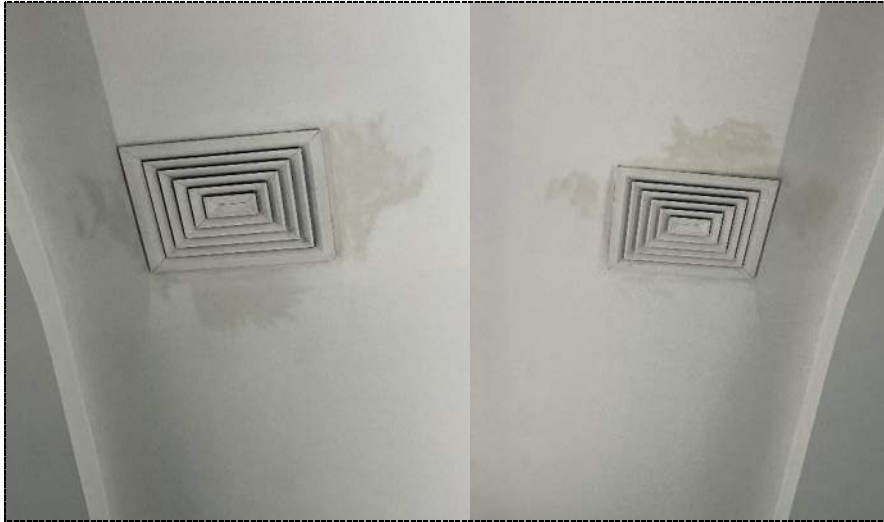


Photo 36 -
Water staining
around diffusers in
Media room-
building 1.



Photo 37 -
Water damaged
walls with
microbial
amplification in
Media room-
building 1.

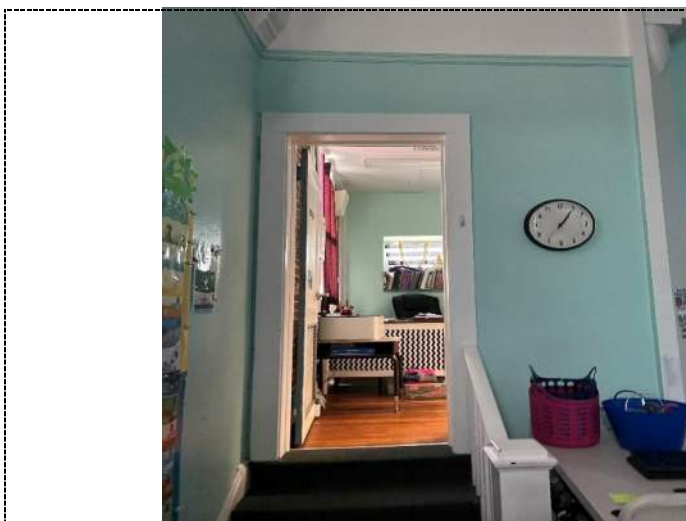


Photo 38 -
Entry to office
behind Media
room-building 1.



Photo 39 - Office behind Media room-building 1.



Photo 40 - Casting and microbial amplification on diffuser and ceiling in office behind Media room-building 1

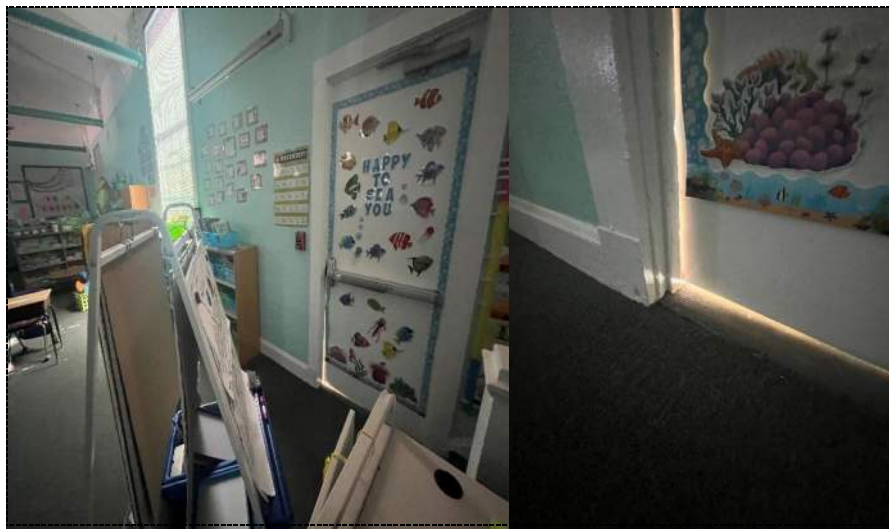


Photo 41 - Poorly sealed exterior door-building 1.



Photo 42 -
Poorly sealed
exterior door-
building 1.



Photo 43 -
Poorly sealed
exterior doors-
building 1.



Photo 44 -
Various tower fans
observed
throughout building
1.

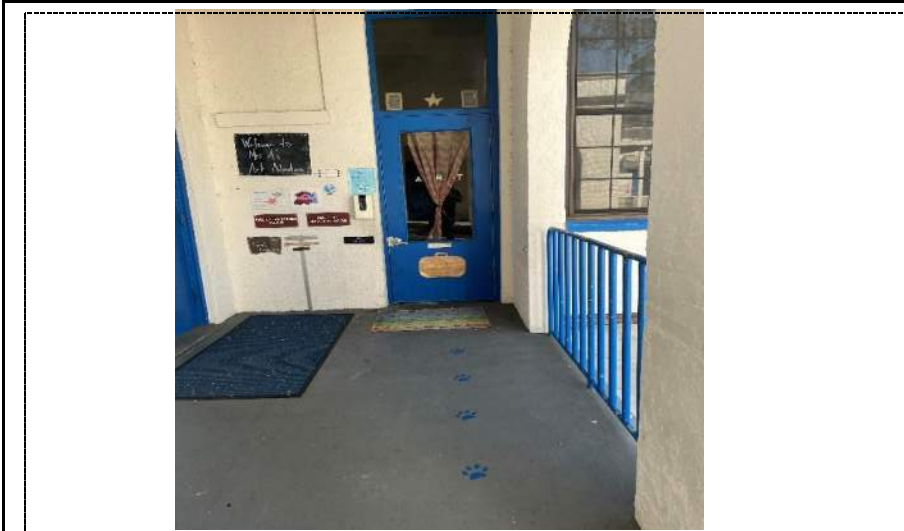


Photo 45 -
Entrance to Art
room-building 1.



Photo 46 -
Art room-building
1.



Photo 47 -
Some casting
around supply
diffuser and water
drip marks below
diffuser grate in Art
room-building 1



Photo 48 -
Evidence of wall
damage of Art
room-building 1.



Photo 49 -
Evidence of wall
damage of Art
room-building 1.



Photo 50 -
Structural crack in
Northwest corner
of Art room-
building 1.

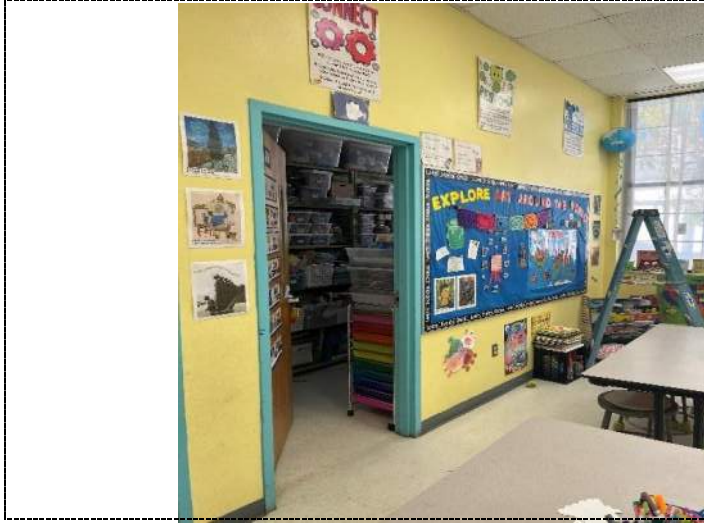


Photo 51 - Entrance to Art room closet-building 1.



Photo 52 - Water stained ceiling tiles and wall damage in Art room closet-building 1.



Photo 53 - Evidence of roof leak above ceiling in Art room closet-building 1.



Photo 54 -
Evidence of roof
leak above ceiling
in Art room closet-
building 1.



Photo 55 -
Evidence of
damage around
window in Art room
closet-building 1.



Photo 56 -
Entrance to
building 3.



Photo 57 - Exterior cracking and area of questionable roofing to North of entrance into building 3.



Photo 58 - Wall damage next to downspouts-building 3.



Photo 59 - Exterior cracking and areas of failing weatherproofing around building-building 3.



Photo 60 - Possible structural corner crack-building 3.



Photo 61 - Exterior structural crack with interior damage in Southwest corner of Cafeteria-building 3.



Photo 62 - Evidence of window seal deficiencies-building 3.



Photo 63 -
Cafeteria-building
3.



Photo 64 -
Ceiling tiles bowed
throughout
Cafeteria-building
3.

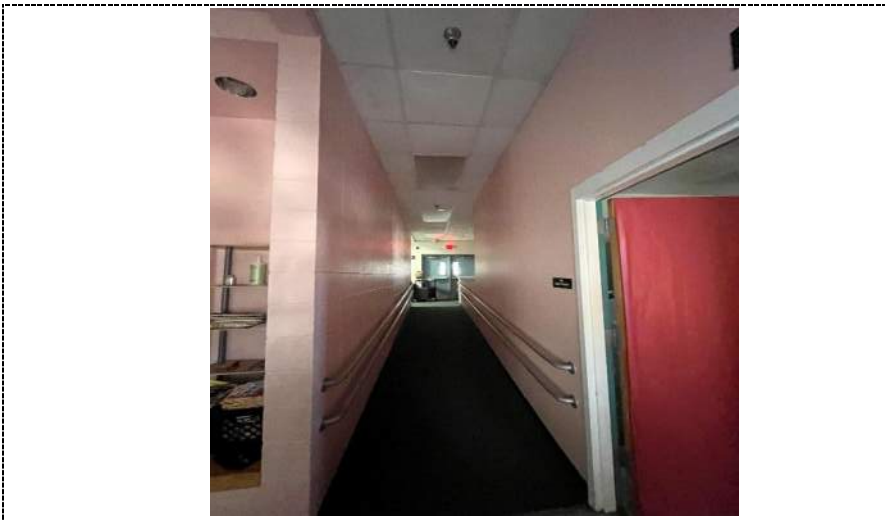


Photo 65 -
Hallway along
Northeast side of
Cafeteria-building
3.



Photo 66 - Water staining ceiling tiles and cross block cracking at end of hallway along Northeast side of Cafeteria-building 3.



Photo 67 - Water stained ceiling tiles in hallway along Northeast side of Cafeteria-building 3.



Photo 68 - Casting and possible microbial amplification and evidence of moisture around diffuser in hallway along Northeast side of Cafeteria-building 3.



Photo 69 - Water infiltration and impacted ceiling tiles that corresponds to a structural exterior crack and possible roof compromise in first room in hallway along Northeast side of Cafeteria-building 3.



Photo 70 - Very dirty HVAC grate and possible microbial amplification on North wall behind stage outside of PE office-building 3.

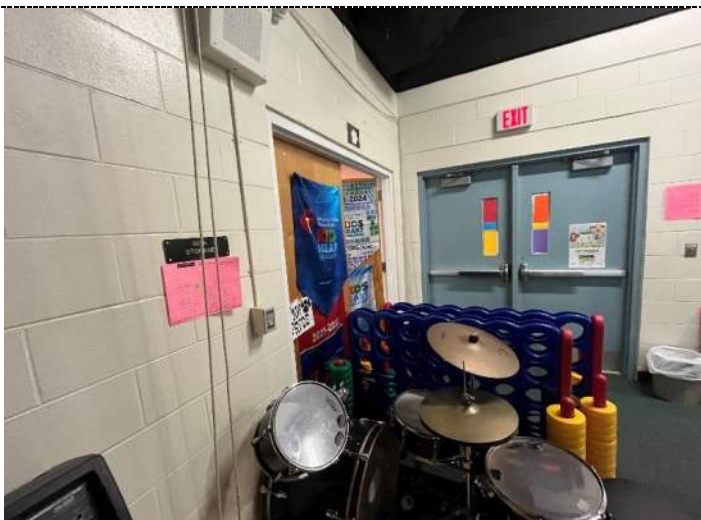


Photo 71 - Entrance to PE office behind stage in Cafeteria-building 3.



Photo 72 -
PE office behind
stage in Cafeteria-
building 3.

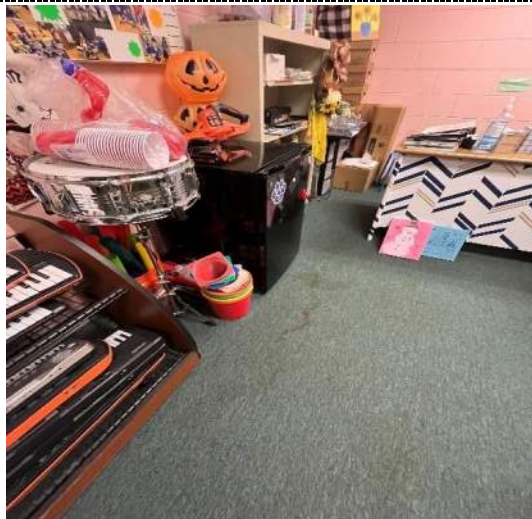


Photo 73 -
Water staining on
carpet in front of
dorm refrigerator
in PE office-
building 3.



Photo 74 -
Water staining on
ceiling tiles in PE
office-building 3.



	<p>Photo 75 - Supply dirty with possible water marking in PE office-building 3.</p>
	<p>Photo 76 - Kichen-building 3.</p>
	<p>Photo 77 - Casting around kitchen diffusers and rusted ceiling grid-building 3.</p>



Photo 78 -
Entrance to
kitchen managers
office-building 3.



Photo 79 -
Kitchen managers
office-building 3.



Photo 80 -
Evidence of
repairs/infills in
kitchen managers
office-building 3.



Photo 81 - Evidence of window leaks in kitchen managers office-building 3.



Photo 82 - Rust under cabinets and peeling cove base in the kitchen managers office-building 3.



Photo 83 - cabinets and peeling cove base in the kitchen managers office-building 3.



Photo 84 - Room to the Southwest corner of Cafeteria-building 3.



Photo 85 - Water stained ceiling tiles in room to the Southwest corner of Cafeteria-building 3.



Photo 86 - Casting around diffuser with possible microbial amplification room to the Southwest corner of Cafeteria-building 3.



Photo 87 -
Water damage
along West wall in
room to the
Southwest corner
of Cafeteria-
building 3.



Photo 88 -
Peeling cove base
with possible
microbial
amolification
underneath in
room to the
Southwest corner
of Cafeteria-
building 3.



Photo 89 -
Evidence of water
intrusion at exterior
door in room to the
Southwest corner
of Cafeteria-
building 3.



Photo 90 - Poorly sealed diffuser with evidence of moisture impact on the back of surrounding ceiling tiles in room to the Southwest corner of Cafeteria-building 3.



Photo 91 - Typical entrance to classrooms (South pod Southwest entrance pictured)-building 2.



Photo 92 - Typical classroom (Southwest classroom of South pod pictured)-building 2.

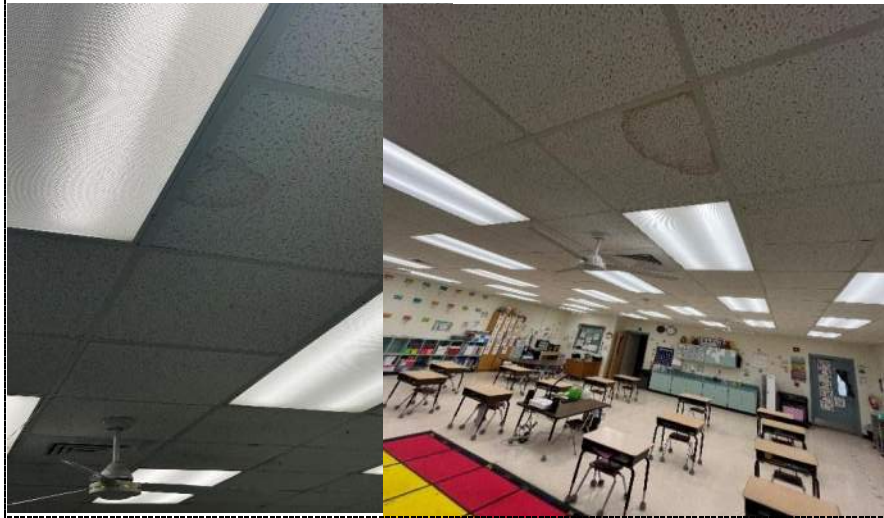


Photo 93 -
Water stained
ceiling tiles
throughout North
and South
classrooms-
building 2.

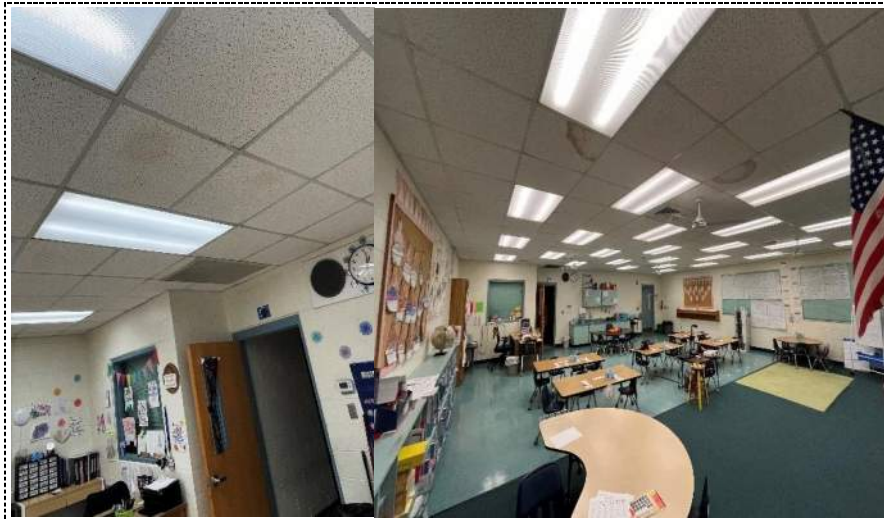


Photo 94 -
Water stained
ceiling tiles
throughout North
and South
classrooms-
building 2.



Photo 95 -
Water stained
ceiling tiles
throughout North
and South
classrooms-
building 2.



Photo 96 - Water stained ceiling tiles throughout North and South classrooms-building 2.

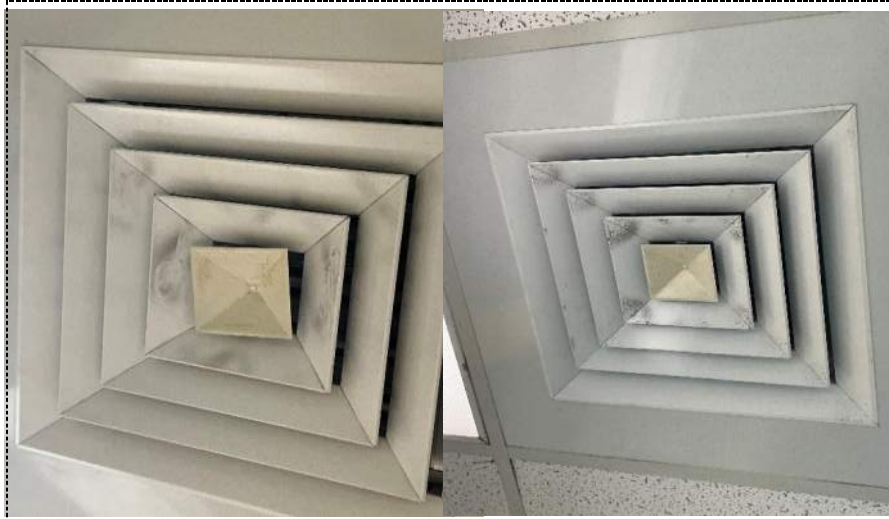


Photo 97 - Impacted diffusers throughout North and South classrooms-building 2.

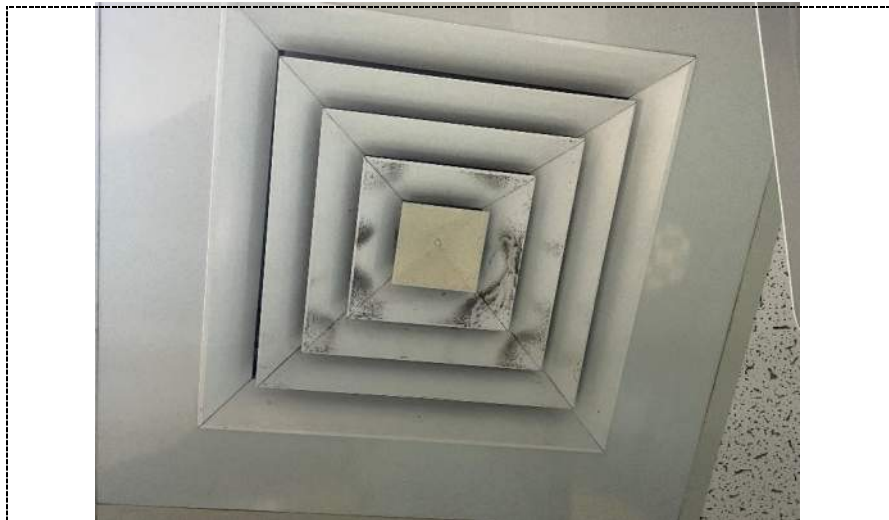


Photo 98 - Impacted diffusers throughout North and South classrooms-building 2.



Photo 99 - Poorly sealed diffusers in classrooms-building 2.



Photo 100 - Poorly sealed diffusers in classrooms-building 2.



Photo 101 - Evidence of above ceiling leaking rain leaders in classrooms-building 2.



Photo 102 - Evidence of roof leaks above ceilings in classrooms-building 2.



Photo 103 - Evidence of above ceiling roof leaks along parapet wall in Northwest classroom in North pod (stained ceiling tile below)- building 2.



Photo 104 - Evidence of above ceiling roof leaks along parapet wall in Northwest classroom in North pod (stained ceiling tile below)- building 2.



Photo 105 -
Water staining in
light lenses in
Southwest
classroom of
South pod-building
2.

Photo 106 -
Water staining in
light lenses in
Northeast
classroom of
South pod-building
2.

These photographs and sketches are based on field observations during EMS’s onsite visit on November 26 and 27, 2024. They do not intend to represent every condition present as of those dates.

END OF PHOTOGRAPHIC LOG

APPENDIX B

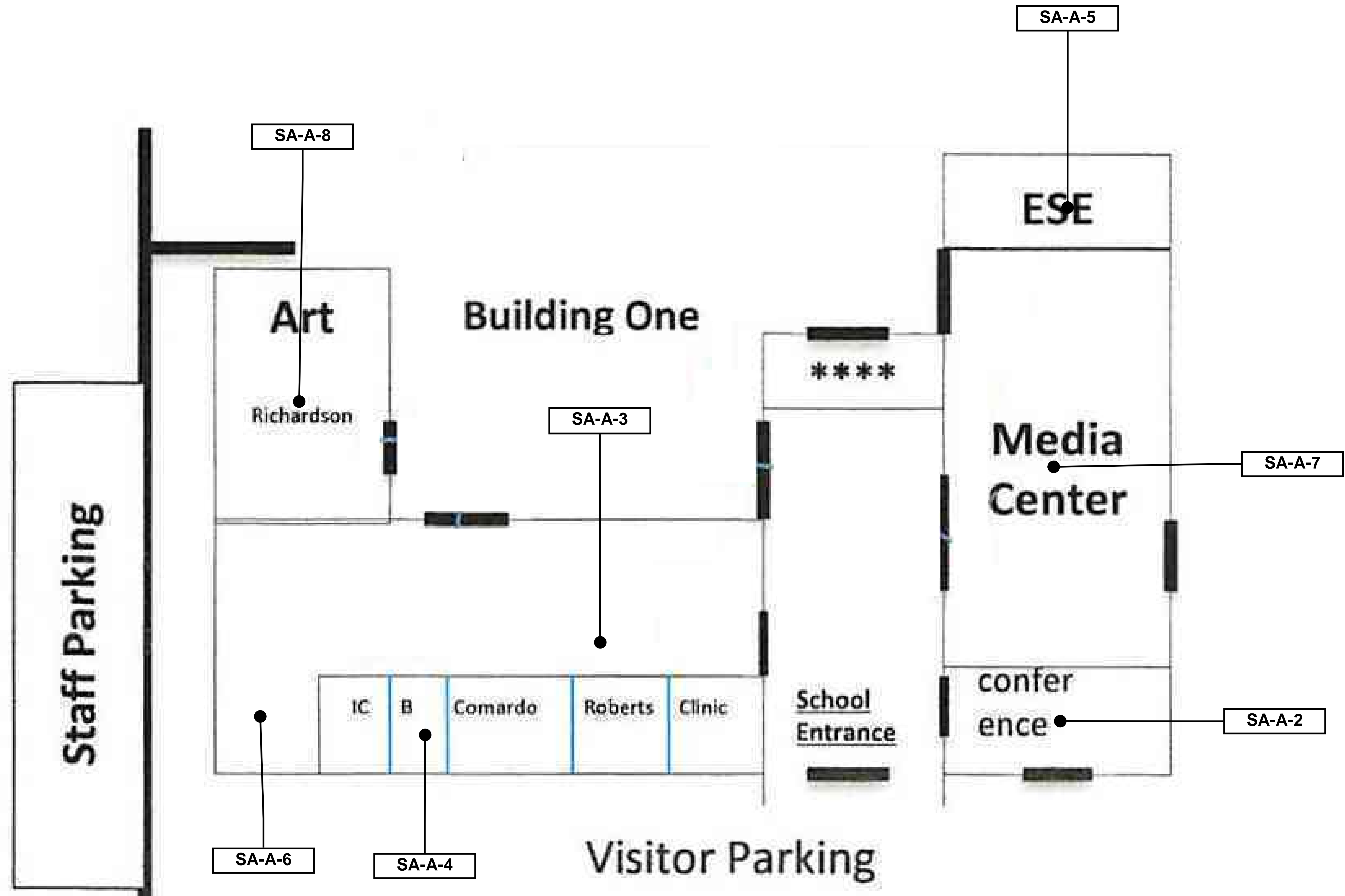
Maps

BUILDING 1 AIR SAMPLE LOCATION MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



MOISTURE MAP

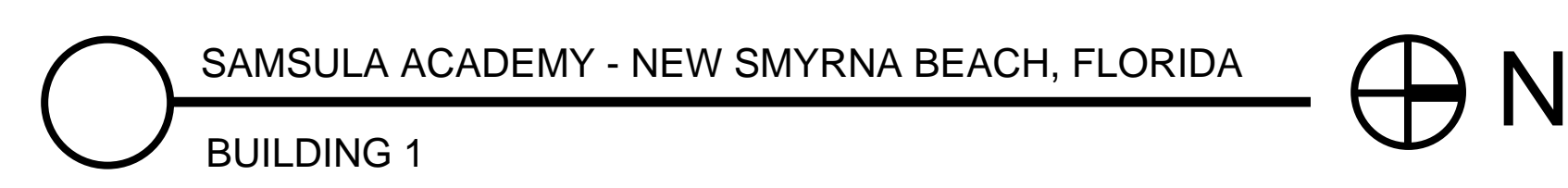
NOTES:
- Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:

AS-1.0



LEGEND

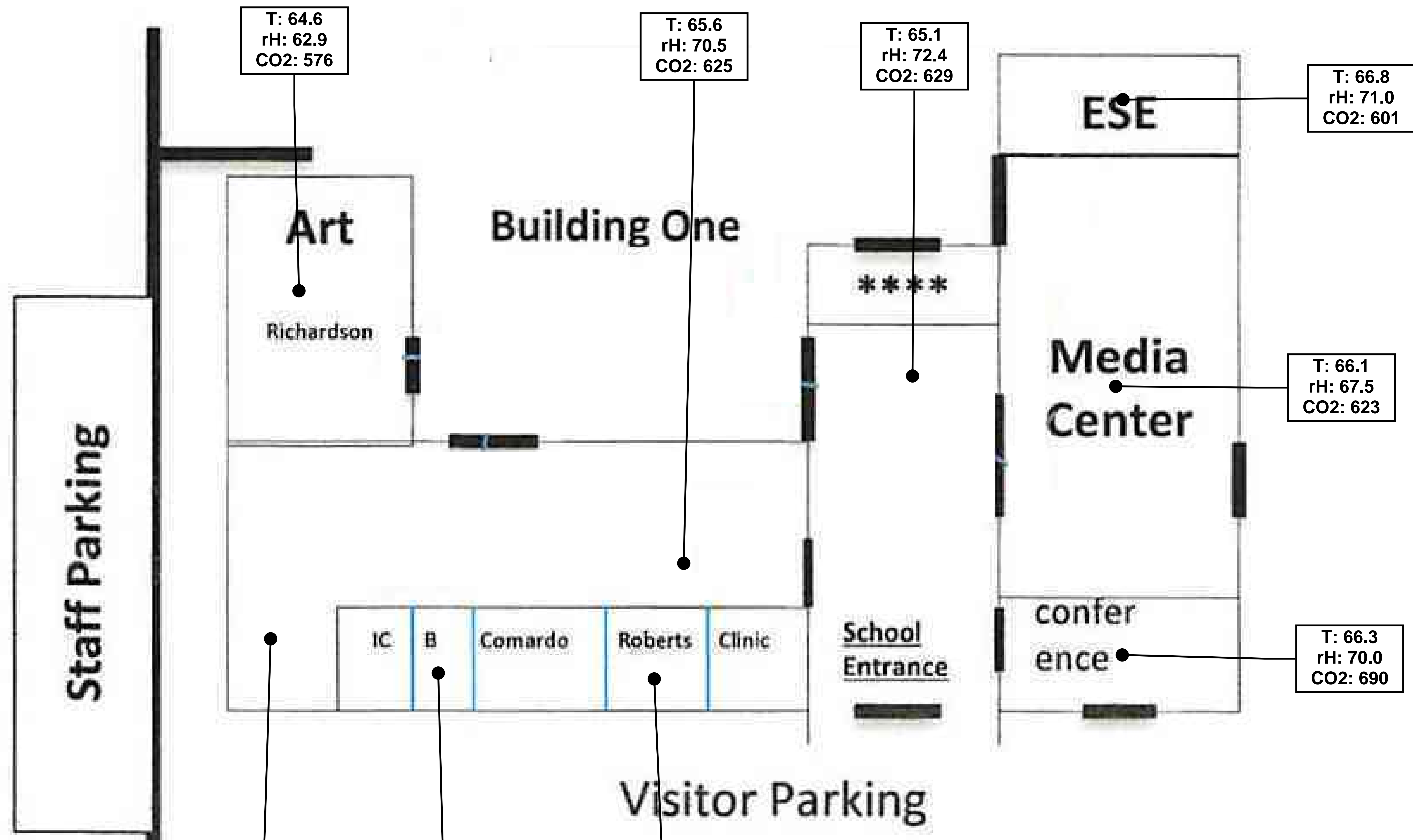
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	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

BUILDING 1 INDOOR AIR COMFORT PARAMETER MEASUREMENTS MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



T: 64.6
rH: 62.9
CO2: 576

T: 65.6
rH: 70.5
CO2: 625

T: 65.1
rH: 72.4
CO2: 629

T: 66.8
rH: 71.0
CO2: 601

T: 66.1
rH: 67.5
CO2: 623

T: 66.3
rH: 70.0
CO2: 690

T: 64.9
rH: 67.5
CO2: 623

T: 64.7
rH: 68.4
CO2: 628

T: 65.6
rH: 66.9
CO2: 634

MOISTURE MAP

NOTES:

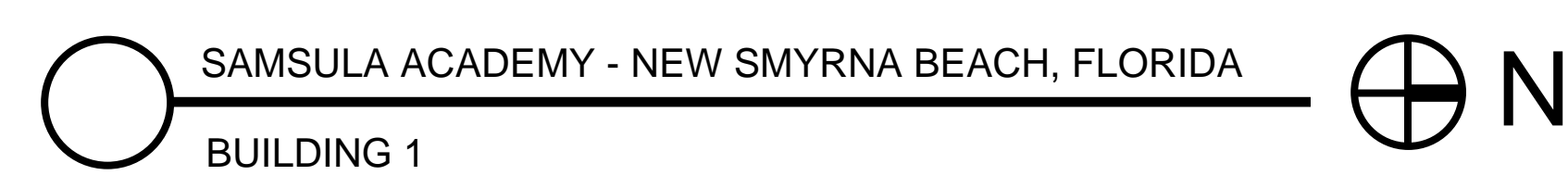
- Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:

CP-1.0



LEGEND

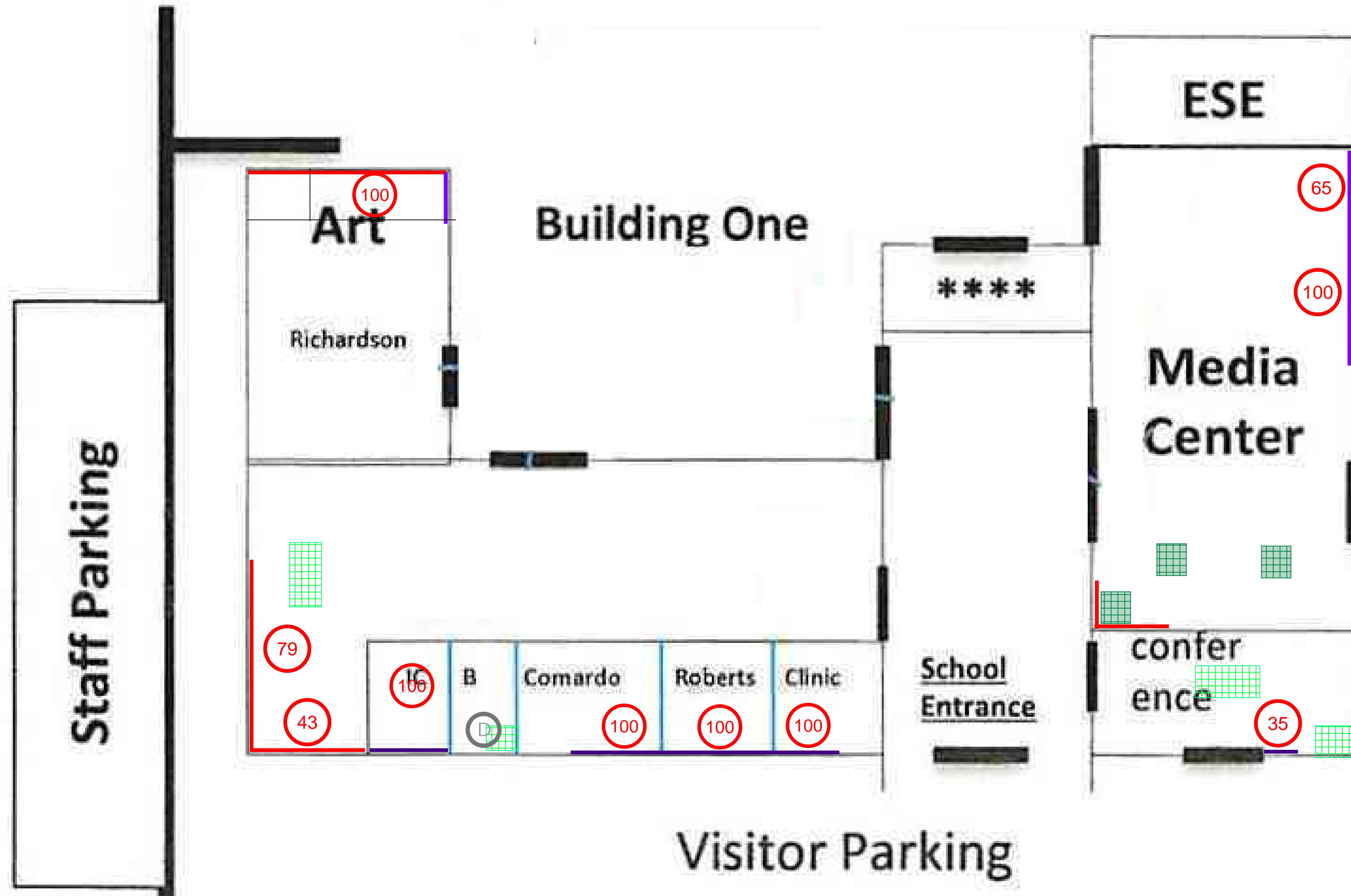
	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

BUILDING 1 LIMITED MOISTURE MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
- Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:

MM-1.0

LEGEND			
	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

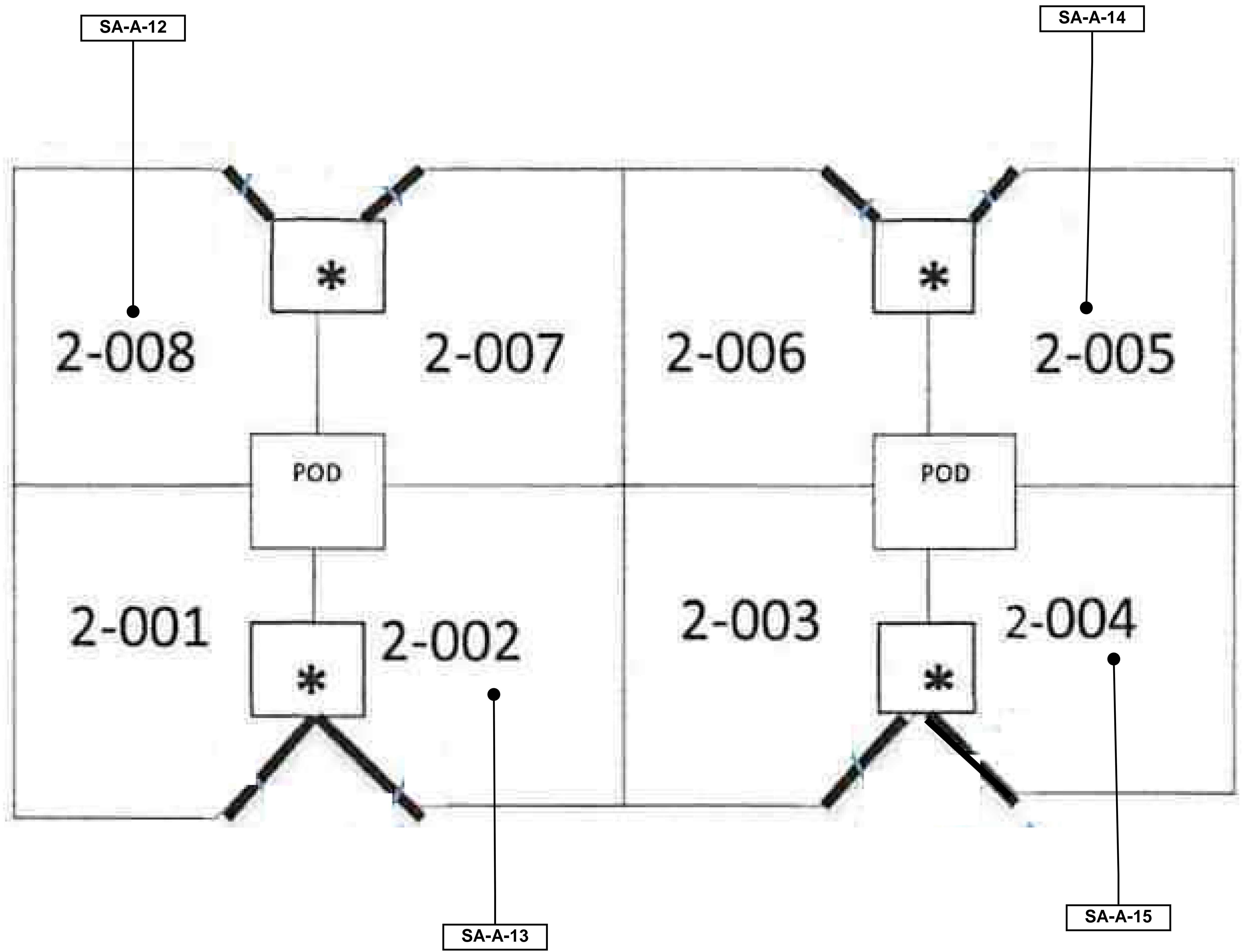
SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
BUILDING 1

BUILDING 2 AIR SAMPLE LOCATION MAP



CONSULTANTS:

Samsula Academy
 248 North Samsula Drive
 New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
 - Field verification required for all measurements.

REVISIONS:

DATE: 11/27/24
 DRAWN BY: CG
 SHEET TITLE:

DRAWING NUMBER:

MM-1.1

SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
 BUILDING 2



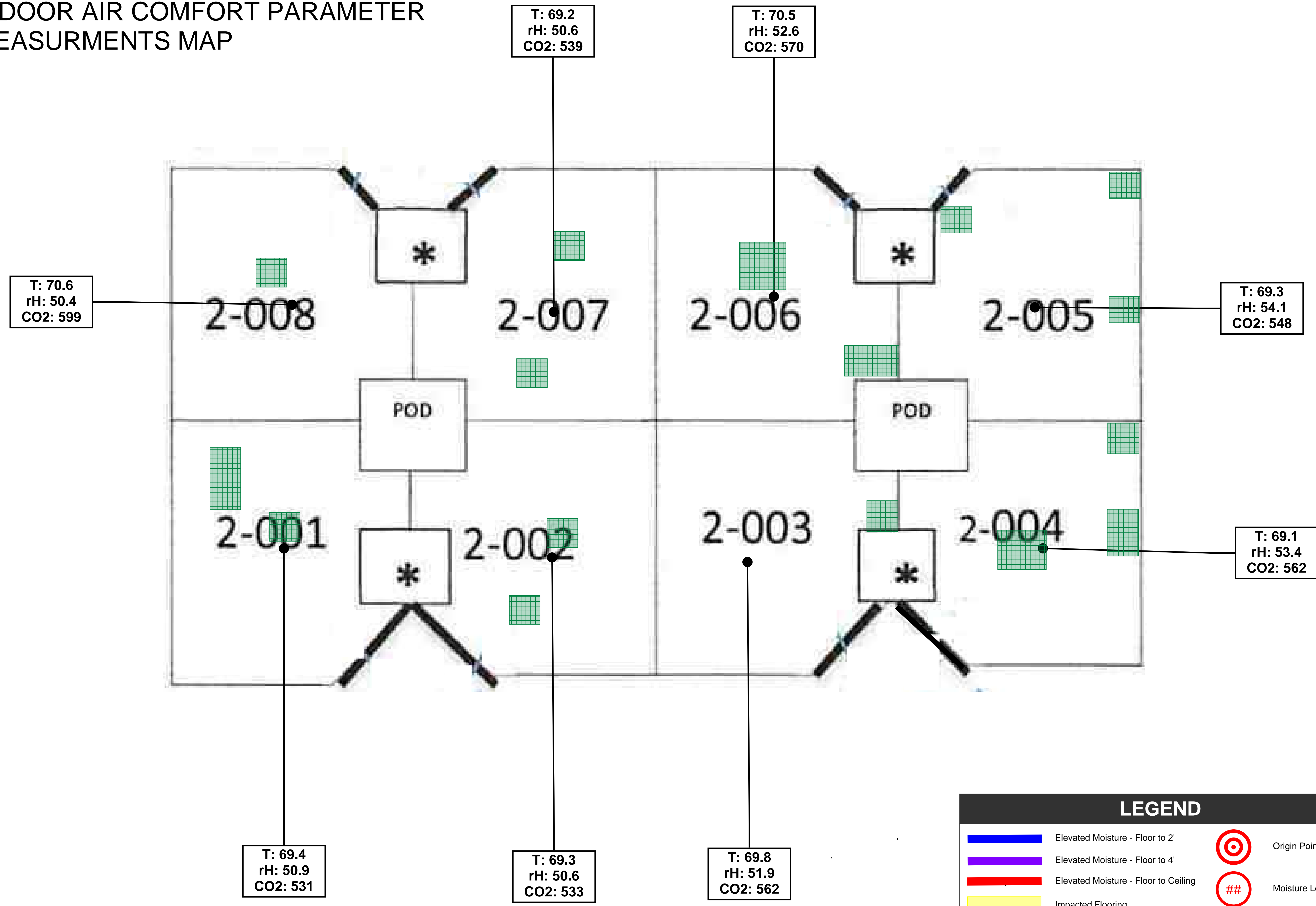
LEGEND			
	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

BUILDING 2 INDOOR AIR COMFORT PARAMETER MEASUREMENTS MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
- Field verification required for all measurements.

REVISIONS:

DATE: 11/27/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:
MM-1.1

LEGEND

	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

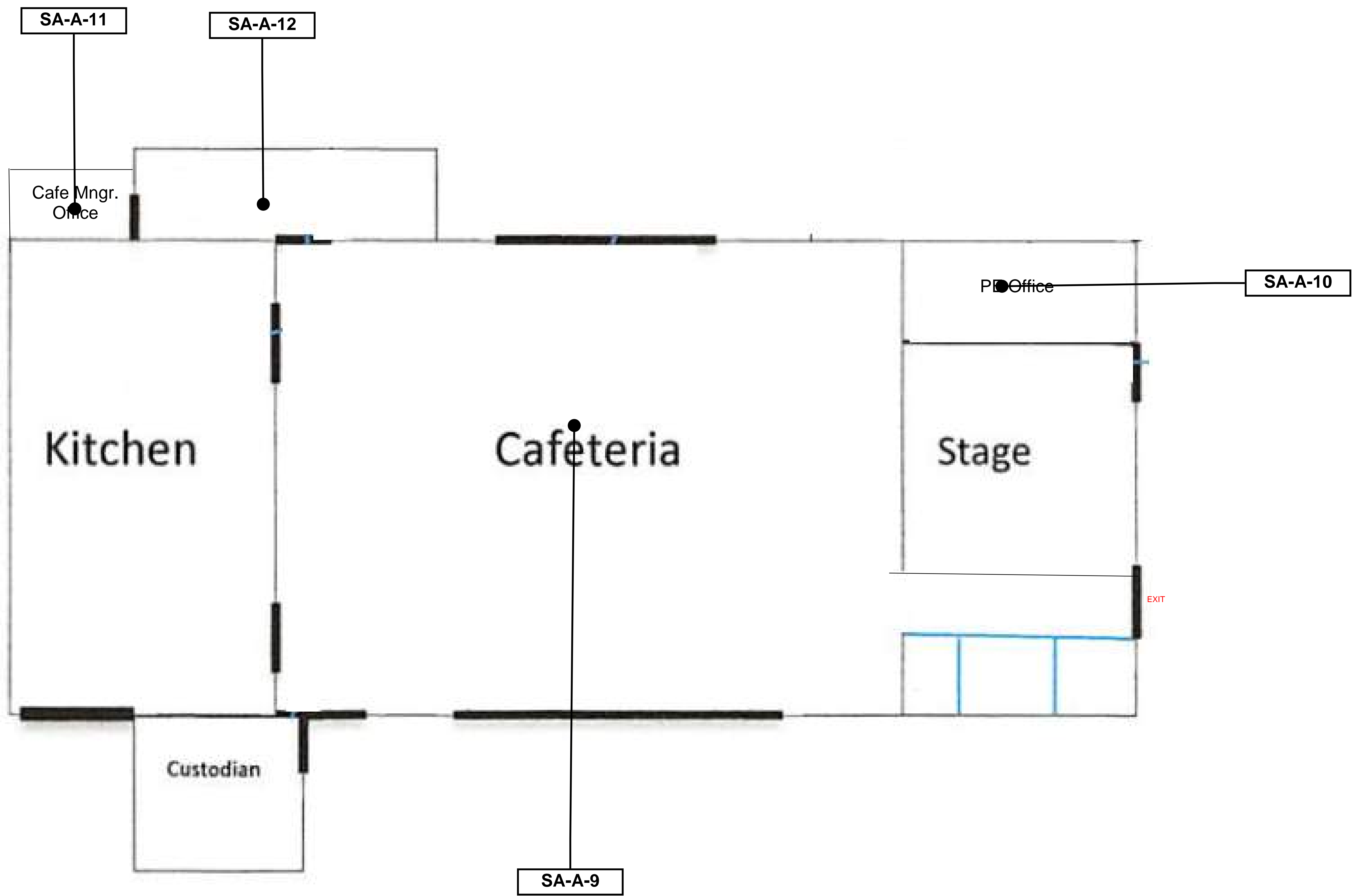
SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
BUILDING 2

BUILDING 3 AIR SAMPLE LOCATION MAP



CONSULTANTS:

Samsula Academy
 248 North Samsula Drive
 New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
 - Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
 DRAWN BY: CG
 SHEET TITLE:

DRAWING NUMBER:

AS-3.0

SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
 BUILDING 3



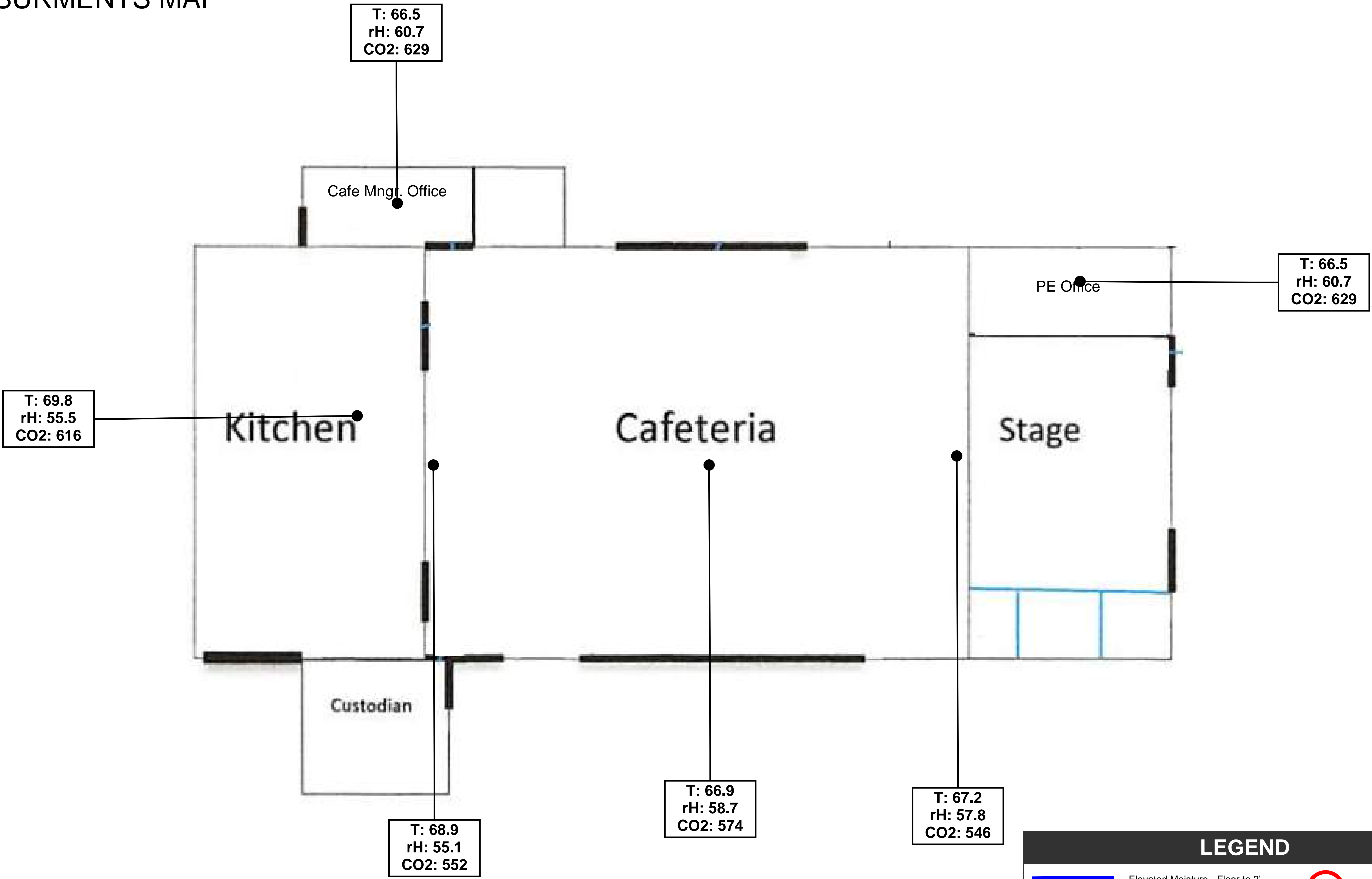
LEGEND			
	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

BUILDING 3 INDOOR AIR COMFORT PARAMETER MEASUREMENTS MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
- Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:

CP-3.0

SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
BUILDING 3



LEGEND

	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

BUILDING 3 LIMITED MOISTURE MAP



CONSULTANTS:

Samsula Academy
248 North Samsula Drive
New Smyrna Beach, Florida 32168



MOISTURE MAP

NOTES:
- Field verification required for all measurements.

REVISIONS:

DATE: 11/26/24
DRAWN BY: CG
SHEET TITLE:

DRAWING NUMBER:

MM-3.0

LEGEND

	Elevated Moisture - Floor to 2'		Origin Point / Source
	Elevated Moisture - Floor to 4'		Moisture Level
	Elevated Moisture - Floor to Ceiling		No Moisture Detected
	Impacted Flooring		Containment
	Impacted Ceiling Tile(s)		Notes
	Impacted Drywall/Plaster Ceiling		
	Damaged Casework		
	Impacted Insulation (above-ceiling)		
	Ductwork / Condensation		

SAMSULA ACADEMY - NEW SMYRNA BEACH, FLORIDA
BUILDING 3

APPENDIX C

Laboratory Analytical Results and Chain of Custody

Report for:

Mr. Chip Gruber
Environmental Management Services
510 Bahama Drive
Indian Harbour Beach, FL 32937

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3 Buildings
EML ID: 3869627

Approved by:



Regional Laboratory Director
Francina Thadigiri

Dates of Analysis:

Spore trap analysis: 12-03-2024

Service SOPs: Spore trap analysis (EB-MY-S-1038)
AIHA LAP, LLC accredited service, Lab ID #221504

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Information supplied by the client which can affect the validity of results: sample air volume.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmt'd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-1: Ext Pre			SA-A-2: Conf Room BL1		
Comments (see below)	None			None		
Lab ID-Version‡:	19159337-1			19159338-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores	2	25	110			
Basidiospores	16	25	850	12	25	640
Bipolaris/Drechslera group				1	100	13
Chaetomium						
Cladosporium	1	25	53	1	25	53
Curvularia				1	100	13
Epicoccum						
Myrothecium						
Nigrospora						
Other brown	1	100	13			
Other colorless						
Penicillium/Aspergillus types†	9	25	480			
Pithomyces	1	100	13			
Rusts						
Smuts, Periconia, Myxomycetes	1	100	13			
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	2+			2+		
Hyphal fragments/m3	< 13			27		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			1,500			720

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-3: Reception Desk BL1			SA-A-4: Center office N-S hall BL1		
Comments (see below)	None			None		
Lab ID-Version‡:	19159339-1			19159340-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	6	25	320	15	25	800
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia				1	100	13
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†	1	25	53			
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	1+			1+		
Hyphal fragments/m3	< 13			13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			370			810

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-5: Room behind stage in Media room BL1			SA-A-6: Break room BL1		
Comments (see below)	None			None		
Lab ID-Version‡:	19159341-1			19159342-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	8	25	430	8	25	430
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia				1	100	13
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†	1	25	53	2	25	110
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			480			560

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmt'd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-7: Media Center room BL1			SA-A-8: Art room BL1		
Comments (see below)	None			None		
Lab ID-Version‡:	19159343-1			19159344-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	10	25	530	6	25	320
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†	1	25	53			
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	1+			< 1+		
Hyphal fragments/m3	13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			590			320

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-9: Cafeteria BL2			SA-A-10: PE office BL2		
Comments (see below)	None			None		
Lab ID-Version‡:	19159345-1			19159346-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	4	25	210	1	25	53
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum				1	100	13
Myrothecium						
Nigrospora						
Other brown				1	100	13
Other colorless						
Penicillium/Aspergillus types†	2	25	110	1	25	53
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	1+			1+		
Hyphal fragments/m3	13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			320			150

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-11: Cafeteria Manager office BL2			SA-A-12: SW classroom Spod BL3		
Comments (see below)	None			None		
Lab ID-Version‡:	19159347-1			19159348-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	3	25	160	2	25	110
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†	1	25	53	1	25	53
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	1+			1+		
Hyphal fragments/m3	13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			210			160

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-13: NE classroom Spod BL3			SA-A-14: NW classroom Npod BL3		
Comments (see below)	None			None		
Lab ID-Version‡:	19159349-1			19159350-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	2	25	110	1	25	53
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	< 1+			< 1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			110			53

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-15: SE classroom Npod BL3			SA-A-16: SW room W of kitchen BL2		
Comments (see below)	None			A		
Lab ID-Version‡:	19159351-1			19159352-1		
Analysis Date:	12/03/2024			12/03/2024		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores				2	25	110
Basidiospores	4	25	210	9	25	480
Bipolaris/Drechslera group						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Myrothecium						
Nigrospora						
Other brown						
Other colorless						
Penicillium/Aspergillus types†				14/15	25/100	950
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	< 1+			2+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			210			1,500

Comments:A) 15 of the raw count *Penicillium/Aspergillus* type spores were present as a single clump.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmt'd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	SA-A-17: Ext Post		
Comments (see below)	None		
Lab ID-Version‡:	19159353-1		
Analysis Date:	12/03/2024		
	raw ct.	% read	spores/m3
Ascospores			
Basidiospores	19	25	1,000
Bipolaris/Drechslera group			
Chaetomium			
Cladosporium			
Curvularia	1	100	13
Epicoccum	1	100	13
Myrothecium			
Nigrospora			
Other brown			
Other colorless			
Penicillium/Aspergillus types†			
Pithomyces			
Rusts			
Smuts, Periconia, Myxomycetes			
Spegazzinia	1	100	13
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Zygomycetes			
Background debris (1-4+)	2+		
Hyphal fragments/m3	27		
Pollen/m3	13		
Skin cells (1-4+)	< 1+		
Sample volume (liters)	75		
§ TOTAL SPORES/m3			1,100

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

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§ Total Spores/m³ has been rounded to two significant figures to reflect analytical precision.

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Air; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

PROJECT ANALYST AND SIGNATORY REPORT

Project Analyst



Analyst: Abbey Arnold

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by AIHA LAP, LLC, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6633

Weather	Fog	Rain	Snow	Wind	Clear
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Light	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTACT INFORMATION

Company: Environmental Management Services Address: 510 Bahama Dr. Indian Harbour Beach, FL 32937
 Contact: Chip Gruber Special Instructions:
 Phone: 302-593-1930 emslinc@gmail.com

PROJECT INFORMATION

Project ID: 24235.00-Resub, Edge-Air
 Project Description: Lmb THQ - 3 Buildings
 Project Zip Code: Sampling Date & Time: 11/26/24
 PO Number: Sampled By: Chip Gruber

TURN AROUND TIME CODES (TAT)

STD - Standard (DEFAULT)
 ND - Next Business Day
 SD - Same Business Day Rush
 WH - Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
SA-A-1	EXTRIE	ST	STD	75L	11/26/24 9:20am
SA-A-2	Conf Room B1A	ST	STD	75L	11/26/24 9:52am
SA-A-3	Reception Desk B1A	ST	STD	75L	11/26/24 9:52am
SA-A-4	Center office US Hall B1A	ST	STD	75L	11/26/24 10:28am
SA-A-5	Room behind stage in Media room B1A	ST	STD	75L	11/26/24 10:28am
SA-A-6	Break room B1A	ST	STD	75L	11/26/24 10:09am
SA-A-7	Media Center room B1A	ST	STD	75L	11/26/24 10:25am
SA-A-8	Art room B1A	ST	STD	75L	11/26/24 10:44am
SA-A-9	Cafeteria B1A	ST	STD	75L	11/26/24 11:25am
SA-A-10	PE office B1A	ST	STD	75L	11/26/24 11:25am
SA-A-11	Cafeteria Manager office B1A	ST	STD	75L	11/26/24 11:42am

FUNG



REQU (Ch)

Sample ID	Non-Culturable			Culturable										
	Spore Trap	Tape Swab	Bulk	BioCassette™, Anderson, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates	1-Media Surface Fungi (Genus ID + Asp. speciation)	1-Media Surface Fungi - Full spec. Pen/Clad genus only	1-Media Surface Fungi - Full speciation	2-Media Surface Fungi (Genus ID + Asp. speciation)	2-Media Surface Fungi - Full spec. Pen/Clad genus only	2-Media Surface Fungi - Full speciation	3-Media Surface Fungi (Genus ID + Asp. speciation)	3-Media Surface Fungi - Full spec. Pen/Clad genus only	3-Media Surface Fungi - Full speciation	
SA-A-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA-A-11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAMPLE TYPE CODES

BC - BioCassette™ CP - Contact Plate T - Tape D - Dust
 AIS - Anderson ST - Spore Trap, Zelon, SW - Swab W - Water
 SAS - Surface Air Sampler Allergen, Burkard ... B - Bulk SO - Soil
 O - Other:

RELINQUISHED BY

[Signature]

DATE & TIME

11/21/24 9:30

RECEIVED BY

AA

DATE & TIME

11/21/24 9:22M

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SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Light	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CONTACT INFORMATION

Company: Environmental Management Services
 Address: 510 Bahama Dr. Indian Harbour Beach, FL 32937
 Contact: Chip Gruber
 Special Instructions:
 Phone: 302-593-1930 emslinc@gmail.com

PROJECT INFORMATION

Project ID: 2025.00 - Reading Edge - Air
 Project Description: LIND TRD - 3 Buildings
 Project Zip Code: 1126124
 Sampling Date & Time: 11/26/24
 PO Number:
 Sampled By: Chip Gruber

TURN AROUND TIME CODES (TAT)

STD - Standard (DEFAULT)
 ND - Next Business Day
 SD - Same Business Day Rush
 WH - Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
SA-A-12	SW classroom Spod B/L3	ST	STD	75L	11/26/24 3:36
SA-A-13	NE classroom Spod B/L3	ST	STD	75L	11/26/24 3:36
SA-A-14	NE classroom Spod B/L3	ST	STD	75L	11/26/24 3:33
SA-A-15	SE classroom Spod B/L3	ST	STD	75L	11/26/24 3:33
SA-A-16	SW room 100 kitchen B/L3	ST	STD	75L	11/26/24 4:21
SA-A-17	Ext Post	ST	STD	75L	11/26/24 4:55

SAMPLE TYPE CODES

BC - BioCassette™	CP - Contact Plate	T - Tape	D - Dust
AIS - Anderson	ST - Spore Trap, Zefon, Allergenco, Burkard ...	SW - Swab	W - Water
SAS - Surface Air Sampler		B - Bulk	SO - Soil
O - Other:			

RELINQUISHED BY

Chip Gruber

DATE & TIME

11/27/24 9:30

RECEIVED BY

AA

DATE & TIME

12/16/24 9:25A

FUNG

REQU

003869627



Non-Culturable
 Spore Trap
 Tape Swab Bulk
 BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates
 Other

Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Dust Characterization	Air Fungi (Genus ID + Asp. speciation)	Air Fungi - Full speciation Pen. & Clad. genus only	Air Fungi - Full speciation	1-Media Surface Fungi (Genus ID + Asp. speciation)	1-Media Surface Fungi - Full spec. Pen/Clad genus only	1-Media Surface Fungi - Full speciation	2-Media Surface Fungi (Genus ID + Asp. speciation)	2-Media Surface Fungi - Full spec. Pen/Clad genus only	2-Media Surface Fungi - Full speciation	3-Media Surface Fungi (Genus ID + Asp. speciation)	3-Media Surface Fungi - Full spec. Pen/Clad genus only	3-Media Surface Fungi - Full speciation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at

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Fungal COC, Doc # EM429-F-6605, Rev 9, Revised 8/15/19, Page 2 of 2

Report for:

Mr. Chip Gruber
Environmental Management Services
510 Bahama Drive
Indian Harbour Beach, FL 32937

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 24235.00 - Reading Edge - Swabs; Lmtd IAQ - 3 Buildings
EML ID: 3869634

Approved by:



Regional Laboratory Director
Francina Thadigiri

Dates of Analysis:

Direct microscopic exam (Qualitative): 12-03-2024

Service SOPs: Direct microscopic exam (Qualitative) (EM-MY-S-1039)
AIHA LAP, LLC accredited service, Lab ID #221504

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: Environmental Management Services
 C/O: Mr. Chip Gruber
 Re: 24235.00 - Reading Edge - Swabs; Lmtd IAQ - 3
 Buildings

Date of Sampling: 11-26-2024
 Date of Receipt: 12-02-2024
 Date of Report: 12-03-2024

DIRECT MICROSCOPIC EXAMINATION REPORT

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 19160494-1, Analysis Date: 12/03/2024: Swab sample SA-SW-1: diffusers BL1 Admin side				
Moderate	Variety	4+ <i>Cladosporium</i> species (spores, hyphae, conidiophores) 1+ <i>Penicillium/Aspergillus</i> group (spores, hyphae)	None	Mold growth
Lab ID-Version: 19160495-1, Analysis Date: 12/03/2024: Swab sample SA-SW-2: horiz. surfaces BL1 Admin side				
Heavy	Wide variety	< 1+ Brown hyphae with no associated spores, ID unknown. (hyphae)	dark amorphous particles detected, not biological in appearance.	Minimal mold growth
Lab ID-Version: 19160496-1, Analysis Date: 12/03/2024: Swab sample SA-SW-3: SE corner mediarm at damage BL1				
Heavy	Variety	4+ <i>Penicillium/Aspergillus</i> group (spores, hyphae)	dark amorphous particles detected, not biological in appearance.	Mold growth
Lab ID-Version: 19160497-1, Analysis Date: 12/03/2024: Swab sample SA-SW-4: diffusers BL1 conf room				
Moderate	Variety	3+ <i>Cladosporium</i> species (spores, hyphae, conidiophores)	dark amorphous particles detected, not biological in appearance.	Mold growth
Lab ID-Version: 19160498-1, Analysis Date: 12/03/2024: Swab sample SA-SW-5: diffusers & ceiling in office W of mediarm BL1				
Moderate	Few	4+ <i>Cladosporium</i> species (spores, hyphae, conidiophores)	None	Mold growth
Lab ID-Version: 19160499-1, Analysis Date: 12/03/2024: Swab sample SA-SW-6: diffusers Art room BL1				
Heavy	Wide variety	< 1+ <i>Cladosporium</i> species (spores, hyphae)	None	Minimal mold growth
Lab ID-Version: 19160500-1, Analysis Date: 12/03/2024: Swab sample SA-SW-7: Horiz & Vert surfaces Artroom BL1				
Very Heavy	Wide variety	1+ <i>Curvularia</i> species (spores, hyphae)	None	Mold growth
Lab ID-Version: 19160501-1, Analysis Date: 12/03/2024: Swab sample SA-SW-8: Spod random classroom diffusers BL3				
Heavy	Wide variety	3+ <i>Cladosporium</i> species (spores, hyphae) 1+ <i>Curvularia</i> species (spores, hyphae)	dark amorphous particles detected, not biological in appearance.	Mold growth

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 19160502-1, Analysis Date: 12/03/2024: Swab sample SA-SW-9: Npod random classroom diffusers BL3				
Heavy	Variety	4+ <i>Cladosporium</i> species (spores, hyphae, conidiophores)	dark amorphous particles detected, not biological in appearance.	Mold growth

* Indicative of normal conditions, i.e. seen on surfaces everywhere. Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen mirrors that usually seen outdoors.

† Quantities of molds seen growing are listed in the MOLD GROWTH column and are graded <1+ to 4+, with 4+ denoting the highest numbers.

†† Some comments may refer to the following: Most surfaces collect a mix of spores which are normally present in the outdoor environment. At times it is possible to note a skewing of the distribution of spore types, and also to note "marker" genera which may indicate indoor mold growth. Marker genera are those spore types which are present normally in very small numbers, but which multiply indoors when conditions are favorable for growth.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
The limit of detection is < 1+ when mold growth is detected.

For additional information necessary for the interpretation of the results, all readers are advised to refer to the document "Direct Exam Details Page" which is available on our website at:
www.emlab.com/services/mold-testing/direct-microscopic-exam-qualitative/

Eurofins EPK Built Environment Testing, LLC
6215 Regency Parkway, Suite 900, Norcross, GA 30071
(866) 871-1984 www.eurofinsus.com/Built

Client: Environmental Management Services
C/O: Mr. Chip Gruber
Re: 24235.00 - Reading Edge - Swabs; Lmtd IAQ - 3
Buildings

Date of Sampling: 11-26-2024
Date of Receipt: 12-02-2024
Date of Report: 12-03-2024

DIRECT MICROSCOPIC EXAMINATION REPORT

PROJECT ANALYST AND SIGNATORY REPORT

Project Analyst



Analyst: Abbey Arnold

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by AIHA LAP, LLC, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

CHAIN OF CUSTODY
www.EMLabPK.com



New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * (866) 871-1984
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * (800) 651-4802
SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Light	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CONTACT INFORMATION

Company: Environmental Management Services Address: 510 Bahama Dr. Indian Harbour Beach, FL 32937
Contact: Chip Gruber Special Instructions:
Phone: 302-593-1930 emslinc@gmail.com

PROJECT INFORMATION

Project ID: 2435.00 - Redwing Edge - Swabs
Project Description: LNH IAG - 3 BioDivers
Project Zip Code: 112624
Project Date & Time: 11/26/24
Sampled By: Chip Gruber

TURN AROUND TIME CODES (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
SA-SW-1	Hallway BL 1 Admin side	SW	STD	Compos/10	11/26/24 11:30am
SA-SW-2	Koritz Surface BL 2 Admin side	SW	STD	Compos/10	11/26/24 12:05pm
SA-SW-3	EC corner medication storage BL 2	SW	STD	Compos/10	11/26/24 12:51pm
SA-SW-4	Hallway BL 2 conf room	SW	STD	Compos/10	11/26/24 13:55pm
SA-SW-5	Hallway ceiling office W/doorway BL 2	SW	STD	Compos/10	11/26/24 1:08pm
SA-SW-6	Hallway Att room BL 2	SW	STD	Compos/10	11/26/24 3:37pm
SA-SW-7	Hallway surface photo room BL 2	SW	STD	Compos/10	11/26/24 3:47pm
SA-SW-8	Spod random classroom & hallway BL 3	SW	STD	Compos/10	11/26/24 4:58pm
SA-SW-9	Wpod random classroom & hallway BL 3	SW	STD	Compos/10	11/26/24 5:07pm

SAMPLE TYPE CODES

BC - BioCassette™	CP - Contact Plate	T - Tape	D - Dust
AIS - Anderson	ST - Spore Trap, Zefon, Allergenco, Burkard ...	SW - Swab	W - Water
SAS - Surface Air Sampler		B - Bulk	SO - Soil
O - Other			

RELINQUISHED BY

DATE & TIME

RECEIVED BY

DATE & TIME

Relinquished by: *[Signature]* Date & Time: 11/27/24 09:20am
Received by: *[Signature]* Date & Time: 12/12/24 9:20AM

FUNGUS

REQU (C)

003869634



Non-Culturable
Tape Swab
Bulk
BioCassette™, Anderson, Zefon, Water, Bulk, Dust, Soil, Contact Plates
Other

	Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Dust Characterization	Air Fungi (Genus ID + Asp. speciation)	Air Fungi - Full speciation Pen. & Clad. genus only	Air Fungi - Full speciation	1-Media Surface Fungi (Genus ID + Asp. speciation)	1-Media Surface Fungi - Full spec. Pen/Clad genus only	1-Media Surface Fungi - Full speciation	2-Media Surface Fungi (Genus ID + Asp. speciation)	2-Media Surface Fungi - Full spec. Pen/Clad genus only	2-Media Surface Fungi - Full speciation	3-Media Surface Fungi (Genus ID + Asp. speciation)	3-Media Surface Fungi - Full spec. Pen/Clad genus only	3-Media Surface Fungi - Full speciation
Spore Trap	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tape Swab	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bulk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Fungal COC, Doc. # BA-CS-F-5656, Rev. 5, Revised 8/15/19, Page 1 of 1

APPENDIX D:

Certificates of Calibration

Certificate of Calibration

- Buck™ BioAire Pump Calibration Rotameter
 Buck™ BioSlide Pump Calibration Rotameter

Serial number: R15989

Date Calibrated: 8-13-24

Calibration Due Date: 8-13-25

Flow Calibration

This is to certify that the rotameter listed above has been calibrated using a Buck Primary calibrator listed below which is calibrated according to A.P. Buck, Inc. calibration procedure APB-1, Ver. 6.2 and is traceable to the National Institute of Standards & Technology (N.I.S.T). A.P. Buck guarantees the accuracy of the rotameter to be within $\pm 5\%$ of the actual flow rate.

AMBIENT CONDITIONS: Temperature $74 \pm 3^\circ$ F Relative Humidity $50 \pm 10\%$

Description	MFR.	Model	Serial #
Primary Calibrator	A.P. Buck Inc.	M30B	<input type="checkbox"/> A40020 <input checked="" type="checkbox"/> A40021

QA Approval By: Thomas J. Cannon

Information contained in this document should not be reproduced in any form without the written consent of A.P. Buck, Inc. It is for reference only and cannot be used as a form of endorsement by any private or governmental regulatory body.

A.P. BUCK, INC.
7101 Presidents Drive, Suite 110
Orlando, FL 32809
Phone: 407-851-8602
Fax: 407-851-8910





CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITIONS			MODEL	7545
TEMPERATURE	72.7 (22.6)	°F (°C)	SERIAL NUMBER	T75451847004
RELATIVE HUMIDITY	50	%RH		
BAROMETRIC PRESSURE	29.13 (986.5)	inHg (hPa)		

<input type="checkbox"/> AS LEFT	<input type="checkbox"/> IN TOLERANCE
<input checked="" type="checkbox"/> AS FOUND	<input checked="" type="checkbox"/> OUT OF TOLERANCE

- CALIBRATION VERIFICATION RESULTS -

GAS CO2 AS FOUND				SYSTEM G-101				Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	0	0	0-50	4	3000	2942	2910-3090	
2	500	467	450-550	5	5037	4966	4886-5188	
3	1000	965	950-1050					

GAS CO AS FOUND				SYSTEM G-101				Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	35	32	32-38	2	100	* 89.8	97-103	

TEMPERATURE AS FOUND				SYSTEM T-101				Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	32.0 (0.0)	32.8 (0.4)	31.0-33.0 (-0.5-0.6)	2	139.87 (59.93)	* 141.73 (60.96)	138.87-140.87 (59.37-60.48)	

HUMIDITY AS FOUND				SYSTEM H-102				Unit: %RH
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	10.0	11.6	7.0-13.0	4	70.0	71.8	67.0-73.0	
2	30.0	32.7	27.0-33.0	5	90.0	90.6	87.0-93.0	
3	50.0	52.6	47.0-53.0					

*Indicates Out-of-Tolerance Condition

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2015.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
5000 CO2	HP752197	01-25-23	01-25-30	200 CO	211703179	04-04-24	04-09-32
N2	HP-T-081827	07-24-24	07-24-31	Air	HA-274	05-21-24	05-21-31
2000 C4H8	160060	09-13-23	09-13-26	100 C4H8	222805144	02-08-23	02-08-27
Flow	E005595	06-03-24	06-30-25	Flow	E005600	06-04-24	06-30-25
Flow	E003502	10-02-23	10-31-24	Flow	E011541	06-28-24	12-31-24
Temperature	E010657	03-11-24	03-31-25	Temperature	E010658	03-11-24	03-31-25
Temperature	E010656	03-11-24	03-31-25	Humidity	E011511	06-26-24	11-30-24

Haylay

VERIFIED

September 9, 2024

DATE

Doc. ID: CERT_GEN_WCC



CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

ENVIRONMENT CONDITIONS			MODEL	7545
TEMPERATURE	72.9 (22.7)	°F (°C)	SERIAL NUMBER	T75451847004
RELATIVE HUMIDITY	48	%RH		
BAROMETRIC PRESSURE	29.05 (983.7)	inHg (hPa)		

- | | |
|---|--|
| <input checked="" type="checkbox"/> AS LEFT | <input checked="" type="checkbox"/> IN TOLERANCE |
| <input type="checkbox"/> AS FOUND | <input type="checkbox"/> OUT OF TOLERANCE |

- CALIBRATION VERIFICATION RESULTS -

HUMIDITY VERIFICATION				SYSTEM H-102				Unit: %RH
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	10.0	11.6	7.0~13.0	4	70.0	71.8	67.0~73.0	
2	30.0	32.7	27.0~33.0	5	90.0	90.6	87.0~93.0	
3	50.0	52.6	47.0~53.0					

TEMPERATURE VERIFICATION				SYSTEM T-101				Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	32.0 (0.0)	31.6 (-0.2)	31.0~33.0 (-0.5~0.6)	2	139.9 (59.9)	140.3 (60.2)	138.9~140.9 (59.4~60.5)	

CO2 GAS VERIFICATION				SYSTEM G-101				Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	0	0	0~50	4	3000	2994	2910~3090	
2	500	495	450~550	5	5037	5021	4886~5188	
3	1000	1008	950~1050					

CO GAS VERIFICATION				SYSTEM G-101				Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	35	36	32~38	2	100	99	97~103	

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2015.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Humidity	E011511	06-26-24	11-30-24	Temperature	E010657	03-11-24	03-31-25
Temperature	E010658	03-11-24	03-31-25	Temperature	E010656	03-11-24	03-31-25
5000 CO2	HP752197	01-25-23	01-25-30	200 CO	211703179	04-04-24	04-09-32
N2	HP-T-081827	07-24-24	07-24-31	Air	HA-274	05-21-24	05-21-31
2000 C4H8	160060	09-13-23	09-13-26	100 C4H8	222805144	02-08-23	02-08-27
Flow	E005595	06-03-24	06-30-25	Flow	E005600	06-04-24	06-30-25
Flow	E003502	10-02-23	10-31-24	Flow	E011541	06-28-24	12-31-24

Kevin Vue

CALIBRATED

September 9, 2024

DATE



CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITIONS			MODEL	7525
TEMPERATURE	72.5 (22.5)	°F (°C)	SERIAL NUMBER	T75250906003
RELATIVE HUMIDITY	50	%RH		
BAROMETRIC PRESSURE	29.13 (986.5)	inHg (hPa)		

- AS LEFT IN TOLERANCE
 AS FOUND OUT OF TOLERANCE

- CALIBRATION VERIFICATION RESULTS -

TEMPERATURE VERIFICATION				SYSTEM T-101			Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.3 (0.2)	31.0-33.0 (-0.5-0.6)	2	139.9 (59.9)	139.9 (60.0)	138.9-140.9 (59.4-60.5)

HUMIDITY VERIFICATION				SYSTEM H-120			Unit: %RH
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.1	7.0-13.0	4	70.0	70.8	67.0-73.0
2	30.0	31.6	27.0-33.0	5	90.0	89.3	87.0-93.0
3	50.0	51.6	47.0-53.0				

CO2 GAS VERIFICATION				SYSTEM G-101			Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0	0	0-50	4	3000	3000	2910-3090
2	500	496	450-550	5	5005	4995	4855-5155
3	1000	1001	950-1050				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2015.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E010657	03-11-24	03-31-25	Temperature	E010658	03-11-24	03-31-25
Temperature	E010656	03-11-24	03-31-25	Humidity	E002008	08-16-24	02-28-25
5000 CO2	17B169033	06-25-24	06-25-31	200 CO	211703182	04-04-24	04-09-32
N2	3071133	06-13-24	06-13-31	Air	HA-274	05-21-24	05-21-31
2000 C4H8	159989	03-21-23	03-22-31	100 C4H8	222805144	02-08-23	02-08-27
Flow	E005595	06-03-24	06-30-25	Flow	E005600	06-04-24	06-30-25
Flow	E003502	10-02-23	10-31-24	Flow	E011541	06-28-24	12-31-24

Kevin Vue

CALIBRATED

August 23, 2024

DATE

Doc. ID: CERT_DEFAULT_GLOBAL_CHECK



CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITIONS			MODEL	7525
TEMPERATURE	72.7 (22.6)	°F (°C)	SERIAL NUMBER	T75250906003
RELATIVE HUMIDITY	49	%RH		
BAROMETRIC PRESSURE	29.12 (986.1)	inHg (hPa)		

- | | |
|--|--|
| <input type="checkbox"/> AS LEFT | <input checked="" type="checkbox"/> IN TOLERANCE |
| <input checked="" type="checkbox"/> AS FOUND | <input type="checkbox"/> OUT OF TOLERANCE |

- CALIBRATION VERIFICATION RESULTS -

GAS CO ₂ AS FOUND				SYSTEM G-101				Unit: ppm
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	0	0	0-50	4	3000	2992	2910-3090	
2	500	470	450-550	5	5005	4990	4855-5155	
3	1000	997	950-1050					

TEMPERATURE AS FOUND				SYSTEM T-101				Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	32.0 (0.0)	32.3 (0.2)	31.0-33.0 (-0.5-0.6)	2	139.9 (59.9)	139.9 (60.0)	138.9-140.9 (59.4-60.5)	

HUMIDITY AS FOUND				SYSTEM H-120				Unit: %RH
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE	
1	10.0	11.1	7.0-13.0	4	70.0	70.8	67.0-73.0	
2	30.0	31.6	27.0-33.0	5	90.0	89.3	87.0-93.0	
3	50.0	51.6	47.0-53.0					

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2015.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
5000 CO ₂	17B169033	06-25-24	06-25-31	200 CO	211703182	04-04-24	04-09-32
N ₂	3071133	06-13-24	06-13-31	Air	HA-274	05-21-24	05-21-31
2000 C ₄ H ₈	159989	03-21-23	03-22-31	100 C ₄ H ₈	222805144	02-08-23	02-08-27
Flow	E005595	06-03-24	06-30-25	Flow	E005600	06-04-24	06-30-25
Flow	E003502	10-02-23	10-31-24	Flow	E011541	06-28-24	12-31-24
Temperature	E010657	03-11-24	03-31-25	Temperature	E010658	03-11-24	03-31-25
Temperature	E010656	03-11-24	03-31-25	Humidity	E002008	08-16-24	02-28-25

Chernova
August 22, 2024

VERIFIED DATE

Doc. ID: CERT_DEFAULT_GLOBAL_CHECK

APPENDIX D:

Certifications and Licensure



Ron DeSantis, Governor

Melanie S. Griffin, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

MOLD-RELATED SERVICES LICENSING PROGRAM

THE MOLD ASSESSOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 468, FLORIDA STATUTES

GRUBER, GLENN W

510 BAHAMA DR.
INDIAN HARBOUR BEACH FL 32937

LICENSE NUMBER: MRSA2853

EXPIRATION DATE: JULY 31, 2026

Always verify licenses online at [MyFloridaLicense.com](https://www.MyFloridaLicense.com)

ISSUED: 06/22/2024

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The Board for Global EHS Credentialing® (BGC®)

through its vested authority, hereby confirms that

Glenn W. Gruber

has met all requirements of education, experience, and examination set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for initial certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 12093 CP
Award Date: June 26, 2020
Expiration Date: December 1, 2025

Cynthia Hanco, CIH
Chair of the Board of Directors

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



Board of Certified Safety Professionals

Upon the recommendation of the
Board of Certified Safety Professionals,
by virtue of the authority vested in it,
has conferred on

Glenn W Gruber

the credential of

Certified Safety Professional

and has granted the title as evidence of meeting the qualifications and passing
the required examination so long as this credential is not suspended or
revoked and is renewed annually and meets all recertification requirements.



March 21, 2014

DATE ISSUED

24804

CERTIFICATION NUMBER

Lon H. Ferguson

BOARD PRESIDENT SIGNATURE

Teresa M. Sunbeaugh

BOARD SECRETARY SIGNATURE