

LIMITED ASBESTOS ROOF SURVEY REPORT

of

**ORLANDO PUBLIC LIBRARY – SELECT AREAS
101 East Central Boulevard
Orlando, Orange County, Florida**

Prepared for

**ARCHITECTURAL TESTING, INC.
1748 33rd Street
Orlando, Florida 32839**

Prepared by

**PROFESSIONAL SERVICE INDUSTRIES, INC.
1748 33rd Street
Orlando, Florida 32839**

August 30, 2022

PSI Project No. 06635953



A handwritten signature in blue ink, appearing to read "John H. Clary".

John H. Clary, CIE
EPA Accredited Asbestos and Lead
Inspector

A handwritten signature in blue ink, appearing to read "Jeremy Jernigan".

Jeremy Jernigan, CIH, CSP, CHMM
Florida Licensed Asbestos Consultant
License #AX73

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1.0 PROJECT SUMMARY

1.1 GENERAL INFORMATION

Professional Service Industries, Inc. (PSI), an Intertek company, was retained by Architectural Testing, Inc. (ATI) to conduct a limited asbestos roof survey for suspect asbestos containing materials (ACMs) at select field roof areas of the Orlando Public Library located at 101 East Central Boulevard in Orlando, Orange County, Florida. As reported, ATI has been contracted to perform a roofing moisture survey and requested PSI collect bulk samples of the materials that will be surveyed. The approximate locations to be sampled were provided by KMF Architects via a marked roof drawing. It should be noted that KMF indicated that the selected areas may contain the original roof below the re-roof and had the potential to contain asbestos fibers.

The limited asbestos roof survey was conducted to assist the client in determining if the field areas contained ACMs, and is not compliant with requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), established by the U.S. Environmental Protection Agency (EPA) in 40 Code of Federal Regulations (CFR), Part 61, Final Rule.

The survey was conducted on August 18, 2022 by Mr. John Clary and Mr. Andrew Smith, who were responsible for sample collection and testing for this project. Access to the areas was provided by Mr. Sean Bison of Orange County Public Libraries (OCPL).

This report has been prepared for ATI and may be relied upon by ATI, as well as its employees, officers, and agents.

1.2 ASBESTOS NESHAP RENOVATION SURVEY SUMMARY

The EPA, OSHA, and Chapter 469 Florida Statutes consider a homogeneous material to be asbestos-containing if at least one sample of the homogeneous material contains greater than one percent (>1%) asbestos when analyzed by Polarized Light Microscopy (PLM). **Asbestos was not identified in the eight (8) roof core samples collected.**

This summary does not contain all the information presented in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.



2.0 INTRODUCTION

The survey was conducted to determine the absence or presence of asbestos in the materials that will be impacted during the upcoming moisture survey activities.

2.1 SCOPE OF WORK

The following scope of work was performed by PSI:

- Preliminary walk-through and inspection of the accessible areas to locate and document suspect areas and materials for sampling.
- Development and implementation of a sampling scheme for suspect ACM identified, which incorporated the locations selected by the client.
- Performance of quality-assured analysis of the bulk samples at PSI's Pittsburgh, Pennsylvania laboratory.
- Preparation and submission of this report, which includes:
 - a. Inspection Methodology;
 - b. Table of the sampled homogeneous areas, classification, location, condition and percent of asbestos content;
 - c. Conclusions and Recommendations;
 - d. Asbestos sample analysis results (Appendix A);
 - e. representative photographs (Appendix B);
 - f. Staff and Laboratory Certifications (Appendix C).

2.2 AUTHORIZATION

This report was prepared in purchase order #154077 dated August 5, 2022 in reference to PSI Proposal No. 0663-375850 dated June 10, 2022 and was authorized by Ms. Teri Phares of ATI. That contractual relationship included an exchange of information about the property that was unique and between PSI and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between PSI and its client, reliance, or any use of this report by anyone other than the client, for whom it was prepared, is prohibited and therefore not foreseeable to PSI.

2.3 WARRANTY

The field and laboratory results reported herein are considered sufficient in detail and scope to determine the presence of accessible and/or exposed suspect materials at the project site. PSI warrants that the findings contained herein have been prepared in accordance with accepted practices as applied by similar professionals in the community. Subsequent changes in the state of the art or in applicable regulations cannot be anticipated and have not been addressed in this report.

The survey and analytical methods employed by PSI have been used to provide ATI with information regarding the presence of accessible and/or exposed suspect ACMs existing in the project area at the time of inspection. Test results are valid only for the materials tested. There is a possibility that conditions may exist which could not be identified within the scope of the study or which were not apparent during the site visit, as the inspection covered only those areas that were exposed and/or physically accessible to the inspector. The study is also limited to the information made available by ATI and KMF at the time it was conducted.



3.0 METHODOLOGY

3.1 ASBESTOS SURVEY METHODOLOGY

3.1.1 INSPECTION PROCEDURES

PSI personnel, Mr. John Clary (Asbestos Inspector Certificate No. ON-4644-11612-032022) and Mr. Andrew Smith (Asbestos Inspector Certificate No. AA0930211103) performed the asbestos survey. An initial walkthrough of the project area was conducted to determine the presence of suspect materials, which were accessible and/or exposed. Materials similar in general appearance were grouped into homogeneous sampling areas. All materials were touched to determine their friability. If the dry material could be broken or crumbled by hand pressure, it was considered to be friable.

3.1.2 SAMPLING PROCEDURES

Following the walkthrough, the inspectors formulated a sampling scheme. Samples were collected from materials identified as suspect ACM within the project scope. Survey and sampling protocols were conducted in accordance with EPA specifications and recommendations, including regulations adopted pursuant to the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763.107 – 733.109, 1982; 40 CFR 763.85 – 763.88, 1987). AHERA (40 CFR 763) guidelines are considered by the EPA and OSHA to be the “state of the art” for conducting asbestos inspections and assessments.

Samples of suspect materials that were anticipated to be disturbed during the upcoming moisture survey were collected, placed in sealed containers, and labeled. Samples along with chain of custody were sent to the laboratory by overnight courier.

3.1.3 ASBESTOS LABORATORY ANALYSIS

Bulk samples were analyzed by PLM with dispersion staining, as described in The Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116). This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. The method involves the use of PLM and dispersion staining to locate and identify asbestos fibers in bulk samples. As asbestos is identified, other non-asbestos fibers and particles are also noted and classified. Transmission Electron Microscopy (TEM) analyses are not required by the regulatory jurisdiction in the State of Florida.

The non-asbestiform materials are analyzed concurrently with the asbestiform components. Many non-fibrous substances can be identified under low magnification with a stereomicroscope. A stereomicroscope is used to visually estimate relative amounts of each constituent to determine their volume in proportion to the total volume of the sample. Other fibrous and non-fibrous particles are identified with the PLM during the crossed polars and dispersion staining examinations.

The U. S. National Institute of Standards and Technology (NIST) accredits PSI’s laboratory under the National Voluntary Laboratory Accreditation Program (NVLAP) for the analysis of bulk asbestos.



4.0 FINDINGS

4.1 ASBESTOS SURVEY FINDINGS

The EPA and State of Florida consider a material to be ACM if at least one (1) sample collected from the homogeneous area evidences the presence of asbestos in an amount greater than one percent (>1%).

Suspect asbestos containing building materials and/or materials assumed to contain asbestos were identified in this survey. A total of eight (8) bulk material samples were collected from one (1) homogenous material, all of which were analyzed. **Asbestos was not identified in the materials sampled.**

4.1.1 SUMMARY OF ASBESTOS CONTAINING MATERIAL

The following chart lists each material sampled, sample location, approximate quantity of suspect materials located throughout the surveyed area and percentage of asbestos fibers found in materials sampled, if any.

Sample No.	Material Description	Sampled Location	Approximate Quantity	Percent (%) Asbestos - Type
1	Field Roof Core	Roof Area 1, Central	NQ ⁽¹⁾	NAD ⁽²⁾
2	Field Roof Core	Roof Area 1F, Central	NQ	NAD
3	Field Roof Core	Roof Area 7E, Central	NQ	NAD
4	Field Roof Core	Roof Area 7A, Central	NQ	NAD
5	Field Roof Core	Roof Area 8, Central	NQ	NAD
6	Field Roof Core	Roof Area 2, Central	NQ	NAD
7	Field Roof Core	Roof Area 3, by Mechanical Room Penthouse Entrance	NQ	NAD
8	Field Roof Core	Roof Area 9A, Central	NQ	NAD

(1) NQ – Not quantified based on no asbestos detected in the homogenous material sampled
 (2) NAD – No asbestos detected

A copy of the laboratory analytical results has been provided in Appendix A; a sample location field drawing in Appendix B, and representative photographs are located in Appendix C.



5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 ASBESTOS

Asbestos was not identified in the samples collected of roofing materials in the field areas of the facility. As such, these roofing materials may be disturbed without asbestos engineering controls in place.

During the moisture survey activities, if any additional materials such as perimeter/equipment curb flashings or roof penetrations, which were not tested or any materials are found in any of the areas that were not visible at the time of the survey, they should be assumed to be asbestos containing until laboratory testing proves otherwise. The client should ensure that additionally found suspect materials are properly tested. The client must keep a copy of the asbestos survey onsite during the moisture survey.



APPENDIX A

REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS



REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS

TESTED FOR: **PSI, Inc.**
1748 33rd Street
Orlando, FL 32839
Attn: John Clary

Project ID: **06635953**
Orlando Public Library
NESHAP Renovation
ACM Roof Survey

Date Received: **8/19/2022**

Date Completed: **8/23/2022**

Date Reported: **8/23/2022**

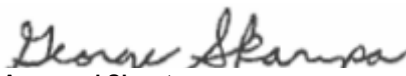
Analyst: **Dan Anderson** Work Order: **2208366** Page: **1 of 1**

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) <i>Analyst's Comment</i>	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
1	001A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Fibrous Glass
2	002A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Fibrous Glass
3	003A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Synthetic Fiber
4	004A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Synthetic Fiber
5	005A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Synthetic Fiber
6	006A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Fibrous Glass
7	007A	(1) Black, Roofing, Homogeneous (2) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED NO ASBESTOS DETECTED	10% Fibrous Glass 10% Fibrous Glass
8	008A	(1) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED	10% Fibrous Glass

Report Notes: **(PT) Point Count Results**

Quantitation is based on a visual estimation of the relative area of bulk sample components, unless otherwise noted in the "Comments" section of this report. The results are valid only for the item tested as received. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Method used: E.P.A. Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA 600/M4-82-020). Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if the material can be considered or treated as non-asbestos containing. Samples will be disposed of within 30 days unless notified in writing by the client. No part of this report may be reproduced, except in full, without written permission of the laboratory. The reporting limit is 1% by weight. NVLAP Lab Code 101350-0.

Respectfully submitted,
PSI, Inc.


Approved Signatory
George Skarupa

CHAIN OF CUSTODY RECORD



PROJECT NAME: NESHAP Renovation ACM Roof Survey – Orlando Public Library		REPORT TO: Intertek-PSI PROJECT MANAGER: John Clary		JOB TO: PSI, INC. ADDRESS: 1748 33 rd Street	
PROJECT NUMBER: 06635953		ADDRESS: 1748 33 rd Street CITY/STATE/ZIP: Orlando, FL 32839		CITY/STATE/ZIP: Orlando, FL 32839	
REQUIRED DUE DATE (MM-DD-YY): 8/23/2022		CITY/STATE/ZIP: Orlando, FL 32839		ATTENTION: John Clary	
SAMPLES TO LAB VIA: Fed-Ex		CELLULAR: 407- 467- 0405		TELEPHONE: 407-304-5560	
NUMBER OF COOLERS:		REPORT VIA: VERBAL		FAX: 407-304-5561	
RELINQUISHED BY & DATE: John Clary 8/18/2022		ACCEPTED BY & DATE: <i>[Signature]</i> 8/18/2022		LABORATORY USE ONLY	
SAMPLE CUSTODIAN		LABORATORY USE ONLY		LABORATORY USE ONLY	
SAMPLE No's.		SAMPLE DESCRIPTION		DATE/TIME	
LAB USE ONLY		LAB USE ONLY		LAB USE ONLY	
LABORATORY USE ONLY		LABORATORY USE ONLY		LABORATORY USE ONLY	
REPORT DUE DATE		REPORT DUE DATE		REPORT DUE DATE	
INORGANIC		INORGANIC		INORGANIC	
ORGANIC		ORGANIC		ORGANIC	
SECT		SECT		SECT	
ROW		ROW		ROW	
PSI PROJECT NAME		PSI PROJECT NAME		PSI PROJECT NAME	
PSI PROJECT #		PSI PROJECT #		PSI PROJECT #	
SHIPPING		SHIPPING		SHIPPING	
Y/N \$		Y/N \$		Y/N \$	
PARAMETER LIST		PARAMETER LIST		PARAMETER LIST	
COMMENTS		COMMENTS		COMMENTS	

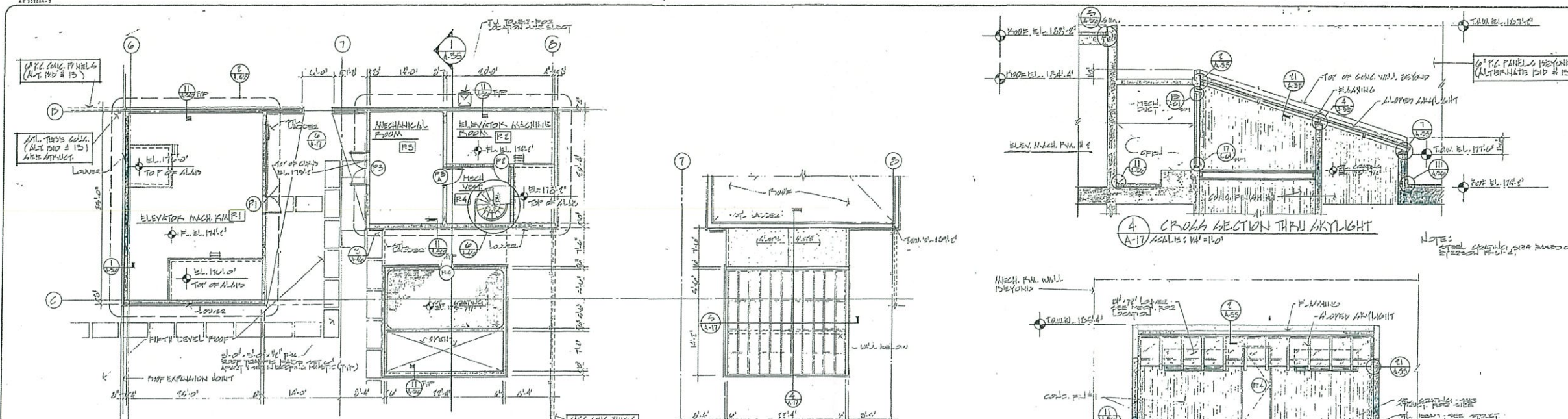
ADDITIONAL REMARKS: Analyze all layers and all samples

SAMPLER'S SIGNATURE: *[Signature]*



APPENDIX B

SAMPLE LOCATION FIELD DRAWING

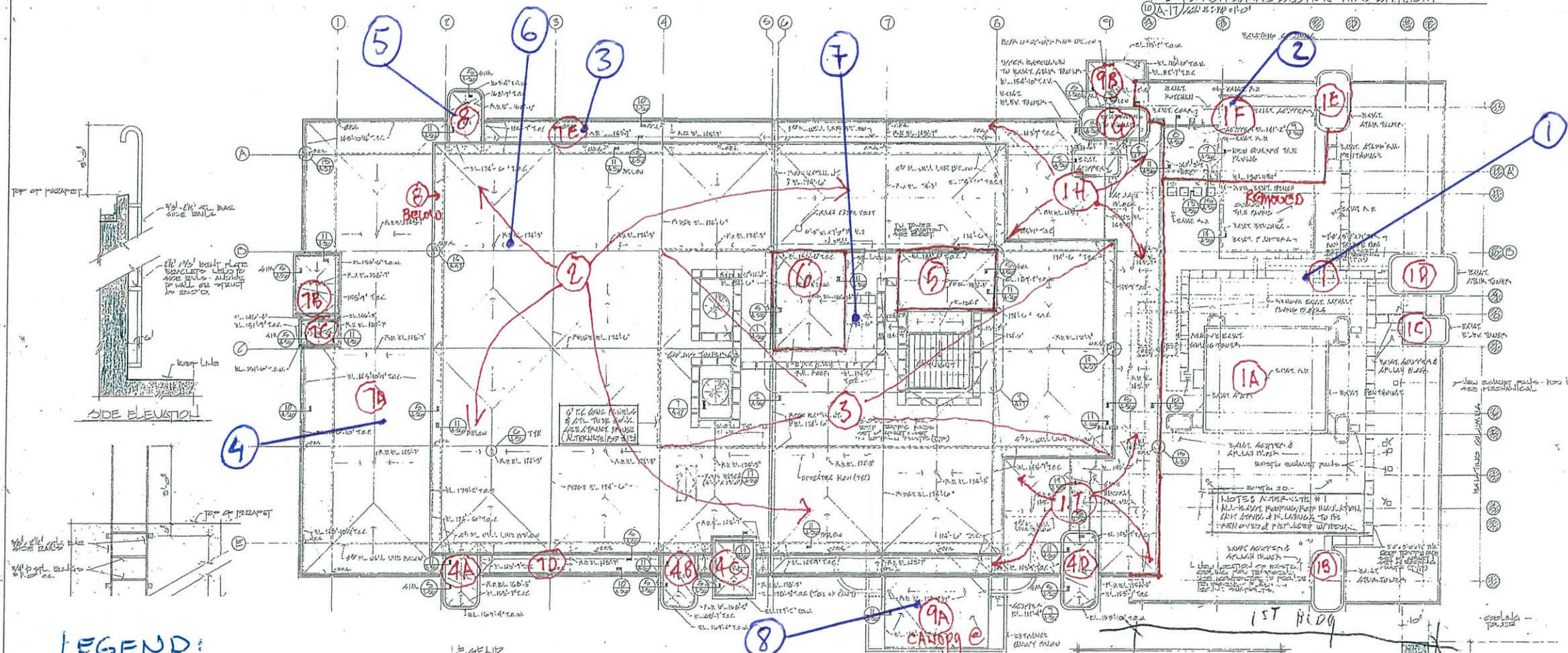


2 PARTIAL ROOF PLAN/ELEVATOR MACHINE RM. PLANS
SCALE: 1/8" = 1'-0"

3 SKYLIGHT PLAN
SCALE: 1/8" = 1'-0"

4 CROSS SECTION THRU SKYLIGHT
SCALE: 1/4" = 1'-0"

5 LONGITUDINAL SECTION THRU SKYLIGHT
SCALE: 1/4" = 1'-0"



LEGEND:
 # SAMPLE LOCATION

1/2" GRID
 F.O.D. = FLOOR DECK
 T.O.C. = TOP OF CURTAIN WALL
 T.O.W. = TOP OF WALL
 T.O.P. = TOP OF PARAPET
 O.R.S. = OVER THE ROOF SUPPORT



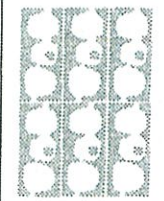
ROOF PLAN
 SCALE: 1/8" = 1'-0"

LIMITED ASBESTOS ROOF SURVEY
 ORLANDO PUBLIC LIBRARY
 PSI PROJECT NO. 06635953

7 COOLING TOWER WALL
 SCALE: 1/4" = 1'-0"

MARK	DATE	REVISION DESCRIPTION

ADDITION AND RENOVATIONS TO THE
ORLANDO PUBLIC LIBRARY
 ORLANDO, FLORIDA



SCHWEIZER ASSOCIATES Incorporated
 architecture, engineering, planning
 construction services
 ENVIRONMENTAL DESIGN GROUP

55 East Jackson Street
 Post Office Box 1471
 Orlando, Florida 32802
 Phone (305) 425-0922

CONSULTANTS
 John M. Johansen, FRIA
 consulting architect
 Gensert, Breitall, Bobel
 structural
 Tilden, Denson, Lohmiller, Inc.
 mechanical/electrical
 Foster, Conant & Associates, Inc.
 landscape
 Samuel S. Coston, II
 equipment consultant

COMMISSION NO. A-1885
 DATE: 10/11/92
 DRAWN: L.L.C.
 CHECKED: D.L.
 APPROVED: L.P.
 SHEET NUMBER

A-17



APPENDIX C

REPRESENTATIVE PHOTOGRAPHS



Photo 1: Overall view of roof area 1



Photo 2: Roof core 1 collected from area 1



Photo 3: Roof core cavity of sample 1



Photo 4: Typical roof patch consisting of 3-ply roof asphalt, 2-ply mesh.



Photo 5: Typical roof core/sample 1 patched



Photo 6: Overall view of roof area 1F



Photo 7: Sample 2 collected from roof area 1F



Photo 8: Typical patch of roof core 2



Photo 9: Sample 3 collected from area 7E



Photo 10: Roof core 3 collected from area 7E

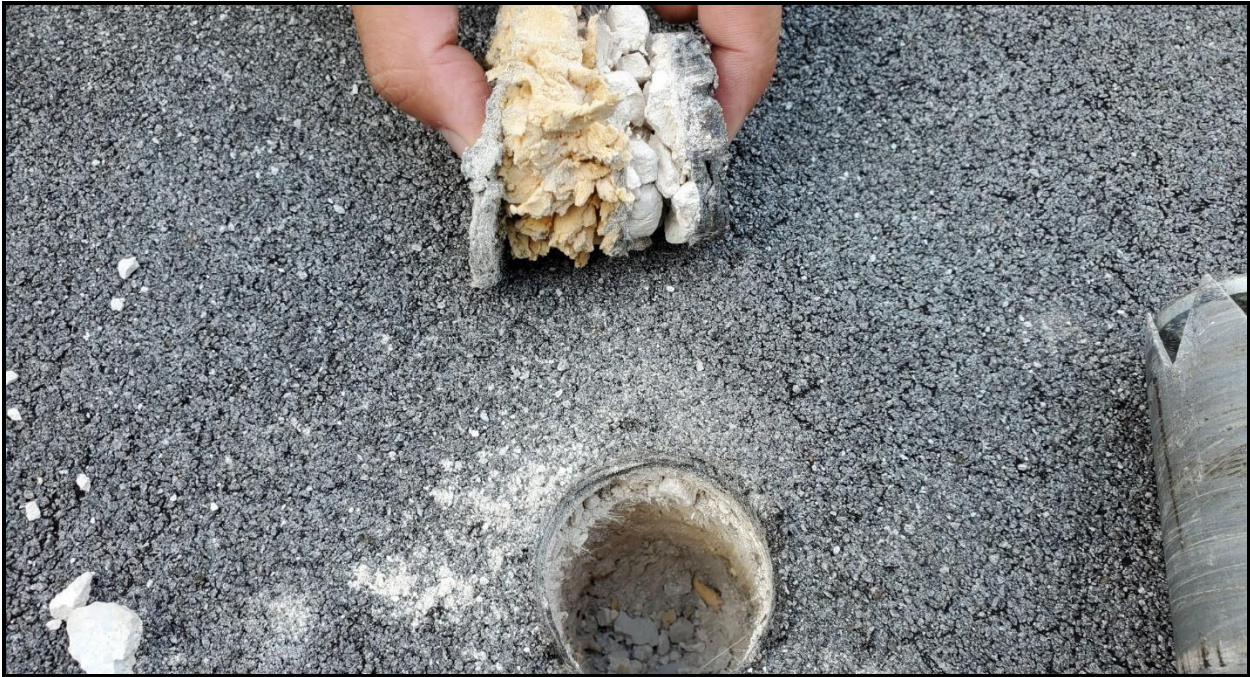


Photo 11: Sample 4 collected from area 7A



Photo 12: Sample 5 collected from area 8



Photo 13: Sample 6 collected from area 2. Underlying roof could not be cored as the asphalt bound the coring tool



Photo 14: Sample 6 collected from area 2. Underlying roof could not be cored as the asphalt bound the coring tool



Photo 15: Sample 7 collected from area 3 outside mechanical penthouse entrance



Photo 16: Wet insulation below the capsheet of sample 7



Photo 17: Roof core sample 7

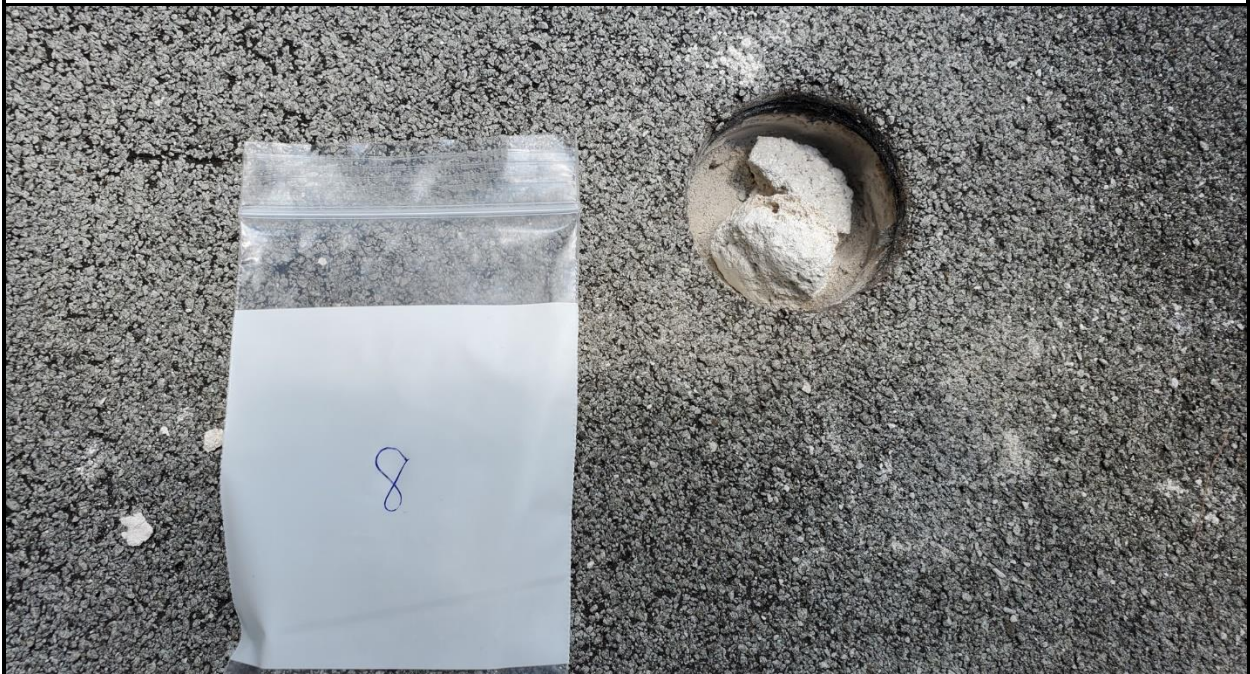


Photo 18: Roof core sample 8 area 9A



APPENDIX D

PERSONNEL AND LABORATORY CERTIFICATIONS



Ron DeSantis, Governor

Julie I. Brown, Secretary



**STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

ASBESTOS LICENSING UNIT

THE ASBESTOS CONSULTANT HEREIN IS LICENSED UNDER THE
PROVISIONS OF CHAPTER 469, FLORIDA STATUTES

JERNIGAN, JEREMY RYAN

PROFESSIONAL SERVICE INDUSTRIES, INC.
545 EAST ALGONQUIN ROAD
ARLINGTON HEIGHTS IL 60005

LICENSE NUMBER: AX73

EXPIRATION DATE: NOVEMBER 30, 2022

Always verify licenses online at MyFloridaLicense.com



Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

THE ASBESTOS INSTITUTE

Certifies that

John Clary

has attended and received instruction in the EPA approved course

AHERA Building Inspector Refresher

on

March 20, 2022

and successfully completed and passed the competency exam.

Certificate:
ON-4644-11612-032022

Date of Examination:
20-Mar-2022

Date of Expiration:
20-Mar-2023



William T. Cavness
Director



Approved Instructor

THE ASBESTOS INSTITUTE

20033 N. 19th Ave, Building 6, Phoenix, AZ 85027

602-864-6564 – www.theasbestosinstitute.com

This training meets all requirements for asbestos certification under Toxic Substance Control Act Title II.

AIR ANALYTICS

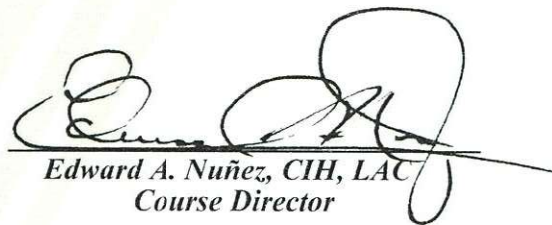
certifies that

Andrew Smith

has attended and completed 24 hours of training from 9/28/21 to 9/30/21,
and passed an examination covering the content of the
asbestos accreditation under Section 206 of TSCA, 15 U.S.C. 2646

AHERA Facility Inspector Initial Training Course

In accordance with U.S.E.P.A. 40 C.F.R. 763 and in testimony whereof,
we do confer this certificate at Winter Springs, Florida, September 30, 2021.
Certificate expires 9/30/22.



Edward A. Nuñez, CIH, LAC
Course Director



Certificate # AA0930211103
ID # 7124



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Intertek-PSI, Inc.
PSI, Inc.
850 Poplar Street
Pittsburgh, PA 15220
Ms. Catherine McNamee
Phone: 412-922-4010 x286 Fax: 412-922-4014
Email: cathy.mcnamee@intertek.com
<http://www.intertek.com>

ASBESTOS FIBER ANALYSIS

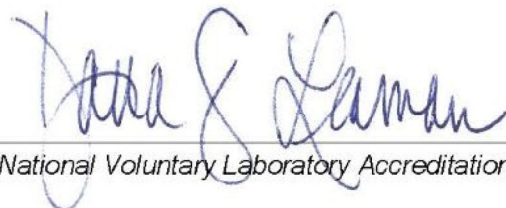
NVLAP LAB CODE 101350-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.



For the National Voluntary Laboratory Accreditation Program