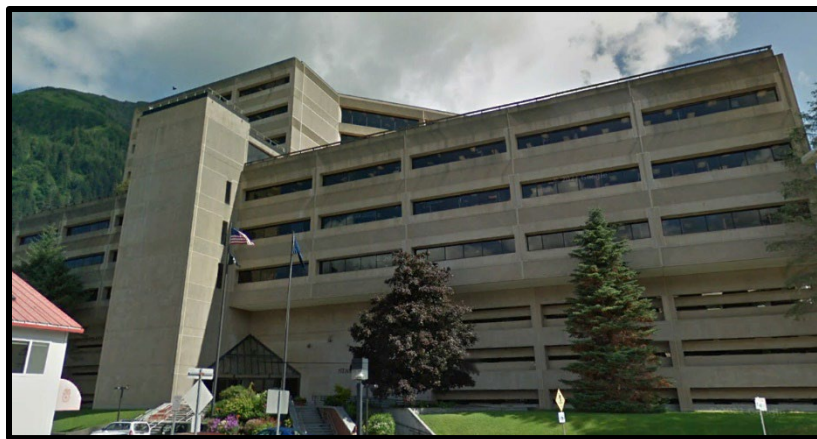


**ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING
333 WILLOUGHBY AVE
JUNEAU, ALASKA
Program # 25RC013611, 25RC013612
AUGUST 5, 2024**



Alaska Department of Transportation and Public Facilities
333 Willoughby Ave.
Juneau, AK 99801

Prepared by: **NORTECH**



TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Applicable Regulations	1
1.1.1	29 CFR 1910.1001 and 29 CFR 1926.1101	1
1.1.2	40 CFR Part 763, Subpart E	2
1.1.3	40 CFR Part 763, Subpart G	2
1.1.4	8 AAC 61.600 – 61.720	2
1.1.5	40 CFR 61 Subpart M.....	2
1.1.6	18 AAC 60.450	3
1.2	Building Description and Uses	3
1.3	Asbestos Assessments	3
1.3.1	1989 Survey and Management Plan for ACM	4
1.3.2	2023 Bulk Sampling Report.....	4
2.0	GENERAL INFORMATION	6
2.1	Contact Information and Responsibilities	6
2.1.1	Building Owner	6
2.1.2	Designated Person	6
2.1.3	Location of the Asbestos Management Plan	7
2.1.4	Custodial, Operations, and Maintenance.....	7
2.1.5	Annual Surveillance Contact.....	8
2.1.6	Minor and Major Release Responder.....	8
2.1.7	Employee Interface Contact	8
2.2	Recordkeeping	9
2.2.1	Contact Information Record.....	10
2.2.2	Training Records	10
2.2.3	Annual Surveillance Records.....	10
2.2.4	Inspection Report.....	11
2.2.5	Cleaning Records	11
2.2.6	Maintenance, Repair, and Preventative Measures Records	11
2.2.7	Minor and Major Fiber Release Records	12
2.2.8	Implementation of Response Actions Records.....	12
2.3	Regulated Areas Signage Requirements	13
3.0	EVALUATION OF RESOURCES	14
4.0	TRAINING.....	15
4.1	Training Courses	15
4.2	Designated Person	17
4.3	Maintenance Staff	17
4.4	Information and Technology Staff	17
4.5	General Building Staff Training	18
4.6	Contractors.....	18



5.0	OPERATION, MAINTENANCE, AND REPAIR PROGRAM	19
5.1	Annual Surveillance.....	19
5.2	Reinspection.....	19
5.3	Cleaning	20
5.4	Maintenance, Repairs, and Preventative Measures.....	20
5.5	Emergency Response Term Contractors	21
5.6	Minor Fiber Release Actions	22
5.7	Major Fiber Release Actions	23
5.8	General Response Actions.....	23
6.0	ASBESTOS MANAGEMENT	25
6.1	Manage in Place.....	25
6.2	Abatement	25
6.2.1	Removal of Spray on Fireproofing in 9 th Floor Channel Iron	25
6.2.2	Abatement of Elevator Shafts.....	25
6.2.3	Abatement of Damaged Spray on Fireproofing on 11 th Floor	26
6.2.4	Abatement of Damaged Spray on Fireproofing on 5 th Floor IT Room	26
7.0	NOTIFICATIONS	28
7.1	Annual Notifications.....	28
7.2	Short Term Contractor Notifications	28
7.3	Minor and Major Fiber Release Notifications.....	29
7.4	Public Notification.....	29



LIST OF APPENDICES

Appendix 1: Quantities Figures

Known quantities and locations of ACM

Appendix 2: Contact Information

Completed Contact Information forms

Appendix 3: Annual Surveillance Records

Annual Surveillance Forms by Year

Maps of Surveillance Locations

Appendix 4: Latest Inspection Report

Inspection Report with attached forms

Appendix 5: Cleaning Activities Records

Cleaning Activities form by year

Map of areas where cleaning was conducted

Appendix 6: Operations and Maintenance Activities Records

Operations and Maintenance Activities forms by year

Maps of areas where activities were conducted

Appendix 7: Minor and Major Release Episode Records

Release Records by year

Map of area where release occurred

Appendix 8: Implementation of Response Action Records

Implementation of Response Actions forms by year

Maps of areas where actions were taken

Appendix 9: Blank AMP Forms

AMP Form 1: Contact Information Form (Blank)

AMP Form 2: Annual Surveillance Form (Blank)

AMP Form 3: Inspection Cover Sheet (Blank) and Inspection Definitions Cheat Sheet

AMP Form 4: Homogenous Areas Form (Blank)

AMP Form 5: Cleaning Activities Form (Blank)

AMP Form 6: Maintenance, Repairs and Preventative Measures Form (Blank)

AMP Form 7: Minor and Major Release Episodes (Blank)

AMP Form 8: Implementation of Response Actions Form (Blank)



ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ACM	Asbestos Containing Material
DEC	Alaska Department of Environmental Conservation
DOT&PF	Alaska Department of Transportation and Public Facilities
AHERA	Asbestos Hazard Emergency Response Act
AMP	Asbestos Management Plan
ASCG	Arctic Slope Consulting Group
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
IT	Information and Technology
JSOB	Juneau State Office Building
OSHA	Occupational Safety and Health Administration
O&M	Operations and Maintenance
PACM	Potential Asbestos Containing Material
PLM	Polarized Light Microscopy
RACM	Regulated Asbestos Containing Materials
TSI	Thermal Systems Insulation
TWA	Time Weighted Average



1.0 INTRODUCTION

The Juneau State Office Building (JSOB) is located at 333 Wiloughby Avenue in Juneau, Alaska. The building serves as office space for multiple State of Alaska Divisions and is known to contain both friable and non-friable asbestos. To help ensure the protection of building occupants, the Building Owner has elected to implement an Asbestos Management Plan (AMP). An AMP clearly summarizes location and types of asbestos throughout a building, how to manage each type of asbestos, necessary actions when a fiber release occurs, and sets down a schedule for both annual visual inspections of asbestos and a three-year schedule for a thorough reinspection of the entire building. Additionally, an AMP lays out the responsibilities and necessary training of each user group within the building. This document acts as the AMP for the JSOB.

1.1 Applicable Regulations

Owners of public and commercial buildings have several asbestos related obligations under OSHA (29 CFR 1910.1001, 29 CFR 1926.1101) and EPA AHERA (40 CFR 763), including, but not limited to: determining the presence, location and quantity of asbestos containing materials (ACM), record keeping, training, occupant notifications, monitoring, job-site controls, safe work practices, and worker protection. DOT&PF has instituted development and implementation of this AMP in order to maintain compliance with these regulatory requirements and to ensure the protection of employees working within the JSOB. This AMP generally follows the Asbestos hazard Emergency Response Act (AHERA) requirements in 40 CFR Part 763. Regulations applicable to this AMP are discussed below.

1.1.1 29 CFR 1910.1001 and 29 CFR 1926.1101

OSHA standards 29 CFR 1910 (general industry) and 1926 (construction) protect workers in those industries from occupation exposures to asbestos. These standards state duties of employers and building and facility owners of public and commercial buildings. The standards also dictate warning sign requirements, training requirements, worker exposure limits, air sample collection methods, monitoring requirements, notification requirements, when and how to institute a respiratory protection program, and proper handling and removal of asbestos containing materials (ACM).

Duties of employers and building and facility owners listed in 1910.1001(j)(3) include:

- Determining the presence, location, and quantity of ACM and/or presumed asbestos containing materials (PACM) at the work site.
- Recordkeeping
- Communication to employees who will perform housekeeping activities in areas which contain ACM and/or PACM.

OSHA standards also describe four classes of asbestos work (1926.1101(b)), each of which requires specific training and will be discussed in this AMP. OSHA work classes for asbestos are:

- Class IV: Maintenance and custodial work during which an employee contacts, but does not disturb ACM or potential asbestos containing materials (PACM), and activities to clean up dust, waste, or debris resulting from Class I, II, and III work activities



- Class III: Repair and maintenance activities where ACM, including thermal system insulation (TSI) and surfacing ACM/PACM are likely to be disturbed
- Class II: Activities involving the removal of ACM that is not TSI or surfacing material. These materials include, but are not limited to asbestos containing:
 - Wallboard
 - Floor tiles/sheeting
 - Roofing and side shingles
 - Construction mastics
- Class I: Removal of TSI and Surfacing ACM and PACM

1.1.2 40 CFR Part 763, Subpart E

AHERA regulations governing the material that is required within an AMP written for a school is covered under 40 CFR Part 763, Subpart E. This subpart covers responsibilities of the local education authority (which will be assumed in this case by the building owner), surveillance of damaged asbestos, inspection/reinspection of all asbestos within the building, sampling requirements, analysis requirements, response actions for minor and major releases, training, record keeping, management of asbestos within the building (including abatement), and warning labels. This AMP generally follows the requirements for asbestos management planning in 40 CFR Part 763 Subpart E.

1.1.3 40 CFR Part 763, Subpart G

While the Occupational Safety and Health Administration (OSHA) protects general industry and construction workers during asbestos work, it does not extend worker protection standards to public employees. 40 CFR Part 763, Subpart G imparts all protections covered in OSHA asbestos standards 29 CFR 1910 and 29 CFR 1926 to public employees.

1.1.4 8 AAC 61.600 – 61.720

The State of Alaska Occupational Safety and Health Asbestos Abatement Statutes and Regulations are covered in 8 AAC 61.600 – 720. This statute covers required training, testing, and recertification for asbestos abatement workers within the State of Alaska. All individuals conducting abatement work (OSHA Class I and II work) within the Juneau State Office Building must have certifications that meet this standard.

1.1.5 40 CFR 61 Subpart M

The National Emission Standard for Asbestos is covered under 40 CFR 61 Subpart M. This standard sets forth requirements for asbestos work in various industries (including demolition and renovation of buildings), and disposal of asbestos containing waste. Renovation work within the Juneau State Office Building must follow the requirements of 40 CFR 61 Subpart M.

This standard also defines categories of ACM as follows:

Category I Nonfriable

Asbestos containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using polarized light microscopy (PLM).



Category II Nonfriable

Any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using PLM, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Friable

Any material containing more than 1% asbestos as determined by using PLM, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

1.1.6 18 AAC 60.450

The Alaska Department of Environmental Conservation (ADEC) regulates asbestos containing waste disposed of in landfills or monofills throughout Alaska. 18 AAC 60.450 lays out the requirements for disposing of both regulated asbestos containing materials (RACM) and non-regulated asbestos. RACM can only be disposed of within an ADEC approved RACM landfill. Non-regulated ACM may be disposed of within a municipal solid waste landfill under certain conditions. Disposal of both regulated and non-regulated ACM generated during operations, maintenance, or abatement activities shall follow the procedures outlined in 18 AAC 60.450.

1.2 Building Description and Uses

The Juneau State Office Building is an 11-story concrete building completed in 1973. The first four stories are comprised of a parking garage. Floors 5 – 11 consist of a mixture of mechanical, storage, IT, and office space. Office space is primarily occupied by various divisions for the State of Alaska. The divisions of administrative services, finance, general services, personnel, retirement and benefits, risk management, and the office of information and technology for the State of Alaska are housed within the State Office Building.

While most floor space is dedicated to offices, the eighth floor boasts a large atrium area which is open to the public. The main public access is from the eighth floor of the building, and weekly organ concerts during the lunch hour occur during the summer months. Public access to some State services is also available within the building and are primarily located on the 8th – 10th floors.

1.3 Asbestos Assessments

Two building-wide asbestos assessments of the JSOB are known to have occurred. The first, a limited sampling event that also encompassed the old Juneau State Museum building, occurred in 1989. Arctic Slope Consulting Group (ASCG) collected a total of 66 bulk samples from throughout the JSOB. The report recommends abatement of ACM throughout the building but recognizes such an abatement project would be expensive and sets forth special priority areas for abatement, enclosure of areas where friable, asbestos containing spray on fireproofing is open to the public/building occupants, and general cleaning.

The second building wide assessment occurred in 2022 and included collection of 179 bulk samples by **NORTECH**. The report, finalized in 2023, notes that in the 33 years between the two assessments, it appears the recommended cleaning occurred, friable spray on fireproofing is now behind either gypsum wallboard or drop tile ceilings, and that most of the recommended special priority abatement had occurred. The 2023 report notes there are several areas of damaged friable ACM that should be a priority for abatement, including elevator shafts also called out in the 1989 report.



1.3.1 1989 Survey and Management Plan for ACM

In 1989, Arctic Slope Consulting Group (ASCG) conducted limited sampling of the JSOB and Alaska State Museum. Results from these sampling activities were used to create the 1989 Survey and Management Plan for Asbestos Containing Material, Alaska State Museum & Juneau State Office Building. ASCG collected a total of 66 bulk samples and 10 air samples (predominantly personal breathing zone air samples from survey workers) from the JSOB and used results from an additional 105 samples (bulk and air samples) that had been previously collected by different entities in order to make their recommendations.

ASCG states that the friable spray on fireproofing was found throughout the building on structural steel and noted substantial overspray from the application of the fireproofing. They noted that fireproofing was openly exposed in portions of the return air system, maintenance areas, custodial/storage closets and in most mechanical rooms. Their testing indicated the spray on fireproofing contained between 5% and 25% chrysotile asbestos.

Random testing of thermal system insulation (TSI) on piping indicated that a mix of ACM and non-ACM were used on piping and associated structures. As ACM and non-ACM insulation have very few visual differences, ASCG stated all "hard to the touch" insulation systems should be considered ACM unless testing proves otherwise.

Overall, the report characterized the building as low risk, as long as proper Operations and Maintenance (O&M) Procedures were followed.

While the ASCG recommends complete abatement of all friable ACM within the building, they also acknowledge this would be a large and expensive project. The report states that ASCG suspects ACM spray on fireproofing has fallen into wall cavities of permanent walls and if so, complete abatement would involve demolition of most, if not all, of the interior walls. The ASCG report therefore recommends prioritizing specific abatement projects in order to reduce risk associated with the potential for an asbestos release. Recommendations for special priority abatement locations were:

- Spray on Fireproofing in the elevator shafts
- Exposed spray on fireproofing on ceiling of the air plenums and mechanical rooms on the sixth and seventh floors
- Exposed spray on fireproofing in janitorial closets, storage areas, and satellite mechanical rooms
- Remaining spray on fireproofing should be managed in place until it can be abated
- ACM insulated fittings in the seventh floor loading area and stairway 3 between the sixth and seventh floors

1.3.2 2023 Bulk Sampling Report

In 2022 - 2023, **NORTECH** conducted a condition assessment and bulk ACM sampling of the JSOB. Efforts encompassed the entire building including the four-story parking garage and mechanical spaces. The condition assessment consisted of documenting the overall condition of the sampled material at the location where the sample was collected. In total, 179 bulk samples having a total of 266 layers, were collected for laboratory analysis via polarized light microscopy (PLM) using EPA method 600/R-931/116. Functional Space and homogenous area were also noted for each sample collected.



During the course of field efforts, areas of blue spray on fireproofing were mapped. The blue spray on fireproofing does not contain asbestos and represents areas where the ACM spray on fireproofing has been abated. These areas were mapped as limited information was available on areas of the building that had previously been abated of asbestos containing spray on fireproofing.

Friable asbestos found within the JSOB included TSI on piping elbows and the gray spray on fireproofing found throughout the building. Non-friable asbestos included vinyl floor tiles, joint compound, various colors of mastics, and the black window seals on atrium facing windows. The largest source of asbestos within the JSOB was the gray spray on fireproofing found in most areas of the building on the fifth through eleventh floors. Appendix 1 of this report contains quantities of known asbestos throughout the building. The 2023 report contains figures showing all sample locations and visually identifies those samples considered ACM.

Overall, the asbestos containing fireproofing throughout the building was considered to be in good condition, with localized damage identified within the report. The report made the following recommendations:

- Update the 1989 AMP
- Abate all asbestos containing spray on fireproofing
 - Priority abatement areas were
 - Removal of ACM Spray on Fireproofing overspray build up from the channel iron on the 9th floor
 - Abate elevator shafts 1/2, 4/5, and 6/7
 - Abate water damaged areas on the 11th floor
 - Abate water damaged areas on the 5th floor
 - Abate other areas of damaged fireproofing as they are identified
- Remove ACM overspray from on top of drop ceiling tiles
- Replace damaged ceiling tiles and missing cross bars
 - Ceiling tiles were not ACM
- Quarterly inspection of roof patches and protrusions to prevent water leaks that damage asbestos containing spray on fireproofing
- Cables and wire that are placed above the drop ceiling tiles must be run through conduits
 - This will protect the spray on fireproofing from damage
- Offer Information and Technology employees Operations and Maintenance asbestos training
- Ensure all building employees undergo at least Asbestos Awareness Training



2.0 GENERAL INFORMATION

2.1 Contact Information and Responsibilities

There are multiple participants within the Juneau State Office Building with responsibilities under this AMP. This section describes the designated contact and responsibilities for each position. Contact information for each set of responsibilities below is listed in Appendix 2. Whenever contact information changes, Form 1 (blank located in Appendix 9) must be updated and placed in Appendix 2.

2.1.1 Building Owner

Owning Agency: Alaska Department of Transportation and Public Facilities	Name of Building: Juneau State Office Building
Contact Person: Daniel Gibson	
Contact Position: Division of Facilities Services, Division Operations Manager	
Email: daniel.gibson@alaska.gov	Telephone Number: 907-451-2203
Address: 2301 Peger Road, Fairbanks, AK 99709	

The building is administered by the Alaska Department of Transportation and Public Facilities. According to 40 CFR 763.84, DOT&PF responsibilities include:

- Ensure the AMP remains up to date
- Have a copy of the up-to-date AMP available for public review
- Properly train building occupants
- Inform contractors and consultants as to training necessary for their employees to work in the JSOB
 - Inform short term workers (repair personnel etc.) as to the locations of ACM they may come in contact with
- Inform building occupants at least once a year of inspections, response action, post-response actions, periodic reinspection, and planned surveillance activities
- Ensure warning signs are posted in accordance with 40 CFR 1910.1001(j)(4) and Section 2.4 of this AMP.
- Designate a person to ensure that requirements of this AMP are properly implemented

2.1.2 Designated Person

Name of Designated Person: Bill Campbell	
Position: DOT&PF South Coast Region Building Maintenance Manager	
Email: bill.campbell@alaska.gov	Telephone Number: 907 465-3977
Address: 141 Willoughby Ave, Juneau AK 99801	

The Designated Person is responsible for proper implementation of the AMP to include:

- Ensuring asbestos related activities or activities in regulated spaces are carried out in accordance with AHERA requirements and this AMP
- Coordination between the Building Owner and other contact personnel



- Posting warning signs in accordance with 40 CFR 1910.1001(j)(4) and Section 2.4 of this AMP.
- Avoiding conflicts of interest that may arise when selecting accredited personnel to conduct asbestos-related activities
- Provide a copy of the AMP for review upon request

2.1.3 Location of the Asbestos Management Plan

The AMP must be available for review upon request. A hard copy of the current AMP can be found in the Operations and Maintenance office of the building, and a link to the online version is available online at <https://dot.alaska.gov/dfs/leasing/juneau.shtml#jsobinfo>. Persons interested in viewing the AMP in hard copy may contact the person specified in Appendix 2.

2.1.4 Custodial, Operations, and Maintenance

Custodial, Operations, and Maintenance Contact Person	
Name of Contact Person: Bill Campbell	
Position: DOT&PF South Coast Region Building Maintenance Manager	
Email: bill.campbell@alaska.gov	Telephone Number: 907 465-3977
Address: 141 Willoughby Ave, Juneau AK 99801	

The Custodial, Operations, and Maintenance Contact Person must be immediately informed of a suspected ACM or PACM release, or if dust or debris resulting from OSHA Class I, II, or III activities is encountered. The Custodial, Operations, and Maintenance Contact Person is responsible for confirming the reported issue, notifying the Designated Person, and identifying proper personnel (either maintenance or a third-party contractor) necessary to resolve the identified issue. In addition, the Custodial, Operations, and Maintenance Contact Person will use the drawings in Appendix 1 to identify the areas of damaged ACM or the release area and place it in the appropriate appendix (Appendix 5 if cleaning occurred in the area, Appendix 6 if maintenance or repair of ACM occurred, Appendix 7 if the event was a minor or major asbestos release, or Appendix 8 for areas where response action occurred). If the reported event involves damaged ACM, it must also be recorded in the Appendix 3 Surveillance Form and Map.

Custodial services are currently contracted to a third-party contractor (REACH). Custodial personnel are responsible for notifying the Custodial, Operations and Maintenance Contact Person if a suspected asbestos release is found. Third party custodial personnel are not responsible for cleanup of known or suspected asbestos, including OSHA Class III or IV work.

O&M personnel are responsible for notifying the Custodial, Maintenance, and Operations Contact Person if damaged asbestos or a suspected asbestos release is identified. O&M personnel are also responsible for:

- Isolation of an area if ACM related custodial work is necessary
 - Cleaning can be conducted by O&M or a third party contractor
- Isolation of an area affected by an emergency
 - Broken piping, fallen or water damaged spray on asbestos fireproofing, etc.
- Stabilization of the surrounding area and ACM/PACM during an emergency
 - OSHA Class III or IV work



- Actions must ensure the damaged ACM/PACM will not cause a further release until a third party can complete repairs
- Repair of ACM/PACM in an emergency
 - OSHA Class IV work
 - Burst pipes, roof leaks, minor and major releases, etc.
 - Repairs necessary to stabilize the situation until a third party can complete repairs of the ACM
 - OSHA Class III work

2.1.5 Annual Surveillance Contact

Annual Surveillance of installed ACM, with the intent to determine current condition and identify newly damaged or areas requiring repair or abatement will be sub-contracted to a third-party consultant. Contact information for the third-party contractor is included in Appendix 2.

2.1.6 Minor and Major Release Responder

While stabilization and emergency repair of ACM/PACM after a minor or major asbestos fiber release will be conducted by M&O, work beyond stabilization and emergency repairs will be conducted by a third-party contractor. Contact information for the third-party contractor is included in Appendix 2.

2.1.7 Employee Interface Contact

Employee Interface Contact	
Name of Contact: Call Center / Safety Hub	
Email: facilities.callcenter@alaska.gov	Telephone Number: 907 465 5689

Building employees are responsible for reporting potential ACM/PACM dust, damage, and minor and major releases to the Employee Interface Contact. The Employee Interface Contact is the point of contact for:

- Asbestos related custodial requests e.g., cleanup of dust from OSHA class III or IV work
- Reports of potential major or minor asbestos releases
- Reports of potentially damaged ACM or PACM

The Employee Interface Contact is also responsible for:

- Coordinating employee concerns
- Passing information on to the appropriate contact
 - Custodial, Operations and Maintenance Contact
 - Designated Person
- Disseminating information concerning
 - the AMP
 - Asbestos related updates such as fiber releases or abatement updates

Asbestos Management Plan

The primary goal of an AMP is to document the location of asbestos within the building, recommended abatement and response actions, and any action taken to repair or abate asbestos. An AMP also lays out responsibilities and contact information for specific groups,



including the building owner, the owner's designated person, who is responsible for specific activities (such as response actions, maintenance, surveillance of known asbestos, and reinspection of the building), and the training responsibilities of each user group. As such, it is imperative that the AMP be kept up to date at all times and be available on-Site for anyone who wishes to read it. The AMP must be updated whenever the following occurs:

- Asbestos conditions change, such as
 - When new damaged areas of ACM are identified
 - When abatement occurs
- When personnel change, such as a change of:
 - Designated person
 - A Contact person
 - Abatement company
- If a group's responsibilities change
- After a building wide re-inspection
- Regulatory changes occur which impact asbestos management within the building
- Location of the AMP changes

Keeping the AMP up to date also includes ensuring all record keeping forms outlined below are included in the appropriate appendix. Once a form is completed, it must immediately be scanned, and the hard copy placed in the working copy of the AMP that is available on Site. A scanned version of each completed form must be attached within the appropriate appendix of the digital copy of the AMP. The most recent version of the AMP must be available upon request.

2.2 Recordkeeping

Although 40 CFR 763 applies to AMPs created for schools, these same regulations will be followed for maintenance of the JSOB's AMP. Records required under 40 CFR 763.94 include preventative measures and response actions, training, yearly asbestos surveillance, cleaning efforts, M&O efforts, major asbestos related activities (such as abatement), and both minor and major fiber release events must be kept in a centralized location. In order to help maintain appropriate records, checklists covering most of the listed activities can be found in Appendix 9. Completed checklists can be stored with all copies of this AMP by inserting them into Appendices 2 – 8 as appropriate.

Records must be maintained for all areas where ACM is present. If a homogeneous area has been abated of all ACM, records for that area must be kept for the duration of the AMP implementation.

Completed forms will be placed into the following appendices in order to ensure records are properly maintained throughout the course of this AMP:

- Appendix 2: Contact Information
- Appendix 3: Annual Surveillance Records
- Appendix 4: Copy of the most recent Inspection Report
- Appendix 5: Cleaning Records
- Appendix 6: Operations, Maintenance, and Repairs Records
- Appendix 7: Minor and Major Release Episode Records
- Appendix 8: Implementation of Response Action Records



Each appendix must be organized so that the most recent form is first, with older forms appearing in chronological order. Forms must be updated as soon as information changes or new work has been completed.

2.2.1 Contact Information Record

Blank Contact information forms can be found in Appendix 9, the current completed contact information form is included in Appendix 2. These forms include names and contact information of the person/company/entity in charge of various vital tasks. Information concerning the building owner, the building owner's designated person, the location of the AMP, Custodial, Operations and Maintenance Contact, third party in charge of annual surveillance, third party in charge of minor and major release response, Employee Interface Contact, and company/person who wrote the AMP are included in Appendix 2.

The name (person or company), job title (if applicable), email, phone number, and physical address for each of the roles listed above must be included in the completed form. A new form must be completed if a new person/company/entity is designated to fulfill a specific role, or if the contact information for any of the listed people/companies/entities changes.

2.2.2 Training Records

All employees who work within the JSOB, including State of Alaska Employees and contractors who conduct work within the building on a regular basis, are required to have a minimum of asbestos awareness training. Specific training needed by each user group is discussed in Section 4.0. Training courses must be administered by personnel that are certified to conduct the necessary training and must be renewed annually. The building owner's Designated Person is responsible for informing all State of Alaska Departments and Divisions working within the JSOB of the training needed for each entity's employees. The Department/Divisions are responsible for informing managers of the training their specific employees need, and managers are responsible for ensuring individual employees get the necessary training in a timely manner. The Designated Person is also responsible for ensuring third-party contractors (including custodial, security, and repair contractors) what training is required for their employees. The third-party contracting companies are responsible for training and documentation of training for their employees.

Asbestos related training for State of Alaska Employees will be tracked and documented in the State of Alaska's Safetyhub (<https://alaskadot.safetyhub.com/login/index.php>). It is the responsibility of individual employees to ensure their training records are up to date within the database. Training records for third-party contractors are the responsibility of the individual contractor.

2.2.3 Annual Surveillance Records

Annual surveillance is the yearly visual inspection of all known or suspected ACM, both friable and non-friable, within the building. Maps of the areas of known ACM locations and quantities, as of the writing of this AMP are included as part of Appendix 1. The Designated Person must keep one set of updated surveillance maps in Appendix 3. These maps will show the updated areas of known, assumed or damaged ACM observed during the annual surveillance inspection. Copies of the Appendix 1 maps may be used for the initial surveillance inspection, which will be marked up and placed in Appendix 3 to be updated with future inspections. Appendix 3 Form 2



must be completed for each annual surveillance effort. Blank forms are provided in Appendix 9. The completed form will include the name of the person conducting the surveillance, the date of the surveillance, the condition of the materials, and whether that condition has changed since the last surveillance. If new locations of ACM are identified, they will be added to the maps and surveillance list immediately. All completed forms will be placed in Appendix 3, with the most recent form first and older forms following in chronological order.

While some materials, such as the gray spray on fireproofing, are distinct and can be visually identified as ACM, other materials are not. Bulk sampling conducted during the 2022/2023 Inspection showed that various colors of mastics as well as joint compound may or may not contain asbestos. Asbestos containing mastic or joint compound is not visually different from their non-asbestos counterparts. These materials must be assumed to contain asbestos unless testing has specifically shown otherwise.

Areas where cove base, carpets, or vinyl flooring are damaged must have the associated mastics tested to determine whether or not the mastic contains asbestos. Similarly, areas where gypsum wallboard walls or ceilings are damaged must also have the associated joint compound tested to determine if it contains asbestos. Areas where mastics or joint compound are known to contain asbestos are included on the maps in Appendix 1.

2.2.4 Inspection Report

The most recent Inspection Report, as of the writing of this AMP, was completed in 2023 and is included as Appendix 4. This report must remain unchanged and only replaced when a new Inspection Report is completed. Each new Inspection Report must use Form 3 (Appendix 9) as a cover sheet. Form 4, Homogenous Areas (Appendix 9), will be used during the inspection to ensure designation of homogenous areas and functional spaces remains consistent between inspections. Maps denoting where samples were collected must also be included in future reports.

2.2.5 Cleaning Records

Under 40 CFR 763.91(c), areas of a school building where friable ACM, damaged TSI, or materials assumed to be friable ACM, must be cleaned at least once after the initial inspection (1989) and prior to any response action other than O&M or repair activities. Additional cleaning, if necessary, will be recommended in future AMP revisions. Cleaning recommendations for the JSOB are included in Section 5.3.

Whenever cleaning activities occur, Form 5 (Appendix 9) must be completed and placed in Appendix 5. The form will include the name of the person conducting the cleaning, the date cleaning activities occurred, location of the areas cleaned, and the methods used. Cleaning records must be kept in compliance with OSHA regulations 29 CFR 1910 and 1926.

2.2.6 Maintenance, Repair, and Preventative Measures Records

Establishment of an Operations, Maintenance, and Repair Program, discussed in Section 5 is required under 40 CFR 763.91. Form 6, located in Appendix 9, must be completed for each operation, maintenance, repair, or preventative measure activity conducted within the JSOB. A preventative measure is defined in 40 CFR 763.84 as *actions taken to reduce disturbance (of asbestos), due to factors including, but not limited to, accessibility or, under certain circumstances, vibration, or air erosion.*



The completed form will be placed in Appendix 6, along with a map of the area(s) where O&M activities took place. Maintenance, repair, and preventative measure records must be kept in compliance with OSHA regulations 29 CFR 1910 and 1926.

2.2.7 Minor and Major Fiber Release Records

According to 40 CFR 763.83(f), a fiber release episode is defined as “...*any uncontrolled or unintentional disturbance of ACBM resulting in visible emission.*” A minor fiber release is defined as falling or dislodging of less than three square feet of asbestos material. A major fiber release comprises three or more square feet of asbestos material. How to handle minor and major releases are discussed in Sections 5.6 and 5.7.

If a fiber release occurs, it must be documented using Form 7 (Appendix 9) and include a map of the area where the release occurred. A completed Form 7 and map will be placed in Appendix 7. In addition to documentation of a fiber release event in the AMP, all potentially impacted employees must be immediately notified of the release and associated actions they must take (such as leaving the area). The Employee Interface Contact is responsible for such notifications, but in the event an emergency evacuation of the area is necessary the responding O&M personnel must inform affected employees immediately, and in person. Minor and major fiber release records must be kept in compliance with OSHA regulations 29 CFR 1910 and 1926.

2.2.8 Implementation of Response Actions Records

Response actions must be documented using Form 8, which is available in Appendix 9. Response actions are defined in 40 CFR 763.84 as *a method, including removal, encapsulation, enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACBM.*

Completed forms must include a detailed written description of the action taken, including extra pages if necessary to do so. Details are to include what method was used (removal/abatement, encapsulation, enclosure, repair, or operations and maintenance), the location where the action was taken, reasons the action was taken, the date or date range when the actions took place, and any contractors who were involved in the actions.

If air samples were collected during the preventative measure or response action, the name and signature of the person collecting the air samples must be included, along with the name of the company they represent and their certification number. Other information that must be included on the form is the date of collection of the air samples, the locations of the air samples, the results of the air samples, and a statement that the lab participates in the NVLAP program.

A map with the location of the preventative measure or response action and the location(s) of air samples can be attached to Form 8. Blank floor plan maps are available in Appendix 10. Similarly, the laboratory report itself can also be attached to Form 8. The laboratory report must have a statement stating the lab participates in the NVLAP program.



2.3 Regulated Areas Signage Requirements

Regulated areas as defined in 29 CFR 1926.1101(e) must be marked by signs compliant with 29 CFR 1926.1101(k)(7) be colored in white, black and red and must include the words:

Danger
Asbestos
May Cause Cancer
Causes Damage to Lungs
Authorized Personnel Only



3.0 EVALUATION OF RESOURCES

In order to properly administer this AMP, personnel, equipment, and financial resources are needed. While resources needed for some activities, such as annual surveillance of known ACM, can be estimated, other activities, such as response activities associated with a fiber release episode, will vary based on extent of the release and whether or not such a release occurs. Below is an estimate, based on 2023 costs, of resources needed to successfully carry out training, operations and maintenance activities, annual surveillance, re-inspections, and response actions.

Training requirements for personnel working within the JSOB and/or administering this AMP will vary widely and are discussed in Section 4.0. As the number of people working within the JSOB may vary over time, resource requirements are estimated below per person and by training.

The majority of people working within the JSOB will only require Asbestos Awareness Training. This is the minimum level of training and is required annually for all workers in the JSOB. The training can be developed and administered by the building owner or their representative.

Operations and Maintenance training is required for employees involved in maintenance tasks that have the potential to disturb small areas of ACM. Initial O&M training is 16 hours and requires in-person attendance. Yearly refresher courses are four hours in length and have online and in person options available. Additional costs, such as travel to a training site may also apply but will be dependent upon the location of the training.

It is required that the Designated Person receive AHERA Building Inspector Training. Initial training is a 24-hour (three day) in person training, refresher classes are required annually and are offered in a four-hour online format. Additional costs, such as travel to a training site may also apply but will be dependent upon the location of the training.

The Designated Person is also required to hold the AHERA Management Planner certification in addition to Building Inspector certification. The Management Planner course is an in-person, two-day (16 hour) certification and annual refresher courses are four hours. Additional costs, such as travel to a training site may also apply but will be dependent upon the location of the training.

Maintenance and Operations activities, Custodial activities related to Class III asbestos cleanup, and response to minor and major fiber releases will generally be completed using third-party contractors selected via a competitive bid process. Funds for these activities are part of JSOB building maintenance budget.

Annual surveillance and reinspection will be completed using a third-party contractor selected via a qualifications based bid process. Funds for these activities will be procured from the State of Alaska.



4.0 TRAINING

Employers are responsible for ensuring their employees receive proper training that adheres to applicable regulations. The Designated Person has been identified as the person in charge of informing building occupants and contractors of what training is necessary for each user group. Training records for State of Alaska employees within the JSOB must be kept up to date as described in Section 2.3. Unless otherwise stated, applicable training must be completed within 60 days of initial employment, or as soon as possible thereafter if applicable classes are not available within that timeframe. Refresher courses are required annually.

4.1 Training Courses

Under the EPA's regulations, there are three types of training. Additional training for certain AHERA related activities may also be pertinent to JSOB personnel. Applicable training is described below.

EPA Type 1: Awareness Training

Awareness training which includes such topics as:

- Background information on asbestos
- Asbestos related health issues
- Worker protection programs (as applicable to the audience)
- Locations of asbestos within the building
- How to recognize damaged and deteriorating asbestos containing materials
- To whom to report damaged or deteriorating asbestos
- Location of the Asbestos Management Plan

Awareness training can be developed by the Building Owner so that it is building specific and administrated by a properly trained individual.

EPA Type II: Special O&M Training

Maintenance workers who may conduct OSHA Class III or IV work must receive this training. AHERA classes usually refer to this training simply as O&M Training. This training consists of a total of 16 hours, including Awareness Training as described above along with more in-depth and specialized training including:

- Federal, State, and local asbestos regulations
- Asbestos related work practices
- Proper handling of ACM, including waste handling and disposal
- Respirator use and care
- Personal Protective Clothing donning, use, and handling
- Hands on exercises for glovebag work and HEPA vacuum use
- Worker decontamination procedures

O&M Training must be administered by an organization certified to provide EPA and OSHA compliant training. Initial courses are generally in person, while yearly refresher courses can be taken via Zoom or similar digital platforms.



EPA Type III: Abatement Worker Training

Abatement Worker Training is for individuals who may conduct OSHA Class I or II work. Abatement activities which include OSHA Class I or II work will be contracted to an appropriately certified third-party Abatement Contractor. State employees at the JSOB, including O&M personnel, do not require this training. However, it is important to ensure contractors who conduct abatement work maintain current certification.

AHERA Building Inspector Training

AHERA Building Inspector Training is required for individuals who may inspect buildings for the presence of asbestos, conduct sampling (air or bulk) of suspected ACM, and prepare reports which document the presence of asbestos. The training consists of 24 hours of training in topics that include:

- Asbestos types, uses, and applications
- The role of the Building Inspector
- Health effects of asbestos
- Medical surveillance requirements
- Federal and State asbestos regulations
- Sampling methods
- Site inspection methods and documentation
- Legal issues associated with asbestos
- Personal Protective Equipment

Building Inspector training must be administered by an organization certified to provide EPA and OSHA compliant training. Initial courses are generally in person, while yearly refresher courses can be taken via Zoom or similar digital platforms.

AHERA Project Designer Training

This certification allows a person to write specifications for asbestos response actions in schools, as well as public and commercial buildings. Initial training is 24 hours and consists of the following topics:

- Asbestos types, uses, and applications
- The role of the Project Designer
- Health effects of asbestos
- Medical surveillance requirements
- Federal and State asbestos regulations
- Abatement methods
- Development of specifications and contract documents
- Legal Issues
- Replacement Materials
- Personal Protective Equipment

Project Designer training must be administered by an organization certified to provide EPA and OSHA compliant training. Initial courses are generally in person, while yearly refresher courses can be taken via Zoom or similar digital platforms.



AHERA Management Planner

The Management Planner training deals primarily with preparation and updating of Asbestos Management Plans. Topics covered in this training include:

- Evaluation and selection of Control Options
- Role of Management Planners
- Legal Issues
- Recordkeeping
- State and Federal regulations
- Development of an O&M Plan
- Cost Estimation

Management Planner training is required to be administered by an organization certified to provide EPA and OSHA compliant training. Initial courses are generally in person, while yearly refresher courses can be taken via Zoom or similar digital platforms.

Training for each identified user group within the building is described below.

4.2 Designated Person

The EPA requires that the designated person be adequately trained in the elements listed in 40 CFR 763.84(g) including:

- Health effects of asbestos
- Detection, identification, and assessment of ACM
- Options for controlling ACBM
- Asbestos management programs
- Federal and State regulations (including EPA and OSHA)

In combination with the Asbestos Awareness Training, the Designated Person must receive AHERA Building Inspector Training and AHERA Building Management Planner Training which are sufficient to meet the EPA requirements. Asbestos Awareness Training and Building Inspector Training must be completed within 60 days. Management Planner Training must be completed within 1 year of plan implementation or upon assignment of a new Designated Person.

4.3 Maintenance Staff

Maintenance staff may conduct repair or maintenance tasks where ACM, including TSI and surfacing ACM, may be disturbed. OSHA defines this as Class III work (29 CFR 1926.1101(b)), and therefore O&M Training is required. Asbestos Awareness training topics are included in O&M training. However, Maintenance Staff must be informed of the locations of ACM throughout the building as well as the locations of the AMP. Familiarization with the Operations, Maintenance, and Repair Program portion of the AMP (Section 5.0) is also encouraged.

4.4 Information and Technology Staff

Information and Technology (IT) staff require access the space above the drop ceiling to access IT devices (cables, routers, etc.). Accessing this space requires a higher level of training than basic awareness training. All IT staff are required to complete annual O&M Training prior to accessing regulated spaces.



4.5 General Building Staff Training

All State of Alaska employees working within the JSOB are required to complete annual Awareness Training.

4.6 Contractors

Third-party contractors are responsible for ensuring their employees are properly trained and up to date on applicable training. The asbestos training necessary for each contractor will vary based on the work they will be conducting. Examples are listed below for the most common contractor types.

- Custodial (REACH)
 - Awareness Training
- Custodial (Third Party Contractor)
 - Conduct asbestos related, Class IV cleaning
 - O&M Training
- Security (Bootlegger Security)
 - Awareness Training
- Repair Contractors
 - Elevators
 - O&M Training
 - Plumbing
 - O&M Training
 - Electrical
 - O&M Training
 - Drywall
 - O&M Training
- Asbestos Abatement Contractors
 - Abatement Worker Training
- Asbestos Sampling/Reinspection Contractors
 - AHERA Building Inspector Training
- Annual Asbestos Surveillance Contractors
 - AHERA Building Inspector Training



5.0 OPERATION, MAINTENANCE, AND REPAIR PROGRAM

Under 40 CFR 763.93, an operations, maintenance, and repair program is required whenever friable ACM is present within a building. 40 CFR 763.83 defines an Operations and Maintenance Program as “...a program of work practices to maintain friable ACBM in good condition, ensure cleanup of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACBM disturbance or damage.” The following sections comprise the Operation, Maintenance, and Repair Program for the JSOB. The operation, maintenance, and repair program must be compliance with OSHA regulations 29 CFR 1910 and 1926.

5.1 Annual Surveillance

Surveillance of known and suspected ACM must occur annually and will be carried out by a third-party contractor. Surveillance must include a visual inspection of areas identified as containing ACM or suspected ACM. The date of the surveillance, the name of person conducting the surveillance, and any changes from previous surveillance or inspections must be noted. Form 2 (Appendix 3) has the areas of identified ACM and their condition during the 2022 bulk sampling efforts. The blank Form 2 in Appendix 9 has the known ACM locations listed, but no condition indicated. Maps located in Appendix 1 contain the locations of known ACM throughout the building. Both Form 2 and the associated maps must be updated as new ACM is identified or if ACM is abated.

Asbestos containing gray spray on fireproofing is the most prevalent ACM within the building. It is located on floors 5 – 11 and its location is shown in the Surveillance Maps in Appendix 3. A minimum of seven locations per floor will be randomly selected to visually assess the grey spray on fireproofing located above the drop ceiling tiles in the building. These locations will be marked on the Surveillance maps and will be *in addition* to visual surveillance of areas of gray spray on fireproofing that are known to be damaged. Surveillance of the blue spray on fireproofing, which does not contain asbestos, is not necessary.

5.2 Reinspection

Reinspection of the JSOB must occur every three years and be conducted in accordance with 40 CFR 763.85(b) by persons holding current AHERA Building Inspector certifications. A copy of the latest inspection must be kept in Appendix 4. To aid in inspection, Form 3 will be used as a cover page and the homogenous areas identified in Form 4 will be used. The functional areas used in the 2023 Bulk Sampling Report are defined in Form 4, as are the categories used to determine damage. Maps available in Appendix 4 show known areas of ACM and abated areas throughout the JSOB. These maps must be updated if additional ACM is identified, or if abatement occurs within the building.

A reinspection differs from an annual surveillance, and one cannot be substituted for another. Re-inspections include assessment of all previously identified or assumed friable and non-friable ACM. The condition of all identified or assumed ACM must be determined during an inspection, including noting when previously non-friable asbestos has become friable due to deteriorating condition. If a previously non-friable material that was assumed to be asbestos becomes friable, bulk samples will be collected to confirm asbestos content. For instance, mastics throughout the building that contain asbestos cannot be visually distinguished from mastics that do contain asbestos. If a previously untested area of mastic becomes friable, the mastic in question must be bulk sampled to confirm asbestos content.



5.3 Cleaning

Cleaning is an important part of a maintenance plan (40 CFR 763.91(c)) and helps minimize potential exposure to employees working around friable asbestos. The primary friable ACM within the JSOB is the gray spray on fireproofing located on the pan decking and structural building components. The gray spray on fireproofing is generally located above a drop tile ceiling but may also be present above gypsum wall board ceilings or on unabated structural components behind walls. Cleaning of asbestos-containing dust that may be present in these areas is considered OSHA Class III work and must be completed by persons with appropriate training.

Cleaning must occur in the follow circumstances and using the suggested methods:

- Prior to and after projects above the drop ceiling tiles where ACM fireproofing present
 - Vacuum the top of drop ceiling tiles within project area with a HEPA vac
 - HEPA vac carpets below work area
- Prior to and after projects within non-abated elevator shafts
 - Clean top of elevator using HEPA vac
- Prior to an after projects impacting TSI piping elbows
 - Usually will be abatement related
 - HEPA vac or wet cleaning floors and horizontal surfaces in project area
- Prior to initiation of any response action
 - HEPA vac or wet clean area as appropriate

Form 5, available in Appendix 9, will be used to document any asbestos related cleaning that occurs within the JSOB. Completed forms will be placed in Appendix 5. See Section 2.3.5 for information on the Cleaning Record Form.

5.4 Maintenance, Repairs, and Preventative Measures

Maintenance recommendations discussed in the 2023 Asbestos Bulk Sampling Report included quarterly inspection of roof patches and protrusions. During the 2022/23 reinspection, seven areas of water damaged friable asbestos were noted on the 11th floor. Maintenance personnel indicated that the damage was due to roof leaks and the overall damage pattern indicated that leaks were most prevalent in areas where roof protrusions were present. Quarterly inspection of areas around roof protrusions and patches would allow maintenance to identify areas of potential water intrusion as soon as possible, decreasing the likelihood that water intrusion would damage the friable spray on asbestos fireproofing. This would be a visual inspection that would not disturb asbestos and can be completed by maintenance personnel, and documented using Form 6 (Appendix 9) and placed in Appendix 6 once completed. If evidence of a damaged patch or sealing around a roof protrusion is identified, the Designated Person must be notified immediately to schedule repair activities.

The 2023 report also discussed the need for replacement of damaged drop ceiling tiles and repair of their metal support grid. In many portions of the JSOB, the presence of ceiling tiles acts as a physical barrier to prevent asbestos containing dust or small pieces of the gray spray on asbestos fireproofing from falling onto occupants. In order to properly function in this manner, damaged ceiling tiles must be replaced. Ceiling tiles fit into a metal support grid and missing cross sections of this grid allow for gaps and improper fit of the ceiling tiles.



Hanging decorations, sun shades, etc. from the ceiling tiles damages the tiles. Hanging decorations or plants from the ceiling tile crossbars means the ceiling tiles do not fit snug against the crossbars, creating gaps that also create a potential pathway for dust or small pieces of ACM spray on fireproofing to fall through. Holes purposefully cut through ceiling tiles to run cables, wires, poles for dividers, etc., also damage the ceiling tiles.

To prevent future damage to ceiling tiles, no objects can be hung from or inserted into ceiling tiles, or their crossbar supports. Employees will be asked to remove all objects hanging from ceiling tiles or crossbars and a building-wide policy must be implemented to prevent any object being hung from ceiling tiles or crossbars in the future. If such objects are observed, the employee must be asked to remove the object and new tiles put in place if the object damages the ceiling tile.

If holes in a ceiling tile are necessary, such as to run cables or wires above the ceiling tiles, the holes must be sealed to the extent practicable and inspected quarterly at the same time roof patches and protrusions are inspected.

A preventative measure is defined in 40 CFR 763.83 as *actions taken to reduce disturbance (of asbestos), due to factors including, but not limited to, accessibility or, under certain circumstances, vibration, or air erosion*. Preventative measures must be taken whenever there is the potential for disturbance of friable asbestos. A recent example of a preventative measure was reinstalling gypsum wallboard on a wall of the seventh-floor fan room after a beam containing gray spray on fireproofing was discovered. The 2023 Asbestos Bulk Sampling report included recommended preventative measures for cables and wires placed above the drop ceiling tiles.

Currently wires, cables, and IT equipment are located in the area above the drop ceiling tiles and the pan decking where asbestos containing spray on fireproofing is present. Placing equipment on top of friable ACM, especially dragging cables across friable ACM, may damage the asbestos and cause potential exposure. In order to prevent both damage to the friable ACM above the ceiling tiles and contamination of equipment in this area, future projects involving placing cables or wire above the ceiling tiles must include placing them within conduits placed directly on top of the ceiling tiles as designed, on a project specific basis.

Pulling cables through conduits will not damage the friable ACM as long as the conduits themselves are not placed on the friable ACM. In addition, equipment placed within conduits or boxes (in the case of equipment that may not fit inside a conduit) prevents the equipment from being contaminated by asbestos, allowing for personnel with no asbestos training to handle the equipment once it has been removed from above the ceiling tiles. This is Class III OSHA work can be conducted on a project-by-project basis by contractors with appropriate O&M asbestos training.

5.5 Emergency Response Term Contractors

Emergency response can be classified into minor or major releases of asbestos fibers. In both cases responses require an initial response to stabilize the situation from DOT&PF staff and then a response from a term contractor to complete the response activities.

DOT&PF has the responsibility to keep a current list of qualified contractors who can respond to emergencies in an active term contract. Contractors must be qualified to provide emergency



services of building inspection, repair, abatement, monitoring and clearance sampling for asbestos and ACM. This term contract must be implemented within 4 months of AMP finalization and kept current thereafter.

5.6 Minor Fiber Release Actions

A minor fiber release event is defined in 40 CFR 763.83 as the falling or dislodging of three square or linear feet or less of friable ACM. Minor fiber release actions must be in compliance with OSHA regulations 29 CFR 1910 and 1926. In the event of a minor fiber release, M&O personnel will conduct the following emergency response action to stabilize the area:

- Inform the Designated Person
- Remove all personnel from the area that are not part of emergency response action
- Shut off the HVAC system to the impacted area (if possible)
- Closure of louvres is acceptable
- Stabilize the area
 - Repair damaged piping, roofing, etc. that caused the release
- Erect a temporary enclosure around the affected area
 - The enclosure must:
 - Be made of plastic sheeting
 - Be taped to both the floor and pan decking/drywall ceiling (if possible)
 - If the sheeting cannot be attached to pan decking without disturbing ACM, attach to the drop ceiling tile metal grid system
- Saturate the debris using wet methods
- Place the asbestos debris in a sealed, leak-tight container
 - Dispose of the container in accordance with local, state, and federal regulations
OR
 - Leave the sealed container within the enclosed area until disposal can occur

In the event of a minor fiber release, the Designated Person shall:

- Contact the Employee Interface Contact and provide the following information:
 - That a minor release has occurred
 - Location of the release
 - That the release has been stabilized
 - Timeline (if available) that employees will be excluded from the area
- Contact the appropriate Term Contractor for further cleanup and repair actions
 - Schedule the cleanup and repair actions to occur as soon as possible
 - Cleanup must include using wet methods for cleaning of all affected horizontal surfaces and carpets
 - Cleaning and housekeeping efforts must be in compliance with 29 CFR 1910.1001(k)
- Contact the Term Contract Project Designer to determine further response actions, if necessary



5.7 Major Fiber Release Actions

A major fiber release event is defined in 40 CFR 763.83 as the falling or dislodging of greater than three square or linear feet of friable ACM. Major fiber release actions must be in compliance with OSHA regulations 29 CFR 1910 and 1926. In the event of a major fiber release, M&O personnel will conduct the following emergency response action to stabilize the area:

- Inform the Designated Person
- Remove all personnel from the area that are not part of emergency response action
- Shut off the HVAC system to the impacted area (if possible)
 - Closure of louvres is acceptable
- Stabilize the area
 - Repair damaged piping, roofing, etc. that caused the release
- Erect a temporary enclosure around the affected area
 - The enclosure must
 - Be made of plastic sheeting
 - Be taped to both the floor and pan decking/drywall ceiling (if possible)
 - If the sheeting cannot be attached to pan decking without disturbing ACM, attach to the drop ceiling tile metal grid system
- Saturate the debris using wet methods
- Place appropriate signs and barriers in the area to keep personnel out until response actions have been completed.

In the event of a major fiber release, the Designated Person shall:

- Contact the Employee Interface Contact and provide the following information:
 - That a major release has occurred
 - Location of the release
 - That the release has been stabilized
 - Timeline (if available) that employees will be excluded from the area
- Contact the appropriate Term Contractor for further cleanup and repair actions
 - Schedule the cleanup and repair actions to occur as soon as possible
 - Cleanup must include using wet methods for cleaning of all affected horizontal surfaces and carpets
 - Cleaning and housekeeping efforts must be in compliance with 29 CFR 1910.1001(k)
- Contact the Term Contract Project Designer to determine further response actions

5.8 General Response Actions

Response actions are defined in 40 CFR 763.83 as *a method, including removal, encapsulation, enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACBM*. Examples of response actions include repair of damaged TSI piping elbows or abatement of an area of asbestos containing spray on fireproofing. Response actions must occur as soon as possible after identification of damaged ACM, especially damage that results in a minor or major fiber release.



Response actions shall conform to 40 CFR 763.90. If response actions become necessary, the Building Owner may choose from the following options as outlined in 40 CFR 763.90, as long as the chosen response action is protective of human health and the environment.

Thermal System Insulation

If the TSI is damaged or significantly damaged, general options include:

- Repair the area
- If repair is not possible due to technological factors, remove the damaged material
- Maintain remaining TSI and its covering in an intact and undamaged state

Damaged Friable Surfacing or Miscellaneous ACM

General options for damaged friable surfacing or miscellaneous ACM include:

- Encapsulate the material
- Enclose the material
- Remove the damaged material
- Repair the damaged material

Significantly Damaged Surfacing or Miscellaneous ACM

If surfacing or miscellaneous ACM is significantly damaged, options include:

- Immediately isolate the functional space
- restrict access if necessary to protect human health
- Enclose or encapsulate the damaged area
- Remove material if enclosure/encapsulation is not protective of human health

Small-scale, short duration response actions, including emergency response and stabilization of an area after a minor or major fiber release, may be completed by M&O personnel, or appropriately trained third party contractors. All other response actions must be designed by a person with AHERA Project Designer certification and carried out by persons with the appropriate level of training for the chosen response action.

Whenever a response action is made, Form 8 (Implementation of Response Actions Form) must be completed. Blank forms can be found in Appendix 9. Completed forms will be put in Appendix 8.



6.0 ASBESTOS MANAGEMENT

6.1 Manage in Place

Non-friable asbestos, or friable asbestos that is considered in good condition, may be safely managed in place. Managing in place entails leaving the asbestos in place while conducting periodic monitoring of the identified materials to ensure they remain in good condition. The majority of the ACM within the building was considered to be in good condition during a condition survey conducted during the 2022/2023 asbestos bulk sampling activities and may be managed in place. Unless visibly damaged, the following ACM may be managed in place:

- Joint compound
- Mastics
 - All colors
- Vinyl flooring
- Gray spray on fireproofing

Surveillance, as described in Section 5.1, is the primary tool used to manage ACM in place. Once ACM is classified as damaged, it must be repaired or abated as soon as possible to prevent potential exposure. Preventative measures must also be taken to minimize the risk of disturbance if the damaged asbestos may become friable.

6.2 Abatement

Abatement is the permanent removal of ACM. ACM can be managed in place until it is abated, but efforts must be made to ensure friable, damaged asbestos is abated first. The 2023 Asbestos Bulk Sampling Report made recommendations for abatement based on assessed condition of the ACM, building occupant concerns, and the goals of the Building Owner. Under 40 CFR 763.93(e)(6), an AMP must contain specific recommendations for necessary response actions. The specific recommendations, as set out in the 2023 Report, include abatement of specific areas of damaged friable ACM and are discussed in the following sections. Abatement is considered a response action and must adhere to Section 6.2.

6.2.1 Removal of Spray on Fireproofing in 9th Floor Channel Iron

Floors 8 – 11 of the Juneau State Office Building are open to a central atrium. Floors 9 – 11 have windows that overlook this central atrium. On the 9th floor, channel iron is located above the drop ceiling on the central walls bordering the atrium. Pieces of loose fireproofing have fallen/been placed within this channel iron. The first priority is to remove the loose asbestos containing fireproofing within the channel iron on this floor. Appendix 1 shows the location of the loose asbestos spray on fireproofing and estimated quantities (500 square feet).

This work is OSHA Class III work, which is defined in 40 CFR 1926.1101(b) as “...*repair and maintenance operations, where “ACM”, including TSI and surfacing ACM and PACM, is likely to be disturbed.*” In addition to removal of the loose fireproofing within the channel iron, replacement of drop ceiling tiles within the work area is recommended.

6.2.2 Abatement of Elevator Shafts

There are four elevator shafts within the building. The shaft housing Elevator 3 has previously been abated. The remaining three elevator shafts house Elevators 1/2, Elevators 4/5, and Elevators 6/7. Gray spray on fireproofing, which contains asbestos, is present throughout these



three elevator shafts (Figures 1-11, Appendix 1). Abatement of asbestos containing spray on fireproofing within the elevators was recommended in both the 1989 and 2023 reports.

The elevators are used by all persons within the JSOB and are used extensively throughout the day. Asbestos containing fireproofing within the elevator shafts are subject to erosion by both air and vibration, and was considered to be in damaged condition during the 2023 inspection. There is an estimated total of 19,800 square feet of damaged, friable asbestos within the three elevator shafts that require abatement. Square footage for each elevator shaft can be found on Figure 0.2 in Appendix 1.

6.2.3 Abatement of Damaged Spray on Fireproofing on 11th Floor

Asbestos containing spray on fireproofing is present on the corrugated pan decking and structural components above the drop ceiling on floors 5 – 11 of the Juneau State Office Building. This asbestos containing spray on fireproofing is considered friable. On the 11th floor, seven separate areas of water damaged spray on fireproofing have been identified (Figures P4 – P5, Appendix 1). There are two abatement options for this area:

- Abatement of the damaged areas only
- Abatement of all asbestos containing spray on fireproofing on the 11th floor

Abatement of the damaged areas of spray on fireproofing, with replacement of the fireproofing with similar, non-asbestos containing fireproofing is necessary. However, the seven damaged areas occur across the 11th floor pan decking (Figure 11, Appendix 1) and comprise an estimated 560 square feet. Due to the spacing of the damaged areas, and as abatement of ACM within the building is a goal, DOT&PF should consider abatement of all asbestos containing spray on fireproofing on the 11th floor (33,000 square feet) instead of limiting abatement to the damaged areas (Figure 11, Appendix 1).

Abatement of asbestos containing fireproofing for damaged areas only on the 11th floor is potentially OSHA Class III work. The square footage for Areas 11A – 11G can be found on Figure 11. Abatement of all asbestos containing spray on fireproofing on the 11th floor is considered OSHA Class I work. The square footage for each abatement option is shown on Figure 0.2, Appendix 1.

6.2.4 Abatement of Damaged Spray on Fireproofing on 5th Floor IT Room

Similar to the 11th floor, ACM spray on fireproofing is present above the drop ceiling on the 5th floor. An inspection of the Server Room on the 5th floor showed three areas, estimated to be 50 square feet each, where plastic had been installed above the drop ceiling tiles and fire suppression system (Figure P1, Appendix 1). IT personnel indicated areas 5A – 5C (Figure 5, Appendix 1) were the locations of previous water leaks. As the plastic was attached to the drop ceiling tiles, and the ceiling tiles within the Server Room were screwed into the metal support grid, the condition of the asbestos containing fireproofing could not be visually assessed. Based on information provided by the IT staff at the time, it is assumed the asbestos containing spray on fireproofing above Areas 5A – 5C is damaged and estimated at a total of 150 square feet. There are two abatement options for this area:

- Abatement of the damaged areas only
- Abatement of all asbestos containing spray on fireproofing in the 5th floor IT Server Room



Abatement of the areas of damaged asbestos is necessary. However, as with the 11th floor, abatement of the entire IT Server Room (7,250 square feet) will help to further DOT&PF's goal of abatement of all ACM within the building.

Removal of visibly damaged asbestos containing fireproofing and reapplication of non-asbestos containing fireproofing in areas 5A – 5C is considered OSHA / III work, and must include removal of overspray that may be present on wires, piping, etc., replacement of the removed areas with non-ACM fireproofing, and replacement of the drop ceiling tiles within the work area.

Abatement of all asbestos containing spray on fireproofing within the 5th floor IT Server Room is considered OSHA Class I work. The square footage for abatement of the IT Server Room can be found on Figure 0.2 in Appendix 1. This work must provide for abatement of all ACM fireproofing within the IT Server Room itself, (including overspray that may be present on wires, piping, etc.), replacement with non-ACM fireproofing, and replacement of all drop ceiling tiles within the work area.



7.0 NOTIFICATIONS

Building occupants, long term contractors such as security personnel, and short-term contractors must receive asbestos related notifications in specific circumstances. The Designated Person is responsible for informing the Employee Interface Contact when notifications require to be sent to State of Alaska employees working with the JSOB, as well as the content of each notification. The Employee Interface Contact is responsible for disseminating information to State of Alaska employees. The Designated Person is also responsible for ensuring applicable notifications are sent to long term contractors working within the building and informing the Custodial, Operations, and Maintenance Contact Person of what notifications must be given to short term contractors. The Custodial, Operations, and Maintenance Contact Person is in charge of providing applicable notifications to short term contractors prior to the long-term contractor beginning work.

7.1 Annual Notifications

State of Alaska employees working within the JSOB must be provided annual notifications of the following:

- That ACM is located in building
- Results of last Inspection
- Results of last Annual Surveillance
- Abatement or Repair work planned for the year
- The name, position, and contact information for the current AMP Contact Person
- Location of AMP
 - Both physical and digital versions

This information can also be included in the mandatory annual Asbestos Awareness Training if such training is conducted in-house. If this information is not included in the annual training, the Employee Interface Contact must send out an annual email notification to JSOB employees with the above information.

7.2 Short Term Contractor Notifications

Short term contractors include those conducting repairs, renovations, or maintenance of the building and its component, preventative actions, response actions such as abatement, responding to fiber release events, annual surveillance, or conducting a reinspection of the building. If the planned work may put a contractor in contact with ACM, they must be provided with the following notifications prior to beginning work:

- Locations of all known or suspected ACM within their work area
- Location of the AMP
- Contact information of the Custodial, Operations, and Maintenance Contact Person in case a fiber release event occurs during planned work

If the contractor is working in the building as part of demolition, renovation, or abatement activities, design documents must include a requirement for the contractor to provide the Designated Person and Building Owner an Asbestos Work Plan.



7.3 Minor and Major Fiber Release Notifications

In the event of a fiber release event while the building is occupied, potentially impacted employees must be immediately notified and removed from the area by response personnel. This includes both State of Alaska employees and long-term contractors such as security personnel. If the building is not occupied, such as after hours or over the weekend, on duty security personnel must be notified immediately and told to stay away from the impacted area. State of Alaska employees potentially impacted by the release must be notified via email and informed of where they must report to work until response actions have been completed. Notices must also be posted in conspicuous areas near and at the perimeter of the enclosure to prevent employees from entering the impacted area.

While not required, it is recommended to notify all building employees when a release event occurs. Once the area has been secured, a notice must be sent to employees with the following information:

- Reason for release
- Actions being taken to cleanup/mitigate release
- Precautions employees must take
- Anticipated timeline for response actions

Once response actions have been completed, impacted employees will be notified they can return to their normal workstations. Long-term contractors, such as security and custodial personnel, will be informed when it is safe to enter the impacted area. Additionally, all employees must be notified of the following:

- When response actions are completed
 - Results of any bulk or air testing that may have occurred

7.4 Public Notification

In order to notify the public that asbestos is present within the building, signs or flyers stating that asbestos is present within the building, as well as the location of the AMP, must be posted in an easily visible location where people may congregate. This notification must be kept up to date and changed if the location of the AMP changes.

Appendix 1: Quantities Figures

JUNEAU STATE OFFICE BUILDING ASBESTOS CONTAINING MATERIALS



JUNE 2024
24-2501

REVISIONS

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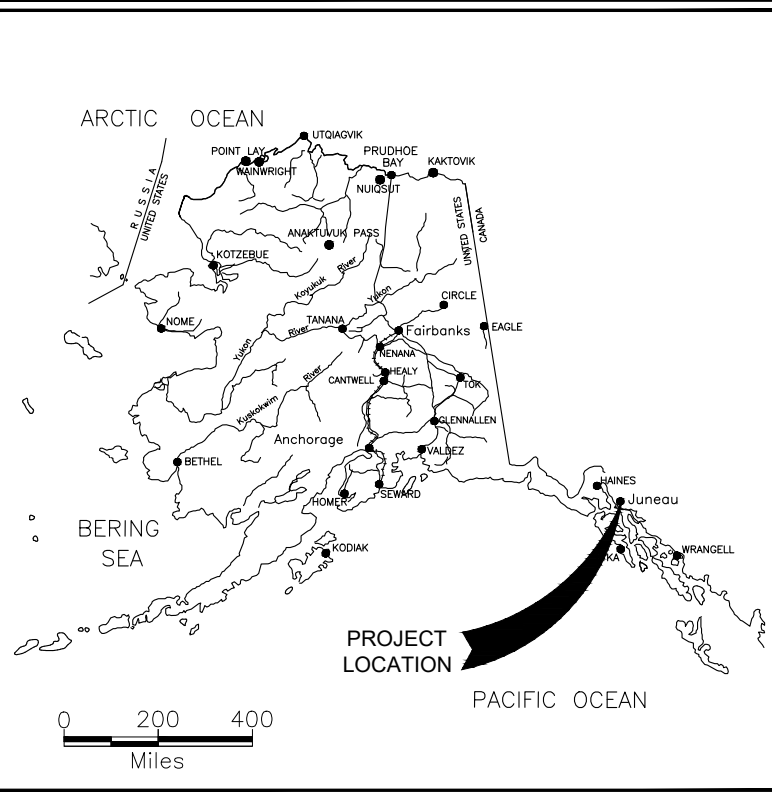
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0.1



SHEET INDEX:

0.1) TITLE PAGE, SHEET INDEX, LOCATION MAP, & VICINITY MAP

0.2) ASBESTOS QUANTITIES

0.3) NOTES & DAMAGED CEILING TILE COUNT

1) IDENTIFIED ACM: 1st FLOOR - PARKING GARAGE

2) IDENTIFIED ACM: 2nd FLOOR - PARKING GARAGE

3) IDENTIFIED ACM: 3rd FLOOR - PARKING GARAGE

4) IDENTIFIED ACM: 4th FLOOR - PARKING GARAGE

5) IDENTIFIED ACM: 5th FLOOR - IT OFFICES

6) IDENTIFIED ACM: 6th FLOOR - OFFICES

7) IDENTIFIED ACM: 7th FLOOR - OFFICES

8) IDENTIFIED ACM: 8th FLOOR - LOBBY, ATRIUM, & OFFICES

9) IDENTIFIED ACM: 9th FLOOR - OFFICES

10) IDENTIFIED ACM: 10th FLOOR - OFFICES

11) IDENTIFIED ACM: 11th FLOOR - OFFICES

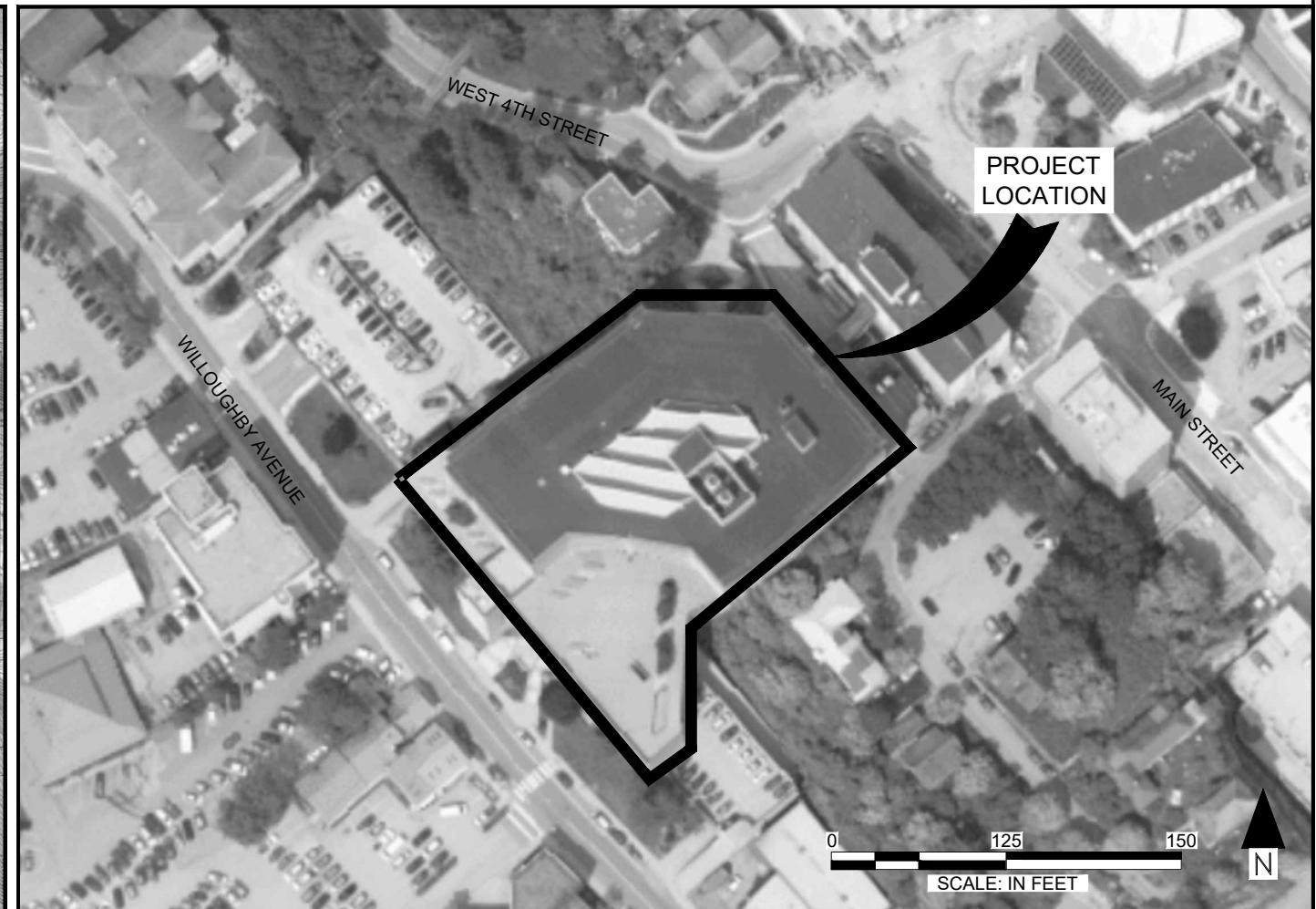
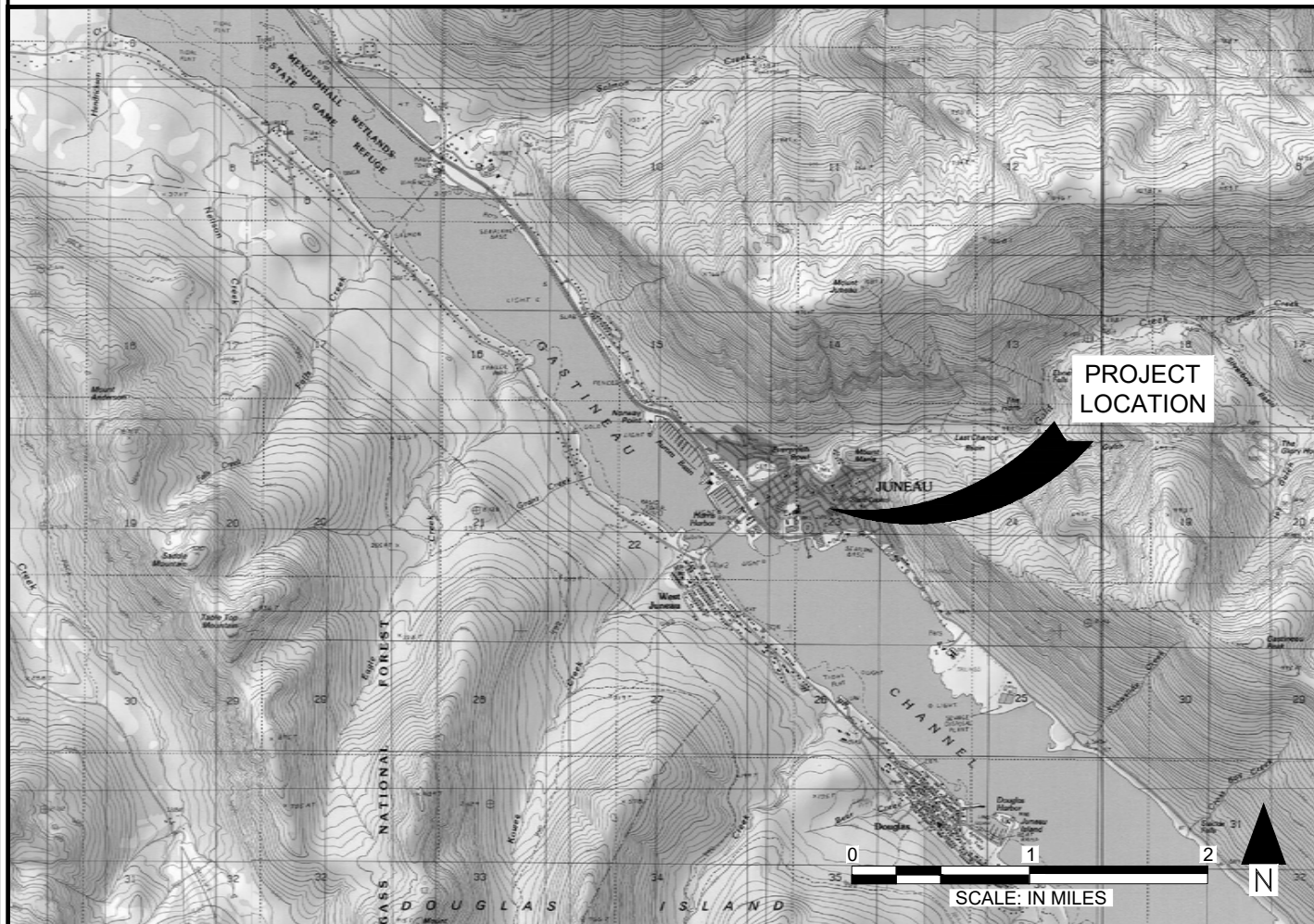
P1) PHOTOGRAPHS: 5th FLOOR - IT OFFICES

P2) PHOTOGRAPHS: 9th FLOOR - OFFICES

P3) PHOTOGRAPHS: 10th FLOOR - OFFICES

P4) PHOTOGRAPHS: 11th FLOOR - OFFICES

P5) PHOTOGRAPHS: 11th FLOOR - OFFICES



NOTES:

- 1) QUANTITIES SHOWN ARE ROUNDED ESTIMATES.
- 2) ASSUMED QUANTITIES OF SPRAY-ON FIREPROOFING BASED ON AREA OF ROOMS INACCESSIBLE DURING ASBESTOS ASSESSMENTS.
- 3) ASSUMED QUANTITIES OF JOINT COMPOUND AND MASTIC STATED AS "ALL" BECAUSE THESE ASBESTOS CONTAINING MATERIALS ARE NOT VISUALLY DISTINGUISHABLE FROM NON-ASBESTOS CONTAINING MATERIALS.
- 4) ELEVATORS 1 & 2 SHARE A SHAFT AND ARE OPEN, WITHOUT DIVIDER WALL, TO EACHOTHER.
- 5) ELEVATORS 4 & 5 SHARE A SHAFT AND ARE OPEN, WITHOUT DIVIDER WALL, TO EACHOTHER.
- 6) ELEVATORS 6 & 7 SHARE A SHAFT AND ARE OPEN, WITHOUT DIVIDER WALL, TO EACHOTHER.
- 7) ELEVATOR 3 IS AN INDIVIDUAL SHAFT, SEGREGATED WITH A DIVIDER WALL FROM ELEVATOR SHAFT 1/2, AND HAS BEEN ABATED OF ALL ASBESTOS CONTAINING FIREPROOFING.

Asbestos Containing Material Quantities					
Category	Description	Floor	Confirmed Quantity	Assumed Quantity	Total Quantity
Friable	Priority Abatement Area #1 - Fireproofing in Channel Iron	9	500 square feet	-	500 square feet
	Priority Abatement Area #2 - Fireproofing on Walls	Elevators 1 & 2	6,800 square feet	-	19,800 square feet
		Elevators 4 & 5	6,500 square feet	-	
		Elevators 6 & 7	6,500 square feet	-	
	Priority Abatement Area #3 - Damaged Fireproofing	11A	200 square feet	-	560 square feet
		11B	50 square feet	-	
		11C	50 square feet	-	
		11D	30 square feet	-	
		11E	20 square feet	-	
		11F	200 square feet	-	
		11G	10 square feet	-	
	Priority Abatement Area #4 - Damaged Fireproofing	5A	50 square feet	-	150 square feet
		5B	50 square feet	-	
		5C	50 square feet	-	
	Server Floor Area (Outlined) - Fireproofing	5	7,250 square feet	-	29,575 square feet
	Spray-on Fireproofing	5	20,750 square feet	1,575 square feet	
		6	12,750 square feet	500 square feet	13,250 square feet
		7	24,000 square feet	100 square feet	24,100 square feet
		8	22,500 square feet	300 square feet	22,800 square feet
		9	33,000 square feet	70 square feet	33,070 square feet
10		32,350 square feet	720 square feet	33,070 square feet	
	11	33,000 square feet	70 square feet	33,070 square feet	
Non-Friable Category I	Vinyl Tile	5	200 square feet	-	200 square feet
Non-Friable Category II	Joint Compound	5	240 square feet	ALL	ALL
		6	-	ALL	ALL
		7	1,500 square feet	ALL	ALL
		8	-	ALL	ALL
		9	175 square feet	ALL	ALL
		10	750 square feet	ALL	ALL
		11	1,750 square feet	ALL	ALL
	Mastic	5	200 square feet	ALL	ALL
		6	-	ALL	ALL
		7	90 linear feet	ALL	ALL
		8	-	ALL	ALL
		9	35 linear feet	ALL	ALL
		10	-	ALL	ALL
	Black Window Sealant	11	65 linear feet	ALL	ALL
		9	-	300 linear feet	300 linear feet
		10	-	300 linear feet	300 linear feet
		11	40 linear feet	260 linear feet	300 linear feet

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Department of Transportation
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ASBESTOS QUANTITIES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

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NOTES:

- 1) ELEVATORS COMPRISE PRIORITY AREA #2 FOR ABATEMENT. FRIABLE ACM FIREPROOFING HAS BEEN IDENTIFIED IN ELEVATOR SHAFTS 1, 2, 4, 5, 6, & 7. ACM FIREPROOFING IS PRESENT ON FLOORS 1-8 IN ELEVATOR SHAFTS 1 & 2. ACM FIREPROOFING IS PRESENT ON FLOORS 5-11 IN ELEVATOR SHAFTS 4-7.
 - 1.1) ELEVATOR SHAFT NUMBERS ARE DETAILED ON EACH FIGURE.
- 2) ACM SPRAY-ON FIREPROOFING IDENTIFIED ON 9TH FLOOR IS PRESENT IN THE CHANNEL IRON ONLY. CHANNEL IRON IS APPROXIMATELY 6" WIDE. FALLEN FIREPROOFING IDENTIFIED IN SOME AREAS AT UP TO 2' IN DEPTH.
- 3) ASBESTOS CONTAINING JOINT COMPOUND WITHIN THE STRUCTURE CANNOT VISUALLY BE DISTINGUISHED FROM NON-ACM JOINT COMPOUND. ALL JOINT COMPOUND SHOULD BE MANAGED AS AND ASSUMED TO CONTAIN ASBESTOS AND TESTED IF DAMAGED OR DISTURBED TO DETERMINE INDIVIDUAL LOCATIONS OF WORK FOR ASBESTOS CONTENT.
- 4) BLACK, TAN, & YELLOW MASTIC IS FOUND THROUGHOUT THE BUILDING AND CONTAINS ASBESTOS. ASBESTOS CONTAINING MASTIC CANNOT VISUALLY BE DISTINGUISHED FROM NON-ACM MASTICS. MASTIC SHOULD BE MANAGED IN PLACE AS ASBESTOS AND TESTED IF DAMAGED OR DISTURBED TO DETERMINE INDIVIDUAL LOCATIONS OF WORK FOR ASBESTOS CONTENT.
- 5) ALL BLACK WINDOW SEALANT ON INTERIOR WINDOWS SURROUNDING THE ATRIUM ON FLOORS 9-11 SHOULD BE ASSUMED TO CONTAIN ASBESTOS.
- 6) ASBESTOS CONTAINING HARD PIPE ELBOWS WERE IDENTIFIED IN A 1989 HAZARDOUS MATERIALS ASSESSMENT AND ONE WAS IDENTIFIED IN THE PARKING GARAGE. ALL HARD PIPE ELBOWS SHOULD BE ASSUMED TO CONTAIN ASBESTOS UNTIL CONFIRMED BY LABORATORY ANALYSIS NOT TO CONTAIN ASBESTOS.

Damage Ceiling Tile Count								
Floor	Cracked	Missing Tile	Holes	General Damage	Water Damage	Missing Crossbar	Total by floor	Areas Not Accessible During Assessment
5	16	1	34	150	10	28	239	IT "cage", OIT office areas
6	5	1	3	67	3	5	84	None
7	22	2	42	170	6	26	268	Grants and Contracts Offices
8 - "West Portion"	18	0	3	8	0	19	48	Food courts
8 - "East Portion"	12	0	11	78	5	12	118	None
9	27	0	70	81	2	66	246	None
10	14	0	27	110	1	4	156	None
11	20	0	39	43	31	34	167	None
Total Within Assessed Area	134	4	229	707	58	194	1326	-

TABLE NOTES:

- 1) NOT ALL AREAS WERE ACCESSIBLE FOR ASSESSMENT.
- 2) AREAS WHERE ACM SPRAY-ON FIREPROOFING HAS BEEN CONFIRMED ABATED WERE NOT ASSESSED FOR DAMAGED CEILING TILES AND ARE NOT INCLUDED IN TOTALS SHOWN.



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NOTES & DAMAGED CEILING TILE COUNT
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

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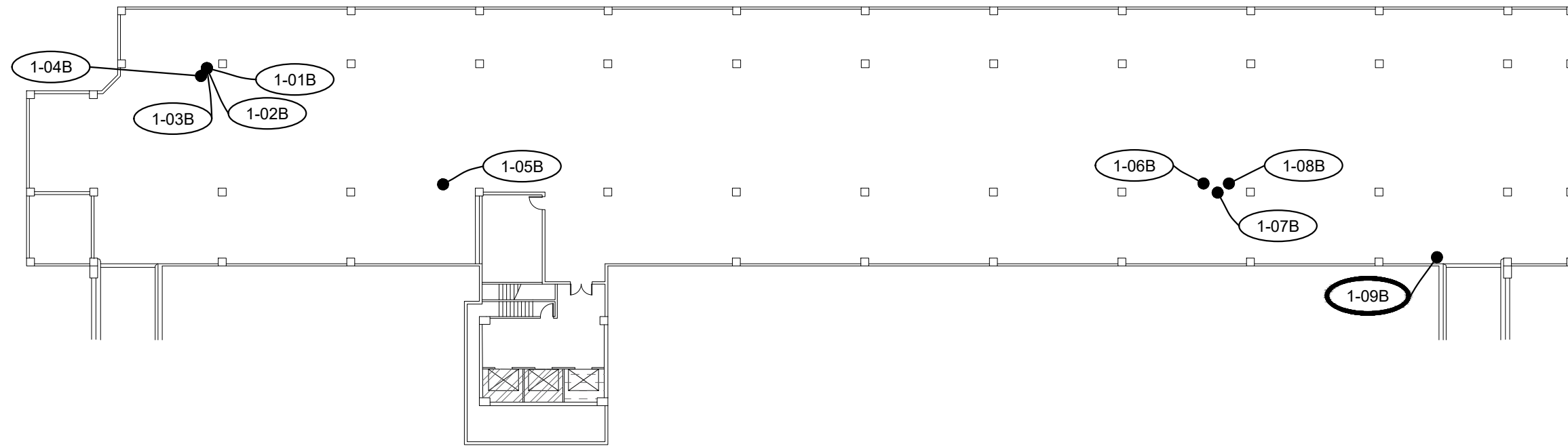
FLOOR 1: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

KNOWN/ASSUMED ACM:
 • TAN HARD PIPE ELBOW

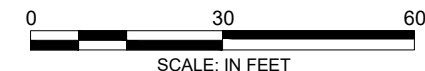
CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS
 • SPRAY-ON FIREPROOFING ON THE FIRST FLOOR

1st Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
1-01B	White Fireproofing	ND
1-02B	Gray Fireproofing	ND
1-03B	Tan Fireproofing	ND
1-04B	Gray Pipe Elbow & Yellow Fiberglass	Both ND
1-05B	Gray Fireproofing	ND
1-06B	Tan Fireproofing	ND
1-07B	Smooth Tan Fireproofing	ND
1-08B	Tan Chunky Fireproofing	ND
1-09B	Tan Hard Pipe Elbow	6% Amosite



LEGEND

- 0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ACM FIREPROOFING
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682

Department of Transportation and Public Facilities

IDENTIFIED ACM: 1st FLOOR - PARKING GARAGE
 ASBESTOS MANAGEMENT PLAN
 JUNEAU STATE OFFICE BUILDING

JUNE 2024
 24-2501

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FLOOR 2: ASBESTOS HAZARDS

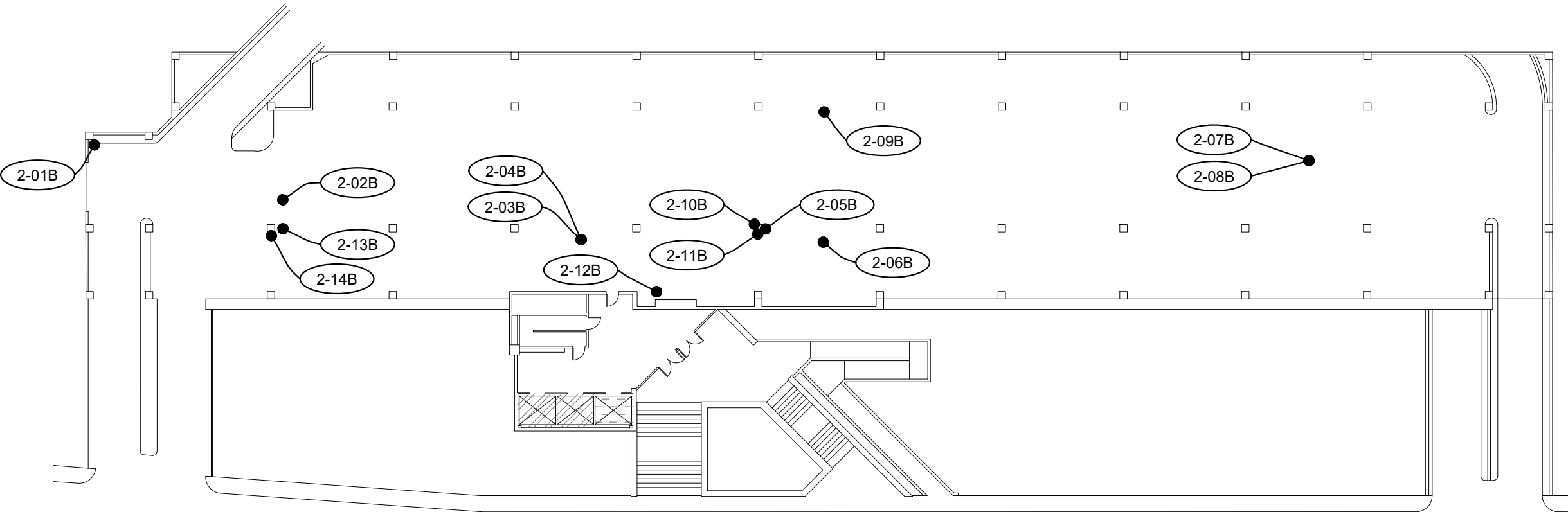
AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

KNOWN/ASSUMED ACM:
 • NONE IDENTIFIED

CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS
 • SPRAY-ON FIREPROOFING ON THE SECOND FLOOR

2nd Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
2-01B	Light Tan Fireproofing	ND
2-02B	Dark Gray Fireproofing	ND
2-03B	Off-White Fireproofing	ND
2-04B	Gray Fireproofing	ND
2-05B	Gray Hard Pipe Elbow	ND
2-06B	Tan Speckled Fireproofing	ND
2-07B	Tan & Black Speckled Fireproofing	ND
2-08B	Tan Smooth Fireproofing	ND
2-09B	Dark Gray Fibrous Fireproofing	ND
2-10B	Dark Gray Hard Fireproofing	ND
2-11B	Brown/Gray/Black Fireproofing	ND
2-12B	White Pipe Wrap & Yellow Fiberglass	Both ND
2-13B	Gray/White Pipe Elbow, White Pipe Wrap, & Yellow Fiberglass	All ND
2-14B	Dark Brown Pipe Wrap	ND

Department of Transportation
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IDENTIFIED ACM: 2nd FLOOR - PARKING GARAGE
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
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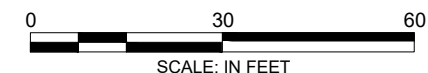
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2

LEGEND

- ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ACM FIREPROOFING
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



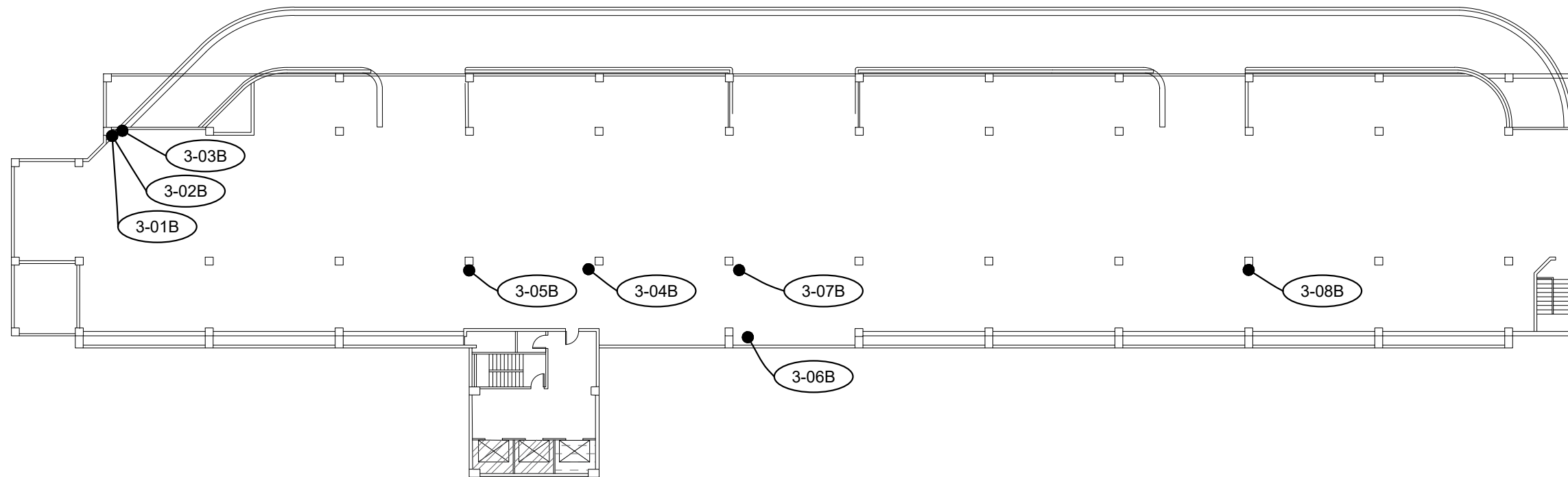
FLOOR 3: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

KNOWN/ASSUMED ACM:
 • NONE IDENTIFIED

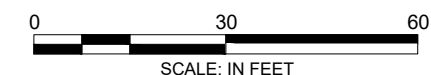
CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS
 • SPRAY-ON FIREPROOFING ON THE THIRD FLOOR

3rd Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
3-01B	Black Ceiling Membrane	ND
3-02B	Gray Fireproofing	ND
3-03B	White Fireproofing	ND
3-04B	Off-White Fibrous Fireproofing	ND
3-05B	White Pipe Elbow & Yellow Insulation	Both ND
3-06B	Gray Insulation	ND
3-07B	Gray Pipe Cap	ND
3-08B	Gray & Yellow Pipe Debris - Floor	Both ND



LEGEND

- 0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ACM FIREPROOFING
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682

Department of Transportation and Public Facilities



IDENTIFIED ACM: 3rd FLOOR - PARKING GARAGE
 ASBESTOS MANAGEMENT PLAN
 JUNEAU STATE OFFICE BUILDING

JUNE 2024
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FLOOR 4: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

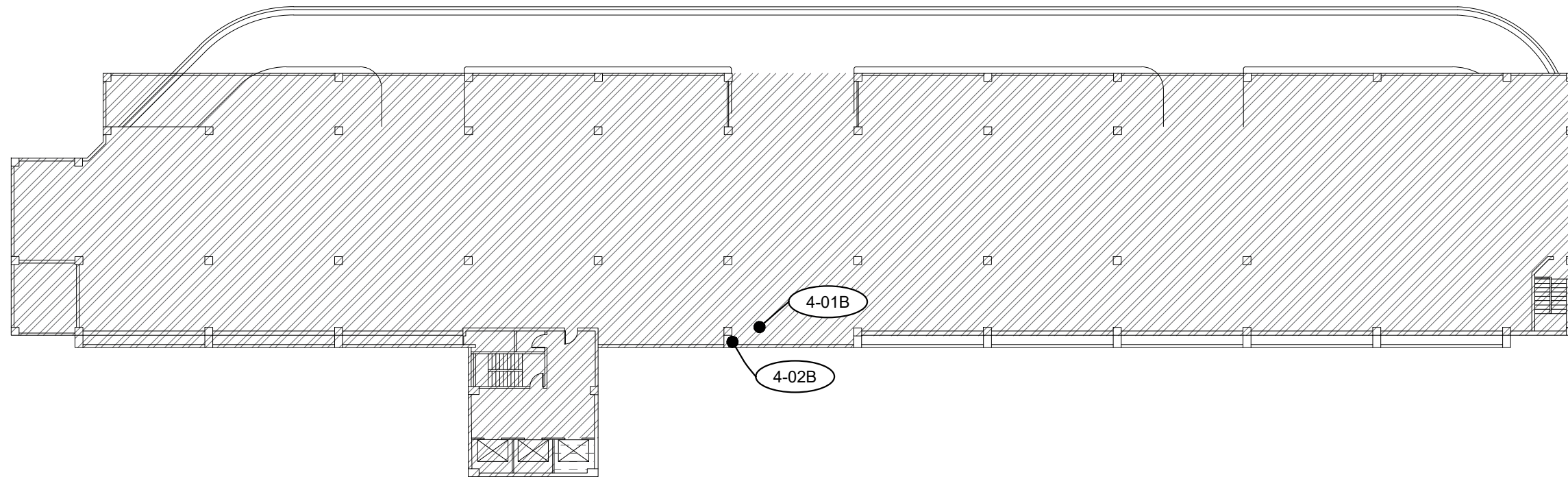
KNOWN/ASSUMED ACM:

- GRAY SPRAY-ON FIREPROOFING (ABOVE HARD LID CEILING)

CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS

- NONE IDENTIFIED

4th Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
4-01B	White GWB, Joint Compound, & Texture	All ND
4-02B	Gray Fireproofing	ND



Department of Transportation
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IDENTIFIED ACM: 4th FLOOR - PARKING GARAGE
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

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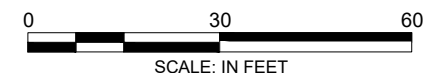
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4

LEGEND

- ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ACM FIREPROOFING
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



FLOOR 5: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

DROP CEILING DISTURBANCE
ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

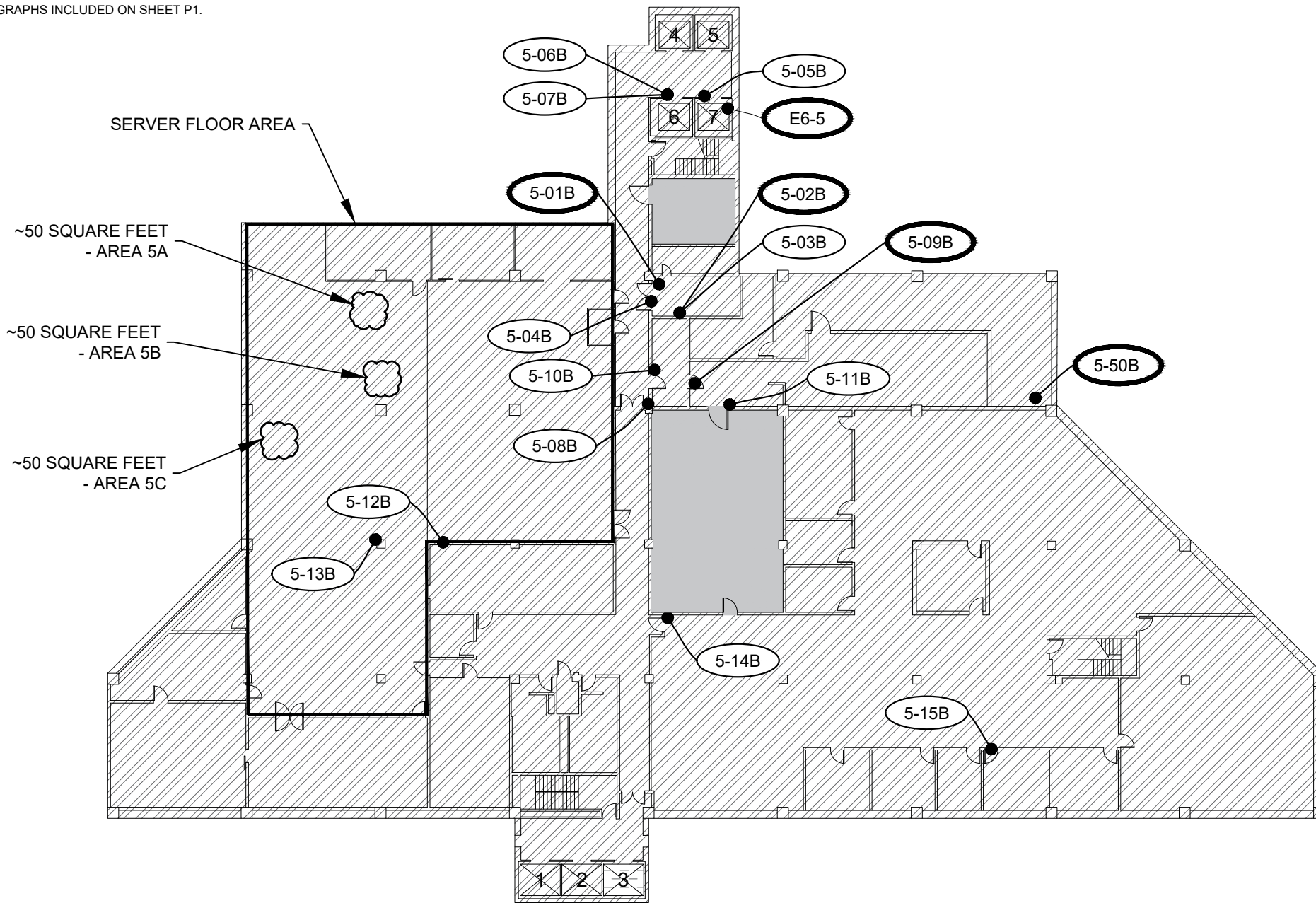
KNOWN/ASSUMED ACM:

- GRAY SPRAY-ON FIREPROOFING
- JOINT COMPOUND ASSOCIATED WITH WALLS
- BEIGE FLOOR TILE AND ASSOCIATED BLACK MASTIC

CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS

- BLUE SPRAY-ON FIREPROOFING

PHOTOGRAPHS INCLUDED ON SHEET P1.

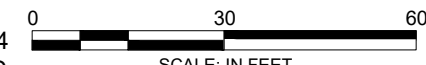


5th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
5-01B	Gray Fireproofing	25% Chrysotile
5-02B	White Joint Compound	1.5% Chrysotile
5-02B	Pink GWB & White Texture	Both ND
5-03B	Black Cove Base & Yellow Mastic	Both ND
5-04B	Brown/Green Floor Tile & Red Mastic	Both ND
5-05B	White Floor Tile & Yellow Mastic	Both ND
5-06B	Tan Material & Gray Mastic - Under Tile	Both ND
5-07B	Brown/Beige Floor Tile & Gray Mastic	Both ND
5-08B	Gray Floor Tile & Yellow Mastic	Both ND
5-09B	Beige Floor Tile	1.5% Chrysotile
5-09B	Black Mastic	8% Chrysotile
5-10B	Dark Brown Cove Base & Brown Mastic	Both ND
5-11B	Gray Acoustical Wall Tile	ND
5-12B	Gray Hard Wall	ND
5-13B	Black Cove Base & Yellow Mastic	Both ND
5-14B	Navy Blue Cove Base & Yellow Mastic	Both ND
5-15B	Gold Mastic	ND
5-50B	Light Gray Fireproofing	6% Chrysotile

Elevator Shaft		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
E6-5	Light Gray Fireproofing	7% Chrysotile

LEGEND

	ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)	} SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS		AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED		AREA OF KNOWN ACM FIREPROOFING ABATEMENT
	ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)			ACM FIREPROOFING		PRIORITY ABATEMENT AREA #4 DAMAGED ACM FIREPROOFING



NOTE: SEE LOCATIONS 19, 20, & 21 ON FIGURE xxx FOR PHOTOS OF PRIORITY ABATEMENT AREAS.

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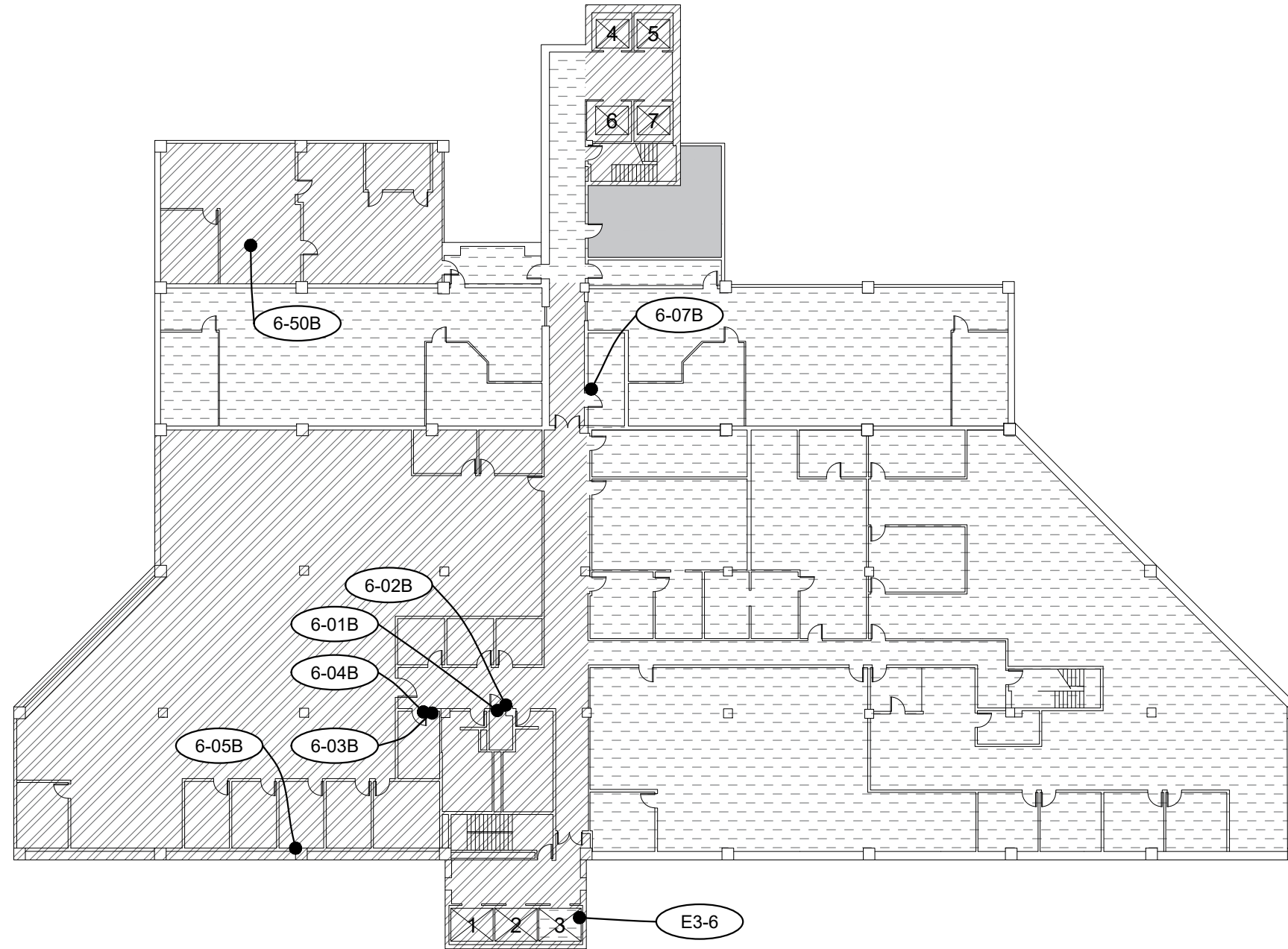
FLOOR 6: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

DROP CEILING DISTURBANCE
ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

- KNOWN/ASSUMED ACM:**
- GRAY SPRAY-ON FIREPROOFING
 - JOINT COMPOUND ASSOCIATED WITH WALLS
 - BLACK MASTIC ASSOCIATED WITH FLOORING
 - TAN MASTIC ASSOCIATED WITH COVE BASE

- CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS**
- BLUE SPRAY-ON FIREPROOFING

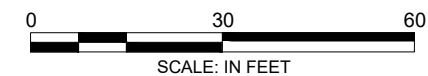


6th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
6-01B	Brown Floor Tile & Black/Yellow Mastic	Both ND
6-02B	Black Cove Base, Tan Mastic, & White Joint Compound	All ND
6-03B	Yellow Mastic & White Joint Compound	Both ND
6-04B	Blue Vinyl Sheet & Yellow Mastic	Both ND
6-05B	White GWB, Joint Compound, & Plaster	All ND
6-06B	Gray/White Ceiling Tile	ND
6-07B	Brown Cove Base	ND
6-07B	Black Mastic	<1% Chrysotile
6-50B	Tan/Gray Fireproofing	ND

Elevator Shaft		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
E3-6	Light Blue Fireproofing	ND

LEGEND

- 0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 - ACM FIREPROOFING
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682

Department of Transportation and Public Facilities



IDENTIFIED ACM: 6th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG
DRAWN BY: SPH
CHECKED BY: PLB
SCALE: AS SHOWN
DATE: 06/14/2024

NOT FOR CONSTRUCTION

SHEET NO.

6

FLOOR 7: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

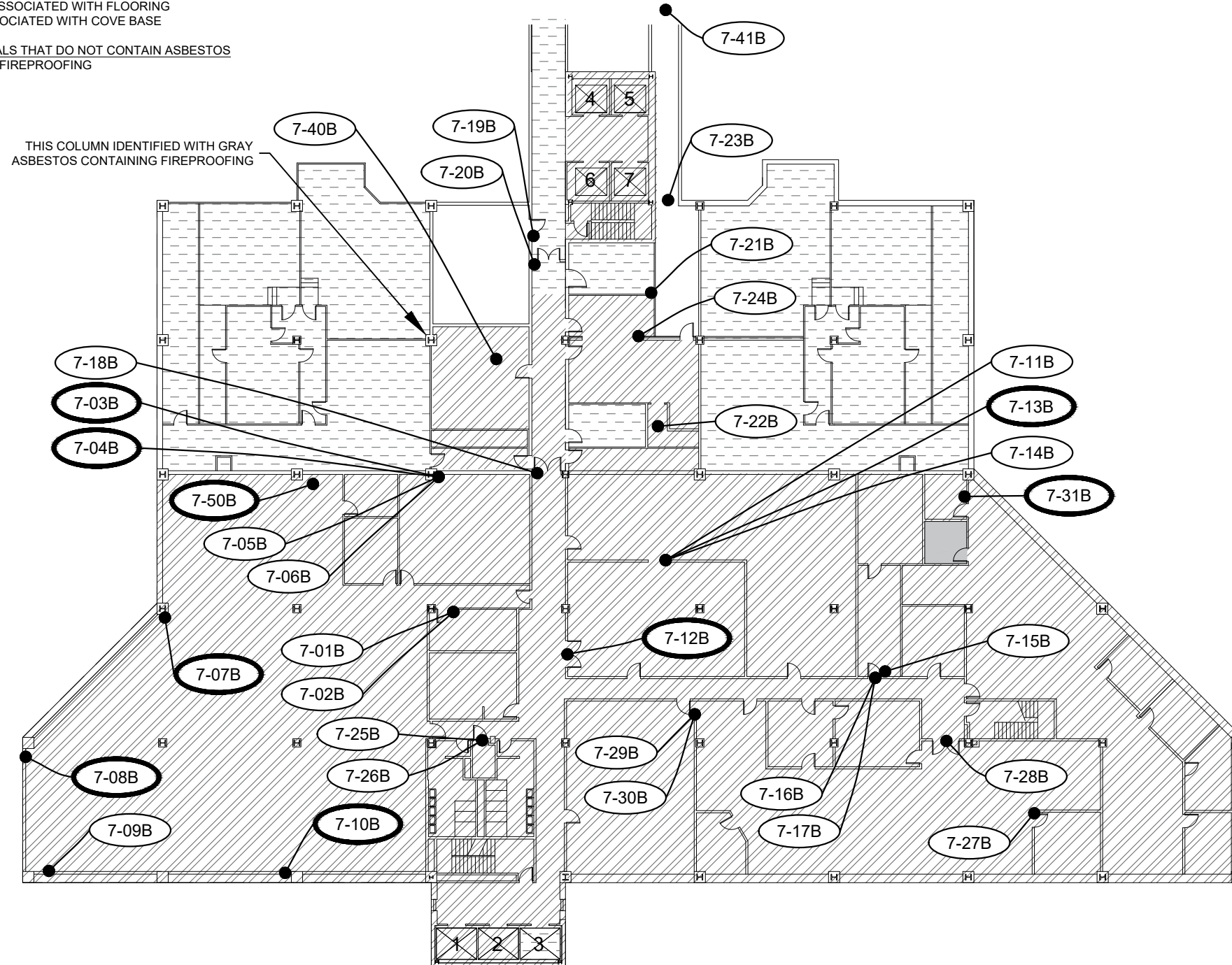
DROP CEILING DISTURBANCE
ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

KNOWN/ASSUMED ACM:

- GRAY SPRAY-ON FIREPROOFING
- JOINT COMPOUND ASSOCIATED WITH WALLS
- BLACK MASTIC ASSOCIATED WITH FLOORING
- TAN MASTIC ASSOCIATED WITH COVE BASE

CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS

- BLUE SPRAY-ON FIREPROOFING

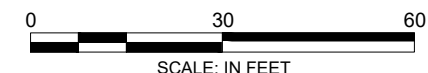


7th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
7-01B	Brown Cove Base & Brown/Yellow Mastic	Both ND
7-02B	Green Carpet & Gray Leveler	Both ND
7-03B	White Joint Compound	4.75% Chrysotile
7-03B	Brown/Gray GWB	ND
7-04B	Gray Joint Compound	3.5% Chrysotile
7-04B	Brown/Tan GWB	ND
7-05B	Tan/White Ceiling Tile #1	ND
7-06B	Gray Ceiling Tile #2	ND
7-07B	Brown Cove Base	ND
7-07B	Light Tan Mastic	2.50% Anthophyllite
7-08B	White Joint Compound	3.00% Chrysotile
7-08B	Brown/Gray GWB	ND
7-09B	Black Cove Base & Gray/Tan Mastic	Both ND
7-10B	Gray Joint Compound	4.22% Chrysotile
7-10B	Brown/Tan GWB	ND
7-11B	Brown Cove Base & Yellow Mastic	Both ND
7-12B	Brown Cove Base	ND
7-12B	Tan Mastic	1.75% Anthophyllite
7-12B	Tan/White Joint Compound	ND
7-13B	Black Mastic	6% Chrysotile
7-13B	Tan Vinyl Flooring	ND
7-14B	Gray Floor Leveler & Clear Mastic	Both ND
7-15B	Brown Cove Base & Yellow Mastic	Both ND
7-16B	Red Tape & Black Mastic	Both ND
7-17B	Gray/Yellow Mastic	ND
7-18B	Blue Mastic	ND
7-19B	Various Colors of Mastic	ND
7-20B	Burgandy Cove Base & Tan Mastic	Both ND
7-21B	Blue Fireproofing	ND
7-22B	White Ceiling Tile	ND
7-23B	Gray/Yellow Pipe Insulation	ND
7-24B	Tan/White Joint Compound	ND
7-25B	Tan Floor Tile & Brown Mastic	Both ND
7-26B	Silver Mastic	ND
7-27B	Clear Mastic	ND
7-28B	Yellow Mastic & Gray Leveler	Both ND
7-29B	Yellow Mastic & Gray Leveler	Both ND
7-30B	Gray Mastic	ND
7-31B	Black Mastic	6% Chrysotile
7-31B	Gray Floor Tile	<1% Chrysotile
7-50B	Gray Fireproofing	6% Chrysotile

7th Floor - Above Ceiling		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
7-40B	Gray Spray-On Fireproofing	ND
7-41B	Gray Hard Pipe Elbow & Yellow Wrap	Both ND

LEGEND

ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS) } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS
 ASBESTOS BULK SAMPLE LOCATION (>=1% ASBESTOS)
 AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 ACM FIREPROOFING
 AREA OF KNOWN ACM FIREPROOFING ABATEMENT



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682

Department of Transportation and Public Facilities



IDENTIFIED ACM: 7th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG
DRAWN BY: SPH
CHECKED BY: PLB
SCALE: AS SHOWN
DATE: 06/14/2024

NOT FOR CONSTRUCTION

SHEET NO.
7

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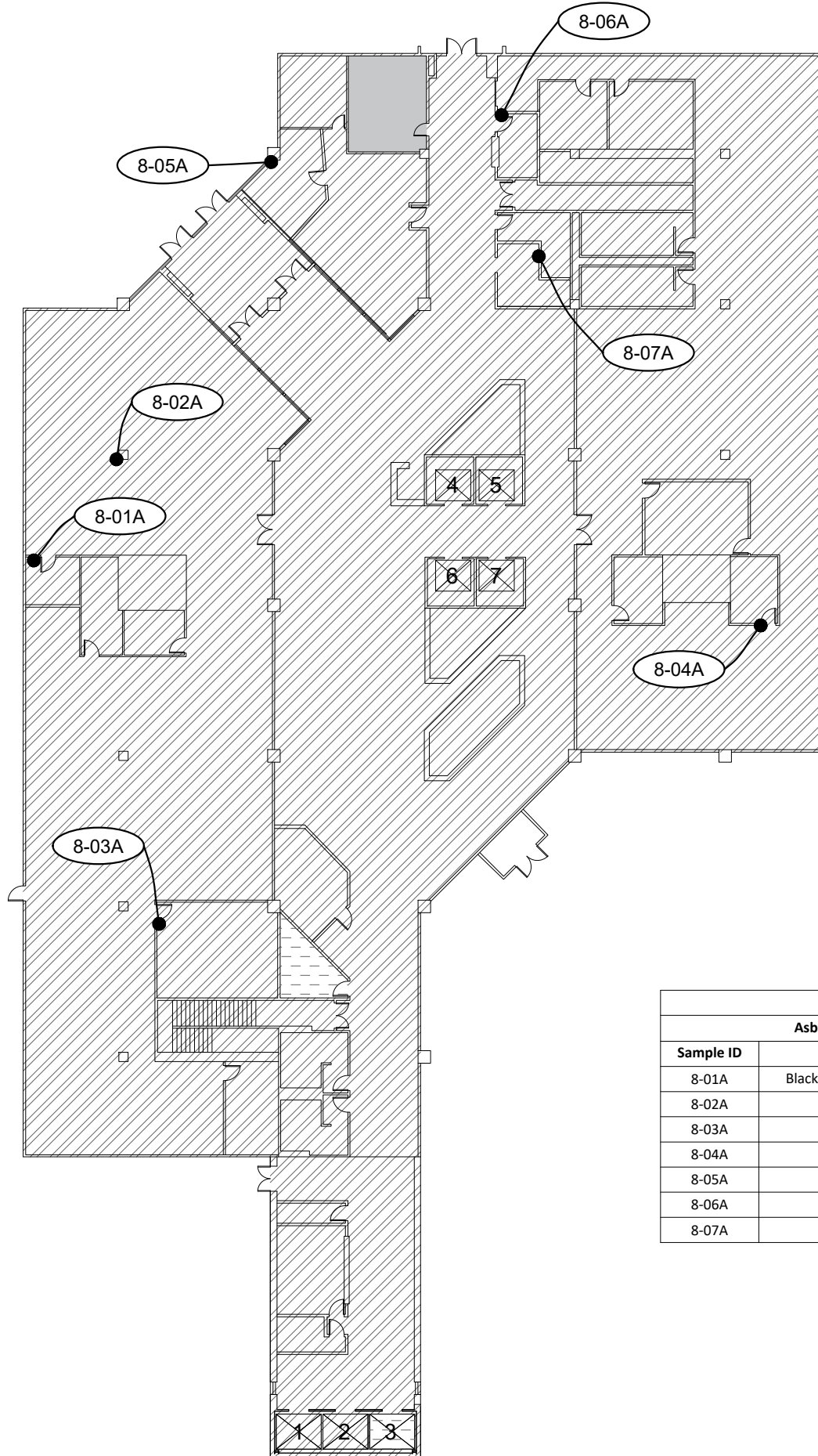
FLOOR 8: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

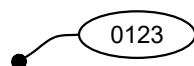
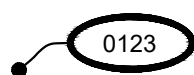



DROP CEILING DISTURBANCE
ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

- KNOWN/ASSUMED ACM:**
- GRAY SPRAY-ON FIREPROOFING
 - JOINT COMPOUND ASSOCIATED WITH WALLS

- CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS**
- BLUE SPRAY-ON FIREPROOFING



LEGEND

-  ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 -  AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 -  ACM FIREPROOFING
 -  AREA OF KNOWN ACM FIREPROOFING ABATEMENT
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

8th Floor - Main Floor Atrium		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
8-01A	Black Cove Base, Beige Mastic, & White Joint Compound	All ND
8-02A	Brown Cove Base & Tan Mastic	Both ND
8-03A	Gray Vinyl Flooring & Tan Mastic	Both ND
8-04A	Brown Cove Base & Tan Mastic	Both ND
8-05A	Black Cove Base & Tan Mastic	Both ND
8-06A	Beige with Black Fleck Vinyl	ND
8-07A	Beige with Black Fleck Vinyl	ND



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation and Public Facilities

IDENTIFIED ACM: 8th FLOOR - LOBBY, ATRIUM, & OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG

DRAWN BY: SPH

CHECKED BY: PLB

SCALE: AS SHOWN

DATE: 06/14/2024

NOT FOR CONSTRUCTION

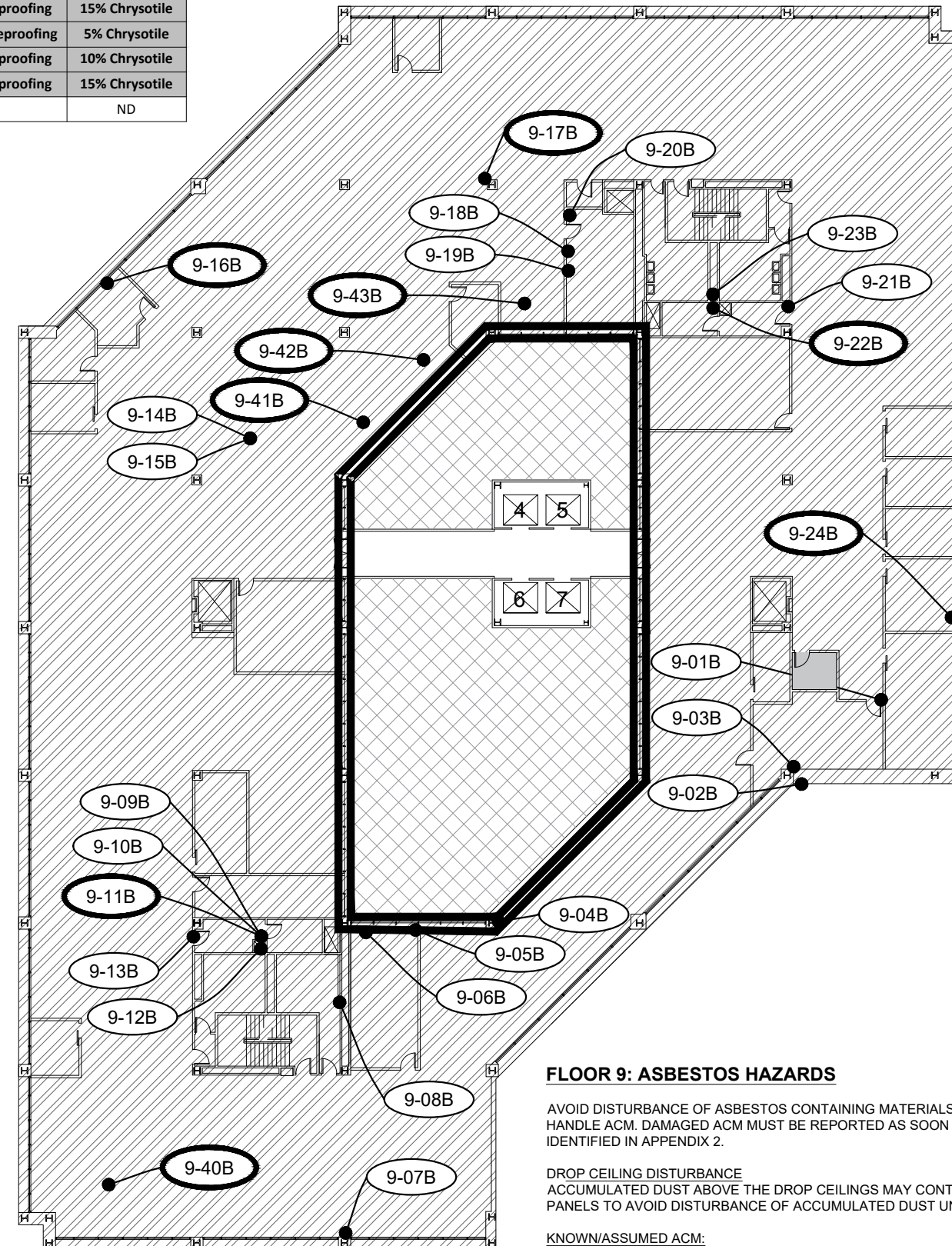
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Plotted 6/14/2024 3:29 PM by Sean Heaney

9th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
9-01B	Black Cove Base & Beige Mastic	Both ND
9-02B	Brown Insulation	ND
9-03B	Brown/White GWB	ND
9-04B	Gray Wall	ND
9-05B	Brown/Gray Ceiling Tile #1	ND
9-06B	Brown Ceiling Tile #2	ND
9-07B	Black Cove Base & Gray Mastic	Both ND
9-08B	Gray Ceiling Tile #3	ND
9-09B	Gray Floor Tile	<1% Chrysotile
9-10B	Green Floor Tile	ND
9-11B	Brown Cove Base	ND
9-11B	Brown Mastic	2.75% Anthophyllite
9-12B	Brown/Gray GWB	ND
9-13B	Brown Carpet Mastic	ND
9-14B	Gray Ceiling Tile #1	ND
9-15B	Brown/Gray Ceiling Tile #2	ND
9-16B	Black Cove Base	ND
9-16B	Brown Mastic	2.25% Anthophyllite
9-17B	White Joint Compound	10% Chrysotile
9-17B	Brown Mastic	5.00% Anthophyllite
9-18B	Tan Floor Tile & Gray/Yellow Mastic	Both ND
9-19B	Red Floor Tile & Brown/Gray Mastic	Both ND
9-20B	Gray Floor Tile & Gray/Tan Mastic	Both ND
9-21B	Tan Carpet Mastic	ND
9-22B	Brown/Gray GWB	ND
9-22B	White Joint Compound	3.5% Chrysotile
9-23B	Green Fireproofing	ND
9-24B	Gray/Tan GWB	ND
9-24B	Gray/Tan Joint Compound	5.25% Chrysotile

9th Floor - Above Ceiling		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
9-40B	Light Gray Spray-On Fireproofing	15% Chrysotile
9-41B	Gray/White Spray-On Fireproofing	5% Chrysotile
9-42B	Light Gray Spray-On Fireproofing	10% Chrysotile
9-43B	Light Gray Spray-On Fireproofing	15% Chrysotile
9-43B	Gray Ceiling Tile	ND



LEGEND

- ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 - ACM FIREPROOFING
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ATRIUM, OPEN TO BELOW
 - PRIORITY ABATEMENT AREA #1
 - ACM SPRAY-ON FIREPROOFING IN CHANNEL IRON ABOVE DROP CEILING
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

FLOOR 9: ASBESTOS HAZARDS

AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

DROP CEILING DISTURBANCE
ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

- KNOWN/ASSUMED ACM:**
- GRAY SPRAY-ON FIREPROOFING
 - JOINT COMPOUND ASSOCIATED WITH WALLS
 - BLACK SEALANT ASSOCIATED WITH ATRIUM WINDOWS
 - BROWN/YELLOW/WHITE MASTIC ASSOCIATED WITH COVE BASE
 - PATTERNED FLOOR TILE IN STORAGE CLOSETS

- CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS**
- BLUE SPRAY-ON FIREPROOFING

PHOTOGRAPHS INCLUDED ON SHEET P2.



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation
and Public Facilities

IDENTIFIED ACM: 9th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG
DRAWN BY: SPH
CHECKED BY: PLB
SCALE: AS SHOWN
DATE: 06/14/2024

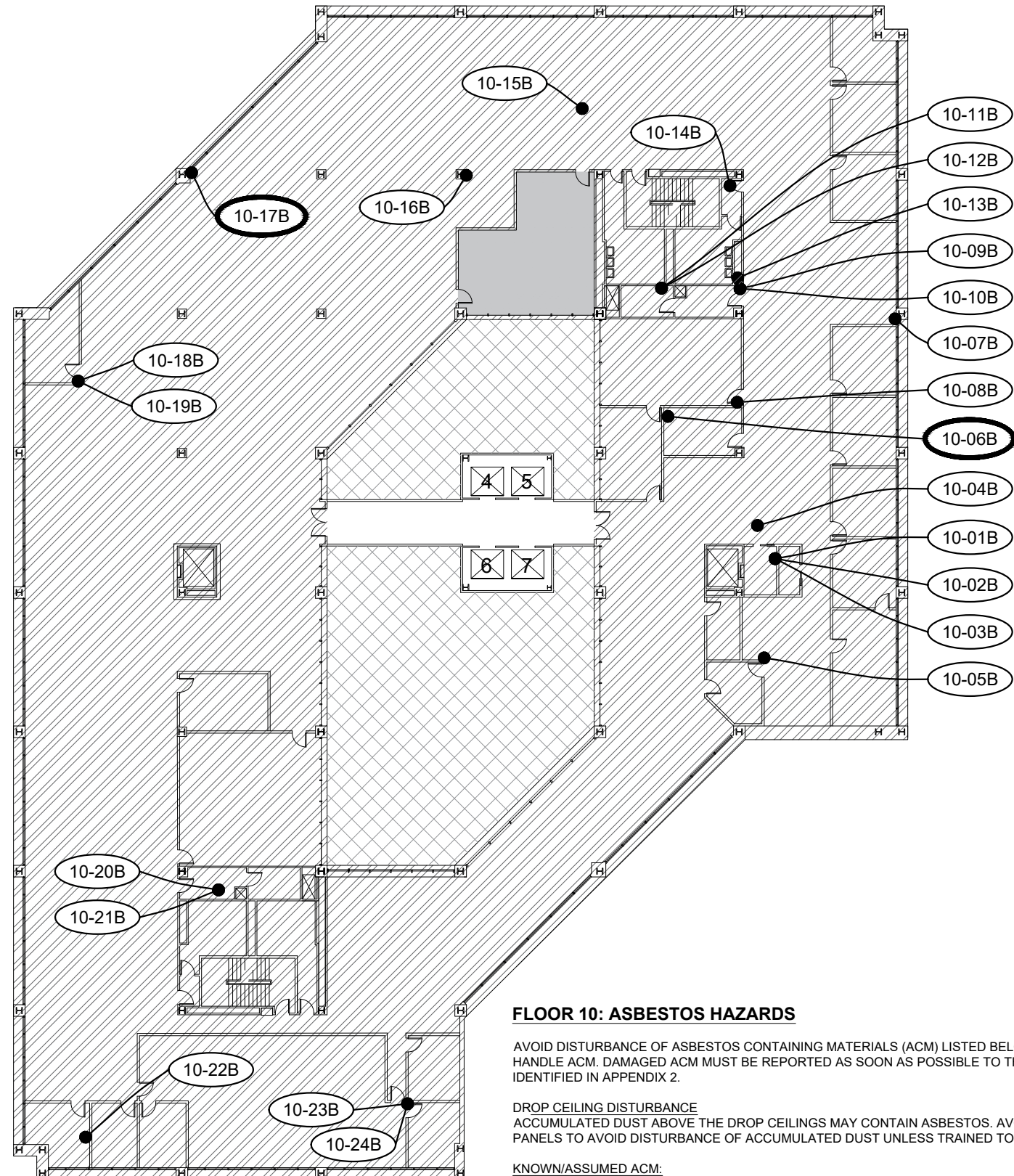
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10th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
10-01B	Gray Ceiling Tile #1	ND
10-02B	Black Cove Base & Beige Mastic	Both ND
10-03B	Yellow Carpet Mastic	ND
10-04B	Gray Ceiling Tile #2	ND
10-05B	Off-White Cove Base Mastic	ND
10-06B	Gray GWB	ND
10-06B	White Joint Compound	3.25% Chrysotile
10-07B	White Cove Base Mastic	ND
10-08B	Black Cove Base & Yellow Mastic	Both ND
10-09B	Gray Cove Base & Beige Mastic	Both ND
10-10B	Gray Pebble Floor Sheet	ND
10-11B	Red & Yellow Caulk	Both ND
10-12B	Gray GWB & White Joint Compound	Both ND
10-13B	Blue Fireproofing	ND
10-14B	Gray Ceiling Tile #3	ND
10-15B	Tan/White Ceiling Tile #4	ND
10-16B	Brown GWB & White Patch Foam	Both ND
10-17B	Brown/Gray GWB	ND
10-17B	White Joint Compound	3.75% Chrysotile
10-18B	Brown Cove Base & Brown/Yellow Mastic	Both ND
10-19B	Yellow Carpet Mastic	ND
10-20B	Beige Floor Tile	ND
10-21B	Green Floor Tile	ND
10-22B	Gray Thinset & Yellow Mastic	Both ND
10-23B	Black Cove Base, Various Color Mastics, & White Joint Compound	All ND
10-24B	Brown/Gray GWB	ND



LEGEND

- ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 - ACM FIREPROOFING
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ATRIUM, OPEN TO BELOW
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

FLOOR 10: ASBESTOS HAZARDS

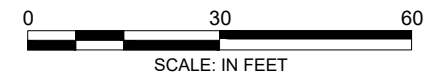
AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

DROP CEILING DISTURBANCE
 ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

- KNOWN/ASSUMED ACM:**
- GRAY SPRAY-ON FIREPROOFING
 - JOINT COMPOUND ASSOCIATED WITH WALLS
 - BLACK SEALANT ASSOCIATED WITH ATRIUM WINDOWS
 - BROWN/YELLOW/WHITE MASTIC ASSOCIATED WITH COVE BASE
 - PATTERNED FLOOR TILE IN STORAGE CLOSETS

- CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS**
- BLUE SPRAY-ON FIREPROOFING

PHOTOGRAPHS INCLUDED ON SHEET P3.



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682

JUNE 2024
24-2501

REVISIONS

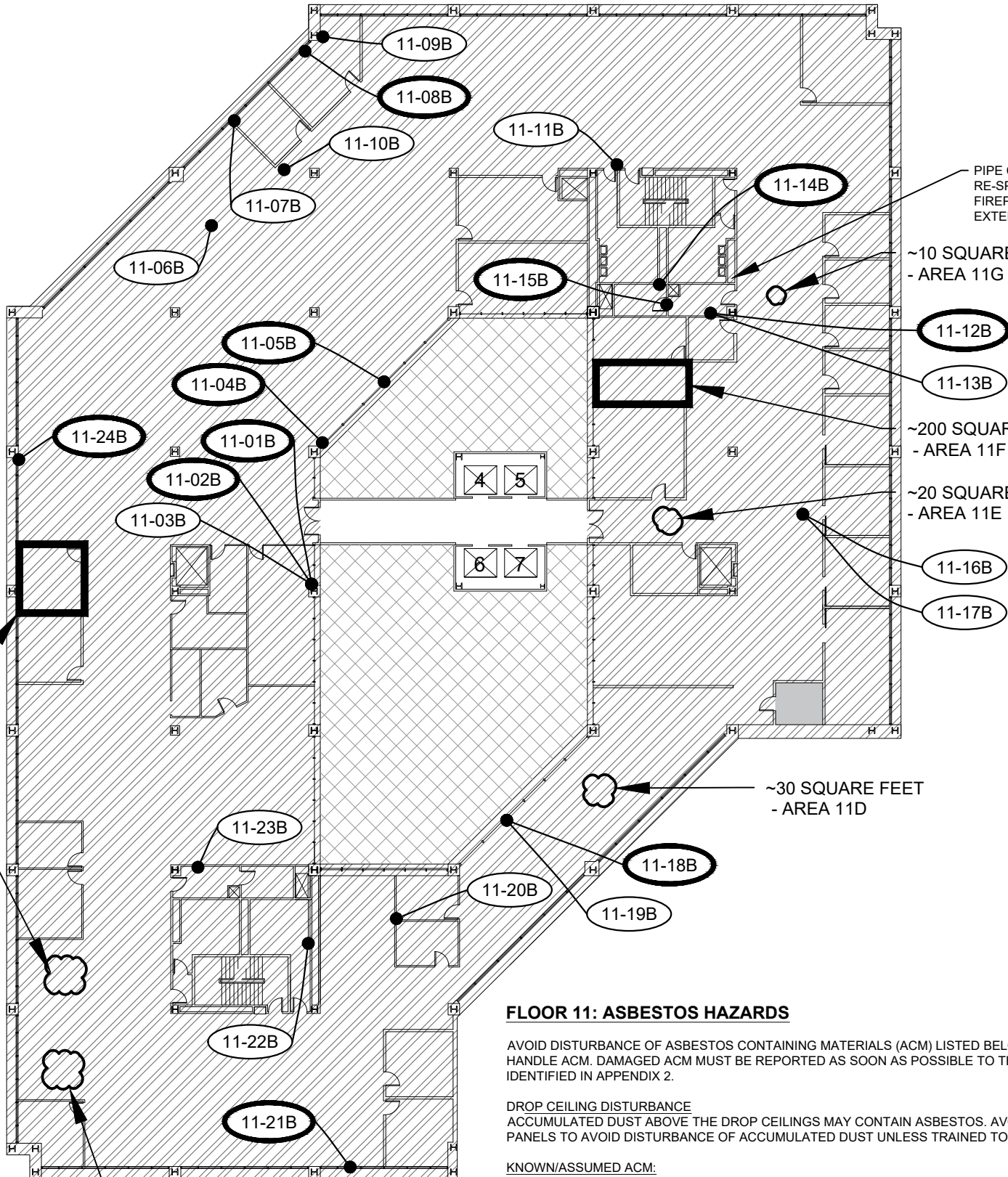
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 CHECKED BY: PLB
 SCALE: AS SHOWN
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10

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11th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
11-01B	Pink GWB	ND
11-01B	White Joint Compound	6% Chrysotile
11-02B	Brown & Black Cove Base	Both ND
11-02B	Brown/Yellow Mastic	1.25% Anthophyllite
11-03B	Orange Carpet Mastic	ND
11-04B	White Joint Compound	6% Chrysotile
11-04B	Brown/Yellow Mastic	<1% Anthophyllite
11-05B	Black Sealant	5.5% Chrysotile
11-06B	Tan Ceiling Tile #1	ND
11-07B	Brown/White GWB	ND
11-08B	Tan/White Joint Compound	1.5% Chrysotile
11-09B	Beige Mastic	ND
11-10B	Tan Ceiling Tile #2	ND
11-11B	Gray/White Joint Compound	<1% Chrysotile
11-12B	White Mastic	1.25% Anthophyllite
11-13B	Cream Floor Tile	ND
11-14B	White Joint Compound	6% Chrysotile
11-14B	Brown/Gray GWB	ND
11-15B	Brown Cove Base	ND
11-15B	Brown/Yellow Mastic	2.00% Anthophyllite
11-16B	Tan Ceiling Tile #1	ND
11-17B	Gray/White Ceiling Tile #2	ND
11-18B	Brown/Yellow Mastic	1.25% Anthophyllite
11-19B	Tan Carpet Mastic	ND
11-20B	Brown/Gray GWB	ND
11-21B	Brown/Gray GWB	ND
11-21B	White Joint Compound	3% Chrysotile
11-22B	Tan Ceiling Tile #3	ND
11-23B	Gray Floor Tile	ND
11-24B	Stone Pattern Flooring & Brown/Gray GWB	Both ND
11-24B	White Joint Compound	6% Chrysotile



LEGEND

- ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 - AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
 - ACM FIREPROOFING
 - AREA OF KNOWN ACM FIREPROOFING ABATEMENT
 - ATRIUM, OPEN TO BELOW
 - PRIORITY ABATEMENT AREA #3 DAMAGED ACM FIREPROOFING
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

FLOOR 11: ASBESTOS HAZARDS

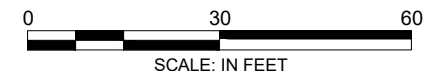
AVOID DISTURBANCE OF ASBESTOS CONTAINING MATERIALS (ACM) LISTED BELOW UNLESS TRAINED AND QUALIFIED TO HANDLE ACM. DAMAGED ACM MUST BE REPORTED AS SOON AS POSSIBLE TO THE AHERA DESIGNATED PERSON IDENTIFIED IN APPENDIX 2.

DROP CEILING DISTURBANCE
 ACCUMULATED DUST ABOVE THE DROP CEILINGS MAY CONTAIN ASBESTOS. AVOID DISTURBANCE OF THE DROP CEILING PANELS TO AVOID DISTURBANCE OF ACCUMULATED DUST UNLESS TRAINED TO HANDLE ASBESTOS CONTAINING DUST.

- KNOWN/ASSUMED ACM:**
- GRAY SPRAY-ON FIREPROOFING
 - JOINT COMPOUND ASSOCIATED WITH WALLS
 - BLACK SEALANT ASSOCIATED WITH ATRIUM WINDOWS
 - BROWN/YELLOW/WHITE MASTIC ASSOCIATED WITH COVE BASE
 - PATTERNED FLOOR TILE IN STORAGE CLOSETS

- CONFIRMED MATERIALS THAT DO NOT CONTAIN ASBESTOS**
- BLUE SPRAY-ON FIREPROOFING

PHOTOGRAPHS INCLUDED ON SHEET P4 & P5.



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG
 DRAWN BY: SPH
 CHECKED BY: PLB
 SCALE: AS SHOWN
 DATE: 06/14/2024

NOT FOR
CONSTRUCTION

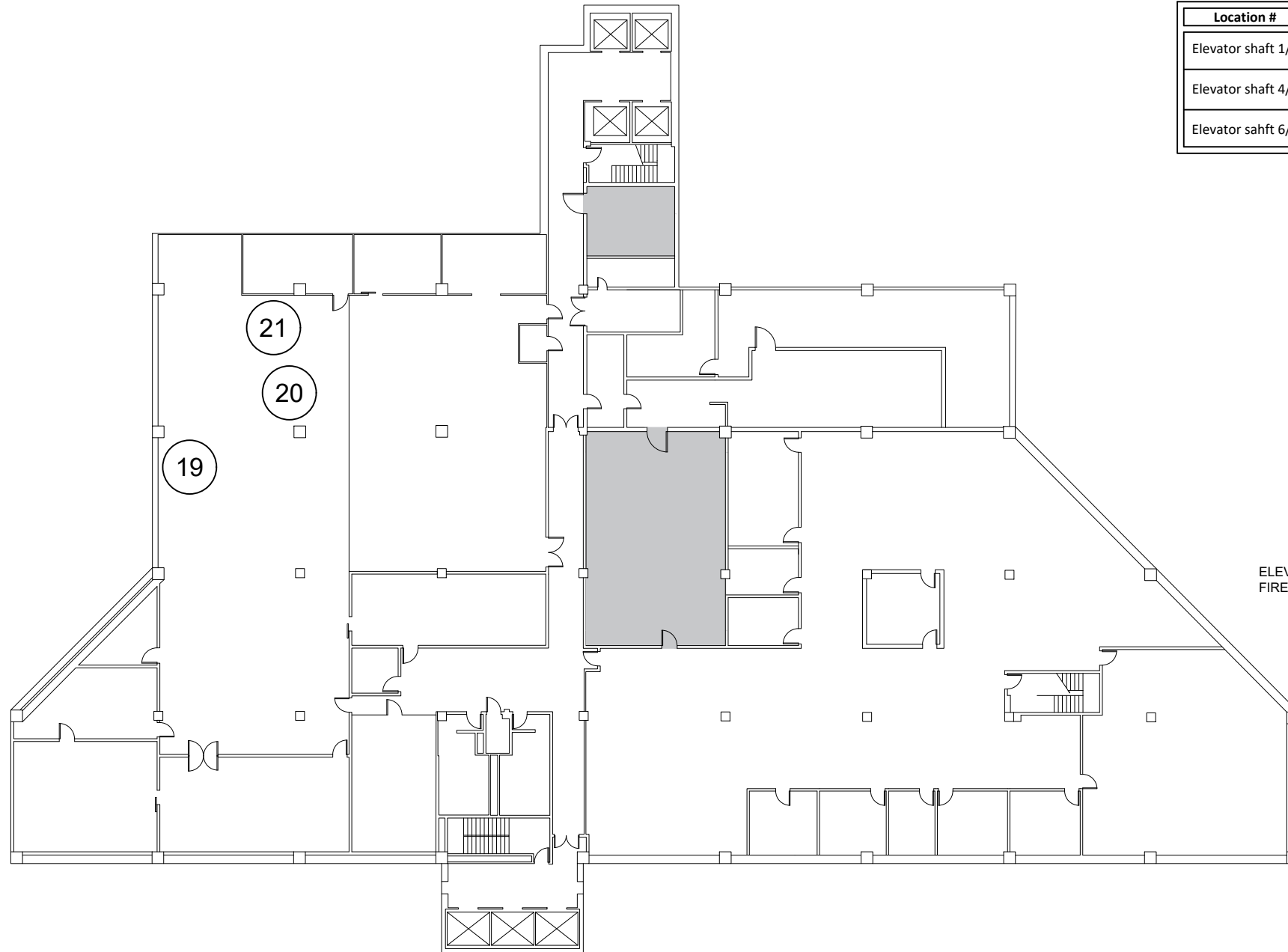
SHEET NO.

11



Location #	Floor	Area Description	Damage Description
19	5	IT Server Room, near air sample 5-13	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM
20	5	IT Server Room	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM
21	5	IT Server Room	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM

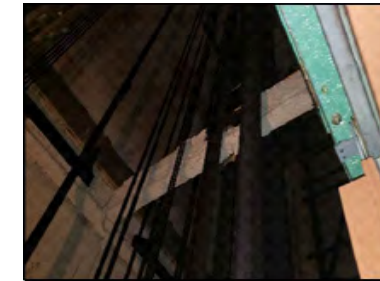
Location #	Floor	Area Description	Description
Elevator shaft 1/2	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



ELEVATOR 1/2: EXTENSIVE CRACKING OF ACM FIREPROOFING THROUGHOUT SHAFT



ELEVATOR 4/5: CRACKING AND MISSING PIECES OF ACM FIREPROOFING THROUGHOUT ELEVATOR SHAFT.



ELEVATOR 7/8: CRACKING AND MISSING PIECES OF ACM FIREPROOFING THROUGHOUT ELEVATOR SHAFT.



LOCATION 19: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.



LOCATION 20: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.



LOCATION 21: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.

LEGEND

PHOTOGRAPH NUMBER

AREA NOT ACCESSIBLE DURING ASSESSMENTS
- MATERIALS NOT CONFIRMED



SCALE: IN FEET

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Location #	Floor	Area Description	Description
1	9	West Exit to Elevator Walkway	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
2	9	East Exit to Elevator Walkway	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
22	9	Outside North Stairwell Entrance	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
23	9	North Interior Wall Looking into Atrium	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
24	9	Conference Room C West	Fireproofing present in channel iron as in 1. Large cable bundles have been run over/through angle iron and pulling cables over the iron has damaged the ACM. Overspray onto water pipe damaged due to pipe vibration.

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



LOCATION 1: ACM FIREPROOFING ON PAN DECKING.



LOCATION 1: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON.



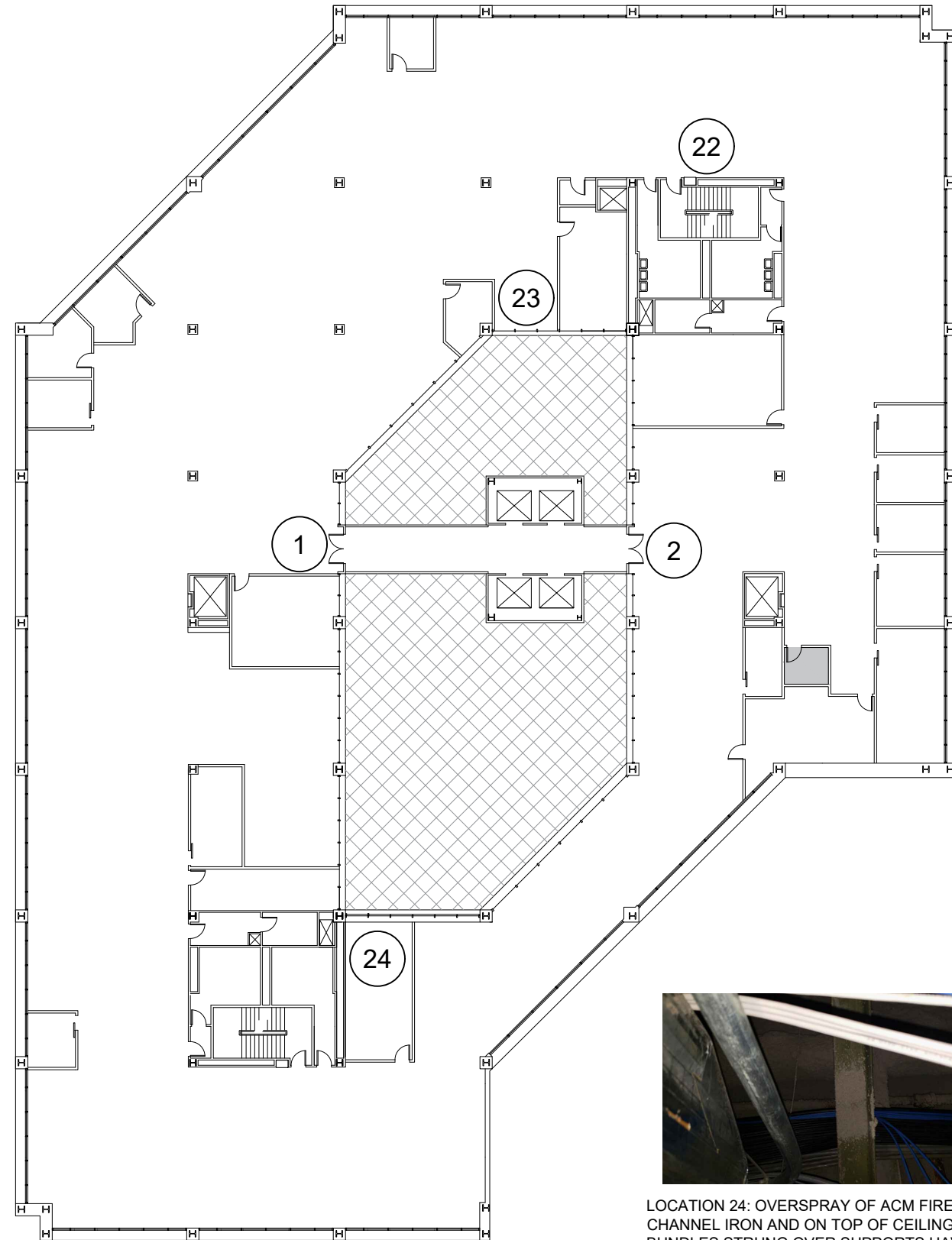
LOCATION 22: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 2: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON.



LOCATION 23: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON AND ON TOP OF CEILING TILES. ASSOCIATED ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.

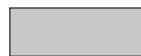


LOCATION 24: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON AND ON TOP OF CEILING TILES. CABLE BUNDLES STRUNG OVER SUPPORTS HAVE ACM FIREPROOFING ON THEM, DAMAGING THE ACM.

LEGEND



PHOTOGRAPH NUMBER



AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED



ATRIUM, OPEN TO BELOW



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation and Public Facilities

PHOTOGRAPHS: 9th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG

DRAWN BY: SPH

CHECKED BY: PLB

SCALE: AS SHOWN

DATE: 06/14/2024

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SHEET NO.

P2

C:\Users\sean.heaney\NORTECH, Inc.\24-2501 J - RWCI ADOT SOB AMP & Design - Documents\Drawings\242501(AMP)0.dwg
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Location #	Floor	Area Description	Description
3	10	Personnel and Labor Relations	Spray on fireproofing observed on top of ceiling tiles. No visible damaged of fireproofing observed in this area.
4	10	West Exit to Elevator Walkway	Same as 3, to lesser extent. Overspray on water piping has fallen off likely due to pipe vibration over time.

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



LOCATION 3: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING IN GOOD CONDITION.



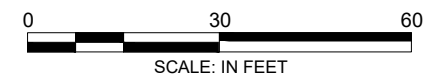
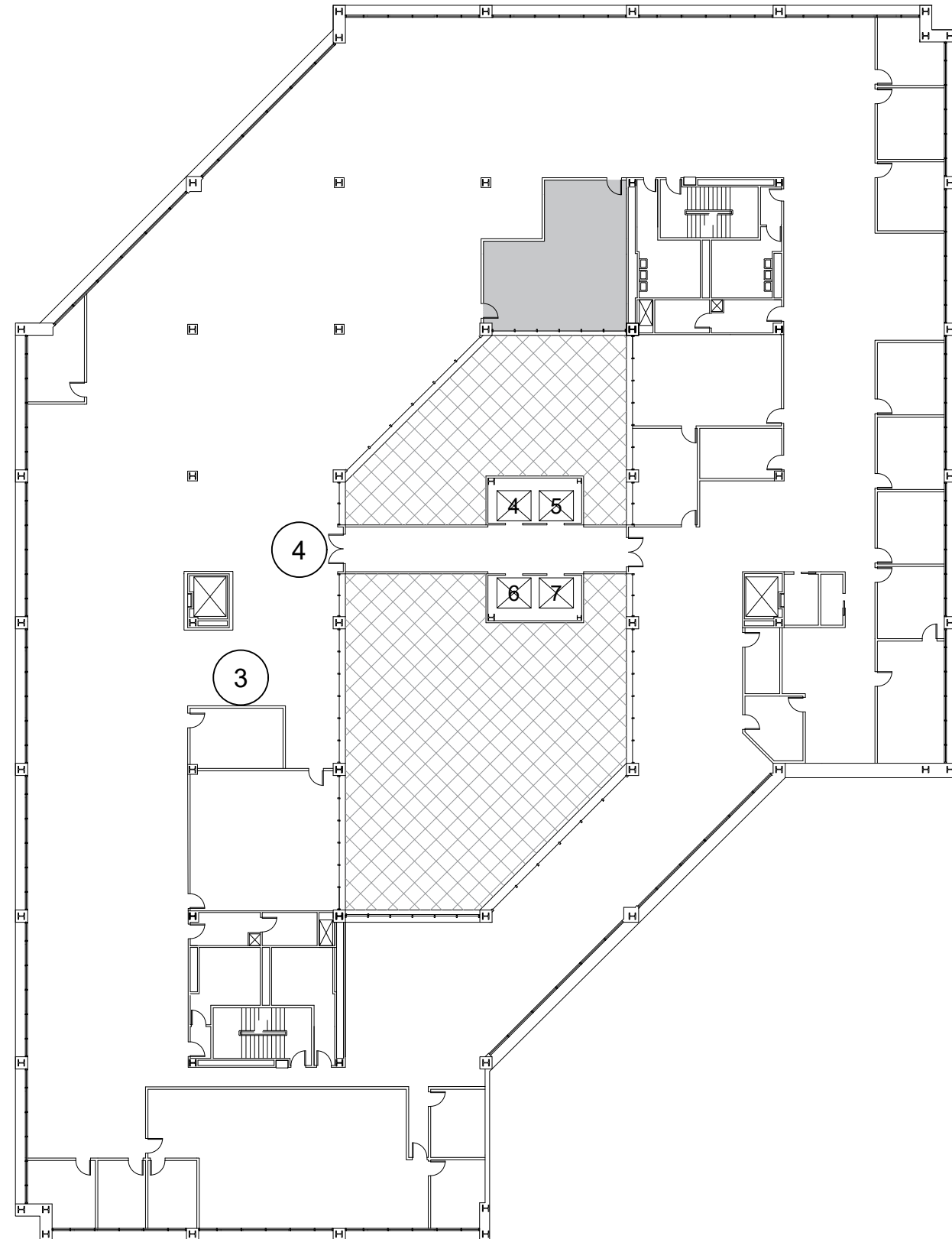
LOCATION 4: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING IN GOOD CONDITION.



LOCATION 4: ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.

LEGEND

- ## PHOTOGRAPH NUMBER
- AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
- ATRIUM, OPEN TO BELOW



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation
and Public Facilities

PHOTOGRAPHS: 10th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG

DRAWN BY: SPH

CHECKED BY: PLB

SCALE: AS SHOWN

DATE: 06/14/2024

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CONSTRUCTION

SHEET NO.

P3

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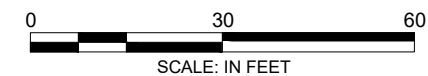
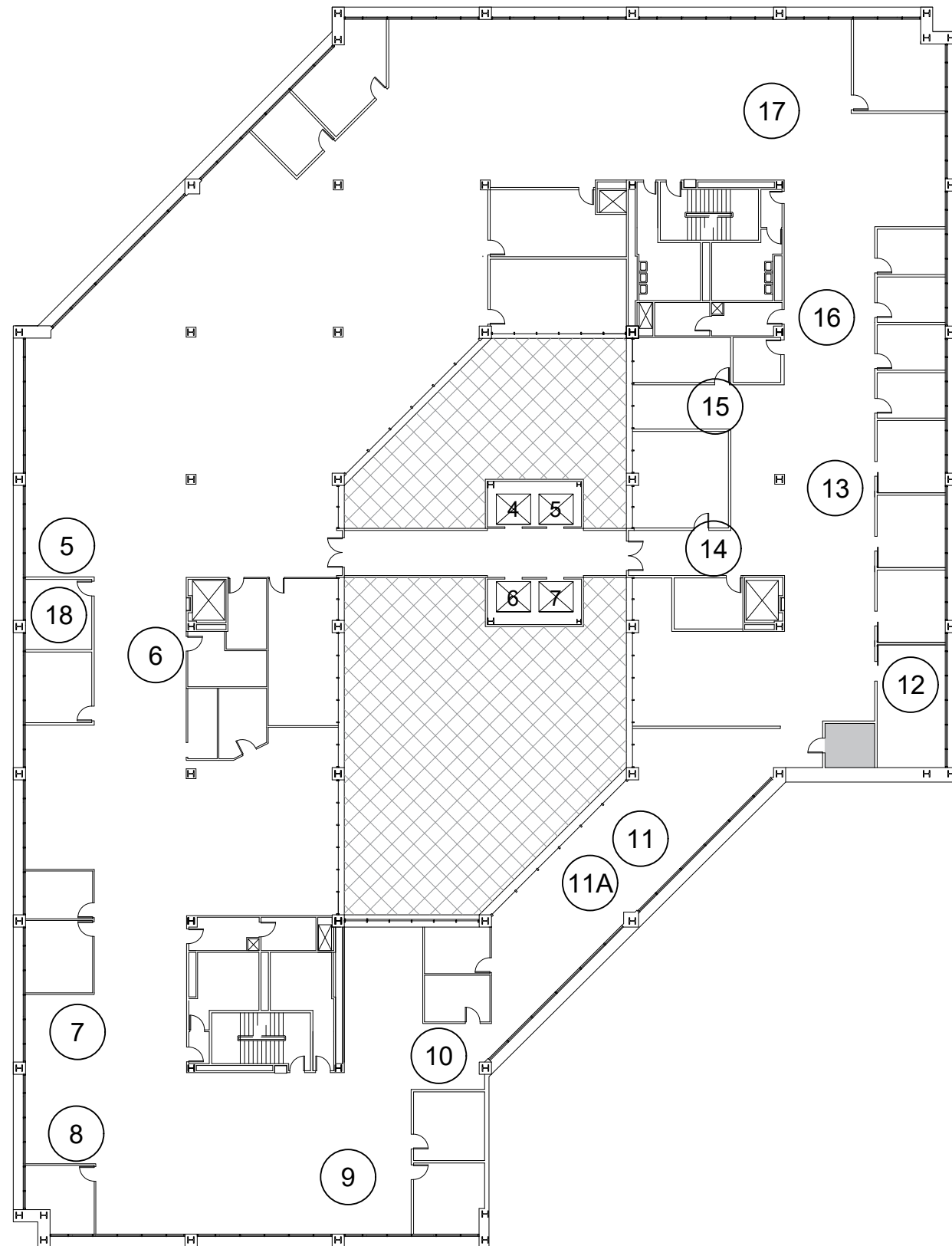
Location #	Floor	Area Description	Description
5	11	Outside Tax Director's Office, near air sample 11-2	Spray on fireproofing observed on top of ceiling tiles. No visible damage of fireproofing observed in this area.
6	11	Tax Division	Visible fireproofing in good condition. Small pieces of spray on fireproofing on top of ceiling tiles, area near air plenum, beams and ducting blocked full view.
7	11	Exterior wall, SW Corner	Water stains in area around wire roof protrusion
8	11	Ceiling around SW Corner Office	Three water stains around roof protrusions in this area
9	11	Southern most corner, near air sample 11-7	No visible damage of fireproofing observed in this area. Small pieces of spray on fireproofing observed on top of ceiling tiles.
10	11	Southern end of windowed walkway	No visible damage of fireproofing observed in this area. Small pieces of spray on fireproofing observed on top of ceiling tiles.
11	11	Middle of windowed walkway	Crack in fireproofing, slight staining (estimated < 25% of immediate area)
11A	11	Middle of windowed walkway, near Air Sample 11-8	Plastic Containment Area, could not access this area to look inside, ADOT&PF did not know of containment, could not find on 4/26/23
12	11	Admin. Services' Commissioner's Office, Air Sample 11-10	Surficial cracks in ACM. Rusting around brackets, ACM does not appear Stained. <1% of office area damaged
13	11	Administrative Services Hallway, south near air sample 11-11	Small Cracks in fireproofing along 1 I-beam, appear surficial
14	11	Eastern Exit to Elevator Walkway	3 ft x 4 ft water stain and 1 ft x 1 ft water stain near roof protrusions
15	11	Data Processing Area	Discoloring (water damage?) around roof protrusions, seven observed in a 10 ft x 20 ft area
16	11	Administrative Services Hallway, north by air sample 11-40	Water stain (3 ft x 3 ft) and surficial cracks in ACM along I beam, some ACM on top of tiles, If not stained, ACM in visually good condition
17	11	Outside PFD Corner Conference Rm, air sample 11-15	Sporadic surficial cracks along ~32 feet of beam, <25% of beam
18	11	Tax Director's Office, near air sample 11-2	Water damage from roof leak(s), plastic in place, could not see entire area to accurately estimate damage

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft

NOTE: SEE FIGURE P5 FOR PHOTOGRAPHS.

LEGEND

- ##** PHOTOGRAPH NUMBER
- AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED
- ATRIUM, OPEN TO BELOW



FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation and Public Facilities

PHOTOGRAPHS: 11th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG

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CHECKED BY: PLB

SCALE: AS SHOWN

DATE: 06/14/2024

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P4

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LOCATION 5: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 6: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 7: WATER STAINED/DAMAGED SPRAY-ON ACM FIREPROOFING.



LOCATION 8: WATER STAINED/DAMAGED SPRAY-ON ACM FIREPROOFING.



LOCATION 9: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 10: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 11: CRACKING/STAINING IN DAMAGED ACM FIREPROOFING ON PANDECKING.



LOCATION 12: RUSTING AROUND BRACKETS. ACM FIREPROOFING NOT STAINED.



LOCATION 13: RUSTING AROUND BRACKETS. ACM FIREPROOFING NOT STAINED.



LOCATION 14: WATER STAINING NEAR PIPE PENETRATIONS IN PANDECKING.



LOCATION 15: WATER STAINING AROUND ROOF PENETRATIONS.



LOCATION 16: WATER STAINING ON I-BEAM WITH SUPERFICIAL CRACKS.



LOCATION 17: CRACKS IN ACM FIREPROOFING ALONG I-BEAM.



LOCATION 18: ASSUMED WATER DAMAGE. ACM FIREPROOFING NOT VISIBLE DUE TO PLASTIC CATCHMENT.

NOTE: SEE FIGURE P4 FOR DESCRIPTIONS.

LEGEND



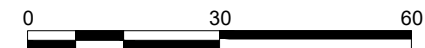
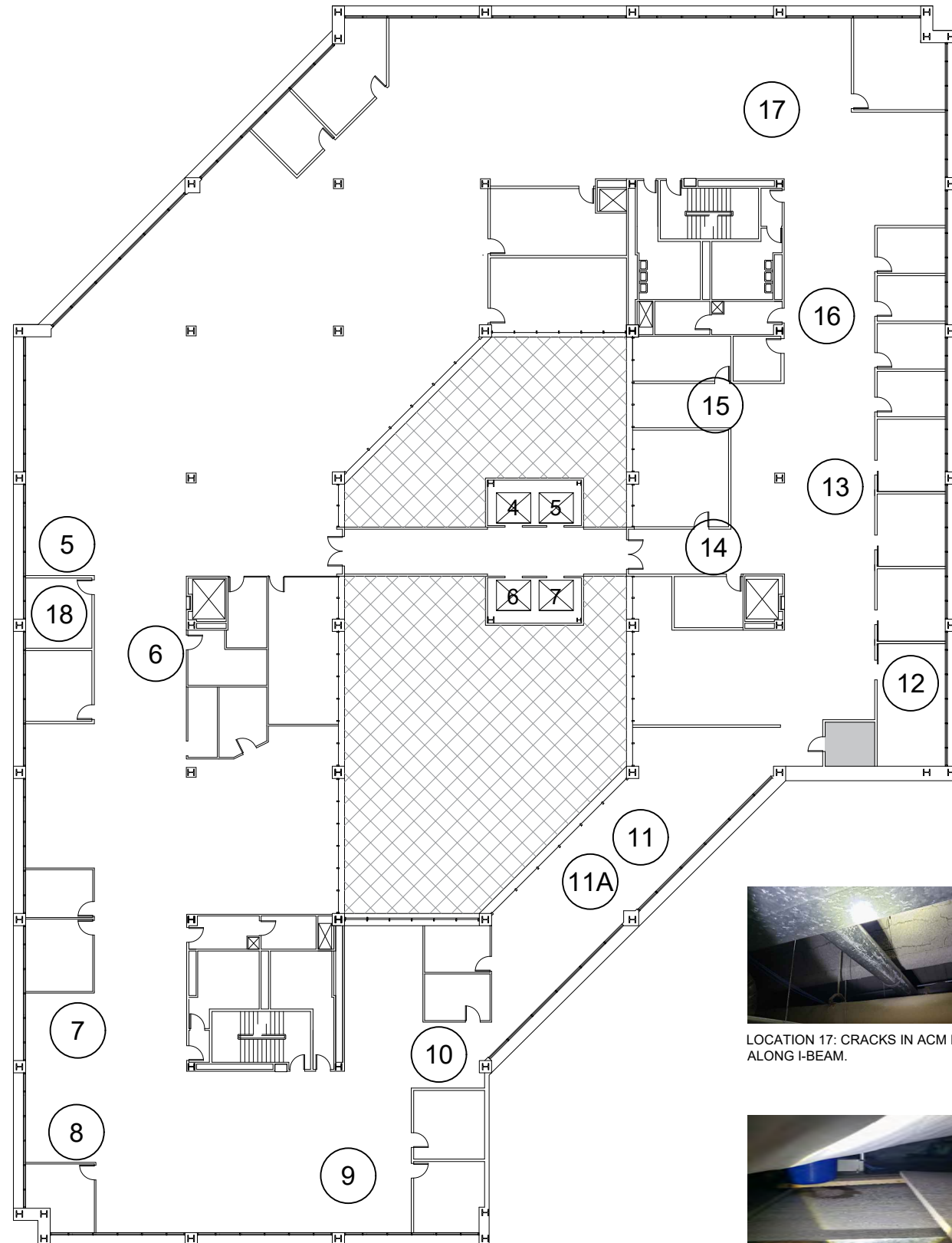
PHOTOGRAPH NUMBER



AREA NOT ACCESSIBLE DURING ASSESSMENTS - MATERIALS NOT CONFIRMED



ATRIUM, OPEN TO BELOW



SCALE: IN FEET

FIGURES DEVELOPED BY: NORTECH ENGINEERING CORPORATE NO: AECC682



Department of Transportation and Public Facilities

PHOTOGRAPHS: 11th FLOOR - OFFICES
ASBESTOS MANAGEMENT PLAN
JUNEAU STATE OFFICE BUILDING

JUNE 2024
24-2501

REVISIONS

DESIGNED BY: JDG

DRAWN BY: SPH

CHECKED BY: PLB

SCALE: AS SHOWN

DATE: 06/14/2024

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SHEET NO.

P5

Appendix 2: Contact Information

Blank Contact Information Form
(Form 1) located in Appendix 9

Building Name: Juneau State Office Building
Address: 333 Willoughby Ave, Juneau AK

(Number ___ of ___, make copies as necessary)

AMP FORM 1 – CONTACT INFORMATION

Building Owner	
Owning Agency: Alaska Department of Transportation and Public Facilities	Name of Building: Juneau State Office Building
Contact Person: Daniel Gibson	
Position: Division of Facilities Services, Division Operations Manager	
Email: daniel.gibson@alaska.gov	Telephone Number: 907-451-2203
Address: 2301 Peger Road, Fairbanks, AK 99709	

Designated Person			
Name of Designated Person: Bill Campbell			
Position: ADOT&PF South Coast Region Building Maintenance Manager			
Email: bill.campbell@alaska.gov		Telephone Number: 907 465-3977	
Address: 141 Willoughby Ave, Juneau AK 99801			
Course Name:	Training Agency:	Date:	Hours of Training:

Asbestos Management Plan Location
Physical Location: Office of Designated Person
Digital Address: https://dot.alaska.gov/dfs/leasing/juneau.shtml#jsobinfo

Custodial, Operations, and Maintenance Contact Person	
Name of Contact Person: Bill Campbell	
Position: ADOT&PF South Coast Region Building Maintenance Manager	
Email: bill.campbell@alaska.gov	Telephone Number: 907 465-3977
Address: 141 Willoughby Ave, Juneau AK 99801	

Building Name: Juneau State Office Building

Address: 333 Wiloughby Ave, Juneau AK

(Number ___ of ___, make copies as necessary)

Employee Interface Contact	
Name of Contact: Call Center / Safety Hub	
Email: facilities.callcenter@alaska.gov	Telephone Number: 907 465 5689

Annual Surveillance Contact	
Name of Company: TBD	
Position:	
Email:	Telephone Number:
Address:	

Reinspection Contact	
Name of Company: TBD	
Position:	
Email:	Telephone Number:
Address:	

Minor and Major Release Responder	
Name of Company: TBD	
Position:	
Email:	Telephone Number:
Address:	

Asbestos Management Plan Author	
Name of Company/Contact: NORTECH	
Email:	Telephone Number: (907) 452-5688
Address: 2400 College Road, Fairbanks, AK 99709-3754	

Appendix 3: Annual Surveillance Records

Blank Surveillance Record Form
(Form 2) located in Appendix 9

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 2 – ANNUAL SURVEILLANCE REPORT

Annual Surveillance Report:

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
1	1-09B	Tan chunky fireproofing	Good		
5	5-01B	Gray fireproofing	Good		
5	5-02B	White joint compound	Damaged		
5	5-09B	Beige floor tile	Damaged		
5	5-09B	Black mastic	Damaged		
5	5-50B	Light gray fireproofing	Good		
7	7-03B	White joint compound	Good		
7	7-04B	Gray joint compound	Good		
7	7-07B	Light tan mastic	Good		
7	7-08B	White joint compound	Good		
7	7-10B	Gray joint compound	Good		

Building Name:**Address:**

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
7	7-12B	Tan mastic	Good		
7	7-13B	Black mastic	Good		
7	7-31B	Black mastic	Good		
7	7-50B	Gray fireproofing	Good		
9	9-11B	Brown mastic	Damaged		
9	9-16B	Brown mastic	Good		
9	9-17B	White joint compound	Damaged		
9	9-17B	Brown mastic	Damaged		
9	9-22B	White joint compound	Good		
9	9-24B	Gray/tan joint compound	Damaged		
10	10-06B	White joint compound	Good		
10	10-17B	White joint compound	Good		
11	11-01B	White joint compound	Good		

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
11	11-02B	Brown/yellow mastic	Good		
11	11-04B	White joint compound	Good		
11	11-05B	Black sealant	Damaged		
11	11-08B	Tan/white joint compound	Damaged		
11	11-12B	White mastic	Good		
11	11-14B	White joint compound	Good		
11	11-15B	Brown/yellow mastic	Damaged		
11	11-18B	Brown/yellow mastic	Good		
11	11-21B	White joint compound	Good		
11	11-24B	White joint compound	Good		

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed

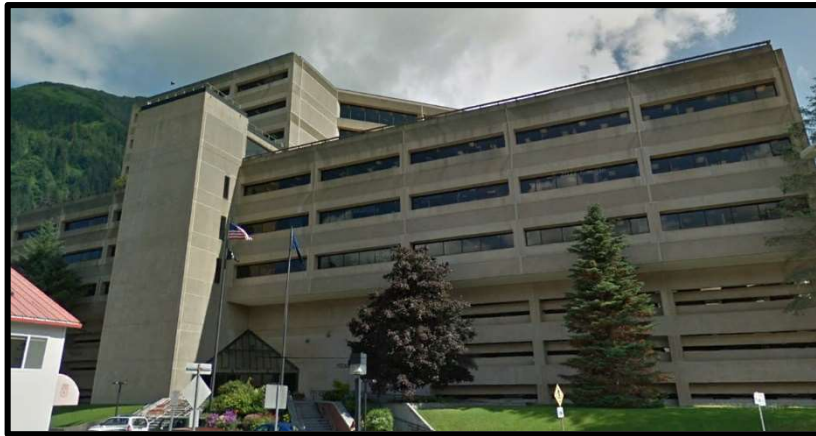
*If no change in condition, write N/C

Surveillance Inspector's Name	Surveillance Inspector's Signature	Date
-------------------------------	------------------------------------	------

Appendix 4: Latest Inspection Report

Blank Inspection Report Cover Form (Form 3)
and Homogenous Area /
blank Bulk Sample Summary Form (Form 4)
are located in Appendix 9

**ASBESTOS BULK SAMPLING REPORT
JUNEAU STATE OFFICE BUILDING
333 WILOUGHBY AVE
JUNEAU, ALASKA
Program # 25RC013611, 25RC013612
AUGUST 18, 2023**



Prepared for:

Alaska Department of Transportation and Public Facilities
333 Willoughby Ave.
Juneau, AK 99801

Prepared by:



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p. 907.222.2445
f. 907.222.0915

Managing Office
5438 Shaune Dr, Ste B
Juneau, Alaska 99801
p: 907.586.6813
f: 907.586.6819

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TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	BACKGROUND	2
2.1	Asbestos Containing Materials.....	2
2.2	Air Sampling	2
2.3	Visible Dust Survey.....	3
3.0	SCOPE OF WORK	4
4.0	METHODOLOGY	4
5.0	FIELD ACTIVITIES	5
5.1	Bulk Sampling.....	5
5.2	Condition Assessment	6
5.3	Damaged Ceiling Tiles.....	7
6.0	RESULTS	7
6.1	Bulk Samples.....	7
6.2	Condition Assessment	9
6.2.1	Damaged ACM.....	9
6.2.2	Good Condition ACM.....	12
6.3	Damaged Ceiling Tiles.....	13
7.0	ABATED AREAS	14
8.0	ANALYSIS AND DISCUSSION	15
8.1	Bulk Sampling and Building Inspection	15
8.1.1	Bulk Sample Results	15
8.1.2	Abated Areas	16
8.1.3	Condition Assessment.....	16
8.1.4	Damaged Ceiling Tiles and Frame	18
8.1.5	Exposure Potential	19
8.1.6	1989 Sampling vs Current Sampling Results.....	19
8.2	Management of Remaining ACM	21
8.2.1	Updated Asbestos Management Plan	21
8.2.2	Asbestos Abatement	22
8.3	Operations and Maintenance	24
8.3.1	Dust/Debris on Top of Ceiling Tiles	24
8.3.2	Damaged Ceiling Tiles and Frame	24
8.3.3	Patch and Sealant Inspections	25
8.3.4	Equipment Above Drop Ceilings.....	25
8.4	Future Project Specifications and Training.....	25
9.0	CONCLUSIONS AND RECOMMENDATIONS	26
9.1	Conclusions of Bulk Sampling and Building Inspection	26
9.2	Recommendations for Management of Remaining ACM.....	28
10.0	LIMITATIONS	30
11.0	SIGNATURES OF ENVIRONMENTAL PROFESSIONALS	30



LIST OF APPENDICES

Appendix 1: Figures

Appendix 2: Asbestos Containing Materials Photographs

Appendix 3: Spray on Fireproofing Type Examples

Appendix 4: Damaged Ceiling Tile Count Table

Appendix 5: Recommendations Tables

Appendix 6: Laboratory Reports

Appendix 7: 1989 ASCG Survey and Management Plan

Appendix 8: *NORTECH's* 2022 Limited Air Monitoring Report



ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Materials
ADOT&PF	Alaska Department of Transportation and Public Facilities
AMP	Asbestos Management Plan
f/cc	Fibers per Cubic Centimeter
GWB	Gypsum Wall Board
JSBO	Juneau State Office Building
L, mL	Liter, Milliliter
O&M	Operations and Maintenance
OSHA	Occupational Health and Safety Administration's
PCM	Phase-Contrast Microscopy
PEL	Permissible Exposure Limit
R&M	R&M Consulting
TSI	Thermal Systems Insulation
TWA	Time Weighted Average



1.0 EXECUTIVE SUMMARY

In April 2022, the Alaska Department of Transportation and Public Facilities (ADOT&PF) retained R&M Consulting (R&M) to conduct limited asbestos in air sampling and bulk materials sampling at the Juneau State Office Building (JSOB). As the previous Asbestos Management Plan (AMP) for the JSOB was written in 1989, the project also included submission of an updated AMP. R&M subcontracted **NORTECH** to perform the work and associated reporting. The goal of the project was to determine if employees working within the building are exposed to airborne asbestos in concentrations exceeding the Occupational Health and Safety Administration's (OSHA) permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter of air (f/cc) over an eight-hour time weighted average (TWA), document asbestos containing materials (ACM) located within the building and their condition, and to update the 1989 AMP.

NORTECH conducted a visible dust survey in areas where air samples were collected. Dust levels were generally low (between Level 0 and Level 1) within office and public spaces. Level 2 dust was observed in some areas, such as the tops of refrigerators and cabinets within break room areas, and floor level heat registers blocked by desks or furniture. Level 2 and Level 3 dust levels were observed above the drop ceiling tiles. Pieces of spray on fireproofing from the pan decking was also a common observation on top of the ceiling tiles. Dust levels did not appear to correspond with detections of asbestos fibers during air monitoring.

NORTECH completed air sampling within accessible occupied spaces on Floors 5 – 11 of the JSOB and collected a total of 129 valid air samples were collected throughout the seven sampled floors. Results ranged from below detection laboratory detection levels to 0.004 f/cc, and all submitted samples were below the OSHA PEL of 0.1 f/cc.

A total of 179 bulk samples, encompassing all floors and all functional areas, were collected as part of the project. A condition assessment was conducted for sampled materials and observations of areas where asbestos containing spray on fireproofing appeared to have been abated were noted. Asbestos containing spray on fireproofing was the most prevalent form of asbestos containing materials throughout the building and was observed on all non-parking floors and within three of the four elevator shafts. Asbestos containing spray on fireproofing condition ranged from good to damaged, with the elevator shafts containing the majority of the observed damaged asbestos.

The majority of asbestos within the building was installed during original construction of the building and will continue to age and degrade over time. Therefore, complete abatement of the asbestos containing spray on fireproofing is the best course of action. Based on the square footage of damage and probability of being disturbed, elevator shafts 1/2, 4/5 and 6/7 should be priorities for future abatement projects. Small scale abatement, such as removing asbestos containing spray on fireproofing overspray that has fallen into channel iron or on top of ceiling tiles, can be done at the same time other projects are being conducted in those areas.

The purpose of this Asbestos Bulk Sampling Report is to document **NORTECH's** building material sampling, laboratory results, condition assessment, and recommendations for future actions at the Juneau State Office Building. Air monitoring, and an updated AMP will be discussed in other documents.

2.0 BACKGROUND

The Juneau State Office Building was constructed in 1973 and currently consists of an 11 – story building containing both public and office spaces as well as mechanical and maintenance areas. The bottom four floors of the building consist of a dedicated parking garage.

2.1 Asbestos Containing Materials

Based on a 1989 survey of the building, ACM occurs throughout the building, most notably in the spray on fireproofing found throughout the building. While spray on fireproofing was generally located above a suspended ceiling (either ceiling tiles or gypsum wall board (GWB) in public and office areas), the report stated the fireproofing is exposed in air return, mechanical, maintenance, and some storage areas throughout the building. However, as small and localized holes and unsealed protrusions were observed in ceilings throughout the building, these localized areas should not be considered barriers to airborne asbestos fibers.

Generally, spray on fireproofing that is original to the building was a light gray color. New spray on fireproofing was generally colored blue. However, as a dye was mixed in with the spray on fireproofing prior to application and dye amounts were not consistent, the shades of blue present on new spray on fireproofing varied widely. Available information indicated that the new, blue, fireproofing should be asbestos free and would represent areas where asbestos containing fireproofing had been abated. **NORTECH** used this color criteria to determine areas within the building that had been abated of the old ACM spray on fireproofing. Examples of types and colors of spray on fireproofing can be found in Appendix 3. Known abatement of spray on fireproofing was completed in limited areas in 2010-2011 and included:

- Sixth Floor
 - Mechanical spaces
 - Telephone/electrical room
- Seventh Floor
 - Mechanical spaces
 - Compactor room
 - Envelope Room
 - Telephone/electrical room
 - Fire/signal room

Although spray on fireproofing was abated to the extent possible prior to spraying on non-ACM fireproofing, residual ACM fireproofing may remain on the pan decking and support beams. Specifications for the 2010/2011 abatement work indicated that after abatement, and prior to spraying on the non-ACM fireproofing, a sealant would be sprayed on the pan decking and support beams to seal any potential ACM remaining on the structures. The specifications also state wall cavities within the project area were assumed to be contaminated spaces. The contractor was responsible for sealing and enclosing the accessible wall openings to prevent the spread of potential ACM from within the cavities.

2.2 Air Sampling

Limited air sampling has been conducted throughout the building between 2007 and 2022. The majority of the air sampling was associated with the 2010/2011 abatement work. Air sampling results ranged from below detection levels to 0.005 f/cc in 2007-2011 samples and were below

the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL). Air samples collected in early 2022 and associated with installation of a totem pole in the 8th floor atrium, ranged from below laboratory detection to 0.0271 f/cc and were also below the OSHA PEL. Comprehensive air sampling of occupied spaces also occurred in 2022, with laboratory results ranging from below laboratory detection to 0.004 f/cc and were below the OSHA PEL. Results for the 2022 comprehensive air monitoring are discussed in **NORTECH's** Limited Air Sampling Report (October 2022, attached as Appendix 8).

2.3 Visible Dust Survey

During comprehensive air sampling efforts, a visible dust survey was conducted of occupied spaces and concentrated on work areas as opposed to areas above the ceiling tiles. Visible dust within office and public occupied spaces, including above the drop ceiling tiles, was noted during a walkthrough of each floor. While dust surveys are subjective, the same personnel conducted the survey on each floor. As the same personnel conducted the survey on all floors, while subjective, the survey is considered consistent throughout the project area.

Level 0 – 1 dust was observed throughout most of the occupied areas of floors 5 – 11 of the building. Level 1 dust was most likely to be noted on horizontal surfaces not associated with desks or high use areas. Examples of areas where Level 1 dust was most commonly observed were the ledges of interior windows on floors 9 – 11 which overlooked the central atrium and floor level heat registers.

Level 2 dust was generally observed in low visibility areas, such as the tops of cabinets or refrigerators in the break rooms, and hard to see or reach floor level heat registers behind desks. Level 2 dust was more likely to be observed in the lower levels (floors 5 – 7) than upper levels (floors 8 – 11). Occupied spaces on floors 5 – 7 were also more likely to contain older and more worn looking furniture, cubicle dividers, and flooring (both vinyl and carpet) than the upper floors.

The highest occurrences of Level 2 dust in occupied spaces were observed in the Legislative Audit Offices on the sixth floor and the IT Control Room on the fifth floor. These spaces correspond to areas within the building that are not routinely cleaned due to access restrictions.

In general, low levels of observed dust below the drop ceiling tiles indicate good housekeeping practices throughout the building. Although Level 2 dust was more likely to be observed in occupied spaces on lower floors, this may be due to desks on these floors being more likely to obscure access to the floor level heat registers than desks in upper-level floors. Dust levels within occupied areas are discussed in Limited Air Sampling Report (October 2022, Appendix 8).

Dust levels between the pan decking and drop ceiling were also noted in areas where drop ceilings were present. Dust levels on the top of the drop ceiling tiles ranged from Level 2, to Level 3. Small clumps of overspray from the spray on fireproofing were observed on top of the ceiling tiles in some areas, especially those that exhibited high overspray from application of the spray on fireproofing.

While spray on fireproofing above the ceiling tiles is considered to be in generally good condition, there are areas of significant overspray throughout the building. Overspray of the ACM containing spray on fireproofing is a by-product of the application process and was most

prominent along the exterior walls and interior walls overlooking the 8th floor atrium. As the spray on fireproofing that has been properly applied to steel structural components is in good condition (unless otherwise noted in Section 6.2.1), dust and spray on fireproofing pieces on top of the ceiling tiles appear to predominantly be the result of overspray. As such, the dust on top of the ceiling tiles should be assumed to contain asbestos. There are no regulatory limits for asbestos in dust and air sampling has indicated that airborne asbestos within the building is below OSHA PEL limits. However, **NORTECH** recommends that properly trained individuals wearing appropriate PPE clean dust from off the top of the ceiling tiles of the work area prior to and after work being conducted within areas of visible dust.

3.0 SCOPE OF WORK

The scope of work discussed in this report includes review of available previous documents (1989 Survey and Management Plan for Asbestos Containing Material, Alaska State Museum & Juneau State Office Building, and 2010/2011 asbestos abatement specifications), conducting a whole building assessment to determine the location and extent of potential asbestos containing materials.

Select spaces were not accessible for inspection, are outlined below, and denoted on the Figures:

- Security Room in center of 5th floor
- Vault on 5th floor
- Security vault on 7th floor adjacent to the breakroom
- Private entity renting room on north side of 8th floor
- Storage room adjacent to offices on 9th floor
- Storage room(s) on 10th floor
- Storage closet adjacent to office on 11th floor

Although accessible, the building's roof has not been sampled as a roofer to patch the sample locations has not been secured at this time. **NORTECH** will include the roof results in an addendum once sampling has been completed.

4.0 METHODOLOGY

Project sampling efforts were completed in accordance with **NORTECH** Hazardous Material Standardized Methodologies (v19). Project work was performed by experienced Health & Safety Professionals with current AHERA Building Inspector certification utilizing industrial hygiene inspection practices dedicated to the anticipation, recognition, and evaluation of materials within workplaces.

Suspect asbestos samples were sent to EMSL Analytical, Inc., a laboratory certified through the National Voluntary Laboratory Association (NVLAP). The samples were analyzed by Phase Light Microscopy (PLM) using the EPA 600/R-93/116 Method. Materials initially determined to be between 1% - 5% asbestos were additionally analyzed using the PLM Point Count method to more accurately determine the percentage content of asbestos.



The AHERA criteria to determine if ACM was in good, damaged, or significantly damaged condition was followed and is described in detail in Section 5.2. Where possible, the square footage of damaged ACM and the area needed for an enclosure to abate the damaged ACM were estimated. These criteria are essentially divided into two categories: TSI and other materials (includes spray-on fireproofing, GWB systems, flooring, etc.).

Spray on fireproofing systems typically include fireproofing on the system needing protection (structural steel I-beams, posts, pan decking, and similar) and overspray on adjacent items and materials such as ducting, concrete walls, and wires. While application to structural areas can be assumed to cover all of the intended area, application overspray is typically more random and uneven. The original overspray areas and depth of overspray is not known and the overspray was not included in the damage assessment. If overspray areas were considered damaged, this was documented in the field notes or maps, but was not counted towards the damaged ACM total.

No documentation of the extent of overspray on non-structural items (such as ducting and wires) has been provided or is thought to exist. As the extent and location of overspray at the time of installation cannot be compared to the extent and location of overspray at the time of the inspection, **NORTECH** cannot assess the condition of the spray on fireproofing overspray in terms of the AHERA criteria. The observed areas of overspray were not included in the total square footage of ACM or the asbestos condition survey.

In addition to determining if ACM was damaged, **NORTECH** conducted a visual count of damaged ceiling tiles within accessible, occupied, and non-abated areas of the building. Ceiling tiles were considered damaged if they had cracks, holes, rounded/crumbled edges, were missing entirely, or portions of the support grid were missing. An estimate of the number and type of damaged ceiling tiles by floor is included in Appendix 4.

5.0 FIELD ACTIVITIES

NORTECH personnel Jennifer Stoutamore and Sean Heaney conducted bulk material sampling activities between June 29 and July 18, 2022. Due to scheduling difficulties, bulk sampling was not completed in the Legislative Audit offices on the sixth floor until September 22, 2022. Ms. Stoutamore returned to the JSOB on November 29, 2022, to complete sampling and an assessment of the elevator shafts. On March 9, 2023, Ms. Stoutamore conducted a walkthrough of the 9th – 11th floors with ADOT&PF personnel Scott Yarnell to inspect areas of concern to ADOT&PF. At ADOT&PF's request, **NORTECH** personnel Jennifer Stoutamore, Jason Ginter, and Heather Gulley catalogued damaged ceiling tiles on accessible, non-abated portions of the 5th – 11th floors of the State Office Building in April 2023.

During bulk sampling activities, the previously provided floor plans were noted to not have depicted updates to the floor plans on each floor. Measurements were taken to determine where walls and rooms had been removed or added and updated floor plans have been created to accurately detail where material sampling occurred.

5.1 Bulk Sampling

Floors 1-3 of the parking garage were sampled as a homogeneous area, while Floor 4 of the parking garage was different in materials present. Floors 1-3 contained fireproofing sprayed ceilings and beams open to the atmosphere while the 4th floor had a metal pan decking lid protected by a gypsum wallboard drop ceiling with fiberglass insulation batts above.

The 5th, 6th, 7th, and 8th floors have slightly different floor plans, space usage, and materials present throughout each area. The 9th-11th floors were identical and contained limited closed door office space with the majority of the area containing half-walled cubical areas.

The elevator shafts were generally similar to each other, with the elevator shafts for Elevators 1 and 2 and Elevator 3 shaft containing insulating panels in some areas, while elevator shafts for Elevators 4/5 and 6/7 did not. The shaft containing Elevator 3 had been abated and is not considered to be homogenous with the other elevator shafts. All other elevator shafts contained light grey spray on fireproofing which contains Chrysotile asbestos.

Building materials suspected of containing asbestos included gypsum wallboard, joint compound, tape, taping mud, surfacing materials, pipe insulation, cove base, flooring, floor leveling compound, mastics, ceiling tiles, caulking and sealants, wall patching materials, waterproofing membranes, and various types of spray on fireproofing. A total of 179 samples were collected and submitted for laboratory analysis to determine the percent content of asbestos by PLM from the structure and associated parking garage. Sample locations and results are shown on Figures 2-12, Appendix 1.

Sampled areas were repaired as possible. When samples were collected from potentially friable materials (e.g. pipe insulation, spray on fireproofing) the sampled area was encapsulated with tape or spray on glue to prevent fibers from the sampled area becoming airborne.

5.2 Condition Assessment

During bulk sampling activities, **NORTECH** conducted a condition survey of the materials sampled for ACM. Materials that were not sampled, but were visually similar to sampled materials, were also included in the condition assessment survey. **NORTECH** used the following categories, based on established AHERA visual criteria to assess materials:

- Good:
 - Non-TSI: Material with no visible damage or deterioration, or showing only very limited damage or deterioration
 - TSI: Material with no visible damage or deterioration, or showing only very limited damage or deterioration
- Damaged:
 - Non-TSI: Material whose surface is crumbling, blistered, water-stained, gouged, marred or otherwise abraded over less than 10% of the surface if it evenly distributed, 25% if damage is localized.
 - TSI: Material with one or more of the following:
 - A few water stains or less than 10% of insulation with missing jackets
 - Crushed insulation or water stains, gouges, punctures, or mars on up to 10% of the insulation if evenly distributed, 25% if localized
- Significantly Damaged:
 - Non-TSI: Material with one or more of the following:
 - Surface is crumbling or blistered over at least 10% of the surface if the damage is evenly distributed, or 25% if localized

- 10% if evenly distributed or 25% if localized, of material hanging from the surface, deteriorated, or showing adhesive failure
- Water stains, gouges, or mars over at least 10% of the surface if damage is evenly distributed, 25% if localized
- TSI: Material with one or more of the following characteristics:
 - Missing jackets on at least 10% of the piping or equipment
 - Crushed or heavily gouged or punctured insulation on at least 10% of pipe runs/risers, boiler, tank, duct, etc. if the damage is evenly distributed, 25% if it is localized

In the case of adhesives or mastics, **NORTECH** considered the material damaged or deteriorating if it had become dry, brittle, or was no longer sticky or tacky. While this does not meet the formal definition of damaged as set forth in AHERA, it demonstrates a decrease in the material's ability to perform its function which could potentially lead to a fiber release if disturbed.

Materials were assessed by functional space and floor level (if the material was found on multiple floors). For instance, while gray spray on fireproofing was present in the same functional space (office areas) on Floors 9 and 10, the condition of the spray on fireproofing on Floor 9 was assessed independently of the similar spray on fireproofing on Floor 10. **NORTECH** also assessed specific areas of concern identified by ADOT&PF personnel. Tables with a description of each of the ADOT&PF areas of concern and description of damage, if applicable, are located on Figures 17-20 in Appendix 1.

During the condition survey, small pieces of spray on fireproofing were observed on top of ceiling tiles. In many cases, the spray on fireproofing located on structural steel above these locations did not visually appear damaged. As the fireproofing on the structural components did not appear damaged, it is unlikely the observed pieces of fireproofing on the ceiling tiles were from the spray on fireproofing located on structural components. It is likely these pieces of fireproofing are from areas of overspray, which due to the reasons discussed above, cannot accurately be assessed for damage.

5.3 Damaged Ceiling Tiles

At the request of ADOT&PF, **NORTECH** conducted a visual inspection of ceiling tiles in accessible, non-abated areas of the building. Spray on ACM Fireproofing was observed on top of ceiling tiles throughout the building, and as damaged ceiling tiles have the potential to allow the ACM to fall into occupied spaces, the ADOT&PF requested an approximate count of the number of damaged ceiling tiles on all floors of the building. Criteria for designating a ceiling tile as "damaged" is described in Section 4.0. Only accessible, occupied, and non-abated areas of the building were inspected for ceiling tile condition. Appendix 4 contains a count of damaged ceiling tiles by floor.

6.0 RESULTS

6.1 Bulk Samples

Sample locations and summary tables are depicted in Figures 2-12, Appendix 1. Copies of the laboratory reports are also included as Appendix 6. The following is a discussion of sample results by floor for materials that were sampled:

Floor 1-4 (Parking Garage)

- Friable
 - Hard elbow on insulated 4" pipe, painted brown
 - Photo 2, Appendix 2

Floor 5 (State Servers, IT, Offices, & Mechanical)

- Friable
 - Gray fireproofing on pan decking/overspray
 - Photo 5, Appendix 2
 - Gray fireproofing in Elevator 1/2 shaft
 - Photo 20, Appendix 2
- Non-Friable (Category I)
 - Beige floor tile in mechanical IT server room entrance
 - Photo 7, Appendix 2
 - Black mastic under beige floor tile in mechanical IT server room entrance
 - Photo 7, Appendix 2
- Non-Friable (Category II)
 - White joint compound in Maintenance Room
 - Photo 6, Appendix 2

Floor 7 (Offices & Mechanical)

- Friable
 - Gray fireproofing on pan decking/overspray
 - Similar to Photo 5, Appendix 2, different location
- Non-Friable (Category I)
 - Light tan mastic behind brown cove base
 - Photo 8, Appendix 2
 - Black mastic under tan vinyl flooring and gray floor tiles
 - Similar to Photo 7, Appendix 2, different location
- Non-Friable (Category II)
 - White and gray joint compound
 - Similar to Photo 6, Appendix 2, different location

Floor 9 (Offices)

- Friable
 - Light Gray, gray, and white spray on fireproofing above drop ceiling
 - Photo 13, Appendix 2
- Non-Friable (Category I)
 - Brown mastic behind brown and black cove base
 - Photo 10, Appendix 2
 - Brown mastic behind joint compound of structural corner column
 - Similar to Photo 10, Appendix 2, different location
- Non-Friable (Category II)
 - White, gray, and tan joint compound
 - Photo 12, Appendix 2

Floor 10 (Offices)

- Non-Friable (Category II)
 - White joint compound
 - Similar to Photo 12, different location

Floor 11 (Offices)

- Non-Friable (Category I)
 - Brown and yellow mastic behind brown cove base
 - Photo 14, Appendix 2
 - Black sealant around atrium windows and metal window framing
 - Photo 15, Appendix 2
 - White mastic under cream floor tile
 - Similar to Photo 14, Appendix 2, different location
 - Brown and yellow mastic under carpet
 - Photo 14, Appendix 2
- Non-Friable (Category II)
 - White and tan joint compound
 - Photo 16, Appendix 2

6.2 Condition Assessment

NORTECH conducted a condition assessment of all bulk sampled materials. Not all materials sampled had laboratory results that classified the material as ACM. Materials that were classified as ACM based on laboratory results were divided into those classified as damaged and those in good condition. Condition assessment results are summarized in the following sections.

6.2.1 Damaged ACM

Below is a list of materials, by floor which **NORTECH** identified as damaged:

Floors 1 – 4 Parking Garage

- No damaged ACM identified

Floor 5

- GWB/Joint Compound in the maintenance/storage room
 - Sampled joint compound is non-friable ACM
 - The wall system was extensively patched and multiple gouges/holes were observed
- Beige vinyl tile/black mastic in Phone Room
 - Both tiles and mastic are non-friable ACM
 - Missing tiles, holes, and cracks were observed in the tile
- Spray on fireproofing above the IT Server Area (Figure 17, Appendix 1)
 - Spray on fireproofing is friable ACM
 - Three areas were observed to have plastic enclosures above the ceiling tiles and around Halon fire suppression globes
 - Ceiling tiles were screwed in place and **NORTECH** was not able to visually assess the spray on fireproofing

- The ACM fireproofing is therefore assumed to be damaged and area is estimated based on the number of ceiling tiles the plastic appeared to be over

Floor 6

- Brown cove base and black mastic in room 608
 - The mastic contained asbestos, but in a concentration less than 1%
 - Is not considered ACM
 - Included here as it may require special handling to protect workers if it is disturbed during project activities
 - Mastic was dry and may become friable if disturbed

Floor 7

- No damaged ACM identified

Floor 8

- No damaged ACM identified

Floor 9

- Vinyl tile on storage room floor
 - Tile is non-friable ACM
 - Tile was brittle with missing pieces
- Brown mastic under both brown and black cove bases
 - Mastic is non-friable ACM
 - Mastic is hard, dry, and brittle and may become friable if disturbed
- Joint Compound
 - Joint compound is non-friable ACM
 - Wall where joint compound was collected was damaged
 - Gouges, holes, cracks
 - Not ALL walls on the floor were damaged
- Spray on ACM fireproofing (Figure 18, Appendix 1)
 - Spray on fireproofing is friable ACM
 - Conference Room C West
 - Cable bundles strung above the drop ceiling damaged the fireproofing as it was pulled along the top of the steel structural supports
 - Overspray and/or application excess present in channel iron above the drop ceiling in multiple locations on the walls facing the atrium
 - Overspray/excess is not counted towards damaged ACM

Floor 10

- No damaged ACM identified
 - Overspray and/or application excess present in channel iron above the drop ceiling
 - Overspray/excess is not counted towards damaged ACM
 - Overspray/excess is still considered friable ACM

Floor 11

- Black window sealant around interior windows looking into foyer
 - Sealant is non-friable ACM

- Condition listed as “damaged” due to missing or ripped pieces sporadically located throughout the windows
- Joint Compound in the PFD Division
 - Joint compound is non-friable ACM
 - Walls where joint compound samples were collected were damaged
 - Gouges, holes, cracks
 - Not ALL walls on the floor were damaged
- Brown mastic under brown cove bases in the mechanical/maintenance room
 - Mastic is non-friable ACM
 - Mastic is hard, dry, and brittle and may become friable if disturbed
- Spray on ACM fireproofing
 - Spray on fireproofing is friable ACM
 - Water damage observed in the following areas (see Figure 20, Appendix 1)
 - Exterior wall, southwest corner around wire roof protrusions
 - Around exterior of SW corner office by wire roof protrusions
 - Middle of windowed walkway overlooking atrium by location of air sample 11-8
 - Eastern exit to elevator walkway around roof protrusions
 - Data processing area, around roof protrusions
 - Administrative Services hallway by location of air sample 11-40
 - Above Tax Director’s office due to a roof leak caused by removal of old roof anchors
 - Sporadic cracks observed in the ACM spray on fireproofing on one beam outside the Permanent Fund Dividend corner office
 - Cracks did not appear to reach the substrate

Elevator shafts

Elevators 1 & 2 share a shaft, elevator 3 is contained within its own shaft, elevators 4 & 5 share a shaft, and elevators 6 & 7 share a shaft. Damaged ACM is discussed below by elevator shaft. In addition to being described as damaged, ACM present within the elevator shafts is subject to high levels of disturbance from vibration and air flow as part of the normal function of the elevators and shafts. As such, there is an increased risk for the damaged spray on fireproofing to release fibers into the air while the elevators are in use.

Elevator Shaft 1/2

- Gray spray on fireproofing
 - Fireproofing is friable ACM
 - Cracks, missing portions, and patches were observed throughout

Elevator Shaft 3

- Abated, no ACM spray on fireproofing present

Elevator Shaft 4/5

- Gray spray on fireproofing
 - Fireproofing is friable ACM
 - Large cracks (greater than 1 foot in length) and pits were observed throughout

Elevator Shaft 6/7

- Gray spray on fireproofing

- Fireproofing is friable ACM
- Large cracks (greater than 1 foot in length) and pits were observed throughout

Appendix 2 contains photos of the ACM identified during these activities. At least 15 different types of gray/tan spray on fireproofing are present throughout the building. The majority of the different types of spray on fireproofing were found within the Parking Garage (Floors 1 – 4) and do not contain asbestos. However, gray/tan non-asbestos containing fireproofing is not easily differentiated from the asbestos containing gray/tan fireproofing and spray on fireproofing on parking levels should be tested prior to being disturbed. Blue spray on fireproofing was found throughout abated areas of the interior of the building. While submitted samples of blue spray on fireproofing were non-detect for asbestos, the shade and saturation of blue within the new fireproofing was highly variable. To aid in identification of the various types of spray on fireproofing sampled, a guide to the different observed spray on fireproofing is presented in Appendix 3.

6.2.2 Good Condition ACM

The majority of the ACM that was sampled as part of these field activities were considered to be in good condition and with low potential for disturbance. An overview of the identified ACM considered to be in good condition is listed below.

Floor 1

- Hard piping elbow
 - Piping elbows are TSI and considered friable ACM

Floors 2 – 4

- No ACM observed

Floor 5

- Gray spray on fireproofing above the drop ceiling
 - Fireproofing is considered friable ACM
 - Located above drop ceiling and exposed in some mechanical spaces
 - Except in the IT area as noted in Section 6.2.1
- Black mastic within the phone room
 - Mastic is non-friable ACM

Floor 6

- Gray spray on fireproofing
 - Fireproofing is considered friable ACM
 - Above drop ceiling in non-abated areas
 - See Figure 13, Appendix 1 for abated areas
 - The majority of the sixth floor has been abated of ACM spray on fireproofing

Floor 7

- White and gray joint compound
 - Joint compound is non-friable ACM
- Tan and black mastics
 - Mastics are non-friable ACM
- Gray spray on fireproofing
 - Fireproofing is considered friable ACM

- Above drop ceiling and that potentially exposed in mechanical spaces in non-abated areas
 - See Figure 14 Appendix 1 for abated areas
- A portion of the seventh floor has been abated of ACM spray on fireproofing

Floor 8

- Gray spray on fireproofing
 - Fireproofing is considered friable ACM
 - Assumed to be above drop ceilings, due to height could not assess
 - Electrical room next to organ has been abated (Figure 15, Appendix 1)

Floor 9

- Brown mastic from the insurance office
 - Mastics are non-friable ACM
- Gray spray on fireproofing
 - Fireproofing is considered friable ACM
 - Except as noted in Section 6.2.1

Floor 10

- Joint Compound
 - Joint compound is non-friable ACM
- Gray spray on fireproofing
 - Fireproofing is considered friable ACM
 - Above drop ceiling and that potentially exposed in mechanical spaces

Floor 11

- Joint compound in the Tax Division, Treasury Division, and mechanical/maintenance room
 - Joint compound is non-friable ACM
- Brown, yellow, and white mastics
 - Mastics are non-friable ACM
- Gray spray on fireproofing
 - Above drop ceiling and exposed in some mechanical spaces
 - Except as noted in Section 6.2.1

6.3 Damaged Ceiling Tiles

Damaged ceiling tiles were counted by floor and type of damage. In addition to the areas listed in Section 3.0 and areas where abatement is known to happen, the following areas were not accessible for assessment of ceiling tiles:

- IT “cage” area
- OIT Offices
- Grants and Contracts Offices
- Food court/coffee businesses on the 8th Floor

A Total of 1,326 ceiling tiles were classified as damaged with the assessed areas. The majority of the damaged ceiling tiles (707) were classified under general damage, which was damage to the outside edges of the tiles due to general wear. Holes (found in 229 tiles) and missing crossbars (194 tiles) were also common reasons for damage. Appendix 4 contains a table with damaged tile counts by type of damage and floor.

7.0 ABATED AREAS

Abatement has been conducted and documented in limited areas of the building. Documented abatement of spray on fireproofing was completed in limited areas in 2010-2011 and included:

- Floor 6
 - Mechanical spaces
 - Telephone/electrical room
- Floor 7
 - Mechanical spaces
 - The pipe chase between room 737 and the mechanical areas near the loading dock was not abated
 - Compactor room
 - Envelope Room
 - Telephone/electrical room
 - Fire/signal room

Although spray on fireproofing was abated to the extent possible prior to spraying on non-ACM fireproofing, residual ACM fireproofing was expected to remain on the pan decking and support beams. Specifications for the 2010/2011 abatement work on Floors 6 and 7 indicated that after abatement, and prior to spraying on the non-ACM fireproofing, a sealant would be sprayed on the pan decking and support beams to seal any potential ACM remaining on the structures. The specifications also state wall cavities within the project area were assumed to be contaminated spaces. The contractor was responsible for sealing and enclosing the accessible wall openings to prevent the spread of potential ACM within the cavities.

Newly installed spray on fireproofing in the abated areas was dyed blue. However, as the dying was conducted during on-Site mixing of the fireproofing prior to application, the blue coloration of the non-ACM spray on fireproofing is highly variable. Observed blue coloration ranged from a light, low saturation blue that looked nearly white in ambient light to a brilliant, highly saturated blue which was easily identifiable in ambient light and at a distance. **NORTECH** collected samples from multiple areas of blue spray on fireproofing for confirmation purposes, and submitted samples were non-detect for asbestos. Appendix 3 shows examples of the blues encountered during the bulk sampling and materials assessment field activities.

Field personnel used the blue coloring of new spray on fireproofing to identify areas which had been abated, whether or not they had been previously documented. Sampling was conducted on the blue spray on fireproofing to confirm it was non-ACM. Based on visual observations and sampling of the blue fireproofing, the following, non-documented abated areas were identified:

- Floor 6
 - Legislative Office area
 - Abatement may have extended into the hallway adjacent to legislative offices, but the hallway ceiling is covered with GWB and was not accessible for inspection
 - Hallway by elevator shafts 4/5 and 5/6
- Floor 7
 - Hallway between the loading dock and first set of double doors

- Floor 8
 - Electrical room next to organ
- Elevator 3 Shaft
 - Abatement appears to have occurred throughout the elevator shaft
- Floor 10
 - Mechanical Chase in DOA office area
 - See Figure 11 Appendix 1 for location sample was collected
 - Extent of this abatement is not known

Figures 13-16 in Appendix 1 show areas that are known to have been abated of spray on fireproofing that contains asbestos.

While not abated, spray on fireproofing located in the southeast corner of the sixth floor is visually distinct (Photo 20, Appendix 3) from other spray on fireproofing in the building and was non-detect for asbestos. This tannish-gray fireproofing appears to have a carpet like texture and is located adjacent to areas abated in 2010/2011 (Figure 7, Appendix 1). As this fireproofing has not technically been abated it is not included in the abated area marked on Figure 13. It should however be noted that this type of spray on fireproofing does not require abatement as it does not contain asbestos.

8.0 ANALYSIS AND DISCUSSION

8.1 Bulk Sampling and Building Inspection

8.1.1 Bulk Sample Results

Materials with results below the regulatory threshold of 1% asbestos are not considered ACM for demolition and disposal purposes. However, the asbestos content of the items detailed below should be disclosed to contractors as part of future projects, even if results are less than 1% and are not considered ACM.

Floor 6 (Offices & Mechanical)

- Black mastic <1% chrysotile was identified in black mastic behind brown cove base in Maintenance storage closet

Floor 7 & 9 (Offices & Mechanical)

- Gray floor tile

Floor 11 (Offices)

- Brown and yellow mastic behind column wallboard
- Gray & white joint compound at bathroom adjoining wall

No asbestos was detected on the 8th floor, except gray fireproofing known to be contained within the elevator columns. Due to ceiling height, **NORTECH** was unable to assess the area above the drop ceilings in the 8th floor office areas. It is expected that gray spray on fireproofing is present on the pan deck above the ceiling tiles, as spray on fireproofing was observed on all inspected pan decking and there is no documentation that spray on fireproofing was abated above the 8th floor office area ceilings. If gray spray on fireproofing is present above the drop



ceilings on the 8th floor, and as **NORTECH** is not aware of documentation concerning abatement of spray on fireproofing in this area, it should be treated as ACM. Although confirmation sampling of abated spray on fireproofing was non-detect for asbestos, as there is no documentation of abatement in this area, if blue spray on fireproofing is present in this area, it should be tested to confirm it is free of asbestos prior to disturbing it.

Throughout the building, black mastic contains Chrysotile asbestos. Light tan, brown, yellow, and white mastics contain Anthophyllite asbestos, an amphibole mineral that requires additional means and methods to protect workers when working with the material due to its water repellent characteristic. These materials were observed throughout the entire building behind cove base and under flooring. For these colors of mastic, they are not differentiable from non-asbestos containing mastics by visual indication or location within the structure with current historical information available.

Joint compound throughout the structure containing asbestos appears limited to exterior walls, structural columns, and mechanical spaces. Asbestos containing joint compound was also observed in limited spaces in rooms adjoining bathrooms and original construction rooms near the atrium on the 9th-11th floors.

Asbestos containing fireproofing was observed on pan decking throughout the structure. In office spaces, a drop ceiling conceals the fireproofing material, while in mechanical spaces the ceiling is open to the room and not protected against contact. Fireproofing, not colored blue, contains asbestos and was identified on Floor 5-7 and 9-11. It is also assumed to be above the drop ceiling in Floor 8 office areas, however the ceilings were too high to visually inspect with available ladders. On Floor 4 of the parking garage, the same gray fireproofing was identified on pan decking above the gypsum wallboard ceiling hard lid and should be assumed to be ACM and identical to that found throughout the rest of the interior of the building.

8.1.2 Abated Areas

Prior to the current building-wide survey, areas that may have been abated were only known from the abatement specifications for the 2010/2011 abatement activities. Several other areas of abatement, including a portion of the sixth floor and elevator shaft three, were found during current activities. It is important that complete records be available detailing all abated areas of the building, as work in areas where ACM spray on fireproofing is present will have different requirements from areas where the ACM has been abated. Up to date records and maps of abated areas should be included in a current Asbestos Management Plan.

8.1.3 Condition Assessment

NORTECH conducted a condition assessment on all bulk sampled materials as well as areas which ADOT&PF personnel considered to be areas of concern for the ACM spray on fireproofing above the drop ceiling tiles within occupied spaces (see Figures 17-20, Appendix 1). As the ACM spray on fireproofing is friable, areas of damaged ACM spray on fireproofing are discussed below.

During assessment of the ACM spray on fireproofing located throughout the building, it was common to observe small amounts of fireproofing on top of ceiling tiles (Photos 24-25, Appendix 2). It should be noted that the presence of spray on fireproofing on top of ceiling tiles does not, in and of itself, mean that the surrounding ACM spray on fireproofing is in damaged condition. As discussed in section 5.2, ACM is only considered damaged if up to 10% of the material in a

given area can be visually identified as damaged. For instance, Photo 25 in Appendix 2 shows ACM fireproofing on top of the ceiling tiles, but there is no visible damage to the fireproofing above it.

The ADOT&PF identified 17 areas between floors 9-11 which it considered a concern, 13 of which were located on the 11th floor. **NORTECH** identified an additional six areas; three on the ninth floor and three on the fifth floor (Figure 17-20, Appendix 1). The areas of concern on the 11th floor were mostly attributed to water damage and consisted of staining of the spray on fireproofing in areas of roof protrusions. The largest non-elevator area of potential concern, by square footage, occurred on the ninth floor where spray on fireproofing overspray was observed in the channel iron above the ceiling tiles along interior walls (walls facing the atrium) as shown in Photos 26-27, Appendix 2. Spot checks in three additional locations indicated this may be occurring sporadically throughout the ninth floor on the walls facing the atrium.

Areas of concern on the ninth floor are centered around the presence of ACM spray on fireproofing overspray present in the U-shaped channel iron which functions as a sill plate along the top of the concrete walls above the drop ceiling tiles (Photos 26-27, Appendix 2). During the application of the ACM spray on fireproofing to structural steel components, many non-structural and/or non-steel components were covered in whole or part with the fireproofing (overspray, see Photos 25-28, Appendix 2). The thickness of the applied ACM spray on fireproofing did not appear to be uniform, causing application excess, especially in areas of overspray. Based on visual observations of the six spot-checked areas on the ninth floor, the spray on fireproofing overspray present in the U-shaped channel iron appears to be from application excess and overspray falling into this area. As previously noted, **NORTECH** did not include the condition of this overspray/application excess into considerations of damaged ACM. ACM spray on fireproofing applied to structural steel appeared to be in good condition in five of the six inspected areas.

Although usually associated with overspray and not ACM on structural steel components, small amounts of spray on fireproofing located on top of the ceiling tiles has the potential to be disturbed, especially during work above the drop ceiling tiles. To prevent accumulation, the tops of ceiling tiles should be vacuumed before *and after* any work is conducted above the drop ceiling. Any overspray present in the channel iron within the work area should also be removed prior to work activities. This work should be done by properly trained personnel during times when the work area is not occupied.

Within the ninth floor Conference Room C West, ACM spray on fireproofing was also observed within the channel iron above the drop ceiling tile. While the majority of the observed fireproofing in the channel iron is likely from overspray and application excess as described above, **NORTECH** also noted that large cable bundles had been strung over the structural steel supports (Photos 29-30, Appendix 2). The act of pulling the cables over structural steel that had been sprayed with ACM fireproofing appears to have resulted in damage to the ACM. Therefore, **NORTECH** considers the ACM spray on fireproofing located under the cable bundles to be damaged.

Cables and other IT equipment (such as routers, see Photo 26 in Appendix 2) were observed above the ceiling tiles on all floors. Most of the cables were run on top of the ceiling tiles themselves, though it was not uncommon for cables to be run over either structural steel supports or areas where ACM spray on fireproofing overspray was present. Pulling cables or other equipment over areas impacted by ACM spray on fireproofing will damage the fireproofing

and potentially lead to an exposure. Cables and equipment which are located above the drop ceiling should be run through conduits, which are in turn placed directly on the top of ceiling tiles and not touching ACM spray on fireproofing (either sprayed on structural steel or in areas of overspray/application excess) when possible. Other equipment, such as routers, placed above the ceiling tiles should be placed within sealed bags or other containers as possible and located in areas where they are not touching ACM spray on fireproofing whenever possible. Placing cables and other equipment into conduits or containers will help prevent both contamination of the equipment and prevent damage to the ACM spray on fireproofing itself.

During work within the IT server room on the fifth floor, **NORTECH** observed three areas where ceiling tiles were either missing or in the process of falling out of the crossbar grid. In all three areas plastic sheeting was observed above the drop ceiling tiles. The plastic was sealed at the seams and to the surrounding ceiling tiles with tape. All three locations had Halon fire suppression globes present, with the plastic sheeting going over the globes and obstructing the view of the pan decking and ACM spray on fireproofing above. As the ceiling tiles below the halon globes were either missing or falling down, **NORTECH** was able to estimate the potentially impacted area by counting the number of 3 x 5 ft ceiling tiles that appeared to have plastic sheeting above them. The IT personnel present at the time of the inspection did not know how long the plastic had been up, but assumed it was due to previous water leaks.

Four elevator shafts are present within the Juneau State Office Building; one containing elevators 1 and 2, one containing elevator 3, one containing elevators 4 and 5, and one containing elevators 6 and 7. Three of the four elevator shafts within the Juneau State Office Building contain ACM spray on fireproofing. Elevator shafts are subject to vibrational and air erosion damage and ACM spray on fireproofing within all five non-abated elevator shafts is considered damaged. The elevator shafts were considered separately from the rest of the building during the condition assessment as the elevator shafts span multiple floors. Based on floor plans and an average height of 14 feet per story, **NORTECH** estimates there are approximately 22,000 square feet of elevator shafts within the building. Elevator shaft 3 (estimated to be around 2,600 square feet) has been abated. The remaining elevator shafts, comprising nearly 20,000 square feet of ACM containing spray on fireproofing, are considered to contain damaged ACM. For comparison, **NORTECH** estimates less than 1,000 square feet of ACM spray on fireproofing on structural steel components not associated with an elevator is damaged throughout the remainder of the building. Due to the square footage of damaged ACM spray on fireproofing within the elevator shafts, the consistent vibrational and erosion conditions within the elevator shafts, and as the 1989 Survey and Management Plan report calls out the elevator shafts as an area of concern and priority for abatement, **NORTECH** considers the elevator shafts as the highest abatement priority within the building. As discussed in the 1989 report, any elevator maintenance or repair work conducted prior to the elevator shafts being abated should be completed by personnel with proper asbestos training and wearing proper PPE for the planned work.

8.1.4 Damaged Ceiling Tiles and Frame

In total, **NORTECH** counted 1,326 ceiling tiles meeting the criteria for damaged. General damage, or damage around the outside edges of a tile from general wear, was the most common type of damage (707 ceiling tiles). Holes in ceiling tiles were the second most common type of damage (229 tiles) and cracked ceiling tiles accounted for the third highest type of damage (134 tiles). Comparatively few tiles exhibited water damage or were missing.

Floors with the most damage to ceiling tiles were the seventh floor (268 tiles), the ninth floor (246 tiles), and the fifth floor (239 tiles). The sixth floor had the fewest damaged tiles observed, although it also had the least square footage inspected as areas with previous abatement of ACM fireproofing were excluded from the ceiling tile inspection. Appendix 4 contains a table with damaged tile counts by type of damage and floor.

While ceiling tiles are not ACM, the ceiling system provides a physical barrier can be important if the ACM spray on fireproofing has been damaged, such as during a water leak. Replacing damaged tiles and maintaining the frame support structure provides a physical barrier to prevent small pieces of fireproofing from potentially falling onto office workers.

8.1.5 Exposure Potential

NORTECH estimates that damaged ACM spray on fireproofing on structural steel portions of the Juneau State Office building encompasses less than 1,000 square feet. Damaged ACM spray on fireproofing within the elevator shafts is estimated to encompass over 19,000 square feet. In addition to damaged ACM spray on fireproofing, **NORTECH** estimates over 1,300 ceiling tiles are damaged throughout the building. Despite this damage and the presence of fireproofing overspray on top of the ceiling tiles, previous air testing has shown that building occupants are not likely to be exposed to air born asbestos fibers in concentrations exceeding OSHA regulatory limits.

The most likely exposure pathway would occur during work above the drop ceiling tiles. Having properly trained individuals vacuum the tops of ceiling tiles within the proposed work area both before and after conducting the planned activities would minimize this potential. Additional protection against potential exposure to workers above the ceiling tiles would be provided by ensuring known leaks (both from the roof and from piping) are fixed immediately. Water erosion, especially prolonged exposure to water, damages the ACM spray on fireproofing. Minimizing damage from water by repairing water leaks immediately will help to keep the ACM fireproofing in better condition and less likely to create dust or fall on top of the drop ceiling tiles.

8.1.6 1989 Sampling vs Current Sampling Results

In 1989, Arctic Slope Consulting Group (ASCG) conducted limited sampling of the JSOB and Alaska State Museum. Results from these sampling activities were used to create the 1989 Survey and Management Plan for Asbestos Containing Material, Alaska State Museum & Juneau State Office Building (Plan). ASCG collected a total of 66 bulk samples and 10 air samples (predominantly personal breathing zone air samples from survey workers) from the JSOB and used results from an additional 105 samples (bulk and air samples) that had been previously collected by different entities in order to make their recommendations.

Abatement and remodeling work, as well as piece-meal testing of materials for various reasons has been completed in the 33 years between sampling conducted for the Plan and **NORTECH's** current sampling activities. Testing of materials and abatement of spray on fireproofing was generally not well documented during this time. Therefore, **NORTECH's** approach to sampling consisted of a comprehensive, floor by floor survey and sampling of potential ACM as opposed to confirmation sampling of the 1989 materials. **NORTECH** collected a total of 179 bulk samples and 129 area air samples as part of the current project efforts. Air sampling results are discussed in **NORTECH's Limited Air Sampling Report** (Appendix 8).



Although efforts were made to be as consistent as possible with the 1989 survey in terms of functional spaces and sampling techniques, some aspects of the condition survey are subjective and **NORTECH** used slightly different criteria to determine condition of the ACM. Both ASCG and **NORTECH**'s methods are based on AHERA regulations, however CFR 40 Title 763.83 does not specifically define percent damage that is acceptable for each category. ASCG does not state in their 1989 report how they grouped their results for the condition assessment.

Based on wording within the report, it seems likely the assigned condition was for a material as a whole. For instance, gray spray on fireproofing throughout the entire building, in all functional spaces and on all floors, may have been considered as an aggregate and the condition assigned accordingly. This contrasts with **NORTECH**'s method, described in Section 8.0. In addition to differences in condition criteria, spray on fireproofing has been abated in many of the areas called out in the Plan.

NORTECH's findings generally agree with those of the 1989 survey. Due to minor differences in how conditions were assessed, and likely because the damaged ACM spray on fireproofing in mechanical areas called out in the 1989 report has been abated, **NORTECH** determined ACM spray on fireproofing was generally in good condition in occupied areas and damaged in the elevator shafts and localized areas, while ASCG had determined ACM spray on fireproofing throughout the building was in damaged condition.

ASCG also states throughout the 1989 report that the space between the pan decking and the drop ceiling is a return air plenum. During the site inspection, a multitude of ducting lines was observed above the drop ceiling. Based on a discussion with building maintenance staff and a review of the plans for the 9th floor, the ducting is supply air that is delivered to the occupied space through the light fixtures. Return air is "unducted" and enters the ceiling cavity through a different slot section on the light fixtures, confirming this space is operating as the return plenum. This configuration for air delivery and return was not verified in the field.

The 1989 Plan called out areas of exposed spray on fireproofing throughout the building as special priority areas. Exposed spray on fireproofing is defined as spray on fireproofing that contains asbestos and is visible to users. In other words, spray on fireproofing that is not behind a wall, ceiling (either gypsum wallboard or drop ceiling tiles) or otherwise obscured from viewing. Based on the Plan's figures, the majority of the high priority areas have either been abated of ACM spray on fireproofing or are now above either drop ceiling tiles or gypsum wallboard.

The 1989 Plan contains multiple recommendations, not all of which had been addressed at the time of this inspection. Below are the recommendations from the 1989 Plan (main bullets) and **NORTECH**'s updated observations and recommendations for these items (sub-bullets).

- Spray on Fireproofing in elevator shafts should be removed (special priority)
 - The shaft for Elevator 3 has since been abated
 - **NORTECH** agrees remaining elevator shafts should be abated
- Exposed spray on fireproofing is located in the loading dock and mechanical areas of the sixth and seventh floors and should be abated
 - The majority of this area has been abated (Figures 14-15, Appendix 1)

- The remaining ACM spray on fireproofing should be managed in place until it can be abated
- Exposed spray on fireproofing is located in janitor closets, storage areas, and satellite mechanical rooms, clumps of fireproofing have fallen onto the floor/on top of stored items, and such rooms should be cleaned and the fireproofing abated
 - Some areas have been abated (Figures 14-15, Appendix 1)
 - **NORTECH** did not observe clumps of fireproofing on floor or stored items
 - Areas have likely been cleaned as recommended by the Plan
- ACM fittings are exposed to the public in the seventh floor loading area and stairway #3 between Levels 6 and 7, and should be abated
 - Stairway #3 now has a gypsum wallboard ceiling and ACM that may remain in this area is not exposed to the public
 - If ACM fittings remain in these areas, they should be managed in place until they can be abated
- Damaged ACM fittings should be abated
 - This did not refer to a specific area or portion of the building
 - **NORTECH** concurs

8.2 Management of Remaining ACM

8.2.1 Updated Asbestos Management Plan

While only schools are required by current regulations to develop and maintain an Asbestos Management Plan, industry best practices encourage Asbestos Management Plans in commercial and public buildings that contain ACM, especially if the asbestos material is considered friable. The US EPA's *Information for Owners and Manager of Buildings that Contain Asbestos* (<https://www.epa.gov/asbestos/information-owners-and-managers-buildings-contain-asbestos#o&m>, accessed June 5, 2023), states the goal of an Asbestos Management Plan is to formulate or detail a plan for "...*training, cleaning, work practices, and surveillance to maintain asbestos-containing materials (ACM) in good condition within buildings. The goal is to minimize exposure of all building occupants to asbestos fibers.*" The EPA's suggestions on setting up an overall Asbestos Operations and Maintenance (O&M) Program, including an Asbestos Management Plan, can be found at <https://www.epa.gov/asbestos/setting-asbestos-operations-and-maintenance-om-program>.

The EPA states on their website that the Asbestos Management Plan should be updated "periodically". The Asbestos Hazard Emergency Response Act (AHERA) states that a school "...*maintain and update its management plan to keep it current with ongoing operations and maintenance, periodic surveillance, inspection, reinspection, and response action activities.*" Industry best practices follow AHERA updating requirements for public and commercial buildings. Therefore, a building's Asbestos Management Plan should be updated every time activities affecting known ACM occur. These activities include, but are not limited to:

- Abatement of asbestos
- Change in condition of known ACM, such as
 - Water damage due to a leak
 - Change in condition noted after a periodic re-inspection

- Timing of ACM re-inspection should be laid out in the Asbestos Management Plan

The last Asbestos Management Plan was written in 1989. Since then, extensive abatement of friable ACM spray on fireproofing has occurred, floor plans within the building have changed, water leaks damaging the spray on fireproofing have occurred, and the condition of friable ACM in areas such as elevator shafts has deteriorated. While this report may document the re-inspection and condition of known asbestos within the building, it does not detail training, clean, work practices, or future surveillance of ACM. Writing and implementing an updated Asbestos Management Plan will ensure protection of employees, inform contractors concerning location and condition of ACM that may be within their work area, document proper work practices for activities that may disturb ACM, outline timelines for re-inspection of ACM, and detail ACM management (including abatement). Until a new Asbestos Management Plan can be written and implemented, building employees should follow the 1989 plan.

8.2.2 Asbestos Abatement

While proper management of asbestos can minimize risk and liability associated with asbestos, only full abatement of all ACM within a building can remove the risk. As the highest risk and liability are centered around friable asbestos, abatement of the friable, asbestos containing spray on fireproofing should be considered. Abatement would remove the friable spray on fireproofing from the building permanently, significantly reducing the likelihood of asbestos fibers becoming airborne. As non-friable ACM can become friable due to damage or activities such as grinding, only complete removal of all ACM (both friable and non-friable) from the building can eliminate the potential for airborne asbestos within the building.

Total abatement of the spray on fireproofing will be expensive, time consuming, and can only be done by a qualified abatement company. Phased approaches, such as abatement being planned during other projects being conducted above the drop ceiling tiles, can save money while still moving forward with abatement goals. Removal of small amounts of ACM, such as spray on fireproofing overspray, can be completed by properly trained ADOT&PF maintenance personnel. ADOT&PF should consult current local, State, and Federal regulations to determine the extent to which staff training allows for removal of limits quantifies of ACM.

Based on condition of the ACM containing spray on fireproofing during the activities covered under this report, abatement priorities are as follows:

- 9th floor overspray/application excess present within the channel iron on interior concrete wall sills
 - Removal of the overspray/excess in the channel iron and vacuuming of the area is sufficient
- Elevator shafts 1/2, 4/5, and 6/7 (in no particular order)
 - Elevator shafts are subject to vibrational and air erosion every time they are used
- 11th floor water stained areas
- 5th floor damaged areas above the servers
- Areas of damaged ACM should be recorded as soon as they are known and abated as soon as possible

Overspray that has fallen into the channel iron on the 9th floor is shown in Photos 26-27, Appendix 2. Overspray within the channel iron has been identified as a concern by ADOT&PF and can easily be removed by hand and a HEPA vacuum. Due to the overall area impacted by this detached overspray, if it is removed all at once the work must be completed by an asbestos abatement contractor. **NORTECH** also recommends that the ceiling tiles within easy reach of the work area be vacuumed before and after removal of detached overspray.

Elevator shafts were called out as a priority for abatement in the 1989 plan, however only abatement of the shaft containing Elevator 3 has been completed. Asbestos containing spray on fireproofing within the elevator shafts is subject to more sources of erosion/potential damage (vibrational damage and air erosion) than other ACM within the building. The asbestos containing spray on fireproofing within each elevator shaft is subjected to these damaging forces whenever an elevator is used. As the elevators are used as the primary means of transportation between floors of the building and elevators are not air tight, potential exposure to airborne asbestos fibers from damaged friable ACM is most likely to come from an elevator shaft.

ACM within the elevator shafts can be abated in phases, such as abating one elevator shaft at a time. A phased approach will allow asbestos abatement goals to move forward while still allowing employees to use other elevators to access each floor of the building. Abatement of ACM within elevator shafts should be completed by an asbestos abatement contractor with input from elevator maintenance company staff to ensure abatement crew safety and prevent damage to the elevators during abatement activities.

Areas of water damaged asbestos containing fireproofing were observed on the 11th floor due to leaks around areas where equipment was attached to the pan decking/roof protrusions. Areas above the computer servers within the 5th floor IT area were observed to be covered with plastic from water leaks occurring at an unknown time in the past. Damaged asbestos containing fireproofing is more likely to release asbestos fibers into the air than asbestos containing fireproofing that is in good condition. Due to area of water damage on the 11th floor, and the fact that the IT server room contains sensitive instruments crucial to employee work, these areas are also considered a priority for abatement.

Abatement of water damaged asbestos containing spray on fireproofing on the 11th floor can be completed during other planned work above the ceiling tiles. If small areas, such as visibly damaged fireproofing around one set of support wires (such as shown in the photo for Location 8, Figure 20.2, Appendix 1), are abated during other planned work, it is possible properly trained ADOT&PF maintenance personnel may be able to complete abatement of these areas over time. Worker training should be compared against local, State, and Federal regulations prior to potential abatement activities to ensure ADOT&PF personnel are able to conduct the abatement with their current training.

Lastly, whenever damaged ACM is identified it should be recorded and abated as soon as practicable. The extent of the damaged area and the total desired area to be abated around the damaged ACM should be taken into consideration when determining whether or not ADOT&PF personnel or an abatement company is necessary for abatement in each circumstance.

8.3 Operations and Maintenance

8.3.1 Dust/Debris on Top of Ceiling Tiles

The majority of the occupied spaces within the Juneau State Office Building have a drop tile ceiling. While ceiling tiles sampled under activities covered by this report were non-ACM, dust and pieces of ACM spray on fireproofing overspray were observed on the top of the ceiling tiles throughout the building. Air sampling indicated that employees working in areas below the ceiling tiles are likely not exposed to airborne asbestos in concentrations near the OSHA exposure limit.

Air sampling was not completed above the drop ceiling. In order to limit the potential of exposure to workers conducting activities above the ceiling tiles, the tops of ceiling tiles within the planned work area should be vacuumed using a HEPA vac before and after work above the ceiling tiles is conducted. As the spray on fireproofing overspray, as well as the fireproofing installed on structural areas (such as pan decking) will naturally degrade with age, vacuuming activities will be ongoing and should not be considered a method that will permanently remove exposure risk.

8.3.2 Damaged Ceiling Tiles and Frame

Ceiling tiles within the Juneau State Office Building are not considered ACM. However, ceiling tiles can provide a physical barrier between the ACM spray on fireproofing itself and building occupants. While ceiling tiles cannot prevent an exposure if sufficient amounts of ACM fireproofing fall or are disturbed, ceiling tiles in good condition can prevent small amounts of ACM spray on fireproofing from falling directly onto building occupants. Damage to the ceiling tiles, which can range from staining from water damage to holes purposefully cut into the tile to anchor decorations, or missing crossbars in the grid that secures the ceiling tiles, creates the potential for small amount of ACM spray on fireproofing to fall onto building occupants or into their workspaces. In order to prevent this and ensure building occupants feel safe while at work, damaged ceiling tiles should be replaced and every hole should be sealed to the extent possible.

Hanging decorations, sun shades, etc. from the ceiling tiles damages the tiles and potentially creates pathways that ACM spray on fireproofing or dust may fall through. Hanging decorations or plants from the ceiling tile crossbars means the ceiling tiles do not fit snug against the crossbars, creating gaps that also create a potential pathway for dust or small pieces of ACM spray on fireproofing to fall through. Holes purposefully cut through ceiling tiles to run cables, wires, poles for dividers, etc., should be sealed with tape or caulking to the extent possible. Crossbars that are missing should be replaced as soon as they are reported.

To prevent future damage to ceiling tiles, no objects should be hung from or inserted into ceiling tiles or their crossbar supports. Employees should be asked to remove all objects hanging from ceiling tiles or crossbars before removal of damaged tiles, and a building wide policy should be implemented to prevent any object being hung from ceiling tiles or crossbars in the future. If such objects are observed, the employee should be asked to remove the object and new tiles put in place if the object damaged the ceiling tile.

If holes in a ceiling tile are necessary, such as to run cables or wires above the ceiling tiles, the holes should be sealed to the extent practicable. Necessary holes within ceiling tiles should be kept to a minimum and sealed areas inspected on a regular basis. Placing wire and cables that

are strung on top of the ceiling tiles within conduits and sealing the conduit to the ceiling tile may help minimize protrusions in ceiling tiles. Conduits are discussed in further detail in Section 9.5.

8.3.3 Patch and Sealant Inspections

Water damaged areas on the 11th floor were primarily caused by roof leaks in areas where roof protrusions are present or equipment is bolted to the pan decking. Water damage to building fireproofing is a concern, even if the spray on fireproofing does not contain asbestos. Water damage decreases the fireproofing's ability to properly function, and replacement of the fireproofing can be costly. To help prevent future damage of spray on fireproofing on the 11th floor, ADOT&PF maintenance should inspect and repair (as necessary) all seals around roof protrusions and patches on a quarterly basis.

8.3.4 Equipment Above Drop Ceilings

Currently wires, cables, and IT equipment is located in the area above the drop ceiling tiles and the pan decking where asbestos containing spray on fireproofing is present. **NORTECH** observed equipment or wires/cables placed directly on asbestos containing spray on fireproofing (Photos 26, 27, 29, and 30 Appendix 2). Placing equipment on top of friable ACM, especially dragging cables across friable ACM, has the potential to damage the asbestos and cause potential exposure. In addition, all of this equipment has been contaminated with friable asbestos and should be treated as friable ACM when handling. Cleaning of these objects is possible but may not be economical.

In order to prevent both damage to the friable ACM above the ceiling tiles and contamination of equipment in this area, **NORTECH** recommends that future projects involving placing cables above the ceiling tiles include placing the cables or wires within conduits placed directly on top of the ceiling tiles whenever possible. Pulling cables through conduits will not damage the friable ACM as long as the conduits themselves are not placed on the friable ACM. In addition, equipment placed within conduits or boxes (in the case of equipment that may not fit inside a conduit) prevents the equipment from being contaminated by asbestos, allowing for personnel with no asbestos training to handle the equipment once it has been removed from above the ceiling tiles. This work can be conducted on a project-by-project basis by ADOT&PF maintenance personnel with appropriate O&M asbestos training.

8.4 Future Project Specifications and Training

Due to the presence of ACM throughout the building, all future renovation, repair, or abatement projects should include an Asbestos Work Plan if there is the possibility of disturbing any ACM during the project. This work plan should address ACM or other hazardous materials to be handled and disposed of, address all non-hazardous waste streams, and identify work practice methods and means. The work plan should also provide qualifications and certifications of all workers and identify all disposal facilities that will receive waste from the project.

It is **NORTECH's** understanding that currently only ADOT&PF maintenance staff have O&M asbestos training. O&M training allows certified maintenance staff to access areas with known friable asbestos. As the equipment above the drop ceiling tiles are primarily associated with IT needs, **NORTECH** recommends building IT staff be given to option to obtain O&M training as well. Such training would allow IT staff to access, remove, replace, or fix IT equipment that is located above the ceiling tiles.

While O&M training for IT personnel should be optional, asbestos awareness training for all building employees is required. Employees who do not have asbestos awareness training should be scheduled to attend such training during normal business hours. Training needs and timelines should be included in an updated Asbestos Management Plan.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The Juneau State Office Building has had several asbestos air monitoring and abatement projects in the years from 2007-present. The sampling and assessment efforts described in this report are part of an effort to continue to determine locations of asbestos containing materials, and damaged asbestos for the purposes of protecting the life and health of the building occupants and workers during their everyday activities and future renovations.

9.1 Conclusions of Bulk Sampling and Building Inspection

Based on the field observations and laboratory results from the 2022/2023 bulk sampling results and condition assessments, **NORTECH** has developed the following conclusions regarding asbestos in the JSOB:

Asbestos Bulk Sampling Results

- A total of 179 Bulk Samples were collected from floors 1-11 of the JSOB
 - Mastics, joint compound, floor tiles & floor sheet, fireproofing, and pipe insulation contain both Chrysotile & Anthophyllite asbestos
 - Fireproofing on Floors 2-3 of the parking garage do not contain asbestos for the 14 different types sampled
 - Spray on Fireproofing was found on Floors 1 and 4 of the parking garage
 - Sampled spray on fireproofing on these floors did not contain asbestos
 - see Appendix 3 for a photo log of observed spray on fireproofing types
- Multiple renovations and work have occurred to the structure over the years, making identification of asbestos containing materials from non-asbestos containing materials of the same type not possible without specifically testing each material prior to work being performed on it
 - All materials matching the description of known asbestos containing materials should be assumed to contain asbestos if found anywhere in the structure unless specially tested
- Gray or tan spray on fireproofing located *within* the building should be assumed to contain asbestos unless specifically tested to determine otherwise
 - The tannish-gray spray on fireproofing in the sixth floor mechanical areas with a carpet like texture is non-ACM (Sample 6-50B, Photo 20, Appendix 3)
- Blue fireproofing located within the building appears to be free of asbestos
 - The blue color varies considerably throughout the building
 - See Appendix 3 for examples of blue spray on fireproofing
 - New areas of blue fireproofing should be tested prior to being disturbed to confirm they are non-ACM

Abated Areas

- Abatement of spray on fireproofing has occurred in the following areas
 - Floor 6 (Figure 13, Appendix 1)

- Legislative Office area
 - All areas in this wing appear to have been abated
- Mechanical spaces
 - Including air intake areas
- Telephone/electrical room
- Floor 7 (Figure 14, Appendix 1)
 - Loading dock
 - Hallway between the loading dock and first set of double doors
 - Mechanical spaces
 - Compactor room
 - Envelope Room
 - Telephone/electrical room
 - Fire/signal room
- Floor 8 (Figure 15, Appendix 1)
 - Electrical room next to organ
- Elevator 3 Shaft
 - Abatement appears to have occurred throughout the elevator shaft
 - Elevator 3 had not been installed at the time of the 1989 Plan
- Floor 10 (Figure 16, Appendix 1)
 - Mechanical Chase in DOA office area
 - Extent of this abatement is not known

Condition Assessment

- Overall asbestos within the building is considered to be in good condition
 - Areas of localized damage are present
- Overspray and application excess of ACM spray on fireproofing occurs throughout the building
 - Overspray and dust were observed on top of drop ceiling tiles
 - Overspray and application excess were not considered part of the condition survey
- The following areas of concern were identified
 - Floor 9
 - ACM spray on fireproofing overspray/application excess in channel iron
 - Elevator shafts 1/2, 4/5, and 6/7
 - ACM spray on fireproofing damaged due to vibration and air erosion
 - Floor 11
 - Water damaged ACM spray on fireproofing due to roof/water leaks
 - Floor 5
 - Assumed water damaged ACM spray on fireproofing from water leaks
 - Could not access area above plastic to confirm, IT personnel stated damage was due to a leaky pipe
- The most likely exposure route is during work conducted above the ceiling tiles
 - Previous air testing indicates it is unlikely employees in occupied spaces are exposed near the OSHA PEL



1989 Survey and Current Conditions

- The current survey was more extensive than the 1989 survey
- **NORTECH**'s findings generally agree with the 1989 findings
- Most of the abatement in the 1989 report has been completed
 - **NORTECH** agrees with 1989 recommendations to abate elevator shafts that have not already been abated

9.2 Recommendations for Management of Remaining ACM

Based on the above conclusions, recommendations in the 1989 *Survey and Management Plan for Asbestos Containing Material, Alaska State Museum & Juneau State Office Building*, **NORTECH** has developed the following recommendations regarding asbestos in the JSOB, which can also be found in Appendix 5 in tabular form:

Asbestos Maintenance Plan

The last Asbestos Maintenance Plan was written in 1989. As asbestos maintenance plans help with management and tracking of asbestos within a building, a new maintenance plan should be developed.

- Best practice is to update Asbestos Management Plans when
 - Abatement or other work impacting ACM occurs
 - ACM conditions change (e.g. water damage)
- No updates have been made since the 1989 Survey and Management Plan
- Employees should follow the existing 1989 Survey and Management Plan until a new plan is written and in place

In addition to developing a new asbestos maintenance plan, future demolition and renovation design documents for the building should require an Asbestos Work Plan to document planned abatement and work practices

Abatement Priorities

Abatement of all ACM (including fireproofing, flooring, mastics, drywall, etc.) would be necessary to eliminate all liability associated with asbestos within the building.

- Abatement removes friable ACM from the building permanently
 - Complete abatement of the building in a single project is not realistic
 - Limiting abatement to other renovation projects is not likely to reach this goal
- Incremental abatement will reduce risk associated with airborne asbestos fibers over time
- Identifying high priority items for standalone abatement projects could significantly reduce the potential for exposure in specific areas

The highest priority for abatement is the ACM containing spray on fireproofing, which cannot be removed as a single project. The fireproofing should be managed in place until abatement can be completed. Based on discussions with building maintenance, abatement using a phased approach is recommended with the following order for priority:

- 9th floor overspray/application excess present within the channel iron on interior concrete wall sills



- Removal of the overspray/excess in the channel iron and vacuuming of the area is sufficient
- Other overspray dust/debris on the top of the ceiling is considered a distinct and lower priority (see next section of bullets)
- Elevator shafts 1/2, 4/5, and 6/7
 - Elevator shafts are subject to vibrational and air erosion every time they are used
 - Elevator shafts may be completed individually and do not have a specific priority
- 11th floor water stained areas
- 5th floor damaged areas above the servers
- Areas of damaged ACM should be recorded as soon as they are known and abated as soon as possible

Removal of dust and ACM fireproofing debris from the top of ceiling tiles is a lower priority and discussed under Operations and Maintenance Priorities. Removal of dust and ACM fireproofing debris are recommended in the following circumstances:

- An O&M project is planned above the ceiling
- Abatement of all fireproofing in an area

Operation and Maintenance Priorities

Operations and Maintenance priorities are not abatement, but are activities aimed at limiting potential exposures while asbestos is still present. These priorities are as follows:

- Dust and ACM fireproofing (if present) should be vacuumed off of the top of ceiling tiles within any above-ceiling project work area before *and after* any work is conducted above the drop ceiling
- Damaged/missing ceiling tiles and missing crossbars should be replaced
 - Holes cut into ceiling tiles for the purpose of running cables, wires, etc. should be sealed to the extent possible
 - Anything currently attached to ceiling tiles or crossbars should be removed and the ceiling tile replaced if holes are present
 - Nothing should be attached or hung from ceiling tiles or crossbars
- Patches/seals around roof protrusions should be
 - inspected quarterly
 - repaired as necessary to help prevent water intrusion and damage to ACM spray on fireproofing on the 11th floor
- Future cable and wiring projects should have planning documents to address the potential ACM Hazards
 - New cables and wires above the drop ceiling should be run through conduits and not directly on top of ACM or ceiling tiles
 - Conduits should be placed on top of the non-ACM ceiling tiles whenever possible
 - Conduits should not contact ACM whenever possible



Training Recommendations

Asbestos training is an important means to both educate employees and help them make informed decisions. Training priorities should include:

- Information and Technology workers should be offered asbestos O&M training so that they can replace or repair IT equipment located above the drop ceiling
- All building employees should have asbestos awareness training

10.0 LIMITATIONS

NORTECH conducted the activities described in this report according to industry standards and performed withing the standard of care and competence of the environmental engineering profession. Sample results presented provide information about the air quality conditions during the time period that sampling was conducted, and in the locations where sampling took place. Therefore, while these limitations are considered reasonable and adequate for the purposes of this report, actual site conditions may differ and change over time.

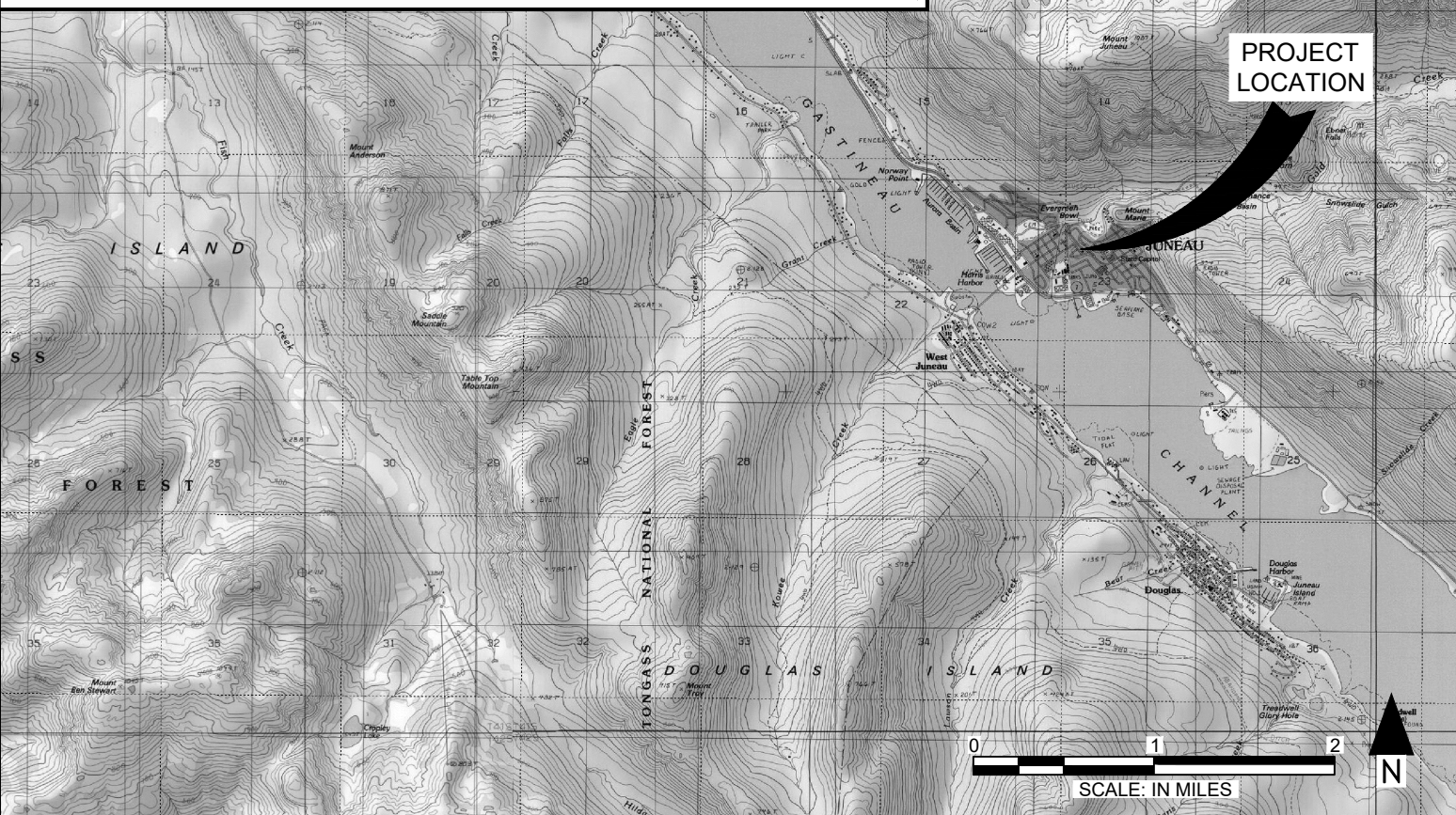
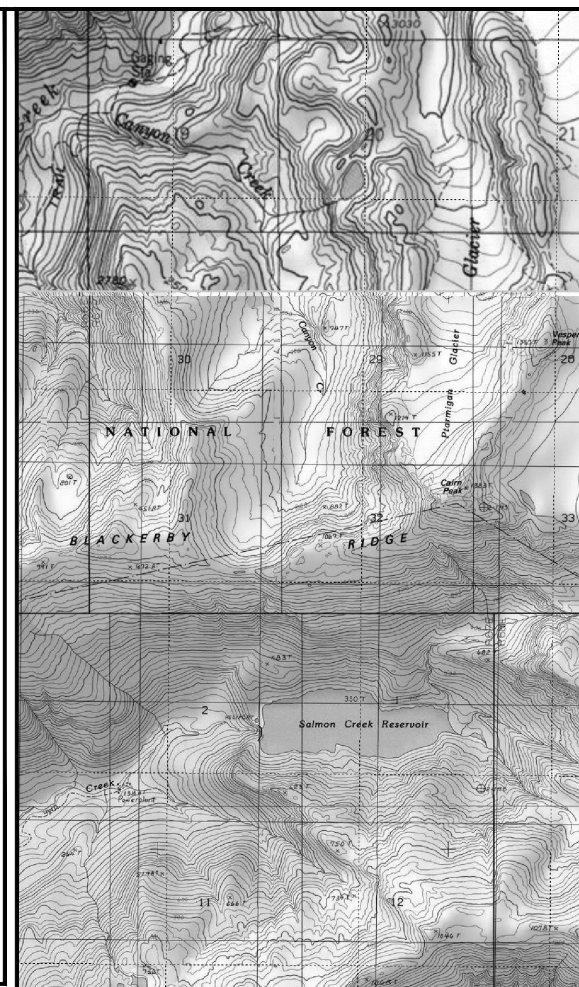
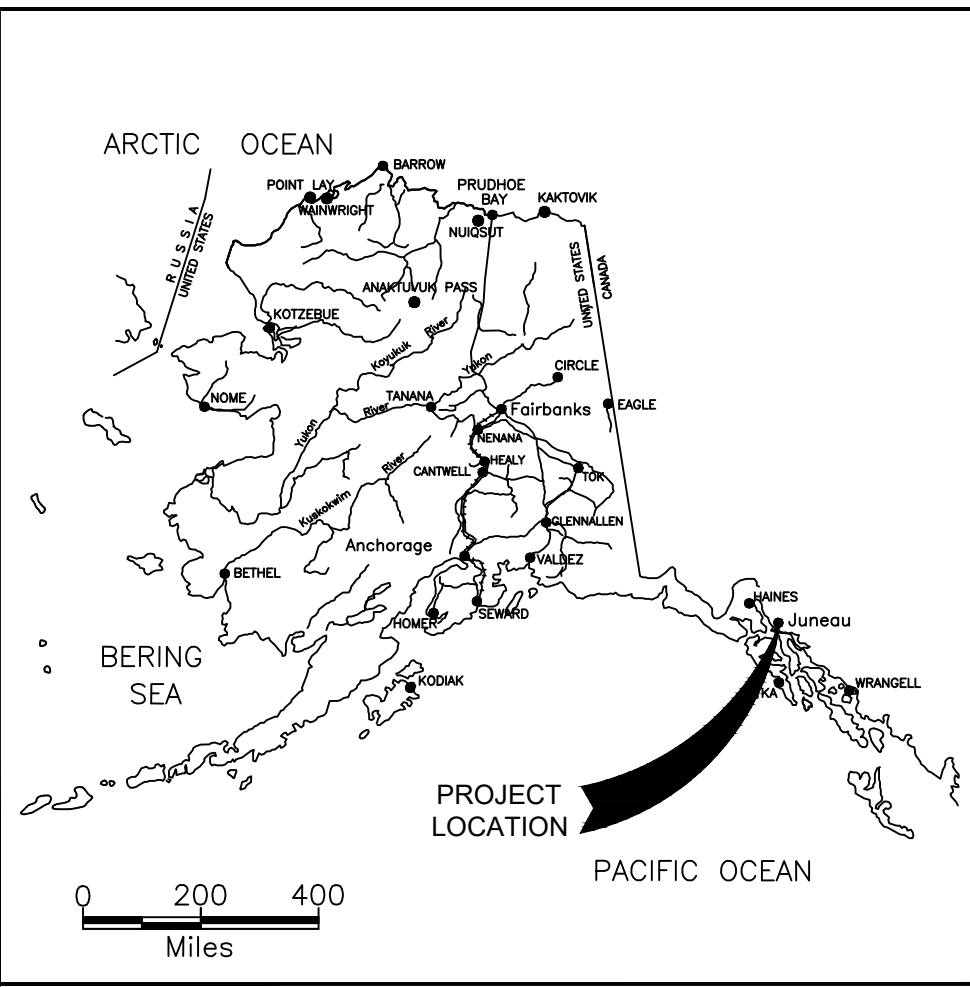
11.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Reviewed by:

Jennifer Stoutamore, QEP
Staff Professional II

Jason Ginter, PMP
Principal, Juneau Technical Manager

Appendix 1

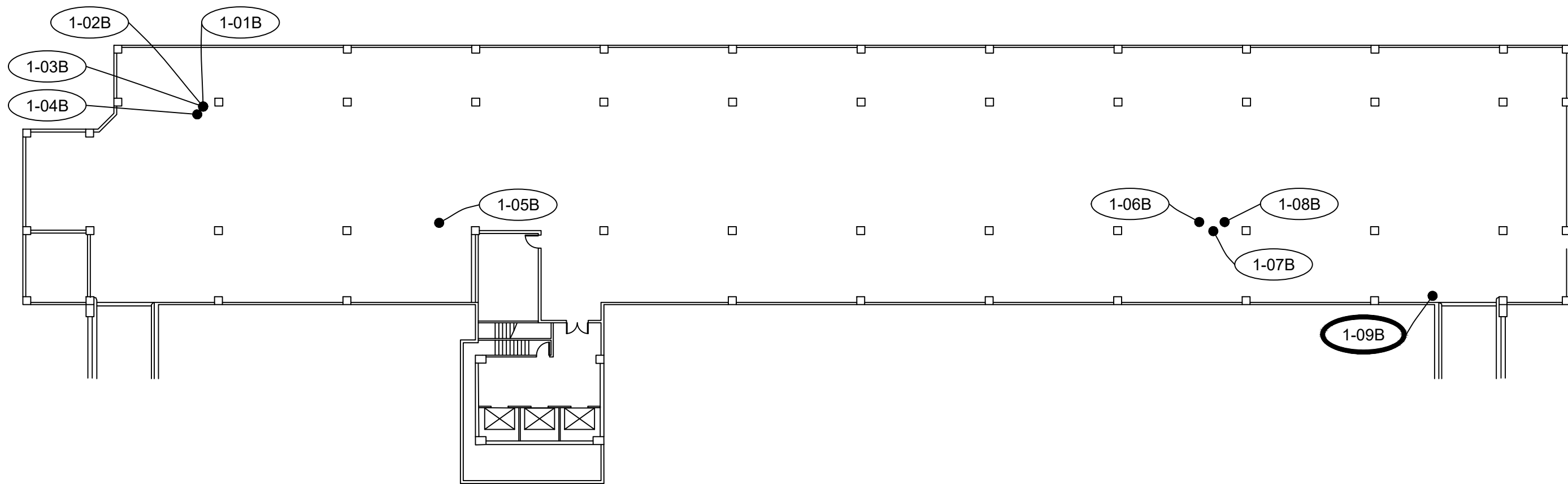


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Location & Vicinity Maps
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

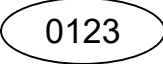

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PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

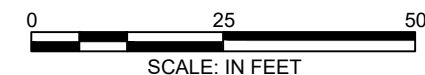
FIGURE
1



1st Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
1-01B	white fireproofing	ND
1-02B	gray fireproofing	ND
1-03B	tan fireproofing	ND
1-04B	gray pipe elbow insulation	ND
1-04B	yellow fiberglass	ND
1-05B	gray fireproofing	ND
1-06B	tan fireproofing	ND
1-07B	smooth tan fireproofing	ND
1-08B	tan hard pipe elbow	ND
1-09B	tan chunky fireproofing	6% Amosite

LEGEND

- 
 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 
 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

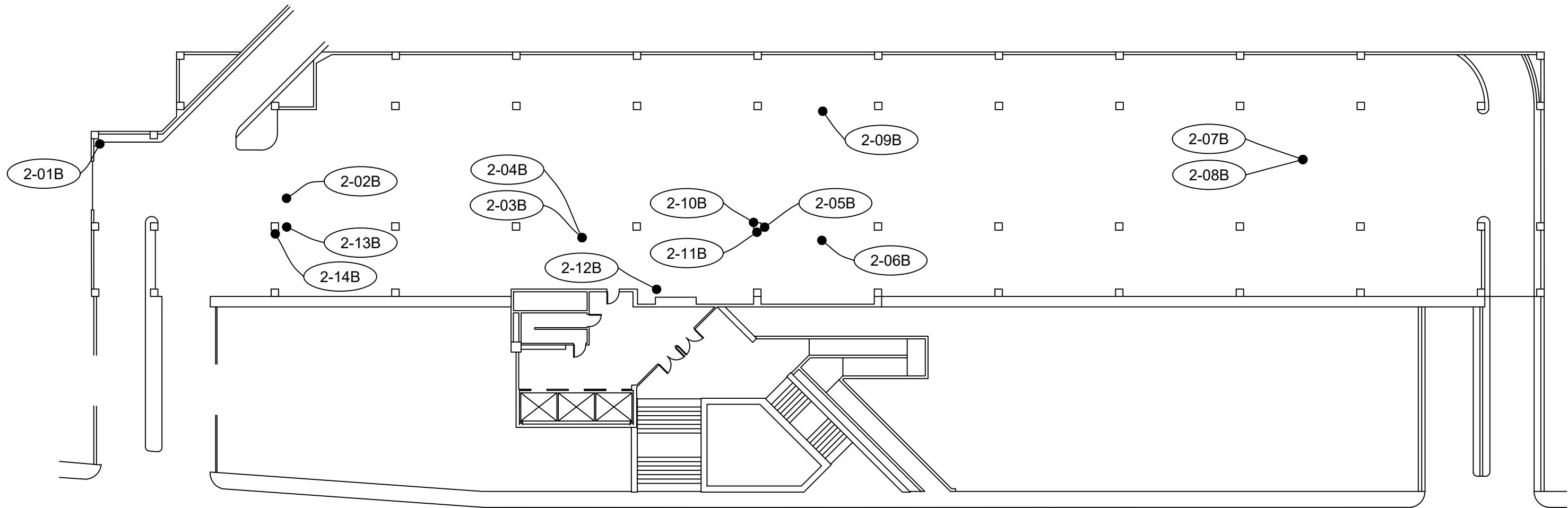


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1st Floor – Parking Garage
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

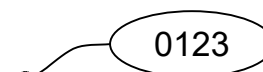

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PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

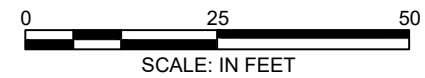
FIGURE
2

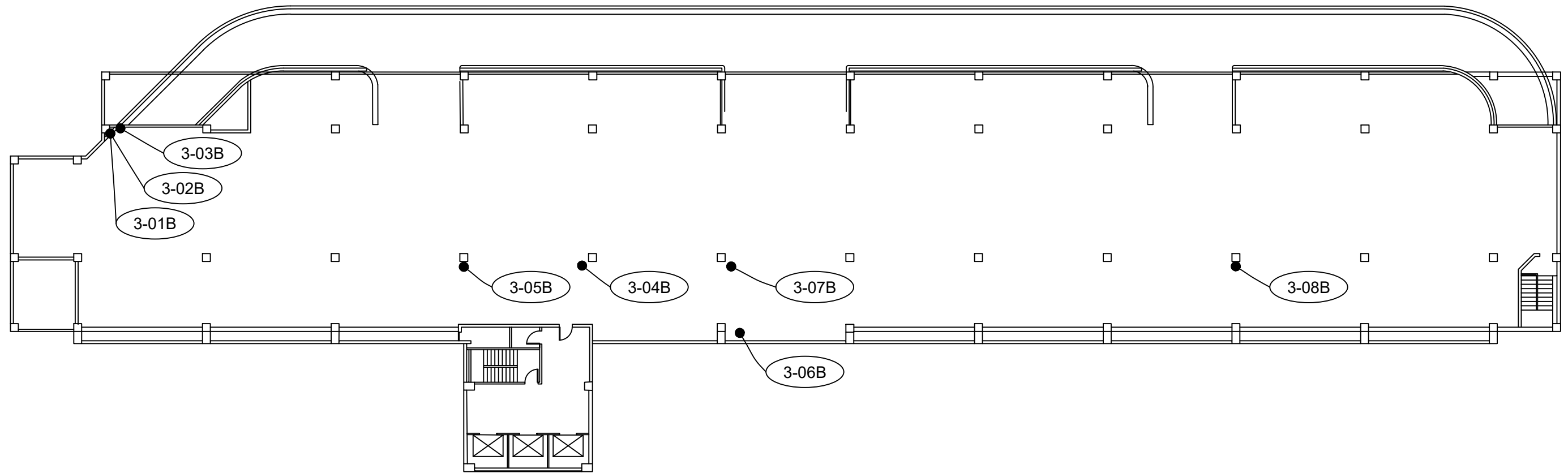


2nd Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
2-01B	light tan fireproofing	ND
2-02B	dark gray fireproofing	ND
2-03B	off-white fireproofing	ND
2-04B	gray fireproofing	ND
2-05B	gray hard pipe elbow	ND
2-06B	tan speckled fireproofing	ND
2-07B	tan black speckled fireproofing	ND
2-08B	tan smooth fireproofing	ND
2-09B	dark gray fibrous fireproofing	ND
2-10B	dark gray hard fireproofing	ND
2-11B	brown/gray/black pipe debris	ND
2-12B	yellow fiberglass	ND
2-12B	white pipe wrap	ND
2-13B	gray/white pipe elbow	ND
2-13B	white pipe wrap	ND
2-13B	yellow fiberglass	ND
2-14B	dark brown pipe wrap	ND

LEGEND

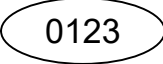
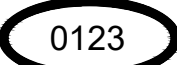
- 
0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 
0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

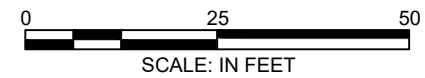




3rd Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
3-01B	black ceiling membrane	ND
3-02B	gray fireproofing	ND
3-03B	white fireproofing	ND
3-04B	off-white fibrous fireproofing	ND
3-05B	white pipe elbow	ND
3-05B	yellow fiberglass	ND
3-06B	gray insulation	ND
3-07B	gray pipe cap	ND
3-08B	gray pipe debris - floor	ND
3-08B	yellow pipe debris - floor	ND

LEGEND

- 
 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 
 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

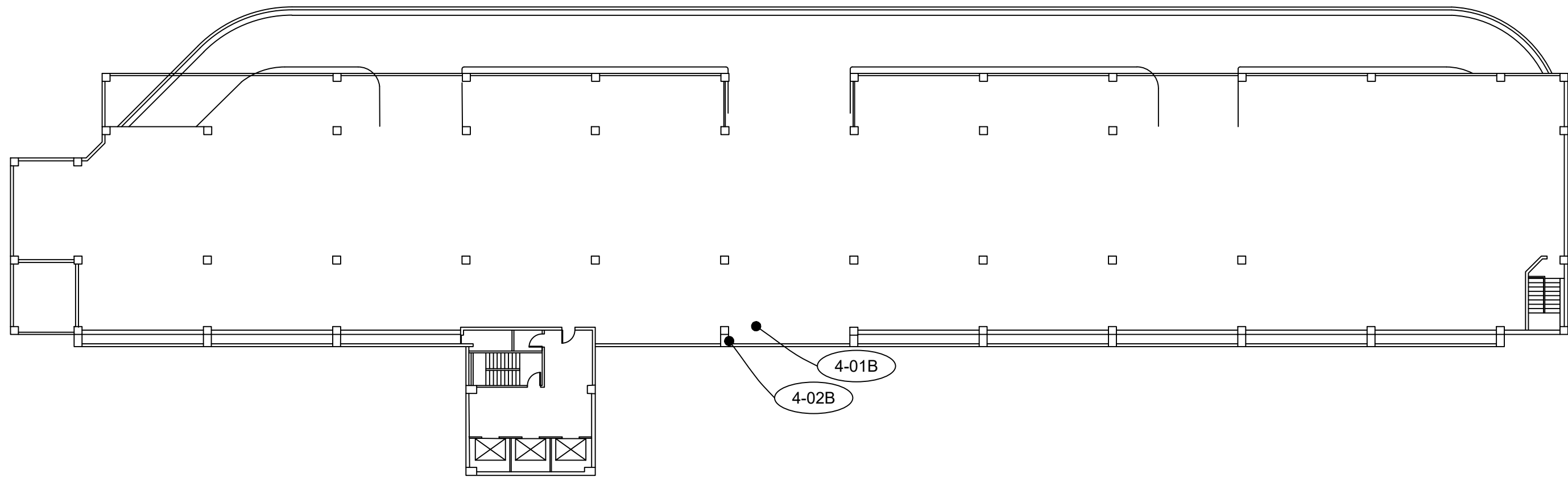


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3rd Floor – Parking Garage
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

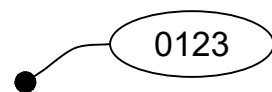
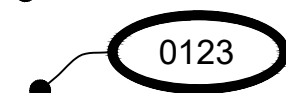
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PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

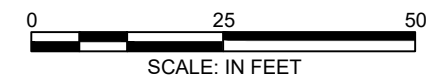
FIGURE
4



4th Floor - Parking Garage		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
4-01B	white gypsum wallboard	ND
4-01B	white joint compound	ND
4-01B	white texture	ND
4-02B	gray fireproofing	ND

LEGEND

-  0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

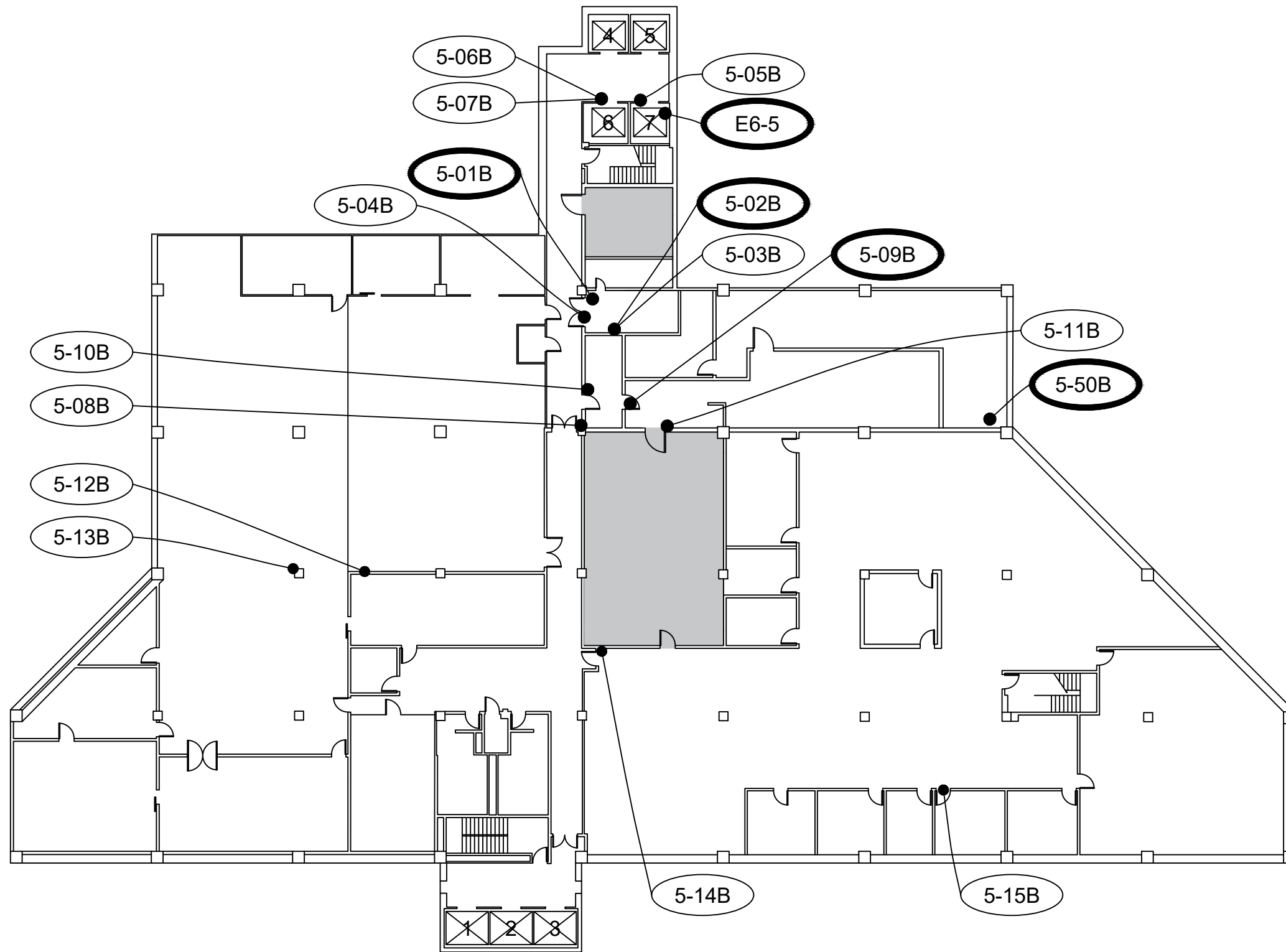


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4th Floor – Parking Garage
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

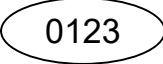


FIGURE
5

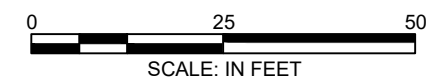


5th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
5-01B	gray fireproofing	25% Chrysotile
5-02B	white joint compound	1.5% Chrysotile
5-02B	pink gypsum wallboard	ND
5-02B	white texture	ND
5-03B	black cove base	ND
5-03B	yellow mastic	ND
5-04B	brown/green floor tile	ND
5-04B	red mastic	ND
5-05B	white floor tile	ND
5-05B	yellow mastic	ND
5-06B	tan under-tile material	ND
5-06B	gray mastic	ND
5-07B	brown/beige floor tile	ND
5-07B	gray mastic	ND
5-08B	gray floor tile	ND
5-08B	yellow mastic	ND
5-09B	beige floor tile	1.5% Chrysotile
5-09B	black mastic	8% Chrysotile
5-10B	dark brown cove base	ND
5-10B	brown mastic	ND
5-11B	gray acoustical wall tile	ND
5-12B	gray hard wall	ND
5-13B	black cove base	ND
5-13B	yellow mastic	ND
5-14B	navy blue cove base	ND
5-14B	yellow mastic	ND
5-15B	gold mastic	ND
5-50B	light gray fireproofing	6% Chrysotile

Elevator Shaft		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
E6-5	light gray fireproofing	7% Chrysotile

LEGEND

-  ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
-  ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
-  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

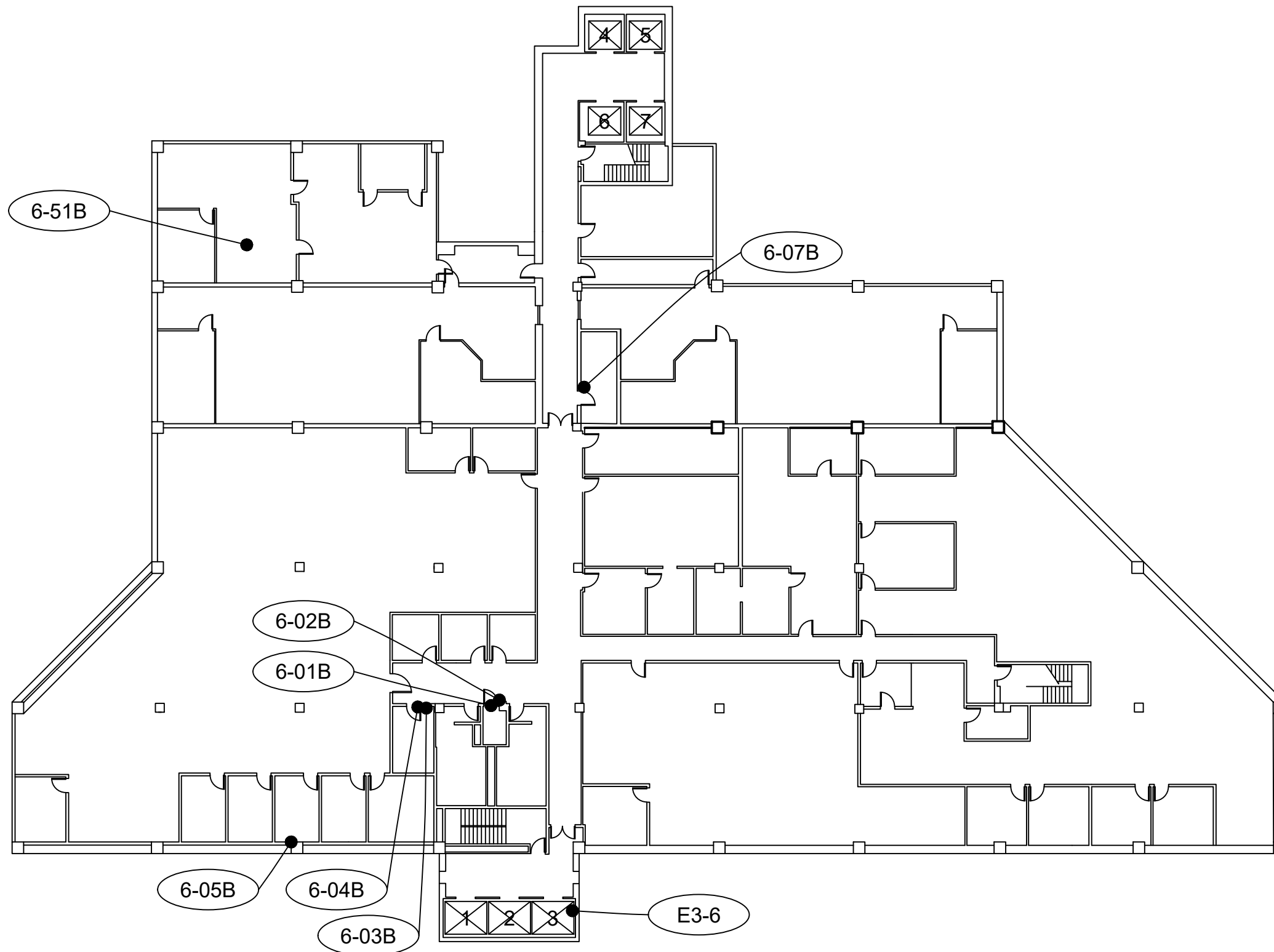


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5th Floor – IT
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
6

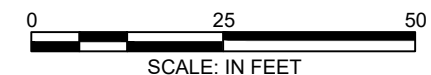


6th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
6-01B	brown floor tile	ND
6-01B	black/yellow mastic	ND
6-02B	black cove base	ND
6-02B	tan mastic	ND
6-02B	white joint compound	ND
6-03B	white joint compound	ND
6-03B	yellow mastic	ND
6-04B	blue vinyl sheet	ND
6-04B	yellow mastic	ND
6-05B	white gypsum wallboard	ND
6-05B	white joint compound	ND
6-05B	white plaster	ND
6-06B	gray/white ceiling tile	ND
6-07B	brown cove base	ND
6-07B	black mastic	<1% Chrysotile
6-50B	tan/gray fireproofing	ND

Elevator Shaft		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
E3-6	light blue fireproofing	ND

LEGEND

- (thin border) 0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - (thick border) 0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

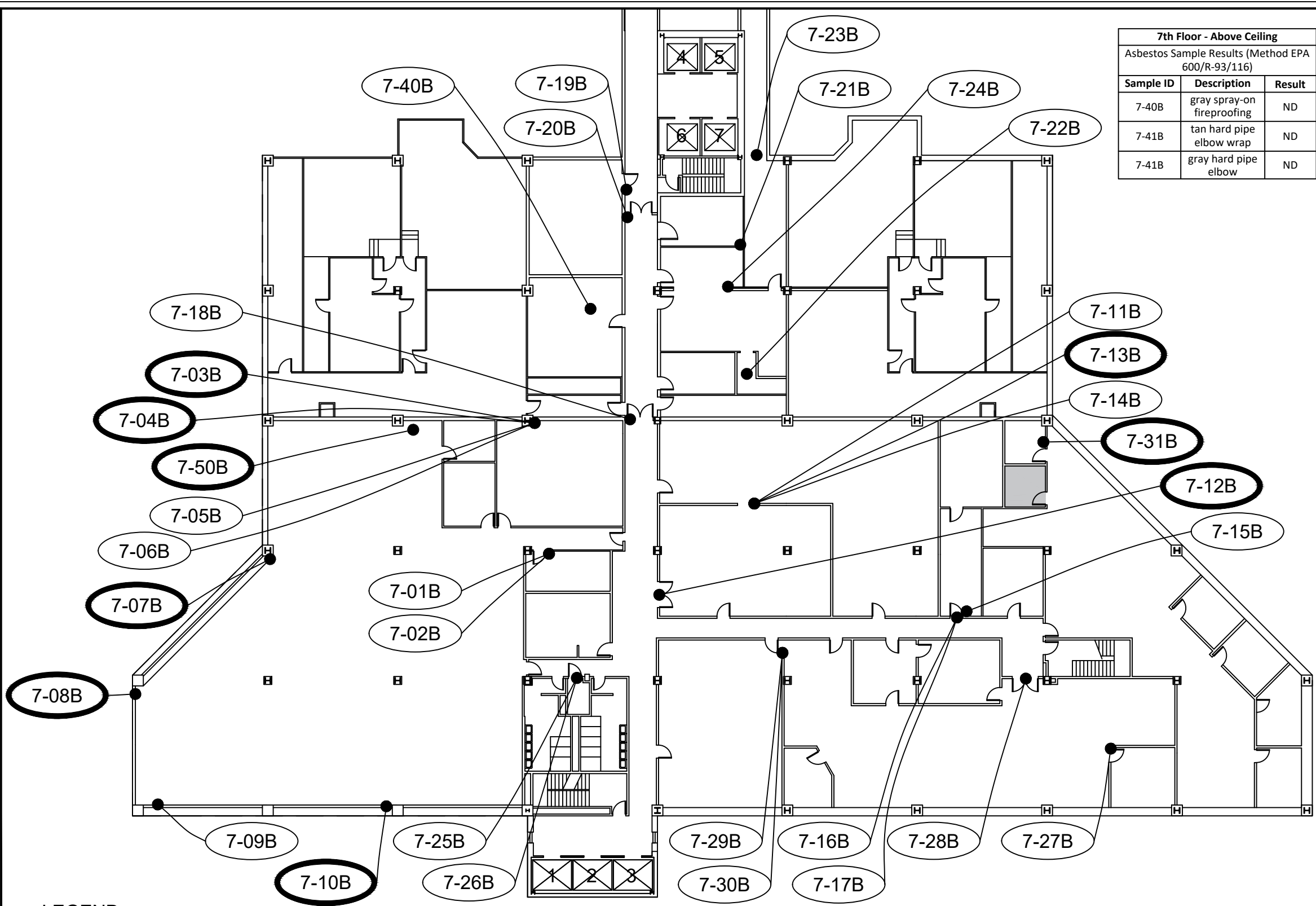


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6th Floor - Offices
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023 SCALE: As Shown
 PROJ MGR: JLS PROJECT: 22-2502
 DRAWN: SPH DWG. NO.: 222502(bulk)v6

FIGURE
7



7th Floor - Above Ceiling		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
7-40B	gray spray-on fireproofing	ND
7-41B	tan hard pipe elbow wrap	ND
7-41B	gray hard pipe elbow	ND

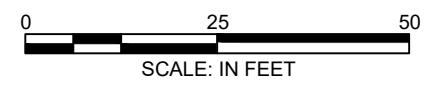
7th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
7-01B	brown cove base	ND
7-01B	brown/yellow mastic	ND
7-02B	green carpet mastic	ND
7-02B	gray leveler	ND
7-03B	white joint compound	4.75% Chrysotile
7-03B	brown/gray gypsum wallboard	ND
7-04B	gray joint compound	3.5% Chrysotile
7-04B	brown/tan gypsum wallboard	ND
7-05B	tan/white ceiling tile #1	ND
7-06B	gray ceiling tile #2	ND
7-07B	brown cove base	ND
7-07B	light tan mastic	2.50% Anthophyllite
7-08B	white joint compound	3.00% Chrysotile
7-08B	brown/gray gypsum wallboard	ND
7-09B	black cove base	ND
7-09B	gray/tan mastic	ND
7-10B	gray joint compound	4.22% Chrysotile
7-10B	brown/tan gypsum wallboard	ND
7-11B	brown cove base	ND
7-11B	yellow mastic	ND
7-12B	brown cove base	ND
7-12B	tan mastic	1.75% Anthophyllite
7-12B	tan/white joint compound	ND
7-13B	black mastic	6% Chrysotile
7-13B	tan vinyl flooring	ND
7-14B	gray floor leveler	ND
7-14B	clear mastic	ND
7-15B	brown cove base	ND
7-15B	yellow mastic	ND
7-16B	red tape	ND
7-16B	black mastic	ND
7-17B	gray/yellow mastic	ND
7-18B	blue mastic	ND
7-19B	various color mastic	ND
7-20B	burgandy cove	ND
7-20B	tan mastic	ND
7-21B	blue fireproofing	ND
7-22B	white ceiling tile	ND
7-23B	gray/yellow pipe elbow	ND
7-24B	tan/white joint compound	ND
7-25B	tan floor tile	ND
7-25B	brown mastic	ND
7-26B	silver mastic	ND
7-27B	clear mastic	ND
7-28B	yellow mastic	ND
7-28B	gray leveler	ND
7-29B	yellow mastic	ND
7-29B	gray leveler	ND
7-30B	gray mastic	ND
7-31B	black mastic	6% Chrysotile
7-31B	gray floor tile	<1% Chrysotile
7-50B	gray fireproofing	6% Chrysotile

LEGEND

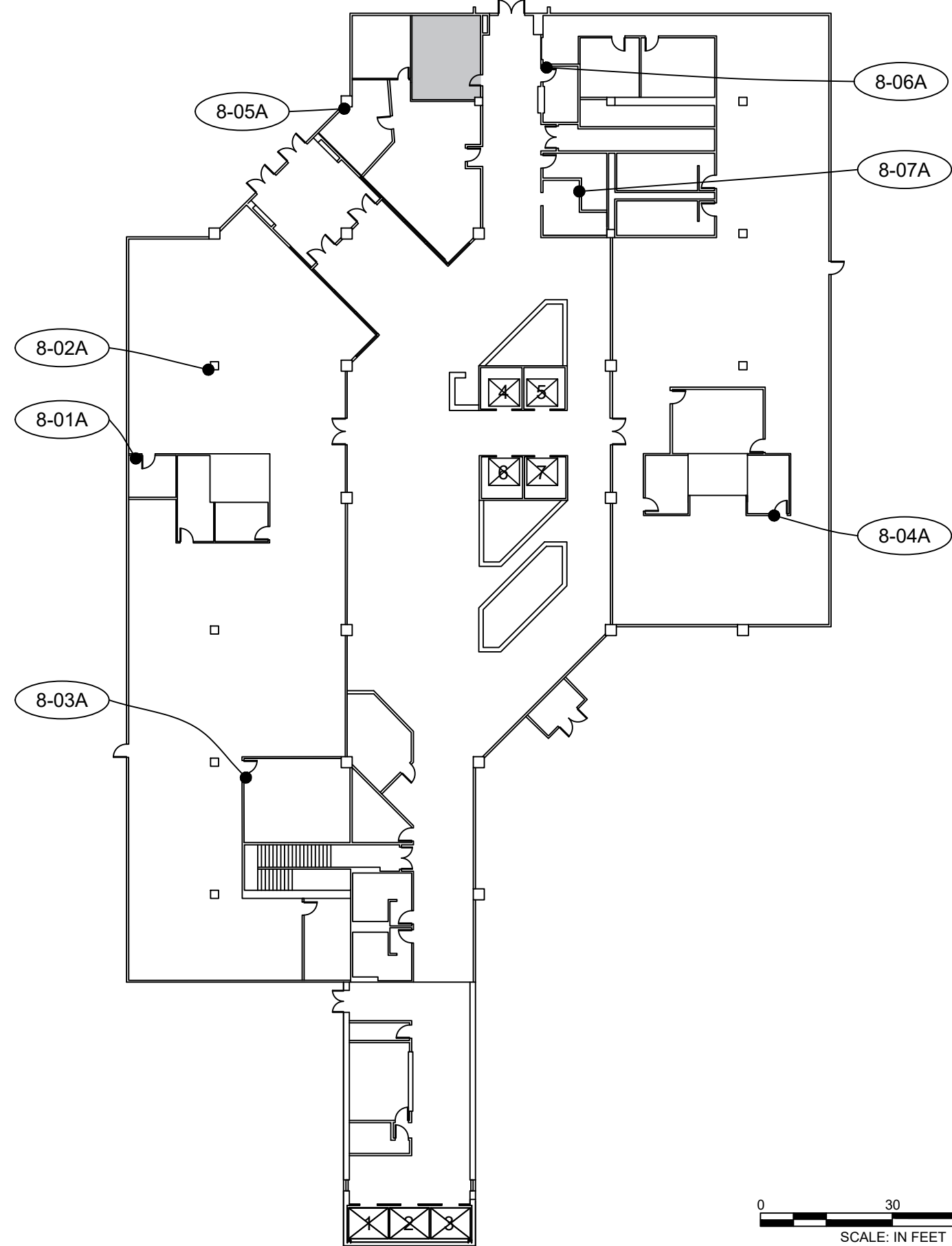
- 0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 - 0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED

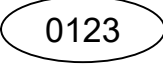


NOTE: SAMPLE 7-41B COLLECTED FROM BOILER ROOM AT END OF HALLWAY

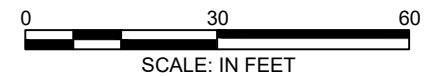


8th Floor - Main Floor Atrium		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
8-01A	black cove base	ND
8-01A	beige mastic	ND
8-01A	white joint compound	ND
8-02A	brown cove base	ND
8-02A	tan mastic	ND
8-03A	gray vinyl flooring	ND
8-03A	tan mastic	ND
8-04A	brown cove base	ND
8-04A	tan mastic	ND
8-05A	black cove base	ND
8-05A	tan mastic	ND
8-06A	beige with black fleck vinyl	ND
8-07A	beige with black fleck vinyl	ND



LEGEND

-  ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



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8th Floor – Lobby, Atrium, & Offices
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

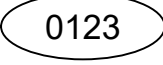
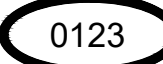


DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

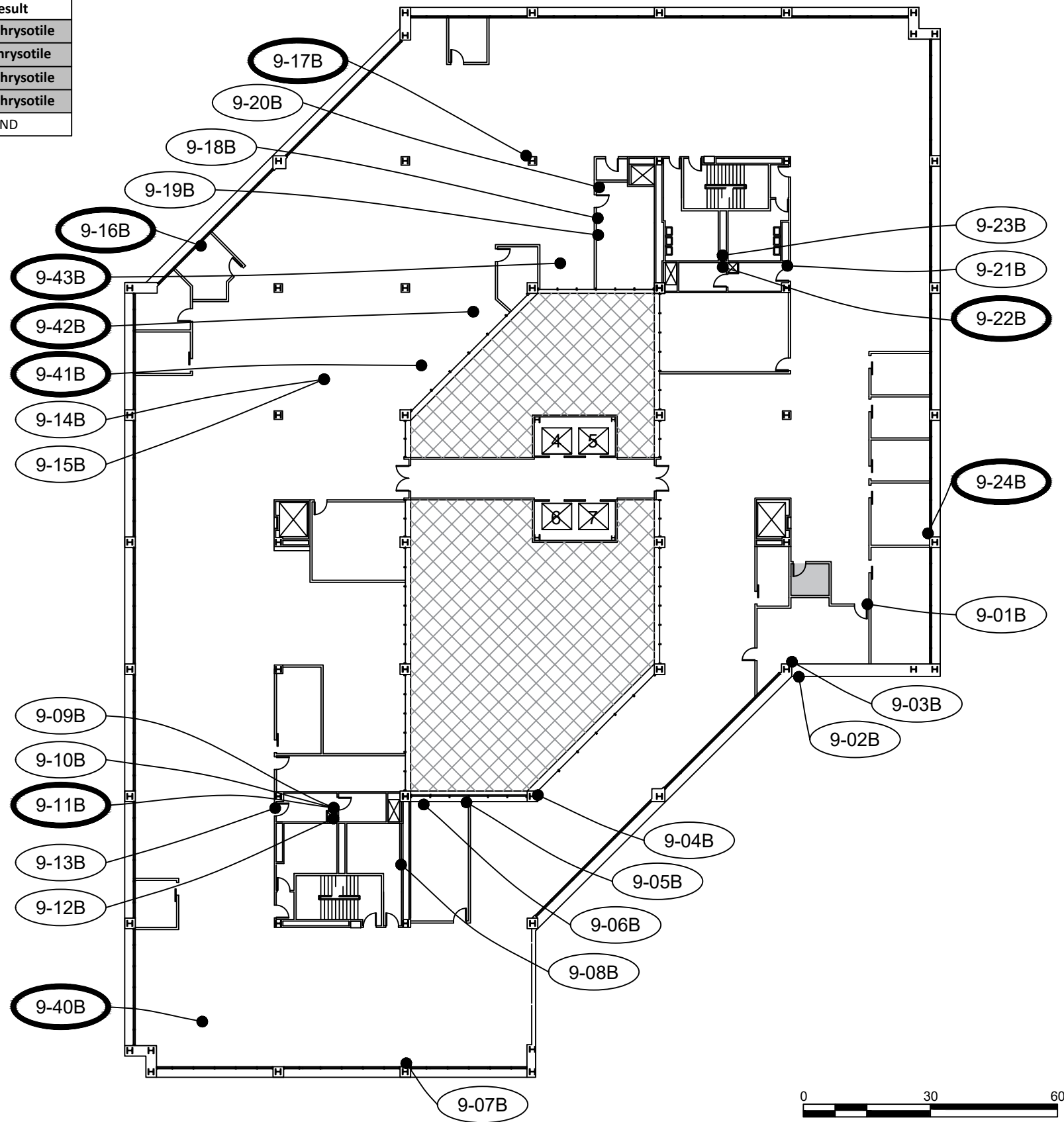
FIGURE
9

9th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
9-01B	black cove base	ND
9-01B	beige mastic	ND
9-02B	brown insulation	ND
9-03B	brown/white gypsum wallboard	ND
9-04B	gray wall	ND
9-05B	brown/gray ceiling tile #1	ND
9-06B	brown ceiling tile #2	ND
9-07B	black cove base	ND
9-07B	gray mastic	ND
9-08B	gray ceiling tile #3	ND
9-09B	gray floor tile	<1% Chrysotile
9-10B	green floor tile	ND
9-11B	brown cove base	ND
9-11B	brown mastic	2.75% Anthophyllite
9-12B	brown/gray gypsum wallboard	ND
9-13B	brown carpet mastic	ND
9-14B	gray ceiling tile #1	ND
9-15B	brown/gray ceiling tile #2	ND
9-16B	black cove base	ND
9-16B	brown mastic	2.25% Anthophyllite
9-17B	white joint compound	10% Chrysotile
9-17B	brown mastic	5.00% Anthophyllite
9-18B	tan floor tile	ND
9-18B	gray/yellow mastic	ND
9-19B	red floor tile	ND
9-19B	brown/gray mastic	ND
9-20B	gray floor tile	ND
9-20B	gray/tan mastic	ND
9-21B	tan carpet mastic	ND
9-22B	brown/gray gypsum wallboard	ND
9-22B	white joint compound	3.5% Chrysotile
9-23B	green fireproofing	ND
9-24B	gray/tan gypsum wallboard	ND
9-24B	gray/tan joint compound	5.25% Chrysotile

9th Floor - Above Ceiling		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
9-40B	light gray spray on fireproofing	15% Chrysotile
9-41B	gray/white spray on fireproofing	5% Chrysotile
9-42B	light gray spray on fireproofing	10% Chrysotile
9-43B	light gray spray on fireproofing	15% Chrysotile
9-43B	gray ceiling tile	ND

LEGEND

-  0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 -  ATRIUM, OPEN TO BELOW - NO SAMPLES COLLECTED
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



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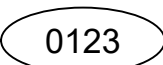

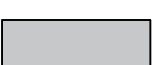

9th Floor - Offices
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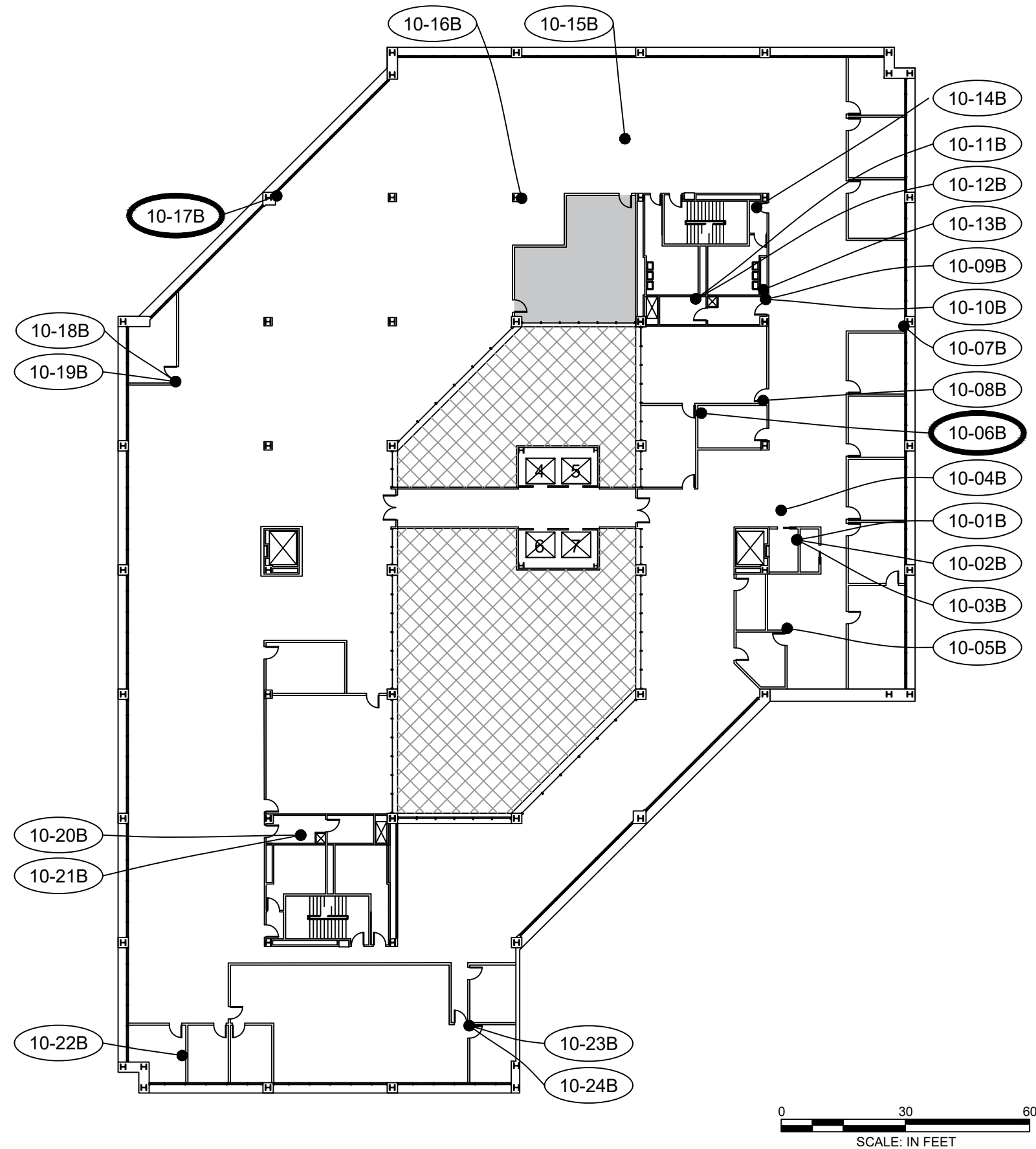
DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
10

10th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
10-01B	gray ceiling tile #1	ND
10-02B	black cove base	ND
10-02B	beige mastic	ND
10-03B	yellow carpet mastic	ND
10-04B	gray ceiling tile #2	ND
10-05B	off-white cove base mastic	ND
10-06B	gray gypsum wallboard	ND
10-06B	white joint compound	3.25% Chrysotile
10-07B	white cove base mastic	ND
10-08B	black cove base	ND
10-08B	yellow mastic	ND
10-09B	gray cove base	ND
10-09B	beige mastic	ND
10-10B	gray pebble floor sheet	ND
10-11B	red caulk	ND
10-11B	yellow caulk	ND
10-12B	gray gypsum wallboard	ND
10-12B	white joint compound	ND
10-13B	blue fireproofing	ND
10-14B	gray ceiling tile #3	ND
10-15B	tan/white ceiling tile #4	ND
10-16B	brown gypsum wallboard	ND
10-16B	white patch foam	ND
10-17B	brown/gray gypsum wallboard	ND
10-17B	white joint compound	3.75% Chrysotile
10-18B	brown cove base	ND
10-18B	brown/yellow mastic	ND
10-19B	yellow carpet mastic	ND
10-20B	beige floor tile	ND
10-21B	green floor tile	ND
10-22B	gray thinset	ND
10-22B	yellow mastic	ND
10-23B	black cove base	ND
10-23B	various color mastics	ND
10-23B	white joint compound	ND
10-24B	brown/gray gypsum wallboard	ND

LEGEND

-  0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 -  ATRIUM, OPEN TO BELOW - NO SAMPLES COLLECTED
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



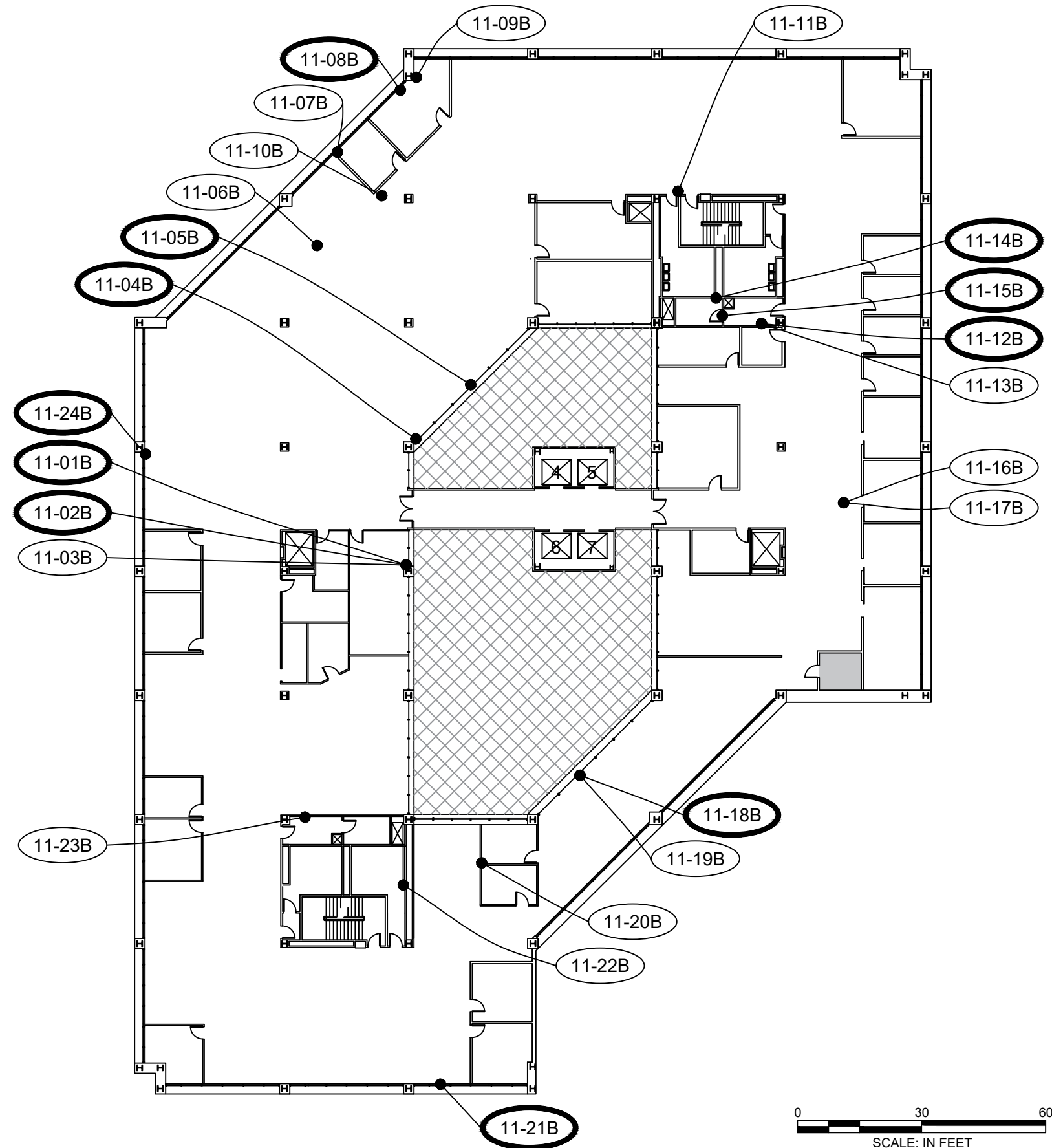
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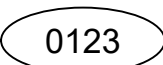

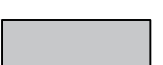

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
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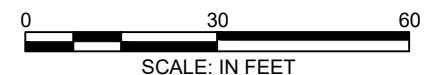
FIGURE
11

11th Floor - Offices		
Asbestos Sample Results (Method EPA 600/R-93/116)		
Sample ID	Description	Result
11-01B	pink gypsum wallboard	ND
11-01B	white joint compound	6% Chrysotile
11-02B	brown cove base	ND
11-02B	brown/yellow mastic	1.25% Anthophyllite
1-02B	black cove base	ND
11-03B	orange carpet mastic	ND
11-04B	white joint compound	6% Chrysotile
11-04B	brown/yellow mastic	<1% Anthophyllite
11-05B	black sealant	5.5% Chrysotile
11-06B	tan ceiling tile #1	ND
11-07B	brown/white gypsum wallboard	ND
11-08B	tan/white joint compound	1.5% Chrysotile
11-09B	beige mastic	ND
11-10B	tan ceiling tile #2	ND
11-11B	gray/white joint compound	<1% Chrysotile
11-12B	white mastic	1.25% Anthophyllite
11-13B	cream floor tile	ND
11-14B	white joint compound	6% Chrysotile
11-14B	brown/gray gypsum wallboard	ND
11-15B	brown cove base	ND
11-15B	brown/yellow mastic	2.00% Anthophyllite
11-16B	tan ceiling tile #1	ND
11-17B	gray/white ceiling tile #2	ND
11-18B	brown/yellow mastic	1.25% Anthophyllite
11-19B	tan carpet mastic	ND
11-20B	brown/gray gypsum wallboard	ND
11-21B	brown/gray gypsum wallboard	ND
11-21B	white joint compound	3% Chrysotile
11-22B	tan ceiling tile #3	ND
11-23B	gray floor tile	ND
11-24B	stone pattern floor	ND
11-24B	brown/gray gypsum wallboard	ND
11-24B	white joint compound	6% Chrysotile



LEGEND

-  0123 ASBESTOS BULK SAMPLE LOCATION (<1% ASBESTOS)
 -  0123 ASBESTOS BULK SAMPLE LOCATION (≥1% ASBESTOS)
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 -  ATRIUM, OPEN TO BELOW - NO SAMPLES COLLECTED
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

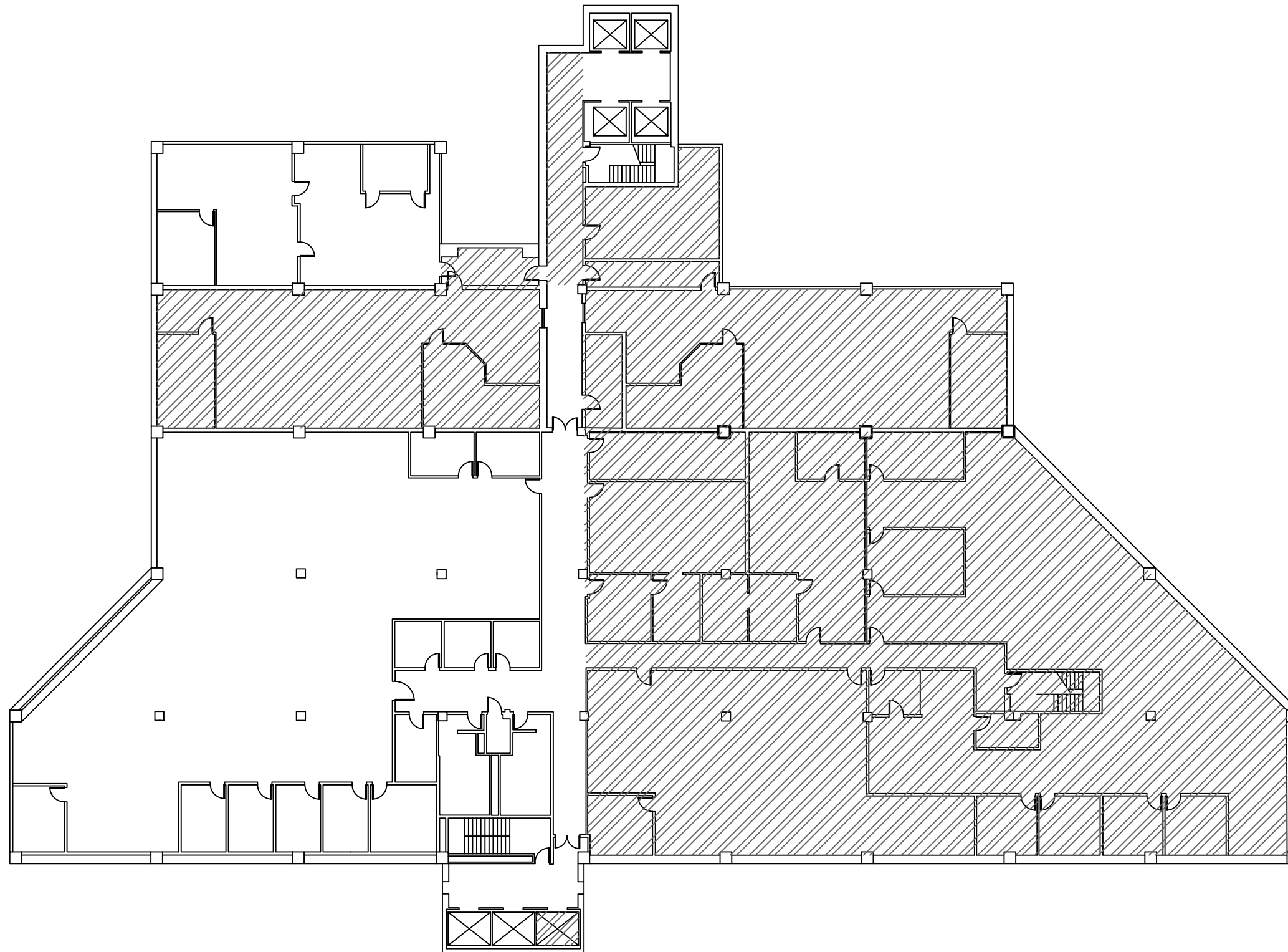


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11th Floor - Offices
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

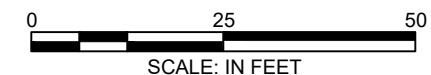
FIGURE
12



LEGEND



AREA OF KNOWN ACM FIREPROOFING ABATEMENT

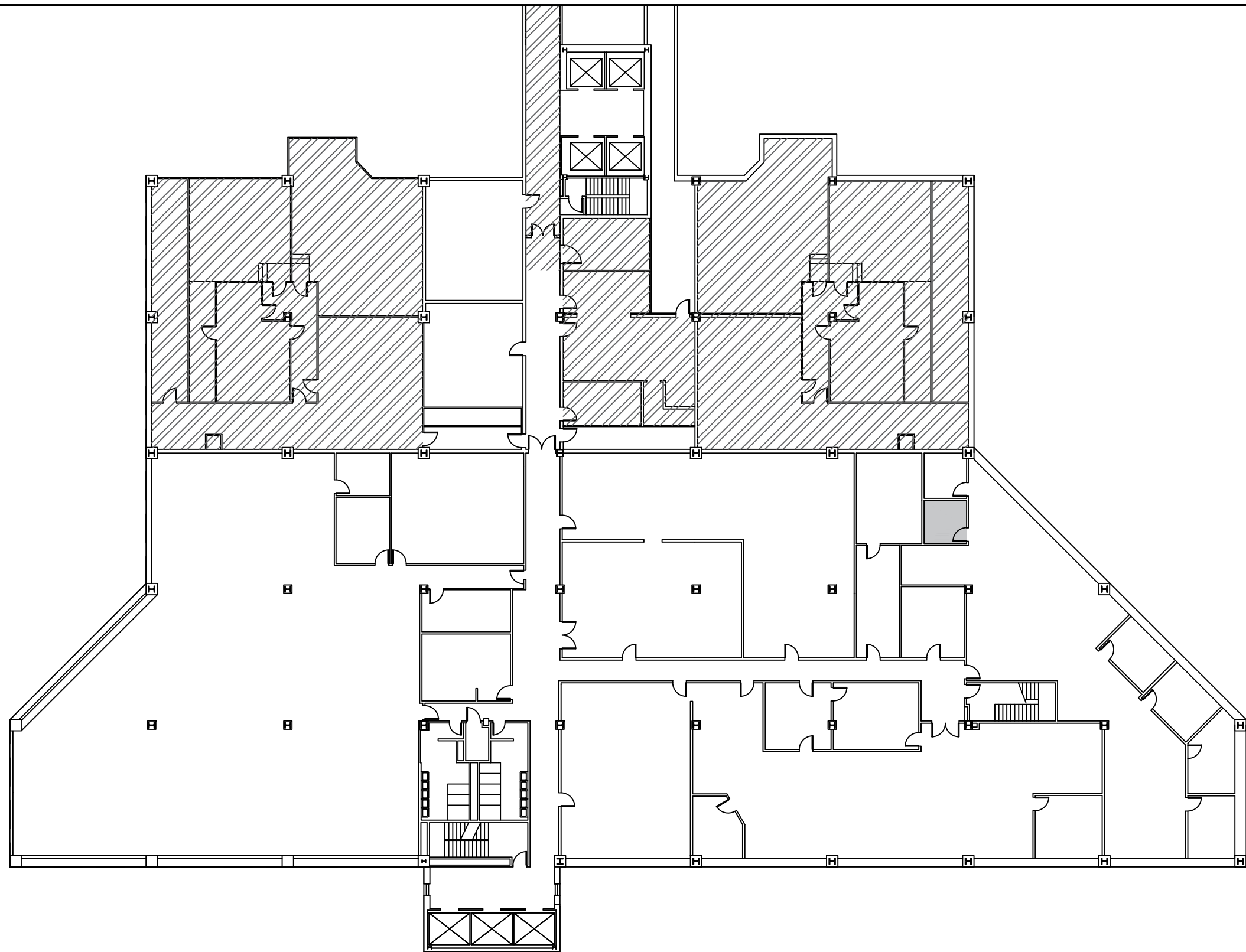


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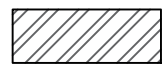
6th Floor – Offices
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 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
13



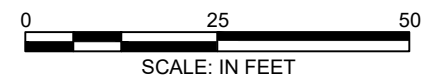
LEGEND



AREA OF KNOWN ACM FIREPROOFING ABATEMENT



AREA NOT ACCESSIBLE

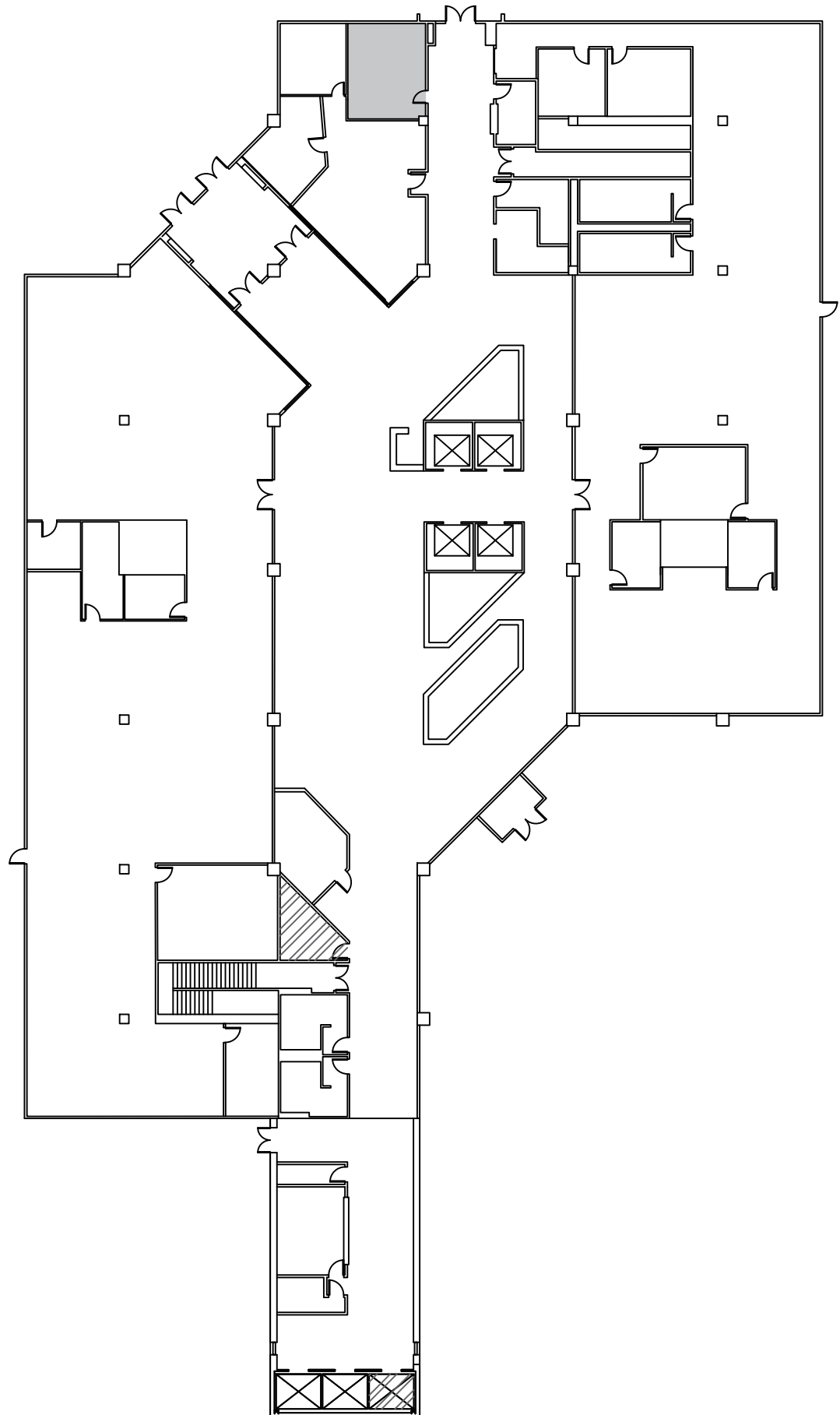


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7th Floor – Offices
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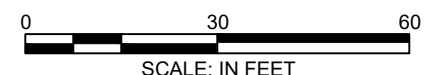
DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
14



LEGEND

-  AREA OF KNOWN ACM FIREPROOFING ABATEMENT
-  AREA NOT ACCESSIBLE

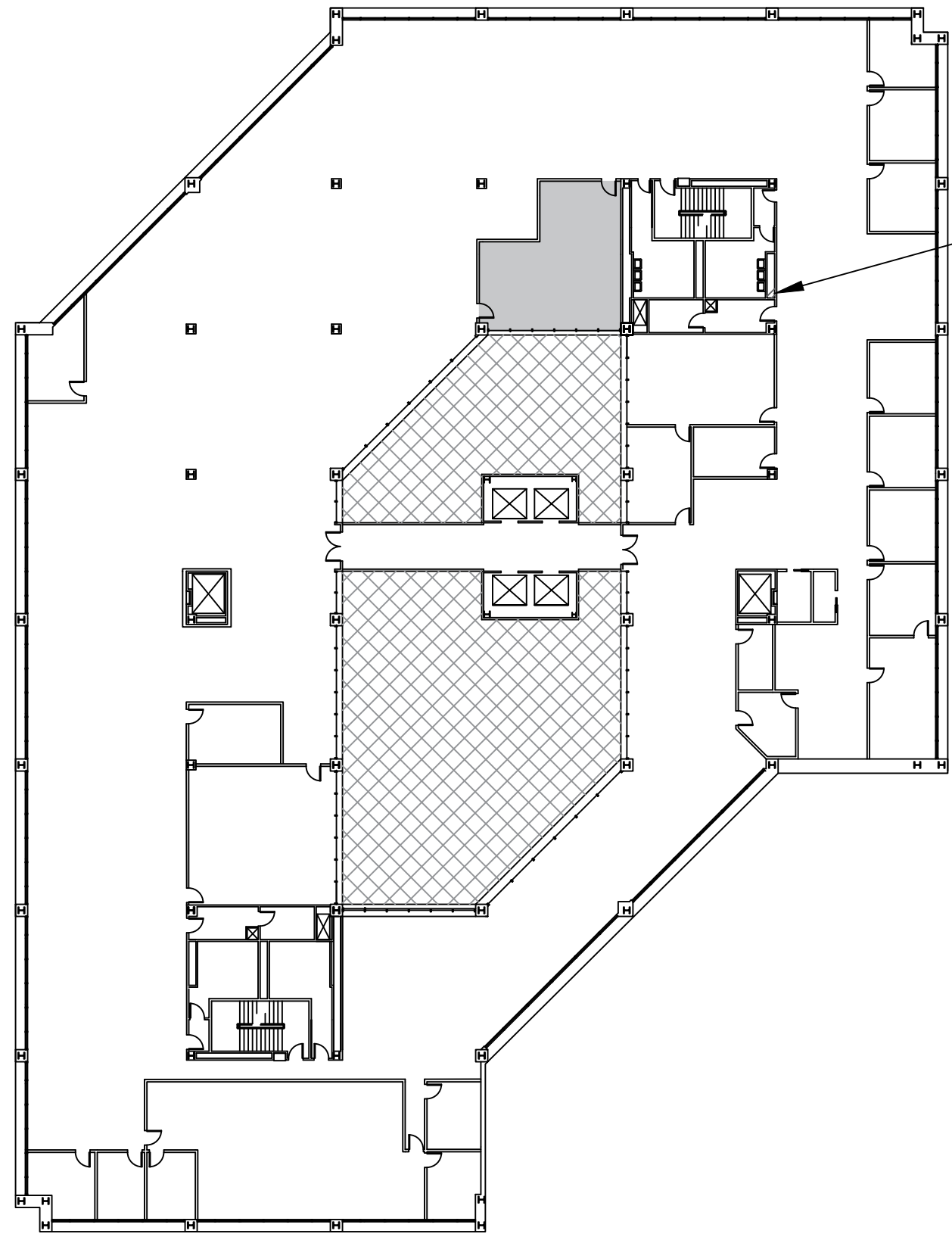


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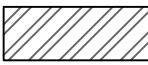
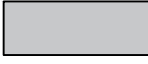

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

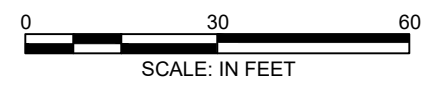
FIGURE
15



PIPE CHASE CONFIRMED ABATED AND RE-SPRAYED WITH BLUE FIREPROOFING. EXTENTS OF ABATEMENT UNKNOWN.

LEGEND

-  AREA OF KNOWN ACM FIREPROOFING ABATEMENT
-  AREA NOT ACCESSIBLE
-  ATRIUM, OPEN TO BELOW

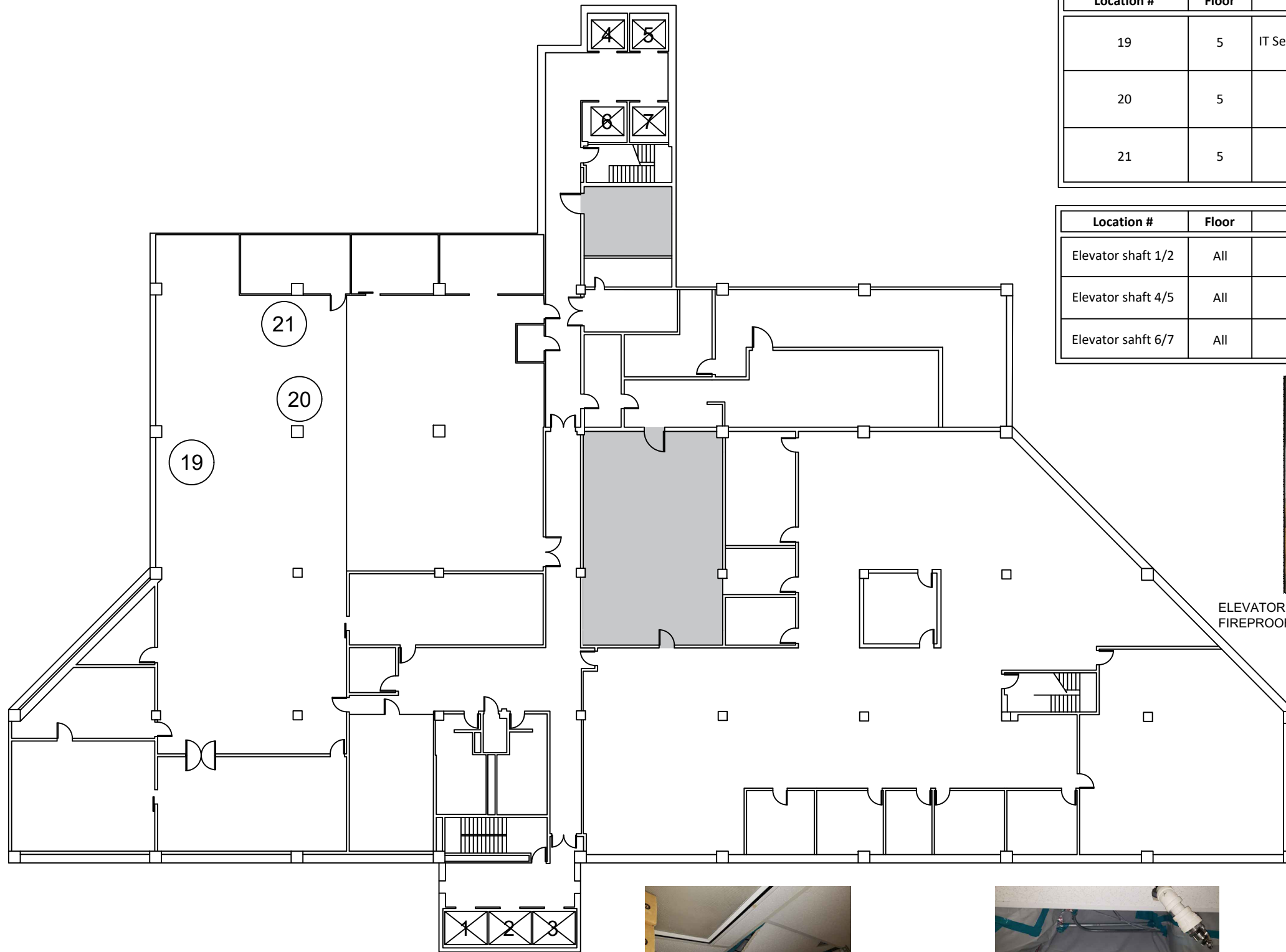


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10th Floor – Offices
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 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
16



Location #	Floor	Area Description	Damage Description
19	5	IT Server Room, near air sample 5-13	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM
20	5	IT Server Room	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM
21	5	IT Server Room	Water damage from pipe leaks? Near a halon fire suppression globe. Tiles screwed in place, could not assess spray on ACM

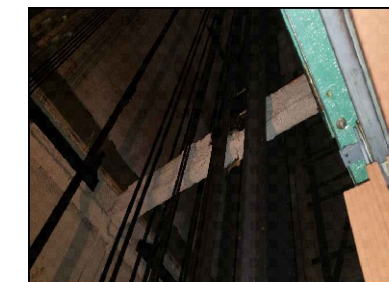
Location #	Floor	Area Description	Description
Elevator shaft 1/2	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



ELEVATOR 1/2: EXTENSIVE CRACKING OF ACM FIREPROOFING THROUGHOUT SHAFT



ELEVATOR 4/5: CRACKING AND MISSING PIECES OF ACM FIREPROOFING THROUGHOUT ELEVATOR SHAFT.



ELEVATOR 7/8: CRACKING AND MISSING PIECES OF ACM FIREPROOFING THROUGHOUT ELEVATOR SHAFT.

LEGEND

"PROBLEM AREA" VISUALLY ASSESSED

AREA NOT ACCESSIBLE



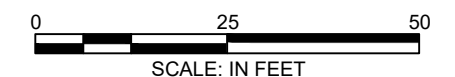
LOCATION 19: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.



LOCATION 20: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.



LOCATION 21: PLASTIC COVER OVER/AROUND FIRE SUPPRESSION GLOBE. ACM NOT VISIBLE. ASSUMED WATER DAMAGED.



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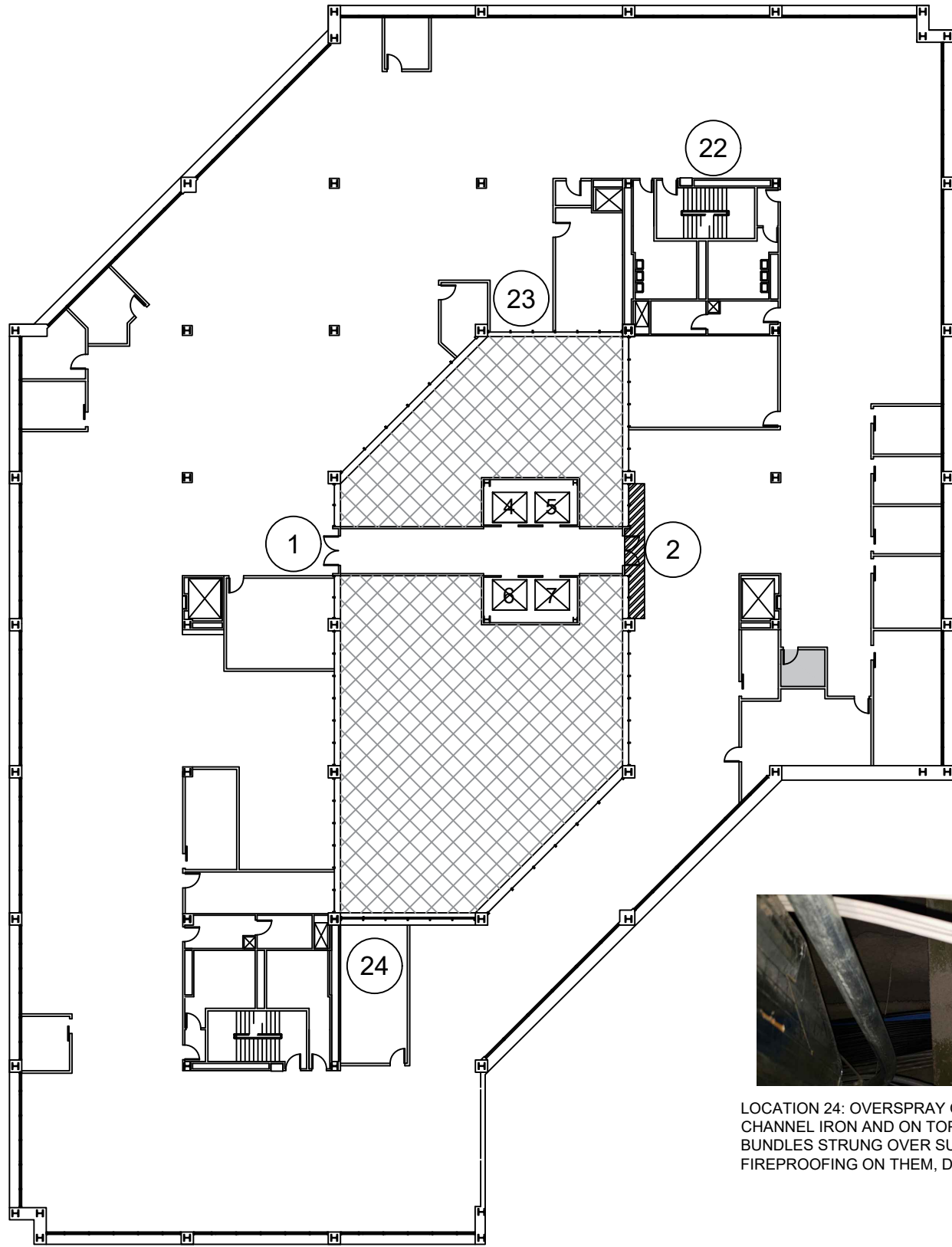
5th Floor – IT
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 PROJ MGR: JLS PROJECT: 22-2502
 DRAWN: SPH DWG. NO.: 222502(bulk)v6

FIGURE
 17

Location #	Floor	Area Description	Description
1	9	West Exit to Elevator Walkway	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
2	9	East Exit to Elevator Walkway	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
22	9	Outside North Stairwell Entrance	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
23	9	North Interior Wall Looking into Atrium	No visible damage to ACM. Spray on fireproofing in channel iron by atrium wall between pandeck and ceiling tiles, may be overspray/excess from application. Spot checks (1, 2, 22, 23, 24) indicate issue is sporadic throughout 9th floor
24	9	Conference Room C West	Fireproofing present in channel iron as in 1. Large cable bundles have been run over/through angle iron and pulling cables over the iron has damaged the ACM. Overspray onto water pipe damaged due to pipe vibration.

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



LOCATION 1: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON.



LOCATION 1: ACM FIREPROOFING ON PAN DECKING.



LOCATION 22: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 2: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON.



LOCATION 23: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON AND ON TOP OF CEILING TILES. ASSOCIATED ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 24: OVERSPRAY OF ACM FIREPROOFING IN CHANNEL IRON AND ON TOP OF CEILING TILES. CABLE BUNDLES STRUNG OVER SUPPORTS HAVE ACM FIREPROOFING ON THEM, DAMAGING THE ACM.

LEGEND



"PROBLEM AREA" VISUALLY ASSESSED



AREA NOT ACCESSIBLE



ATRIUM, OPEN TO BELOW



DAMAGED AREA



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DATE: 06/02/2023	SCALE: As Shown
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DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
18

Location #	Floor	Area Description	Description
3	10	Personnel and Labor Relations	Spray on fireproofing observed on top of ceiling tiles. No visible damaged of fireproofing observed in this area.
4	10	West Exit to Elevator Walkway	Same as 3, to lesser extent. Overspray on water piping has fallen off likely due to pipe vibration over time.

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft



LOCATION 3: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING IN GOOD CONDITION.







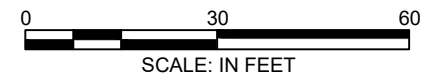
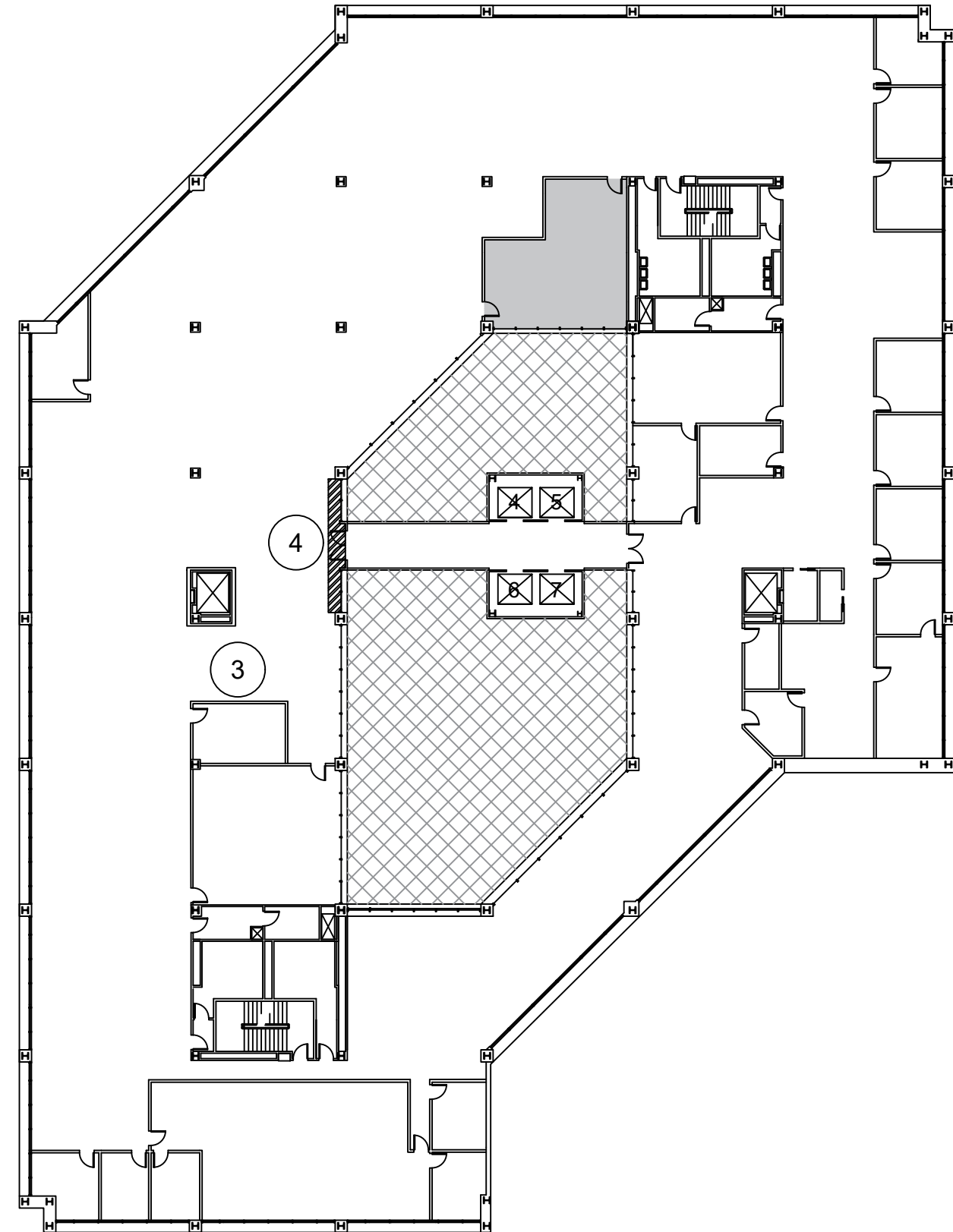
LOCATION 4: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING IN GOOD CONDITION.



LOCATION 4: ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.

LEGEND

-  "PROBLEM AREA" VISUALL ASSESSED
-  AREA NOT ACCESSIBLE
-  ATRIUM, OPEN TO BELOW
-  DAMAGED AREA



ENVIRONMENT, ENERGY, HEALTH & SAFETY CONSULTANTS
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 3105 Lakeshore Dr., Anchorage, AK. 99517 907-222-2445
 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813

10th Floor – Offices
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

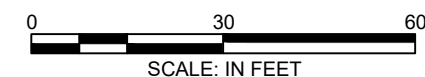
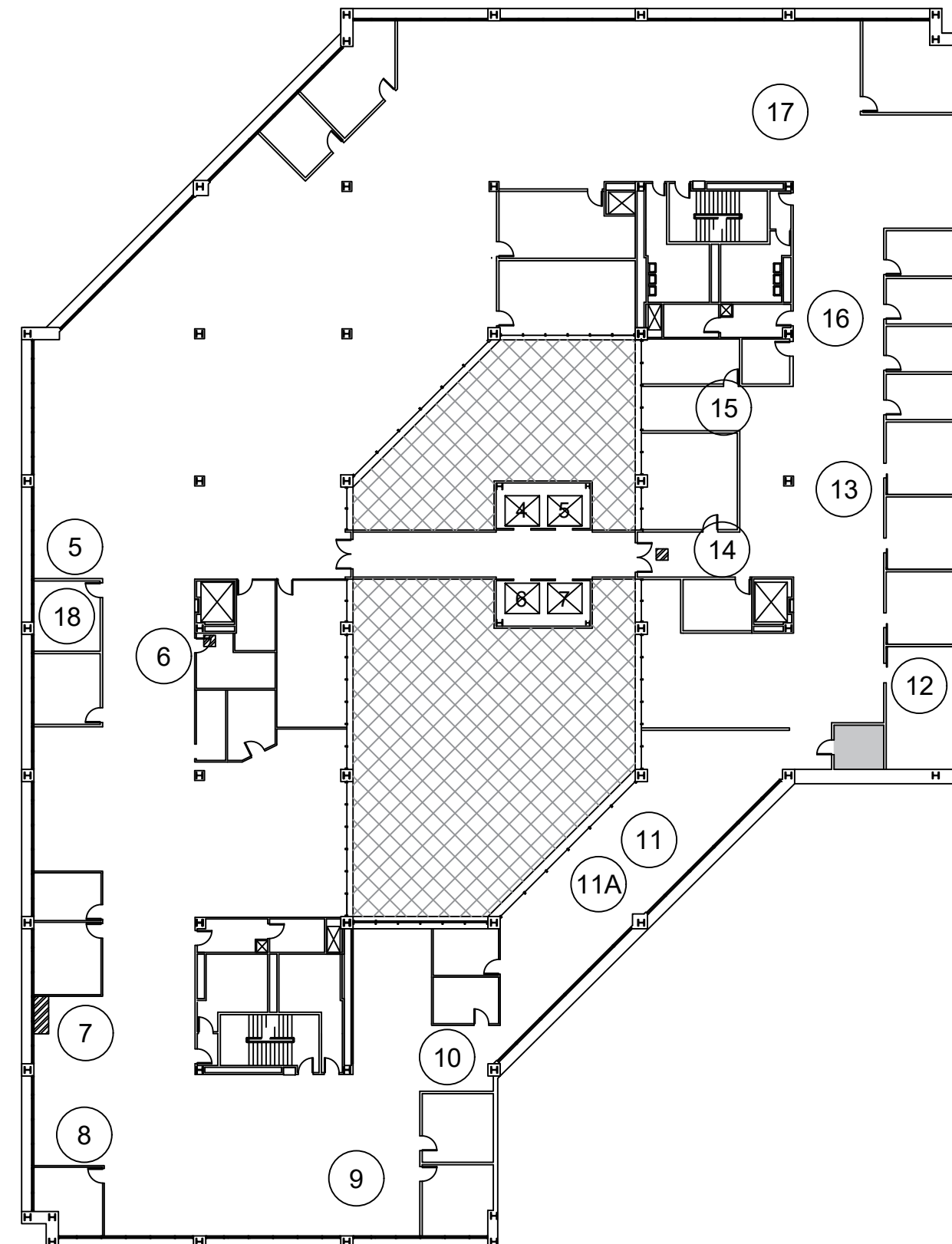
FIGURE
19

Location #	Floor	Area Description	Description
5	11	Outside Tax Director's Office, near air sample 11-2	Spray on fireproofing observed on top of ceiling tiles. No visible damage of fireproofing observed in this area.
6	11	Tax Division	Visible fireproofing in good condition. Small pieces of spray on fireproofing on top of ceiling tiles, area near air plenum, beams and ducting blocked full view.
7	11	Exterior wall, SW Corner	Water stains in area around wire roof protrusion
8	11	Ceiling around SW Corner Office	Three water stains around roof protrusions in this area
9	11	Southern most corner, near air sample 11-7	No visible damage of fireproofing observed in this area. Small pieces of spray on fireproofing observed on top of ceiling tiles.
10	11	Southern end of windowed walkway	No visible damage of fireproofing observed in this area. Small pieces of spray on fireproofing observed on top of ceiling tiles.
11	11	Middle of windowed walkway	Crack in fireproofing, slight staining (estimated < 25% of immediate area)
11A	11	Middle of windowed walkway, near Air Sample 11-8	Plastic Containment Area, could not access this area to look inside, ADOT&PF did not know of containment, could not find on 4/26/23
12	11	Admin. Services' Commissioner's Office, Air Sample 11-10	Surficial cracks in ACM. Rusting around brackets, ACM does not appear Stained. <1% of office area damaged
13	11	Administrative Services Hallway, south near air sample 11-11	Small Cracks in fireproofing along 1 I-beam, appear surficial
14	11	Eastern Exit to Elevator Walkway	3 ft x 4 ft water stain and 1 ft x 1 ft water stain near roof protrusions
15	11	Data Processing Area	Discoloring (water damage?) around roof protrusions, seven observed in a 10 ft x 20 ft area
16	11	Administrative Services Hallway, north by air sample 11-40	Water stain (3 ft x 3 ft) and surficial cracks in ACM along I beam, some ACM on top of tiles, If not stained, ACM in visually good condition
17	11	Outside PFD Corner Conference Rm, air sample 11-15	Sporadic surficial cracks along ~32 feet of beam, <25% of beam
18	11	Tax Director's Office, near air sample 11-2	Water damage from roof leak(s), plastic in place, could not see entire area to accurately estimate damage

Location #	Floor	Area Description	Description
Elevator shaft 4/5	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft
Elevator shaft 6/7	All	Elevator Shaft	Vibration and air movement damage, nearly continuous throughout elevator shaft

LEGEND

- ## "PROBLEM AREA" VISUALLY ASSESSED
- AREA NOT ACCESSIBLE
- ATRIUM, OPEN TO BELOW
- DAMAGED AREA



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11th Floor – Offices
 ADOT State Office Building Asbestos Bulk Sampling
 Juneau, Alaska

DATE: 06/02/2023	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(bulk)v6

FIGURE
20.1



LOCATION 5: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 6: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 7: WATER STAINED/DAMAGED SPRAY-ON ACM FIREPROOFING.



LOCATION 8: WATER STAINED/DAMAGED SPRAY-ON ACM FIREPROOFING.



LOCATION 9: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 10: OVERSPRAY OF ACM FIREPROOFING ON TOP OF CEILING TILES. ACM FIREPROOFING ON PANDECKING IN GOOD CONDITION.



LOCATION 11: CRACKING/STAINING IN DAMAGED ACM FIREPROOFING ON PANDECKING.



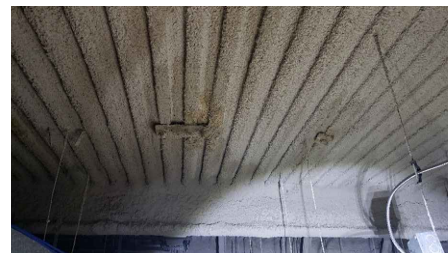
LOCATION 12: RUSTING AROUND BRACKETS. ACM FIREPROOFING NOT STAINED.



LOCATION 13: RUSTING AROUND BRACKETS. ACM FIREPROOFING NOT STAINED.



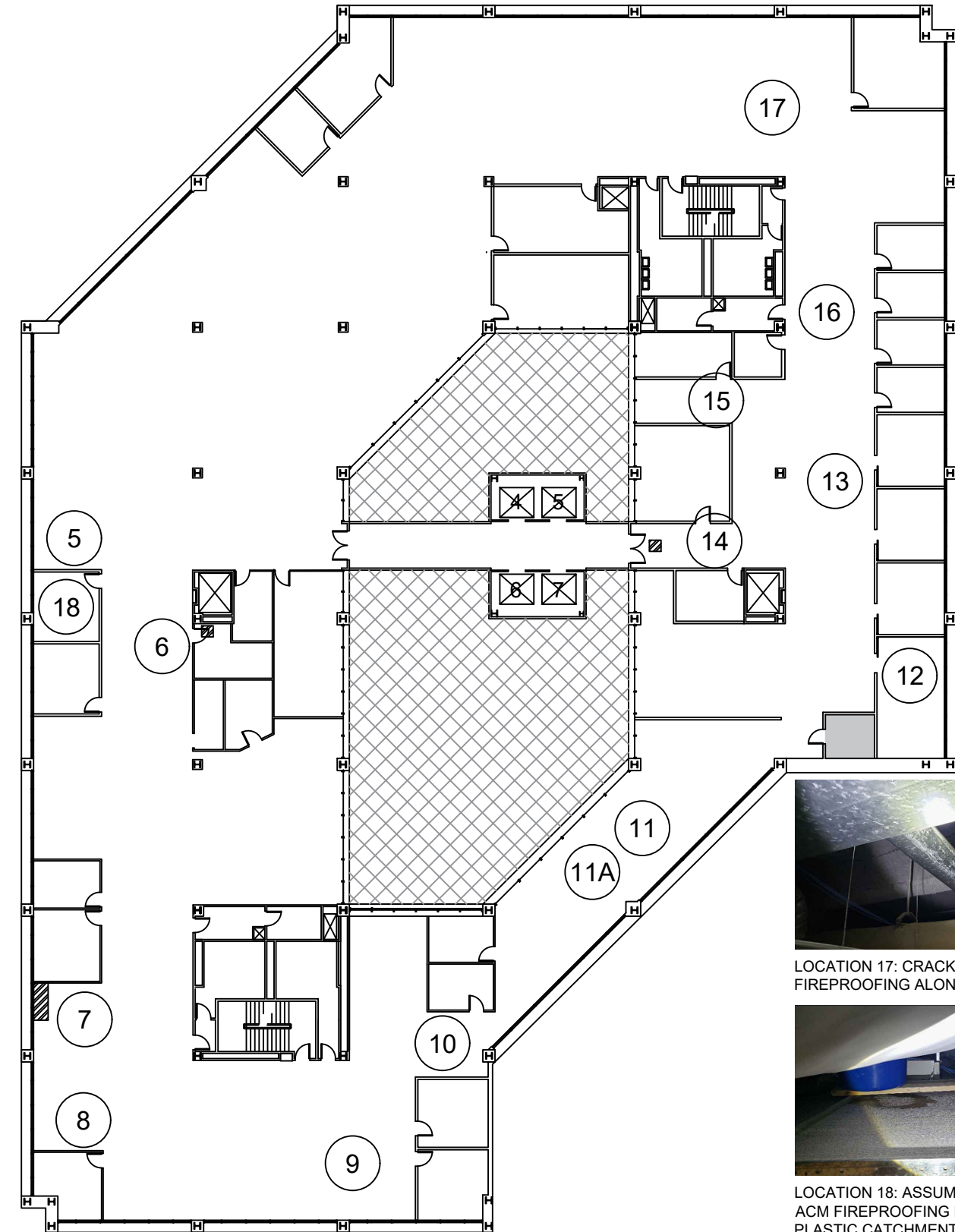
LOCATION 14: WATER STAINING NEAR PIPE PENETRATIONS IN PANDECKING.



LOCATION 15: WATER STAINING AROUND ROOF PENETRATIONS.



LOCATION 16: WATER STAINING ON I-BEAM WITH SUPERFICIAL CRACKS.



LOCATION 17: CRACKS IN ACM FIREPROOFING ALONG I-BEAM.



LOCATION 18: ASSUMED WATER DAMAGE. ACM FIREPROOFING NOT VISIBLE DUE TO PLASTIC CATCHMENT.



SCALE: IN FEET

LEGEND



"PROBLEM AREA" VISUALL ASSESSED



ATRIUM, OPEN TO BELOW



AREA NOT ACCESSIBLE



DAMAGED AREA



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11th Floor - Offices
ADOT State Office Building Asbestos Bulk Sampling
Juneau, Alaska

DATE: 06/02/2023
PROJ MGR: JLS
DRAWN: SPH

SCALE: As Shown
PROJECT: 22-2502
DWG. NO.: 222502(bulk)v6

FIGURE
20.2

Appendix 2



Photo 1: 1st floor garage showing 3 different materials of fireproofing overlapped, non-homogenous, and damaged.



Photo 2: Pipe elbow containing 6% Amosite asbestos. Small diameter insulated piping sporadic throughout parking garages.

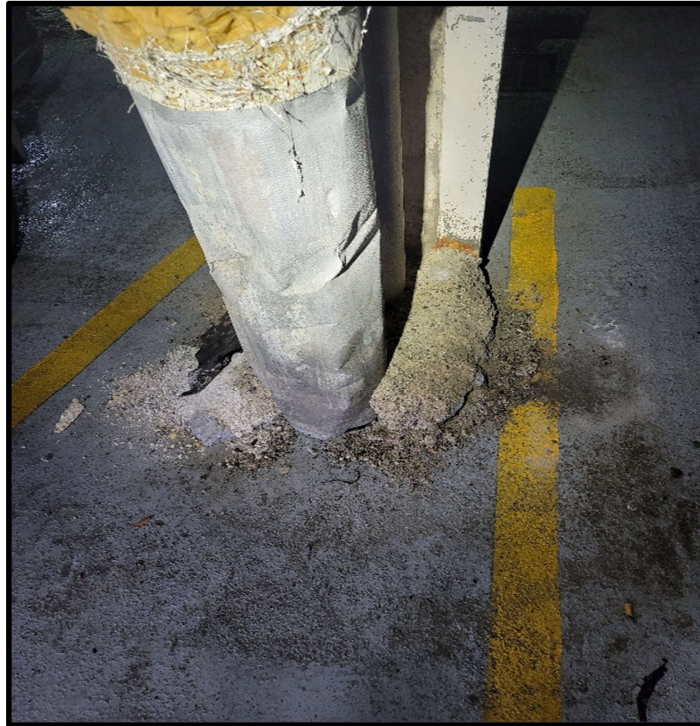


Photo 3: *Deterioration of pipe insulation and ceiling spray-on fireproofing accumulating on ground.*



Photo 4: *4th floor parking garage view above hard lid. Gray spray-on fireproofing present on pandecking consistent with rest of building. Assumed to contain chrysotile asbestos.*



Photo 5: Gray fireproofing overspray on pipe at ceiling inside 5th floor Maintenance room. Ceiling appears to have been previously abated or hard lid installed encapsulating fireproofing above. Overspray fireproofing contains 25% Chrysotile asbestos.



Photo 6: Asbestos containing joint compound patching applied to walls in 5th floor Maintenance room. Joint compound patching applied to interior walls throughout building assumed to contain asbestos.



Photo 7: 5th floor office building server room entry floor tiles and black mastic both contain Chrysotile asbestos. Floor tiles brittle and damaged.



Photo 8: Light tan mastic behind brown cove base contains 2.5% Anthophyllite asbestos.



Photo 9: Brown mastic on cove base inside Storage room in front of Mechanical room contains 2.75% Anthophyllite asbestos. Cove base mastic containing asbestos not differentiable from non-asbestos containing cove base mastic throughout Floor 9-11.

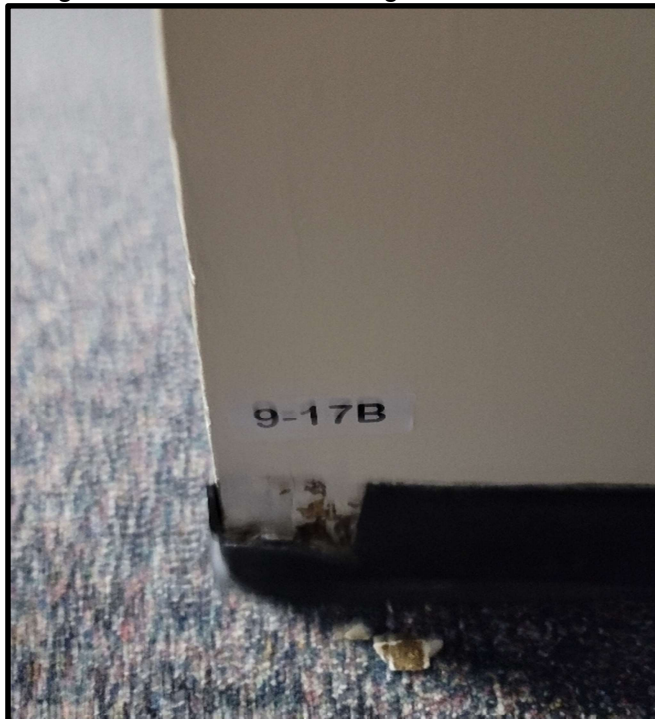


Photo 10: Brown cove base mastic (5.00% Anthophyllite) and joint compound (10% Chrysotile) at edge of structural support column on 9th floor contain asbestos.



Photo 11: 9th floor Mechanical room joint compound contains 3.5% Chrysotile asbestos. Joint compound present as wallboard seam sealant and patching.



Photo 12: 9th floor exterior wall above window joint compound contains 5.25% Chrysotile asbestos. Exterior walls, structural columns, and interior spaces surrounding Atrium constructed with asbestos containing joint compound.



Photo 13: Space between drop ceiling and pan decking on 9th floor. White spots shown are overspray from spray-on fireproofing. White spots on ceiling tile in bottom of photo are fireproofing that has deteriorated and fallen. Fireproofing contains 10-15% Chrysotile asbestos.



Photo 14: Joint compound (6% Chrysotile) and cove base mastic (1.25% Anthophyllite) contain asbestos. Old carpet mastic and existing carpet adhesive do not contain asbestos.



Photo 15: Black sealant at Atrium metal window supports contains 5.5% Chrysotile asbestos. Black sealant present at all visible seams for metal connections.



Photo 16: Joint compound sample at corner wall adjoining Atrium window wall contains 6% Chrysotile asbestos.



Photo 17: Brown/Yellow mastic containing 2% Anthophyllite asbestos present on brown cove base at step separating Storage room and Mechanical room on 11th floor.



Photo 18: Typical Mechanical space present on Floors 5-7 depicting blue colored fireproofing on pan decking (non-asbestos containing) with gray fireproofing overspray on walls and piping (Chrysotile asbestos containing).



Photo 19: Elevator shaft 6/7, southern 2 elevators in center of building connecting Floors 5-11, showing asbestos containing gray fireproofing. Damage to fireproofing on central beam outlined in red.



Photo 20: Elevator shaft 1/2, western and central elevators on south edge of building connecting Floors 1-8, showing asbestos containing gray fireproofing. Damage to fireproofing present throughout shared elevator shaft including missing and cracking fireproofing.



Photo 21: Damaged ACM containing fireproofing within an elevator shaft. Note the cracks and missing pieces.



Photo 22: Air plenum and intake area. Note the spray on fireproofing has been abated and non-ACM fireproofing has been sprayed blue.



Photo 23: Opening in floor of sixth floor mechanical room, looking onto the pandecking above the fifth floor dropped ceiling. Although sixth floor mechanical areas have either been abated of ACM containing spray on fireproofing, or contain non-abated, but non-ACM spray on fireproofing, areas of the mechanical rooms may still be open to areas with ACM containing spray on fireproofing.



Photo 24: ACM spray on fireproofing on top of ceiling tiles.



Photo 25: ACM spray on fireproofing on top of ceiling tiles. Note the spray on fireproofing on the pandecking above the tiles is in good condition. Note the overspray on the support wires and ducting (arrows).



Photo 26: Fireproofing in channel iron on the concrete wall sill. Note the router placed on top of the ACM fireproofing and the overspray (arrows).



Photo 27: Fireproofing in channel iron on the concrete wall sill. Note the overspray areas (arrows)



Photo 28: ACM spray on fireproofing overspray on ducting and pipe insulation.



Photo 29: Cable bundles on top of ACM spray on fireproofing.



Photo 30: Cable bundles on top of ACM spray on fireproofing overspray.

Appendix 3



Photo 1: *Light tan fireproofing – standard spray pattern*



Photo 2: *Dark gray fireproofing – standard spray pattern*



Photo 3: Off-white(left)/gray(right) fireproofing – standard spray pattern



Photo 4: Tan speckled fireproofing with mica chips – standard spray pattern



Photo 5: Tan fireproofing with black specks – standard spray pattern



Photo 6: Tan fireproofing coating – sandy – smoothed



Photo 7: Dark gray fireproofing – fibrous – clumpy – semi-hardened



Photo 8: Dark gray – fibrous – cementitious/hard quality – similar to sample 2-10B



Photo 9: *New fireproofing from 2nd floor are 1-01B (white – standard spray pattern) & 1-03B (dark tan – standard spray patter)*



Photo 10: *Gray fireproofing – visibly fibrous overspray pattern*



Photo 11: Slightly darker tan fireproofing – chunky/thick spray with white undercoat spray



Photo 12: Off-white fireproofing (standard tan behind pipe) – standard spray pattern



Photo 13: *Beige fireproofing/insulation – visibly fibrous – inside metal clad cross brace members at edges of garage (large 3' diameter)*



Photo 14: *Gray fireproofing (above ceiling and at corner openings) – appears to be same spray as identified inside of the building on undersides of metal pan-decking (but is ND for asbestos)*



Photo 15: Typical light gray fireproofing on pandecking above dropped ceilings in office spaces (Chrysotile asbestos containing).



Photo 16: Typical Mechanical space present on Floors 5-7 depicting blue colored fireproofing on pan decking (non-asbestos containing) with gray fireproofing overspray on walls and piping (Chrysotile asbestos containing).



Photo 17: Blue, non-asbestos fireproofing. Note the inconsistent color, probably stemming from insufficient mixing of dye within the fireproofing batch.



Photo 18: Blue, non-asbestos fireproofing within Elevator 3 shaft. Note the color is less intense than in other areas, again likely due to inconstant amounts of dye mixed with the fireproofing.



Photo 19: Blue, non-asbestos fireproofing in the air intake plenum. Note the blue color is consistent, but light colored.



Photo 20: Tannish-gray spray on fireproofing located on the sixth floor in part of the mechanical areas. This fireproofing was non-detect for asbestos.

Appendix 4

Floor	Damage Tile Count						Total by floor	No Access Areas
	Cracked	Missing Tile	Holes	General Damage	Water Damage	Missing Crossbar		
5	16	1	34	150	10	28	239	IT "cage", OIT office areas
6	5	1	3	67	3	5	84	
7	22	2	42	170	6	26	268	Grants and Contracts Offices
8 West	18	0	3	8	0	19	48	Food courts
8 East	12		11	78	5	12	118	
9	27	0	70	81	2	66	246	
10	14	0	27	110	1	4	156	
11	20	0	39	43	31	34	167	
Total Within Assessed Area	134	4	229	707	58	194	1326	

Notes:

Areas where ACM spray on fireproofing confirmed abated were not assessed for damaged ceiling tiles

Not all areas were accessible for counting ceiling tiles

Appendix 5

Recommendations Table

Priority	Task	Advantage	Disadvantage	Comments
1	Update the asbestos management plan	*Updates recommended after abatement, other work, or periodic reinspection of known asbestos containing materials		*No updates to the Management Plan have been made since 1989 *The 1989 Survey and Management Plan for Asbestos Containing Material, Alaska State Museum & Juneau State Office Building should be followed until an updated plan can be written and implemented
2	Abate all spray on fireproofing	*Removes all known friable asbestos within the building *Can be done in a phased approach	*Replacement with non ACM fireproofing will be needed *Removal will be costly and time consuming *Improper removal may temporarily raise airborne fiber levels *Must be done by a professional abatement company	*Abatement Priorities include: 1) Removal of ACM overspray from channel Iron on 9th floor 2) Elevator Shafts (excluding Elevator 3 shaft) 3) Water damaged ACM on 11th floor 4) Water Damaged ACM on 5th floor above servers 5) Other areas of damaged ACM should be recorded as soon as they are known and abated as soon as practicable *Containment barriers necessary *Worker protection necessary
3	Remove ACM overspray from top of ceiling tiles	* Can be done during other projects requiring above ceiling work *Can target areas of concern on an as-needed basis	*Will be an on-going task as long as ACM spray on fireproofing is present in the building *Must be done by properly trained individuals	*Dust and ACM spray on fireproofing (if present) should be vacuumed of the top of ceiling tiles with a work area before and after work is conducted above the drop ceiling *Containment barriers may be necessary *Worker protection necessary
4	Replace all damaged ceiling tiles and missing cross bars	* Removes potential pathway for ACM fireproofing to fall into occupied areas *Helps alleviate employee concerns	*May be expensive due to large number of damaged tiles *Will be ongoing effort as tiles can be damaged for various reasons	*Top of tiles will need to be vacuumed before removal *Containment barriers may be necessary during work *Worker protection necessary *To prevent additional damage, all objects hanging from ceiling tiles or cross bars should be removed *Employees should be reminded to refrain from hanging items from the ceiling *Seal all necessary holes around protrusions through the ceiling tiles to extent possible
5	Inspect roof protrusion patches/seals	*Reduce likelihood of water damage from roof leaks	*Periodic and ongoing inspection and repair will be *Not a permanent fix	*Patches and seals around roof protrusions should be inspected quarterly *Patches or seals should be repaired as necessary
6	Cables and wires above the ceiling tiles should be run through conduits	*Prevents cables/wires from damageing ACM *Prevents cables/wires from become contaminated with ACM spray on fireproofing	*Not practicable to redo all wire/cable placements at once *Will need to occur during future cable/wire/equipment repair and replacement above the ceiling tiles *Does not prevent cables/wire/equipment currently above the ceiling tiles from becoming contaminated with ACM spray on fireproofing	*Conduits should be placed on top of ceiling tiles and NOT in contact with ACM whenever possible
7	Asbestos Work Plan (future projects)	*Required for inclusion in future Demolition and Design Documents to document planned abatement and work practices	*Project specific plans are necessary, may increase project cost	* Required under 40 CFR 61.145 for activities other than those covered under operations and maintenance activities
8	Offer Information and technology employees asbestos O&M training	*Allows IT to work above ceiling tiles and determine placement of equipment	*Ongoing training and re-certification necessary	*O&M Training is offered through various entities in Anchorage
9	All Employees should have Asbestos Awareness Training	* Required for employees working in a building which contains asbestos		

Appendix 6



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

EMAIL: c@emsl.com

[Empty box for EMSL Order Number / Lab Use Only]

Customer Information	Customer ID:	Billing ID:
	Company Name: Nortech Environmental & Engineer Cnslt.	Company Name: Nortech Environmental & Engineer Cnslt.
	Contact Name: Sean Heaney	Billing Contact: Sean Heaney
	Street Address: 2400 College Road	Street Address: 2400 College Road
	City, State, Zip: Fairbanks AK 99709 Country: US	City, State, Zip: Fairbanks AK Country: US
	Phone: 907-452-5688	Phone: 907-452-5688
Email(s) for Report: sean.heaney@nortechengr.com	Email(s) for Invoice:	

Project Information

Project Name/No: 22-2502	Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: AK
State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)	
Sampled By Name: Sean Heaney	Sampled By Signature:
Date Sampled: 7/22/22	No. of Samples in Shipment: 9

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only, samples must be submitted by 11:30am.

Test Selection

<p>PLM - Bulk (reporting limit)</p> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<p>TEM - Bulk</p> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%) <p>Other Tests (please specify)</p> <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)
--	--

Sample Number	HA Number	Sample Location	Material Description
1-01B		end of I-beam, underside	white fireproofing
1-02B		end of I-beam, underside	dark gray fireproofing
1-03B		end of I-beam, vertical end	dark tan fireproofing
1-04B		horizontal large diameter pipe	pipe elbow
1-05B		underside of I-beam	gray fibrous fireproofing
1-06B		ceiling	tan fireproofing
1-07B		underside of I-beam	tan smoothed fireproofing
1-08B		corner joining ceiling/I-beam	hard pipe elbow 15'
1-09B		horizontal small diameter pipe	tan chunky fireproofing

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
 If sample is between 1% - 5% asbestos, perform 400 Point Count.

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: Sean Heaney	Date/Time: 7/22/22
Relinquished by:	Date/Time:
Received by:	Date/Time:
Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042218404

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 07/28/2022 9:20 AM

Analysis Date: 08/04/2022 - 08/05/2022

Collected Date: 07/22/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-01B <small>042218404-0001</small>	End of I-beam Underside - White Fireproofing	Gray Fibrous Homogeneous	15% Cellulose 25% Glass	60% Non-fibrous (Other)	None Detected
1-02B <small>042218404-0002</small>	End of I-beam Underside - Dark Gray Fireproofing	Gray/Black Fibrous Homogeneous	15% Cellulose 25% Glass	60% Non-fibrous (Other)	None Detected
1-03B <small>042218404-0003</small>	End of I-beam Vertical End - Dark Tan Fireproofing	Tan Fibrous Homogeneous	30% Cellulose	15% Vermiculite 55% Non-fibrous (Other)	None Detected
1-04B-Pipe Insulation <small>042218404-0004</small>	Horizontal Large Diameter Pipe - Pipe Elbow	Gray Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
1-04B-Fiberglass <small>042218404-0004A</small>	Horizontal Large Diameter Pipe - Fiberglass	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
1-05B <small>042218404-0005</small>	Underside of I-beam - Gray Fibrous Fireproofing	Gray Fibrous Homogeneous	25% Cellulose 15% Glass	60% Non-fibrous (Other)	None Detected
1-06B <small>042218404-0006</small>	Ceiling - Tan Fireproofing	Tan Fibrous Homogeneous	25% Cellulose	15% Vermiculite 60% Non-fibrous (Other)	None Detected
1-07B <small>042218404-0007</small>	Underside of I-beam - Tan Smoothed Fireproofing	Tan Fibrous Homogeneous	30% Cellulose	15% Vermiculite 55% Non-fibrous (Other)	None Detected
1-08B <small>042218404-0008</small>	Corner Ceiling I-beam - Hard Pipe Elbow	Tan Fibrous Homogeneous	25% Cellulose	15% Vermiculite 60% Non-fibrous (Other)	None Detected
1-09B <small>042218404-0009</small>	Horizontal Small Diameter Pipe - Tan Chunky Fireproofing	Gray Fibrous Homogeneous	10% Cellulose 25% Min. Wool	59% Non-fibrous (Other)	6% Amosite

Analyst(s)

Alex Francois (6)

Nancy Stalter (4)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 08/05/2022 11:23:35



EMSL ANALYTICAL, INC.
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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminon, NJ 08077

PHONE: 1-800-220-3675

EMAIL: c@emsl.com

Customer Information	Customer ID:			Billing ID:		
	Company Name: Nortech Environmental & Engineer Cnslt.			Company Name: Nortech Environmental & Engineer Cnslt.		
	Contact Name: Sean Heaney			Billing Contact: Sean Heaney		
	Street Address: 2400 College Road			Street Address: 2400 College Road		
	City, State, Zip: Fairbanks AK 99709 Country: US			City, State, Zip: Fairbanks AK Country: US		
	Phone: 907-452-5688			Phone: 907-452-5688		
Email(s) for Report: sean.heaney@nortechengr.com			Email(s) for Invoice:			

Project Information

Project Name/No: 22-2502		Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sean Heaney	Sampled By Signature:	Date Sampled: 7/22/22	No. of Samples in Shipment: 14

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only, samples must be submitted by 11:30am.

Test Selection

<p>PLM - Bulk (reporting limit)</p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)</p> <p><input type="checkbox"/> PLM EPA NOB (<1%)</p> <p><input type="checkbox"/> POINT COUNT</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p><input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC</p> <p style="padding-left: 20px;"><input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (<1%)</p> <p><input type="checkbox"/> NYS 198.1 (Friable - NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY)</p> <p><input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)</p>	<p>TEM - Bulk</p> <p><input type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)</p> <p style="text-align: center;">Other Tests (please specify)</p> <p><input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)</p>
---	---

Sample Number	HA Number	Sample Location	Material Description
2-01B		corner of ceiling	light tan fireproofing
2-02B		corner of adjoining I-beams	dark gray fireproofing
2-03B		side of I-beam	off-white fireproofing
2-04B		side of I-beam	gray fireproofing
2-05B		pipe under I-beam, horizontal	hard elbow + fiberglass
2-06B		ceiling adjacent light	tan speckled fireproofing
2-07B		corner of I-beam/ceiling	tan + black speck fireproofing
2-08B		bottom of I-beam	tan smoothed fireproofing
2-09B		bottom of I-beam	dark gray fibrous fireproofing
2-10B		side of column	dark gray, fibrous, hard, fireproofing coating

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample analyzed is between 10%-5% asbestos, perform 400 Point Count.

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney	Date/Time: 7/22/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
2-11B		ground between column piping	dust/chunks of pipe insulation
2-12B		in front of handicap stalls	pipe insulation
2-13B		horizontal piping adjacent column	pipe elbow
2-14B		vertical piping adjacent column	dark brown pipe wrap

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <i>Sean Heaney</i>	Date/Time: 7/22/22	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042218387

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 07/28/2022 9:20 AM

Analysis Date: 08/04/2022 - 08/05/2022

Collected Date: 07/22/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-01B <small>042218387-0001</small>	Corner of Ceiling - Light Tan Fireproofing	Tan/Beige Fibrous Homogeneous	15% Glass	35% Vermiculite 50% Non-fibrous (Other)	None Detected
2-02B <small>042218387-0002</small>	Corner of Adjoining I-beams - Dark Gray Fireproofing	Gray Fibrous Homogeneous	10% Cellulose 30% Glass	60% Non-fibrous (Other)	None Detected
2-03B <small>042218387-0003</small>	Side of I-beam - Off-white Fireproofing	Gray/Beige Non-Fibrous Homogeneous	25% Cellulose 35% Glass	15% Vermiculite 25% Non-fibrous (Other)	None Detected
2-04B <small>042218387-0004</small>	Side of I-beam - Gray Fireproofing	Gray Fibrous Homogeneous	25% Cellulose 40% Glass	35% Non-fibrous (Other)	None Detected
2-05B <small>042218387-0005</small>	Pipe under I-beam Horizontal - Hard Elbow Fiberglass	Gray Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
2-06B <small>042218387-0006</small>	Ceiling adjacent Light - Tan Speckled Fireproofing	Tan Fibrous Homogeneous	30% Cellulose 10% Glass	20% Vermiculite 40% Non-fibrous (Other)	None Detected
2-07B <small>042218387-0007</small>	Corner of I-beam Ceiling - Tan and Black Speck Fireproofing	Tan Fibrous Homogeneous	30% Cellulose 10% Glass	20% Vermiculite 40% Non-fibrous (Other)	None Detected
2-08B <small>042218387-0008</small>	Bottom of I-beam - Tan Smoothed Fireproofing	Tan Fibrous Homogeneous	35% Cellulose 15% Glass	30% Vermiculite 20% Non-fibrous (Other)	None Detected
2-09B <small>042218387-0009</small>	Bottom of I-beam - Dark Gray Fibrous Fireproofing	Gray Fibrous Homogeneous	10% Cellulose 30% Glass	60% Non-fibrous (Other)	None Detected
2-10B <small>042218387-0010</small>	Side of Column - Dark Gray Fibrous Hard Fireproofing	Black Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (Other)	None Detected
2-11B <small>042218387-0011</small>	Ground between Column Piping - Dust Chunks of Pipe Insulation	Brown/Gray/Black Fibrous Heterogeneous	30% Cellulose 20% Glass	20% Vermiculite 30% Non-fibrous (Other)	None Detected
2-12B-Pipe Insulation <small>042218387-0012</small>	In Front of Handicap Stalls - Pipe Insulation	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
2-12B-Wrap <small>042218387-0012A</small>	In Front of Handicap Stalls - Wrap	White/Silver Fibrous Homogeneous	30% Cellulose 20% Glass	50% Non-fibrous (Other)	None Detected
2-13B-Elbow <small>042218387-0013</small>	Horizontal Piping adjacent Column - Pipe Elbow	Gray/White Fibrous Homogeneous	20% Synthetic 25% Glass	55% Non-fibrous (Other)	None Detected
2-13B-Wrap <small>042218387-0013A</small>	Horizontal Piping adjacent Column - Wrap	White Fibrous Heterogeneous	80% Cellulose 3% Glass	17% Non-fibrous (Other)	None Detected

Result includes a small amount of inseparable attached material

Initial report from: 08/05/2022 10:34:50



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EMSL Order: 042218387
Customer ID: NORT69
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-13B-Insulation <small>042218387-0013B</small>	Horizontal Piping adjacent Column - Pipe Elbow	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
2-14B <small>042218387-0014</small>	Vertical Piping adjacent Column - Dark Brown Pipe Wrap	Brown/Gray Fibrous Homogeneous	30% Cellulose 20% Glass	50% Non-fibrous (Other)	None Detected

Analyst(s)

Andrew Borsos (7)

Alex Francois (10)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 08/05/2022 10:34:50



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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

[Empty box for Order Number / Lab Use Only]

Customer Information	Customer ID:	Billing ID:
	Company Name: Nortech Environmental & Engineer Cnslt.	Company Name: Nortech Environmental & Engineer Cnslt.
	Contact Name: Sean Heaney	Billing Contact: Sean Heaney
	Street Address: 2400 College Road	Street Address: 2400 College Road
	City, State, Zip: Fairbanks AK 99709 Country: US	City, State, Zip: Fairbanks AK Country: US
	Phone: 907-452-5688	Phone: 907-452-5688
Email(s) for Report: sean.heaney@nortechengr.com	Email(s) for Invoice:	

Project Name/No: 22-2502		Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sean Heaney	Sampled By Signature: <i>[Signature]</i>	Date Sampled: 7/26/22 No. of Samples in Shipment: 10

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only, samples must be submitted by 11:30am.

<p>PLM - Bulk (reporting limit)</p> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<p>Test Selection</p> <p>TEM - Bulk</p> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)	<p>Other Tests (please specify)</p> <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)
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Sample Number	HA Number	Sample Location	Material Description
3-01B		3rd floor - ceiling	black membrane on wood
3-02B		3rd floor - ceiling	gray fireproofing
3-03B		3rd floor - side of I-beam	white fireproofing
3-04B		3rd floor - under I-beam	off-white fibrous fireproofing
3-05B		3rd floor - behind column	pipe elbow
3-06B		3rd floor - inside cross-brace	packing insulation
3-07B		3rd floor - horizontal pipe cap	debris pipe end
3-08B		3rd floor - floor pole	debris
4-01B		4th floor - ceiling	gypsum wallboard
4-02B		4th floor - open corner	gray fireproofing

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample is analyzed between 1% and 5% asbestos, perform 400 Point Count.

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: Sean Heaney <i>[Signature]</i> Date/Time: 7/26/22	Received by: Date/Time:
Relinquished by:	Received by: Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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EMSL Analytical, Inc.

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<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042218543

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 07/29/2022 9:40 AM

Analysis Date: 08/05/2022

Collected Date: 07/26/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-01B <small>042218543-0001</small>	3rd Floor - Ceiling - Black Membrane on Wood	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-02B <small>042218543-0002</small>	3rd Floor - Ceiling - Gray Fireproofing	Gray Fibrous Homogeneous	6% Glass	94% Non-fibrous (Other)	None Detected
3-03B <small>042218543-0003</small>	3rd Floor - Side of I-Beam - White Fireproofing	Gray/White Fibrous Homogeneous	10% Cellulose 8% Glass	82% Non-fibrous (Other)	None Detected
3-04B <small>042218543-0004</small>	3rd Floor - Under I-Beam - Off-White Fibrous Fireproofing	Gray Fibrous Homogeneous	15% Cellulose 10% Glass	75% Non-fibrous (Other)	None Detected
3-05B-Pipe Elbow <small>042218543-0005</small>	3rd Floor - Behind Column - Pipe Elbow	White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
3-05B-Insulation <small>042218543-0005A</small>	3rd Floor - Behind Column - Insulation	Yellow Fibrous Homogeneous	98% Glass	2% Non-fibrous (Other)	None Detected
3-06B <small>042218543-0006</small>	3rd Floor - Inside Cross-Brace - Packing Insulation	Gray Fibrous Homogeneous	15% Cellulose 15% Glass	8% Vermiculite 62% Non-fibrous (Other)	None Detected
3-07B <small>042218543-0007</small>	3rd Floor - Horizontal Pipe Cap - Pipe End	Gray Fibrous Homogeneous	15% Cellulose 5% Min. Wool	80% Non-fibrous (Other)	None Detected
3-08B-Debris <small>042218543-0008</small>	3rd Floor - Floor Pile - Debris	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-08B-Insulation <small>042218543-0008A</small>	3rd Floor - Floor Pile - Insulation	Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
4-01B-Gypsum Wallboard <small>042218543-0009</small>	4th Floor - Ceiling - Gypsum Wallboard	Brown/White Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (Other)	None Detected
4-01B-Joint Compound <small>042218543-0009A</small>	4th Floor - Ceiling - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-01B-Texture <small>042218543-0009B</small>	4th Floor - Ceiling - Texture	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-02B <small>042218543-0010</small>	4th Floor - Open Corner - Gray Fireproofing	Gray Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected

Initial report from: 08/05/2022 14:52:18



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<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042218543

Customer ID: NORT69

Customer PO:

Project ID:

Analyst(s)

Laura Kantor (1)

Michelle Quach (13)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 08/05/2022 14:52:18



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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

[Empty box for EMSL Order Number / Lab Use Only]

Customer Information	Customer ID:		Billing Information	Billing ID:	
	Company Name:	Nortech Environmental & Engineer Cnslt.		Company Name:	Nortech Environmental & Engineer Cnslt.
	Contact Name:	Sean Heaney		Billing Contact:	Sean Heaney
	Street Address:	2400 College Road		Street Address:	2400 College Road
	City, State, Zip:	Fairbanks AK 99709 Country: US		City, State, Zip:	Fairbanks AK Country: US
	Phone:	907-452-5688		Phone:	907-452-5688
Email(s) for Report: sean.heaney@nortechengr.com			Email(s) for Invoice:		

Project Information			
Project Name/No:	22-2502	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	AK
		State of Connecticut (CT) must select project location:	<input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name:	Sean Heaney	Sampled By Signature:	<i>[Signature]</i>
		Date Sampled:	7/26/22
		No. of Samples in Shipment:	15

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

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PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)		TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%) <u>Other Tests (please specify)</u> <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)	
--	--	--	--

Sample Number	HA Number	Sample Location	Material Description
S-01B		Maintenance/Storage	gray fireproofing
S-02B		Maintenance/Storage	joint compound + pink gub
S-03B		Maintenance/Storage	black cov + yellow mastoz
S-04B		Hallway	brown/green tile + red mastoz
S-05B		Elevator lobby / Hallway	white tile + yellow mastoz
S-06B		Elevator lobby / Hallway	tan material with gray mastoz
S-07B		Elevator lobby / Hallway	beige/brown tile with ^{beige} brown mastoz
S-08B		Hallway	gray tile with yellow mastoz
S-09B		Phone Room	beige tile with black mastoz
S-10B		Phone Room	dark brown cov + dark brown mastoz

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample 3 analyzed between 1% and 5% asbestos, perform 400 Point Count.

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	<i>Sean Heaney</i>	Date/Time:	7/26/22
Relinquished by:		Received by:	
		Date/Time:	

Controlled Document - Asbestos Bulk R7 9/14/2021

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Asbestos Bulk Building Materials - Chain of Custody

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PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
5-11B		Phone Room	acoustical wall tile
5-12B		Server Room	hard wall
5-13B		Server Room	black cove + yellow mastic
5-14B		IT Offices	navy blue cove + cream mastic
5-15B		IT Offices	shiny golden glitter mastic

Method of Shipment:	Sample Condition Upon Receipt:		
Relinquished by: <i>Sean Heaney</i>	Date/Time: 7/26/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042218553
Customer ID: NORT69
Customer PO:
Project ID:

Attn: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709
Phone: (907) 452-5688
Fax: (907) 452-5694
Collected: 7/26/2022
Received: 7/29/2022
Analyzed: 8/04/2022
Proj: 22-2502

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 5-01B **Lab Sample ID:** 042218553-0001

Sample Description: Maintenance/Storage/Gray Fireproofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	75.0%	25% Chrysotile	

Client Sample ID: 5-02B-Joint Compound **Lab Sample ID:** 042218553-0002

Sample Description: Maintenance/Storage/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	White	0.0%	98.5%	1.50% Chrysotile	

Client Sample ID: 5-02B-GWB **Lab Sample ID:** 042218553-0002A

Sample Description: Maintenance/Storage/Pink GWB

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Pink	0.0%	100.0%	None Detected	

Client Sample ID: 5-02B-Texture **Lab Sample ID:** 042218553-0002B

Sample Description: Maintenance/Storage/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 5-03B-Cove **Lab Sample ID:** 042218553-0003

Sample Description: Maintenance/Storage/Black Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 5-03B-Mastic **Lab Sample ID:** 042218553-0003A

Sample Description: Maintenance/Storage/Yellow Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 5-04B-Tile **Lab Sample ID:** 042218553-0004

Sample Description: Hallway/Brown/Green Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Green	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218553
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 5-04B-Mastic **Lab Sample ID:** 042218553-0004A

Sample Description: Hallway/Red Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Red	40.0%	60.0%	None Detected	

Client Sample ID: 5-05B-Tile **Lab Sample ID:** 042218553-0005

Sample Description: Elevator Lobby / Hallway/White Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 5-05B-Mastic **Lab Sample ID:** 042218553-0005A

Sample Description: Elevator Lobby / Hallway/Yelow Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black/Yellow	0.0%	100.0%	None Detected	Result includes a small amount of inseparable attached material

Client Sample ID: 5-06B-Material **Lab Sample ID:** 042218553-0006

Sample Description: Elevator Lobby / Hallway/Tan Material

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Tan	15.0%	85.0%	None Detected	

Client Sample ID: 5-06B-Mastic **Lab Sample ID:** 042218553-0006A

Sample Description: Elevator Lobby / Hallway/Gray Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	10.0%	90.0%	None Detected	

Client Sample ID: 5-07B-Tile **Lab Sample ID:** 042218553-0007

Sample Description: Elevator Lobby / Hallway/Beige/Brown Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Beige	0.0%	100.0%	None Detected	

Client Sample ID: 5-07B-Mastic **Lab Sample ID:** 042218553-0007A

Sample Description: Elevator Lobby / Hallway/Beige/Brown Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 5-08B-Tile **Lab Sample ID:** 042218553-0008

Sample Description: Hallway/Gray Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218553
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 5-08B-Mastic **Lab Sample ID:** 042218553-0008A

Sample Description: Hallway/Yellow Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 5-09B-Tile **Lab Sample ID:** 042218553-0009

Sample Description: Phone Room/Beige Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	Beige	0.0%	98.5%	1.50% Chrysotile	

Client Sample ID: 5-09B-Mastic **Lab Sample ID:** 042218553-0009A

Sample Description: Phone Room/Black Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	92.0%	8% Chrysotile	

Client Sample ID: 5-10B-Cove **Lab Sample ID:** 042218553-0010

Sample Description: Phone Room/Dark Brown Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 5-10B-Mastic **Lab Sample ID:** 042218553-0010A

Sample Description: Phone Room/Dark Brown Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	4.0%	96.0%	None Detected	

Client Sample ID: 5-11B-Wall Tile **Lab Sample ID:** 042218553-0011

Sample Description: Phone Room/Acoustical Wall Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 5-11B-Adhesive **Lab Sample ID:** 042218553-0011A

Sample Description: Phone Room/Acoustical Wall Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	5.0%	95.0%	None Detected	

Client Sample ID: 5-12B **Lab Sample ID:** 042218553-0012

Sample Description: Server Room/Hard Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218553
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 5-13B-Cove **Lab Sample ID:** 042218553-0013

Sample Description: Server Room/Black Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 5-13B-Mastic **Lab Sample ID:** 042218553-0013A

Sample Description: Server Room/Yellow Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 5-14B-Cove **Lab Sample ID:** 042218553-0014

Sample Description: IT Offices/Navy Blue Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Blue	0.0%	100.0%	None Detected	

Client Sample ID: 5-14B-Mastic **Lab Sample ID:** 042218553-0014A

Sample Description: IT Offices/Cream Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 5-15B **Lab Sample ID:** 042218553-0015

Sample Description: IT Offices/Shiny Golden Glitter Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gold	4.0%	96.0%	None Detected	

Analyst(s):

Cory Caragiulo PLM (26)
400 PLM Pt Ct (2)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. EMSL bears no responsibility for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples. PLM alone is not consistently reliable in detecting asbestos in floor coverings and similar NOBs

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 08/04/2022 18:40



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

[Empty box for EMSL Order Number / Lab Use Only]

Customer Information	Customer ID:		Billing Information	Billing ID:	
	Company Name:	Nortech Environmental & Engineer Cnslt.		Company Name:	Nortech Environmental & Engineer Cnslt.
	Contact Name:	Sean Heaney		Billing Contact:	Sean Heaney
	Street Address:	2400 College Road		Street Address:	2400 College Road
	City, State, Zip:	Fairbanks AK 99709 Country: US		City, State, Zip:	Fairbanks AK Country: US
Phone:	907-452-5688	Phone:	907-452-5688		
Email(s) for Report:	sean.heaney@nortechengr.com	Email(s) for Invoice:			

Project Information		
Project Name/No:	22-2502	Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name:	Sean Heaney	Sampled By Signature: <i>[Signature]</i>
		Date Sampled: 7/25/22
		No. of Samples in Shipment: 7

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)
 PLM EPA NOB (<1%)
 POINT COUNT
 400 (<0.25%) 1,000 (<0.1%)
 POINT COUNT w/ GRAVIMETRIC
 400 (<0.25%) 1,000 (<0.1%)
 NIOSH 9002 (<1%)
 NYS 198.1 (Friable - NY)
 NYS 198.6 NOB (Non-Friable - NY)
 NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

TEM EPA NOB
 NYS NOB 198.4 (Non-Friable - NY)
 TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
6-01B		Janitor's Closet	brown floor tile and master
6-02B		Hallway	black cover, master, joint compound
6-03B		Breakroom	joint compound + master
6-04B		Breakroom	vinyl sheet + master
6-05B		Office	wall
6-06B		Conference Room	ceiling tile
6-07B		Room 608	brown cover + black master

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample is analyzed between 1% and 5% asbestos, perform 400 Point Count.
Ceiling tile may contain residual fireproofing.

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney <i>[Signature]</i>	Date/Time: 7/25/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



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200 Route 130 North Cinnaminson, NJ 08077

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<http://www.EMSL.com> / cinnaslab@EMSL.com

EMSL Order: 042218598

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 07/29/2022 9:40 AM

Analysis Date: 08/05/2022

Collected Date: 07/18/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-01B-Floor Tile <i>042218598-0001</i>	Janitor's Closet - Brown Floor Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-01B-Mastic <i>042218598-0001A</i>	Janitor's Closet - Mastic	Black/Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
<i>Result includes a small amount of inseparable attached material</i>					
6-02B-Cove <i>042218598-0002</i>	Hallway - Black Cove	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-02B-Mastic <i>042218598-0002A</i>	Hallway - Mastic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-02B-Joint Compound <i>042218598-0002B</i>	Hallway - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-03B-Joint Compound <i>042218598-0003</i>	Breakroom - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-03B-Mastic <i>042218598-0003A</i>	Breakroom - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-04B-Vinyl Sheet <i>042218598-0004</i>	Breakroom - Vinyl Sheet	Blue Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
6-04B-Mastic <i>042218598-0004A</i>	Breakroom - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-05B-Drywall <i>042218598-0005</i>	Office - Wall	White Fibrous Homogeneous	3% Cellulose 5% Glass	92% Non-fibrous (Other)	None Detected
6-05B-Joint Compound <i>042218598-0005A</i>	Office - Wall	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-05B-Plaster <i>042218598-0005B</i>	Office - Wall	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-06B <i>042218598-0006</i>	Conference Room - Ceiling Tile	Gray/White Fibrous Homogeneous	35% Cellulose 40% Min. Wool	25% Non-fibrous (Other)	None Detected
6-07B-Cove <i>042218598-0007</i>	Room 608 - Brown Cove	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-07B-Mastic <i>042218598-0007A</i>	Room 608 - Black Mastic	Brown/White Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	<1% Chrysotile
<i>Result includes a small amount of inseparable attached material</i>					

Initial report from: 08/05/2022 22:43:47



EMSL Analytical, Inc.

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<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 042218598

Customer ID: NORT69

Customer PO:

Project ID:

Analyst(s)

Alex Francois (15)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 08/05/2022 22:43:47



Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

5 1 2 2 0 2 5 9 7

PHONE: (800) 220-3675
EMAIL: CS@Asstlab@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

<p>Customer Information</p> <p>Customer ID: NORT69</p> <p>Company Name: NORTECH</p> <p>Contact Name: Jennifer Stoutamore</p> <p>Street Address: 5438 Shaune Dr STE B</p> <p>City, State, Zip: Juneau, AK 99801 Country: USA</p> <p>Phone: 907 586 6813</p> <p>Email(s) for Report: jennifer.stoutamore@nortechengr.com</p>	<p>Billing Information</p> <p>Billing ID: _____</p> <p>Company Name: NORTECH</p> <p>Billing Contact: Christine Matson</p> <p>Street Address: 2400 College Rd</p> <p>City, State, Zip: Fairbanks, AK Country: USA</p> <p>Phone: 907 452-5688</p> <p>Email(s) for Invoice: ap@nortechengr.com</p>
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Project Information

Project Name/No: **22-2502** Purchase Order: _____

EMSL LIMS Project ID: _____ US State where samples collected: **AK** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Sampled By Name: **Bryan Stipp** Sampled By Signature: _____ No. of Samples in Shipment: **10**

Turn-Around-Time (TAT)

3 Hour
 4-4.5 Hour (AHERA ONLY)
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

<p>PCM Air</p> <p><input type="checkbox"/> NIOSH 7400</p> <p><input type="checkbox"/> NIOSH 7400 w/ 8hr. TWA</p> <p>PLM - Bulk (reporting limit)</p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <i>W</i></p> <p><input type="checkbox"/> PLM EPA NOB (<1%)</p> <p><input type="checkbox"/> POINT COUNT</p> <p style="margin-left: 20px;"><input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p>POINT COUNT w/ GRAVIMETRIC</p> <p style="margin-left: 20px;"><input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (<1%)</p> <p><input type="checkbox"/> NYS 198.1 (Friable - NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY)</p> <p><input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)</p>	<p>TEM - Air</p> <p><input type="checkbox"/> AHERA 40 CFR, Part 763</p> <p><input type="checkbox"/> NIOSH 7402</p> <p><input type="checkbox"/> EPA Level II</p> <p><input type="checkbox"/> ISO 10312*</p> <p>TEM - Bulk</p> <p><input type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (Non-Friable-NY)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)</p> <p>Other-Test (please specify) _____</p>	<p>TEM - Settled Dust</p> <p><input type="checkbox"/> Microvac - ASTM D5755</p> <p><input type="checkbox"/> Wipe - ASTM D6480</p> <p><input type="checkbox"/> Qualitative via Filtration Prep</p> <p><input type="checkbox"/> Qualitative via Drop Mount Prep</p> <p>Soil - Rock - Vermiculite (reporting limit)*</p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%)</p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.1%)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%)</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep</p>
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*Please call with your project-specific requirements

Positive Stop - Clearly Identified Homogeneous Areas (HA) Filter Pore Size (Air Samples) 0.8um 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
6-50b	front entry door/cove base mastic		
6-51b	front entry door/carpet mastic		
6-52b	front entry door/hallway carpet mastic		
6-53b	main office/carpet mastic		
6-54b	main office/carpet mastic		
6-55b	main office/carpet mastic		
6-56b	main office/carpet mastic		
6-57b	tile and mastic/break room		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

EMSL FedEx: 7964 8263 9562

Method of Shipment: _____	Sample Condition Upon Receipt: 100%
Relinquished by: <i>Jennifer Stoutamore</i> Date/Time: 9/26/22 1400	Received by: <i>Carolina Yee Gyle</i> Date/Time: 9/28/22 10:27 AM
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____



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Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc. 200 Route 130 North Cinnaminson, NJ 08077

PHONE: (800) 220-3675 EMAIL: CinnAslab@EMSL.com

#512202597

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Table with 4 columns: Sample Number, Sample Location / Description, Volume, Area or Homogeneous Area, Date / Time Sampled (Air Monitoring Only). Contains entries for sample numbers 6-58b and 6-59b.

Method of Shipment, Sample Condition Upon Receipt, Relinquished by, Received by, Date/Time fields with handwritten signature and date 9/26/22.

Controlled Document - COC-05 Asbestos R16 10/28/2021

[X] AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202597

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813

Fax: (907) 452-5694

Received Date: 09/28/2022 10:27 AM

Analysis Date: 09/30/2022

Collected Date:

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-50b <i>512202597-0001</i>	Front entry door / cove base mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-51b <i>512202597-0002</i> <i>Inseperable leveler included in analysis.</i>	Front entry door / carpet mastic	Gray/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-52b <i>512202597-0003</i>	Front entry door / hallway carpet mastic	Tan Non-Fibrous Homogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
6-53b <i>512202597-0004</i> <i>Analysis includes mastic and leveler.</i>	Main office / carpet mastic	Gray/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-54b <i>512202597-0005</i> <i>Analysis includes mastic and leveler.</i>	Main office / carpet mastic	Gray/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-55b <i>512202597-0006</i> <i>Analysis includes inseperable mastic and leveler.</i>	Main office / carpet mastic	Gray/Tan Non-Fibrous Heterogeneous	7% Cellulose	93% Non-fibrous (Other)	None Detected
6-56b <i>512202597-0007</i> <i>Analysis includes inseperable leveler and two mastics.</i>	Main office / carpet mastic	Gray/Tan/Clear Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
6-57b-Floor Tile <i>512202597-0008</i>	Tile and mastic / break room	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-57b-Mastic & Leveler <i>512202597-0008A</i> <i>inseperable leveler included in analysis.</i>	Tile and mastic / break room	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-58b <i>512202597-0009</i>	Ceiling tile	Gray/White Fibrous Homogeneous	25% Cellulose 30% Min. Wool	20% Perlite 25% Non-fibrous (Other)	None Detected
6-59b <i>512202597-0010</i>	Spray on fire proofing core	Gray/Green Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

Initial report from: 09/30/2022 16:41:25



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EMSL Order: 512202597

Customer ID: NORT69

Customer PO:

Project ID:

Analyst(s)

Claudiu Nistor (3)

Carolyn Yeo (8)

Ehrin Stephens, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA NVLAP Lab Code 200613, CA 2733, WA C1025

Initial report from: 09/30/2022 16:41:25



EMSL ANALYTICAL, INC.
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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

[Empty box for EMSL Order Number / Lab Use Only]

Customer Information	Customer ID:	Billing ID:
	Company Name: Nortech Environmental & Engineer Cnslt.	Company Name: Nortech Environmental & Engineer Cnslt.
	Contact Name: Sean Heaney	Billing Contact: Sean Heaney
	Street Address: 2400 College Road	Street Address: 2400 College Road
	City, State, Zip: Fairbanks AK 99709 Country: US	City, State, Zip: Fairbanks AK Country: US
	Phone: 907-452-5688	Phone: 907-452-5688
Email(s) for Report: sean.heaney@nortechengr.com		Email(s) for Invoice:

Project Name/No: 22-2502		Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sean Heaney	Sampled By Signature: <i>[Signature]</i>	Date Sampled: 7/25/22 No. of Samples in Shipment: 31
Turn-Around-Time (TAT) <input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 32 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <small>Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.</small>		

PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%) Other Tests (please specify) <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)
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Sample Number	HA Number	Sample Location	Material Description
7-01B		Storage	brown cave + tan mastoz
7-02B		Storage	carpet mastoz + leveker
7-03B		Computer Room - column	wall
7-04B		Computer Room	wall
7-05B		Computer Room	Ceiling tile #1
7-06B		Computer Room	Ceiling tile #2
7-07B		Suote 200	light brown cave + light tan mastoz
7-08B		Exterior wall	wall
7-09B		Exterior wall	black cave + w hote mastoz
7-10B		Exterior wall	wall

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
 If sample 3 analyzed between 1% and 5% asbestos, perform 400 Point Count.
 Ceiling tile samples may contain residual fireproofing.

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: Sean Heaney <i>[Signature]</i> Date/Time: 7/25/22	Received by: Date/Time:
Relinquished by:	Received by: Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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Asbestos Bulk Building Materials - Chain of Custody

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EMAIL: c@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
7-11B		Mud Room	brown cove, yellow mastic, j.c.
7-12B		Mud Room	black cove, tan mastic, j.c.
7-13B		Mud Room	yellow/gray mastic + vinyl
7-14B		Mud Room	Floor leveller + mastic
7-15B		Storage	Brown/gray cove, tan mastic
7-16B		Storage	red tape + black mastic
7-17B		Hallway	gray + blue + orange mastics
7-18B		Hallway	blue mastic
7-19B		Hallway	brown + yellow + gray mastics
7-20B		Hallway	burgandy cove + off-white mastic
7-21B		Fire Alarm Room	blue fireproofing
7-22B		Storage	ceiling-wall
7-23B		Mechanical Hallway	pipe elbow
7-24B		Storage	joint compound
7-25B		Janitoria	tan tile + red/orange mastic
7-26B		Hallway	silver mastic layer
7-27B		Office	mastic
7-28B		DHSS	yellow + green mastics
7-29B		DHSS	yellow/green mastic
7-30B		DHSS	gray mastic
7-31B		Break Room	grayish-beige hard tile

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney <i>[Signature]</i>	Date/Time: 7/25/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

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Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Attn: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709
Phone: (907) 452-5688
Fax: (907) 452-5694
Collected: 7/25/2022
Received: 7/28/2022
Analyzed: 8/05/2022
Proj: 22-2502

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-01B-Cove Base **Lab Sample ID:** 042218459-0001
Sample Description: Storage/Brown Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-01B-Mastic **Lab Sample ID:** 042218459-0001A
Sample Description: Storage/Tan Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown/Yellow	6.0%	94.0%	None Detected	

Client Sample ID: 7-02B-Mastic **Lab Sample ID:** 042218459-0002
Sample Description: Storage/Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Green	0.0%	100.0%	None Detected	

Client Sample ID: 7-02B-Leveler **Lab Sample ID:** 042218459-0002A
Sample Description: Storage/Leveler

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7-03B-Joint Compound **Lab Sample ID:** 042218459-0003
Sample Description: Computer Room - Column/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	White	0.0%	95.3%	4.75% Chrysotile	

Client Sample ID: 7-03B-Drywall **Lab Sample ID:** 042218459-0003A
Sample Description: Computer Room - Column/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown/Gray	4.0%	96.0%	None Detected	

Client Sample ID: 7-04B-Joint Compound **Lab Sample ID:** 042218459-0004
Sample Description: Computer Room/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	Gray	0.0%	96.5%	3.50% Chrysotile	



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EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-04B-Drywall **Lab Sample ID:** 042218459-0004A

Sample Description: Computer Room/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 7-05B **Lab Sample ID:** 042218459-0005

Sample Description: Computer Room/Ceiling Tile #1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Tan/White	65.0%	35.0%	None Detected	

Client Sample ID: 7-06B **Lab Sample ID:** 042218459-0006

Sample Description: Computer Room/Ceiling Tile #2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	75.0%	25.0%	None Detected	

Client Sample ID: 7-07B-Cove Base **Lab Sample ID:** 042218459-0007

Sample Description: Suite 200/Light Brown Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-07B-Mastic **Lab Sample ID:** 042218459-0007A

Sample Description: Suite 200/Light Tan Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	Brown/Yellow	0.0%	97.5%	2.50% Anthophyllite	Point Count performed on NOB material without gravimetric reduction at client request. Asbestos results may be under-reported.

Client Sample ID: 7-08B-Joint Compound **Lab Sample ID:** 042218459-0008

Sample Description: Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	White	0.0%	97.0%	3.00% Chrysotile	

Client Sample ID: 7-08B-Drywall **Lab Sample ID:** 042218459-0008A

Sample Description: Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown/Gray	4.0%	96.0%	None Detected	

Client Sample ID: 7-09B-Cove Base **Lab Sample ID:** 042218459-0009

Sample Description: Exterior Wall/Black Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Black	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-09B-Mastic **Lab Sample ID:** 042218459-0009A

Sample Description: Exterior Wall/White Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 7-10B-Joint Compound **Lab Sample ID:** 042218459-0010

Sample Description: Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	Gray	0.0%	95.8%	4.22% Chrysotile	

Client Sample ID: 7-10B-Drywall **Lab Sample ID:** 042218459-0010A

Sample Description: Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown/Tan	10.0%	90.0%	None Detected	

Client Sample ID: 7-11B-Cove Base **Lab Sample ID:** 042218459-0011

Sample Description: Mail Room/Brown Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-11B-Mastic **Lab Sample ID:** 042218459-0011A

Sample Description: Mail Room/Yellow Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-11B-Joint Compound **Lab Sample ID:** 042218459-0011B

Sample Description: Mail Room/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 7-12B-Cove Base **Lab Sample ID:** 042218459-0012

Sample Description: Mail Room/Black Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-12B-Mastic **Lab Sample ID:** 042218459-0012A

Sample Description: Mail Room/Tan Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/05/2022	Brown/Yellow	0.0%	98.3%	1.75% Anthophyllite	Point Count performed on NOB material without gravimetric reduction at client request. Asbestos results may be under-reported.



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EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-12B-Joint Compound **Lab Sample ID:** 042218459-0012B

Sample Description: Mail Room/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Tan/White	6.0%	94.0%	None Detected	

Client Sample ID: 7-13B-Mastic **Lab Sample ID:** 042218459-0013

Sample Description: Mail Room/Yellow/Gray Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Black	0.0%	94.0%	6% Chrysotile	

Client Sample ID: 7-13B-Vinyl **Lab Sample ID:** 042218459-0013A

Sample Description: Mail Room/Vinyl

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Tan	0.0%	100.0%	None Detected	

Client Sample ID: 7-14B-Leveler **Lab Sample ID:** 042218459-0014

Sample Description: Mail Room/Floor Leveler

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	10.0%	90.0%	None Detected	

Client Sample ID: 7-14B-Mastic **Lab Sample ID:** 042218459-0014A

Sample Description: Mail Room/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Clear	0.0%	100.0%	None Detected	

Client Sample ID: 7-15B-Cove Base **Lab Sample ID:** 042218459-0015

Sample Description: Storage/Brown/Gray Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-15B-Mastic **Lab Sample ID:** 042218459-0015A

Sample Description: Storage/Tan Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-16B-Tape **Lab Sample ID:** 042218459-0016

Sample Description: Storage/Red Tape

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Red	0.0%	100.0%	None Detected	



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EMSL Order ID:	042218459
Customer ID:	NORT69
Customer PO:	
Project ID:	

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-16B-Mastic **Lab Sample ID:** 042218459-0016A

Sample Description: Storage/Black Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7-17B **Lab Sample ID:** 042218459-0017

Sample Description: Hallway/Gray/Blue/Orange Mastics

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray/Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-18B **Lab Sample ID:** 042218459-0018

Sample Description: Hallway/Blue Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Blue	0.0%	100.0%	None Detected	

Client Sample ID: 7-19B **Lab Sample ID:** 042218459-0019

Sample Description: Hallway/Brown/Yellow/Gray Mastics

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Various	0.0%	100.0%	None Detected	

Client Sample ID: 7-20B-Cove Base **Lab Sample ID:** 042218459-0020

Sample Description: Hallway/Burgandy Cove

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-20B-Mastic **Lab Sample ID:** 042218459-0020A

Sample Description: Hallway/Off-White Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Tan	0.0%	100.0%	None Detected	

Client Sample ID: 7-21B **Lab Sample ID:** 042218459-0021

Sample Description: Fire Alarm Room/Blue Fireproofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Blue	25.0%	75.0%	None Detected	

Client Sample ID: 7-22B **Lab Sample ID:** 042218459-0022

Sample Description: Storage/Ceiling Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	White	0.0%	100.0%	None Detected	



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-23B

Lab Sample ID: 042218459-0023

Sample Description: Mechanical Hallway/Pipe Elbow

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray/Yellow	17.0%	83.0%	None Detected	

Client Sample ID: 7-24B

Lab Sample ID: 042218459-0024

Sample Description: Storage/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Tan/White	0.0%	100.0%	None Detected	

Client Sample ID: 7-25B-Tile

Lab Sample ID: 042218459-0025

Sample Description: Janitorial/Tan Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7-25B-Mastic

Lab Sample ID: 042218459-0025A

Sample Description: Janitorial/Red/Orange Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 7-26B

Lab Sample ID: 042218459-0026

Sample Description: Hallway/Silver Mastic Layer

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray/Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-27B

Lab Sample ID: 042218459-0027

Sample Description: Office/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Clear	0.0%	100.0%	None Detected	

Client Sample ID: 7-28B-Mastic

Lab Sample ID: 042218459-0028

Sample Description: DHSS/Yellow/Green Mastics

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-28B-Leveler

Lab Sample ID: 042218459-0028A

Sample Description: DHSS/Leveler

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218459
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 7-29B-Mastic **Lab Sample ID:** 042218459-0029

Sample Description: DHSS/Yellow/Green Mastics

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-29B-Leveler **Lab Sample ID:** 042218459-0029A

Sample Description: DHSS/Leveler

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7-30B **Lab Sample ID:** 042218459-0030

Sample Description: DHSS/Gray Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray/Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-31B-Mastic **Lab Sample ID:** 042218459-0031

Sample Description: Break Room/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Black	0.0%	94.0%	6% Chrysotile	

Client Sample ID: 7-31B-Floor Tile **Lab Sample ID:** 042218459-0031A

Sample Description: Break Room/Grayish-Beige Hard Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	<1% Chrysotile	

Analyst(s):

Ghaly Hemaya	PLM (37) 400 PLM Pt Ct (4)
Johannes Breckheimer	PLM (9) 400 PLM Pt Ct (2)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. EMSL bears no responsibility for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples. PLM alone is not consistently reliable in detecting asbestos in floor coverings and similar NOBs

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--IHLAP Accredited #102581, NVLAP Lab Code 101048-9, NJ NY022, CT PH-0170, MA AA000170

Initial report from: 08/05/2022 02:42



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

#512202247

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: <u>NORTECH</u>		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: <u>5430 Shawnee Dr Ste B</u>		<i>Third Party Billing requires written authorization from third party</i>	
City: <u>Juneau</u>	State/Province: <u>AK</u>	Zip/Postal Code: <u>99801</u>	Country: <u>USA</u>
Report To (Name): <u>Jen Stutzman</u>		Telephone #: <u>907 586 6813</u>	
Email Address: <u>jennifer.stutzman@nortechengr.com</u>		Fax #:	Purchase Order: <u>22-2502</u>
Project Name/Number: <u>22-2502</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: <u>Alaska</u>		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <u>W</u>	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	<u>Other</u>
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: 8/17/2022

Samplers Name: Jennifer Stutzman Samplers Signature: Jennifer Stutzman

Sample #	HA #	Sample Location	Material Description
8-01A		Back office, south office area	dark brown cove base yellow mastic
8-02A		pillar, south office area	brown cove base, yellow mastic
8-03A		Break room, south office area	grey vinyl, yellow mastic
8-04A		northeastern most office, office area ^{north}	brown cove base, yellow tan mastic
8-05A		Attorney office	double height brown cove base tan mastic
8-06A		Concessions north, floor	beige w/ black flecks vinyl white mastic
8-07A		Postal Area Floor	beige w/ black flecks vinyl and texture, yellow mastic

Client Sample # (s): 8-01A - 8-07A Total # of Samples: 7

Relinquished (Client): Jennifer Stutzman Date: 8/18/22 Time: 09:30

Received (Lab): [Signature] Date: 8/19/22 Time: 12:53 pm

Comments/Special Instructions: please send invoice to : ap@nortechengr.com 7964 5910 7830

order



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202247

Customer ID: NORT69

Customer PO: 22-2502

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813

Fax: (907) 452-5694

Received Date: 08/19/2022 12:53 PM

Analysis Date: 08/22/2022

Collected Date: 08/17/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
8-01A-Cove Base <small>512202247-0001</small>	Dark brown cove base, yellow mastic - back office, south offices area	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-01A-Mastic <small>512202247-0001A</small>	Dark brown cove base, yellow mastic - back office, south offices area	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-01A-Mud <small>512202247-0001B</small>	Dark brown cove base, yellow mastic - back office, south offices area	White Non-Fibrous Homogeneous		50% Ca Carbonate 50% Non-fibrous (Other)	None Detected
8-02A-Cove Base <small>512202247-0002</small>	Brown cove base, yellow mastic - pillar, south office area	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-02A-Mastic <small>512202247-0002A</small> <i>Analysis includes mastic and embedded fibrous mesh.</i>	Brown cove base, yellow mastic - pillar, south office area	Tan/Clear Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
8-03A-Vinyl Flooring <small>512202247-0003</small>	Gray viny, yellow mastic - break room, south office area	Brown/Black Fibrous Homogeneous	30% Cellulose 20% Synthetic	50% Non-fibrous (Other)	None Detected
8-03A-Mastic <small>512202247-0003A</small>	Gray viny, yellow mastic - break room, south office area	Tan/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-04A-Cove Base <small>512202247-0004</small>	Brown cove base, yellow mastic - northeastern most office, north office area	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-04A-Mastic <small>512202247-0004A</small>	Brown cove base, yellow mastic - northeastern most office, north office area	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-05A-Cove Base <small>512202247-0005</small>	Double height brown cove base, tan mastic - attorney office	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-05A-Mastic <small>512202247-0005A</small>	Double height brown cove base, tan mastic - attorney office	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-06A <small>512202247-0006</small>	Beige w/ black flecks vinyl, white mastic - concessions north, floor	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-07A <small>512202247-0007</small>	Beige w/ black flecks vinyl and textue, yellow mastic - postal area floor	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/23/2022 11:31:42



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202247

Customer ID: NORT69

Customer PO: 22-2502

Project ID:

Analyst(s)

Claudiu Nistor (13)

Ehrin Stephens, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA NVLAP Lab Code 200613, CA 2733, WA C1025

Initial report from: 08/23/2022 11:31:42



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

#512202278

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: NORTECH		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 5438 Shaune Dr Ste B		<i>Third Party Billing requires written authorization from third party</i>	
City: Juneau	State/Province: AK	Zip/Postal Code: 99801	Country: USA
Report To (Name): Jen Stoutamore		Telephone #: 907 586 6813	
Email Address: jennifer.stoutamore@nortecheng.com		Fax #:	Purchase Order: 22-2502
Project Name/Number: 22-2502		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: Alaska		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <i>or</i>	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	Other
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop = Clearly Identify Homogenous Group Date Sampled: **8/23/22**

Samplers Name: **Jennifer Stoutamore** Samplers Signature: *Jennifer Stoutamore*

Sample #	HA #	Sample Location	Material Description
9-403		spray on fireproofing ^{9th floor} pandeck Rm 201	light grey spray on fireproof
9-41B		pandek 9th floor rm 130/131	light grey spray on fireproof
9-42B		pandek 9th floor rm 104	" " "
9-43B		pandek 9th floor rm 67	" " "

Client Sample # (s): 9-403 - 9-43B	Total # of Samples: 4
Relinquished (Client): <i>Jennifer Stoutamore</i> Date: 8/24/22	Time: 0930
Received (Lab): <i>Carolyne</i> Date: 8/25/22	Time: 10:50
Comments/Special Instructions:	
EMSL FedEx 7964 6286 6695 1 order	



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202278

Customer ID: NORT69

Customer PO: 22-2502

Project ID:

Attention: Jen Stoutamore
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 08/25/2022 10:50 AM

Analysis Date: 08/29/2022

Collected Date: 08/23/2022

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9-40B <small>512202278-0001</small>	Light Gray Spray On Fireproof, 9th Floor Pandeck Rm 201	Gray Fibrous Homogeneous	5% Cellulose	80% Non-fibrous (Other)	15% Chrysotile
9-41B <small>512202278-0002</small>	Light Gray Spray On Fireproofing, Pandeck 9th Floor Rm 130/131	Gray/White Fibrous Heterogeneous	30% Cellulose	65% Non-fibrous (Other)	5% Chrysotile
9-42B <small>512202278-0003</small>	Light Gray Spray On Fireproofing, Pandeck 9th Floor Rm 104	Beige Non-Fibrous Homogeneous		30% Mica 60% Non-fibrous (Other)	10% Chrysotile
9-43B-Fireproofing <small>512202278-0004</small>	Light Gray Spray On Fireproofing, Pandeck 9th Floor Rm 67 <i>Result includes residual grout material</i>	Gray Fibrous Heterogeneous		<1% Quartz 25% Mica 60% Non-fibrous (Other)	15% Chrysotile
9-43B-Ceiling Tile <small>512202278-0004A</small>	Light Gray Spray On Fireproofing, Pandeck 9th Floor Rm 67	Gray Fibrous Homogeneous	35% Cellulose 55% Glass	10% Non-fibrous (Other)	None Detected

Analyst(s)

Carolyn Yeo (2)

Ehrin Stephens (3)

Ehrin Stephens, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA NVLAP Lab Code 200613, CA 2733, WA C1025

Initial report from: 08/30/2022 12:40:48



EMSL ANALYTICAL, INC.
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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Customer Information	Customer ID:			Billing Information	Billing ID:		
	Company Name: Nortech Environmental & Engineer Cnslt.				Company Name: Nortech Environmental & Engineer Cnslt.		
	Contact Name: Sean Heaney				Billing Contact: Sean Heaney		
	Street Address: 2400 College Road				Street Address: 2400 College Road		
	City, State, Zip: Fairbanks AK 99709 Country: US				City, State, Zip: Fairbanks AK Country: US		
	Phone: 907-452-5688				Phone: 907-452-5688		
Email(s) for Report: sean.heaney@nortechengr.com			Email(s) for Invoice:				

Project Information

Project Name/No: 22-2502		Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sean Heaney	Sampled By Signature:	Date Sampled: 7/24/22	No. of Samples in Shipment: 24

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

<p>PLM - Bulk (reporting limit)</p> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<p>TEM - Bulk</p> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%) <p style="text-align: center;"><u>Other Tests (please specify)</u></p> <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)
--	--

Sample Number	HA Number	Sample Location	Material Description
9-01B		DCCED door near 981	black cov base + master
9-02B		DCCED corner office	insulation
9-03B		DCCED corner office-column	wall
9-04B		Admin Services	wall
9-05B		Admin Services	ceiling tile #1
9-06B		Admin Services	ceiling tile #2
9-07B		Admin Services	black cov, white master
9-08B		Men's Restroom	Ceiling tile #3
9-09B		Storage	beige floor tile
9-10B		Storage	green floor tile

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample analyzed between 1% and 5% asbestos, perform 400 Point Count, Ceiling tile samples may contain residual fireproofing.

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney	Date/Time: 7/24/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042218390
Customer ID: NORT69
Customer PO:
Project ID:

Attn: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709
Phone: (907) 452-5688
Fax: (907) 452-5694
Collected: 7/24/2022
Received: 7/28/2022
Analyzed: 8/04/2022
Proj: 22-2502

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 9-01B-Cove Base **Lab Sample ID:** 042218390-0001
Sample Description: DCCED Door near 981/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 9-01B-Mastic **Lab Sample ID:** 042218390-0001A
Sample Description: DCCED Door near 981/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 9-02B **Lab Sample ID:** 042218390-0002
Sample Description: DCCED Corner Office/Insulation

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	90.0%	10.0%	None Detected	

Client Sample ID: 9-03B **Lab Sample ID:** 042218390-0003
Sample Description: DCCED Corner Office Column/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/White	25.0%	75.0%	None Detected	

Client Sample ID: 9-04B **Lab Sample ID:** 042218390-0004
Sample Description: Admin Services/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	12.0%	88.0%	None Detected	

Client Sample ID: 9-05B **Lab Sample ID:** 042218390-0005
Sample Description: Admin Services/Ceiling Tile 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Gray	60.0%	40.0%	None Detected	

Client Sample ID: 9-06B **Lab Sample ID:** 042218390-0006
Sample Description: Admin Services/Ceiling Tile 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	68.0%	32.0%	None Detected	



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EMSL Order ID: 042218390
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 9-07B-Cove Base **Lab Sample ID:** 042218390-0007

Sample Description: Admin Services/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 9-07B-Mastic **Lab Sample ID:** 042218390-0007A

Sample Description: Admin Services/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 9-08B **Lab Sample ID:** 042218390-0008

Sample Description: Men's Restroom/Ceiling Tile 3

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	55.0%	45.0%	None Detected	

Client Sample ID: 9-09B **Lab Sample ID:** 042218390-0009

Sample Description: Storage/Beige Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	<1% Chrysotile	

Client Sample ID: 9-10B **Lab Sample ID:** 042218390-0010

Sample Description: Storage/Green Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Various	0.0%	100.0%	None Detected	

Client Sample ID: 9-11B-Cove Base **Lab Sample ID:** 042218390-0011

Sample Description: Storage/Brown Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 9-11B-Mastic **Lab Sample ID:** 042218390-0011A

Sample Description: Storage/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	Brown	0.0%	97.3%	2.75% Anthophyllite	Point Count performed on NOB material without gravimetric reduction at client request. Asbestos results may be under-reported.

Client Sample ID: 9-12B **Lab Sample ID:** 042218390-0012

Sample Description: Storage/Gray Wallboard

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Gray	20.0%	80.0%	None Detected	



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EMSL Order ID: 042218390
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 9-13B **Lab Sample ID:** 042218390-0013

Sample Description: Admin Services/Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	10.0%	90.0%	None Detected	

Client Sample ID: 9-14B **Lab Sample ID:** 042218390-0014

Sample Description: Insurance/Ceiling Tile 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	55.0%	45.0%	None Detected	

Client Sample ID: 9-15B **Lab Sample ID:** 042218390-0015

Sample Description: Insurance/Ceiling Tile 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Gray	63.0%	37.0%	None Detected	

Client Sample ID: 9-16B-Cove Base **Lab Sample ID:** 042218390-0016

Sample Description: Insurance Office/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 9-16B-Mastic **Lab Sample ID:** 042218390-0016A

Sample Description: Insurance Office/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	Brown	0.0%	97.8%	2.25% Anthophyllite	Point Count performed on NOB material without gravimetric reduction at client request. Asbestos results may be under-reported.

Client Sample ID: 9-17B-Joint Compound **Lab Sample ID:** 042218390-0017

Sample Description: Insurance Column/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	White	0.0%	90.0%	10% Chrysotile	

Client Sample ID: 9-17B-Mastic **Lab Sample ID:** 042218390-0017A

Sample Description: Insurance Column/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	Brown	0.0%	95.0%	5.00% Anthophyllite	Point Count performed on NOB material without gravimetric reduction at client request. Asbestos results may be under-reported.

Client Sample ID: 9-18B-Floor Tile **Lab Sample ID:** 042218390-0018

Sample Description: CBPL Break Room/Tan Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Tan/Green	35.0%	65.0%	None Detected	



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EMSL Order ID: 042218390
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 9-18B-Mastic **Lab Sample ID:** 042218390-0018A

Sample Description: CBPL Break Room/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray/Yellow	5.0%	95.0%	None Detected	

Client Sample ID: 9-19B-Floor Tile **Lab Sample ID:** 042218390-0019

Sample Description: CBPL Break Room/Red Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown	20.0%	80.0%	None Detected	

Client Sample ID: 9-19B-Mastic **Lab Sample ID:** 042218390-0019A

Sample Description: CBPL Break Room/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Gray	5.0%	95.0%	None Detected	

Client Sample ID: 9-20B-Floor Tile **Lab Sample ID:** 042218390-0020

Sample Description: CBPL Break Room/Gray Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 9-20B-Mastic **Lab Sample ID:** 042218390-0020A

Sample Description: CBPL Break Room/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 9-21B **Lab Sample ID:** 042218390-0021

Sample Description: Storage/Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Tan	0.0%	100.0%	None Detected	

Client Sample ID: 9-22B-Wallboard **Lab Sample ID:** 042218390-0022

Sample Description: Maintenance/Wallboard

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Brown/Gray	15.0%	85.0%	None Detected	

Client Sample ID: 9-22B-Joint Compound **Lab Sample ID:** 042218390-0022A

Sample Description: Maintenance/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	White	0.0%	96.5%	3.50% Chrysotile	



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EMSL Order ID: 042218390
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 9-23B **Lab Sample ID:** 042218390-0023

Sample Description: Maintenance/Fireproofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Green	25.0%	75.0%	None Detected	

Client Sample ID: 9-24B-Wallboard **Lab Sample ID:** 042218390-0024

Sample Description: DCCED Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/04/2022	Gray/Tan	8.0%	92.0%	None Detected	

Client Sample ID: 9-24B-Joint Compound **Lab Sample ID:** 042218390-0024A

Sample Description: DCCED Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/04/2022	Gray/Tan	0.0%	94.8%	5.25% Chrysotile	

Analyst(s):

Johannes Breckheimer	PLM (10) 400 PLM Pt Ct (2)
Kerrie Gibson	PLM (19) 400 PLM Pt Ct (3)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--IHLAP Accredited #102581, NVLAP Lab Code 101048-9, NJ NY022, CT PH-0170, MA AA000170

Initial report from: 08/04/2022 16:29:41



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

EMAIL: c@emsl.com

Customer Information	Customer ID:			Billing ID:		
	Company Name: Nortech Environmental & Engineer Cnslt.			Company Name: Nortech Environmental & Engineer Cnslt.		
	Contact Name: Sean Heaney			Billing Contact: Sean Heaney		
	Street Address: 2400 College Road			Street Address: 2400 College Road		
	City, State, Zip: Fairbanks AK 99709 Country: US			City, State, Zip: Fairbanks AK Country: US		
	Phone: 907-452-5688			Phone: 907-452-5688		
Email(s) for Report: sean.heaney@nortchengr.com			Email(s) for Invoice:			

Project Information			
Project Name/No: 22-2502		Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sean Heaney	Sampled By Signature:	Date Sampled: 7/23/22	No. of Samples in Shipment: 24

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection	
<p>PLM - Bulk (reporting limit)</p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)</p> <p><input type="checkbox"/> PLM EPA NOB (<1%)</p> <p><input checked="" type="checkbox"/> POINT COUNT</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p><input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC</p> <p style="margin-left: 20px;"><input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (<1%)</p> <p><input type="checkbox"/> NYS 198.1 (Friable - NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY)</p> <p><input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)</p>	<p>TEM - Bulk</p> <p><input type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)</p> <p style="text-align: center;">Other Tests (please specify)</p> <p><input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)</p>

Sample Number	HA Number	Sample Location	Material Description
10-01B		Department of Admin (DoA)	Ceiling tile #1
10-02B		DoA - storage	black cave, off-white master
10-03B		DoA - storage	yellow-green carpet master
10-04B		DoA - lobby	Ceiling tile #2
10-05B		DoA - office/storage	off-white cave base master
10-06B		DoA - storage	wall
10-07B		DoA - conference room	brown cave, beige master
10-08B		DoA - exterior wall	wall
10-09B		DoA - storage	gray cave, white master
10-10B		DoA - storage	green pebble floor sheet

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample is analyzed between 1% and 5% asbestos, perform 400 point count.
Ceiling tile samples may contain residual fireproofing.

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney	Date/Time: 7/24/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North

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Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
10-11B		DoA - maintenance	red + yellow caulking
10-12B		DoA - maintenance	joint compound
10-13B		DoA - mechanical chase	blue fireproofing
10-14B		DoA - women's bathroom	ceiling tile #3
10-15B		Finance - walkway	ceiling tile #4
10-16B		Finance - column	wall, multiple layers + patch
10-17B		Finance - exterior column	wall
10-18B		Personnel + Labor Relations (PLR)	brown cover + tan mastix
10-19B		PLR - office	carpet mastix
10-20B		Storage Room	beige floor tile
10-21B		Storage Room	green floor tile
10-22B		PLR - office	brown mastix + gray thin sheet
10-23B		PLR - behind door	black cover, hard board, clear mastix, joint compound
10-24B		PLR - behind door	wall

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <i>Sean Heaney</i>	Date/Time: <i>7/24/22</i>	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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EMSL Order ID: 042218401
Customer ID: NORT69
Customer PO:
Project ID:

Attn: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709
Phone: (907) 452-5688
Fax: (907) 452-5694
Collected: 7/23/2022
Received: 7/28/2022
Analyzed: 8/06/2022
Proj: 22-2502

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 10-01B **Lab Sample ID:** 042218401-0001
Sample Description: Department of Admin DOA/Ceiling Tile 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	50.0%	50.0%	None Detected	

Client Sample ID: 10-02B-Cove Base **Lab Sample ID:** 042218401-0002
Sample Description: DOA - Storage/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 10-02B-Mastic **Lab Sample ID:** 042218401-0002A
Sample Description: DOA - Storage/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 10-03B **Lab Sample ID:** 042218401-0003
Sample Description: DOA - Storage/Yellow Green Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 10-04B **Lab Sample ID:** 042218401-0004
Sample Description: DOA - Lobby/Ceiling Tile 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	45.0%	55.0%	None Detected	

Client Sample ID: 10-05B **Lab Sample ID:** 042218401-0005
Sample Description: DOA - Office and Storage/Off-White Cove Base Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 10-06B-Sheetrock **Lab Sample ID:** 042218401-0006
Sample Description: DOA - Storage/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	5.0%	95.0%	None Detected	



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EMSL Order ID: 042218401
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 10-06B-Joint Compound **Lab Sample ID:** 042218401-0006A

Sample Description: DOA - Storage/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/06/2022	White	0.0%	96.8%	3.25% Chrysotile	

Client Sample ID: 10-07B **Lab Sample ID:** 042218401-0007

Sample Description: DOA - Conference Room/Brown Cove Beige Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	White	2.0%	98.0%	None Detected	

Client Sample ID: 10-08B-Cove Base **Lab Sample ID:** 042218401-0008

Sample Description: DOA - Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 10-08B-Mastic **Lab Sample ID:** 042218401-0008A

Sample Description: DOA - Exterior Wall/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 10-09B-Cove Base **Lab Sample ID:** 042218401-0009

Sample Description: DOA - Storage/Gray Cove White Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 10-09B-Mastic **Lab Sample ID:** 042218401-0009A

Sample Description: DOA - Storage/Gray Cove White Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 10-10B **Lab Sample ID:** 042218401-0010

Sample Description: DOA - Storage/Green Pebble Floor Sheet

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 10-11B-Red Caulk **Lab Sample ID:** 042218401-0011

Sample Description: DOA - Maintenance/Red and Yellow Caulkings

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Red	5.0%	95.0%	None Detected	



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EMSL Order ID: 042218401
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 10-11B-Yellow Caulk **Lab Sample ID:** 042218401-0011A

Sample Description: DOA - Maintenance/Red and Yellow Caulkings

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	4.0%	96.0%	None Detected	

Client Sample ID: 10-12B-Sheetrock **Lab Sample ID:** 042218401-0012

Sample Description: DOA - Maintenance/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	2.0%	98.0%	None Detected	

Client Sample ID: 10-12B-Joint Compound **Lab Sample ID:** 042218401-0012A

Sample Description: DOA - Maintenance/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	White	4.0%	96.0%	None Detected	

Client Sample ID: 10-13B **Lab Sample ID:** 042218401-0013

Sample Description: DOA - Mechanical Chase/Blue Fireproofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Blue	15.0%	85.0%	None Detected	

Client Sample ID: 10-14B **Lab Sample ID:** 042218401-0014

Sample Description: DOA - Womens Bathroom/Ceiling 3

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	45.0%	55.0%	None Detected	

Client Sample ID: 10-15B **Lab Sample ID:** 042218401-0015

Sample Description: Finance - Walkway/Ceiling Tile 4

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan/White	60.0%	40.0%	None Detected	

Client Sample ID: 10-16B-Sheetrock **Lab Sample ID:** 042218401-0016

Sample Description: Finance - Column/Wall Multiple Layers Patch

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	4.0%	96.0%	None Detected	

Client Sample ID: 10-16B-Patch Foam **Lab Sample ID:** 042218401-0016A

Sample Description: Finance - Column/Wall Multiple Layers Patch

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	White	60.0%	40.0%	None Detected	



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EMSL Order ID: 042218401
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 10-17B-Sheetrock **Lab Sample ID:** 042218401-0017

Sample Description: Finance - Exterior Column/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	5.0%	95.0%	None Detected	

Client Sample ID: 10-17B-Joint Compound **Lab Sample ID:** 042218401-0017A

Sample Description: Finance - Exterior Column/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
400 PLM Pt Ct	8/06/2022	White	0.0%	96.3%	3.75% Chrysotile	

Client Sample ID: 10-18B-Cove Base **Lab Sample ID:** 042218401-0018

Sample Description: Personnel and Labor Relations PLR/Brown Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 10-18B-Mastic **Lab Sample ID:** 042218401-0018A

Sample Description: Personnel and Labor Relations PLR/Tan Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Yellow	10.0%	90.0%	None Detected	

Client Sample ID: 10-19B **Lab Sample ID:** 042218401-0019

Sample Description: PLR - Office/Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 10-20B **Lab Sample ID:** 042218401-0020

Sample Description: Storage Room/Beige Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 10-21B **Lab Sample ID:** 042218401-0021

Sample Description: Storage Room/Green Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Various	0.0%	100.0%	None Detected	

Client Sample ID: 10-22B-Thinset **Lab Sample ID:** 042218401-0022

Sample Description: PLR - Office/Thinset

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Gray	0.0%	100.0%	None Detected	



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EMSL Order ID: 042218401
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 10-22B-Mastic **Lab Sample ID:** 042218401-0022A

Sample Description: PLR - Office/Brown Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/05/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 10-23B-Cove Base **Lab Sample ID:** 042218401-0023

Sample Description: PLR - Behind Door/Black Cove Base Hardboard

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 10-23B-Mastic **Lab Sample ID:** 042218401-0023A

Sample Description: PLR - Behind Door/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Various	10.0%	90.0%	None Detected	

Client Sample ID: 10-23B-Joint Compound **Lab Sample ID:** 042218401-0023B

Sample Description: PLR - Behind Door/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 10-24B **Lab Sample ID:** 042218401-0024

Sample Description: PLR - Behind Door/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	4.0%	96.0%	None Detected	

Analyst(s):

Ghaly Hemaya PLM (12)
400 PLM Pt Ct (1)
Laura Harris PLM (22)
400 PLM Pt Ct (1)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. EMSL bears no responsibility for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples. PLM alone is not consistently reliable in detecting asbestos in floor coverings and similar NOBs

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--IHLAP Accredited #102581, NVLAP Lab Code 101048-9, NJ NY022, CT PH-0170, MA AA000170

Initial report from: 08/08/2022 11:52:13



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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

EMAIL: c@emsl.com

[Empty box for EMSL Order Number / Lab Use Only]

Customer Information	Customer ID:	Billing ID:
	Company Name: Nortech Environmental & Engineer Cnslt.	Company Name: Nortech Environmental & Engineer Cnslt.
	Contact Name: Sean Heaney	Billing Contact: Sean Heaney
	Street Address: 2400 College Road	Street Address: 2400 College Road
	City, State, Zip: Fairbanks AK 99709 Country: US	City, State, Zip: Fairbanks AK Country: US
	Phone: 907-452-5688	Phone: 907-452-5688
Email(s) for Report: sean.heaney@nortchengr.com	Email(s) for Invoice:	

Project Information			
Project Name/No: 22-2502	Purchase Order:		
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: AK	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)	
Sampled By Name: Sean Heaney	Sampled By Signature: <i>[Signature]</i>	Date Sampled: 7/23/22	No. of Samples in Shipment: 24

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input checked="" type="checkbox"/> POINT COUNT <input checked="" type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)
<u>Other Tests (please specify)</u> <input type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)	

Sample Number	HA Number	Sample Location	Material Description
11-01B		Tax Division	pink wall board
11-02B		Tax Division	black + brown cov, mastoz
11-03B		Tax Division	orange carpet mastoz
11-04B		Tax Division	white joint compound, brown mastoz
11-05B		PFD Division	black sealant
11-06B		PFD Division	ceiling tile #1
11-07B		PFD Division	wall
11-08B		PFD Division	joint compound
11-09B		PFD Division	beige mastoz
11-10B		PFD Division	ceiling tile #2

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

If sample 3 analyzed between 1% and 5% asbestos, perform 400 Point Count. Ceiling tile samples may contain residual fireproofing.

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: <i>Sean Heaney</i> <i>[Signature]</i> Date/Time: 7/24/22	Received by: _____ Date/Time: _____
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



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Asbestos Bulk Building Materials - Chain of Custody

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PHONE: 1-800-220-3675
EMAIL: c@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
11-11B		PFD Division	Joint Compound
11-12B		Storage	black cov, white mastic
11-13B		storage	cream floor tile
11-14B		Mechanical / Maintenance	joint compound, wall board
11-15B		Mechanical / Maintenance	brown cov + mastic
11-16B		Treasury	Ceiling tile #1
11-17B		Treasury	ceiling tile #2
11-18B		Treasury	black cov + mastic
11-19B		Treasury	carpet mastic
11-20B		Treasury	wall
11-21B		Treasury	exterior wall
11-22B		Restroom - men's	ceiling tile #3
11-23B		Treasury	stone patter floor sheet + mastic
11-24B		Tax Division	exterior wall
11-25B			

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: Sean Heaney <i>[Signature]</i>	Date/Time: 7/24/22	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

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EMSL Order ID: 042218396
Customer ID: NORT69
Customer PO:
Project ID:

Attn: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709
Phone: (907) 452-5688
Fax: (907) 452-5694
Collected: 7/23/2022
Received: 7/28/2022
Analyzed: 8/08/2022
Proj: 22-502

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 11-01B-Sheetrock **Lab Sample ID:** 042218396-0001
Sample Description: Tax Division/Pink Wallboard

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	4.0%	96.0%	None Detected	

Client Sample ID: 11-01B-Joint Compound **Lab Sample ID:** 042218396-0001A
Sample Description: Tax Division/Joint Compound

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	94.0%	6% Chrysotile	

Client Sample ID: 11-02B-Cove Base **Lab Sample ID:** 042218396-0002
Sample Description: Tax Division/Black and Brown Cove Base

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 11-02B-Mastic **Lab Sample ID:** 042218396-0002A
Sample Description: Tax Division/Mastic

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Yellow	5.0%	93.0%	2% Anthophyllite	
400 PLM Pt Ct	8/06/2022	Brown/Yellow	0.0%	98.8%	1.25% Anthophyllite	

Client Sample ID: 11-02B-Cove Base 2 **Lab Sample ID:** 042218396-0002B
Sample Description: Tax Division/Black and Brown Cove Base

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 11-03B **Lab Sample ID:** 042218396-0003
Sample Description: Tax Division/Orange Carpet Mastic

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 11-04B-Joint Compound **Lab Sample ID:** 042218396-0004
Sample Description: Tax Division/White Joint Compound

TEST	Analyzed		Non-Asbestos		Asbestos	Comment
	Date	Color	Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	94.0%	6% Chrysotile	



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EMSL Order ID: 042218396
Customer ID: NORT69
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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 11-04B-Mastic **Lab Sample ID:** 042218396-0004A

Sample Description: Tax Division/Brown Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Yellow	0.0%	100.0%	<1% Anthophyllite	

Client Sample ID: 11-05B **Lab Sample ID:** 042218396-0005

Sample Description: PFD Division/Black Sealant

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Black	0.0%	95.0%	5% Chrysotile	
400 PLM Pt Ct	8/06/2022	Black	0.0%	94.5%	5.50% Chrysotile	

Client Sample ID: 11-06B **Lab Sample ID:** 042218396-0006

Sample Description: PFD Division/Ceiling Tile 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan	55.0%	45.0%	None Detected	

Client Sample ID: 11-07B **Lab Sample ID:** 042218396-0007

Sample Description: PFD Division/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Brown/White	6.0%	94.0%	None Detected	

Client Sample ID: 11-08B **Lab Sample ID:** 042218396-0008

Sample Description: PFD Division/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan/White	0.0%	98.0%	2% Chrysotile	
400 PLM Pt Ct	8/06/2022	Tan/White	0.0%	98.5%	1.50% Chrysotile	

Client Sample ID: 11-09B **Lab Sample ID:** 042218396-0009

Sample Description: PFD Division/Beige Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 11-10B **Lab Sample ID:** 042218396-0010

Sample Description: PFD Division/Ceiling Tile 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan	60.0%	40.0%	None Detected	

Client Sample ID: 11-11B **Lab Sample ID:** 042218396-0011

Sample Description: PFD Division/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray/White	3.0%	97.0%	<1% Chrysotile	Inseparable paint / coating layer included in analysis



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EMSL Order ID: 042218396
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 11-12B-Cove Base **Lab Sample ID:** 042218396-0012

Sample Description: Storage/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022					Layer Not Present

Client Sample ID: 11-12B-Mastic **Lab Sample ID:** 042218396-0012A

Sample Description: Storage/White Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Brown/Yellow	3.0%	95.0%	2% Anthophyllite	
400 PLM Pt Ct	8/08/2022	Brown/Yellow	0.0%	98.8%	1.25% Anthophyllite	

Client Sample ID: 11-13B **Lab Sample ID:** 042218396-0013

Sample Description: Storage/Cream Floor Tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan	25.0%	75.0%	None Detected	

Client Sample ID: 11-14B-Joint Compound **Lab Sample ID:** 042218396-0014

Sample Description: Mechanical Maintenance/Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	94.0%	6% Chrysotile	

Client Sample ID: 11-14B-Wallboard **Lab Sample ID:** 042218396-0014A

Sample Description: Mechanical Maintenance/Wallboard

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	3.0%	97.0%	None Detected	

Client Sample ID: 11-15B-Cove Base **Lab Sample ID:** 042218396-0015

Sample Description: Mechanical Maintenance/Brown Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 11-15B-Mastic **Lab Sample ID:** 042218396-0015A

Sample Description: Mechanical Maintenance/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Yellow	0.0%	98.0%	2% Anthophyllite	
400 PLM Pt Ct	8/06/2022	Brown/Yellow	0.0%	98.0%	2.00% Anthophyllite	

Client Sample ID: 11-16B **Lab Sample ID:** 042218396-0016

Sample Description: Treasury/Ceiling Tile 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan	55.0%	45.0%	None Detected	



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EMSL Order ID: 042218396
Customer ID: NORT69
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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 11-17B **Lab Sample ID:** 042218396-0017

Sample Description: Treasury/Ceiling Tile 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Gray/White	60.0%	40.0%	None Detected	

Client Sample ID: 11-18B-Cove Base **Lab Sample ID:** 042218396-0018

Sample Description: Treasury/Black Cove Base

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022				Layer Not Present	

Client Sample ID: 11-18B-Mastic **Lab Sample ID:** 042218396-0018A

Sample Description: Treasury/Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Yellow	0.0%	98.0%	2% Anthophyllite	
400 PLM Pt Ct	8/06/2022	Brown/Yellow	0.0%	98.8%	1.25% Anthophyllite	

Client Sample ID: 11-19B **Lab Sample ID:** 042218396-0019

Sample Description: Treasury/Carpet Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Tan	3.0%	97.0%	None Detected	

Client Sample ID: 11-20B **Lab Sample ID:** 042218396-0020

Sample Description: Treasury/Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	7.0%	93.0%	None Detected	

Client Sample ID: 11-21B-Sheetrock **Lab Sample ID:** 042218396-0021

Sample Description: Treasury/Exterior Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	3.0%	97.0%	None Detected	

Client Sample ID: 11-21B-Joint Compound **Lab Sample ID:** 042218396-0021A

Sample Description: Treasury/Exterior Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	97.0%	3% Chrysotile	

Client Sample ID: 11-22B **Lab Sample ID:** 042218396-0022

Sample Description: Restroom Men's/Ceiling Tile 3

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Tan	65.0%	35.0%	None Detected	



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042218396
Customer ID: NORT69
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116

Client Sample ID: 11-23B-Floor Tile **Lab Sample ID:** 042218396-0023

Sample Description: Treasury/Stone Pattern Floor

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Gray	10.0%	90.0%	None Detected	

Client Sample ID: 11-23B-Mastic **Lab Sample ID:** 042218396-0023A

Sample Description: Treasury/Stone Pattern Floor

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/08/2022	Black/Yellow	4.0%	96.0%	None Detected	

Client Sample ID: 11-24B-Sheetrock **Lab Sample ID:** 042218396-0024

Sample Description: Tax Division/Exterior Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	Brown/Gray	5.0%	95.0%	None Detected	

Client Sample ID: 11-24B-Joint Compound **Lab Sample ID:** 042218396-0024A

Sample Description: Tax Division/Exterior Wall

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	8/06/2022	White	0.0%	94.0%	6% Chrysotile	

Analyst(s):

Ghaly Hemaya	PLM (26) 400 PLM Pt Ct (5)
Tiquasha Thompson	PLM (7) 400 PLM Pt Ct (1)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--IHLAP Accredited #102581, NVLAP Lab Code 101048-9, NJ NY022, CT PH-0170, MA AA000170

Initial report from: 08/09/2022 12:08:45



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS + TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

5 1 2 2 0 3 1 1 6

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: NORTECH		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 2400 College Rd		<i>Third Party Billing requires written authorization from third party</i>	
City: Juneau	State/Province: AK	Zip/Postal Code: 99709	Country: USA
Report To (Name): Jen Stoutamore		Telephone #: 907 586 6813	
Email Address: jennifer.stoutamore@nortechengr.com		Purchase Order: 22-2502	
Project Name/Number: 22-2502		Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> Email	
U.S. State Samples Taken: Alaska		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <i>OK</i>	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	Other
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: **11/29/22**

Samplers Name: **Jennifer Stoutamore** Samplers Signature: *Jennifer Stoutamore*

Sample #	HA #	Sample Location	Material Description
E6@5		elevator shaft 6, floor 5	light grey fireproofing
E3-6		elevator shaft 3, floor 6	light blue fireproofing

Client Sample #(s): E6@5 - E3-6	Total # of Samples: 2
Relinquished (Client): <i>Jennifer Stoutamore</i> 11/29/22	Time: 1800
Received (Lab): <i>AS</i> 12/2/22	Time: 10:00 AM
Comments/Special Instructions: please send invoice to ap@nortechengr.com	FedEX 3914 2986 6888



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512203116
Customer ID: NORT69
Customer PO: 22-2502
Project ID:

Attention: Jennifer Stoutamore Nortech Environmental & Engineer Cnslt. 5438 Shaune Drive Suite B Juneau, AK 99801	Phone: (907) 586-6813 Fax: (907) 452-5694 Received Date: 12/02/2022 10:00 AM Analysis Date: 12/05/2022 Collected Date: 11/29/2022
Project: 22-2502	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
E6@5 <small>512203116-0001</small>	Light gray fireproofing - elevator shaft 6, floor 5	Gray Fibrous Homogeneous		25% Micaceous Flakes 68% Non-fibrous (Other)	7% Chrysotile
E3-6 <small>512203116-0002</small>	Light blue fireproofing - elevator shaft 3, floor 6	Blue Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Analyst(s)
Claudiu Nistor (2)

Ehrin Stephens, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA NVLAP Lab Code 200613, CA 2733, WA C1025

Initial report from: 12/07/2022 11:26:22



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

5 1 2 2 0 2 3 0 1

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: NORTECH		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 5438 Shaune Dr Ste B		<i>Third Party Billing requires written authorization from third party</i>	
City: Juneau	State/Province: AK	Zip/Postal Code: 99801	Country: USA
Report To (Name): Jen Stoutamore		Telephone #: 907 586 6813	
Email Address: jennifer.stoutamore@nortechengr.com		Fax #:	Purchase Order: 22-2502
Project Name/Number: 22-2502		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: Alaska		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <i>w</i>	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	<u>Other</u>
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled:

Samplers Name: **Jennifer Stoutamore** Samplers Signature: *Jennifer Stoutamore*

Sample #	HA #	Sample Location	Material Description
PR-1B		Roof pump room	Cement ^{iron} metal plenum cover
PR-2B		Roof pump room	ripping elbow
7-40B		7th Floor Distribution rm ceiling	Spray on fireproofing-grey
7-41B		7th Floor Boiler Room pipe	hard wrapped pipe elbow
5lv-1B		Lower level elevator room	hard wrapped pipe elbow

Client Sample # (s):	Total # of Samples: 5
Relinquished (Client): <i>Jennifer Stoutamore</i> Date: 8/24/22	Time: 1400
Received (Lab): <i>Claudia N...</i> Date: 8/26/22	Time: 10:20 AM
Comments/Special Instructions: please send invoice to: ap@nortechengr.com	7964 6317 0147 order



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202301

Customer ID: NORT69

Customer PO: 22-2502

Project ID:

Attention: Jen Stoutamore
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688

Fax: (907) 452-5694

Received Date: 08/26/2022 10:20 AM

Analysis Date: 08/30/2022

Collected Date:

Project: 22-2502

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
PR-1B <i>512202301-0001</i>	Cement on Metal Plenum Cover, Roof Pump Room	Gray Non-Fibrous Homogeneous	3% Cellulose	20% Quartz 77% Non-fibrous (Other)	None Detected
PR-2B-Wrap <i>512202301-0002</i>	Piping Elbow, Roof Pump Room	White/Silver Fibrous Homogeneous	55% Cellulose 5% Glass	40% Non-fibrous (Other)	None Detected
PR-2B-Insulation <i>512202301-0002A</i>	Piping Elbow, Roof Pump Room	Yellow Fibrous Homogeneous	85% Glass	15% Non-fibrous (Other)	None Detected
7-40B <i>512202301-0003</i>	Spray On Fireproofing Gray, 7th Floor Distribution Room Ceiling	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
7-41B-Wrap <i>512202301-0004</i> <i>Inseparable paint / coating layer included in analysis</i>	Hard Wrapped Pipe Elbow, 7th Floor Boiler Room Pipe	Tan Fibrous Homogeneous	85% Synthetic	15% Non-fibrous (Other)	None Detected
7-41B-Insulation <i>512202301-0004A</i>	Hard Wrapped Pipe Elbow, 7th Floor Boiler Room Pipe	Gray Fibrous Homogeneous	3% Cellulose 30% Min. Wool	67% Non-fibrous (Other)	None Detected
Elv-1B-Wrap <i>512202301-0005</i>	Hard Wrapped Pipe Elbow, Lower Level Elevator Room	White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
Elv-1B-Insulation <i>512202301-0005A</i>	Hard Wrapped Pipe Elbow, Lower Level Elevator Room	Gray Fibrous Homogeneous	5% Cellulose 20% Glass	75% Non-fibrous (Other)	None Detected

Analyst(s)

Claudia Nistor (2)

Carolyn Yeo (6)

Ehrin Stephens, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA NVLAP Lab Code 200613, CA 2733, WA C1025

Initial report from: 08/30/2022 15:58:18



383 Industrial Way, Suite 300
 Anchorage, AK 99501 (907) 258-8661
 anchorage@oneatlas.com



Lab Code 200124-0

PLM BULK SAMPLE ANALYSIS FOR ASBESTOS

Lab Login #:	0230140	Report #:	0230140
Atlas Job #:	NA	Report By:	A. Lang
Client Project #:	22-2502	Report Date:	01/16/2023
Client:	Nortech Engineering 2400 College Road Fairbanks AK 99709	Collected By:	Client
		Collection Date:	01/12/2023
		Analyzed By:	A. Lang
		Date Analyzed:	01/16/2023
TAT:	24 Hour	Received By:	A. Lang
Sample Count:	3	Received Date:	01/13/2023
Layer Count:	3		
Project Name/ Location:	State Office Building ACM		

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Non-Asbestos Components	(%)	Asbestos Type	(%)
0230140-001	Sixth Floor Mechanical Piping Room - Fluffy Tan/Gray Spray-On Fireproofing	LAYER 1				
6-50B	Fireproofing, Gray, Homogeneous, Fibrous	100%	Mineral Wool	90%	None Detected	0%
				Total % Non-Asbestos:	100.0%	Total % Asbestos: No Asbestos Detected
0230140-002	Fifth Floor Pandecking - Gray Spray-On Fireproofing	LAYER 1				
5-50B	Fireproofing, White, Homogeneous, Fibrous	100%	Cellulose Fiber	5%	Chrysotile	6%
				Total % Non-Asbestos:	94.0%	Total % Asbestos: 6.0%
0230140-003	Seventh Floor Pandecking - Gray Spray-On Fireproofing	LAYER 1				
7-50B	Fireproofing, White, Homogeneous, Fibrous	100%	Cellulose Fiber	5%	Chrysotile	6%
				Total % Non-Asbestos:	94.0%	Total % Asbestos: 6.0%

Analyzed by:  01/16/2023
 Amanda Lang Date

Approved Signatory:  01/16/2023
 John Harness, Branch Manager Date

Asbestos Containing Material (ACM) Definition: >1% asbestos by weight is considered an ACM.
 TRACE = Less than 1% Asbestos by weight.
 The Atlas Anchorage Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP Lab Code: 200124-0) and in accordance with the recognized International Standard ISO/IEC 10725:2017. Analysis performed by: EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples or EPA Method 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials at the discretion of the client or Atlas.
 Unless a point-counting method is requested and noted for the sample, all quantities reported are based on calibrated visual estimation by Polarized Light Microscopy (PLM). Non-homogenous samples will be layered for testing unless stop-positive is requested by the client or otherwise stated in the chain of custody (COC). Asbestos results are reliable within 2 significant figures.
 Analysis Report generated by Atlas relates only to items tested and submitted on the COC and must not be used by clients to claim product endorsement by the National Voluntary Laboratory Accreditation Program (NVLAP) or any agency of the U.S Government. This report shall not be reproduced, except in full, without written approval of the laboratory. Conditions of samples upon receipt were acceptable unless otherwise stated.
 Liability Notice: Atlas and its personnel shall not be liable for any misinformation provided to us by the client regarding these samples.
 Confidentiality Notice: The document(s) contained herein are confidential and privileged information, intended for the exclusive use of the individual or entity named above.

Laboratory Hours
 Monday - Friday, 8:00 AM - 5:00 PM
 Same Day TAT Cut-Off Time: 1:30 PM
 After Hours Lab Opening Fee: \$200.00
 Lab Emergency Contact: 907-258-8649



0230140

Atlas Anchorage Laboratory

ASBESTOS CHAIN OF CUSTODY

383 Industrial Way Suite 300 Anchorage, AK 99501 Phone: (907)258-8661 Email: anchorage@oneatlas.com

<p style="text-align: center;"><u>Project Information</u></p> <p>Project Name <u>State Office Building ACM</u></p> <hr/> <p>Project No. <u>22-2502</u> No. of Samples <u>3</u></p> <p>Inspector/Cert No. <u>TBI4-1222-17378</u></p> <p>Collected By <u>Jennifer Stoutamore</u> Date <u>1/12/2023</u></p>	<p style="text-align: center;"><u>TAT - Turnaround Time</u> (Business Days)</p> <p>Walk-In Client <input type="checkbox"/> SAME DAY <input type="checkbox"/> NEXT DAY <input type="checkbox"/> 5 DAY <small>(For Customers who do not have an account with Atlas)</small></p> <p>Customer Account <input type="checkbox"/> SAME DAY <input checked="" type="checkbox"/> NEXT DAY <input type="checkbox"/> 5 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 3 DAY</p> <p style="text-align: center;"><u>Method of Payment</u></p> <p><input checked="" type="checkbox"/> INVOICE ACCOUNT <input type="checkbox"/> CREDIT CARD <input type="checkbox"/> CHECK</p>
<p style="text-align: center;"><u>Client Information</u></p> <p>Atlas Client <u>NORTECH</u></p> <p>Phone <u>907 586 6813</u></p> <p>Address <u>2400 College Rd</u></p> <p>City <u>Fairbanks</u> State <u>AK</u> Zip <u>99709</u></p>	<p style="text-align: center;"><u>Report</u></p> <p>Contact Name <u>Jennifer Stoutamore</u></p> <p>Phone Number <u>907 586 6813</u></p> <p>Email <u>jennifer.stoutamore@nortechengr.com</u></p> <p>*Verbal for RUSH TAT: Yes / No</p> <p>*Please Check for Stop Positive <input type="checkbox"/></p>

MATRIX: PLM Asbestos Bulk (EPA 600/R-93/116) PCM AIR (NIOSH 7400) TEM AIR Other: _____

HA	SAMPLE # (ID)	SAMPLE LOCATION/DESCRIPTION	VOLUME(L)	COLLECTION DATE
HA1	001	EXAMPLE (Office Wall, Northwest Corner)	N/A	MM/DD/YYYY
	6-50B	Sixth Floor Mechanical Piping Room fluffly tan/gray spray on fireproofing	N/A	1/12/2023
	5-50B	Fifth Floor Pandecking, Gray spray on fireproofing	N/A	1/12/2023
	7-50B	Seventh Floor Pandecking, Gray spray on fireproofing	N/A	1/11/2023

Comments:
 If results are between 1% and 5%, please point count

Samples Relinquished By (Please Sign): Jennifer Stoutamore Date: 1/12/23 Time: 1700 AM/PM

Lab Use Only
 Samples Received By: (Please Sign) af Date: 1/13/23 Time: 11:00 AM/PM

Lab Opening Fee \$200 Shipping Fee \$75 Courier Fee \$75 Other _____

*Atlas May Reject Samples For One or More of the Following Reasons: Insufficient Material/Over-Large Sample Size, Unsafe Packaging, Missing Sample IDs and/or Volumes, Incomplete COC and Any Other Required Information.
 *Turnaround Times Are Not Always Guaranteed and Depend on Sample Volume and Lab Capacity.

Appendix 7

SURVEY AND MANAGEMENT PLAN FOR ASBESTOS CONTAINING MATERIAL

ALASKA STATE MUSEUM
&
JUNEAU STATE OFFICE BUILDING

for

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SOUTHEAST REGION

MAINTENANCE AND OPERATIONS

Agreement No.: 93-045-71

Project No.: M3-540

OCTOBER, 1989

Prepared by:



TABLE OF CONTENTS

- I. EXECUTIVE SUMMARY
- II. HISTORY AND PURPOSE OF THE SURVEY AND MANAGEMENT PLAN
- III. INTRODUCTION
- IV. SURVEY METHODOLOGY
- V. ASSESSMENTS
- VI. SURVEY FINDINGS AND TECHNICAL ASPECTS
- VII. RESPONSE ACTIONS
- VIII. PLAN MANAGEMENT AND ADMINISTRATION
- IX. PROGRAMMING COST ESTIMATES
- X. APPENDICES
 - A. APPENDIX A: COMPARISON OF ABATEMENT METHODS
 - B. APPENDIX B: MUSEUM SURVEY
 - B-1 SUMMARY AND BACKGROUND
 - B-2 MATERIALS SAMPLED
 - B-3 SUMMARY OF FIELD DATA & NOTES
 - B-4 DRAWINGS
 - B-5 SELECT PHOTOGRAPHS & PHOTO LOG
 - C. APPENDIX C: STATE OFFICE BUILDING SURVEY
 - C-1 COVER SHEET INFORMATION
 - C-2 MATERIALS SAMPLED
 - C-3 SUMMARY OF FIELD DATA & NOTES
 - C-4 DRAWINGS
 - C-5 SELECT PHOTOGRAPHS & PHOTO LOG
 - D. APPENDIX D: SUMMARY OF BULK SAMPLES PREVIOUSLY TAKEN
 - E. APPENDIX E: LABORATORY REPORTS & CHAIN OF CUSTODY FORMS
 - F. APPENDIX F: TRAINED PERSONNEL & EQUIPMENT AVAILABLE
 - G. APPENDIX G: THE ASBESTOS PERMIT SYSTEM
 - H. APPENDIX H: NOTIFICATION FOR VENDORS
 - I. APPENDIX I: INFORMATION SHEET

TABLE OF CONTENTS (CONTINUED)

- J. APPENDIX J: OUTLINE OF ASCG AND NIBS INDEXES OF "GENERIC" ASBESTOS ABATEMENT SPECIFICATIONS

- K. APPENDIX K: INFORMATION & TRAINING RECORDS
 - K-1: OCCUPANT INFORMATION LETTERS
 - K-2: WORKER TRAINING RECORD
 - K-3: ASBESTOS AWARENESS TRAINING OUTLINE

- L. APPENDIX L: MEDICAL FORMS
 - L-1: SAMPLE MEDICAL LETTER
 - L-2: INITIAL EXAMINATION
 - L-3: PERIODIC EXAMINATION

- M. APPENDIX M: PERIODIC SURVEILLANCE & REINSPECTION FORMATS
 - M-1: PERIODIC SURVEILLANCE FORMAT AND CHECKLIST
 - M-2: REINSPECTION FORMAT

- N. APPENDIX N: ESTIMATES
 - N-1: MUSEUM PROGRAMMING COST ESTIMATES
 - N-2: JSOB PROGRAMMING COST ESTIMATES

I. EXECUTIVE SUMMARY

This is the management plan for asbestos-containing material (ACM) in the Juneau State Office Building (JSOB) and the Alaska State Museum (Museum). The Plan is based upon an asbestos survey by ASCG in March, 1989 which used, in part, information from earlier asbestos surveys and other information supplied by the State.

SURVEY FINDINGS

In both the JSOB and the Museum, the spray-on fireproofing above the drop ceiling is damaged, friable ACM. Debris from this fireproofing has contaminated the tops of the ceiling tiles, mechanical and electrical systems, and the stud wall cavities. The air space between the top of the ceiling and the soffit of the floor above is a return air plenum in the JSOB. In the museum it is not a return air plenum. There is also some damaged pipe fitting insulation which is friable in its damaged condition. These damaged friable ACM systems are likely to release asbestos fibers if disturbed. Other ACM systems that are not likely to release fibers include undamaged hard insulation and vinyl asbestos tile.

RECOMMENDATIONS

The Asbestos Hazard Emergency Response Act (AHERA) dictates for schools that damaged friable surfacing material be abated. Abatement alternatives include repair, encapsulation, enclosure and removal. For the JSOB, removal of the ACM fireproofing is the solution recommended by ASCG. This will require demolition of most of the interior walls in the building. Recognizing that this will be a very large project and that funding and construction will take years, ASCG has recommended an O&M plan and certain limited removals to decrease the chance of ACM debris releasing fibers. The recommendations for the fireproofing in the Museum are the same as those for the JSOB. Removal, budget and time constraints are similar. Unlike the JSOB, however, there is some benefit to enclosing the material above the drop ceiling, since it is a dead air space. Since this will not be an airtight enclosure, it can not be a permanent solution, but will reduce the chances of fiber release while awaiting funding for the complete removal. Some other limited removals are also recommended for the Museum.

OPERATIONS AND MAINTENANCE

Because of the friable ACM above the ceilings in both buildings, only workers certified as asbestos workers by the State of Alaska should be permitted above the ceilings. All other work that disturbs friable asbestos should also be done by certified asbestos workers. All the other maintenance and custodial workers,

who may contact friable ACM or potentially friable ACM in the course of their work, need to have a two hour asbestos awareness training. Supervisors, agency safety officers and others could also benefit by this training, but it is not required by this Plan.

SAFETY OF BUILDING OCCUPANTS

Both buildings have friable ACM, and the damaged condition of the ACM indicates that it is capable of releasing fibers into the air. The air monitoring tests done by earlier consultants and ASCG's judgement, based on similar buildings would indicate that the occupants of the building do not have a high exposure to asbestos fibers. Consequently, both buildings are characterized as "low risk" and ASCG does not see any reason to change general building operations in either building based on the ACM in the buildings. Special situations do warrant special concern. Workers in the above-ceiling spaces will be exposed to higher fiber levels and the O&M plans must protect these workers and assure that fibers disturbed by their activities do not migrate into the general building spaces. Also, an event such as an earthquake or plumbing break may damage parts of the ceiling and cause a spill of ACM. Evacuation and clean-up procedures are therefore a part of the O&M section of the plan.

II. HISTORY AND PURPOSE OF SURVEY AND MANAGEMENT PLAN

A. GENERAL HISTORY AND ASPECTS OF ASBESTOS: Asbestos is a term used for a variety of naturally occurring mineral silicates. The six common asbestos minerals can be divided into two families. Mineral asbestos can be separated into constituent fibers which are microscopic in size and capable of remaining airborne for a long time. Chrysotile and amosite are the two most common types of asbestos mineral found in building construction products. Asbestos was used quite extensively in commercial and industrial applications because it is fire resistant, is an excellent thermal and electrical insulator, and is resistant to abrasion. By itself, asbestos has a relatively high tensile strength and is resistant to chemical action. In building products it is usually mixed with other materials and then molded into a variety of convenient shapes or applied as a surfacing material. Asbestos is found in many building construction materials: roofing, siding, flooring, piping material, spayed on fireproofing, and many insulation applications.

Asbestos containing material (ACM), is said to be "friable" when the material can be "crumbled" or crushed by hand pressure. Non-friable forms of ACM can become friable if handled improperly or maintained without proper precautions, i.e., exposed to moisture, sanded, ground, or drilled. Improperly handled friable and non-friable materials are capable of releasing asbestos fibers into the atmosphere.

By 1971, an appreciable amount of data had been accumulated about exposure to airborne asbestos fibers. The data showed that exposure to airborne asbestos fibers led to an increased incidence of lung disorders including cancer of the lungs and pleural cavity. Because of the adverse health effects, the general use of asbestos has been reduced. Use of any form of friable asbestos and incorporation of asbestos in building materials has now been banned by Federal, State, Local Governments, and Building Authorities for nearly all applications in the building construction industry. Additionally, most building authorities and governmental agencies are strongly advocating an inventory of amounts and condition of all asbestos-containing material now incorporated in buildings constructed before the asbestos ban.

Effective in 1987, the Occupational Safety and Health Administration (OSHA), U. S. Department of Labor, narrowed the work place and construction standards for occupants and workers based on tests of the fibrous materials in the air. The State of Alaska has adopted the OSHA Federal Standards; the Federal Standards for workers require in part:

1. The maximum exposure a person can legally receive is 0.2 fibers per cubic centimeter (f/cc) over an eight hour time weighted average (TWA).
2. If a fiber count of 0.1 f/cc is present, precautionary measures must be taken.

The 0.2 f/cc established by OSHA is the Permissible Exposure Limit (PEL), and the 0.1 f/cc limit is the "Action Level." When the concentration of airborne asbestos fibers reaches the action level, control procedures and worker protection provisions must be implemented. Both of the above limits are standards to protect workers who work directly with asbestos, but they are also applicable to all employees. The above levels of fiber counts would not normally be found in buildings, even buildings with significant amounts of asbestos. A conservative safe limit for schools and institutions, as suggested by the Center for Disease Control in Atlanta, Georgia, the Environmental Protection Agency (EPA), and other authorities in the asbestos abatement field, is 0.01 f/cc. A level of 0.01 f/cc can be measured economically and quickly with readily available light microscopes, but the process only measures total fibers longer or equal to five microns and does not differentiate asbestos fibers from other fibers. This test method is accepted by OSHA for checking on the results of asbestos abatement projects. The Asbestos Hazard Emergency Response Act (AHERA) of 1986, now applicable to schools, imposes more accurate and time consuming air clearance testing using electron microscopes. Electron microscope testing is required for school asbestos abatement projects involving more than 160 square feet or 260 linear feet of ACM.

Although air quality measurements are useful for monitoring projects where ACM is disturbed or for clearance testing, they only provide an indication of conditions at the time of test. The EPA does not recommend measurement of airborne asbestos fibers as a measure of exposure. The EPA does recommend an inventory of ACM present in buildings. The inventory should include all ACM contained in the building, and evaluate the condition and potential to release fibers into the atmosphere for each "system" of ACM.

AHERA dictates minimum qualifications for personnel working with asbestos, testing procedures, inventory and management of asbestos now in schools. As further study is completed, State and Federal Standards can be expected to become more strict and similar to AHERA. Many government and private owners are now applying AHERA standards to ACM management in buildings that are not schools.

- B. PURPOSE OF THIS SURVEY AND MANAGEMENT PLAN: This report is to provide the Alaska Department of Transportation and Public Facilities (DOT/PF), Southeast Region, accurate information on the ACM in the Alaska State Museum and Juneau State Office Building, and develop a plan for the safe management of ACM in DOT/PF maintained and operated buildings of the Southeast Region. Although the ACM survey results incorporated in this plan deal only with the Museum and State Office Building, the principles and doctrine developed are expected to be applicable to other buildings maintained by DOT/PF, Southeast Region. A separate asbestos survey of any other building(s) would be required to identify location, condition, and quantities of ACM, but the procedures developed in the management portions of this report should be applicable. This report will provide a "living plan", capable of update and documentation of changes as required.

Inherent with the above general purposes of the survey and report, and stipulated in the agreement for professional services are requirements for:

1. Making each building survey independent by building.
2. The surveys must satisfy the initial inspection requirements of AHERA and the Management Plan is to be in accordance with AHERA standards.
3. All ACM must be evaluated to specifically include:
 - o Condition
 - o Extent of Damage (if any)
 - o Exposed surface area
 - o Accessibility
 - o Friability
 - o Potential for workers and users to be exposed to airborne asbestos fibers

4. The report is designed to assist the DOT/PF Maintenance Personnel in conducting 6-month surveillance and 3-year reinspections.
5. The Management Plan selects and prioritizes alternatives for corrective action in consideration of:
 - o The most likely and quickest corrective action alternative will probably be management of the ACM in place, and:
 - o Maximum utilization of small scale removal or containment for immediate priority actions and routine minor maintenance to the facilities.
6. Development of budgetary cost estimates for Long Term Recommendations (removal, encapsulation, or enclosure).
7. For short to medium range management of in-place ACM, develop comprehensive procedures for DOT/PF maintenance workers, State Agencies, Contractors, and others occupying the buildings which includes:
 - o An informative and effective permit system to assure information and compliance with regulations and good practices
 - o Housekeeping and routine cleaning procedures
 - o Identification of workers requiring medical surveillance and medical program procedures for:
 - medical records keeping requirements
 - training recommendations and requirements
8. Develop procedures for small-scale, short-duration maintenance activities to include:
 - o Use by Maintenance and Operation (O & M) Personnel
 - o Use by contractor personnel for small projects
 - o Procedures are presented as specification "boiler plate" for inclusion in future bidding documents for: electrical, telecommunications, and other projects. These are sample instructions and incorporate some already existing written policy.

9. The procedures developed address requirements for independent monitoring and include air monitoring activities if applicable.

Detailed discussion of specific large scale abatement activities are not included in the plan. Large scale abatement activities would be expected to be individually designed and executed. Some recommended contract procedures are provided if needed for clarification.

III. INTRODUCTION

In October of 1988 The Department of Transportation and Public Facilities, Division of Design and Construction, Southeastern Region, requested proposals from their Professional Services Register and by public advertisement for professional consultant services to develop a management plan for Asbestos Containing Materials in DOT & PF maintained buildings. ASCE/OceanTech (former name for Arctic Slope Consulting Group) submitted their proposal on 25 October 1988, and were notified of selection by letter on 21 November 1988. Negotiations for final scope and costs commenced shortly after and continued through 20 January 1989. Concurrently at this time, ASCE/OceanTech was undergoing a name change to Arctic Slope Consulting Group (ASCG). On 21 January 1989, after completion of negotiations and administrative requirements, ASCG was issued a copy of Agreement No. 93-045-71 for Project No. M3-540, "SE Region Asbestos in Facilities Management Plan." Notice to Proceed was issued 2 February 1989 by the DOT/PF Project Manager, Mr. George C. McCurry, P.E., Building Maintenance Manager.

During the period 2 February through 2 March 1989, ASCG obtained by mail, telephone, and telex, copies of original and modified construction drawings, building sketches, previous ACM reports and documentation that was available. This material was reviewed and working documents for an asbestos survey were developed.

Personnel from the Fairbanks offices of ASCG began building survey work in Juneau on 6 March 1989. Key personnel that ASCG personnel talked to during pre-survey telephone conversations and met with during the course of the survey were:

George C. McCurry, P.E., Building Maintenance Manager, DOT/PF, SE.
Bill Jones, Asbestos Coordinator, Maint. & Ops, DOT/PF, SE.
Rudy D. Walker, Building Maint. Foreman, Maint. & Ops., DOT/PF, SE.
Tom Lundstrom, Acting Maint. Foreman, Maint. & Ops., DOT/PF, SE.

Thomas D. Lonner, Director, Division of Museum, Dept. of Education
Bruce Kato, Museum Exhibits Director, Division of Museum

Mr. Ira Rosen, Regional Professional Services Coordinator, DOT/PF, SE.

Additional working members of the DOT/PF Maintenance Staff provided assistance as needed and were most helpful in gaining access, providing knowledge, and equipment during the on-site survey of the Museum and Juneau State Office Building (JSOB).

During the morning of 6 March the ASCG survey team was briefed by Mssrs. McCurry, Jones, Walker, and Lundstrom on access and security procedures, provided keys to the JSOB, and a place to store equipment. Actual field survey of the two buildings was conducted by the ASCG team:

- o For the Museum, beginning at 1:00 P.M., Monday, 6 March through 5:00 P.M., Tuesday, 7 March 1989, the field work was accomplished. Access to the Museum was limited from 8:00 A.M. to 5:00 P.M. daily because of security requirements at the Museum.

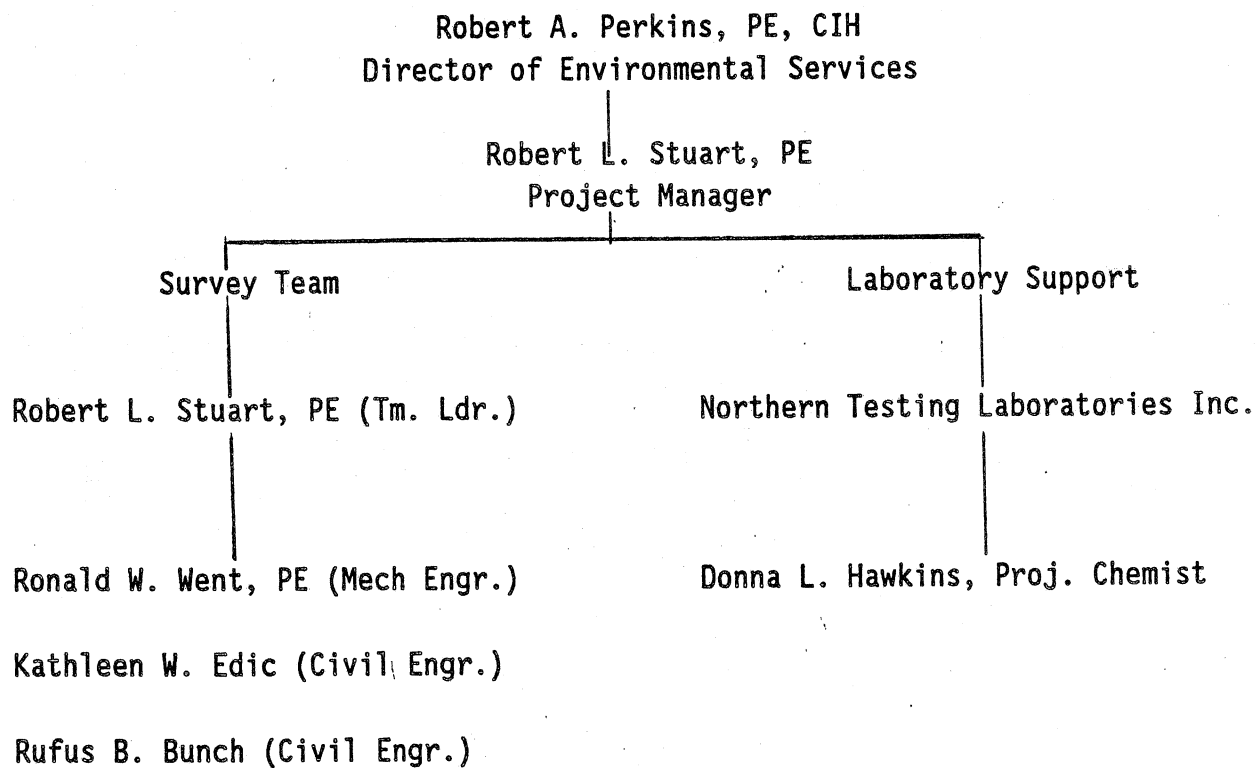
- o For the JSOB, beginning at 8:00 A.M. Wednesday, 8 March extending through 3:00 P.M. Saturday, 11 March 1989, the field work was accomplished. Access to the JSOB was essentially unrestricted except for the Computer Facilities which were scheduled during day time working hours (8:00 A.M. to 5:00 P.M.). Some evening and night time working hours were used to avoid inconvenience to the JSOB assigned working staff, to take advantage of the normal heat and ventilation system shut-down, and to assure the JSOB staff's safety was not in jeopardy. The ASCG survey team was usually in the JSOB until approximately 8:30 P.M. daily during the survey.

The data developed during the ACM survey is cataloged in the appendices attached to this report. Additional appendices provide samples of the various doctrines that should be applied. The appendices are an integral part of the report, and have been used extensively to develop and simplify application of the Management Plan. The Plan uses current doctrine, but some of this doctrine can be expected to change as regulations are updated, additional research completed, and the knowledge of asbestos management and abatement techniques are improved. Now the Plan and included appendices provide information that is cataloged and organized. The Management Plan must be considered a "living plan." At best it is a guide for the safe management of asbestos; it will require update, can certainly be changed, and will unquestionably be added to.

IV. SURVEY METHODOLOGY

A. SURVEY TEAM AND PERSONNEL QUALIFICATIONS:

1. The following organizational structure was used for the survey and this report:



Report Preparation by Survey Team
Supported by Laboratory Data
and Fairbanks ASCG Administrative Staff

2. Training and Qualifications of ASCG Personnel: The specialized asbestos training of personnel affiliated with this survey, report preparation, and review, is:

o Robert A. Perkins, PE, CIH

AHERA Building Inspector, Certification 210,
Georgia Institute of Tech., 2 December 1987.

AHERA Management Planner, Certification 173
Georgia Institute of Tech., 4 December 1987.

Advanced Supervision of Asbestos Abatement
Projects, Georgia Institute of Technology,
Certification 101, 17 July 1987.

Certified Alaska Asbestos Worker, Card Number 1370
Expiration, 3 March 1990.

Alaska Registered Civil Engineer #CE 4338

Certified Industrial Hygienist #CIH 3946

o Robert L. Stuart, PE:

AHERA Building Inspector, Certification I-88-227,
Environmental Institute, 2 March 1988.

AHERA Management Planner, Certification MP-88-205,
Environmental Institute, 4 March 1988.

Supervision of Asbestos Abatement Contracts,
Certificate 923, Georgia Institute of Tech., 29 March 1985.

Certified Alaska Asbestos Worker, Card Number 0464
Expiration, April 1990; Update 26 May 1989.

Alaska Registered Civil Engineer #CE 6470

o Ronald W. Went, PE:

Designing Asbestos Response Actions, Certificate 097,
Georgia Institute of Tech., 11 November 1988.

Certified Alaska Asbestos Worker, Card Number 1368,
Expiration, March 1990.

Alaska Registered Mechanical Engineer #ME 5357

o Kathleen W. Edic:

EPA/AHERA Inspector Certificate #T3005-006-I
Environmental Management Inc. 14 June 1989

Certified Alaska Asbestos Worker, Card Number 2367,
Expiration, June 1991.

Engineer - in - Training, State of Alaska

B. METHODS AND TECHNIQUES USED FOR SURVEY:

1. The Preliminary Investigations that were conducted for both the Alaska State Museum (Museum) and Juneau State Office Building (JSOB) included available documentation as listed on the "Summary and Background" sheets provided in Appendices B & C (B-1 & C-1 respectively). Plans that were called "as-builts" were really original construction documents. Not all building modifications were posted, and some phased improvements had occurred at different times. Some additions, changes or modifications to the buildings had occurred as is normal in a "working" facility. Modifications to the plans had generally not been posted in detail, but the basic plans were quite accurate. Original construction specifications and material submittals were not available for review.

Previous asbestos-related investigations as listed in the Appendix B & C summary sheets were carefully reviewed and incorporated into the data gathered. Test sample results from these investigations were included and reviewed. Generally, the previous ACM sampling was not duplicated; test results and data were considered as being done by other professionals and is used in context. Review of the previous testing, or lack of testing, helped the team determine what should be investigated.

2. Visual identification and touching of suspect materials for potential friability was utilized. Additionally, the recent checklist of suspect materials identified by the Environmental Protection Agency (EPA) as "possible asbestos-containing", AHERA guidelines, and the experience of the Inspection Team Members were utilized to identify potential asbestos containing building material (ACBM) that was used in the construction of the buildings. Visual inspection provided the major method of comparison of specific materials, and dictated the gathering of representative samples and applicable evaluation standards.
3. Bulk Sampling: Each sample was taken in a random manner, but representative of the homogeneous material sampled. Samples were stored in individual containers and kept in the custody of the Inspection Team until turned over to the Laboratory for analysis; transfer of samples was by Chain of Custody Forms (See Appendix E). Due to the respective sizes of the buildings inspected, and the somewhat limited sampling dictated by the Professional Services Agreement used for this inspection, assumptions

regarding potential asbestos-containing materials were allowed and could be made. If an error condition was possible, a deliberate bias on the conservative side was the desired procedure, ie. assume suspect ACM, when it may not be. AHERA provides for this technique, but if a material is "assumed" to be ACM, it must be treated as ACM until proven otherwise.

Although a doctrine for sampling friable material is specified in EPA Circular 560/5-85-030a, "Asbestos in Buildings; Simplified Sampling Scheme for Friable Surfacing Materials", sampling is not as clear for non-friable material. For the purposes of this report and in the interest of economy, assumed asbestos content was used for much of the friable material. A minimum of three samples of a homogeneous friable or non-friable material had to contain no asbestos for the material to be considered as not containing asbestos (negative asbestos content). One sample of a homogeneous friable or non-friable material is deemed sufficient to prove a material is ACM (positive asbestos content).

Data for each individual sample was recorded on a self duplicating tag and one copy of the tag sealed on each sample container. The same data, by distinctive sample number, was recorded on the Field Notes (See Appendices B-3 & C-3 for typed copy of field notes). At each sample location the area was isolated (if friable) and field repaired (encapsulated or taped) after the sample was taken. A distinctive blue tag was left to identify where the sample was taken, and the sample location recorded on the drawings (See Appendices B-4 & C-4). Samples were numbered in the order they were taken. To avoid confusion with previous samples taken by other professionals while still using the results of these previous samples, the team used the following sample numbering scheme:

- o For the Museum:
 - The first digit was an "M"
 - The second digit was a "B" for bulk sample or an "A" for air sample
 - The third digit was a number for individual sample; in some cases, if a homogeneous material could be grouped into three parts, an "A", "B", & "C" was used. This allowed the sample to maintain distinction as the same material, but identifies the sample in three parts.

Example:

MB-6C, can be interpreted as:

Third part of sixth sample

Sixth homogeneous material sampled

Bulk sample ("A" would be "air")

Museum

o For the State Office Building:

- The first digit was an "S"

- The second digit was a "B" for bulk sample or an "A" for air sample

- The third digit was a number for individual sample; in some cases, if a homogeneous material could be grouped into three parts, an "A", "B", & "C" was used. This allowed the sample to maintain distinction as the same material, but identifies the sample in three parts.

Example:

SB-1B

Second part of first sample

First homogeneous material sampled

Bulk sample ("A" would be "air")

State Office Building

The determination of required additional sampling was done by reviewing the data presented in earlier reports, and then collecting additional samples such that at least three representative samples of visually identified suspect material were obtained. Because only a minimum number of samples were to be taken, representative homogeneous material that could be identified between floors was only sampled one time. Very few materials were assumed to contain asbestos; at least three representative samples were taken of suspect material visually identified as suspect ACM. If one sample was recorded in a previous report, and reported negative asbestos content, at least two more samples (if the material could be properly tracked) were taken to confirm it as negative, or non-asbestos containing.

3. Air Sampling: The EPA has discouraged the use of air monitoring to assess building safety, and there was no intent to assess the overall buildings' safety by air monitoring during this survey. Air monitoring tests reflect the air quality only at the time and place of each test. EPA currently recommends a thorough building survey to determine if ACM is present and to assess the probability of each ACM system for release of asbestos fibers into the air. Probability is a function of the friability of the ACM, its location in the air stream, and its location and function with respect to the building system and the occupancy and use of the building's spaces.

Air samples were taken to provide an indication of asbestos exposure to our survey workers during the survey. They are also used as an internal check to assure we have not aggravated fiber release during sampling. The results of the air monitoring did give a rough indication of total fibers present, allowed a check on the survey team's clean up, and verified the compliance of our surveyors with OSHA standards. A portable sampling pump was attached to the survey worker most likely to be exposed to asbestos fibers during actual sampling throughout the survey effort. The monitored survey worker was normally working in a confined area, was wearing full protective equipment (disposable clothing and respirator), entered a variety of areas in the course of the day, and, in most cases, disturbed suspect ACM during the sampling or investigation. These few air tests cannot be used to draw a reasonable conclusion about the building.

Some select air tests of air stream flow, air plenums, return air conduits, mechanical rooms, and ventilator systems were also made during the course of the survey. At best these tests can only be considered a "snapshot" of the conditions at the time of the survey, subject to change by outside influence at any time, ie., disturbance of ACM present in the area, change of air flow, introduction of other material, earthquake, etc. These few air tests should not, and can not, be considered indicative of air quality in the buildings, except during the actual test times.

Air samples taken were in accordance with OSHA Asbestos Standard 29 CFR 1910.1001, using the National Institute for Occupational Safety and Health (NIOSH) 7400 method with Phase Contrast Microscopy (PCM). It should be noted this NIOSH protocol does not distinguish between asbestos and other types of fibers, and counts only fibers longer than 5 micrometers. The results of the few air tests that were taken are listed in Appendices B-2 & C-2.

4. **Building Plans:** Prior to the survey, working drawings of the building floor plans were developed from the existing available plans and sketches. Layout plans were developed using Computer Assisted Drafting (CAD) techniques. Known data and previous test locations and results were posted to the CAD drawings. During the course of the survey, the available building plans were continually reviewed. All available technical (Architectural, Structural, Mechanical, & Electrical) drawings were reviewed and carried by the survey team. The CAD working drawings were hand-posted with sample locations and germane data concerning asbestos during the course of the survey. Finalized data and the completed CAD drawings are furnished in Appendices B-4 & C-4.

5. **Photography:** Over 200 each 35mm photographs (approximately 50 of Museum & approximately 150 of JSOB) were taken during the course of the survey to assure graphic representation was recorded. Photographs were taken of all sample locations, observations, problem areas, and general overviews. In view of the size of the two buildings surveyed, and the large number of photographs taken for the use of the survey team, only select photos that clarify a point, or show typical or serious conditions, were made a part of this report. These select photos are included in Appendices B-5 & C-5. A log of all photos taken is also included in Appendix B-5 for the Museum, and C-5 for the JSOB. Photographs are logged and overprinted by date and time of exposure. Additionally, all photos taken are logged and cross referenced to the subject or observation on the Summaries of Field Data & Notes included in Appendices B-3 & C-3. Photographs can be effectively used for comparisons of material condition on future inspections.

6. **Survey Limitations and Constraints:** The assistance provided for the survey team by members of the DOT/PF maintenance staff was extraordinary. However, as with any survey, certain basic limitations and restrictions apply. In this case these include:
 - a. The size of the facilities surveyed, particularly the JSOB with approximately 200,000 square feet of working floor space, on seven floors, plus an additional 100,000 square feet of parking area on four levels, and about 600 working staff, required very careful coordination with occupants, after hours survey, and the handling of a large volume of information. Because of the presence of high value items in the

Museum and some resultant security requirements, some restrictions and care during the survey was required. Not all parts of the buildings were entered. Where scheduling could not make an area available or disruption was great, some extrapolation of suspect material has been done.

- b. Not all data used in this report was developed exclusively by ASCG. Consideration for the results of previous work and surveys was dictated by the Agreement and economy of effort required.
- c. Because each building was fully occupied, and to preclude obvious damage to finished areas, very few destructive tests which involved penetration of partitions or barriers were made. There are areas where ACM appears to continue through barriers and into concealed areas. Assumptions regarding the extent of ACM material were based on ASCG's judgement.
- d. An effort was made to sample each type of material that might contain asbestos, or to conclude its content from tests by others. However, samples of a particular material represent only a small fraction of the total amount of that material present in a given area. It should also be noted that different layers exist in many materials used for construction. Generally all parts of a given sample are examined under a microscope. If a sample has several layers, each homogeneous layer is usually examined, but the rough percentage of ACM stated for the total sample does not necessarily reflect a total percentage by weight or volume in a layered sample. In buildings of this size, and given the time required for construction, several sources of supply could have been utilized for the same type of material. It would be possible for a particular type of building product to be present in both an ACM version and a non-ACM version. Also, replacement materials obtained at a later date in the building's history, while similar in appearance, could have a different asbestos content.
- e. The budget for samples was limited to 130 bulk samples. This is not a large sampling base considering the size of the facilities. For some suspect ACM systems no samples were taken. For instance, no roof samples were taken because of the season of the year, lack of proper patching material available, and the fact that the roofs do not present an abatement or fiber release problem at this time. A similar case exists with molded pipe fittings (hard pipe fittings) in different

parts of the buildings surveyed. Previous sampling shows that many of these fittings contained ACM. Some materials should be retested as part of abatement design prior to any demolition or programmed abatement, once the limits of demolition or abatement are clearly identified. In the absence of further testing, the suspect material should be treated as ACM unless, and until, further testing confirms it is not.

- f. For preparation of this report and plan, conservative evaluations and conclusions have been given. If sampling or previous data confirms ACM in a given type material, it is usually recommended that the material be treated as ACM. An example where this has been applied is with hard pipe and thermal insulation. Laboratory analysis of samples of this material have shown both positive and negative ACM contents. This has occurred both with samples taken in the same building section and for similar samples taken in different building sections.
 - g. This survey and plan is technically not an AHERA report because the facilities are not schools, nor is there a Local Education Authority (LEA) responsible for the buildings. However, the detail, procedures used in assumptions, and standards applied have been essentially those dictated by AHERA. This survey, combined with the previous survey work, essentially answers initial AHERA survey requirements, and the terminology used falls within or parallels AHERA definitions.
7. Functional Areas: In order to properly assess the potential dangers or problems associated with ACM, AHERA recommends the given areas of a facility be divided or cataloged into "functional spaces", or areas of like use. These divisions should be as few as are necessary, but contain similar use patterns, type of occupancies, and similar potential exposures to ACBM. The codes used for Functional Areas in this report, and the building spaces included in each Functional Area are noted on the data sheets in Appendices B-2 & 3 and C-2 & 3 and below:

a. For the Museum (See Appendices B-2, & B-3):

Functional
Area

Area Encompassing

- A. Gallery Areas: The public area frequented by staff and visitors; accessed frequently.
- B. Employee Office Areas: The area not open to the public, inclusive of custodial, mechanical and storage rooms; accessed only by staff and maintenance personnel.
- C. Outside the Museum: The areas that encompass exterior portions of the facility and do not fall into "A." or "B."

b. For the JSOB (See Appendices C-2, & C-3):

Functional
Area

Area Encompassing

- A. Parking: The area of the four parking levels; accessed at least twice daily by assigned staff, and by the general public.
- B. Mechanical Rooms: All fan rooms and mechanical rooms accessed by only DOT/PF maintenance and select personnel as required; access limited and may approach five times/day; no full time occupancy.

- C. Stairwells/Corridors/Elevators/Lobbies & Plazas: Public and staff continually passing through; traffic heavy during some periods.
- D. Storage, Janitor & Custodial Maintenance Rooms: Areas accessed by only contract custodial and select staff personnel as required; access limited and may approach five times/day; no full time occupancy.
- E. Office Areas: Assigned work station for most building occupants usually occupied eight or more hours/day.

8. Homogeneous Areas (of ACM): In conjunction with the functional areas used in building assessment, AHERA also requires ACM to be sampled by "homogeneous areas". AHERA defines a "homogeneous area" as an area of surfacing material, thermal system insulation, or miscellaneous material that is uniform in color and texture. Because visual inspection must be used to initially identify homogeneous material, the above definition is further refined to include a material that is similar in appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of ACM. "Homogeneous ACM System" is more descriptive of this concept. AHERA requires analysis of each homogeneous ACM system. AHERA requires a minimum of three negative samples to document a suspect Homogeneous ACM System as negative. Therefore, since some previous random samples were taken without regard to the AHERA requirements, the available data was grouped, where possible, to fit the AHERA definitions, and additional samples taken if required, to assure a minimum of three total samples.
9. Methods and Data for Assessment: The data gathered in the field was recorded on tabular worksheets (See Appendices B-3 & C-3). Evaluation and final assessment is completed after the laboratory results are available. Data gathered in the field and the parameters used include:

a. The type of material: Material is classified by three main types. They are:

- o Surfacing Material, prefaced with an "S" on the tabulations.
- o Thermal Systems Insulation, prefaced with a "T" on the tabulations.
- o Miscellaneous Material, prefaced with an "M" on the tabulations.

Each of the general classifications are further classified as noted in the legends at the top of each page of Appendices B-3 & C-3.

b. Friability of Material Observed: Friable material is material which when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Because non-friable material can become friable if damaged, the field observer has recorded if non-friable material could become friable. The friability of material is a factor in assessment because it is considered to indicate the potential for releasing airborne asbestos fibers.

c. The extent of damage or condition of the potential ACM is evaluated and recorded in the field. The terms and parameters used and coded to Appendices B-3 & C-3 are:

- o Good or undamaged -- Less than one percent of the Homogeneous ACM System in a functional or localized area is damaged.
- o Fair or Damaged -- If one to ten percent of the Homogeneous ACM System distributed across a functional area, or one to twenty-five percent of the Homogeneous ACM System in a localized area is damaged.
- o Poor or Severely (Significantly) Damaged -- If greater than 10% of the Homogeneous ACM System distributed across a functional area or greater than 25% of the ACM in a localized area is damaged.

ACM is generally considered material that contains greater than one percent asbestos. Material reported as having less than one percent asbestos is considered to not contain asbestos. AHERA defines non-asbestos containing material in this manner and laboratories

normally report it this way. If laboratory reports indicate "less than 1% asbestos" or "trace" of asbestos, ASCG reviews the situation and decides if any special procedures or precautions are required.

d. Access to the material and the potential for fiber release was recorded using eight coded descriptive terms which assist in later assessments, they are:

- 1 - In an air stream
- 2 - Open and exposed
- 3 - Above a Lay-in ceiling
- 4 - Behind solid ceiling
- 5 - Behind walls
- 6 - Layered in other material
- 7 - Buried
- 8 - In an air plenum

e. Contact, Vibration, and Erosion: These three key evaluations are assigned in the field using the occupancy load, functional areas, and consideration of the location of potential ACM. General evaluations of "High", "Moderate", and "Low" are determined by the judgment and experience of the survey team members.

Careful evaluation of the potential for friable ACM to release fibers into the air has to be considered when assigning the above factors. This is particularly true if the potential for releasing fibers into an air plenum or air handling system is possible. If fibers can be "pumped" into a building or introduced into a return air system, a higher health risk exists than if the ACM is simply exposed and fibers would be confined to a relatively small, limited area of the building.

The gathering and precise recording of accurate field data is paramount in producing accurate, realistic assessments. Invariably there seems to be a need for more data, particularly after the survey team departs a site, or if the data is to be used at a later date. Gaps in data can sometimes be filled with plausible, conservative assumptions, and such assumptions are often needed. Safety of building occupants must always be considered when making assumptions, and the economics of cost and time required to gather more data must be considered when assumptions are developed. The tabulations furnished in Appendices B-3 & C-3, when

correlated with laboratory results and coupled with plausible assumptions provide reasonable assessments. The data is also furnished for future reference and for subsequent abatement response actions.

C. ANALYTICAL LABORATORY

All samples were analyzed by Northern Testing Laboratories, Inc. (NTL) using methods approved by EPA and OSHA. Specifically, air samples were analyzed by the NIOSH 7400 Method, and bulk samples by polarized light microscopy.

NTL participates in and holds Interim Accreditation in EPA's Bulk Sample Quality Assurance Program. Presently this is known as the National Volunteer Laboratory Accreditation Program of the National Institute of Technology (NVLAP/NIST). They also participate in the American Industrial Hygiene Association's (AIHA), NIOSH Proficiency Analytical Testing Program (PAT) for Laboratory Quality Control.

A summary of bulk samples previously taken and furnished to ASCG by DOT/PF reports is furnished in Appendix D. A number of laboratories with similar qualifications were used; some sorting and editing was required to produce the summary. The laboratory results consolidated in the summary were considered professional and accurate as regards to asbestos content.

The results of laboratory analysis and copies of the chain of custody forms for samples taken by ASCG are furnished in Appendix E.

V. ASSESSMENTS AND HAZARD POTENTIALS

- A. GENERAL: Using the physical data gathered at each building as recorded in Appendices B & C, each Homogeneous ACM System in each Functional Area was assessed and hazard rankings developed. ASCG's hazard evaluation follows AHERA doctrine, although AHERA does not specify a particular system for evaluation. The system is simple and informative, but has specific exceptions and specific areas that do not fit the general evaluation. Exceptions are noted where appropriate. The table below is a guide for general evaluations indicating relative hazard ratings. In this system a higher numerical number signifies a greater hazard, while abatement priority is usually in the reverse order of hazard rating.

GENERAL CLASSIFICATIONS FOR HAZARD POTENTIAL

<u>Condition</u>	<u>Disturbance Potential</u>	<u>Relative Hazard Rank</u>	<u>Abatement Priority</u>
Poor	Any	7	1
Fair	High	6	2
Fair	Moderate	5	3
Fair	Low	4	4
Good	High	3	5
Good	Moderate	2	6
Good	Low	1	7

General abatement priorities are listed as a part of the summary data in Appendices B-1 and C-1.

- B. SPECIAL CASES: Other factors must be considered in assessment of risk, particularly in small selected areas. Some of these factors include:
- o the potential for an upset condition such as an earthquake, fire, or exposure to moisture or water leak
 - o isolated incidence of high contact - emergency exits
 - o likely building renovation or addition
 - o personnel or occupants' perception of asbestos dangers and potential perceived liabilities
 - o likely changes in use of space - converting a storage closet to a coffee bar
 - o types of contact
 - o other isolated exceptions to a standard evaluation

Standard evaluations are frequently affected by the above factors and at best are a guide to be tempered with application of specific factors such as those listed above. Often the special factors can only be evaluated by interview with building occupants and officials, and the experience of the inspector surveying the building.

C. SUMMARY OF SAMPLE DATA USED IN ASSESSMENT: The provisions of the Professional Services Agreement for this Survey and Management Plan, economically limited the number of samples to be taken. The knowledge of the ACM in the buildings had been clearly established by previous surveys, although some of the previous data is not clearly cataloged. ASCG tabulated and used the previous data where it could be applied, confirmed locations of sampling, and visually inspected those areas where previous samples were taken. Supplemental data and samples were taken where required. Not all data from previous surveys was usable. The total known samples taken or reviewed by building were:

SAMPLES TAKEN AND REVIEWED

<u>Firm or Agency</u>	<u>Museum</u>	<u>JSOB</u>	<u>Total</u>	<u>Notes</u>
ASCG	22	76	98	(a)
State of Ak.	?	8	8	(b)
DOT/PF & Maint. Staff	?	26	26	
Dept. of Labor (DOL)	5	4	4	
Hazard Man. Inc. (HMI)	-	67	67	(c)
Environm. Health Services	26			(d)
TOTALS:	53	181	203	

Notes:

- (a) Includes personal air samples during Museum and JSOB surveys.
- (b) Exact State Agency not identified on data furnished.
- (c) Includes eight (8) filter paper samples that could have been air or vacuum samples.
- (d) Includes 18 air samples of simulated work situations.

Data gathered and used for assessment by ASCG (by building) is included in Appendices B-2 & 3 for the Museum, and C-2 & 3 for the JSOB. The sample and observation locations, where known, are recorded for all samples and posted to the building drawings in Appendices B-4 & C-4. Extrapolated data from previous sampling that was used is presented in summary form in Appendix D.

VI. SURVEY FINDINGS AND TECHNICAL ASPECTS

Below are narrative descriptions describing the findings of the asbestos survey and information used in the formulation of the Management Plan portions of this report. Included are general comments applicable to the two buildings investigated and the general categories of building materials. In some cases specific findings which provide a narrative description of specific materials or conditions in a building are included. General findings/comments/quantities are also listed in the Summary Appendices (Appendices B-1 & C-1), as are specific data where applicable. All findings are developed in conjunction with the graphic details in Appendices B & C, and should be usable for specific abatement action planning or to check on a specific material.

A. GENERAL FINDINGS: Asbestos Containing Building Materials (ACBM) were confirmed to be present throughout the Museum and JSOB. As subdivided by AHERA categories, the materials include:

1. Surfacing Materials:

- a. Surfacing Material such as sprayed-on fireproofing, was present in friable form on the structural steel, and on portions of the roof or floor soffit. There was also a good deal of overspray on surfaces such as pipes and ducts that were not to be fireproofed, per se. (See Photos 1,2,& 3 of Appendix B-5 and Photos 1 & 2 of Appendix C-5). Although the fireproofing is generally above a suspended ceiling system throughout the buildings, it is openly exposed in portions of the return air system of the JSOB, in maintenance areas, in custodial/storage closets, and in most mechanical rooms. The suspended ceilings screen the fireproofing from view, but fiber-contaminated air can migrate into general office spaces, especially around the ceiling grid or through any holes down through the ceiling system. The spray-on fireproofing varies in asbestos content from 5% to 25% chrysotile, and is by far the highest fiber release risk in both the Museum and JSOB.
- b. Acoustical sprayed or painted surfacing material was found in the lobby and gallery areas of the Museum. This material is not enclosed nor previously identified as ACM, and although stable, contains 1% to 2% chrysotile. (See Photos 4 & 5, Appendix B-5).

- c. Within both buildings the suspended ceiling tiles, although friable, are not asbestos-containing themselves, but are contaminated from the spray-on fireproofing above them. This is largely because of debris and pieces of the fireproofing falling from the structural steel and overspray that has been disturbed by past maintenance/renovation work or from deterioration. The ceiling tiles in both buildings should be considered ACM because of the contamination contained in their porous structure. (See Photo 6, Appendix B-5, and Photo 3, Appendix C-5).
- d. A sample of spackle/plaster taken from the stairway wall between floors 9 and 10 in the JSOB was identified by a previous survey as containing asbestos. This was not confirmed by the random samples taken by ASCG throughout the building. Spackle and plaster was and is made with a variety of formulas, often varied between journeyman applying the mix. The spackle and plaster frequently "picks up" asbestos fibers from other ACM during the curing process. No set pattern of ACM spackle or plaster was identified, but if demolition of spackled or plastered walls, ceilings or structures is anticipated, the site-specific material should be tested for asbestos content. Most of the plaster and spackle sampled was painted, behind barriers, or covered by another wall covering.
- e. No other friable or non-friable surfacing material was identified as ACM. The other surface coverings sampled are discussed below under miscellaneous materials.
2. Thermal Systems Insulation: In the Museum and JSOB a large variety of thermal systems insulation and components were used. Both ACM and non-ACM components were identified in the two buildings. No set pattern of where ACM was used was clearly discernible. The previous reports combined with data taken by ASCG, found ACM and non-ACM thermal insulation types used for the same thermal application with very few visual differences between ACM and non-ACM material. To test every piece of this type material present in the facilities is not practical, thus any "hard to the touch" insulation material should be considered ACM. This includes:
- a. Boiler and tank insulation. (See Photo 7, Appendix B-5).
- b. Molded or "hard" pipe fitting insulation, ie., elbows, tees, valves, and gage or instrument coverings. (See Photo 4, Appendix C-5).

- c. "Hard to the touch" (not fiberglass) pipe insulation generally consisting of two circular pre-molded, approximately three foot insulation sections (hard pipe insulation) installed on pipe and wrapped with a fabric material. Generally the hard pipe insulation, and frequently the wrapping, are ACM. (See Photo 5, Appendix C-5).
- d. Fire brick and cementlike boiler components generally tested positive as ACM. (See Photo 6, Appendix C-5).

The thermal systems insulation components tested and inspected were generally in good condition, painted or encapsulated, well maintained, and serving the purposes for which installed. The material was generally non-friable, but could become friable if damaged by mishandling or became wet from water leaks which are common with these systems. Appendices B-1 & C-1 list summary totals of these type materials, but, with the exception of general cleaning of the JSOB main utilidor, no major abatement actions are considered necessary at this time for the thermal system insulation. If future maintenance or renovation actions dictate handling the thermal insulation in either of the buildings, it should all be handled as ACM or the particular insulation tested. If, for instance, a few (say 1 ft. to 10 ft.) hard fittings or pipe are to be disturbed, it is economical to treat them as ACM. If a greater number of such fittings can be identified as typical and are to be disturbed in a given area, there may be some economy in testing to determine if they contain ACM. First, group the fittings and piping by mechanical system, say all 2" cold water is one group and all 3" hot water is another group, provided there are no other visual differences. Then, sample at least 10% of each group or at least 3 samples minimum.

3. Miscellaneous Materials: Generally any other suspect material that the survey team could identify was tested. The fact that a given homogeneous material has had at least three negative tests provides useful information for future maintenance and renovation planning. Material in this category that was inspected and tested with general results included:

- a. Ceiling tile in each of the various patterns was negative for ACM content, but as discussed above, almost all of it should be considered contaminated by the sprayed-on fireproofing material above the ceiling tile.

- b. Mastics and adhesives of various types were tested. Some of the material used to adhere the various patterns of vinyl composition floor tile to the floor in the Museum contained up to 30% chrysotile asbestos. This material is considered non-friable, but if drilled, ground, or sanded can produce dust containing asbestos. (See Photo 8, Appendix B-5).
- c. Wallboard material (sheet rock or gypsum board) that was tested contained no ACM.
- d. Vinyl composition floor tile in various patterns generally tested negative. Usually the tile and the mastic are evaluated within the same sample. Only the "white with brown and cream colored spots" tile found on the seventh floor of the JSOB appeared to contain 1% to 5% asbestos. This material is non-friable, but if drilled, ground, or sanded can produce dust that is considered friable. (See Photo 7, Appendix C-5).
- e. Other general-type miscellaneous materials were tested, but they generally proved negative in asbestos content and are tabulated in Appendices B-2 & C-2.

B. SURVEY RESULTS, FINDINGS AND DATA FOR EACH BUILDING: The above summary generally describes the findings. Specific quantities and detailed findings for each individual building are contained in Appendices B and C. Appendix B, 1 through 5, deals with the Museum; Appendix C, 1 through 5, deals with the JSOB. Each numbered part of the respective Appendices B and C is presented in the same order and includes:

- 1. Summary and Background (B-1 & C-1): This appendix contains general identifying information about the building; information about previous surveys, friable and non-friable ACM quantities, approximate locations, hazard assessments, and a recommended general abatement priority. The last entries in this appendix include an additional series titled "SPECIAL CASE PRIORITIES." These special considerations are developed because the ACM is located in a critical air stream, is in poor enough condition to potentially release fibers, has a high contact, or is in a heavy traffic area. These areas include (for both buildings):

- o Elevator areas
 - o Work areas open to the spray-on fireproofing, such as:
 - Mechanical rooms
 - Frequently used storage areas
 - Custodial closets and other storage areas
2. Materials Sampled and Checked (B-2 & C-2): These appendices provide a consolidated list of all samples taken and they show both negative and positive results.
 3. Summary of Field Data & Notes (B-3 & C-3): These appendices are a typed consolidation of the field notes taken. Any field observation, sample, photo, or general comment can be traced using this appendix.
 4. Drawings (B-4 & C-4): As explained in Section IV, B, 4., these drawings were generated using CAD and show general building outlines by floor, sample locations, and general locations of ACM.
 5. Photographs (B-5 & C-5): These appendices show only a few select photographs which clarify a point or condition. They also contain a consolidated photo log of all photographs taken. Generally, a photograph was taken of every observation recorded on the field notes. They are initially logged by hour and minute of time taken. The actual photographs used and referenced in this report are numbered concurrently, within a specific appendix, for ease of reference, but each identifying caption (below the individual mounted photograph) contains an hour/minute reference [REF:].

The five parts of Appendix B deal with the Museum, and the five parts of Appendix C deal with the JSOB. If additional buildings are added to this plan a similar type tabulation is suggested.

C. AIR SAMPLING RESULTS: EPA does not encourage air sampling to evaluate a building's potential for fiber release, and air samples were not taken for that purpose. However, a few air samples were taken with an electric pump, as time permitted, in isolated mechanical rooms and obvious return air streams where the potential for fiber release appeared to be particularly high. Results of this type of testing from previous surveys were also reviewed. In all cases, less than 0.01 f/cc were recorded after laboratory analysis. Again, it should be emphasized, this testing is just FOR THE TIME OF TESTING AND SHOULD NOT BE USED AS AN INDICATION OF GENERAL BUILDING AIR QUALITY. Also, air testing by the NIOSH 7400 method used, measures TOTAL fibers for the time of test. It does not measure just asbestos fibers, nor can the method measure fibers less than five microns.

The personal air monitoring tests, taken with small battery powered pumps worn by the survey member taking bulk samples, showed slightly elevated fiber counts as would be expected. Results ranged from 0.02 to 0.05 f/cc. The samples are considered composite because the pump was exposed to a variety of dirty areas in the course of the day, the samples were small (200 to 500 liters), and the detection limit was high (0.03 to 0.05). The survey member always wore protective equipment and enclosed, cleaned and encapsulated each sample area. No conclusions on air quality can be drawn from these personal samples, nor was it intended. Personal samples were taken only to monitor exposure to the survey worker. Results of the air samples taken in the Museum and JSOB are recorded as part of the data in Appendices B-2, C-2, and E. They are recorded with an "A" in the first part of the sample number, i.e., "MA" for the Museum and "SA" for the JSOB.

D. GENERAL PRIORITIES

1. MUSEUM

Appendix B-1 summarizes the priorities for all ACM systems in the Museum. General priorities include four main ACM systems; spray-on fireproofing, acoustical surfacing, vinyl asbestos tile and thermal insulation on fittings, piping and tanks.

- a. Fireproofing and Ceiling Tiles: The fireproofing and ceiling tiles may be considered together as a system. The ceiling tiles are not ACM, but have been contaminated by ACM debris from the fireproofing falling.

The fireproofing itself can be considered as being in "fair" condition, however, the fireproofing and ceiling tiles are both considered as "damaged" (but not "significantly damaged") under the AHERA definitions. Since the fireproofing is friable, it is likely to release fibers. Spray-on fireproofing will slowly deteriorate, gradually spalling off its substrate with age and vibration, with increased spalling due to specific mechanical damage as will likely happen during maintenance or repairs of mechanical and electrical systems in the above ceiling space. The wall cavities that are open to the above ceiling space are also assumed to be contaminated with ACM fireproofing. This will require special worker precautions during any work in that space, both to protect the workers and the building's occupants. These are further discussed in detail in the O&M recommendations. Adhering to these precautions will not guarantee that a major fiber release will not occur in the future due to, for example, an earthquake or a plumbing break. Therefore, complete removal of the fireproofing and the ceiling panels is the most desirable option, and a long range plan for removal should be adopted. Our estimate for this work is between \$1.2 million and \$1.6 million and would take a total project cycle time of two to three years. Since this ACM system, as it now exists, does not take the building out of the "low risk" category, the State will have to compare the risk associated with this ACM system with risks in the Owner's other buildings and program the removal accordingly. Only complete removal will render the Museum a "no asbestos risk" building.

Since complete removal may only be accomplished as a long-range plan, some interim abatement methods are required. Enclosure is a satisfactory method of abatement, and since the material is already enclosed, we recommend that the enclosure be perfected as the first step in maintenance. Enclosure implies airtightness, and since complete airtightness is not practical, the enclosure should assure that there are no air currents between the enclosed space and the rest of the building, i.e. that it be a "dead air space." Our survey did not indicate any air currents, but we were not testing for this, and air currents could vary with season and the building's HVAC systems. Our recommendations are:

- Examine the above ceiling space for cracks or other defects in the ceiling, that could permit debris to filter into the occupied spaces. Patch such cracks or defects.

- Examine the above ceiling spaces for air currents, especially the blind ends of ducts or leaks in the ventilation ducts. Both supply and return air ducts should be checked. The supply could pressurize the above ceiling space and the return could suck fibers into the recirculated air system. Check details such as elevators or dumbwaiters. Seal any air leaks.
 - Institute the O&M controls outlined in Part A of Section VII - Response Actions.
 - The top side of contaminated ceiling panels can usually not be decontaminated effectively, however, if panels are lifted to do maintenance according to the O&M procedure, the tops of the panels should be cleaned of debris with a HEPA vacuum before being put back in place. When the time comes to remove the fireproofing, the ceiling tiles should also be disposed of as ACM.
 - A general inspection of the ceiling suspension system is required. Note such details as the suspension of the drop-in light fixtures and sprinkler system. Current codes require separate suspension of these to the building's structure. Older codes may not have required them. These details would help prevent collapse of the ceiling in an earthquake.
- b. Acoustically Treated Ceilings: The ceilings in the Lobby and Ramp Areas (Gallery 116) can be characterized as being in "good" condition and not likely to release fibers unless disturbed. The immediate recommendation is to keep the acoustical surfacing in good condition by periodically painting the surface. This should be incorporated in the O & M plan. If the surfacing is not periodically painted, it may start to deteriorate with age or wear damage. At that time it will have to be removed as ACM. It would be logical and economical to remove acoustical surfacing at the same time the fireproofing is removed.
- c. Vinyl Asbestos Tile: Other than routine O & M efforts discussed later in this section, no immediate action is required for vinyl asbestos tile. The tile should be removed as asbestos if any repair/renovation work is scheduled in those areas having tile. Even simple tasks such as installing new phone lines must take the tile's asbestos content into account if it is to be penetrated. Asbestos procedures should be used for such instances.

- d. Thermal Insulation-Fittings, Piping and Tank ACM Insulation: Any damaged fitting should be repaired or replaced in the course of normal maintenance, starting with the most badly damaged. All damaged fittings and pipe insulation should be abated within a year. The tank in the Boiler Room should be periodically painted to keep the ACM encapsulated. If the tank insulation should become damaged or the tank itself becomes inoperable, complete removal is recommended.

2. JUNEAU STATE OFFICE BUILDING (JSOB)

The ACM systems that need to be considered are sprayed-on fireproofing, thermal system insulation, and miscellaneous materials.

- a. Fireproofing and Ceiling Tiles: The ACM fireproofing is deteriorating, and therefore must be abated. The ceiling tiles below the fireproofing are contaminated by debris and must also be abated. The abatement priorities are different, depending on the location of the fireproofing. In general, it is recommended that all fireproofing and ceiling tiles be removed. We realize, however, that complete removal is an enormous project. Because we suspect that the fireproofing has fallen in the wall cavities of the permanent walls, abatement will involve demolishing all, or almost all the interior walls. The metal studs, plumbing systems, and electrical systems should be salvageable, and perhaps some of the ductwork, although the latter is not likely. We have estimated a project cost of \$ 16 million and a five year project cycle, from appropriation to completion of construction.

The thrust of our recommendation is to prioritize the actions to minimize exposure to building residents while action is taken to obtain funds to remove the fireproofing. The timing of the action, however, is dependent on the State's other abatement priorities. ASCG has characterized the building as a low risk, and it can be operated for its current purpose with proper O&M practices and procedures as described later in this Plan. The immediate actions recommended will reduce the risk, but only complete removal will render the JSOB a "no asbestos risk" building.

The fireproofing is deteriorating and has spalled off in some places. In other places it appears to have been over-applied and the excess has disbonded. In other areas the fireproofing has been eroded by the airstream, or has been damaged by mechanical damage and water leaks. The problem is similar to the Museum with one important exception. In the JSOB, the space above the ceilings is used as a return air plenum. During the heating season, a large percentage of the return air is recycled through the building. Therefore, enclosure of the ACM is not possible without a complete revision of the HVAC system. This is not practical, since the new ductwork would itself require the removal of the ACM. Encapsulation is not a reliable long term alternative for several reasons. First, a proper encapsulation is almost as expensive as removal - 75% of removal cost is the common estimate for encapsulation. Second, encapsulating the debris within the wall spaces would involve removing the walls. Third, encapsulating a material which was applied too thickly in the first place is not sound engineering - some encapsulant manufacturers advertise they can do this, but long term field test data is not available. Finally, when the building is demolished in the future, the asbestos must be removed anyway. We do recommend encapsulation for special areas when no other method is effective. O&M effort is acceptable as an abatement method, but only as a temporary abatement method, while awaiting funding for the various removals. O&M work will not by itself sufficiently protect human health and the environment.

In order to prioritize abatement, we have to consider how fibers are released and how building occupants may breath them. When a large piece of fireproofing falls off the soffit and lands on the top of a drop ceiling tile, it lays there until the tile is removed for maintenance. Then, without special O&M procedures being followed, the ACM is likely to be dropped to the floor and ground up by foot traffic. Fibers are released during the initial fall to the tile and then later during the fall from the tile to the floor. Either of these could be called a direct release. The later release of fibers by the grinding of the ACM by foot traffic is referred to as secondary entrainment. Both initial release and secondary entrainment are likely in the JSOB. Only the secondary entrainment is preventable by proper O&M. As for smaller pieces of ACM fireproofing, say those only visible with a magnifying glass, they are liable to be swept along the air plenum, then cycled

through the air handling system. Some will release fibers directly. Other small pieces will be caught in the return air filters or settle out in "dead" spaces. Secondary entrainment from handling the filters and maintenance of the duct system is preventable by O&M. Finally, microscopic fibers can be assumed to continuously migrate off the fireproofing and enter the return plenum air stream. Hence, even with the proper O&M procedures, it is reasonable to assume that some fibers are entering the air stream more or less continuously and are therefore exposing the building occupants to levels of asbestos fibers greater than that of the outside air. Since there are usually some asbestos fibers in the air, even the outside air in Alaska, evaluating the increased exposure is relative rather than absolute. The powerful ventilation systems in modern buildings tend to dilute the fibers. Also, as is the situation in the JSOB, the space between a suspended ceiling and ACM fireproofed soffit being used as an air plenum is very common in high-rise buildings. The gradually deteriorating fireproofing is also a common situation. Appendix O is a discussion of a program to do some air monitoring in the JSOB. The EPA does not recommend such air monitoring, nor is air monitoring a criteria of the AHERA program. Appendix O is ASCG's recommendation for limited air monitoring. We have based our characterization of the building as "low risk" on the air monitoring results in similar buildings and our experienced judgement. None of our limited air monitoring at the JSOB, or that of previous consultants whose air monitoring test results were given to us, indicated any airborne fiber counts that would change this characterization.

- b. Thermal Insulation: As mentioned elsewhere in this report, the general condition of pipe, boiler, and fitting insulation is good. Also, various types (both ACM and non-ACM) of insulation are intermingled. It is not believed any special effort toward abatement is required for the thermal insulation. It is in good condition and is serving the purpose for which intended. If other maintenance work is programed in areas containing this material, it should receive a priority for removal by glove bag methods. As for isolated damaged items, when discovered, they should be either removed or wrapped and painted if intact. Because no pattern of ACM vs. non-ACM material could be clearly identified, and if a large geometrically consolidated area or number of items must be accessed, the procedures suggested for additional testing in Section VI, A, 2. should be implemented, otherwise, all hard insulation and fittings should be treated as ACM.

- c. **Miscellaneous Materials:** Although many different materials were sampled, almost none normally found in this classification proved to contain asbestos. Only minor amounts of floor tile and mastic, and some spackle material (which could not be confirmed) contained asbestos. This material should receive the lowest priority for abatement. It is non-friable, and precautions only need to be taken if it will be drilled, ground, or sanded. If a major renovation is programmed that will impact this material, additional testing in a closely bounded area of the building that is to receive the impact should be conducted.

E. SPECIAL CASE PRIORITIES

Appendix B-1 and C-1 also summarize "special case priorities". These are specific priorities that have higher priority than those items mentioned under general priorities.

1. MUSEUM

Specific priorities for the Museum include spray-on fireproofing in exposed areas, water damaged ceiling tile and any damaged fittings or hard pipe insulation.

a. Spray-on Fireproofing:

- i. The spray-on fireproofing in the elevator shaft should be removed. The elevator acts like a piston forcing air ahead of it and the shaft acts like an air plenum because of the chimney effect. The top of the elevator should be cleaned periodically by asbestos qualified workers until the fireproofing in the shaft can be removed. Until the fireproofing can be removed, all personnel maintaining the elevator should be wearing respirators and be asbestos qualified.
- ii. Exposed ACM fireproofing is present on the Boiler Room and Fan Room ceilings. Because the fireproofing is exposed and is in an area which maintenance personnel must frequent, these areas should have a high priority for complete fireproofing removal. All piping systems will need to be cleaned because of possible contamination from either overspray or debris from the fireproofing.

- iii. A mechanical/utility shaft runs the height of the building. The fireproofing in this area is slowly deteriorating and the area is very dirty. Complete removal is recommended so that maintenance personnel may access this shaft to do needed maintenance on the piping. (Piping in this shaft also has asbestos thermal insulation which should be removed at the same time as the fireproofing.)
 - iv. Janitor Room 117 has an access door which provides access underneath the ramp area for Gallery 116. A lot of debris has fallen on the floor and any foot traffic through this area might pick it up and fibers could easily be spread. This access door needs to have asbestos warning signs posted and only asbestos-qualified personnel should access this area. If this area is accessed frequently, the fireproofing should be removed completely.
- b. Water Damaged Ceiling Tile: As mentioned above under General Priorities, the Museum's ceiling tiles are contaminated from fireproofing debris. ASCG noticed water damaged tile in the Collections Area (Storage Area 09). These tiles are contaminated and should be replaced by asbestos-qualified workers in a "Klean Cube" as per the suggested O&M procedures. The fact that the tiles are damaged might also mean a piping failure above the ceiling which should also be checked.
 - c. Damaged Fittings and Hard Pipe Insulation: Any damaged fittings or piping insulation noticed during routine maintenance should be removed by qualified workers as ACM using glovebag techniques.

2. JUNEAU STATE OFFICE BUILDING (JSOB)

Special priorities for the JSOB include spray-on fireproofing in exposed areas, fittings that are exposed to the public, and any damaged fittings.

- a. Spray-on Fireproofing: The following items are essentially subsets of the spray-on fireproofing that is considered "exposed" under General Priorities, Appendix C-1. These areas are also depicted on the drawings in Appendix C-4.

i. The spray-on fireproofing in all the elevator shafts should be removed due to the reasons mentioned above for the Museum. Asbestos-qualified workers should clean the top of the elevator periodically until the fireproofing can be removed. Until that time, any personnel maintaining the elevator should be asbestos-qualified and wearing respirators during maintenance.

ii. Exposed fireproofing is present on the ceiling in Loading Area 732. Because the fireproofing is exposed and is in an area where general employees and the public enter and exit, this area should have a high priority for complete fireproofing removal. ASCG also noticed that there is a lot of air movement in this area. This again exacerbates the need to abate this area.

iii. The fireproofing on the ceiling in Pipe Gallery 737 is deteriorating and the area is very dirty. Fireproofing debris can be found on the pipe runs in this area. If immediate removal of the fireproofing is not possible, this area and the piping runs should be cleaned. Any maintenance personnel working in this area should be asbestos-qualified and wearing protective equipment. (Some of the piping in the gallery is insulated with ACM and should be abated at the same time as the fireproofing.)

iv. The exposed spray-on fireproofing on the ceilings of the large air plenums and mechanical rooms on the sixth and seventh floors should be removed. These areas are of concern because the high velocity air movement is beginning to erode the fireproofing.

v. The ceilings in the janitor closets, storage areas, and satellite mechanical rooms (T & E) are sprayed with fireproofing that is openly exposed to any personnel entering these areas. In many of these areas, clumps of fireproofing debris can be found on the floor and on items being stored. These areas should be cleaned immediately by asbestos-qualified workers. The fireproofing should be removed for several reasons; to minimize personnel exposure, to prevent contamination of other areas, and to return the needed space to safe use. All personnel who must enter these areas should have had asbestos awareness training so that any debris found will be properly cleaned up.

b. Fittings Exposed to the Public: In Loading Area 732 and Stairway #3 between Levels 6 & 7, there are some isolated ACM insulated fittings. If kept in good condition, these fittings are considered stable, however, they are exposed to the general public and State employees. As time permits, asbestos-qualified maintenance personnel can remove these fittings with glovebag techniques.

c. Damaged Fittings: Any damaged fittings noticed through routine maintenance should be removed as ACM using glovebag techniques.

VII. RESPONSE ACTIONS

Throughout the survey and the evaluation of the survey results, ASCG considered the methods of abatement that could be used effectively for each homogeneous ACM system in each given functional area. AHERA identifies a "response action" as a method of abatement. Appendix "A" is a standard comparison of accepted abatement methods: removal, encapsulation, enclosure, and maintenance. The comparison provides good general information about each of the methods.

This section, Response Actions, and Section VIII, Plan Management and Administration, present ASCG's general recommendations to the buildings' managers regarding immediate actions to be taken to minimize possible release of asbestos fibers. In Appendix B-1 and C-1, the future Response Actions for all ACM systems are prioritized and options discussed, but the timing of those actions depend on available budget and the State's needs for building space. The intent of the recommendations in Appendix B-1 and C-1 is to present priorities and acceptable options for management. ASCG is comfortable recommending this flexibility, because the State has asbestos-aware and trained staff, who are capable of exercising good judgement regarding asbestos. This is a slight variation from the AHERA philosophy which requires the "Management Planner" to formulate specific recommendations. Section VIII further discusses the administrative requirements to implement the recommendations being made.

A. INTRODUCTION TO O & M, TRAINING DEFINITIONS

The Operations and Maintenance (O&M) effort is the only immediate response action possible in either building, given the constraints of the State's funding cycle, the time requirements for the design and construction of the various proposed abatements, and - depending on the status and priority of other State buildings - the only method that may be available in the near future.

O & M can be divided into routine cleaning and maintenance tasks, and small scale/short duration projects. Small scale/short duration projects are the abatement of minor amounts of ACM in conjunction with other work. A third type of task, the asbestos abatement "project", is introduced in this O & M section to show its relation to other O & M work. An abatement project is defined in this section as abatement work that is required as part of a large non-asbestos project such as a building renovation, although the same steps would be required for a project pursued solely for asbestos abatement purposes, such as the actions prioritized in Appendix B-1 and C-1. This section starts with some

recommendations and definitions of levels of worker training, since those levels of training are important in the subsequent discussions of O & M tasks.

Prior to the implementation of these O & M provisions, all State workers in each of the buildings should be divided into the following three categories and the required training implemented for each category.

1. Workers who will be required from time to time to handle asbestos or work in asbestos-contaminated areas will all require asbestos certification by the State of Alaska, Department of Labor, and are referred to hereafter as "asbestos-qualified" workers. In addition to that training, the Asbestos Coordinator should provide the workers with extra training relating to the specifics of the building(s) where they work. This extra training should consist of a review of this Plan, a walk-through of the building(s), a review of the protective and clean-up equipment (where it is stored, who has the keys, etc.), and the proper reporting procedures to the Asbestos Coordinator. A thorough review of the entire sequence of paperwork including permits should also be part of this training.
2. Workers, generally maintenance and custodial workers, who will not work with asbestos as a normal part of their jobs, but who may encounter asbestos debris in their cleaning work or contact non-friable ACM are referred to as "asbestos-aware workers". A two hour asbestos-awareness training should be required for everyone falling into this category. The training should consist of (at least) viewing a one hour training film, followed by one hour of special training detailing the specifics of the building where they will be working. Procedures for reporting all incidents which may indicate the possible release of asbestos fibers to the Asbestos Coordinator are an important part of this awareness training.
3. Workers who are not expected to contact friable ACM or disturb non-friable ACM are referred to as "employees". A notification letter should be issued to all employees and posted on the various notice boards, notifying them that the building does contain asbestos materials and that an Asbestos Survey and Management Plan is available for their review if they are interested in knowing more about the ACM in the building.

The asbestos qualifications, training and notifications for each category of worker are also described further in Section VIII, A. Employees of contractors and others who have work in the building that may concern asbestos should also meet training requirements similar to those of the equivalent State workers.

B. CLEANING AND MAINTAINING ACM

O & M involves two phases, initial and routine cleaning, and management of the asbestos-containing material (ACM) in place. Initial and routine cleaning involves those tasks that will be done by your asbestos-qualified and asbestos-aware staff. Management-in-place involves those tasks which keep the ACM in such condition that it is unlikely to release fibers or become damaged.

1. Initial cleaning and maintenance cleaning: Especially in the JSOB, there are several situations regarding the ACM fireproofing that need to be considered as general O&M issues. If there is no ceiling between the fireproofing and the occupied building space, all dust and debris should be assumed to be asbestos-containing and cleaned up by asbestos-qualified workers. If there is a ceiling in place and all the employees have been informed not to remove the ceiling, nor tamper with the ceiling tiles (unless there is some reason to believe that the ceilings were moved or tampered with) normal building cleaning should go on. The normal day-to-day building cleaning should be done by "asbestos-aware" workers, whose limited (2 hour) training will include recognition of friable fireproofing debris, so that if it is encountered, the custodial or maintenance worker has the necessary information and understanding to recognize the material as fireproofing debris. Situations where friable ACM debris has fallen into occupied storage spaces and high velocity air movement areas should be immediately cleaned up by asbestos-qualified, properly equipped workers. Examples of this last situation are:

- Loose friable spray-on fireproofing ACM that has fallen from the ceiling in air plenums (See Photos 8 & 9, Appendix C-5). These conditions are fairly typical of the large, major mechanical rooms and air plenums on the sixth and seventh floors of the JSOB.
- Loose, intermingled, friable spray-on fireproofing ACM debris that has fallen on stored equipment and material in the storage area behind Air Passage 610 and the storage area between the stairs and

Air Passage 609 should be cleaned up (See Photos 10 & 11, Appendix C-5). This particular condition is confusing because the older spray-on insulation which contains ACM has been oversprayed with "Monokote" which contains less than 1% ACM and is considered non-ACM. Personnel who have to access the area may not realize there is ACM present that is masked or hidden, and may become careless. Special signs or warnings are required. Initial cleaning must be followed by periodic and routine cleaning that will have to continue as long as the unenclosed ACM is present in those rooms.

- The filters for the building's HVAC system consist of a fabric prefilter and a HEF (high efficiency) filter. Although ASCG's limited sampling of dust captured in some HEF filters did not indicate any asbestos fibers in the dust, it is reasonable to expect that small particles of ACM will spall off the fireproofing, be swept through the ventilation system, and become lodged in either the prefilter or the HEF filter. Therefore, we recommend handling the filters as ACM. The filters should be handled only by asbestos-qualified workers under respiratory protection. The ventilation system should be shut down and the main louvers closed to minimize air currents during these replacement operations. After laying down some polyethylene, open the filter access so that the filter surface is accessible. Then mist the filter surface with an encapsulant such as BWE 3000. Fold the filters and place in an asbestos disposal bag and seal the bag. Wet wipe the region inside the system near the filters. Dispose of all wipe rags, the filters, and the protective polyethylene as ACM. Then replace the filters and turn back on the air handling system.

2. Management-in-Place: Management-in-place requires various abatement actions concurrent with, or following, those response actions discussed above. Cleaning, as discussed above, is a major portion of management-in-place, but it must be supported by regular inspection. This inspection is already conducted by the maintenance and custodial staff on almost a daily basis because they are in daily contact with the material. Although the presence of ACM in the buildings is reasonably well known, additional awareness training for the custodial staff and some of the non-asbestos trained maintenance staff will be required. The two keys to management-in-place are inspection and control.

- Inspections: All the ACM that will remain in the building must be regularly inspected. According to AHERA, periodic reinspection should take place at least every six months by knowledgeable State personnel and a formal reinspection every three years by an AHERA-certified inspector. The periodic reinspections should be carried out by asbestos-qualified staff, using this report as a guide with regard to what is ACM, and supervised by the Asbestos Coordinator. The six month reports should be documented by using a checklist of the ACM systems in each area, and the three year report should be a formal report by an AHERA-certified Management Planner. Each inspection should look for nicks and gouges in thermal system insulation, fresh delamination or water damage in the fireproofing, and other such evidence of damage that may lead to gradual fiber release. Following the inspection, the Asbestos Coordinator should review the checklists and draft work orders for the repair by asbestos-qualified workers of any new damage.

Perhaps more important than these formal inspections are the frequent, continuing visual inspections by the maintenance and custodial staff during the course of their routine duties. An important part of the asbestos awareness training for these staff will be the accurate identification of known ACM in the building. Identification should include showing them a set of photographs of all the building's ACM systems. Another important aspect is that the staff must understand the chain of command to the Asbestos Coordinator and their duty to inform the Asbestos Coordinator of any damage to the ACM systems that has been noticed. A copy of the training photographs, the suspect ACM reporting instructions to the Asbestos Coordinator, and the proper names and phone extensions of asbestos-qualified workers should be posted where these asbestos-aware workers will have easy access.

- Control: Control means that the Asbestos Coordinator must have tight control over access to areas where there is ACM that is likely to be damaged. For undamaged, but potentially friable, ACM such as hard pipe fittings, control means that the Asbestos Coordinator is reasonably assured that all workers who have access to those fittings have had asbestos-awareness training, are instructed to be careful not to damage the fittings, and that they are to notify the Asbestos Coordinator concerning any damaged fittings. For nonfriable ACM such

as vinyl asbestos floor tile (VAT), control means that the Asbestos Coordinator will review renovation plans and make sure that, if any sanding or grinding of VAT is required, it is to be done by asbestos-qualified workers. For access to areas adjacent to friable damaged fireproofing, control means a permit system that assures that only asbestos-qualified workers are allowed in those spaces, that the workers have the proper equipment to perform their work safely, and that any disposal of ACM will be by approved transportation to an approved landfill. Furthermore, control of these areas means that the Asbestos Coordinator will review all proposed work that may be required in these areas and assure that the contractor or State employees doing the work are either fully trained and equipped or kept out of those areas, and that the elements of work that must be done in those areas be done solely by asbestos-qualified workers.

Finally, control means that records must be kept of all actions that may affect the ACM. See Appendix G for the asbestos disturbance permit system.

C. SMALL-SCALE SHORT DURATION ABATEMENT

Small-scale abatement procedures are applicable for occasional O & M and small contractor jobs. They are controlled by the permit system detailed in Appendix G. The need for small-scale abatement may arise in several ways:

- A fiber release incident: A plumbing leak or other accident may dislodge part of the drop-in ceiling. ACM fireproofing debris, and/or a contaminated ceiling tile may fall on the floor or furniture. Here the abatement method includes clearing the area of all employees other than asbestos-qualified workers who will wear respirators and protective clothing. Shut off the ventilation system, and clean up all the debris. First wet down and pick up the big pieces of debris and any disposable contaminated material such as ceiling tile. The clean up workers shall then HEPA vacuum the area contaminated by the fallen debris, and wet wipe all horizontal surfaces and suspect contaminated surfaces. Non-cleanable surfaces such as rugs can not generally be totally decontaminated by vacuuming, but should be HEPA-vacuumed and steam cleaned. Some non-cleanable surfaces such as fiberglass duct insulation may be encapsulated. Area air monitoring should be done after this cleaning work is completed, but before the

area is reoccupied or the ventilation turned back on. The Asbestos Coordinator should use judgement and evaluate such facts as the size of the spill and the friability of the material to determine the size of the area to be evacuated and whether or not isolation (usually by erecting polyethelene barriers) is needed or just closing doors and posting signs will be sufficient. If the incident is an emergency, the permit paperwork should be completed as soon as the emergency phases of the work are complete.

- Minor work: If a valve needs replacement and it is adjacent to potentially friable ACM such as hard pipe fittings, the Asbestos Coordinator must decide if it can be removed without disturbing the ACM. If disturbance is not likely and the ACM fitting is in good condition, the ACM fitting could be left in place. As an added precaution, before any work is to be done in this area, the fitting could be encapsulated with an encapsulant, or enclosed by wrapping it with duct tape and or polyethylene. In most cases, however, it is more conservative and probably just as efficient to remove all the ACM insulation near the valve by using the glovebag technique, encapsulate or enclose the exposed insulation ends, and then remove the valve and reinsulate the pipe using non-asbestos material.
- Running communications wire above the drop ceiling: Only asbestos-qualified workers can enter the above-ceiling area. The ventilation system must first be shut down (this may not be necessary in the Museum). Next, a "Klean Kube" must be erected at each location where the ceiling tiles are to be lifted. The above-ceiling area should be entered only by asbestos-qualified workers wearing respirators and disposable suits. Any friable asbestos which is disturbed while doing the intended wiring work should be cleaned up or encapsulated before leaving the area. Workers entering the Klean Kube should be wearing two suits. Before leaving the Klean Kube, the workers will HEPA vacuum the inside of the Klean Kube, the outer suit, respirator, tools and exposed body areas, then take off the outer suit and dispose of it in an ACM disposal bag within the Klean Kube. Workers shall then proceed directly to a shower and dispose of the under suit as ACM as well.

- Contract work above the drop ceiling or in the contaminated wall cavities: All such work must be planned by, or coordinated with, the Asbestos Coordinator. All contractors must be made aware of the asbestos, and appropriate asbestos specifications must be included in the project request for quotation, bid documents, or work orders. Using a contractor who has asbestos-qualified workers, or who can subcontract this, or requiring those portions of the work to be done by the State's asbestos-qualified staff is an issue that must be decided by the contracting or procurement authority after taking into account the Asbestos Coordinator's input. If the work requires inspections, the Asbestos Coordinator should make sure that asbestos-qualified inspectors are available, and in all cases the Asbestos Coordinator or an asbestos-qualified worker who is the Asbestos Coordinator's designee should: a) assist the contractor to mobilize, and b) inspect the contractor's operation to assure compliance with the asbestos specifications. Appendix I is a blanket notification letter to workers and contractors and it includes some basic procedures for small abatement tasks. Appendix J includes the indexes for ASCG's and the NIBS boilerplate specifications for larger abatement jobs.

Any of these small scale projects should be done in accordance with the procedures outlined in Appendices G, I and/or J which include permitting, restricting access and warning of asbestos work, HVAC shutdowns, encapsulation and removal techniques, air clearance and proper disposal techniques.

D. ABATEMENT PROJECT

This section briefly discusses the genesis of an asbestos abatement project, as it relates to the O & M Plan. Such a project may come about by two main paths. First is a planned asbestos abatement to reduce the possibility of fiber releases. The plan would probably incorporate some or all of the abatement priority tasks listed in Appendices B-1 and C-1. Second is an abatement required to enable some other building repair or renovation project to go forward. For example, a major renovation to the HVAC system that included work on the ducts above the ceilings would require an abatement of the affected areas above the ceiling space, before the ducts could be moved or replaced. As a practical matter, both abatement and renovation projects are frequently programed together as one project.

Large abatement projects should be designed by a professional asbestos abatement consultant, architect or engineer, who will consider all of the likely abatement methods, the budget and schedule available, construction management, and the inspection and testing that may be required. The normal project sequence involves a thorough survey of the portion of the building affected by the anticipated renovation work, followed by at least a two-stage design effort. Preliminary design will usually establish the anticipated impact of the proposed renovation on existing ACM systems, as well as the financial impact of asbestos abatement on project costs. Final design of the renovation/asbestos abatement project generates the construction documents, i.e. plans, specifications, and an Engineer's Estimate for the project. After review, the project is then bid, and at times a post-qualification process is followed to assure that the low-bidding contractor has a qualified asbestos abatement subcontractor involved so that the asbestos work will proceed properly. A contractor will begin construction by accomplishing the necessary demolition and asbestos abatement identified on the contract documents. It is always a good idea to have full-time inspection while the asbestos abatement work is being performed. After the final air clearance and abatement work closeout, including ACM disposal at an approved disposal site, either the asbestos abatement contractor or the consultant handling the inspection should develop abatement as-builts such that the building's O&M plan can be amended and updated.

The relevant costs associated with such long-term or large-scale renovation/removal projects are discussed in Section IX. Probably any project in excess of \$50,000 should be considered large enough to have the asbestos abatement design done by a professional design consultant. It should be clear that given the wide-spread use of spray-on fireproofing throughout both the Museum and the JSOB, almost any significant renovation project will have a large degree of asbestos involvement.

VIII. PLAN MANAGEMENT AND ADMINISTRATION

A. INFORMATION AND NOTIFICATION: This section discusses specifics related to the information and notifications discussed in a general way in the preceding Section VII - Response Actions.

1. Notices to persons:

- a. Asbestos-Qualified Workers: All workers who may be required to handle ACM in the course of their job at either JSOB or the Museum should receive the training required for the Alaska DOL Asbestos Worker Certification. The term, "handle ACM" includes workers who will be required to enter above-ceiling spaces or demolish walls. In addition, these workers should receive specific instructions concerning the ACM systems in the building where they are working, and be fully aware of the notification procedure regarding alerting the Asbestos Coordinator to asbestos concerns. An outline of the records that should be kept is presented in Appendices K, L, & M.
- b. Asbestos-Aware Workers: All maintenance and custodial workers, whose jobs may require them to contact non-friable asbestos or potentially friable asbestos, should have at least a two hour awareness training. The training content is outlined in Appendix K. This asbestos awareness training should be also be given to key supervisors and worker representatives.
- c. Building Employees: All current JSOB and Museum employees should receive a copy of a notification letter similar to the State's previous letter. A suggested draft of a new letter is attached as Appendix K. All newly hired employees, including temporary employees, should be presented a copy of the letter as part of their sign-up procedure. The State should maintain some documentation showing that all employees received the notice letter. A simple initialed check off list should suffice. In addition, the letter should be placed on the bulletin or other notice boards, in locations where safety notices are normally posted.

d. The General Public: There is no requirement to inform the public, i.e. visitors who have no access to the friable ACM areas nor are likely to be disturbing any ACM. However, it is in keeping with the State's general policy of openness to make such information available. There have been some Juneau newspaper articles on these buildings' asbestos concerns from time to time, but these should not be relied on as adequate or accurate notification to the public. If either building has public bulletin boards, a copy of the employee letter could be hung for general public inspection. Since the letter will reference the availability of this report (a copy could be kept in the public library), the letter should serve as adequate public notice.

e. Contractors and Vendors: All contractors who may access the friable ACM or disturb the non-friable ACM must be notified, and must use the disturbance permit system, which is described in Appendix G. In addition, all contractors and vendors who enter the building should have a brief notice included in their purchase orders or work orders which notes that there is ACM in the building. A draft of that notice is included as Appendix H.

f. Hazard Communication: The Alaska Worker Hazard Communication Regulation does not apply to in-place building materials. The employee notification letters described above should meet the spirit of this regulation.

2. Signs

AHERA requires signs "immediately adjacent to any friable and nonfriable ACM...located in routine maintenance areas (such as boiler rooms)." This is a desirable practice, but it needs some thought in its application. Many institutions simply post a sign on the door to mechanical rooms, but the signs do not explain what in the room may be ACM. The sign may be intimidating to the general building population, but if the mechanical room is locked, which all mechanical rooms should be, the general building population would not be entering the room. This Plan recommends that immediately inside each locked mechanical room door, the AHERA warning label, or one of the more stringent warning labels now available, be posted so that it is immediately visible to

anyone entering the room. In addition, however, we recommend that below the label, you place a list in a plastic laminate of the exact types of ACM that are in that room. Additionally, this notice should include a notification of the employee's duty to call the Asbestos Coordinator if the area's ACM is seen to be damaged or if the employee's work is likely to disturb the ACM.

If there are pipes with ACM insulation that run through the general use area of the building, asbestos warning signs should be placed on these to discourage casual damage, such as hanging plants or pictures, which could damage the insulation's outer coating.

B. TRAINING

1. Availability of Trained Personnel and Equipment: The survey team found that the DOT/PF maintenance staff seems well prepared to handle most ACM situations.
 - a. Personnel: A responsible Asbestos Coordinator has been appointed and trained, and five maintenance workers have been certified as Asbestos Workers under the provisions of the State of Alaska, Department of Labor, Codes 8AAC 61.600 and 8AAC 61.740. No specific AHERA training was recorded for any of the personnel. Appendix F lists the trained personnel. The Asbestos Coordinator should keep the list updated and current.
 - b. Equipment: The maintenance staff, because of the knowledge gained in their training and their work with ACM, are well equipped. Appendix F lists equipment known to be on hand at the time of ASCG's survey, and provides a listing of equipment recommended to be kept on hand for specialized asbestos abatement work. This list should be kept current.

The staff and supervisory personnel dealing with the ACM in both the JSOB and the Museum were knowledgeable about the proper handling of ACM. They had procured a "Klean Kube" for accessing the suspended ceiling space of the JSOB, were in the process of establishing an asbestos abatement equipment storage room, and had constructed a special shower for decontamination of those qualified personnel who were expected to work with ACM. These facilities are to be made available to those contractor

personnel who are hereafter going to be required to work with asbestos. One of the major concerns of the key personnel interviewed was the lack of trained and certified contractor personnel who would be available for small maintenance-type contract work. The availability of the above equipment and knowledgeable staff will assist in the execution of cleaning, management, and small-scale removal or containment actions required in the future.

2. Further Training Needed: The training of workers is described elsewhere. In this paragraph we will distinguish an important difference between this Plan and the AHERA regulations. AHERA provides for a 16 hour worker training (the two hour awareness training plus 14 hours additional training) for employees that "conduct activities that result in disturbance to ACM." Further, AHERA permits employees with this 16 hour training to perform small-scale short-duration projects as well as larger abatements. Because of the strict Alaska Asbestos Worker Certification regulations, which require at least 32 hours of worker training and a physical examination, all the asbestos-qualified workers will have sufficient training to be qualified for any asbestos task under AHERA. It could be argued that, given AHERA and the "maintenance" exemption of the Alaska certification regulation, the State could train some workers for an additional 14 hours, then use these workers for certain small tasks that involve asbestos such as cleaning ACM debris or changing suspect ACM filters. ASCG does not recommend this. The Alaska DOL Certification is the minimum that all workers who may have a significant asbestos exposure should receive. To use the 16 hour training would still require a respiratory protection program with regular physicals and record keeping. Therefore, the extra training itself is not a great expense compared with the rest of the requirements. Also, once Alaska DOL certified, the workers are qualified to do any level of abatement that may be required.

C. MEDICAL SURVEILLANCE

Medical surveillance is required by regulation for all workers who may be exposed above the permissible exposure limit of 0.2 f/cc. This Plan recommends a more conservative approach. All workers who may be exposed to damaged friable ACM are to be asbestos-qualified. With those qualifications goes the requirement for a respiratory protection plan, and with that, an annual physical. Therefore, we recommend that all workers who are likely to be exposed both be asbestos-qualified and have the annual physical described in Appendix L.

ASCG has reviewed the current conditions in both the JSOB and the Museum and does not recommend medical surveillance for workers for whom there is no evidence of significant exposures, nor a likelihood of any significant exposures in the future. Thus we do not recommend surveillance for your "asbestos-aware" staff or general building occupants. We have addressed this, however, in our recommendations regarding the notification letter to building employees. Briefly, there is no harm in general building employees telling their physician that they work in a building that has asbestos material present, so long as they follow that statement with a note that there is no evidence that they have had any significant exposure. Without that final comment, the physician's concerns could lead to unnecessary medical tests.

D. PERIODIC SURVEILLANCE

This was discussed above with regard to the O & M portion of Chapter VII. See Appendix M for a descriptive checklist. Briefly, the six month surveillance and report should examine all the ACM systems described in this Plan and note the conditions observed for each of those systems.

E. RECORD-KEEPING

1. The Asbestos Coordinator should have charge and custody of all records relating to this Plan and of any asbestos-related activities in the building.
2. Here is a list of the type of records that must be kept. These are described in more detail in Appendices K, L, and M.
 - a. Asbestos Abatement
 - (1.) Removal records-Permits
 - (2.) Other abatement efforts
 - (a) Encapsulation
 - (b) Enclosure
 - (3.) Air monitoring reports
 - (4.) Preventative measures and response actions
 - (5.) Small scale/short duration O & M activities
 - (6.) Major renovation/removal activities
 - (7.) Fiber release episodes

- (8.) Cleaning records
- (9.) Asbestos disposal records (chain of custody and disposal receipts)

b. Personnel Records: (Keep separate from Management Plan)

- (1.) Medical Records
- (2.) Training Records
- (3.) Records of Qualification; i.e. ADOL Worker Certification classes or other coursework taken.

SECTION IX. PROGRAMMING COST ESTIMATES

Refer to Appendix N for cost estimates of the abatement priorities in the JSOB and Museum. Appendix N is a programming estimate for planning purposes. The costs used in Appendix N do not include the contractors mark-up values or various administrative expenses. Typically, the following percentages over and above the costs noted can be used in estimating a project's total cost:

Mobilization	15%
Bonding and Insurance	15%
Profit and Overhead	27%
Contingency	20%
A/E Design and Inspection	15%
Contract Administration	<u>10%</u>
	102%

These costs do not include Owner's expenses for moving employees, furniture and records during abatement, nor the cost of providing temporary office space. The total cost, Appendix N plus the 102%, does include the Contractor's expenses associated with working in an occupied building, assuming the Contractor will be able to operate in phases including approximately one half of a floor in a phase.

APPENDIX A
COMPARISON OF ABATEMENT METHODS

APPENDIX A

APPENDIX A
COMPARISON OF ASBESTOS ABATEMENT FOR SURFACING MATERIALS
DOT/PF - SOUTH EAST REGION

METHOD	ADVANTAGES	DISADVANTAGES	APPROPRIATE APPLICATIONS	INAPPROPRIATE APPLICATIONS	GENERAL COMMENTS
Encapsulation	<p>Reduces asbestos fiber release from material.</p> <p>Initial costs may be lower than for removal.</p> <p>Lowest initial cost of any alternative</p>	<p>Asbestos source remains and must be removed later</p> <p>If material is not in good condition, sealant may cause material to delaminate.</p> <p>Periodic reinspection required to check for damage or deterioration.</p> <p>Repair of damaged or deteriorating encapsulated surface required.</p> <p>Encapsulant surface is difficult to remove and may require dry techniques for eventual removal.</p> <p>Long-term costs may be higher than removal.</p>	<p>Material still retains bonding integrity.</p> <p>Damage to material not likely.</p> <p>Material not highly accessible.</p> <p>Material granular, cementitious.</p> <p>After removal of ACM, the substrate is porous.</p>	<p>Material does not adhere well to substrate.</p> <p>Material is deteriorating or damaged, or damage is likely.</p> <p>Water damage is evident.</p> <p>Material is fibrous, fluffy.</p>	<p>Containment barriers needed.</p> <p>Worker protection needed.</p> <p>Airless sprayers should be used.</p> <p>Previously encapsulated materials may have to be re-encapsulated.</p>
Special Operations and Maintenance Program Plus Periodic Re-inspection	<p>Asbestos source remains.</p> <p>Special operations program required to prevent damage of material during maintenance or renovation.</p> <p>Periodic reinspection required to assess material condition and potential for erosion or disturbance.</p>	<p>Asbestos source remains. As a temporary measure until another alternative is selected</p> <p>Material in good condition and has low potential for erosion disturbance.</p> <p>Material is nonfriable.</p>	<p>Material not in good condition or has high potential for erosion or disturbance.</p>	<p>Special building cleaning practices are essential.</p>	

APPENDIX A (CONTINUED)
 COMPARISON OF ASBESTOS ABATEMENT FOR SURFACING MATERIALS
 DOT/PF - SOUTH EAST REGION

METHOD	ADVANTAGES	DISADVANTAGES	APPROPRIATE APPLICATIONS	INAPPROPRIATE APPLICATIONS	GENERAL COMMENTS
Removal	<p>Eliminates asbestos source.</p> <p>Eliminates need for special operations and maintenance program.</p>	<p>Replacement with substitute material may be necessary.</p> <p>Porous surfaces also may require encapsulation.</p> <p>Improper removal may raise fiber levels.</p>	<p>Can be used in most situations.</p>		<p>Containment barriers needed.</p> <p>Worker protection required.</p> <p>Wet removal is required for all types of asbestos (amosite will not absorb water or water with traditional wetting agents)</p> <p>Disposal may be a problem in some areas.</p>
Enclosure	<p>Reduces exposure in outside enclosure.</p> <p>Initial costs may be lower than for removal unless utilities need relocating or major changes.</p> <p>Usually does not require replacement of material.</p>	<p>Asbestos source remains and must be removed eventually.</p> <p>Fiber release continues behind enclosure.</p> <p>Special operations program required to control access to enclosure for maintenance and renovation.</p> <p>Periodic reinspection required to check for damage.</p> <p>Repair of damaged enclosure necessary.</p> <p>Fibers released in dry form during construction of enclosure.</p> <p>Long-term costs could be higher than for removal.</p>	<p>ACM is located in a small area (e.g., a column).</p> <p>Disturbance or entry into enclosed area unlikely.</p>	<p>Damage or deteriorating materials causing rapid fiber release.</p> <p>Water damage evident.</p> <p>Ceiling to be enclosed is low.</p>	<p>Containment barriers needed.</p> <p>Use of tools with HEPA-Filtered vacuum attachments advisable.</p> <p>Worker protection needed.</p> <p>Unusual circumstances, complex surfaces, and the presence of utilities may require special removal techniques.</p>

APPENDIX B
MUSEUM SURVEY

APPENDIX B

B - 1

SUMMARY AND BACKGROUND

B-1

SUMMARY AND BACKGROUND

**APPENDIX B-1
SUMMARY AND BACKGROUND**

BUILDING Alaska State Museum - Juneau
 395 Whittier Street
 Juneau, Alaska

DOCUMENTS CONSULTED

As-builts dated May 1968
Linn A. Forrest Architects
Alaska State Centennial Museum

Portfolio of Letters, Memorandums, and Reports concerning asbestos at the Juneau-Alaska State Museum. Provided to ASCG from DOT/PF, December 1988.

PREVIOUS INSPECTIONS & LABORATORY

Prior to 14 Dec 87

- o December 1979 Environmental Health Services
 Laboratory Used: Unknown

During inspection several air samples were taken while actual work situations were enacted. Dust and insulation samples were also taken. A letter report was furnished. Air fiber concentrations were determined at that time to be low and that no significant asbestos exposures existed in the museum.

- o April 1985 Alaska Department of Labor - Voluntary Compliance
 Industrial Hygiene Evaluation Inspection
 #Fr-4919-85-41-S.

Laboratory Used: NHS, Inc., Richmond, Washington.

Voluntary Compliance was called upon to evaluate the asbestos content of insulation materials in the boiler room. Bulk samples of the fire retardant material from the beams were taken and identified as non-asbestos containing. A sample of pipe elbow insulation material was analyzed and found to contain asbestos. A informal report was provided of the evaluation.

- o September 1986 Alaska Department of Labor
 Consultative Services #Fr-86-58-S

Laboratory Used: NHS, Inc., Richmond, Washington.

An informal survey was conducted with only two samples collected. A letter report was furnished and asbestos containing fire retardant was found to be present in the work environment. Informal procedures were recommended to be followed.

After 14 Dec 87

o March 1989 Arctic Slope Consulting Group, Fairbanks

Laboratory Used: Northern Testing Laboratories, Fairbanks

A thorough survey was conducted where suspect building material samples were analyzed; minimum samples were taken to confirm and support previous data. Asbestos report and management plan were developed. Management plan emphasized recommended response actions, cost estimates, O & M procedures, and in-house asbestos plan management and administration.

**Appendix B-1 SUMMARY
Alaska State Museum - Juneau
General Priorities**

Asbestos Material Type	Friability	Location	Quantity	Hazard Potential	Priority
Sprayed-on Fireproofing	F	Throughout Bldg	8,000 CF	6	2
Acoustical Material	D	Lobby Area/ Ramp Ceiling	2,045 SF	4	4
Tank Insulation	D	Boiler Rm 011	44 SF	3	5
Pipe Insulation <= 4" Dia. > 4" Dia.	D	Throughout Bldg	1,125 LF 100 LF	3*	5*
Fitting Insulation <= 4" Dia. > 4" Dia.	D	Throughout Bldg	175 EA 50 EA	3*	5*
Vinyl Asbestos Tile - Known	N	Rms 109,113,117, 202,205,206,207, 208,209,210,211	1,300 SF	2	6
Vinyl Asbestos Tile - Assumed to be under carpet	N	Rms 101,102, Recept-Gift Shop, 108,112,114,115, 116,201,212	11,320 SF	1	7

* Damaged thermal insulation would have Priority 3

**Appendix B-1 SUMMARY
Alaska State Museum - Juneau
Special Case Priorities**

Asbestos Material Type	Friability	Location	Quantity	Hazard Potential	Priority
Sprayed-on Fireproofing	F	Elevator Shaft & Top of Elevator	60 CF	7	1
Sprayed-on Fireproofing	F	Boiler Rm 011 Fan Room 012	290 CF	7	1
Sprayed-on Fireproofing	F	Janitor 117 Access under Ramp	285 CF	6	2 Post Asbestos Signs
Sprayed-on Fireproofing	F	Mech./Utility Shaft 013 (runs from basement to 2nd floor)	50 CF	6	2
Water Damaged Ceiling Tile	D	Storage 09 Ground Floor	200 SF	6	2
Damaged Fittings and Hard Pipe Insulation	F	Throughout Building*	15 EA* 100 LF*	5	3

* From ASCG's onsite survey, approximately 5% of the fittings and hard pipe insulation can be assumed to be damaged.

B - 2

MATERIALS SAMPLED

B - 2

MATERIALS SAMPLED

Asbestos Materials Survey
Materials Sample and Checked

Functional Areas -
 "A" = Gallery Area
 "B" = Employee Office Area
 "C" = Outside Museum

ITEM TYPE
 S = SURFACING MATERIALS
 S-FP - Sprayed on Fireproofing
 S-AS - Acoustical Spray
 T = THERMAL SYSTEMS INSULATION
 T-AC - Aircell
 T-B - Boiler or Tank
 T-HF - Hard Fitting
 T-HP - Hard Pipe
 T-C - Chimney
 T-FG - Fiberglass
 M = MISCELLANEOUS
 M-BP - Building Paper
 M-CB - Cementitious Board

ITEM TYPE (cont)
 M-CI - Ceiling Tile
 M-M - Mastic or Adhesive
 M-WB - Wallboard
 M-VI - Vinyl Tile Flooring
 M-R - Roofing
 M-RC - Rubber Composites
 M-JC - Joint Compound, Spackle
 M-A - Air
 M-D - Dirt, Dust
 M-TX - Textiles, Fabrics
 M-PC - Paints, Coatings
 M-TC - Troweled on Cementitious Mat.
 M-O - Other

CONDITION
 1 - Good (Undamaged)
 2 - Fair (Damaged)
 3 - Poor (Severely Damaged)

RESULTS
 Y - Asbestos Present
 (Tested or Assumed)
 N - Asbestos not Present

Func Area	Sample Number	Log#	Type	Remarks	Location	Results	Con- dition	Asbestos Content	Non-Asbestos Content
"A"	MA-1	1.0	M-A		Varies	N	0		.031 f/cc
"A"	MB-2A	2.0	M-TC		Main Lobby Area #102	N	1		25 Cellulose 75 Non-Fibrous
"A"	MB-4	14.0	M-JC	Interior Partition	Exterior Wall of Gift Shop in Gallery 107	N	1		85 Cellulose 5 Mineral Wool 10 Non-Fibrous
"A"	MB-5	15.0	M-RC	Fan Flex Connector Sample	Janitor 117	N	1		70 Glass Fiber 30 Non-Fibrous
"A"	MB-6A	16.0	M-WB		Janitor 117 Access	N	2		40 Glass Fiber 60 Non-Fibrous (Plaster) 95 Cellulose 5 Non-Fibrous (Backing)
"A"	MB-6B	18.0	M-WB		Janitor 117 Access	N	2		5 Glass Fiber 10 Cellulose 85 Non-Fibrous
"A"	MA-7	19.0	M-A		Varies	N	0		0.031 f/cc
"A"	MB-6C	21.0	M-JC	Behind Outlet	Display 116 Ramp Area	N	1		5 Glass Fiber 95 Non-Fibrous (Plastic) 90 Glass Fiber 10 Non-Fibrous (Backing)
"A"	MB-9	24.0	M-D		Gallery 212 at Vent	N	3		20 Cellulose 20 Synthetics 60 Non-Fibrous
"A"	MB-2B	3.0	M-TC		Main Lobby Area 102	Y	1	1-2 Chrysotile	20 Cellulose 78 Non-Fibrous
"A"	MB-2C	4.0	M-TC		Gallery 213 Ceiling (End of Ramp)	Y	1	1-2 Chrysotile	20 Cellulose 78 Non-Fibrous

Func. Area Number	Sample Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"A"	MB-3A	6.0 S-FP	Fireproofing on All Horizontal Beams 8" to 12" Overspray	Display Gallery 115	Y	2	15 Chrysotile	85 Non-Fibrous
"A"	MB-3B	7.0 S-FP	Fireproofing on all Horizontal Beams 8" to 12" Overspray	Display Gallery 115	Y	2	15 Chrysotile	85 Non-Fibrous
"A"	MB-3C	8.0 S-FP	Fireproofing on all Horizontal Beams 8" to 12" Overspray	Display Gallery 115	Y	2	10 Chrysotile	90 Non-Fibrous
"A"	MB-8	22.0 S-FP	1-1.5" Thick on Beams, Pans, and HVAC Equipment, Lots of Debris	Gallery 201	Y	2	20 Chrysotile	80 Non-Fibrous
"B"	MB-10A	25.0 M-VT	Tile Underlying ALL Office Area 2nd Level	Custodian/ Storage Floor 2	M	1		>99 Non-Fibrous
"B"	MB-10C	28.0 M-VT		Hallway to Bathrooms Floor 1	M	1		2 Cellulose 98 Non-Fibrous
"B"	MB-11	29.0 M-RC		Hallway to Bathrooms Floor 1	M	1		>99 Non-Fibrous
"B"	MB-12	34.0 S-FP	Should be <1% (New Material) 1985 Construction	Basement of New Mechanical Room Storage Area	M	2		35 Cellulose 35 Glass Fibers 30 Non-Fibrous
"B"	MB-13	43.0 M-CT	Total Quantity of Rooms 05 and 06	Offices 06 Ground Floor	M	1		60 Cellulose 30 Mineral Wool 10 Non-Fibrous
"B"	MA-14	58.0 M-A		Ground Floor Vent Room 012	M	0		0.004 f/cc
"B"	MB-10B	26.0 M-VT		Custodian 113 Floor 1	Y	1	30 Chrysotile (mastic)	70 Non-Fibrous

B - 3

SUMMARY OF FIELD DATA & NOTES

B - 3
FIELD DATA/NOTES

ASCG

AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 37161

Project Name: Museum

<p>FUNCTIONAL AREA CODES "A" = Gallery Area "B" = Employee Office Area "C" = Outside Museum</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (Cont) M-CT - Ceiling Tile M-H - Mastic or Adhesive M-MB - Maltboard M-VT - Vinyl Tile Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other</p>	<p>ITEM TYPE (Cont) F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>FRIABILITY F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged)</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L = Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	By	Area	Location	Func	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
1.0	03/06/89	RLS KVE RBB	A	Varies		Personnel Air Sample on RBB 2 hr @ 3 l/min	MA-1	M-A											
2.0	03/06/89	RLS KVE RBB	A	Main Lobby Area #102		Spackling Acoustical Material	MB-2A	M-TC	F	1	2	H	L	L			10-56	Spackling Acoustical Material	
3.0	03/06/89	RLS KVE RBB	A	Main Lobby Area 102		Spackling Acoustical Material	MB-2B	M-TC	F	1	2	H	L	L			11-3	Spackling Acoustical Material	
4.0	03/06/89	RLS RBB KVE	A	Gallery 213 Ceiling (End of Ramp)		Spackling Acoustical Material	MB-2C	M-TC	F	1	2	H	L	L			14-46	Spackling Acoustical Material	
5.0	03/06/89	RLS RBB KVE	A	Main Lobby and Upper Gallery Ceiling		Spackling Acoustical Material		M-TC	F	1	2	H	L	L	1,200	SF			Total quantity of Sample MB-2A,B,C
6.0	03/06/89	RLS RBB KVE	A	Display Gallery 115		Sprayed on Fireproofing Beam Col. 7C and 7D	MB-3A	S-FP	F	2	3	L	L	L			11-30	Sprayed on Fireproofing Sample	Fireproofing on All Horizontal Beams 8" to 12" Overspray
7.0	03/06/89	RLS RBB KVE	A	Display Gallery 115		Sprayed on Fireproofing Beam Col. 7C and 7D	MB-3B	S-FP	F	2	3	L	L	L			11-30	Sprayed on Fireproofing	Fireproofing on all Horizontal Beams 8" to 12" Overspray
8.0	03/06/89	RLS RBB KVE	A	Display Gallery 115		Sprayed on Fireproofing Beam at Col. 7C and 7D	MB-3C	S-FP	F	2	3	L	L	L			11-30	Sprayed on Fireproofing	Fireproofing on all Horizontal Beams 8" to 12" Overspray
9.0	03/06/89	RLS RBB KVE	A	Display Gallery 115		Photo Above Lay-in Ceiling											11-35	Debris on Ductwork	
10.0	03/06/89	RLS RBB KVE	A	Display Gallery 115		Photo Above Lay-in Ceiling											11-36	Ductwork Above Lay-in Ceiling Gallery 115	

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 37161

Project Name: Museum

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIBILITY	ACCESS (cont)
"A" = Gallery Area "B" = Employee Office Area "C" = Outside Museum	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged M = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet
T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass	M = MISCELLANEOUS M-SP - Building Paper M-CB - Cementitious Board			

Log#	Date	Func By	Area Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit Photos	Photo Comments	Additional Remarks
11.0	03/06/89	RLS RBB KVE	A	Solid Ceiling Above Gift Shop										11-50	Looking SE at Corner Column	Crumbs of Overspray 2 EA Visible
12.0	03/06/89	RLS RBB KVE	A	In Front of Reception Desk										12- 2	Looking South	
13.0	03/06/89	RLS RBB KVE	A	In Front of Reception Desk										12- 3	Looking North	
14.0	03/06/89	RLS RBB KVE	A	Exterior Wall of Gift Shop in Gallery 107	NB-4	M-JC	D	1	2	M	L	L		12-18	Interior Wall Sample	Interior Partition
15.0	03/06/89	RLS RBB KVE	A	Janitor 117	NB-5	M-RC	M	1	2	M	M	M	2 EA	12-34	Fan Flex Connector Sample	Fan Flex Connector Sample
16.0	03/06/89	RLS RBB KVE	A	Janitor 117 Access	NB-6A	M-WB	D	2	2	M	L	L				
17.0	03/06/89	RLS RBB KVE	A	Janitor 117 Access										12-41 12-42	Access Area in Janitor 117	Should Post Asbestos Sign in Janitor 117 Near Access
18.0	03/06/89	RLS RBB KVE	A	Janitor 117 Access	NB-6B	M-WB	D	2	2	M	L	L		12-50	Sample of Original Sheetrock	
19.0	03/06/89	RBB KVE RLS	A	Varies	NA-7	M-A										
20.0	03/06/89	RLS RBB KVE	A	Dis. Gallery 116 Ramp Area										14-30	3 Each of Eagle West Gallery	

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Log#	Date	By	Area	Location	Func	Log Comment	Sample Number	Type Code	Friability	Con- dition	Access	Contact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
21.0	03/06/89	RLS RBB KWE	A	Display 116 Ramp Area	A	Spackle, Tape, Sheetrock (Original)	MB-6C	M-JC	D	1	2	H	L	L			14-35	Original Sheetrock Sample	Behind Outlet
22.0	03/06/89	RLS RBB KWE	A	Gallery 201	A	Sprayed on Fireproofing Debris 2nd Level Above Lay-in Ceiling	MB-8	S-FP	F	2	3	M	L	L			14-54	Looking East Above Lay-in Ceiling	1-1.5" Thick on Beams, Pans, and HVAC Equipment, Lots of Debris
23.0	03/06/89	RLS RBB KWE	A	Conference Room 210	A	Photo - Lots of Debris											15-14	Looking Northeast Above Lay-in Ceiling	Work Above Here Should be Minimized
24.0	03/06/89	RLS RBB KWE	A	Gallery 212 at Vent	A	Vipe Sample @ Vent Intake	MB-9	M-D	F	3	2	H	M	M			15-21	Vipe Sample Taken @ Vent Intake	
25.0	03/06/89	RLS RBB KWE	B	Custodian/ Storage Floor 2	B	9"x9" White Floor Tile and Mastic	MB-10A	M-VT	D	1	2	M	L	L			15-48	Floor Tile Sample	Tile Underlying All Office Area 2nd Level
26.0	03/06/89	RLS RBB KWE	B	Custodian 113 Floor 1	B	9"x9" Torq. Tile and Mastic	MB-10B	M-VT	D	1	2	M	L	L			16-11	Floor Tile Sample	
27.0	03/06/89	RLS RBB KWE	B	Storage 112 Above Ceiling	B	Photos - From Ceiling Access											16-18 16-19 16-20	Looking South, West, and East	Looking, South, NW and NE
28.0	03/06/89	RLS RBB KWE	B	Hallway to Bathrooms Floor 1	B	9"x9" Torq. Tile	MB-10C	M-VT	D	1	2	H	L	L			16-31	Floor Tile Sample	
29.0	03/06/89	RLS RBB KWE	B	Hallway to Bathrooms Floor 1	B	Cove Base and Mastic	MB-11	M-RC	D	1	2	H	L	L			16-31	Cove Base Sample	
30.0	03/06/89	RLS RBB KWE	B	Mens Bathroom 110	B	Photo - Access in Bathroom											16-35	Wall Access in Mens Bathroom 110	

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Log#	Date	Func Area	By	Location	Log Comment	Sample Number	Type Code	Friability	Condit ion	Access	Con tact	Vibr ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
31.0	03/07/89	RLS RBB KUE	B	Ground Floor Corridor 3 Above Lay-in Ceiling	Hard Fittings Above Corridor 03		T-HF	D	2	3	L	L	L	10	EA	8-16	Looking Above Lay-in Ceiling @ Corridor 3	All Beams Sprayed on Fireproofing
32.0	03/07/89	RLS RBB KUE	B	Ground Floor Receiving 01	Hard Fittings Above Lay-in Ceiling		T-HF	D	1	3	L	L	L	5	EA			In SW Corner
33.0	03/07/89	RLS RBB KUE	B	Ground Floor Receiving 01	Hard Fittings		T-HF	D	1	2	M	L	L	1	EA			
34.0	03/07/89	RLS RBB KUE	B	Basement of New Mechanical Room Storage Area	Fireproofing on all Beams, Excessive Overspray Above Lay-in Ceiling	MB-12	S-FP	F	2	3	L	L	L			8-40	Fireproofing Sample	Should be <1% (New Material) 1985 Construction
35.0	03/07/89	RLS RBB KUE	B	Boiler Room 011	Hard Fittings		T-HF	D	2	2	M	M	M	72	EA			See Photos 9-1, 9-12
36.0	03/07/89	RLS RBB KUE	B	Boiler Room 011	Hard Pipe		T-HP	D	2	2	M	M	M	110	LF			See Photos 9-11, 9-12
37.0	03/07/89	RLS RBB KUE	B	Boiler Room 011	Photos - General Boiler Room Layout											9-11 9-12	6 Each General Boiler Room Layout	Beams Spray on Fireproofing Exposed Dirty and Dusty
38.0	03/07/89	RLS RBB KUE	B	Boiler Room 011	Tank Insulation		T-B	D	2	2	M	M	M	44	SF			Length - 6' dia. - 88"
39.0	03/07/89	RLS RBB KUE	B	Plenum Room Near Elevator	General Photo Looking Vert. Up, Utility Shaft Full Height of Building											9-25	Looking Up Utility Shaft	Sheetrock lined Struct. Beams Sprayed-on Fireproofing
40.0	03/07/88	RLS RBB KUE	B	Systems Control	Photo - Debris on Floor, HVAC Work											9-27	Debris on Floor and HVAC Equipment	Exposed Fireproofing on Beams. Overspray on Pans.

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AHERA TYPE SURVEY FORMAT

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Project Number: 37161

Project Name: Museum

<p>FUNCTIONAL AREA CODES "A" = Gallery Area "B" = Employee Office Area "C" = Outside Museum</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-SP Sprayed on Fireproofing S-AS Acoustical Spray</p> <p>T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass</p> <p>M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (cont) M-CT - Ceiling Tile M-H - Mastic or Adhesive M-HB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing Composites M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Traveled On Cementitious Mat. M-O - Other</p>	<p>FRIABILITY F = Friable D = Friable if Damaged M = Non-Friable</p> <p>CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged)</p> <p>ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-in Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum</p> <p>CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low</p> <p>UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	Func By Area	Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr- ation	Air Erosion	Quantity	Unit	Photo Comments	Additional Remarks
41.0	03/07/89	RLS RBB KWE	B Conservation Room (Lab)	Observation - Conservation Room all Sheetrock												
42.0	03/07/89	RLS RBB KWE	B Work Room 05 Ground Floor	Large Fittings >12" Dia. Above Lay-in Ceiling		T-HF	D	1	3	L	L	L	2	EA		Beams Typical, Overspray, Minimal Debris
43.0	03/07/89	RLS RBB KWE	B Offices 06 Ground Floor	Ceiling Tile, White Perforated	MB-13	M-CT	D	1	2	M	L	L	640	SF	Ceiling Tile Sample	Total Quantity of Rooms 05 and 06
44.0	03/07/89	RLS RBB KWE	B Work Room 08 Ground Floor	Large Molded Fittings >12" Dia.		T-HF	D	1	3	L	L	L	2	EA		Beams Typical, Overspray
45.0	03/07/89	RLS RBB KWE	B Storage 09 Ground Floor	Large Hard Fittings >12" Dia.		T-HF	D	1	3	L	L	L	4	EA		
46.0	03/07/89	RLS RBB KWE	B Storage 09 Ground Floor	Hard Fittings <12" Dia.		T-HF	D	1	3	L	L	L	10	EA		
47.0	03/07/89	RLS RBB KWE	B Storage 09 Ground Floor	Photo - General Above Ceiling		M-CT	D	3	3	L	L	L	6,144	SF	9-52	Same Ceiling Tile as Sampled. Extensive Water Damage in One Area (200 SF)
48.0	03/07/89	RLS RBB KWE	B Boiler Room 011 Ground Floor	Photo - Beam and Overspray Typical		T-HF	D	1	2	M	M	M	5	EA	10- 5 10- 7	Typical Overspray and Fireproofing
49.0	03/07/89	RLS RBB KWE	B Fan Room 012 Ground Floor	Large Hard Fitting >12" Dia.		T-HF	D	1	2	M	M	M	40	EA		
50.0	03/07/89	RLS RBB KWE	B Fan Room 012 Ground Floor	Hard Fitting <12" Dia.		T-HF	D	2	2	M	M	M				

ASCG

ASCG TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 37161

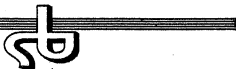
Project Name: Museum

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIBILITY	ACCESS (cont)
"A" = Gallery Area	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Employee Office Area	S-FP Sprayed on Fireproofing	M-H - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Outside Museum	S-AS Acoustical Spray	M-UB - Wallboard	M = Non-Friable	8 - In Plenum
	T = THERMAL SYSTEMS INSULATION	M-VI - Vinyl Tile Flooring		CONTACT, VIBRATION, EROSION
	T-AC - AirCell	M-R - Roofing		H - High
	T-B - Boiler or Tank	M-RC - Rubber Composites		M = Moderate
	T-HF - Hard Fitting	M-JC - Joint Compound, Spackle		L = Low
	T-HP - Hard Pipe	M-A - Air		UNITS
	T-C - Chimney, Stack	M-D - Dirt, Dust		CF - Cubic Feet
	T-FG - Fiberglass	M-TX - Textiles, Fabrics		CY - Cubic Yards
	M = MISCELLANEOUS	M-PC - Paints, Coatings		EA - Each
	M-BP - Building Paper	M-TC - Troweled On Cementitious Mat.		GAL - Gallons
	M-CB - Cementitious Board	M-O - Other		LF - Linear Feet
				SF - Square Feet

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
51.0	03/07/88	RLS RBB KVE	B	Fan Room 012 Ground Floor	Large Hard Pipe >12" Dia.		T-HP	D	1	2	H	M	M	8	LF			
52.0	03/07/89	RLS RBB KVE	B	Fan Room 012 Ground Floor	Hard Pipe <12" Dia.		T-HP	D	1	2	M	M	M	60	LF			
53.0	03/07/89	RLS RBB KVE	B	Fan Room 012 Ground Floor	General Photo											10-11 10-12	General Layout of Fan Room 012	Sprayed on Fireproofing is Exposed
54.0	03/07/89	RLS RBB KVE	A	Gallery 2nd Floor	Gallery Interior Walls		M-UB	D	1	2	H	L	L	2,560	SF			Sheetrock, Tape, and Spackle
55.0	03/07/89	RLS RBB KVE	A	Gallery 1st Floor	Gallery Interior Walls		M-UB	D	1	2	H	L	L	3,400	SF			Sheetrock, Tape and Spackle
56.0	03/07/89	RLS RBB KVE	B	Elevator Shaft	Observation - On Ground Floor Looking Above Elev. Shaft											10-50 10-50 10-51	Looking SW (up) Looking SE (up) Looking NE (up)	Light Debris on top of Elevator
57.0	03/07/89	RLS RBB KVE	B	Fan Room 012 Ground Floor	Fan Flex Connector		M-RC	M	1	2	M	M	M	3	EA			
58.0	03/09/89	RW	B	Ground Floor Vent Room 012	Air Sample in Ductwork	MA-14	M-A											
59.0	03/07/89	RLS KVE RBB	C	Outside Museum	Photo of Museum and New Mechanical Room											11-10	Museum and New Mechanical Room	

B - 4
DRAWINGS

B - 4
DRAWINGS



LEGEND

ITALIC Samples Taken by ASCG.
BOLD Samples Represent Confirmed ACM.

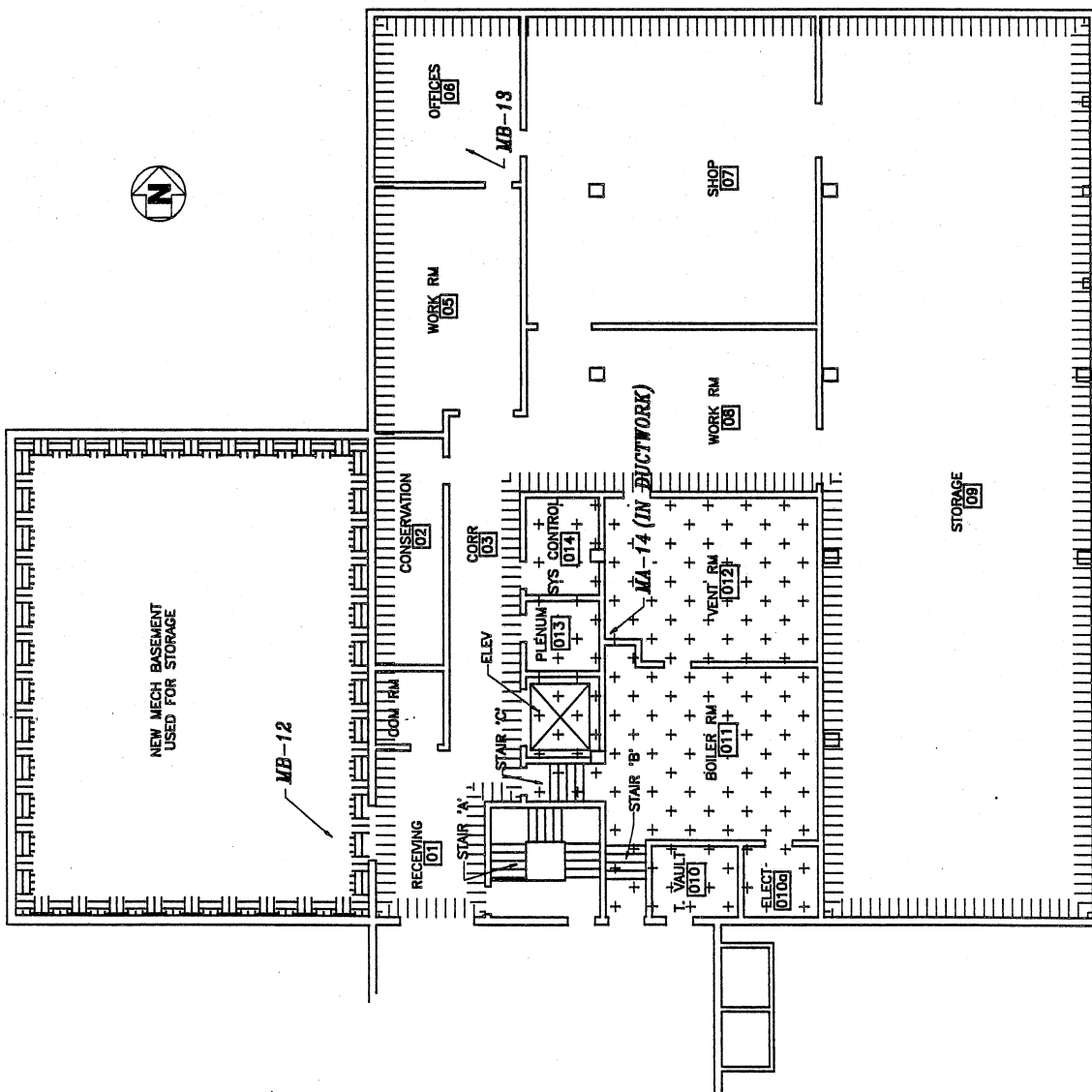
Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)

Sprayed-on ACM Fireproofing above Suspended or Built In Ceiling.

Sprayed-on non-ACM Fireproofing

NOTES

1. STRUCTURAL MEMBERS SPRAYED WITH ACM FIREPROOFING. FIREPROOFING NOT SHOWN AS EXPOSED IS MASKED BY SUSPENDED CEILING.

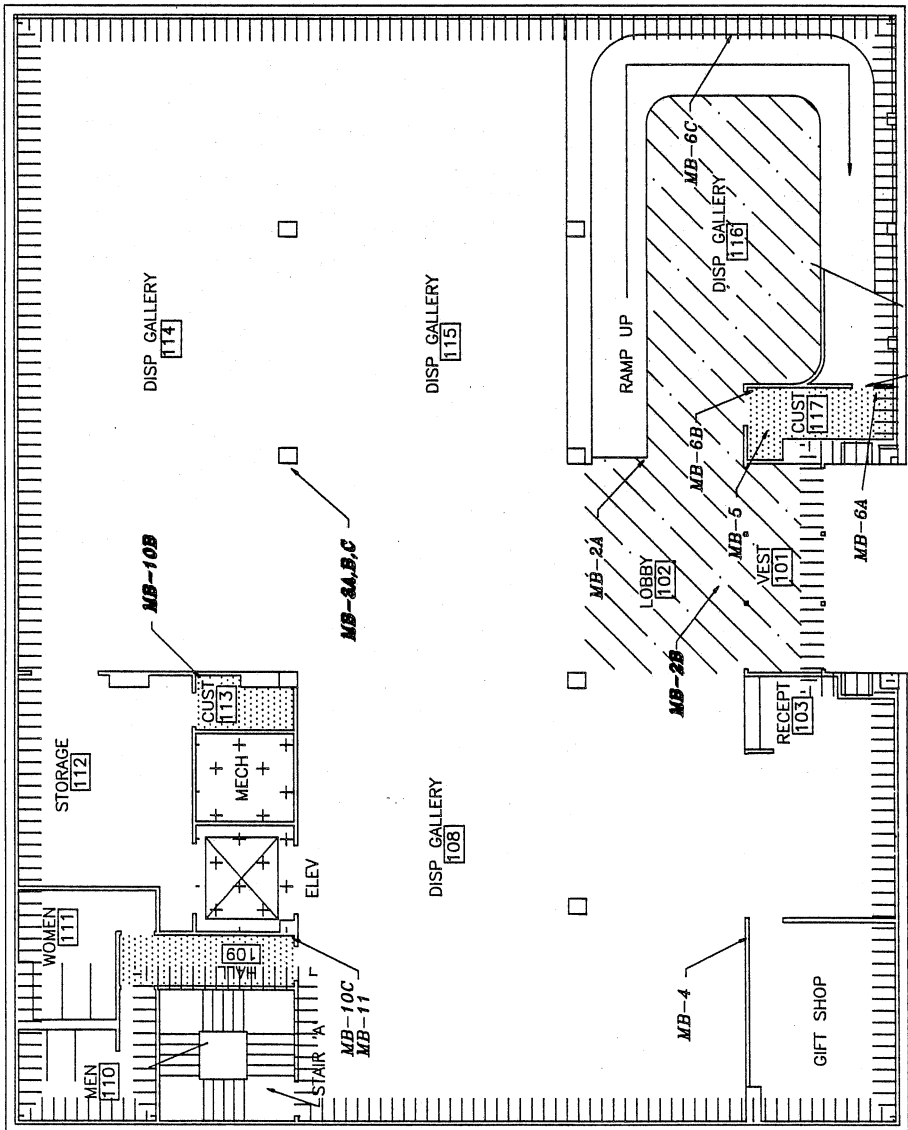


LEGEND

- ITALIC* Samples Taken by ASGG.
BOLD Samples Represent Confirmed ACM.
- Vinyl Asbestos Tile - Known
 - Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 - Sprayed-on Fireproofing above Suspended or Built In Ceiling.
 - Sprayed-on ACM Acoustical Surfacing

NOTES

1. STRUCTURAL MEMBERS SPRAYED WITH ACM FIRE-PROOFING. FIREPROOFING NOT SHOWN AS EXPOSED IS MASKED BY SUSPENDED CEILING.
2. OTHER VINYL ASBESTOS TILE IS ASSUMED TO BE UNDER CARPET AREAS.



ACCESS LEADS TO AREA UNDERNEATH RAMP. ASBESTOS SIGNS SHOULD BE POSTED AT ACCESS OPENING. SPRAY-ON ACM FIRE-PROOFING IS EXPOSED IN THIS AREA.

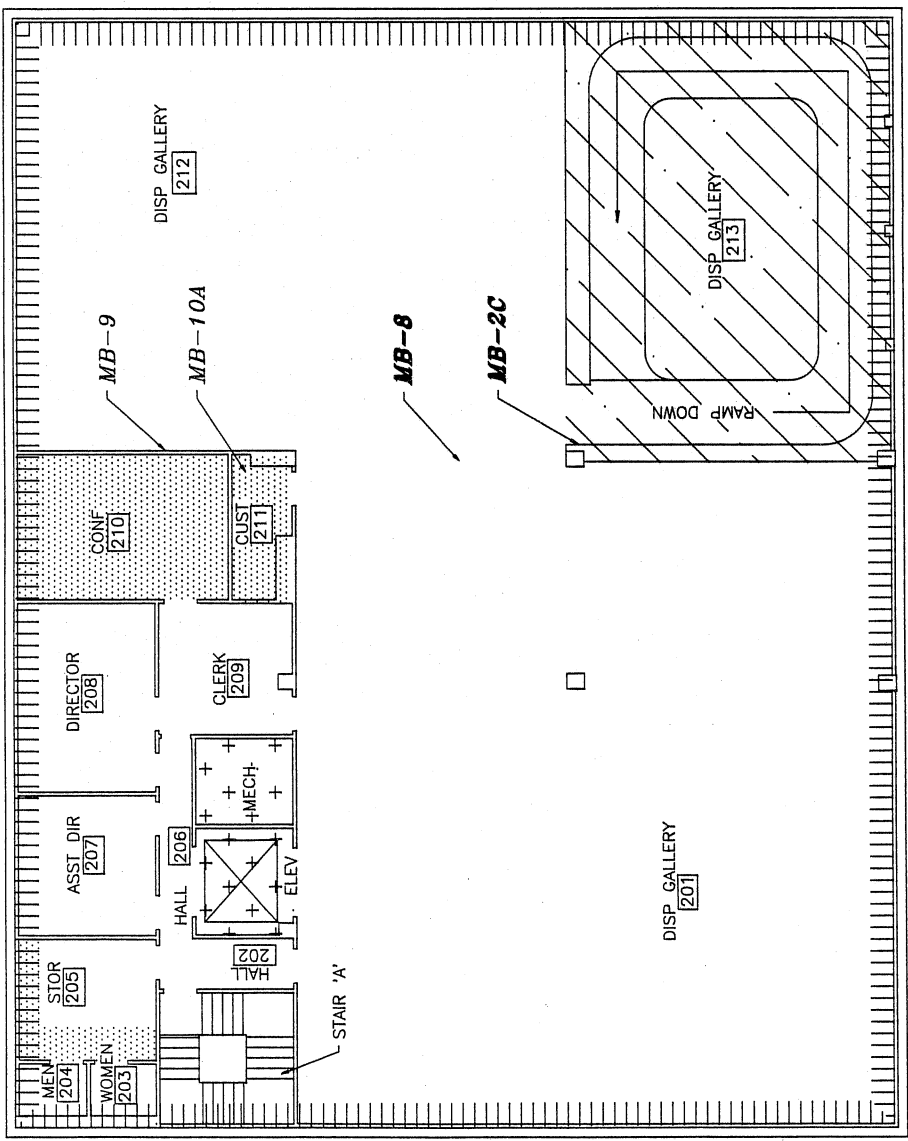
LEGEND

ITALIC Samples Taken by ASCC.
BOLD Samples Represent Confirmed ACM.

Vinyl Asbestos Tile - Known
 Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 Sprayed-on Fireproofing above Suspended or Built in Ceiling.
 Sprayed-on ACM Acoustical Surfacing

NOTES

1. STRUCTURAL MEMBERS SPRAYED WITH ACM FIRE-PROOFING. FIREPROOFING NOT SHOWN AS EXPOSED IS MASKED BY SUSPENDED CEILING.
2. OTHER VINYL ASBESTOS TILE IS ASSUMED TO BE UNDER CARPET AREAS.



B - 5

SELECT PHOTOGRAPHS & PHOTO LOG

B - 5
PHOTOS/PHOTO LOG

**Asbestos Materials Survey
Photograph Log**

* Photo Used in Report

Functional Areas -

"A" = Gallery Area

"B" = Employee Office Area

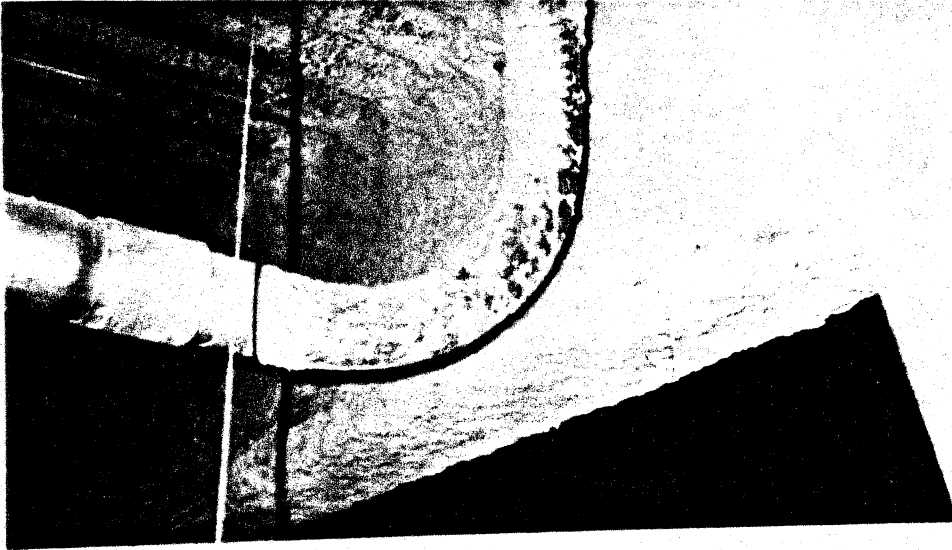
"C" = Outside Museum

Hr./Min.	Date	By	FA	Location	Comment
8 - 16	03/07/89	RLS RBB KWE	"B"	Ground Floor Corridor 3 Above Lay-in Ceiling	Looking Above Lay-in Ceiling @ Corridor 3
8 - 40	03/07/89	RLS RBB KWE	"B"	Basement of New Mechanical Room Storage Area	Fireproofing Sample
9 - 11	03/07/89	RLS RBB KWE	"B"	Boiler Room 011	6 Each General Boiler Room Layout
* 9 - 12	03/07/89	RLS RBB KWE	"B"	Boiler Room 011	6 Each General Boiler Room Layout
9 - 25	03/07/89	RLS RBB KWE	"B"	Plenum Room Near Elevator	Looking Up Utility Shaft
9 - 27	03/07/88	RLS RBB KWE	"B"	Systems Control	Debris on Floor and HVAC Equipment
* 9 - 38	03/07/89	RLS RBB KWE	"B"	Offices 06 Ground Floor	Ceiling Tile Sample
9 - 52	03/07/89	RSL RBB KWE	"B"	Storage 09 Ground Floor	General Above Ceiling
10 - 5	03/07/89	RLS RBB KWE	"B"	Boiler Room 011 Ground Floor	Typical Overspray and Fireproofing
10 - 7	03/07/89	RLS RBB KWE	"B"	Boiler Room 011 Ground Floor	Typical Overspray and Fireproofing
10 - 11	03/07/89	RLS RBB KWE	"B"	Fan Room 012 Ground Floor	General Layout of Fan Room 012
10 - 12	03/07/89	RLS RBB KWE	"B"	Fan Room 012 Ground Floor	General Layout of Fan Room 012

Hr./Min.	Date	By	FA	Location	Comment
10 - 50	03/07/89	RLS RBB KWE	"B"	Elevator Shaft	Looking SW (up) Looking SE (up) Looking NE (up)
10 - 51	03/07/89	RLS RBB KWE	"B"	Elevator Shaft	Looking SW (up) Looking SE (up) Looking NE (up)
10 - 56	03/06/89	RLS KWE RBB	"A"	Main Lobby Area #102	Spackling Acoustical Material
11 - 3	03/06/89	RLS KWE RBB	"A"	Main Lobby Area 102	Spackling Acoustical Material
11 - 10	03/07/89	RLS KWE RBB	"C"	Outside Museum	Museum and New Mechanical Room
* 11 - 30	03/06/89	RLS RBB KWE	"A"	Display Gallery 115	Sprayed on Fire- proofing Sample
11 - 35	03/06/89	RLS RBB KWE	"A"	Display Gallery 115	Debris on Ductwork
11 - 36	03/06/89		"A"	Display Gallery 115	Ductwork Above Lay- in Ceiling Gallery 115
11 - 50	03/06/89	RLS RBB KWE	"A"	Solid Ceiling Above Gift Shop	Looking SE at Corner Column
12 - 2	03/06/89	RLS RBB KWE	"A"	In Front of Reception Desk	Looking South
* 12 - 3	03/06/89	RLS RBB KWE	"A"	In Front of Reception Desk	Looking North
12 - 18	03/06/89	RLS RBB KWE	"A"	Exterior Wall of Gift Shop in Gallery 107	Interior Wall Sample
12 - 34	03/06/89	RLS RBB KWE	"A"	Janitor 117	Fan Flex Connector Sample

Hr./Min.	Date	By	FA	Location	Comment
*12 - 41	03/06/89	RLS RBB KWE	"A"	Janitor 117 Access	Access Area in Janitor 117
12 - 42	03/06/89	RLS RBB KWE	"A"	Janitor 117 Access	Access Area in Janitor 117
12 - 50	03/06/89	RLS RBB KWE	"A"	Janitor 117 Access	Sample of Original Sheetrock
*14 - 30	03/06/89	RLS RBB KWE	"A"	Dis. Gallery 116 Ramp Area	3 Each of Eagle Nest Gallery
14 - 35	03/06/89	RLS RBB KWE	"A"	Display 116 Ramp Area	Original Sheetrock Sample
14 - 46	03/06/89	RLS RBB KWE	"A"	Gallery 213 Ceiling (End of Ramp)	Spackling Acoustical Material
*14 - 54	03/06/89	RLS RBB KWE	"A"	Gallery 201	Looking East Above Lay-in Ceiling
15 - 14	03/06/89	RLS RBB KWE	"A"	Conference Room 210	Looking Northeast Above Lay-in Ceiling
15 - 21	03/06/89	RLS RBB KWE	"A"	Gallery 212 at Vent	Wipe Sample Taken @ Vent Intake
15 - 48	03/06/89	RLS RBB KWE	"B"	Custodian/ Storage Floor 2	Floor Tile Sample
*16 - 11	03/06/89	RLS RBB KWE	"B"	Custodian 113 Floor 1	Floor Tile Sample
16 - 18	03/06/89	RLS RBB KWE	"B"	Storage 112 Above Ceiling	Looking South, West, and East
16 - 19	03/06/89	RLS RBB KWE	"B"	Storage 112 Above Ceiling	Looking South, West, and East

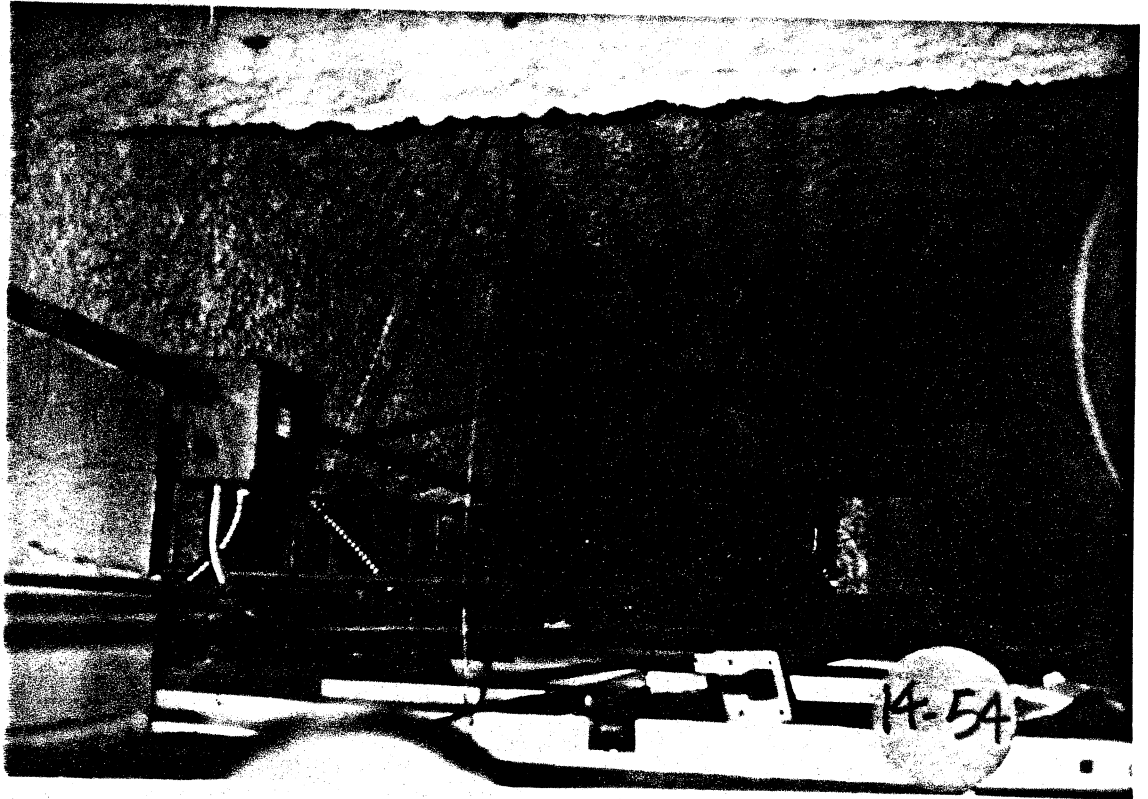
Hr./Min.	Date	By	FA	Location	Comment
16 - 20	03/06/89	RLS RBB KWE	"B"	Storage 112 Above Ceiling	Looking South, West, and East
16 - 31	03/06/89	RLS RBB KWE	"B"	Hallway to Bathrooms Floor 1	Floor Tile Sample
16 - 35	03/06/89	RLS RBB KWE	"B"	Mens Bathroom 110	Wall Access in Mens Bathroom 110



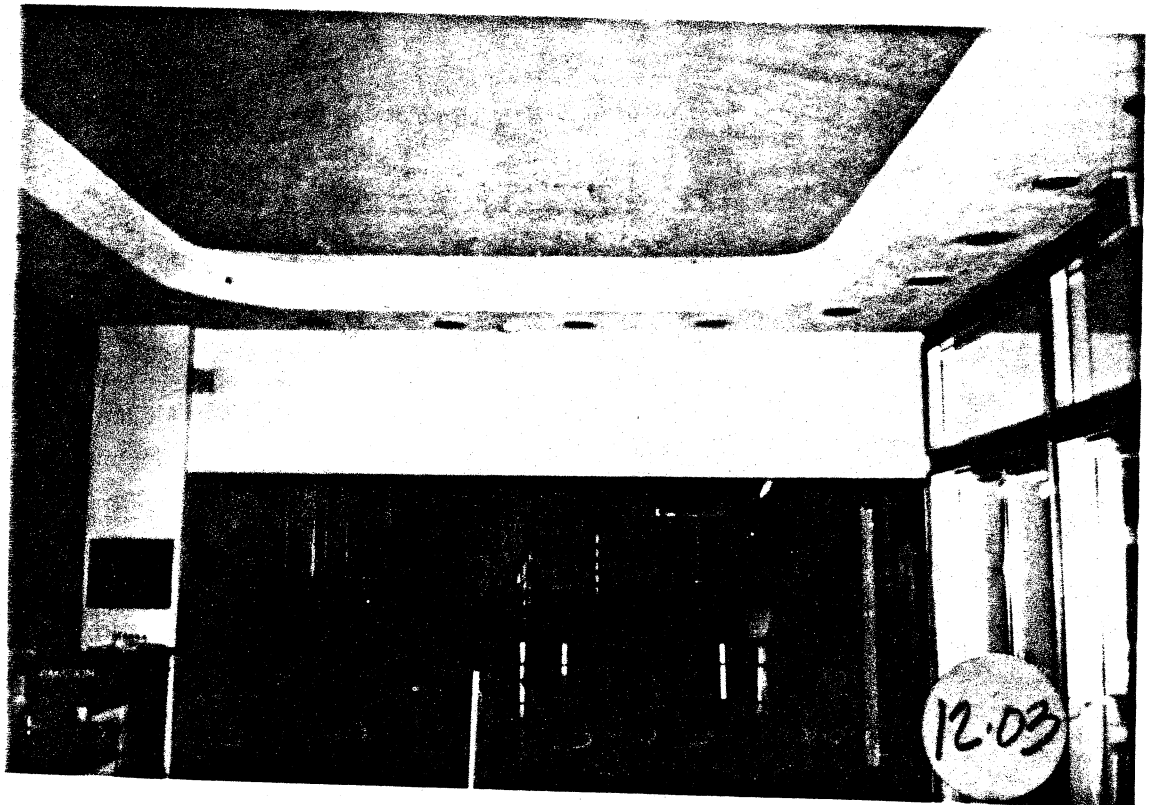
1. [11-30] Overspray



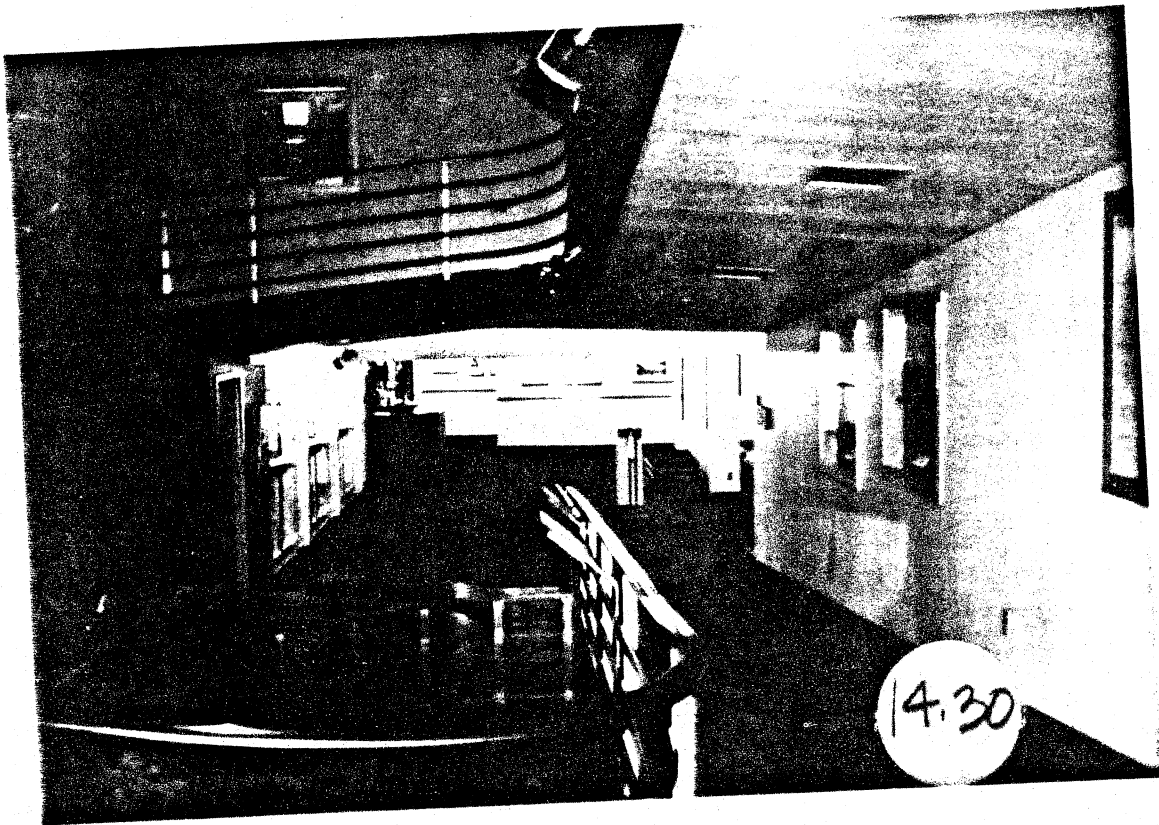
2. [12-41] Spray-on Fireproofing
Below Ramp in Gallery 116



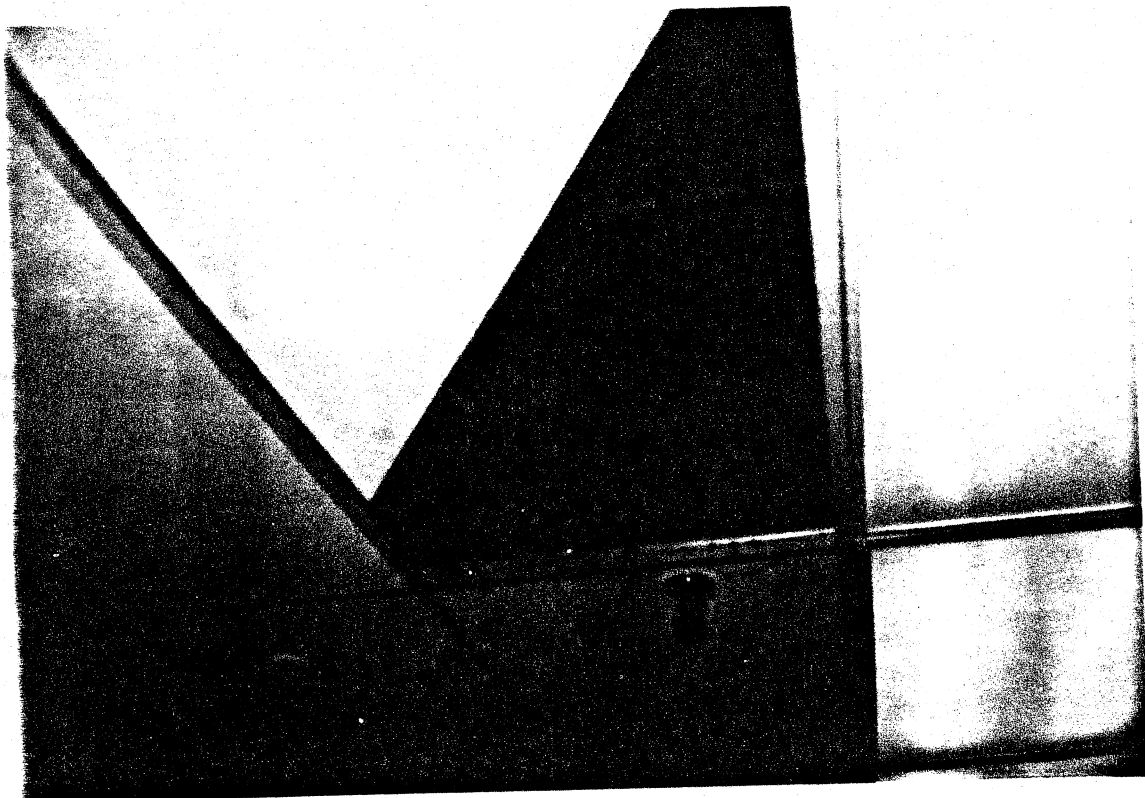
3. [14-54] Spray-on Fireproofing



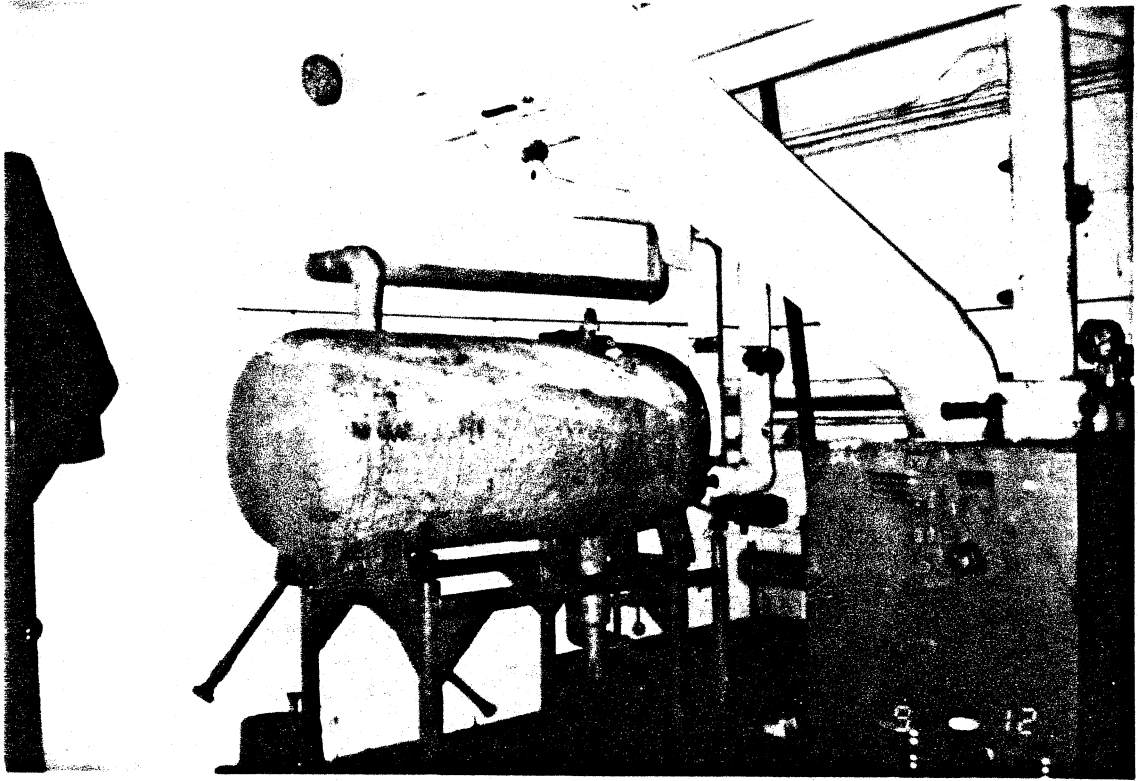
4. [12-03] Gallery Stipple Coat



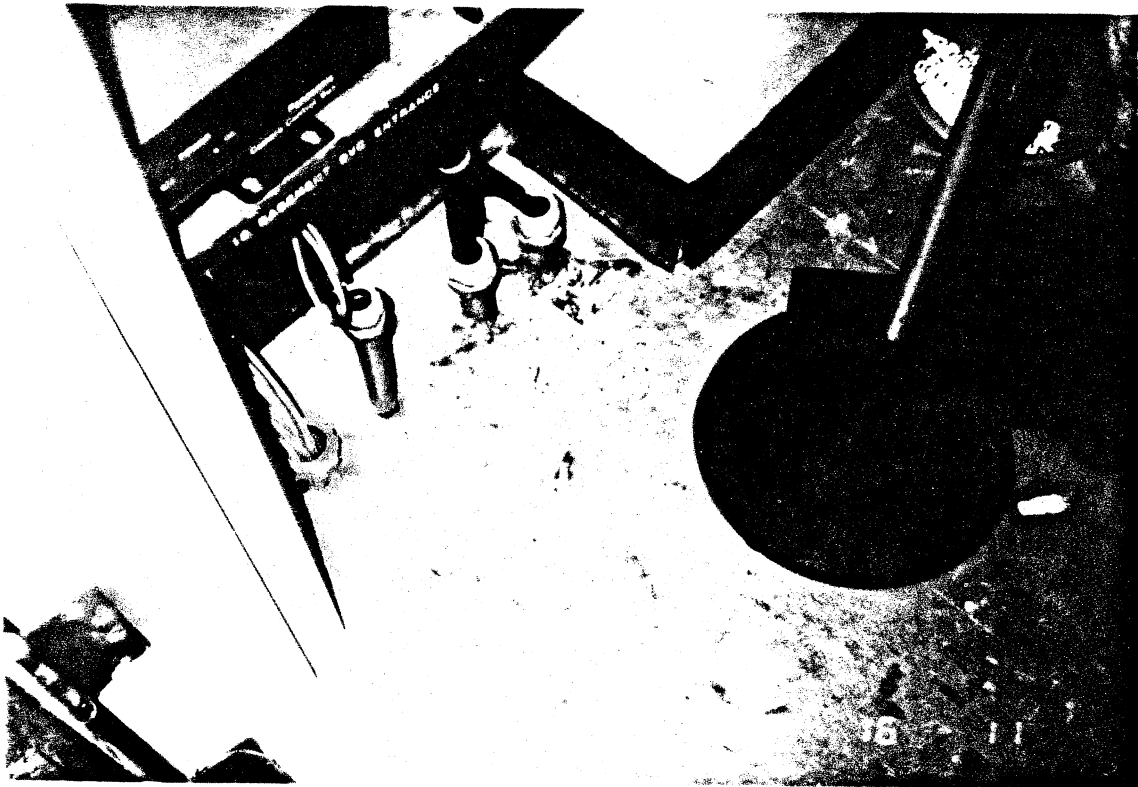
5. [14-30] Stipple Coat on Gallery Ceiling



6. [9-38] Ceiling Tile



7. [9-12] Tank and Pipe Insulation



8. [16-11] Floor Tile and Mastic

APPENDIX C
STATE OFFICE BUILDING SURVEY

APPENDIX C

C - 1

COVER SHEET INFORMATION

C - 1

COVER SHEET INFORMATION

**APPENDIX C-1
SUMMARY AND BACKGROUND**

BUILDING Juneau State Office Building
 333 Willoughby Avenue
 Juneau, Alaska

DOCUMENTS CONSULTED

Plans dated July 1971
John Graham & Co, and Linn A. Forrest Architects
State Office Building

Portfolio of Letters, Memorandums, and Reports concerning asbestos
at the Juneau State Office Building. Provided to ASCG from DOT/PF,
December 1988.

PREVIOUS INSPECTIONS & LABORATORY

Prior to 14 Dec 87

- o October 1984 Alaska Department of Labor - Voluntary Compliance
 Industrial Hygiene Consultative Inspection
 #Rp-4771-84-42-S.

Laboratory Used: Unknown

Voluntary Compliance was called upon to evaluate possible exposure
to asbestos and other air contaminants. Bulk samples were collected
in several areas including samples of dust. Sprayed-on fireproofing
on beams and pans was found to contain more asbestos than originally
thought. Several air samples were also taken in various locations
and exposure to asbestos was found to be below the permissible
exposure limit. The levels of the other air contaminants were also
below the current PEL's. A thorough report was provided of the
evaluation.

After 14 Dec 87

- o March 1988 State of Alaska, DOT/PF, Juneau
 Laboratory Used: Taylor Laboratories, Inc., Sitka

Fireproofing samples on every floor of the facility were taken for
a total of 26 bulk samples. Laboratory reports and floor plans with
the sample locations were the only documentation provided.

- o April 1988 Hazard Management, Inc., Sitka
 Laboratory Used: Taylor Laboratories, Inc., Sitka

Survey consisted of a visually inspecting the facility, obtaining
bulk samples of suspected asbestos containing materials, and
obtaining air samples in areas suspected of air borne asbestos. A
report summarizing the findings of the survey was furnished.

- o June 1988 Hazard Management, Inc., Sitka
Laboratory Used: Taylor Laboratories, Inc., Sitka

Additional samples taken and analyzed. Provided a supplement to asbestos report dated April 1988.

- o June 1988 Medical Director of Occupational Health,
Alaska Department of Labor

Informal walk-thru of the State Office Building. Recommendations for managing asbestos were given.

- o August 1988 State of Alaska - State Office Building Personnel
Laboratory Used: Montgomery Laboratories, Juneau

Eight samples were taken from various locations on Floor 6. Only Laboratory reports were furnished.

- o October 1988 Hazard Management, Inc., Juneau
Laboratory Used: Taylor Laboratories, Inc., Sitka

Two samples were taken of fireproofing material in Janitor's Room 1108. Only lab report furnished.

- o March 1989 Arctic Slope Consulting Group, Fairbanks

Laboratory Used: Northern Testing Laboratories, Fairbanks

A thorough survey was conducted where suspect building material samples were collected and analyzed; minimum samples taken to confirm and support previous data. Asbestos report and management plan were developed. Management plan emphasized recommended response actions, cost estimates, O & M procedures, and in-house asbestos plan management and administration.

**Appendix C-1 SUMMARY
Juneau State Office Building
General Priorities**

Asbestos Material Type	Friability	Location	Quantity	Hazard Potential	Priority	Remarks
Sprayed-on Fireproofing - Main Mechanical	F	Levels 6 & 7 All Main Mech Rms and Associated Plenums	5,525 CF	7	1	
Sprayed-on Fireproofing - Exposed in other areas	F	Throughout Bldg All other areas open to fire- proofing	10,125 CF	6	2	Includes elevator and mechanical areas on parking levels that have ACM.
Sprayed-on Fireproofing - Above ceilings	F	Throughout Bldg	106,000 CF	5	3	Includes lobby areas on all parking levels.
Fitting Insulation	D	Throughout Bldg	1,950 EA	3	5	
Vinyl Asbestos Tile - Known	N	Rm 701 Longevity Area	200 SF	2	6	

Asbestos Material Type	Friability	Location	Quantity	Hazard Potential	Priority	Remarks
Tank Insulation	D	Emergency Generator Rm 733	460 SF	2	6	Generator Exhaust Unit
Fire Brick	D	Boiler Rm 735	1,040 SF	2	6	
Sprayed-on Fireproofing - Parking Areas	F	Levels 1, 2 & 3	23,500 CF	1	7	All previous sampling shows fireproofing to be negative in parking areas only.
Vinyl Asbestos Tile Suspected	N	Throughout Building	7,300 SF	1	7	More sampling needed?

**Appendix C-1 SUMMARY
Juneau State Office Building
Special Case Priorities**

Asbestos Material Type	Friability	Location	Quantity	Hazard Potential	Priority
Sprayed-on Fireproofing	F	Elevator Shafts & Top of Elevators	2,250 CF	7	1
Sprayed-on Fireproofing	F	Loading Area 732	310 CF	6	2
Sprayed-on Fireproofing	F	Pipe Gallery 737	410 CF	6	2
Fittings Exposed to the Public	D	Loading Area 732 Stairway #3 (Level 6-7)	32 EA	5	3
Damaged Fittings	F	Throughout Building	100 EA*	5	3

* From ASCG's onsite survey, approximately 5% of the fittings can be assumed to be damaged.

C - 2

MATERIALS SAMPLED

C - 2

MATERIALS SAMPLED

Asbestos Materials Survey
Materials Sample and Checked

Functional Areas -
 "A" = Parking
 "B" = Mechanical Rooms
 "C" = Stairwell/Corrid./Elev.Lobby/Plaza
 "D" = Storage, Janitor, Maintenance
 "E" = Office Areas

ITEM TYPE
 S = SURFACING MATERIALS
 S-FP - Sprayed on Fireproofing
 S-AS - Acoustical Spray
 T = THERMAL SYSTEMS INSULATION
 T-AC - Aircell
 T-B - Boiler or Tank
 T-HF - Hard Fitting
 T-HP - Hard Pipe
 T-C - Chimney
 T-FG - Fiberglass
 M = MISCELLANEOUS
 M-BP - Building Paper
 M-CB - Cementitious Board

ITEM TYPE (cont)
 M-CT - Ceiling Tile
 M-M - Mastic or Adhesive
 M-WB - Wallboard
 M-VT - Vinyl Tile Flooring
 M-SV - Sheet Vinyl Flooring
 M-R - Roofing
 M-RC - Rubber Composites
 M-JC - Joint Compound, Spackle
 M-A - Air
 M-D - Dirt, Dust
 M-TX - Textiles, Fabrics
 M-PC - Paints, Coatings
 M-TC - Troweled on Cementitious Mat.
 M-O - Other

CONDITION
 1 - Good (Undamaged)
 2 - Fair (Damaged)
 3 - Poor (Severely Damaged)
 RESULTS
 Y - Asbestos Present
 (Tested or Assumed)
 N - Asbestos not Present

Func Area	Sample Number	Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"A"	SA-2	1.0	M-A		Varies Parking Areas	N	0		0.020 f/cc
"A"	SB-1C	5.0	S-FP		Parking Level 1 Col. J6	N	3		40 Cellulose 60 Non-Fibrous
"A"	SB-3	15.0	T-HF	Weird - Soft In High Humidity Parking	Parking Level 2 Sample Taken Near Col. J2	N	1		20 Mineral Wool 50 Cellulose 30 Non-Fibrous
"A"	SB-4A	21.0	M-O		Parking Level 4 Col. J5	N	1		1 Mineral Wool 1 Cellulose 98 Non-Fibrous
"A"	SB-4B	22.0	M-O		Parking Level 4 Col. J4	N	1		1 Cellulose >99 Non-Fibrous
"A"	SB-4C	23.0	M-O		Parking Level 4 Between Col. J9 and J9	N	1		>99 Non-Fibrous
"B"	SB-25	116.0	T-HF	See Total Below. Previous Thermal Insulation Sample Taken (negative).	Emergency Generator 733	N	1		80 Cellulose 20 Non-Fibrous (Textile) 10 Cellulose, 3 Mineral Wool 87 Non-Fibrous (Dust)
"B"	SB-27	118.0	T-B	36" dia. Tank, 8'6" Long 2 HF 18" dia. 4' HP 16" dia.	Emergency Generator 733	N	1		95 Cellulose, 5 Non-Fibrous (Textile) 35 Cellulose, 5 Mineral Wool 60 Non-Fibrous (Dust)
"B"	SB-26	119.0	T-HF	See Total Below	Emergency Generator 733	N	1		80 Cellulose, 20 Non-Fibrous (Textile) 15 Cellulose, 5 Mineral Wool 80 Non-Fibrous (Dust)

Func Area Number	Sample Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"B"	SA-28	123.0	M-A		Varies 6th Floor Fan Rooms	N	0	.025 f/cc
"B"	SB-30	128.0	M-RC	6 sq ft Refer to Sample 8104, Rm. 716	Fan Room 622	N	1	60 Glass Wool 40 Non-Fibrous
"B"	SB-31	130.0	M-RC		Air Plenum 620	M	1	>99 Non-Fibrous
"B"	SB-33	151.0	T-HP	Metal Jacket Coating	Boiler Room 735	N	1	40 Cellulose 60 Non-Fibrous
"B"	SA-35	155.0	M-A	On: 4:25 pm 3-10-89 Off: 7:50 am 3-11-89 @ 10 l/min Total: 9,250 l	Return Air Plenum Level 7	N	0	.001 f/cc
"B"	SB-36	156.0	T-FG		Supply Fan (Inside)	N	2	95 Mineral Wool 5 Non-Fibrous
"B"	SB-40	195.0	M-O		Mech. Rm. 722	N	1	95 Glass Fiber 5 Non-Fibrous
"B"	SB-101	207.0	M-O		Mechanical Room 721	N	1	2-3 Mineral Wool 97 Non-Fibrous
"B"	SB-102	217.0	M-O		Room 719	N	3	95 Glass Fiber 5 Non-Fibrous
"B"	SB-104	224.0	M-O		Room 716 Fan Room	N	1	70 Glass Fiber 30 Non-Fibrous
"B"	SB-105	230.0	M-O	Correlate With Sample SB-103 in Room 721	Mechanical Room 722	N	1	95 Glass Fiber 5 Non-Fibrous
"B"	SB-106	249.0	M-O	Trade name "Ventglass" Correlate with SB-104	Fan Room 615	N	2	90 Glass Fiber 10 Non-Fibrous
"B"	SB-32	146.0	M-RC		Chiller Room 736	Y	1	40 Non-Fibrous (Round) 25 Non-Fibrous (Half Moon) 85 Non-Fibrous (Grey Gasket)
"B"	SB-34	152.0	T-C		Boiler Room 735	Y	1	1-2 Chrysotile (Backing) 98 Non-Fibrous (Backing) 99 Non-Fibrous (Brick)
"C"	SB-10A	67.0	M-CT		Corridor 706 Near Elev. Lobby 707	N	1	40 Mineral Wool 30 Cellulose 30 Non-Fibrous
"C"	SA-11	77.0	M-A		Corridor 706 Varies	N	0	.029 f/cc

Func Area	Sample Number	Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"C"	SB-19	94.0	M-VT	Brown Tile w/Green, Grey, Cream and Dark Brown Streaks	Elevator Lobby 507	N	1		>99 Non-Fibrous
"C"	SB-20A	95.0	M-RC		Elevator Lobby 507	N	1		60 Cellulose (Mastic) 40 Non-Fibrous (Mastic) >99 (Tile)
"C"	SB-22A	100.0	M-TX	Different From Vinyl Covered Sheetrock Partitions	Elevator Lobby 707 Corridor 706	N	1		>99 Non-Fibrous
"C"	SB-22B	170.0	M-TX	Supposedly ALL Vinyl Wallpaper Fairly New According to Maintenance	Corridor 806	N	1		>99 Non-Fibrous
"C"	SB-22C	194.0	M-TX		Elevator Lobby Level 7	N	1		>99 Non-Fibrous
"C"	SB-1A	3.0	S-FP		Elevator Lobby 102 Parking Level 1	Y	1	45 Chrysotile	55 Non-Fibrous
"C"	SB-1B	4.0	S-FP		Stairway #1 Parking Level 1	Y	1	45 Chrysotile	55 Non-Fibrous
"D"	SB-5A	29.0	M-WB		Room 509 (Storage)	N	1		10 Glass Fiber (Plaster) 90 Non-Fibrous (Plaster) 80 Cellulose (Backing) 20 Non-Fibrous (Backing)
"D"	SB-5B	38.0	M-WB		Janitor Closet 505	N	1		10 Glass Fiber (Plaster) 90 Non-Fibrous (Plaster) 70 Cellulose (Backing) 30 Non-Fibrous (Backing)
"D"	SB-5C	48.0	M-WB		Computer Storage Room 611	N	1		10 Glass Fiber, 90 N-F (Plaster Layer) 25 Glass Fiber 75 N-F (Plaster Backing) 80 Cellulose 20 N-F (Paper Backing)
"D"	SA-12	78.0	M-A		Varies	N	0		.019 f/cc
"D"	SB-13A	79.0	S-FP	Some Water Damage	Fire and Signal 729	N	2		35 Cellulose 65 Non-Fibrous
"D"	SB-14A	81.0	S-FP	Lots of Overspray and Debris	Computer Data Storage 611	N	1		60 Glass Fiber 40 Non-Fibrous
"D"	SB-14B	82.0	S-FP	Lots of Overspray and Debris	Computer Data Storage 611	N	1		30 Cellulose 40 Mineral Wool 30 Non-Fibrous

Func Area Number	Sample Log#	Type	Remarks	Location	Results	Concentration	Asbestos Content	Non-Asbestos Content
"D"	SB-14C	83.0	S-FP	Lots of Overspray and Debris	Computer Data Storage 611	N	1	30 Cellulose 30 Mineral Wool 40 Non-Fibrous
"D"	SB-15B	85.0	S-FP	Lots of Overspray, the Monokote is Very Fragile	Storage Room Behind Air Passage 610	N	1	70 Mineral Wool 30 Non-Fibrous
"D"	SB-15C	86.0	S-FP	Lots of Overspray, Monokote Very Fragile	Storage Room Behind Air Passage 610	N	1	70 Mineral Wool 30 Non-Fibrous
"D"	SB-16A	91.0	M-RC		Janitor Closet 606	N	1	5 Cellulose 90 Non-Fibrous
"D"	SB-17A	92.0	M-WB	Sheetrock Appears to be Water Resistant, Brown in Color and Fibrous	Janitor Closet 606	N	1	10 Mineral Wool (Plaster) 90 Non-Fibrous (Plaster) 90 Cellulose (Backing) 10 Non-Fibrous (Backing)
"D"	SB-18B	98.0	M-WB		Office Area 501 Middle Con. Rm. Near Training Classroom	N	1	15 Mineral Wool (Plaster) 85 Non-Fibrous (Plaster) 60 Cellulose (Backing) 40 Non-Fibrous (Backing)
"D"	SB-21A	99.0	M-VT	Green and Brown Square Pattern	Janitor Closet 505	N	2	1-2 Cellulose 98 Non-Fibrous
"D"	SB-21B	107.0	M-VT	Green and Brown Square Pattern	Janitor Closet 705	N	1	20 Cellulose 1 Mineral Wool 79 Non-Fibrous
"D"	SB-17B	108.0	M-WB	Brown Color Appears Water Resistant	Janitor Closet 705	N	1	15 Mineral Wool (Plaster) 85 Non-Fibrous (Plaster) 90 Cellulose (Backing) 10 Non-Fibrous (Backing)
"D"	SB-20C	163.0	M-RC		T&E Room 812	N	1	>99 Non-Fibrous
"D"	SB-24C	171.0	M-VT	White w/Grey Specs	Janitor Closet Level 8	N	1	>99 Non-Fibrous
"D"	SB-17C	172.0	M-WB	Sheetrock Ceiling	Janitor Closet Level 8	N	1	10 Mineral Wool, 90 Non-Fibrous (Plaster) 90 Cellulose, 10 Non-Fibrous (Backing)
"D"	SB-21C	179.0	M-VT		Janitor Closet 904	N	1	>99 Non-Fibrous

Func Area	Sample Number	Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"D"	SB-13B	80.0	S-FP	Some Water Damage	Fire and Signal 729	Y	2	40 Chrysotile	60 Non-Fibrous
"D"	SB-15A	84.0	S-FP		Storage Room Behind Air Passage 610	Y	1	35 Chrysotile	1-2 Mineral Wool 63 Non-Fibrous
"E"	SA-6	43.0	M-A		Varies - Level 5	N	0		.018 f/cc
"E"	SA-7	51.0	M-A	Air Pump Quit Running	Varies 6th Level	N	0		.058 f/cc <.020
"E"	SB-8	56.0	M-TX		Office Area 601	N	2		60 Cellulose 1 Glass Fiber 39 Non-Fibrous
"E"	SB-9A	57.0	S-FP	Clean	Office 1101 Side 11B Between Cols. D4 and D5	N	1		30 Cellulose 10 Mineral Wool 60 Non-Fibrous
"E"	SB-18A	93.0	M-WB		Legislative Finance Office Area 106	N	1		30 Mineral Wool (Plaster) 70 Non-Fibrous (Plaster) 60 Cellulose (Backing) 4 Non-Fibrous (Backing)
"E"	SB-16B	96.0	M-RC		Office Area 501 Near Training Classroom	N	2		50 Cellulose 50 Non-Fibrous
"E"	SA-23	101.0	M-A		Varies Level 7	N	0		.018 f/cc
"E"	SB-20B	102.0	M-RC		Central Micro-Film Office Area 701	N	1		>99 Non-Fibrous
"E"	SB-24A	103.0	M-VT		Central Micro-Film Office Area 701	N	1		>99 Non-Fibrous
"E"	SB-10B	104.0	M-CT	Ceiling Tile was in Corner on Floor	Storage Room Across From Central Micro. Office Area 701	N	1		40 Mineral Wool 30 Cellulose 30 Non-Fibrous
"E"	SB-18C	105.0	M-WB	Vinyl Parition is Painted Over	Storage Room Across from Central Micro. Office Area 701	N	1		10 Mineral Wool (Plaster) 90 Non-Fibrous (Plaster) 60 Cellulose (Backing) 40 Non-Fibrous (Backing)

Func Area	Sample Number	Log#	Type	Remarks	Location	Results	Condi- tion	Asbestos Content	Non-Asbestos Content
"E"	SA-29	124.0	M-A	On: 1:00 Off: 4:08 @ 14 l/min	Storage Room Across From Central Micro.	N	0		.004 f/cc
"E"	SA-37	158.0	M-A		Varies on 7th and 8th Level	N	0		.022 f/cc
"E"	SB-10C	159.0	M-CT		In Front of Long. Office Area Room 701	N	1		40 Mineral Wool 40 Cellulose 20 Non-Fibrous
"E"	SB-38	174.0	M-TX	3" Diameter	Level 8 Atrium	N	2		95 Mineral Wool 1 Cellulose 1 Synthetics 3 Non-Fibrous
"E"	SB-16C	183.0	M-RC		Office Area 1003	N	1		>99 Non-Fibrous
"E"	SB-39A	191.0	M-O		Office Area 501 Along Side Computer Room	N	1		>99 Non-Fibrous
"E"	SB-39B	192.0	M-O		Office Area 501 Along Side Computer Room	N	1		<99 Non-Fibrous
"E"	SB-39C	193.0	M-O		Office Area 501 Along Side Computer Room	N	1		<1 Cellulose 99 Non-Fibrous
"E"	SB-9B	62.0	S-FP	Little Overspray on Ductwork Blue Tags Visible on Ceiling	Office 1101 Side 11A Col. F8	Y	1	35 Chrysotile	65 Non-Fibrous
"E"	SB-9C	63.0	S-FP	Blue Tags Visible on Ceiling Framing	Office 1101 Side 11A Between Cols. EB and D8	Y	1	10 Chrysotile	30 Cellulose 10 Mineral Wool 60 Non-Fibrous
"E"	SB-24B	106.0	M-VT	White w/Brown and Cream Specs	Longevity Area Office Area 701	Y	1	1-5 Chrysotile	95 Non-Fibrous

C - 3

SUMMARY OF FIELD DATA & NOTES

C - 3
FIELD DATA/NOTES

ASCG

ASCG TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking "M" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "S" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged M = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	Func By Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
1.0	03/07/89	RLS RBB KHE	A Varies Parking Areas	Personnel Air Sample on RBB On 3hr @ 2.7 l/min	SA-2	M-A	D	1	2	M	L	L	19	EA	14-57 15-1	Looking North	
2.0	03/07/89	RLS RBB KHE	B Elevator Mechanical 104 Parking Level 1	Hard Fittings		T-HF	D	1	2	M	L	L					
3.0	03/07/89	RLS RBB KHE	C Elevator Lobby 102 Parking Level 1	Fireproofing on Beams and Pans	SB-1A	S-FP	F	1	3	M	L	L			15-9	Fireproofing on Beams and Pans	
4.0	03/07/89	RLS RBB KHE	C Stairway #1 Parking Level 1	Fireproofing on Beams and Pans	SB-1B	S-FP	F	1	2	H	L	L			15-19	Fireproofing on Beams and Pans	
5.0	03/07/89	RLS RBB KHE	A Parking Level 1 Col. J6	Fireproofing on Beams and Pans	SB-1C	S-FP	F	3	2	H	L	M			15-31	Fireproofing on Beams and Pans	
6.0	03/07/89	RLS RBB KHE	C Elevator Lobby 102 Parking Level 1	12"x12" Floor Tile, Tan, White w/Brown and Cream Specs		M-VT	M	1	2	H	L	L					
7.0	03/07/89	RLS RBB KHE	C Elevator Lobby 102 Parking Level 1	Ceiling Tile, White		M-CT	D	1	2	M	L	L					
8.0	03/07/89	RLS RBB KHE	B Mech/Elec Room 103 Parking Level 1	>12" dia. Hard Fittings		T-HF	D	1	2	M	M	L	11	EA	15-33	General Mechanical Room 103 Layout	Supply Fan 7
9.0	03/07/89	RLS RBB KHE	B Mech/Elec Room 103 Parking Level 1	<12" dia. Hard Fittings		T-HF	D	1	2	M	M	L	21	EA	15-34	General Mechanical Room 103 Layout	Supply Fan 7
10.0	03/07/89	RLS RBB KHE	A Parking Level 1	<12" dia. Hard Fittings		T-HF	D	1	2	M	L	L	129	EA	15-48	General Parking Looking North	All Hardfittings Well Painted and Encapsulated

ASCG

AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-H - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-WB - Wallboard	N = Non-Friable	8 - In Plenum
"D" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring		CONTACT, VIBRATION, EROSION
"E" = Office Areas	T-AC - Aircell	M-R - Roofing		H - High
	T-B - Boiler or Tank	M-RC - Rubber Composites		M = Moderate
	T-HF - Hard Fitting	M-JC - Joint Compound, Spackle		L = Low
	T-HP - Hard Pipe	M-A - Air		UNITS
	T-C - Chimney, Stack	M-D - Dirt, Dust		CF - Cubic Feet
	T-FG - Fiberglass	M-TX - Textiles, Fabrics		CY - Cubic Yards
	M = MISCELLANEOUS	M-PC - Paints, Coatings		EA - Each
	M-BP - Building Paper	M-TC - Troweled On Cementitious Mat.		GAL - Gallons
	M-CB - Cementitious Board	M-O - Other		LF - Linear Feet
				SF - Square Feet

Log#	Date	Func By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
21.0	03/07/89	RLS RBB KVE	A	Parking Col. J5	Acoustical Ceiling Material	SB-4A	M-O	D	1	2	M	L	L					
22.0	03/07/89	RLS KVE RBB	A	Parking Col. J4	Acoustical Ceiling Material	SB-4B	M-O	D	1	2	M	L	L			17-24	Acoustical Ceiling Material sample	
23.0	03/07/89	RLS RBB KVE	A	Parking Level 4 Between Col. J9 and J9	Acoustical Ceiling Material	SB-4C	M-O	D	1	2	M	L	L			17-28	Acoustical Ceiling Material sample	
24.0	03/07/89	RLS RBB KVE	A	Parking Level 4	Hard Fittings Above Ceiling		T-HF	D	1	4	L	L	L	26	EA	17-32	Looking North up Port Hole	
25.0	03/07/89	RLS RBB KVE	A	Lobby Area Parking Level 4	Hard Fittings Above Lay-in Ceiling		T-HF	D	1	3	L	L	L	12	EA	17-39	Looking SE Above Lay-in Ceiling	
26.0	03/08/89	RLS RBB KVE	C	Elevatory Lobby Area 507 Level 5	Observation - Fireproofing on Beams and Pans Above Lay-in Ceiling			F	1	3	L	L	L			9-0	Down Hallway Toward Elevator	No Hardfittings
27.0	03/08/89	RLS RBB KVE	C	Level 5	Ceiling Tile		M-CT	D	1	2	M	L	L					Elevator Lobby 507 Corridor and Throughout Office Area 501
28.0	03/08/89	RLS RBB KVE	C	Level 5 Elevator Lobby Corridor	12"x12" Floor Tile, Green, Grey, Brown Streaks		M-VT	N	1	2	H	L	L					
29.0	03/08/89	RLS RBB KVE	D	Room 509 (Storage)	Sheetrock Walls Sample of Sheetrock, Tape and Spackle	SB-5A	M-WB	D	1	2	M	L	L			9-28	Sheetrock Sample	
30.0	03/08/89	RLS RBB KVE	D	Room 509 (Storage)	Observation - Fireproofing on Beams and Pans		S-FP	F	1	2	M	L	M			9-29	Damaged and Patched Fireproofing	In This Room, Some Water Damage. Obvious - Patch Work

ASCC

ASCC TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-M - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-WB - Wallboard	N = Non-Friable	8 - In Plenum
"E" = Office Areas	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
	T-AC - Aircell	M-R - Rubber Composites	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-JC - Joint Compound, Spackle	2 - Fair (Damaged)	M = Moderate
	T-HF - Hard Fitting	M-A - Air	3 - Poor (Severely Damaged)	UNITS
	T-HP - Hard Pipe	M-D - Dirt, Dust	ACCESS	CF - Cubic Feet
	T-C - Chimney, Stack	M-TX - Textiles, Fabrics	1 - In Airstream	CY - Cubic Yards
	T-FG - Fiberglass	M-PC - Paints, Coatings	2 - Open	EA - Each
	M = MISCELLANEOUS	M-TC - Troweled On Cementitious Mat.	3 - Above Lay-In Ceiling	GAL - Gallons
	M-BP - Building Paper	M-O - Other	4 - Behind Solid Ceiling	LF - Linear Feet
	M-CB - Cementitious Board		5 - Behind Walls	SF - Square Feet

Log#	Date	By	Area	Location	Func	Sample Number	Type Code	Friability	Condition	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
31.0	03/08/89	RLS RBB KHE	F	Vault Level 5 Off of Corridor 506													Between Stairwell and Room 509
32.0	03/08/89	RLS RBB KHE	D	Room 506B Access Down Level 5											10-3 10-4	Mech. Equipment on Ground (10-3). Steel Above Area (10-4).	Like Parking Level 4 No Fireproofing and No Hardfittings
33.0	03/08/89	RLS RBB KHE	F	Through Room 508, Side Room Off of Computer Room											9-51	Ventilator	
34.0	03/08/89	RLS RBB KHE	F	Through Room 508 Computer Room											9-52	Computer Room	85' Deep 27' Wide
35.0	03/08/89	RLS RBB KHE	F	Computer Room and Print Room													
36.0	03/08/89	RLS RBB KHE	E	End of Corridor Office 501 Between Columns 6AH and 6AJ		S-FP	F	3	3	L	L	L			10-31 10-32	10/31 - Looking S Showing Extensive Changeable Wiring 10/32 - Looking SE	Ventilated Lights, Lights are Surrounded by Ventilators, Seals are Not Good
37.0	03/08/89	RLS KHE RBB	D	Janitor Closet 505		S-FP	F	1	2	M	L	L					Previous Sample JS08-5-W Taken of Fireproofing. Positive for ACM
38.0	03/08/89	RLS KHE RBB	D	Janitor Closet 505		M-WB	D	1	2	M	L	L			11-1	Sheetrock Sample	
39.0	03/08/89	RLS RBB KHE	D	Janitor Closet 505		M-VT	M	1	2	M	L	L					
40.0	03/08/89	RLS RBB KHE	D	Janitor Closet 505		T-HF	D	1	2	M	L	L	12 EA		10-54	Hard Fittings in Janitor Closet 505	

ASCG

AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

<p>FUNCTIONAL AREA CODES "A" = Parking "M" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "S" = Storage, Janitor, Maintenance "O" = Office Areas</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-PP Sprayed on Fireproofing S-AS Acoustical Spray</p> <p>T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass</p> <p>M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (cont) M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VI - Vinyl Tile Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other</p>	<p>FRIBILITY F = Friable D = Friable if Damaged M = Non-Friable</p> <p>CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged)</p> <p>ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum</p> <p>CONTACT, VIBRATION, EROSION H = High M = Moderate L = Low</p> <p>UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	Func By	Area Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr-	Air	Erosion	Unit	Quantity	Photos	Photo Comments	Additional Remarks
41.0	03/08/89	RLS RBB KWE	D Pipe Chase Across From Janitor 505	Hard Fitting		T-HF	D	3	5	L	L	L	L	EA	19			Pipe Chase Very Dirty
42.0	03/08/89	RLS RBB KWE	E Office Area 501 Conference Room	Photo - Observation Computer Room Wall Construction From Conference Room												11-14	Metal Lath and Plaster Wall Construction for Computer Room	
43.0	03/08/89	RLS RBB KWE	E Varies - Level 5	Personnel Air Sample on RBB 3hr 15min @2.8 l/min	SA-6	M-A										13-58 13-59	13/58 - West 13/59 - South	A lot of Overspray on About 40% of Ductwork, Thick
44.0	03/08/89	RLS RBB KWE	C Elevator Lobby 607 and Corridor 606	Observation - Spray-on fireproofing on Beams and Pans Above Lay-In Ceiling		S-PP	F	2	3	L	L	L	L			14-12	Fireproofing and Overspray	Overspray on Ductwork, Bedrock and Foundation Concrete. Should have OSHA Posting as well as Asbestos Signs.
45.0	03/08/89	RLS RBB KWE	D Access Behind Computer Storage Room	Observation - Fireproofing on Beams and Pans of Above Level		S-PP	F	2	2	M	L	L	L			14-14	Fireproofing and Overspray	Heavy Overspray on All Piping Running Through Room
46.0	03/08/89	RLS RBB KWE	D Computer Storage Room	Observation - fireproofing on Beams and Pans		S-PP	F	2	2	M	L	L	L			14-28 14-30	Inside Elevator Shaft	Overspray on sheetrock inside about 40%. Any insulation that falls, falls to bottom, on windy days can see air borne dust blowing around.
47.0	03/08/89	RLS RBB KWE	D Varies Elevator Shaft #7 Floor Level Access	Observation - Fireproofing on Columns and Beams		S-PP	F	2	8	M	L	L	L			14-52	Sheetrock Sample (Fabric Tape)	
48.0	03/08/89	RLS KWE RBB	D Computer Storage Room 611	Sheetrock, Tape and Spackle, Looks Like 2 Different Tapes Used	SB-5C	M-WB	D	1	2	M	L	L	L					
49.0	03/08/89	RLS RBB KWE	E Office Area 601	Observation - Above Lay-In Ceiling fireproofing on Beams and Pans		S-PP	F	3	3	L	L	L	L			15-17 15-18 15-19 15-20	15/17 - East 15/18 - South @ Beam 15/19 - South 15/20 - West	Photo 15-21 - North A Lot of Debris
50.0	03/08/89	RLS RBB KWE	B Telephone and Electric 608	Observation - Fireproofing on Pans - No Overspray		S-PP	F	1	2	M	L	L	L					No Hard Fittings Area Fairly Clean

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HERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (Cont)	FRIABILITY	ACCESS (Cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-in Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M = Moderate L = Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
51.0	03/08/89	RLS RBB KWE	E	Varies 6th Level	Personnel Air Sample on RBB 1h @ 2.8 L/min	SA-7	M-A											
52.0	03/08/89	RLS RBB KWE	C	Stairway #3 Level 6 up to 7	Hard Fittings at Landing Between Levels		T-HF	D	1	2	H	L	L	18	EA	15-52	Hard Fittings in Stairway	Air Pump Quit Running
53.0	03/08/89	RLS RBB KWE	E	Wall Between Office 601 and Womens 604	Hard Fittings		T-HF	D	1	5	M	L	L	2	EA			
54.0	03/08/89	RLS RBB KWE	D	Janitor's Closet 606	Hard Fittings in Chase		T-HF	D	1	5	L	L	L	13	EA	16-17		
55.0	03/08/89	RLS RBB KWE	D	Janitor's Closet 606	Hard Fittings in Janitor's Closet		T-HF	D	1	2	M	L	L	2	EA			
56.0	03/08/89	RLS RBB KWE	E	Office Area 601	Vinyl Wallpaper on Interior Partitions of Sheetrock	SB-8	M-TX	M	2	2	H	L	L			16-24	Vinyl Wallpaper Sample Taken From Interior Sheetrock Partitions	
57.0	03/08/89	RLS RBB KWE	E	Office 1101 Side 11B Between Cols. D4 and D5	Above Lay-in Ceiling - Fire- proofing on Beams and Pans	SB-9A	S-FP	F	1	3	L	L	L			17- 5	Looking East	Clean
58.0	03/08/89	RLS RBB KWE	E	Office Area 1101 Side 11B Between Cols. G3 and G4	Observation Above Ceiling - Fireproofing on Beams and Pans		S-FP	F	1	3	L	L	L					Clean
59.0	03/08/89	RLS RBB KWE	D	Janitor 1108	Observation - Floor Tile Green and Brown Pattern 12"x12"		M-VT	M	1	2	M	L	L					Exposed Fireproofing on Beams and Pans
60.0	03/08/89	RLS RBB KWE	D	Janitor 1108 Access	Hard Fittings		T-HF	D	3	5	L	L	L	9	EA			Floor of Chase Very Dirty

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HERA TYPE SURVEY FORMAT

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Log#	Date	By	Area	Func	Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
61.0	03/08/89	RLS RBB KWE	D		T&E 1109 Access	Hard Fittings		T-HF	D	1	5	L	L	L	L	16 EA			Floor of Chase Very Dirty
62.0	03/08/89	RLS RBB KWE	E		Office 1101 Side 11A Col. FB	Above Lay-in Ceiling - Fireproofing on Beams and Pans	SB-98	S-FP	F	1	3	L	L	L	L		18-7	Looking West Above Lay-in Ceiling	Little Overspray on Ductwork Blue Tags Visible on Ceiling
63.0	03/08/89	RLS RBB KWE	E		Office 1101 Side 11A Between Cols. EB and DB	Fireproofing on Beams and Pans Above Lay-in Ceiling	SB-9C	S-FP	F	1	3	L	L	L	L		18-32	Looking Above Lay-in Ceiling	Blue Tags Visible on Ceiling Framing
64.0	03/08/89	RLS RBB KWE	D		Janitor 1104 Access	Hard Fittings		T-HF	D	2	5	L	L	L	L	9 EA			
65.0	03/08/89	RLS RBB KWE	D		Tele. and Elec. 1105 Access	Hard Fittings		T-HF	D	2	5	L	L	L	L	16 EA			
66.0	03/08/89	RLS RBB KWE	D		Janitor 1104	12"x12" Floor Tile, Green and Brown Pattern		M-VT	M	1	2	M	L	L	L				
67.0	03/09/89	KWE RBB	C		Corridor 706 Near Elev. Lobby 707	Ceiling Tile, White Perforated	SB-10A	M-CT	D	1	2	M	L	L	L		9-35	Ceiling Tile Sample	
68.0	03/09/89	RBB KWE	C		Corridor 706 Near Elev. Lobby 707	Observation - Fireproofing on Beams Overspray on Concrete Floor Located Above		S-FP	F	2	3	L	L	L	L		9-45 9-46 9-47 9-48	9/45 - South 9/46 - Ceiling 9/47 - East 9/48 - West	Between Cols. D6 and E6 Overspray on Sprinkler Pipes, Surface Damage
69.0	03/09/89	RBB KWE	E		Bldg. Eng. Office Room 730	12"x12" Floor Tile, White w/Grey Specs		M-VT	N	1	2	H	L	L	L				Sheetrock Ceiling
70.0	03/09/89	RBB KWE	D		Storage 732	Observation - Fireproofing on Beams and Pans		S-FP	F	1	2	M	L	L	L				

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corridor/Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Spraying on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-HB - Wallboard M-VI - Vinyl Tile Flooring M-R - Sheet Vinyl Flooring M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Func Area Location

Log#	Date	By	Func Area Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks	
71.0	03/09/89	RBB KWE	C Corridor 706 Near Col. F6	Observation - Thick Fireproofing on Concrete Surface		S-FP	F	1	3	L	L	L			10-21 10-22	10/21 - East 10/22A - West 10/22B - West	A Lot of Pipes, HVAC and Wires	
72.0	03/09/89	KWE RBB	D Fire and Signal 729	Observation - Ceiling 1/2 Concrete 1/2 Pans, Both Fireproofed, Previous Sample JS08-15 (negative).		S-FP	F	2	2	M	L	L						
73.0	03/09/89	RBB KWE	D Room 727	Observation - Abated, Used for Asbestos Decon. - Has Shower													All Fireproofing and Hard Fittings Previously Abated	
74.0	03/09/89	RBB KWE	C Corridor 706 Near Col. F6	Hard Fittings		T-HF	D	1	3	L	L	L	18	EA			Little Overspray	
75.0	03/09/89	RBB KWE	C Corridor 706 Continued Throughout Office 701	Observation - Fireproofing on Beams and Pan		S-FP	F	1	3	L	L	L			10-50 10-51 10-52 10-52	10/50 - East 10/51 - North 10/52A - South 10/52B - West	A Lot of Pipes, HVAC, and Wires	
76.0	03/09/89	RBB KWE	C Corridor 706 Continues Throughout Office 701	Hard Fittings		T-HF	D	1	3	L	L	L	2	EA			Could Only See 2, Appears Level 7 Has a Lot of Piping Above Entire Ceiling.	
77.0	03/09/89	RBB KWE	C Corridor 706 Varies	Personnel Air Sample on RBB 2h @ 2.8 L/min	SA-11	M-A												
78.0	03/09/89	RBB KWE	D Varies	Personnel Air Sample on RBB	SA-12	M-A												
79.0	03/09/89	RBB KWE	D Fire and Signal 729	Fireproofing from Ceiling Pans	SB-13A	S-FP	F	2	2	M	L	L					Some Water Damage	
80.0	08/09/89	RBB KWE	D Fire and Signal 729	Fireproofing from Ceiling - Concrete Area	SB-13B	S-FP	F	2	2	M	L	L			14-21	Fireproofing Sample	Some Water Damage	

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Log#	Date	By	Area	Location	Func	Log Comment	Sample Number	Type Code	Friability	Con- dition	Access	Con- tact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
81.0	03/09/89	RBB KWE	D	Computer Storage 611		Old Fireproofing Under New Sprayed Monokote	SB-14A	S-FP	F	1	2	M	L	L			14-46	Fireproofing Sample	Lots of Overspray and Debris
82.0	03/09/89	RBB KWE	D	Computer Storage 611		Newer Sprayed Monokote Over Old Fireproofing	SB-14B	S-FP	F	1	2	M	L	L			14-46	Fireproofing Sample	Lots of Overspray and Debris
83.0	03/09/89	RBB KWE	D	Computer Storage 611		Newer Sprayed Monokote Over Old Fireproofing	SB-14C	S-FP	F	1	2	M	L	L			14-46	Fireproofing Sample	Lots of Overspray and Debris
84.0	03/09/89	RBB KWE	D	Storage Room Behind Air Passage 610		Old Fireproofing Under New Sprayed Monokote	SB-15A	S-FP	F	1	2	M	M	M			15- 8	Fireproofing Sample	
85.0	03/09/89	RBB KWE	D	Storage Room Behind Air Passage 610		Newer Sprayed Monokote Over Old Fireproofing	SB-15B	S-FP	F	1	2	M	M	M			15-11 15-10	Fireproofing Sample	Lots of Overspray, the Monokote is Very Fragile
86.0	03/09/89	RBB KWE	D	Storage Room Behind Air Passage 610		New Sprayed Monokote Over Old Fireproofing	SB-15C	S-FP	F	1	2	M	M	M			15-14	Fireproofing Sample	Lots of Overspray, Monokote Very Fragile
87.0	02/23/09	RBB KWE	B	UPS #1 and UPS #2		Observation 12"x12" Floor Tile w/White and Brown Streaks		M-VT	N	1	2	M	L	L			15-23 15-28	15/23 - Debris Above UPS #2 15/28 - Debris Above UPS #1	Transformers
88.0	03/09/89	RBB KWE	B	UPS #1 and UPS #2		Observation - Lay-in Ceiling Tile		M-CT	D	1	2	M	L	L			15-29	Looking into UPS #1	Transformers
89.0	03/09/89	RBB KWE	B	Battery Room #1 and #2		12"x12" Floor Tile White w/Dark Tan and White Streaks		M-VT	N	1	2	M	L	L			15-30	Looking into Battery Room #1	Sheetrock Ceiling
90.0	03/09/89	RBB KWE	B	Air Passage 610		Observation - Patched Fireproofing on Beam		S-FP	F	2	2	M	L	L			15-32	Patched Fireproofing on Beam	Water Damage

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ASCG TYPE SURVEY FORMAT

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FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (Cont)	FRIABILITY	ACCESS (cont)
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Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
91.0	03/09/89	RBB KVE	D	Janitor Closet 606	Black Cove Base and Mastic	SB-16A	M-RC	M	1	2	L	L	L			16-2	Sample of Cove Base and Mastic	
92.0	03/09/89	RBB KVE	D	Janitor Closet 606	Original Sheetrock, Tape, Spackle	SB-17A	M-WB	D	1	2	L	L	L			16-3	Sheetrock Sample	Sheetrock Appears to be Water Resistant, Brown in Color and fibrous
93.0	03/09/89	RBB KVE	E	Legislative Finance Office Area 106	Interior Vinyl Covered Sheetrock Partition	SB-18A	M-WB	D	1	2	H	L	L			16-13	Interior Vinyl Covered Sheetrock Partition Sample	
94.0	03/09/89	RBB KVE	C	Elevator Lobby 507	12"x12" Floor Tile and Mastic	SB-19	M-VT	M	1	2	H	L	L			16-26	Floor Tile and Mastic Sample	Brown Tile w/Green, Grey, Cream and Dark Brown Streaks
95.0	03/09/89	RBB KVE	C	Elevator Lobby 507	Brown Cove Base and Mastic	SB-20A	M-RC	M	1	2	H	L	L			16-30	Sample of Cove Base and Mastic	
96.0	03/09/89	RBB KVE	E	Office Area 501 Near Training Classroom	Black Cove Base and Mastic	SB-16B	M-RC	M	2	2	H	L	L			16-37	Sample of Cove Base and Mastic	
97.0	03/09/89	RBB KVE	E	Office Area 501 Middle Con. Rm. Near Training Classroom	Observation - Lifted Ceiling Tile		M-CT	D	1	2	H	L	L			16-41	Shows Lifted Tile in Conference Room, Level 5	Ceiling Tile Should Not be Lifted by Employees Other Than Main. in a Clean Cube
98.0	03/09/89	RBB KVE	D	Office Area 501 Middle Con. Rm. Near Training Classroom	Interior Vinyl Covered Sheetrock Partition	SB-18B	M-WB	D	1	2	H	L	L			16-46	Sample	
99.0	03/09/89	RBB KVE	D	Janitor Closet 505	12"x12" Floor Tile and Mastic	SB-21A	M-VT	M	2	2	M	L	L			16-55	Floor Tile and Mastic Sample	Green and Brown Square Pattern
100.0	03/09/89	RBB KVE	C	Elevator Lobby 707 Corridor	Vinyl Wallpaper	SB-22A	M-TX	M	1	2	H	L	L			17-9	Sample of Vinyl Wallpaper	Different From Vinyl Covered Sheetrock Partitions

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AHERA TYPE SURVEY FORMAT

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Log#	Date	Func By	Area Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr-ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
101.0	03/10/89	RBB KWE	E	Varies Level 7	SA-23	M-A	N		2	H	L	L			1-1	Sample of Cove Base and Mastic	
102.0	03/10/89	RBB KWE	E	Central Micro-Film Office Area 701	SB-208	M-RC	N		2	H	L	L			1-2	Sample of Floor Tile and Mastic	
103.0	03/10/89	RBB KWE	E	Central Micro-Film Office Area 701	SB-24A	M-VT	N		2	H	L	L			1-3	Ceiling Tile Sample	Ceiling Tile was in Corner on Floor
104.0	03/10/89	RBB KWE	E	Storage Room Across from Central Micro. Office Area 701	SB-108	M-CT	D		2	H	L	L			1-3	Interior Vinyl Covered Sheetrock Partition Sample	Vinyl Partition is Painted Over
105.0	03/10/89	RBB KWE	E	Storage Room Across from Central Micro. Office Area 701	SB-18C	M-WB	D		2	H	L	L			1-4	Floor Tile and Mastic Sample	White w/Brown and Cream Specs
106.0	03/10/89	RBB KWE	E	Longevity Area Office Area 701	SB-24B	M-VT	N		2	H	L	L			1-7	Floor Tile and Mastic Sample	Green and Brown Square Pattern
107.0	03/10/89	RBB KWE	D	Janitor Closet 705	SB-21B	M-VT	N		2	M	L	L			1-6 1-9	1/6 Original Condition 1/9 Sample	Brown Color Appears Water Resistant
108.0	03/10/89	RBB KWE	D	Janitor Closet 705	SB-17B	M-WB	D		2	M	L	L			1-8	Hard Fittings in Janitors Closet 706	Fireproofing on Beam and Pans Exposed
109.0	03/10/89	RBB KWE	D	Janitor Closet 705		T-HF	D		5	L	L	L			1-10	Hard Fittings in Access	A Lot of Debris on Bottom of Chase, Also Broken Hard Fitting Laying on Bottom
110.0	03/10/89	RBB KWE	D	Janitor Closet 705 Access		T-HF	D		2	L	L	L					

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AREA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont.)	FRABIILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-H - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-UB - Wallboard	M = Non-Friable	8 - In Plenum
"D" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
	T-AC - Aircell	M-SV - Sheet Vinyl Flooring	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-R - Roofing	2 - Fair (Damaged)	M = Moderate
	T-HF - Hard Fitting	M-RC - Rubber Composites	3 - Poor (Severely Damaged)	L = Low
	T-HP - Hard Pipe	M-JC - Joint Compound, Spackle	ACCESS	UNITS
	T-C - Chimney, Stack	M-A - Air	1 - In Airstream	CF - Cubic Feet
	T-FG - Fiberglass	M-D - Dirt, Dust	2 - Open	CY - Cubic Yards
	M = MISCELLANEOUS	M-TX - Textiles, Fabrics	3 - Above Lay-In Ceiling	EA - Each
	M-BP - Building Paper	M-PC - Paints, Coatings	4 - Behind Solid Ceiling	GAL - Gallons
	M-CB - Cementitious Board	M-TC - Troweled On Cementitious Mat.	5 - Behind Walls	LF - Linear Feet
				SF - Square Feet

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type	Friability	Condition	Access	Contact	Vibration	Air	Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
111.0	03/10/89	RBB KWE	D	T&E 708	Hard Fittings		T-HF	D	2	2	H	L	L	L	7	EA	1-11	Hard Fittings	Obvious water damage to one of the Hard Fittings.
112.0	03/10/89	RBB KWE	D	T&E 708	Observation - Fireproofing on Flat Ceiling		S-FP	F	2	2	H	L	L	L			1-12	Fireproofing	Obvious water damage to fireproofing in concrete ceiling.
113.0	03/10/89	RBB KWE	D	Maintenance Shop 725	Observation - Duct Tape on Ceiling Grid		M-CT	D	1	2	H	L	L	L			1-13	Ceiling of Maintenance Shop	
114.0	03/10/89	RBB KWE	D	Loading Area	Hard Fittings		T-HF	D	1	2	H	M	M	M	14	EA	1-14	Hard Fittings in Loading Area 732	Exposed Fireproofing on Beams and Pans
115.0	03/10/89	RBB KWE	D	Storage 731	Hard Fittings		T-HF	D	1	2	H	L	L	L	2	EA	1-15	Hard Fittings in Storage 731	Exposed Fireproofing on Beams and Pans
116.0	03/10/89	RBB KWE	B	Emergency Generator 733	Hard Fittings Sample	SB-25	T-HF	D	1	2	H	H	M	M			1-21	Sample of Hard Fitting	See Total Below. Previous Thermal Insulation Sample Taken (negative).
117.0	03/10/89	RWB KWE	B	Emergency Generator 733	Photos - General Layout of Room												1-16 1-17 1-18 1-19	General Layout of Emergency Room 733	Exposed Fireproofing on Beams, Fiberglass on Rest of Ceiling. May Cover Fireproofing.
118.0	03/10/89	RBB KWE	B	Emergency Generator 733	Exhaust Muffler Unit	SB-27	T-B	D	1	2	H	H	M	M			1-20 1-23	Exhaust Muffler Unit Sample	36" dia. Tank, 8'6" Long 2' HF 18" dia. 4' HP 16" dia.
119.0	03/10/89	RBB KWE	B	Emergency Generator 733	Hard Fitting Sample	SB-26	T-HF	D	1	2	H	H	M	M			1-22	Sample of Hard Fitting	See Total Below
120.0	03/10/89	RBB KWE	B	Emergency Generator 733	Hard Fittings		T-HF	D	1	2	H	H	M	M	22	EA			Total Quantity of HF for Room 733

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HERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-H - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-WB - Wallboard	N = Non-Friable	8 - In Plenum
"D" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
"E" = Office Areas	T-AC - Aircell	M-SV - Sheet Vinyl Flooring	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-RC - Rubber Composites	2 - Fair (Damaged)	M - Moderate
	T-HF - Hard Fitting	M-JC - Joint Compound, Spackle	3 - Poor (Severely Damaged)	L = Low
	T-HP - Hard Pipe	M-A - Air	ACCESS	UNITS
	T-C - Chimney, Stack	M-D - Dirt, Dust	1 - In Airstream	CF - Cubic Feet
	T-FG - Fiberglass	M-TX - Textiles, Fabrics	2 - Open	CY - Cubic Yards
	M = MISCELLANEOUS	M-PC - Paints, Coatings	3 - Above Lay-In Ceiling	EA - Each
	M-BP - Building Paper	M-TC - Troweled On Cementitious Mat.	4 - Behind Solid Ceiling	GAL - Gallons
	M-CB - Cementitious Board	M-O - Other	5 - Behind Walls	LF - Linear Feet
				SF - Square Feet

Log#	Func By Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
121.0	RBB KWE	B Main Switchboard Room 726	Hard Fittings? - Hard Fittings are Soft		T-HF	D	1	2	M	M	M	24	EA	2-1	Hard Fittings	This Room Kept Cold
122.0	RBB KWE	B Transformer Vault Room 728	Observation - Fireproofing on Beams, Flat Ceiling													No Hard Fittings
123.0	RBB KWE	B Varies 6th Floor Fan Rooms	Personnel Air Sample on RBB on 3h 15min @ 2 L/min	SA-28	M-A											
124.0	RBB KWE	E Storage Room Across From Central Micro.	Air Sample Cassette Near Supply on Light	SA-29	M-A											On: 1:00 Off: 4:08 @ 14 L/min
125.0	RW KWE	B Air Passage 610	Fireproofing on Beams and Flat Ceiling		S-FP	F	3	2	M	M	L	130	SF	13-24	Looking up at Air Passage Ceiling 610	
126.0	RW KWE	B Air Lock	Fireproofing on Beam and Pans		S-FP	F	3	2	M	H	L	65	SF			1 Beam Partially Enclosed
127.0	RW KWE	B Fan Room 622	Fireproofing on Beams Which Are Partially Enclosed		S-FP	F	2	2	M	H	H	320	SF	13-32	Looking North in Fan Room 622	Room has Fiberglass on Ceiling and Walls
128.0	RW KWE	B Fan Room 622	Flex Connections	SB-30	M-RC	N	1	2	M	H	H	1	EA	13-35	Duct Flex Connector Sample	6 sq ft Refer to Sample B104, Rm. 716
129.0	RW KWE	B Air Plenum 620	Fireproofing on Beams and Pans		S-FP	F	2	2	M	H	H	425	SF	13-44	Looking West Air Plenum 620	
130.0	RW KWE	B Air Plenum 620	Ductwork Tape for Connections	SB-31	M-RC	N	1	2	M	H	H			13-43	Sample of Duct Tape Used for Connections	

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Jureau State Office Building

FUNCTIONAL AREA CODES "A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	ITEM TYPE S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	ITEM TYPE (cont) M-CT - Ceiling Tile M-H - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	FRIABILITY F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet
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Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
131.0	03/10/89	RW KVE	B	Mechanical Room 618	Hard Fittings <4" Dia.		T-HF	D	1	2	M	H	M	37	EA			1 Damaged
132.0	03/10/89	RW KVE	B	Mechanical Room 618	Fireproofing on Beams and Pans		S-FP	F	1	2	M	H	M	360	SF			
133.0	03/10/89	RW KVE	B	Air Lock 6128	Fireproofing on Fans		S-FP	F	1	2	M	H	M	16	SF			
134.0	03/10/89	RW KVE	B	Plenums 614 and 612	Hard Fittings		T-HF	D	1	2	M	H	H		EA			ALL Hard Fittings Abated
135.0	03/10/89	RW KVE	B	Plenum 612	Fireproofing on Beams and Pans		S-FP	F	3	2	M	H	H	400	SF			
136.0	03/10/89	RW KVE	B	Fan Room Behind Plenum 612	Fireproofing on Beams and Pans		S-FP	F	3	2	M	H	H	80	SF			
137.0	03/10/89	RW KVE	B	Plenum 614	Fireproofing on Beams and Pans		S-FP	F	3	2	M	H	H	260	SF			
138.0	03/10/89	RW KVE	B	Fan Room Behind Plenum 612	Fan Flex Connections		M-RC	N	1	2	L	H	H	1	EA			3 SF
139.0	03/10/89	RW KVE	B	Fan Room 616	Fireproofing on Beams		S-FP	F	1	2	M	H	H	320	SF	14- 7	Fan Room 616	Fiberglass on East Wall of Ceiling
140.0	03/10/89	RW KVE	B	Fan Room 616	Fan Flex Connections		M-RC	N	1	2	M	H	H	1	EA			7.5 SF Manufacturer Ventglass

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

<p>FUNCTIONAL AREA CODES "A" = Parking "M" = Mechanical Rooms "C" = Stairwell/Corridor/Elev.Lobby/Plaza "S" = Storage, Janitor, Maintenance "E" = Office Areas</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (cont) M-CT - Ceiling Tile M-M - Mastic or Adhesive M-UB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Rubber Composites M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other</p>	<p>FRIABILITY F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H = High M = Moderate L = Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	Func By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Con-dition	Access	Con-tact	Vibr-ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
141.0	03/10/89	RW KWE	B	Intake Plenum	Fireproofing on Beams and Pans		S-FP	F	2	2	L	H	H	230	SF			
142.0	03/10/89	RW KWE	B	Pipe Gallery	Hard Fittings		T-HF	D	1	2	L	L	L	56	EA			A lot of debris - High Priority #1.
143.0	03/10/89	RW KWE	B	Pipe Gallery	Fireproofing on Beams and Pans		S-FP	F	3	2	L	L	L	960	SF			
144.0	03/10/89	RW KWE	B	Chiller Room 735	Hard Fittings		T-HF	D	1	2	M	M	M	33	EA			
145.0	03/10/89	RW KWE	B	Chiller Room 735	Fireproofing on Beams and Pans		S-FP	F	1	2	M	M	M	1,500	SF			Overspray Partially Enclosed Sound Proofing on Ceiling
146.0	03/10/89	RW KWE	B	Chiller Room 735	Various Gaskets Found in Chiller Room	SR-32	M-RC	N	1	2	M	M	M					
147.0	03/10/89	RW KWE	B	Boiler Room 735	Fireproofing on Beams and Probably Pans		S-FP	F	2	2	M	H	M	1,500	SF			Fiberglass Sound Proofing on Ceiling. Overspray Partially Enclosed.
148.0	03/10/89	RW KWE	B	Boiler Room 735	Hard Fittings		T-HF	D	1	2	M	H	M	61	EA			Boiler Room Hard Fittings Partially Abated
149.0	03/10/89	RW KWE	B	Boiler Room 735	Heat Exchanger Front End Only		T-B	D	1	2	M	H	M					8" Diameter
150.0	03/10/89	RW KWE	B	Boiler Room 735	Fan Flex Connector		M-RC	N	1	2	M	H	M	10	SF			1 Each

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ASCG TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (CONT)	FRIBILITY	ACCESS (cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corridor/Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-UB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
151.0	03/10/89	RW KVE	B	Boiler Room 735	Breaching	SB-33	T-HP	D	1	6	M	H	H	432	SF	2-19	Breaching Sample	Metal Jacket Coating
152.0	03/10/89	RW KVE	B	Boiler Room 735	Fire Brick	SB-34	T-C	D	1	2	M	H	H			2-20	Fire Brick Sample	
153.0	03/10/89	RW KVE	B	Corridor 735	Hard Fittings		T-HF	D	1	2	M	L	L	20	EA			
154.0	03/10/89	RW KVE	B	Corridor 734	Fireproofing on Beams and Pans		S-FP	F	2	2	M	L	L	710	SF			
155.0	03/10/89	RW RBB	B	Return Air Plenum Level 7	Exhaust Air Sample	SA-35	M-A									16-26	Exhaust Air Sample From Return Air Plenum	On: 6:25 pm 3-10-89 Off: 7:50 am 3-11-89 @ 10 l/min Total: 9,250 l
156.0	03/10/89	RW RBB	B	Supply Fan (Inside)	Sound Proofing Material Inside Fan	SB-36	T-FG	D	2	1	L	H	H	160	SF			
157.0	03/11/89	RLS RW RBB KVE	E	In Front of Longevity Office Area 701	Observation - Fireproofing on Beams and Pans		S-FP	F	1	3	L	L	L			8-25	Looking All Directions (4 each)	Overspray on Ductwork and Hangers
158.0	03/11/89	RLS RW RBB KVE	E	Varies on 7th and 8th Level	Personnel Air Sample on RBB	SA-37	M-A											
159.0	03/11/89	RLS RW RBB KVE	E	In Front of Long. Office Area Room 701	Ceiling Tile	SB-10C	M-CT	D	1	2	M	L	L					
160.0	03/11/89	RLS RBB KVE RW	D	T&E Room 812	Observation - Exposed Fireproofing on Beams and Pans		S-FP	F	1	2	M	L	L					A Lot of Overspray

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

<p>FUNCTIONAL AREA CODES "A" = Parking "M" = Mechanical Rooms "C" = Stairwell/Corridor/Elev.Lobby/Plaza "S" = Storage, Janitor, Maintenance "O" = Office Areas</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-8 - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (cont) M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other</p>	<p>FRIABILITY F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L = Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	By	Area	Location	Func	Log Comment	Sample Number	Type	Friability	Condit	Access	Quantity	Unit	Photos	Photo Comments	Additional Remarks
161.0	03/11/89	RLS RBB KWE RV	C	Plaza Entry NE		Observation - Fireproofing on Beams		S-FP	F	1	3		L	8-59	Above Lay-in Ceiling Plaza Entry	Clean Cube is 10' High, Ceiling 12' on Level 8 Need Higher Tube
162.0	03/11/89	RLS RBB KWE RV	D	T&E Room 812 Wall Access		Hard Fittings		T-HF	D	1	5	8	EA	9-3	Hard Fittings in Wall Access	Wall Access
163.0	03/11/89	RLS RBB KWE RV	D	T&E Room 812		Brown Cove Base and Mastic	SB-20C	M-RC	N	1	2		M	9-6	Sample of Cove Base	
164.0	03/11/89	RLS RBB KWE RV	E	Technical Services Library Area 815		Observation - Fireproofing on Beams and Pans		S-FP	F	1	3		L	9-17	Looking South Toward Perimeter	Overspray
165.0	03/11/89	RLS RBB KWE RV	E	Mens Room 814 Wall Access		Hard Fittings in Pipe Chase		T-HF	D	1	5	16	EA	9-21	Hard Fittings in Pipe Chase, Mens Room 814	Pipe Chase 2' Wide 45' Long A Lot of Debris on Floor
166.0	03/11/89	RLS RBB KWE RV	E	Technical Services Library Area 815		Hard Fittings Above Ceiling		T-HF	D	1	3		L	9-16	Looking up at Hard Fittings	
167.0	03/11/89	RLS RBB KWE RV	D	T&E Room 807		Hard Fittings		T-HF	D	1	2	6	EA	9-37	Hard Fittings in T&E Room 807	
168.0	03/11/89	RLS RBB KWE RV	D	T&E Room 807		Observation - Fireproofing on Beams and Pans		S-FP	F	1	2		M			Lots of Overspray
169.0	03/11/89	RLS RBB KWE RV	E	Womens Room 804 Wall Access		Hard Fittings		T-HF	D	1	5	14	EA	9-38	Hard Fittings in Wall Access	A Lot of Debris in Chase
170.0	03/11/89	RLS RBB KWE RV	C	Corridor 806		Vinyl Wallpaper	SB-22B	M-TX	N	1	2		M	9-48	Sample of Vinyl Wallpaper	Supposedly All Vinyl Wallpaper Fairly New According to Maintenance

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ASCG TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (Cont)	FRIABILITY	ACCESS (cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Rubber Composites M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
171.0	03/11/89	RLS RBB KWE RW	D	Janitor Closet Level 8	12"x12" Floor Tile and Mastic	SB-24C	M-VT	N	1	2	M	L	L			9-59	Sample of Floor Tile	White w/Grey Specs
172.0	03/11/89	RLS RBB KWE RW	D	Janitor Closet Level 8	Original Sheetrock, Spackle, Tape	SB-17C	M-WB	D	1	2	M	L	L			10-0	Sample of Sheetrock	Sheetrock Ceiling
173.0	03/11/89	RLS RBB KWE RW	E	Library Area 808	Dumb Waiter for Books - Goes to Level 7		S-FP	F	1	5	L	M	L					Shaft is 4"x4' Appears to be Lined w/New Framing Steel. Fireproofing Just on Beams.
174.0	03/11/89	RLS RBB KWE RW	E	Level 8 Atrium	Pump Organ Hose	SB-38	M-TX	M	2	2	M	L	L	15	LF		Pump Organ Hose	3" Diameter
175.0	03/11/89	RLS RBB KWE RW	D	Storage 816	Observation - Fireproofing of Beams and Pans		S-FP	F	2	2	M	L	L					Lots of Overspray
176.0	03/11/89	RLS RBB KWE RW	E	Office Area 901 North	Observation - Fireproofing on Beams and Pans		S-FP	F	1	3	L	L	L			10-26	Looking at Ductwork and Ceiling (4 ea)	
177.0	03/11/89	RLS RBB KWE RW	D	Janitor Closet 904	Hard Fittings		T-HF	D	1	5	L	L	L	9	EA			Exposed Fireproofing on Beams and Pans
178.0	03/11/89	RLS RBB KWE RW	D	Elec. 905	Hard Fittings		T-HF	D	1	5	L	L	L	16	EA			Exposed Fireproofing on Beams and Pans
179.0	03/11/89	RLS RBB KWE RW	D	Janitor Closet 904	12"x12" Floor Tile and Mastic	SB-21C	M-VT	M	1	2	M	L	L					
180.0	03/11/89	RLS RBB KWE RW	D	Janitor Closet 908	Hard Fittings		T-HF	D	1	5	L	L	L	9	EA			Exposed Fireproofing on Beams and Pans. 12"x12" Floor Tile, Green and Brown Square Pattern.

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ANERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

<p>FUNCTIONAL AREA CODES "A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas</p>	<p>ITEM TYPE S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-BP - Building Paper M-CB - Cementitious Board</p>	<p>ITEM TYPE (cont) M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other</p>	<p>FRIABILITY F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls</p>	<p>ACCESS (cont) 6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M = Moderate L = Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet</p>
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Log#	Date	Func By Area Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
181.0	03/17/89	RLS D Elec. 909 RBB Wall Access KWE RW	Hard Fittings		T-HF	D	1	5	L	L	L	16	EA			Exposed Fireproofing on Beams and Pans
182.0	03/11/89	RLS E Office Area RBB 1003 KWE RW	Exposed Fireproofing on Beams and Pans		S-FP	F	1	3	L	L	L			11-5	Fireproofing on Beams and Pans	Overspray
183.0	03/11/89	KWE E Office Area RW 1003	Black Cove Base and Mastic	SB-16C	M-RC	N	1	2	H	L	L					Exposed Fireproofing on Beams and Pans
184.0	03/11/89	KWE D Janitor Closet RW 1008	Hard Fittings		T-HF	D	1	5	L	L	L	9	EA			Exposed Fireproofing on Beams and Pans
185.0	03/11/89	KWE D Elec. 1009 RW	Hard Fittings		T-HF	D	1	5	L	L	L	16	EA			Exposed Fireproofing on Beams and Pans
186.0	03/11/89	KWE D Janitor Closet RW 1004	Hard Fittings		T-HF	D	1	5	L	L	L	9	EA			Exposed Fireproofing on Beams and Pans
187.0	03/11/89	KWE D Elec. 1005 RW	Hard Fittings		T-HF	D	1	5	L	L	L	16	EA			Exposed Fireproofing on Beams and Pans
188.0	03/11/89	KWE C Wall Access in RW Stairwell to RW Roof	Hard Fittings		T-HF	D	1	5	L	L	L	11	EA			
189.0	03/11/89	KWE B Elevator Room RW - Penthouse	Observation - Fireproofing on Beams and Pans		S-FP	F	2	2	M	M	M	600	SF			
190.0	03/11/89	KWE B Fire Hose RW Station - RW Penthouse	Hard Fittings		T-HF	D	1	2	M	L	L	38	EA	11-34	Fire Hose Station Penthouse	No Fireproofing

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRABIILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-H - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-UB - Wallboard	M = Non-Friable	8 - In Plenum
"D" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
"E" = Office Areas	T-AC - Aircell	M-SV - Sheet Vinyl Flooring	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-R - Roofing	2 - Fair (Damaged)	L = Low
	T-HF - Hard Fitting	M-RC - Rubber Composites	3 - Poor (Severely Damaged)	UNITS
	T-HP - Hard Pipe	M-JC - Joint Compound, Spackle	ACCESS	CF - Cubic Feet
	T-C - Chimney, Stack	M-A - Air	1 - In Airstream	CY - Cubic Yards
	T-FG - Fiberglass	M-D - Dirt, Dust	2 - Open	EA - Each
	M = MISCELLANEOUS	M-TX - Textiles, Fabrics	3 - Above Lay-In Ceiling	GAL - Gallons
	M-BP - Building Paper	M-PC - Paints, Coatings	4 - Behind Solid Ceiling	LF - Linear Feet
	M-CB - Cementitious Board	M-TC - Troweled On Cementitious Mat.	5 - Behind Walls	SF - Square Feet

Func

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Condi- tion	Access	Con- tact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks	
191.0	03/11/89	RLS RBB KWE RW	E	Office Area 501 Along Side Computer Room	Plaster Wall Construction	SB-39A	H-O	D	1	3	L	L	L			11-54	Plaster Wall Construction		
192.0	03/11/89	RLS RBB KWE RW	E	Office Area 501 Along Side Computer Room	Plaster Wall Construction	SB-39B	H-O	D	1	3	L	L	L						
193.0	03/11/89	RLS RBB KWE RW	E	Office Area 501 Along Side Computer Room	Plaster Wall Construction	SB-39C	H-O	D	1	3	L	L	L						
194.0	03/11/89	RLS RBB KWE RW	C	Elevator Lobby Level 7	Vinyl Wall Paper	SB-22C	H-TX	D	1	2	H	L	L						
195.0	03/11/89	RLS RBB KWE RW	B	Mech. Rm. 722	Supply Air Bag Filter	SB-40	H-O	D	1	1	L	H	H						
196.0	03/09/89	RLS RBB KWE RW	D	Above Ceiling Room 709	Observation - Fireproofing Spray on	S-FP	F	F	1	1	L	H	H	160	SF			Dusting of Debris	
197.0	03/09/89	RLS RBB KWE RW	B	Plenum Room 711	Observation - Hard Fittings	T-HF	D	D	2	8	L	H	H	14	EA			HF's >4" Dia. Four Need Repair	
198.0	03/09/89	RLS RBB KWE RW	B	Plenum Room 711	Observation - Spray on Fire- proofing on Beams	S-FP	F	F	1	8	L	H	H	600	SF			No Room Number	
199.0	03/09/89	RLS RBB KWE RW	B	Fan Access Passage	Observation - Spray on Fire- proofing on Beams	S-FP	F	F	1	1	L	M	M	160	SF			1 ea Support Member 20' Behind on Board	
200.0	03/09/89	RLS RBB KWE RW	B	Fan Access Passage	Hard Fittings Overspray Present	T-HF	D	D	1	2	L	M	M	12	EA			Less Than 4"	

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-M - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-UB - Wallboard	N = Non-Friable	8 - In Plenum
"E" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-SV - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
"H" = Office Areas	T-AC - Aircell	M-R - Roofing	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-RC - Rubber Composites	2 - Fair (Damaged)	M = Moderate
	T-HF - Hard Fitting	M-JC - Joint Compound, Spackle	3 - Poor (Severely Damaged)	L = Low
	T-HP - Hard Pipe	M-A - Air	ACCESS	UNITS
	T-C - Chimney, Stack	M-D - Dirt, Dust	1 - In Airstream	CF - Cubic Feet
	T-FG - Fiberglass	M-TX - Textiles, Fabrics	2 - Open	CY - Cubic Yards
	M = MISCELLANEOUS	M-PC - Paints, Coatings	3 - Above Lay-in Ceiling	EA - Each
	M-BP - Building Paper	M-TC - Troweled On Cementitious Mat.	4 - Behind Solid Ceiling	GAL - Gallons
	M-CB - Cementitious Board	M-O - Other	5 - Behind Walls	LF - Linear Feet
				SF - Square Feet

Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Con-tact	Vibr-ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
201.0	03/09/89	RLS RW	B	Fan Room 719	Flex Connector		M-O	N	1	1	L	H	H	10	SF			20'x1/2'
202.0	03/09/89	RLS	B	Fan Room 719	Hard Fittings		T-HF	D	1	1	L	H	H	12	EA			
203.0	03/09/89	RLS RW	B	Fan Room 719	Sprayed on With 4" Thick Insulation		S-FP	F	3	1	L	H	H	500	SF			On 2 12" HF 24' Long and 24'x24' on Concrete Ceiling Encapsulate Beams
204.0	03/09/89	RLS	B	Mechanical Room 721	Hard Fittings		T-HF	D	1	1	L	H	H	16	EA			
205.0	03/09/89	RLS RW	B	Mechanical Room 721	Sprayed Beams and Overspray		S-FP	F	3	1	L	H	H	256	SF			
206.0	03/09/89	RLS RW	B	Mechanical Room 721	Flex Connector		M-O	N	1	1	L	H	H	10	SF			
207.0	03/09/89	RLS RW	B	Mechanical Room 721	(Suspect) Glue on Fiberglass Insulation	SB-101	M-O	D	1	1	L	H	H	160	SF			
208.0	03/09/89	RLS RW	B	Plenum 721A	Sprayed Ceiling		S-FP	F	3	8	L	H	H	180	SF			Eroded - Rounded out BAD - PRIORITY #1
209.0	03/09/89	RLS RW	B	Fan Room 715	Sprayed Ceiling and Wall		S-FP	F	2	8	L	H	H	800	SF			Concrete wall 22' Overspray and Total Ceiling 2" Thick. Would Probably Not Hold Encap.
210.0	03/09/89	RLS RW	B	Fan Room 715	Flex Vent		M-O	N	1	1	L	H	H	16	SF			"Ventglass" is Trade Name

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ANERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIBILITY	ACCESS (cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-PP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-PP - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged M = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CY - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	By	Area	Func	Location	Log Comment	Sample Number	Type	Friability	Condition	Access	Contact	Vibration	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
211.0	03/09/89	RLS RW	B	Mechanical Room	717	Sprayed Ceiling and Overspray		S-PP	F	2	8	L	H	H	1,000	SF			
212.0	03/09/89	RLS RW	B	Mechanical Room	717	Hard Fittings		T-HF	D	1	1	L	H	H	64	EA			48 Less Than 4" Dia. 16 Greater Than 4" Dia. (Multiply by 1.5)
213.0	03/09/89	RLS RW	B	Mechanical Room	717	Glue and Lining Inside Fan		M-O	D	3	8	L	H	H	400	SF			
214.0	03/09/89	RLS RW	B	Plenum Ductwork		Observation - Spray on Fireproofing		S-PP	F	3	8	L	H	H	80	SF			Cannot be encapsulated, it would fall off.
215.0	03/09/89	RLS RW	B	Plenum 713		Observation - Spray on Fireproofing		S-PP	F	3	1	L	M	M	600	SF			Overspray on Walls
216.0	03/10/89	RLS RW	B	Room 710	Airlock	Hard Fittings		T-HF	N	1	4	L	M	M	5	EA			
217.0	03/09/89	RLS RW	B	Room 719		Glue on Fiberglass Plenum	SB-102	M-O	N	3	1	L	M	M	450	SF			
218.0	03/10/89	RLS RW	B	Room 710	Airlock	Spray and Debris Above Solid Ceiling		S-PP	F	1	4	L	M	M	110	SF	9-52	Balancing Damper Showing Overspray	Area is dirty with debris.
219.0	03/10/89	RLS RW	B	Room 712	Plenum	Hard Fittings		T-HF	D	1	8	L	H	H	8	EA			4 ea >4" Dia. 4 ea <4" Dia.
220.0	03/10/89	RLS RW	B	Room 712	Plenum	Spray on Fireproofing		S-PP	F	2	1	L	H	H	700	SF	10-2 10-2	10-2A Damaged Insulation 10-2B Overview Looking South	Material cannot be encapsulated.

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AHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIBILITY	ACCESS (cont)
"A" = Parking	S = SURFACING MATERIALS	M-CT - Ceiling Tile	F = Friable	6 - Layered in Other Material
"B" = Mechanical Rooms	S-FP Sprayed on Fireproofing	M-M - Mastic or Adhesive	D = Friable if Damaged	7 - Buried
"C" = Stairwell/Corrid./Elev.Lobby/Plaza	S-AS Acoustical Spray	M-UB - Wallboard	M = Non-Friable	8 - In Plenum
"D" = Storage, Janitor, Maintenance	T = THERMAL SYSTEMS INSULATION	M-VT - Vinyl Tile Flooring	CONDITION	CONTACT, VIBRATION, EROSION
"E" = Office Areas	T-AC - Aircell	M-R - Roofing	1 - Good (Undamaged)	H - High
	T-B - Boiler or Tank	M-RC - Rubber Composites	2 - Fair (Damaged)	M = Moderate
	T-HF - Hard Fitting	M-JC - Joint Compound, Spackle	3 - Poor (Severely Damaged)	L = Low
	T-HP - Hard Pipe	M-A - Air	ACCESS	UNITS
	T-C - Chimney, Stack	M-D - Dirt, Dust	1 - In Airstream	CF - Cubic Feet
	T-FG - Fiberglass	M-TX - Textiles, Fabrics	2 - Open	CY - Cubic Yards
	M = MISCELLANEOUS	M-PC - Paints, Coatings	3 - Above Lay-In Ceiling	EA - Each
	M-BP - Building Paper	M-TC - Troweled On Cementitious Mat.	4 - Behind Solid Ceiling	GAL - Gallons
	M-CB - Cementitious Board	M-O - Other	5 - Behind Walls	LF - Linear Feet
				SF - Square Feet

Log#	Date	By	Func Area	Location	Log Comment	Sample Number	Type Code	Friability	Condit ion	Access	Contact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
221.0	03/10/89	RLS RW	B	Fan Access	Spray on		S-FP	F	1	1	L	M	M	185	SF			Enclosed Support Beams and Columns 2 ea
222.0	03/10/89	RLS RW	B	Fan Access	Hard Fittings Greater Than 4"		T-HF	D	1	1	L	M	M	8	EA		Shows Ceiling and Fan	Shows Ceiling and Fan
223.0	03/10/89	RLS RW	B	Room 716 Fan Room	Return Air		S-FP	F	1	8	L	H	H	500	SF	10-21		
224.0	03/10/89	RLS RW	B	Room 716 Fan Room	Suspected Flex Duct	SB-104	M-O	M	1	8	L	H	H	13	SF	10-14	Looking at Flex Duct Connector	
225.0	03/10/89	RLS RW	B	Mechanical Room 718	Sprayed on fireproofing		S-FP	F	1	8	L	H	H	1,200	SF			
226.0	03/10/89	RLS RW	B	Mechanical Room 718	Hard Fittings <= 4" Dia.		T-HF	D	1	8	L	H	H	38	EA			
227.0	03/10/89	RLS RW	B	Mechanical Room 718	Hard Fittings >4" Dia.		T-HF	D	1	8	L	H	H	8	EA			
228.0	03/10/89	RLS RW	B	Mechanical Room 718	Glue on Fiberglass Inside Duct		M-O	N	1	8	L	H	H	450	SF			Correlate with JSB-8-102 in Room 719
229.0	03/10/89	RLS RW	B	Plenum Ductwork	Sprayed Beams and Ceiling		S-FP	F	3	8	L	H	H	80	SF	10-45	Damage and Air Erosion Looking N Over Filters	
230.0	03/09/89	RLS RW	B	Mechanical Room 722	Fiberglass Insulation Glue	SB-105	M-O	D	1	1	L	H	H	160	SF	10-59	Looking At Access Plate Fan Coil	Correlate With Sample SB-103 in Room 721

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AFERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES	ITEM TYPE	ITEM TYPE (cont)	FRIABILITY	ACCESS (cont)
"A" = Parking "B" = Mechanical Rooms "C" = Stairwell/Corrid./Elev.Lobby/Plaza "D" = Storage, Janitor, Maintenance "E" = Office Areas	S = SURFACING MATERIALS S-FP Sprayed on Fireproofing S-AS Acoustical Spray T = THERMAL SYSTEMS INSULATION T-AC - Aircell T-B - Boiler or Tank T-HF - Hard Fitting T-HP - Hard Pipe T-C - Chimney, Stack T-FG - Fiberglass M = MISCELLANEOUS M-8P - Building Paper M-CB - Cementitious Board	M-CT - Ceiling Tile M-M - Mastic or Adhesive M-WB - Wallboard M-VT - Vinyl Tile Flooring M-SV - Sheet Vinyl Flooring M-R - Roofing M-RC - Rubber Composites M-JC - Joint Compound, Spackle M-A - Air M-D - Dirt, Dust M-TX - Textiles, Fabrics M-PC - Paints, Coatings M-TC - Troweled On Cementitious Mat. M-O - Other	F = Friable D = Friable if Damaged N = Non-Friable CONDITION 1 - Good (Undamaged) 2 - Fair (Damaged) 3 - Poor (Severely Damaged) ACCESS 1 - In Airstream 2 - Open 3 - Above Lay-In Ceiling 4 - Behind Solid Ceiling 5 - Behind Walls	6 - Layered in Other Material 7 - Buried 8 - In Plenum CONTACT, VIBRATION, EROSION H - High M - Moderate L - Low UNITS CF - Cubic Feet CY - Cubic Yards EA - Each GAL - Gallons LF - Linear Feet SF - Square Feet

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Condition	Access	Contact	Vibr-ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
231.0	03/10/89	RLS RW	B	Mechanical Room 722	Sprayed on Fireproofing		S-FP	F	2	1	L	M	M	300	SF	11- 2	Looking NW Damaged Fireproofing	One Damaged
232.0	03/09/89	RLS	B	Mechanical Room 722	Hard Fittings <= 4" Dia.		T-HF	D	1	1	L	M	M	16	EA			
233.0	03/10/89	RLS RW	B	Duct	Spray on Fireproofing		S-FP	F	3	8	L	H	H	160	SF	11- 9	Looking East (Toward Fan Eroded Insulation)	Very Good Condition
234.0	03/10/89	RLS RW	B	Room 720	Hard Fittings		T-HF	D	1	1	L	H	H	25	EA			Need Repair
235.0	03/10/89	RLS RW	B	Mechanical Room 722	2 Flex Connectors		M-O	M	2	1	L	M	M	16	SF			Damaged on Beams
236.0	03/10/89	RLS RW	B	Room 720	Sprayed on Fireproofing on Beams		S-FP	F	2	1	L	H	H	450	SF			
237.0	03/10/89	RLS RW	B	Room 720	Fan Flex		M-O	N	3	1	L	H	H	11	SF			
238.0	03/10/89	RLS RW	B	Room 720	Glue on Fiberglass at Plenum		M-O	N	3	1	L	M	M	450	SF			Same as Sample SB-101 in Room 719
239.0	03/10/89	RLS RW	B	Room 714 Plenum	Outside Spray on		S-FP	F	3	8	L	M	M	500	SF	11-23	Looking West Damaged Patching	
240.0	03/10/89	RLS RBB	B	Airlock Room 609	Observation - Sprayed on Fireproofing		S-FP	F	2	2	L	L	L	100	SF	2- 4 2- 5	Looking South at Ceiling	

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HAHERA TYPE SURVEY FORMAT

Original Field Data & Notes

Project Number: 3716

Project Name: Juneau State Office Building

FUNCTIONAL AREA CODES
 "A" = Parking
 "M" = Mechanical Rooms
 "C" = Stairwell/Corrid./Elev.Lobby/Plaza
 "S" = Storage, Janitor, Maintenance
 "E" = Office Areas

ITEM TYPE
 S = SURFACING MATERIALS
 S-FP Sprayed on Fireproofing
 S-AS Acoustical Spray
 T = THERMAL SYSTEMS INSULATION
 T-AC - Aircell
 T-B - Boiler or Tank
 T-RF - Hard Fitting
 T-HP - Hard Pipe
 T-C - Chimney, Stack
 T-FG - Fiberglass
 M = MISCELLANEOUS
 M-BP - Building Paper
 M-CB - Cementitious Board

ITEM TYPE (cont)
 M-CT - Ceiling Tile
 M-M - Mastic or Adhesive
 M-WB - Wallboard
 M-VT - Vinyl Tile Flooring
 M-SV - Sheet Vinyl Flooring
 M-R - Roofing
 M-RC - Rubber Composites
 M-JC - Joint Compound, Spackle
 M-A - Air
 M-D - Dirt, Dust
 M-TX - Textiles, Fabrics
 M-PC - Paints, Coatings
 M-TC - Troweled On Cementitious Mat.
 M-O - Other

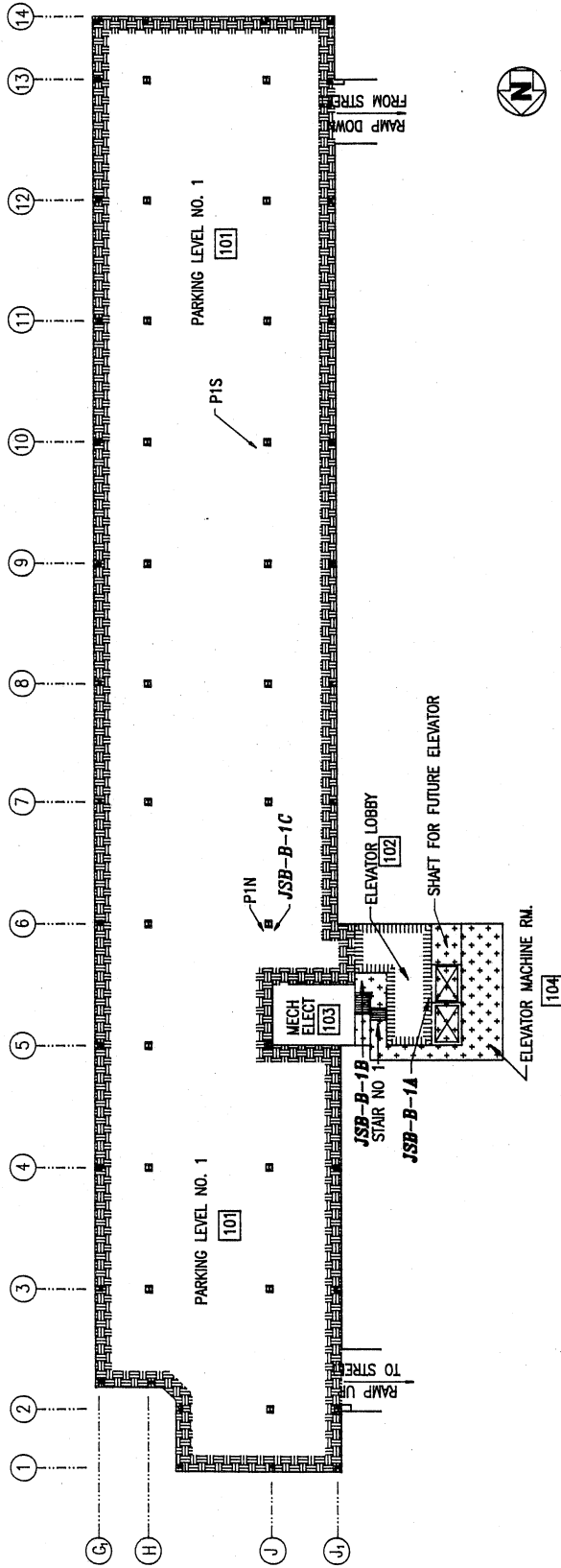
FRIABILITY
 F = Friable
 D = Friable if Damaged
 N = Non-Friable
CONDITION
 1 - Good (Undamaged)
 2 - Fair (Damaged)
 3 - Poor (Severely Damaged)
ACCESS
 1 - In Airstream
 2 - Open
 3 - Above Lay-In Ceiling
 4 - Behind Solid Ceiling
 5 - Behind Walls

ACCESS (cont)
 6 - Layered in Other Material
 7 - Buried
 8 - In Plenum
CONTACT, VIBRATION, EROSION
 H - High
 M = Moderate
 L = Low
UNITS
 CF - Cubic Feet
 CY - Cubic Yards
 EA - Each
 GAL - Gallons
 LF - Linear Feet
 SF - Square Feet

Log#	Date	By	Area	Location	Log Comment	Sample Number	Type Code	Friability	Condit	Access	Contact	Vibr- ation	Air Erosion	Quantity	Unit	Photos	Photo Comments	Additional Remarks
241.0	03/10/89	RLS RBB	B	Access Airlock Between 609 and 619	Observation - Sprayed on Fireproofing on Ceiling		S-FP	F	2	2	L	M	L	24	SF			
242.0	03/10/89	RLS RBB	B	Fan Room 621	Observation - Sprayed on Fireproofing on beams w/FP covered w/fiberglass insul. between beams		S-FP	F	2	8	L	H	H	600	SF	2-6	Typical Looking SW	Approximately 70% wall and ceiling covered w/4" sound deadening fiberglass.
243.0	03/10/89	RLS RBB	B	Fan Room 621	Observation - Flex Connector		M-O	N	1	8	L	H	L	16	SF	2-7	Typical Work at Flex Duct Connector	Trade Name "Ventglass"
244.0	03/10/89	RLS RBB	B	Plenum 619	Observation - Sprayed on Fireproofing on Ceiling		S-FP	F	2	8	L	M	M	420	SF	2-9 2-10	2-9 Overview 2-10 Looking Through Raw Cut to Floor Above	
245.0	03/10/89	RLS RBB	B	Plenum 619	Observation - Pipe Corridor Sprayed on Fireproofing 3'x12'		S-FP	F	2	6	L	M	L	36	SF	2-11	Access to top of Ceiling Below Shows S-FP	
246.0	03/10/89	RLS RBB	B	Mechanical Room 617	Observation - Sprayed on Fireproofing on Ceiling		S-FP	F	1	2	L	M	L	440	SF	2-12	Overview	
247.0	03/10/89	RLS RBB	B	Mechanical Room 617	Hard Fitting <8" dia.		T-HF	D	1	2	L	M	L	38	EA	2-12	Hard Fitting <8" Dia	
248.0	03/10/89	RLS RBB	B	Fan Room 615	Observation - Sprayed on Fireproofing on Ceiling		S-FP	F	1	8	L	H	M	300	SF	2-13	Overview and Flex Connector	Total Ceiling and West Wall Covered w/4" Sound Proofing Fiberglass, Excluding Beam
249.0	03/10/89	RLS RBB	B	Fan Room 615	Observation - Flex Connector	SB-106	M-O	N	2	8	L	H	L	16	SF	2-13	Sample	Trade name "Ventglass" Correlate with SB-104
250.0	03/10/89	RLS RBB	B	Plenum 615 A	Observation - Sprayed on Fireproofing on Ceiling and Beams		S-FP	F	1	8	L	H	H	210	SF	2-14 2-15	Overview of Ceiling Looking West	Looks Like it has been Encapsulated Total Ceiling and West Wall Covered w/4" Sound Proofing

C - 4
DRAWINGS

C - 4
DRAWINGS

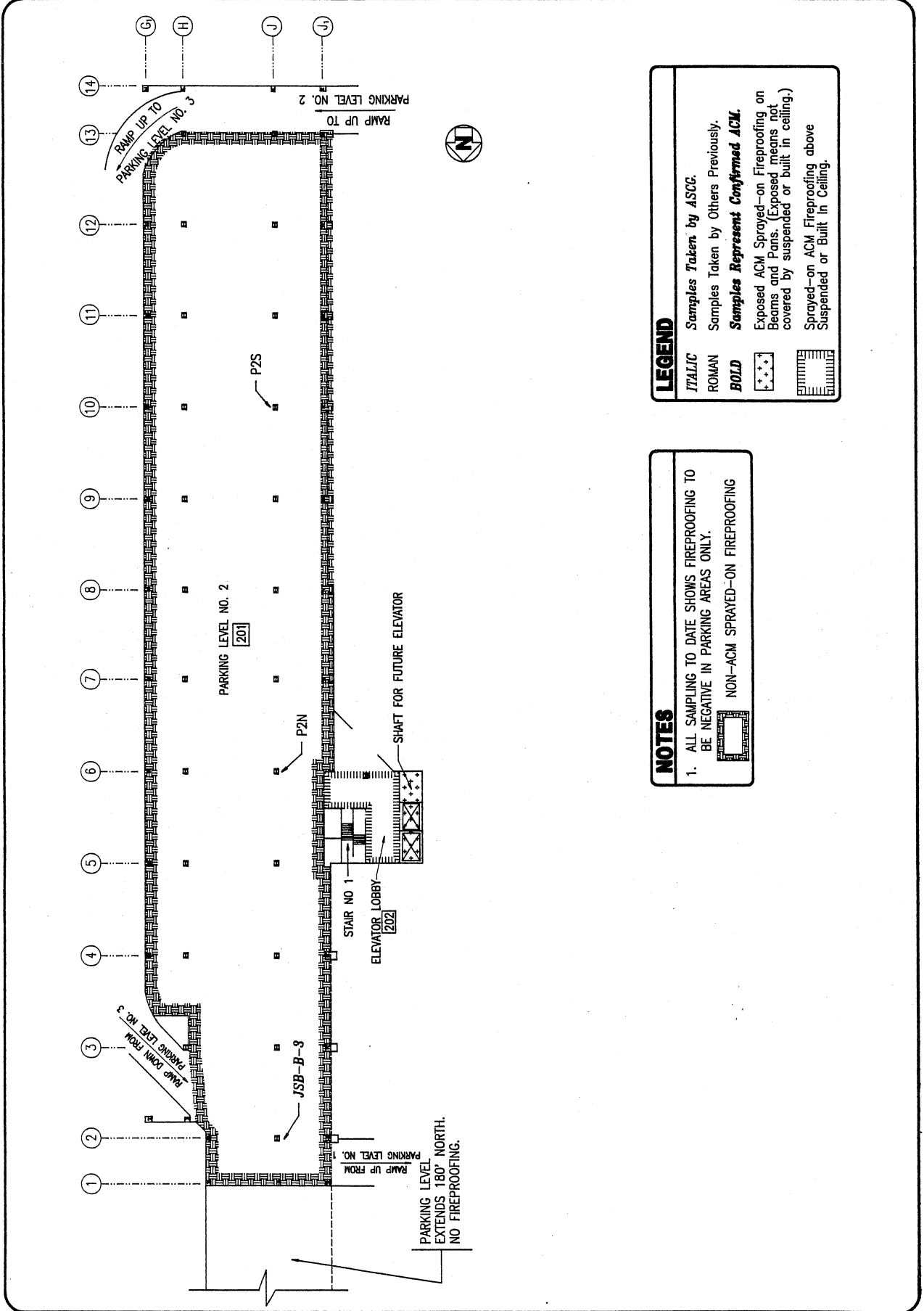


LEGEND

ITALIC	Samples Taken by ASCC.
ROMAN	Samples Taken by Others Previously.
BOLD	Samples Represent Confirmed ACM.
⊠	Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
⊞	Sprayed-on ACM Fireproofing above Suspended Built In Ceiling.

NOTES

- ALL SAMPLING TO DATE SHOWS FIREPROOFING TO BE NEGATIVE IN PARKING AREAS ONLY.
 ⊠ NON-ACM SPRAYED-ON FIREPROOFING



LEGEND

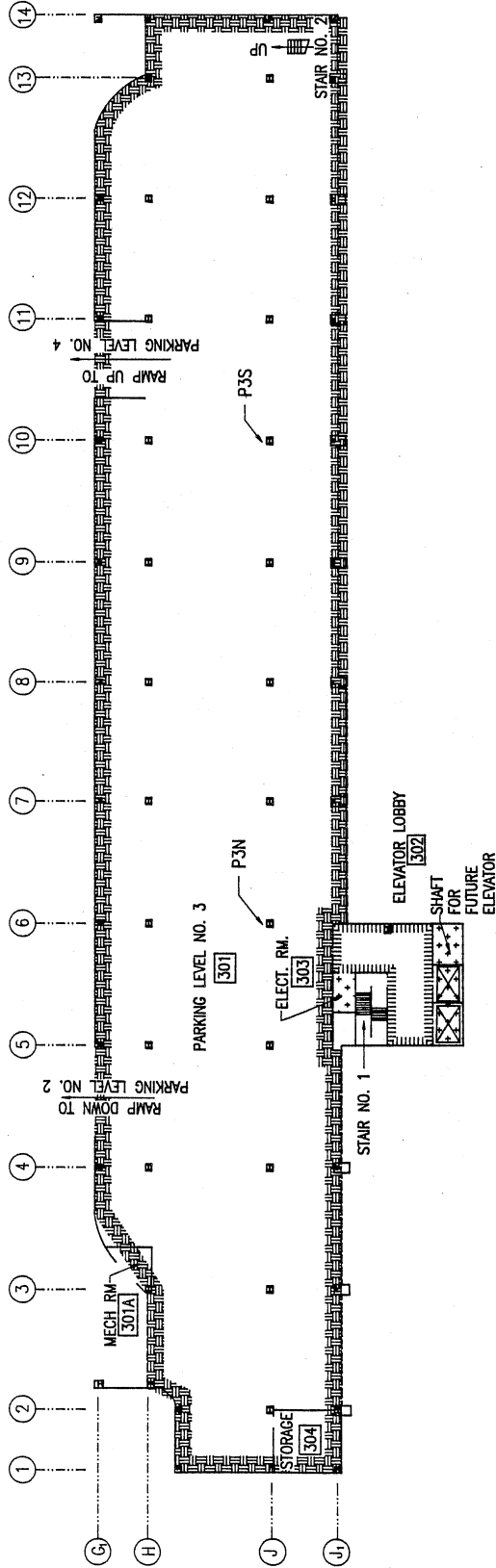
ITALIC Samples Taken by ASCC.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.

Exposed ACM Sprayed—on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 Sprayed—on ACM Fireproofing above Suspended or Built in Ceiling.

NOTES

1. ALL SAMPLING TO DATE SHOWS FIREPROOFING TO BE NEGATIVE IN PARKING AREAS ONLY.

NON-ACM SPRAYED—ON FIREPROOFING

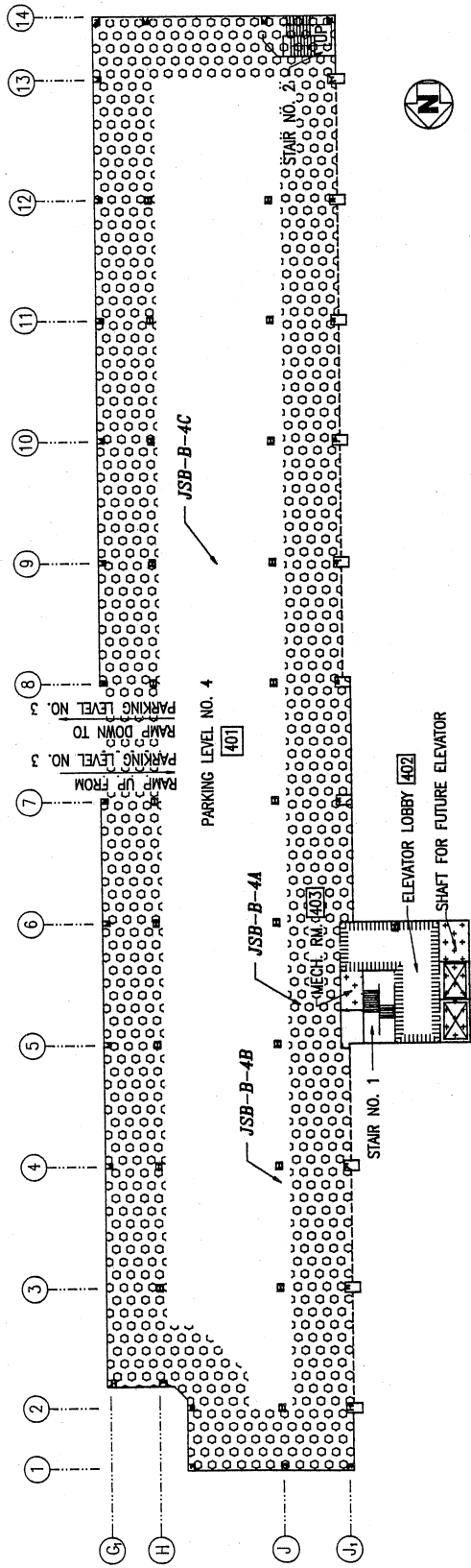


LEGEND

ITALIC Samples Taken by ASCC.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 [Pattern: Dotted] Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [Pattern: Horizontal Lines] Sprayed-on ACM Fireproofing above Suspended or Built In Ceiling.

NOTES

1. ALL SAMPLING TO DATE SHOWS FIREPROOFING TO BE NEGATIVE IN PARKING AREAS ONLY.
 [Pattern: Dotted] NON-ACM SPRAYED-ON FIREPROOFING



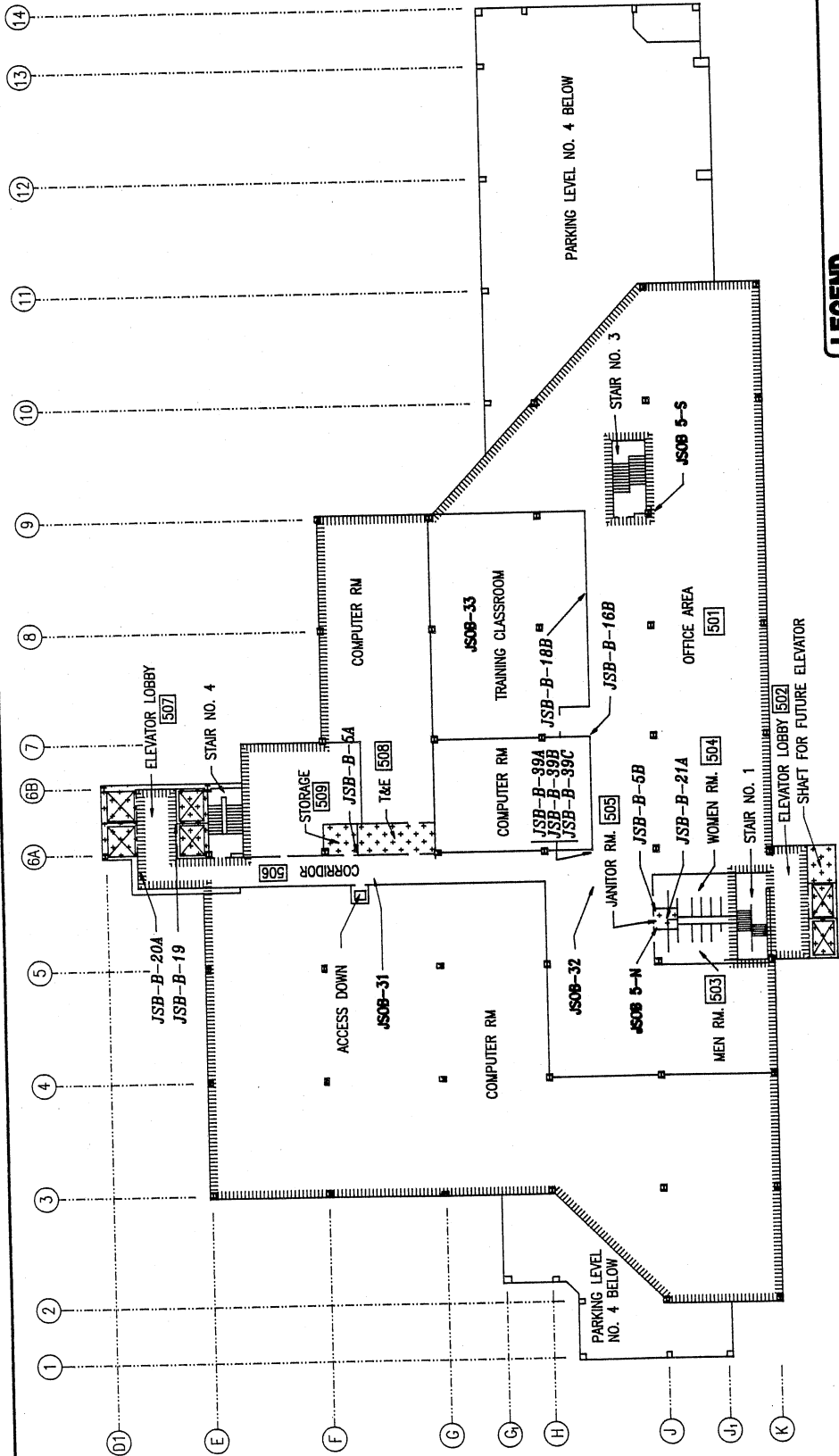
LEGEND

ITALIC Samples Taken by ASCG.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 [Symbol: Small square with 'x's] Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [Symbol: Horizontal lines] Sprayed-on ACM Fireproofing above Suspended or Built In Ceiling.

NOTES




1. SUFACING TEXTURE IS NON-ACM. NO SPRAYED-ON FIREPROOFING IN PARKING AREA, THIS LEVEL ONLY.

[Symbol: Small circles] NON-ACM SUFACING TEXTURE



LEGEND

ITALIC Samples Taken by ASCC.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 Sprayed-on Fireproofing above Suspended or Built in Ceiling.

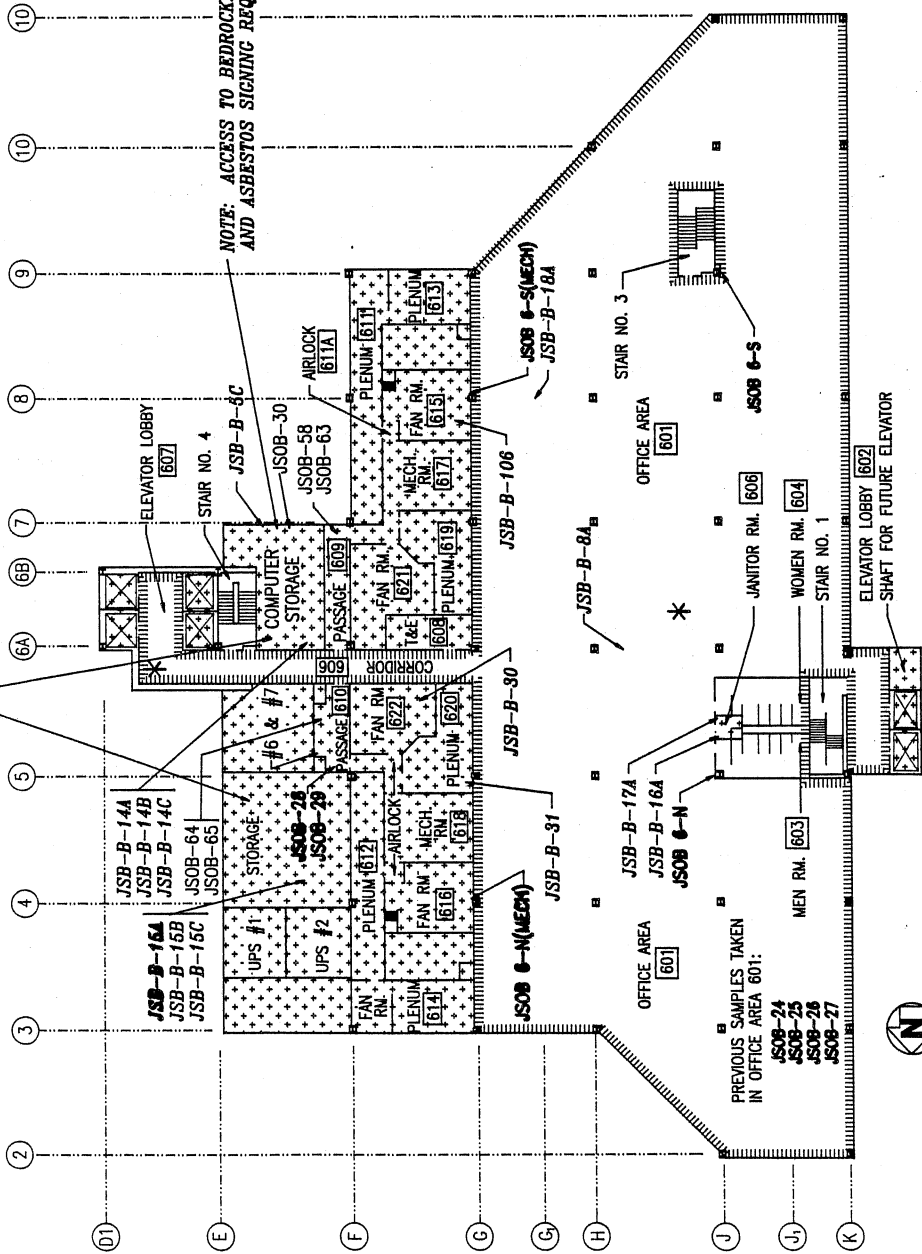






SAMPLES TAKEN FROM SUPPLY FAN FILTER
 SITUATED ON FLOORS 6-7:
 JSOB-47
 JSOB-46
 JSOB-49
 JSOB-50
 JSOB-51
 JSOB-52
 JSOB-53
 JSOB-54

NOTE: NEWER MONOKOTE FIREPROOFING SPRAYED
 ON OVER ACM FIREPROOFING IN THESE ROOMS ONLY.

NOTE: ACCESS TO BEDROCK, OSHA
 AND ASBESTOS SIGNING REQUIRED.



PREVIOUS SAMPLES TAKEN
 IN OFFICE AREA 601:
 JSOB-24
 JSOB-25
 JSOB-26
 JSOB-27


LEGEND

ITALIC Samples Taken by ASCG.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 [Symbol: Star in a square] Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [Symbol: Grid in a square] Sprayed-on Fireproofing above Suspended or Built In Ceiling.
 * Locations where ASCG accessed ceiling.

LEGEND

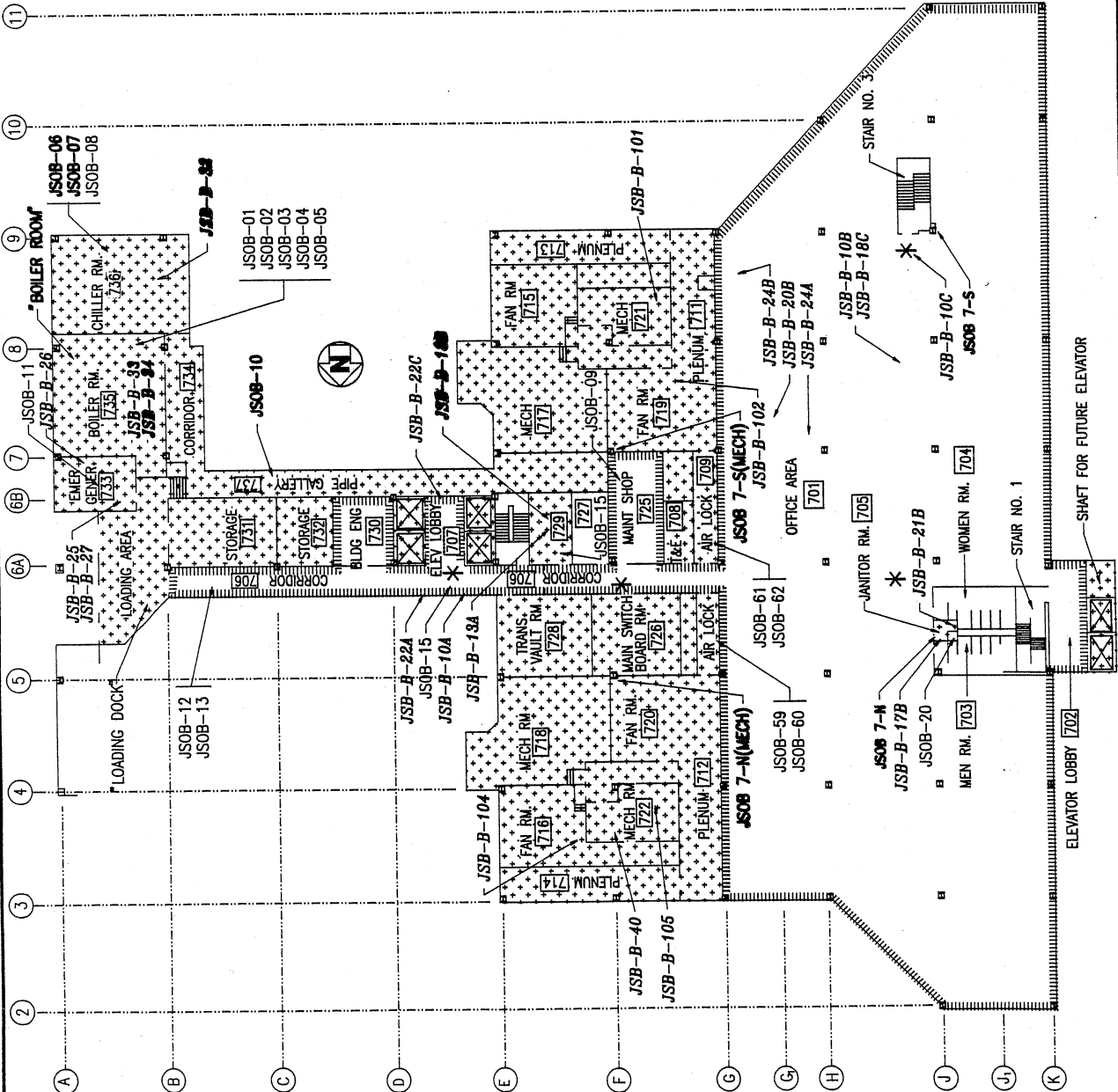
Samples Taken by ASOC.
 Samples Taken by Others Previously.
Samples Represent Confirmed ACM.

Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 Sprayed-on Fireproofing above Suspended or Built in Ceiling.
 Locations where ASOC accessed ceiling.

ITALIC
 ROMAN
BOLD
 + + +

 *

SAMPLES TAKEN BY OTHERS
 PREVIOUSLY IN OFFICE AREA 701

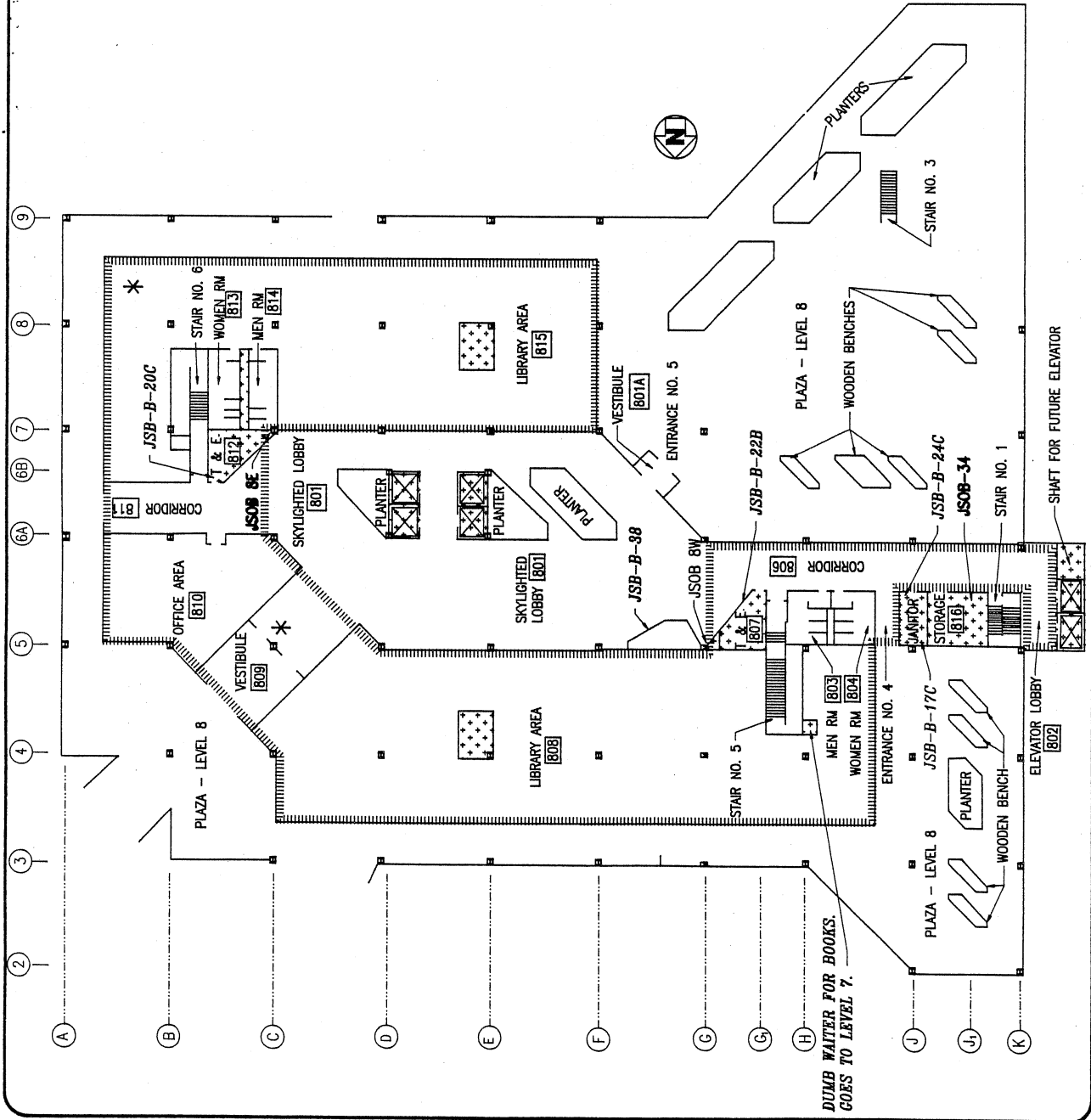
- JSOB-16 JSOB-21
- JSOB-17 JSOB-22
- JSOB-18 JSOB-23
- JSOB-19



LEGEND

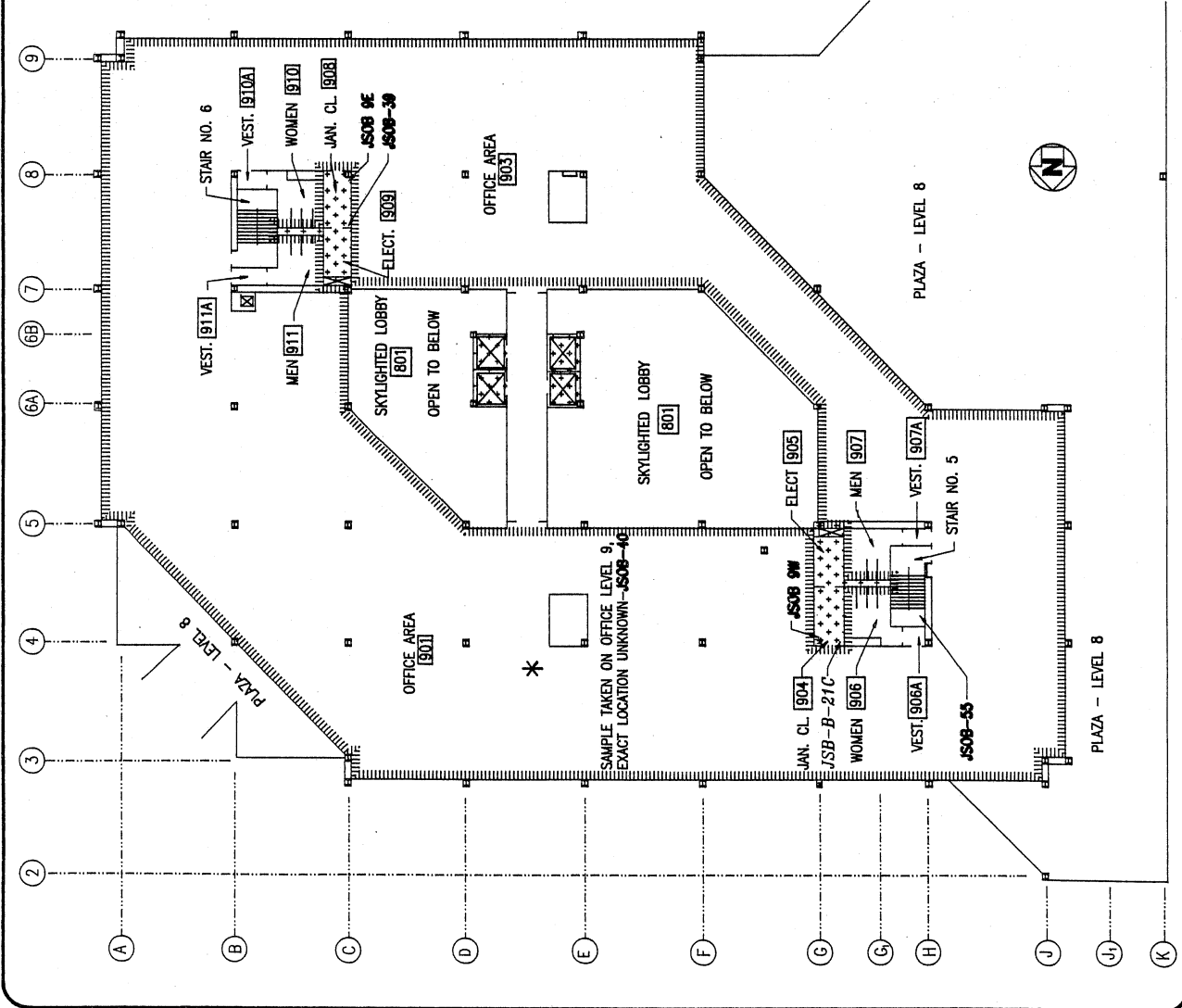
ITALIC Samples Taken by ASGC.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 [Pattern] Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [Pattern] Sprayed-on Fireproofing above Suspended or Built In Ceiling.
 * Locations where ASGC accessed ceiling.

SAMPLES TAKEN BY OTHERS PREVIOUSLY ON LEVEL 8, EXACT LOCATIONS UNKNOWN:
 JSOB-35
 JSOB-36
 JSOB-37
 JSOB-38



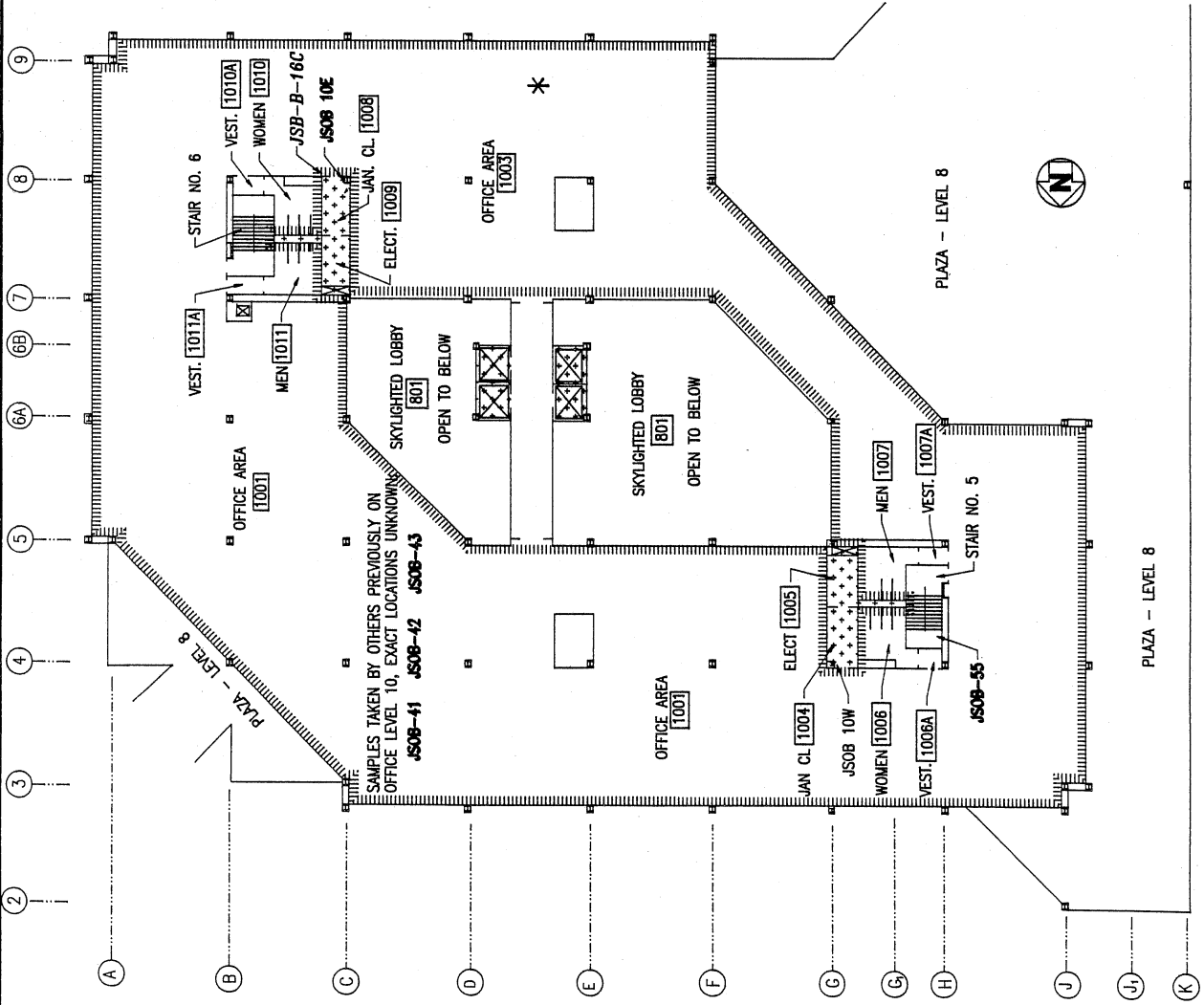
LEGEND

ITALIC Samples Taken by ASCG.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 Sprayed-on Fireproofing above Suspended or Built in Ceiling.
 Locations where ASCG accessed ceiling. *



LEGEND

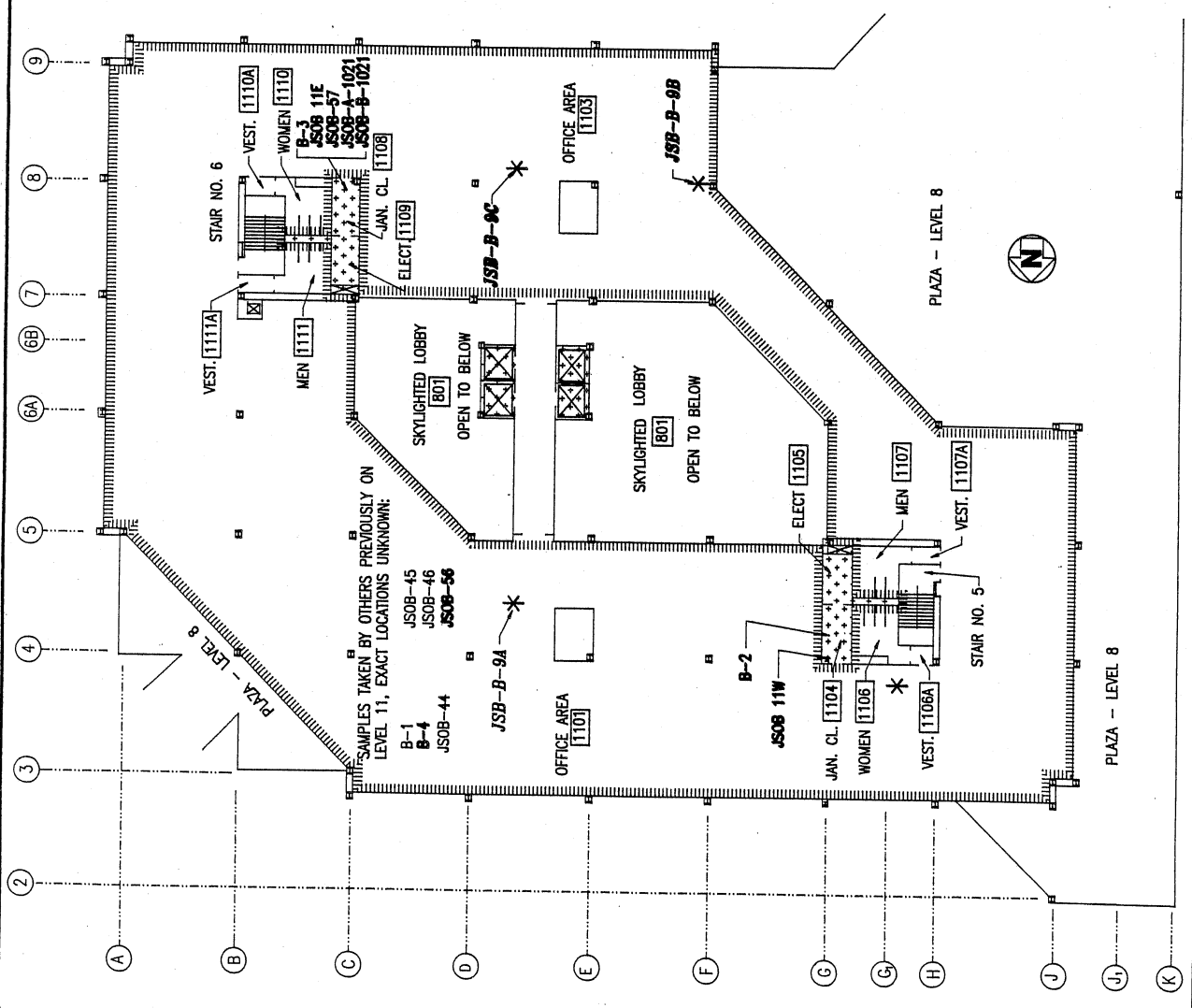
ITALIC Samples Taken by ASCG.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 + + + Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [] Sprayed-on Fireproofing above Suspended or Built In Ceiling.
 * Locations where ASCG accessed ceiling.



SAMPLES TAKEN BY OTHERS PREVIOUSLY ON
 OFFICE LEVEL 10, EXACT LOCATIONS UNKNOWN
 JSOB-41 JSOB-42 JSOB-43

LEGEND

ITALIC Samples Taken by ASCG.
 ROMAN Samples Taken by Others Previously.
BOLD Samples Represent Confirmed ACM.
 [Pattern] Exposed ACM Sprayed-on Fireproofing on Beams and Pans. (Exposed means not covered by suspended or built in ceiling.)
 [Pattern] Sprayed-on Fireproofing above Suspended or Built in Ceiling.
 * Locations where ASCG accessed ceiling.



C - 5

SELECT PHOTOGRAPHS & PHOTO LOG

**C - 5
PHOTOS/PHOTO LOG**

**Asbestos Materials Survey
Photograph Log**

* Photos Used in Report

Functional Areas -

"A" = Parking
 "B" = Mechanical Rooms
 "C" = Stairwell/Corrid./Elev.Lobby/Plaza
 "D" = Storage, Janitor, Maintenance
 "E" = Office Areas

Hr./Min.	Date	By	FA	Location	Comment
1 - 1	03/10/89	RBB KWE	"E"	Central Micro-Film Office Area 701	Sample of Cove Base and Mastic
1 - 2	03/10/89	RBB KWE	"E"	Central Micro-Film Office Area 701	Sample Sample of Floor Tile and Mastic
1 - 3	03/10/89	RBB KWE	"E"	Storage Room Across From Central Micro. Office Area 701	Ceiling Tile Sample
* 1 - 4	03/10/89	RBB KWE	"E"	Longevity Area Office Area 701	Floor Tile and Mastic Sample
1 - 6	03/10/89	RBB KWE	"D"	Janitor Closet 705	1/6 Original Condition 1/9 Sample
1 - 7	03/10/89	RBB KWE	"D"	Janitor Closet 705	Floor Tile and Mastic Sample
1 - 8	03/10/89	RBB KWE	"D"	Janitor Closet 705	Hard Fittings in Janitors Closet 706
1 - 9	03/10/89	RBB KWE	"D"	Janitor Closet 705	1/6 Original Condition 1/9 Sample
1 - 10	03/10/89	RBB KWE	"D"	Janitor Closet 705 Access	Hard Fittings in Access
1 - 11	03/10/89	RBB KWE	"D"	T&E 708	Hard Fittings
1 - 12	03/10/89	RBB KWE	"D"	T&E 708	Fireproofing
1 - 13	03/10/89	RBB KWE	"D"	Maintenance Shop 725	Ceiling of Maintenance Shop
1 - 14	03/10/89	RBB KWE	"D"	Loading Area	Hard Fittings in Loading Area 732

Hr./Min.	Date	By	FA	Location	Comment
1 - 15	03/10/89	RBB KWE	"D"	Storage 731	Hard Fittings in Storage 731
1 - 16	03/10/89	RWB KWE	"B"	Emergency Generator 733	General Layout of Emergency Room 733
1 - 17	03/10/89	RWB KWE	"B"	Emergency Generator 733	General Layout of Emergency Room 733
1 - 18	03/10/89	RWB KWE	"B"	Emergency Generator 733	General Layout of Emergency Room 733
1 - 19	03/10/89	RWB KWE	"B"	Emergency Generator 733	General Layout of Emergency Room 733
1 - 20	03/10/89	RBB KWE	"B"	Emergency Generator 733	Exhaust Muffler Unit Sample
1 - 21	03/10/89	RBB KWE	"B"	Emergency Generator 733	Sample of Hard Fitting
1 - 22	03/10/89	RBB KWE	"B"	Emergency Generator 733	Sample of Hard Fitting
1 - 23	03/10/89	RBB KWE	"B"	Emergency Generator 733	Exhaust Muffler Unit Sample
2 - 1	03/10/89	RBB KWE	"B"	Main Switch- board Room 726	Hard Fittings
2 - 4	03/10/89	RLS RBB	"B"	Airlock Room 609	Looking South at Ceiling
2 - 5	03/10/89	RLS RBB	"B"	Airlock Room 609	Looking South at Ceiling
2 - 6	03/10/89	RLS RBB	"B"	Fan Room 621	Typical Looking SW
2 - 7	03/10/89	RLS RBB	"B"	Fan Room 621	Typical Work at Flex Duct Connector
2 - 9	03/10/89	RLS RBB	"B"	Plenum 619	2-9 Overview 2-10 Looking Through Raw Cut to Floor Above
2 - 10	03/10/89	RLS RBB	"B"	Plenum 619	2-9 Overview 2-10 Looking Through Raw Cut to Floor Above

Hr./Min.	Date	By	FA	Location	Comment
2 - 11	03/10/89	RLS RBB	"B"	Plenum 619	Access to top of Ceiling Below Shows S-FP
2 - 12	03/10/89	RLS RBB	"B"	Mechanical Room 617	Overview
2 - 13	03/10/89	RLS RBB	"B"	Fan Room 615	Overview and Flex Connector
2 - 14	03/10/89	RLS RBB	"B"	Plenum 615 A	Overview of Ceiling Looking West
2 - 15	03/10/89	RLS RBB	"B"	Plenum 615 A	Overview of Ceiling Looking West
* 2 - 16	03/10/89	RLS RBB	"B"	Plenum 613	Overview of Ceiling Looking West
2 - 17	03/10/89	RLS RBB	"B"	Plenum 611	Overview of Ceiling Looking South
* 2 - 18	03/10/89	RLS RBB	"B"	Plenum 611	Looking Down on Floor Space Shows 1" to 1/8" Pieces
2 - 19	03/10/89	RW KWE	"B"	Boiler Room 735	Breeching Sample
* 2 - 20	03/10/89	RW KWE	"B"	Boiler Room 735	Fire Brick Sample
8 - 25	03/11/89	RLS RW RBB KWE	"E"	In Front of Longevity Office Area 701	Looking All Directions (4 each)
* 8 - 59	03/11/89	RLS RBB KWE RW	"C"	Plaza Entry NE	Above Lay-in Ceiling Plaza Entry
9 - 0	03/08/89	RLS RBB KWE	"C"	Elevatory Lobby Area 507 Level 5	Down Hallway Toward Elevator
9 - 3	03/11/89	RLS KWE RBB RW	"D"	T&E Room 812 Wall Access	Hard Fittings in Wall Access

Hr./Min.	Date	By	FA	Location	Comment
9 - 6	03/11/89	RW RLS KWE RBB	"D"	T&E Room 812	Sample of Cove Base
9 - 16	03/11/89	RLS KWE RBB RW	"E"	Technical Services Library Area 815	Looking up at Hard Fittings
9 - 17	03/11/89	RLS KWE RBB RW	"E"	Technical Services Library Area 815	Looking South Toward Perimeter
9 - 21	03/11/89	RLS RBB KWE RW	"E"	Mens Room 814 Wall Access	Hard Fittings in Pipe Chase, Mens Room 814
9 - 28	03/08/89	RLS RBB KWE	"D"	Room 509 (Storage)	Sheetrock Sample
9 - 29	03/08/89	RLS RBB KWE	"D"	Room 509 (Storage)	Damaged and Patched Fireproofing
9 - 35	03/09/89	KWE RBB	"C"	Corridor 706 Near Elev. Lobby 707	Ceiling Tile Sample
9 - 37	03/11/89	RLS RBB KWE RW	"D"	T&E Room 807	Hard Fittings in T&E Room 807
* 9 - 38	03/11/89	RLS RBB KWE RW	"E"	Womens Room 804 Wall Access	Hard Fittings in Wall Access
9 - 45	03/09/89	RBB KWE	"C"	Corridor 706 Near Elev. Lobby 707	9/45 - South 9/46 - Ceiling 9/47 - East 9/48 - West
9 - 46	03/09/89	RBB KWE	"C"	Corridor 706 Near Elev. Lobby 707	9/45 - South 9/46 - Ceiling 9/47 - East 9/48 - West

Hr./Min.	Date	By	FA	Location	Comment
9 - 47	03/09/89	RBB KWE	"C"	Corridor 706 Near Elev. Lobby 707	9/45 - South 9/46 - Ceiling 9/47 - East 9/48 - West
9 - 48	03/09/89	RBB KWE	"C"	Corridor 706 Near Elev. Lobby 707	9/45 - South 9/46 - Ceiling 9/47 - East 9/48 - West
9 - 51	03/08/89	RLS RBB KWE	"F"	Through Room 508, Side Room Off of Computer Room	Ventilator
9 - 52	03/08/89	RLS RBB KWE	"F"	Through Room 508 Computer Room	Computer Room
9 - 59	03/11/89	RLS RBB KWE RW	"D"	Janitor Closet Level 8	Sample of Floor Tile
10 - 0	03/11/89	RLS RBB KWE RW	"D"	Janitor Closet Level 8	Sample of Sheetrock
*10 - 2	03/10/89	RLS RW	"B"	Room 712 Plenum	10-2A Damaged Insulation 10-2B Overview Looking South
10 - 3	03/08/89	RLS RBB KWE	"D"	Room 506B Access Down Level 5	Mech. Equipment on Ground (10-3). Steel Above Area (10-4).
10 - 4	03/08/89	RLS RBB KWE	"D"	Room 506B Access Down Level 5	Mech. Equipment on Ground (10-3). Steel Above Area (10-4).
10 - 14	03/10/89	RLS RW	"B"	Room 716 Fan Room	Looking at Flex Duct Connector
10 - 21	03/09/89	RBB KWE	"C"	Corridor 706 Near Col. F6	10/21 - East 10/22A - West 10/22B - West

Hr./Min.	Date	By	FA	Location	Comment
10 - 22	03/09/89	RBB KWE	"C"	Corridor 706 Near Col. F6	10/21 - East 10/22A - West 10/22B - West
10 - 26	03/11/89	RLS KWE RBB RW	"E"	Office Area 901 North	Looking at Ductwork and Ceiling (4 ea)
10 - 31	03/08/89	RLS RBB KWE	"E"	End of Corridor Office 501 Between Columns 6AH and 6AJ	10/31 - Looking S Showing Extensive Changeable Wiring 10/32 - Looking SE
10 - 32	03/08/89	RLS RBB KWE	"E"	End of Corridor Office 501 Between Columns 6AH and 6AJ	10/31 - Looking S Showing Extensive Changeable Wiring 10/32 - Looking SE
10 - 45	03/10/89	RLS RW	"B"	Plenum Ductwork	Damage and Air Erosion Looking N Over Filters
10 - 50	03/09/89	RBB KWE	"C"	Corridor 706 Continued Throughout Office 701	10/50 - East 10/51 - North 10/52A - South 10/52B - West
10 - 51	03/09/89	RBB KWE	"C"	Corridor 706 Continued Throughout Office 701	10/50 - East 10/51 - North 10/52A - South 10/52B - West
10 - 52	03/09/89	RBB KWE	"C"	Corridor 706 Continued Throughout Office 701	10/50 - East 10/51 - North 10/52A - South 10/52B - West
10 - 54	03/08/89	RLS RBB KWE	"D"	Janitor Closet 505	Hard Fittings in Janitor Closet 505
10 - 59	03/09/89	RLS RW	"B"	Mechanical Room 722	Looking At Access Plate Fan Coil
11 - 1	03/08/89	RLS KWE RBB	"D"	Janitor Closet 505	Sheetrock Sample
11 - 2	03/10/89	RLS RW	"B"	Mechanical Room 722	Looking NW Damaged Fireproofing

Hr./Min.	Date	By	FA	Location	Comment
11 - 5	03/11/89	RLS RBB KWE RW	"E"	Office Area 1003	Fireproofing on Beams and Pans
11 - 9	03/10/89	RLS RW	"B"	Duct	Looking East (Toward Fan Eroded Insulation)
11 - 14	03/08/89	RLS RBB KWE	"E"	Office Area 501 Conference Room	Metal Lath and Plas- ter Wall Construc- tion for Computer Room
11 - 23	03/10/89	RLS RW	"B"	Room 714 Plenum	Looking West Damaged Patching
* 11 - 34	03/11/89	KWE RW	"B"	Fire Hose Station - Penthouse	Fire Hose Station Penthouse
11 - 54	03/11/89	RLS RBB KWE RW	"E"	Office Area 501 Along Side Computer Room	Plaster Wall Construction
13 - 24	03/10/89	RW KWE	"B"	Air Passage 610	Looking up at Air Passage Ceiling 610
13 - 32	03/10/89	RW KWE	"B"	Fan Room 622	Looking North in Fan Room 622
13 - 35	03/10/89	RW KWE	"B"	Fan Room 622	Duct Flex Connector Sample
13 - 43	03/10/89	RW KWE	"B"	Air Plenum 620	Sample of Duct Tape Used for Connections
13 - 44	03/10/89	RW KWE	"B"	Air Plenum 620	Looking West Air Plenum 620
13 - 58	03/08/89	RLS RBB KWE	"C"	Elevator Lobby 607 and Corridor 606	13/58 - West 13/59 - South
13 - 59	03/08/89	RLS RBB KWE	"C"	Elevator Lobby 607 and Corridor 606	13/58 - West 13/59 - South
14 - 7	03/10/89	RW KWE	"B"	Fan Room 616	Fan Room 616

Hr./Min.	Date	By	FA	Location	Comment
14 - 12	03/08/89	RLS RBB KWE	"D"	Access Behind Computer Storage Room	Fireproofing and Overspray
14 - 14	03/08/89	RLS RBB KWE	"D"	Computer Storage Room	Fireproofing and Overspray
14 - 21	08/09/89	RBB KWE	"D"	Fire and Signal 729	Fireproofing Sample
14 - 28	03/08/89	RLS RBB KWE	"D"	Varies Elevator Shaft #7 Floor Level Access	Inside Elevator Shaft
14 - 30	03/08/89	RLS RBB KWE	"D"	Varies Elevator Shaft #7 Floor Level Access	Inside Elevator Shaft
14 - 46	03/09/89	RBB KWE	"D"	Computer Data Storage 611	Fireproofing Sample
14 - 52	03/08/89	RLS KWE RBB	"D"	Computer Storage Room 611	Sheetrock Sample (Fabric Tape)
14 - 57	03/07/89	RLS RBB KWE	"B"	Elevator Mechanical 104 Parking Level 1	Looking North
15 - 1	03/07/89	RLS RBB KWE	"B"	Elevator Mechanical 104 Parking Level 1	Looking North
*15 - 8	03/09/89	RBB KWE	"D"	Storage Room Behind Air Passage 610	Fireproofing Sample
15 - 9	03/07/89	RLS RBB KWE	"C"	Elevator Lobby 102 Parking Level 1	Fireproofing on Beams and Pans
*15 - 10	03/09/89	RBB KWE	"D"	Storage Room Behind Air Passage 610	Fireproofing Sample
15 - 11	03/09/89	RBB KWE	"D"	Storage Room Behind Air Passage 610	Fireproofing Sample

Hr./Min.	Date	By	FA	Location	Comment
15 - 14	03/09/89	RBB KWE	"D"	Storage Room Behind Air Passage 610	Fireproofing Sample
15 - 17	03/08/89	RLS RBB KWE	"E"	Office Area 601	15/17 - East 15/18 - South @ Beam 15/19 - South 15/20 - West
15 - 18	03/08/89	RLS RBB KWE	"E"	Office Area 601	15/17 - East 15/18 - South @ Beam 15/19 - South 15/20 - West
15 - 19	03/07/89	RLS RBB KWE	"C"	Stairway #1 Parking Level 1	Fireproofing on Beams and Pans
15 - 20	03/08/89	RLS RBB KWE	"E"	Office Area 601	15/17 - East 15/18 - South @ Beam 15/19 - South 15/20 - West
15 - 23	02/23/09	RBB KWE	"B"	UPS #1 and UPS #2	15/23 - Debris Above UPS #2 15/28 - Debris Above UPS #1
15 - 28	02/23/09	RBB KWE	"B"	UPS #1 and UPS #2	15/23 - Debris Above UPS #2 15/28 - Debris Above UPS #1
15 - 29	03/09/89	RBB KWE	"B"	UPS #1 and UPS #2	Looking into UPS #1
15 - 30	03/09/89	RBB KWE	"B"	Battery Room #1 and #2	Looking into Battery Room #1
*15 - 31	03/07/89	RLS RBB KWE	"A"	Parking Level 1 Col. J6	Fireproofing on Beams and Pans
15 - 32	03/09/89	RBB KWE	"B"	Air Passage 610	Patched Fireproofing on Beam
15 - 33	03/07/89	RLS RBB KWE	"B"	Mech/Elec Room 103 Parking Level 1	General Mechanical Room 103 Layout

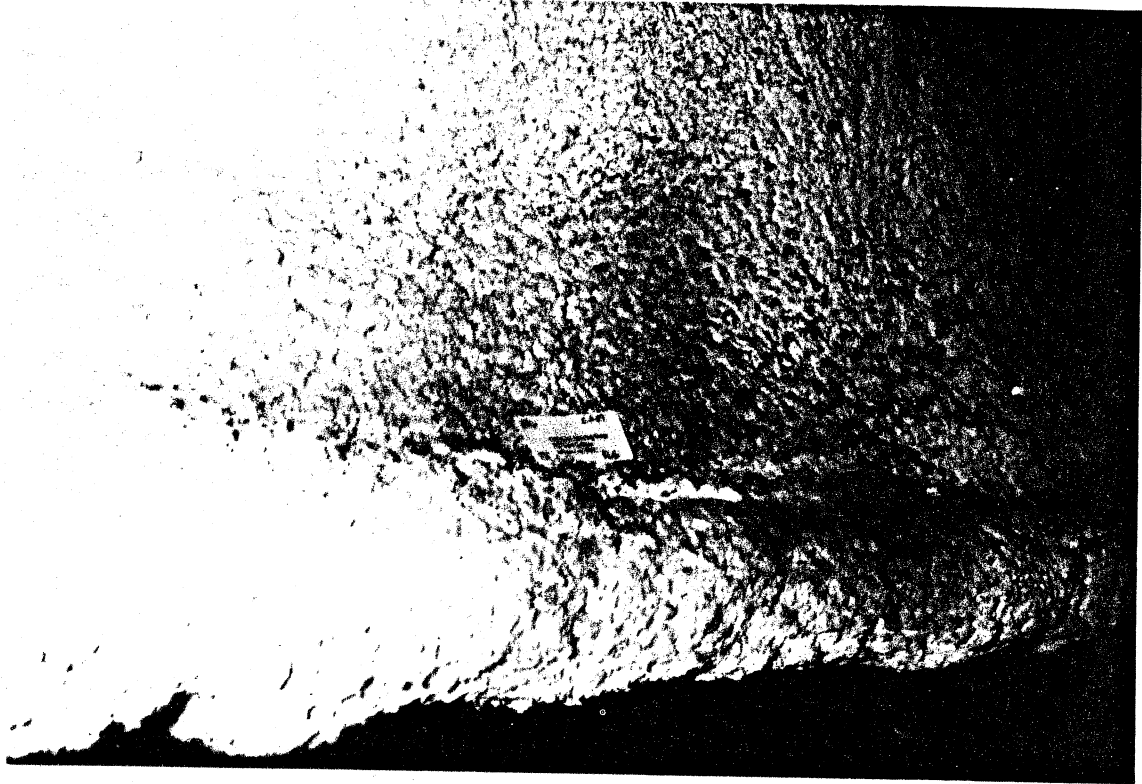
Hr./Min.	Date	By	FA	Location	Comment
15 - 34	03/07/89	RLS RBB KWE	"B"	Mech/Elec Room 103 Parking Level 1	General Mechancial Room 103 Layout
15 - 48	03/07/89	RLS RBB KWE	"A"	Parking Level 1	General Parking Looking North
15 - 49	03/07/89	RLS KWE RBB	"A"	Parking Level 1	General Parking Looking South
15 - 52	03/08/89	RLS RBB KWE	"C"	Stairway #3 Level 6 up to 7	Hard Fittings in Stairway
15 - 56	03/07/89	RLS RBB KWE	"B"	Pipe Access in Elevator Lobby Parking Level 2	15-56 Looking in Small Access 16 Looking in Big Access
16 - 0	03/07/89	RLS RBB KWE	"B"	Pipe Access in Elevator Lobby Parking Level 2	15-56 Looking in Small Access 16 Looking in Big Access
16 - 2	03/09/89	RBB KWE	"D"	Janitor Closet 606	Sample of Cove Base and Mastic
16 - 3	03/09/89	RBB KWE	"D"	Janitor Closet 606	Sheetrock Sample
16 - 13	03/09/89	RBB KWE	"E"	Legislative Finance Office Area 106	Interior Vinyl Covered Sheetrock Partition Sample
16 - 17	03/08/89	RLS RBB KWE	"D"	Janitor's Closet 606	
16 - 20	03/07/89	RLS RBB KWE	"A"	Parking Level 2	Looking North to Addition
16 - 24	03/08/89	RLS RBB KWE	"E"	Office Area 601	Vinyl Wallpaper Sample Taken From Interior Sheetrock Partitions
16 - 25	03/07/89	RLS RBB KWE	"A"	Parking Level 2	16-25 - South 16-26 - North

Hr./Min.	Date	By	FA	Location	Comment
16 - 26	03/07/89	RLS RBB KWE	"A"	Parking Level 2	16-25 - South 16-26 - North
16 - 30	03/09/89	RBB KWE	"C"	Elevator Lobby 507	Sample of Cove Base and Mastic
16 - 32	03/07/89	RLS RBB KWE	"A"	Parking Level 2 Sample Taken Near Col. J2	Hard Fitting Sample
16 - 37	03/09/89	RBB KWE	"E"	Office Area 501 Near Training Classroom	Sample of Cove Base and Mastic
16 - 41	03/09/89	RBB KWE	"E"	Office Area 501 Middle Con. Rm. Near Training Classroom	Shows Lifted Tile in Conference Room, Level 5
16 - 46	03/09/89	RBB KWE	"D"	Office Area 501 Middle Con. Rm. Near Training Classroom	Sample
16 - 52	03/07/89	RLS RBB KWE	"A"	Parking Level 3	16-52 - South 16-53 - North
16 - 53	03/07/89	RLS RBB KWE	"A"	Parking Level 3	16-52 - South 16-53 - North
16 - 55	03/09/89	RBB KWE	"D"	Janitor Closet 505	Floor Tile and Mastic Sample
17 - 5	03/08/89	RLS RBB KWE	"E"	Office 1101 Side 11B Between Cols. D4 and D5	Looking East
17 - 9	03/09/89	RBB KWE	"C"	Elevator Lobby 707 Corridor 706	Sample of Vinyl Wallpaper
17 - 24	03/07/89	RLS KWE RBB	"A"	Parking Level 4 Col. J4	Acoustical Ceiling Material Sample
17 - 28	03/07/89	RLS RBB KWE	"A"	Parking Level 4 Between Col. J9 and H9	Acoustical Ceiling Material Sample

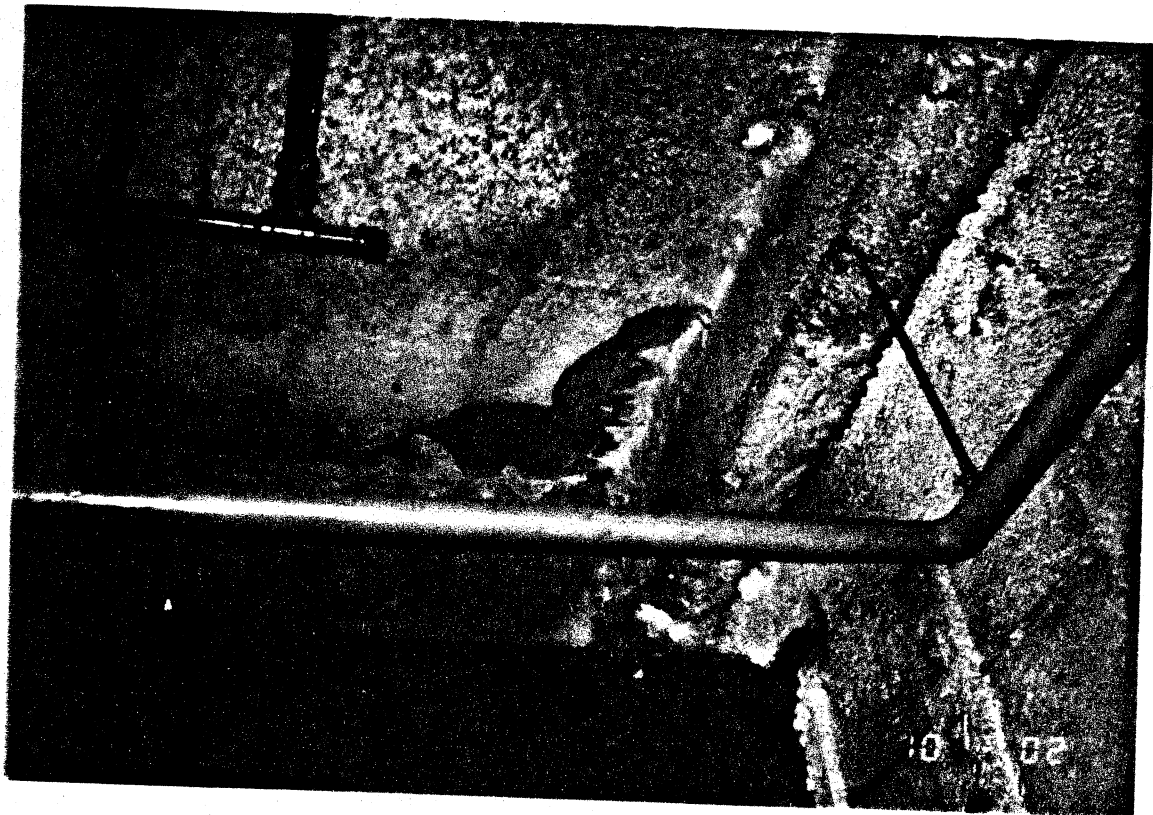
Hr./Min.	Date	By	FA	Location	Comment
17 - 32	03/07/89	RLS RBB KWE	"A"	Parking Level 4	Looking North up Port Hole
17 - 39	03/07/89	RLS RBB KWE	"A"	Lobby Area Parking Level 4	Looking SE Above Lay-in Ceiling
18 - 7	03/08/89	RLS RBB KWE	"E"	Office 1101 Side 11A Col. F8	Looking West Above Lay-in Ceiling
18 - 32	03/08/89	RLS RBB KWE	"E"	Office 1101 Side 11A Between Cols. E8 and D8	Looking Above Lay-in Ceiling

APPENDIX C-5 (JSOB)
PHOTOS REFERENCED IN REPORT

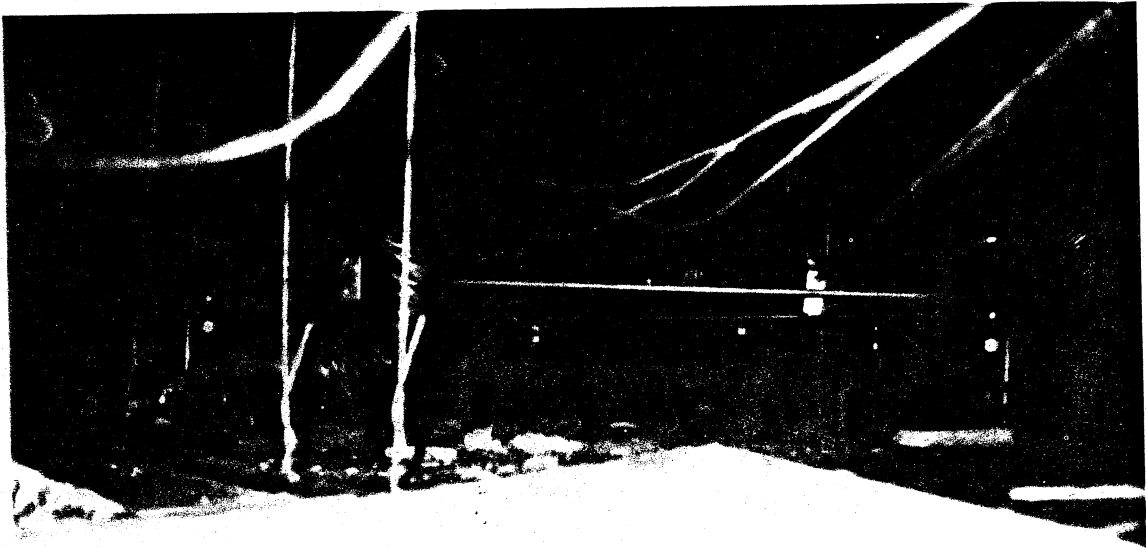
<u>PHOTO</u>	<u>REFERENCE</u>	<u>SUBJECT</u>
1	15-31	Spray-on Fireproofing
2	10-2A	Spray-on Fireproofing on Beams and Ceiling
3	8-59	Debris on Ceiling Tile
4	11-34	Pipe Insulation & Fittings
5	9-38	Hard Pipe & Pipe Fittings
6	2-20	Fire Brick
7	1-04	Brown & Speckled Floor Tile
8	2-18	Typical Debris on Floor Room 611
9	2-16	Typical FP on Air Plenum 613
10	15-10	Debris on Stored Material Room Behind Passage 610
11	15-08	Monokote Spray Material (Non-ACM) over ACM Fire- proofing



1. [15-31] Spray-on Fireproofing

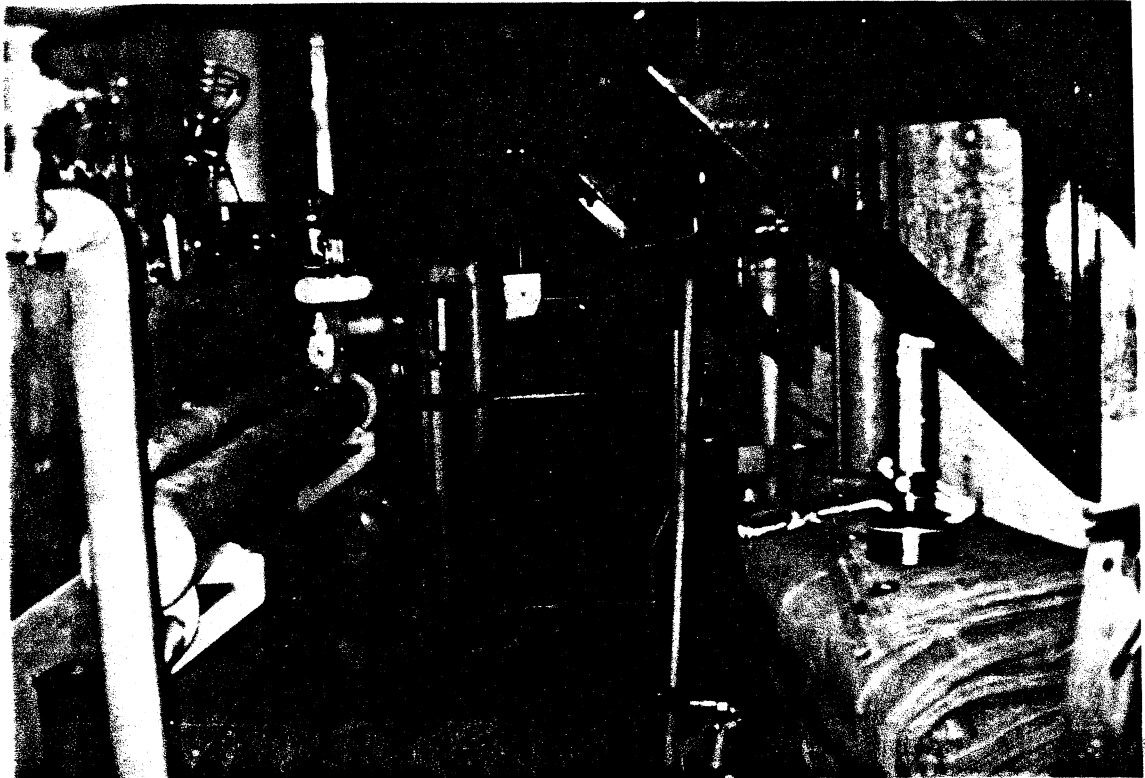


2. [10-2A] Spray-on Fireproofing on Beams and Ceiling

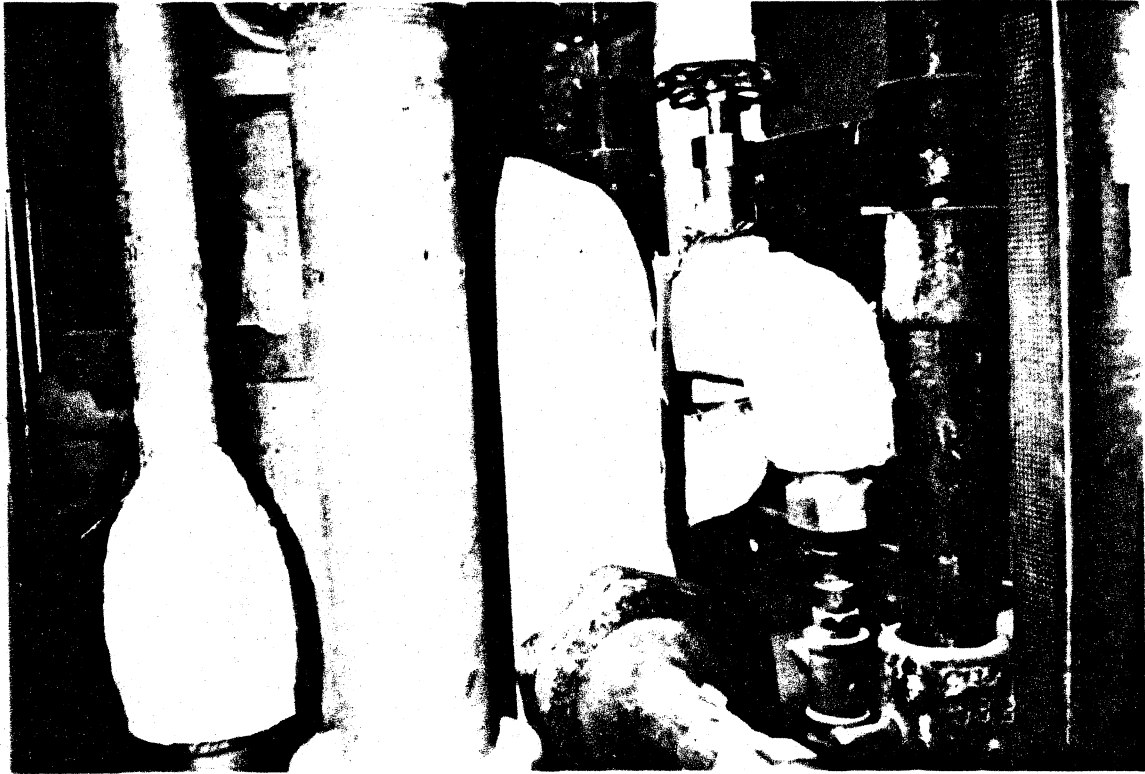


8-59

3. [8-59] Debris on Ceiling Tile



4. [11-34] Pipe Insulation & Fittings



5.

[9-38]

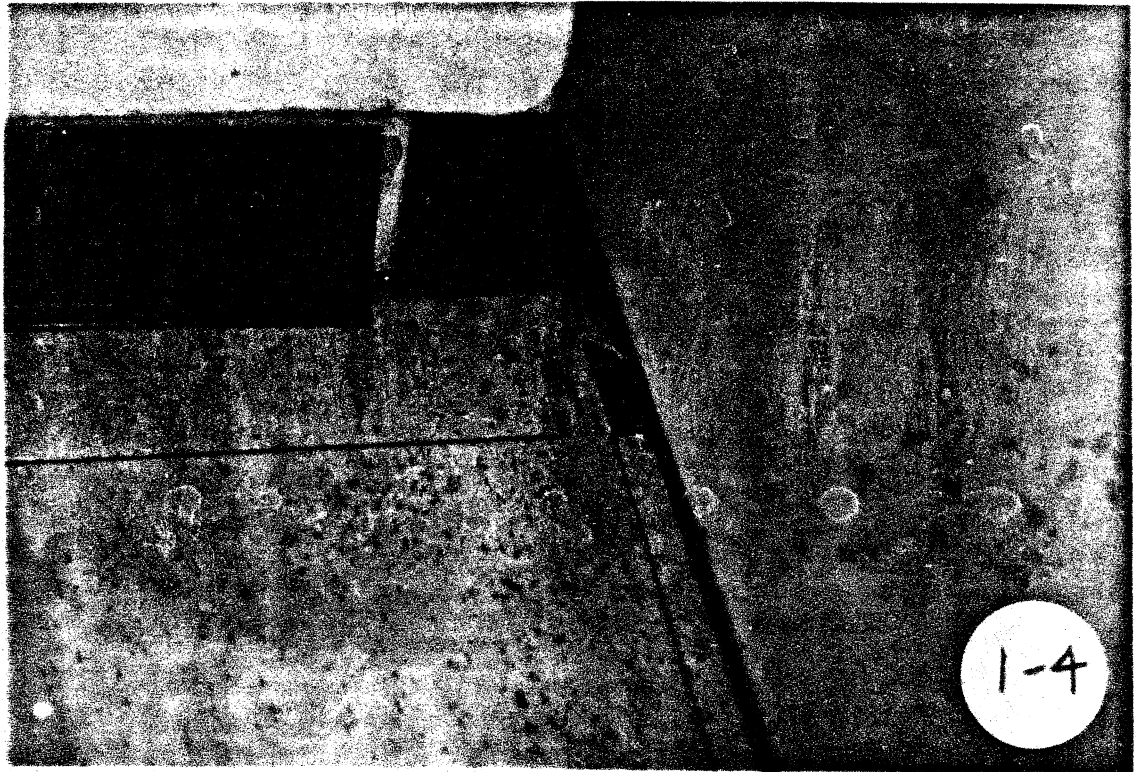
Hard Pipe & Pipe Fittings



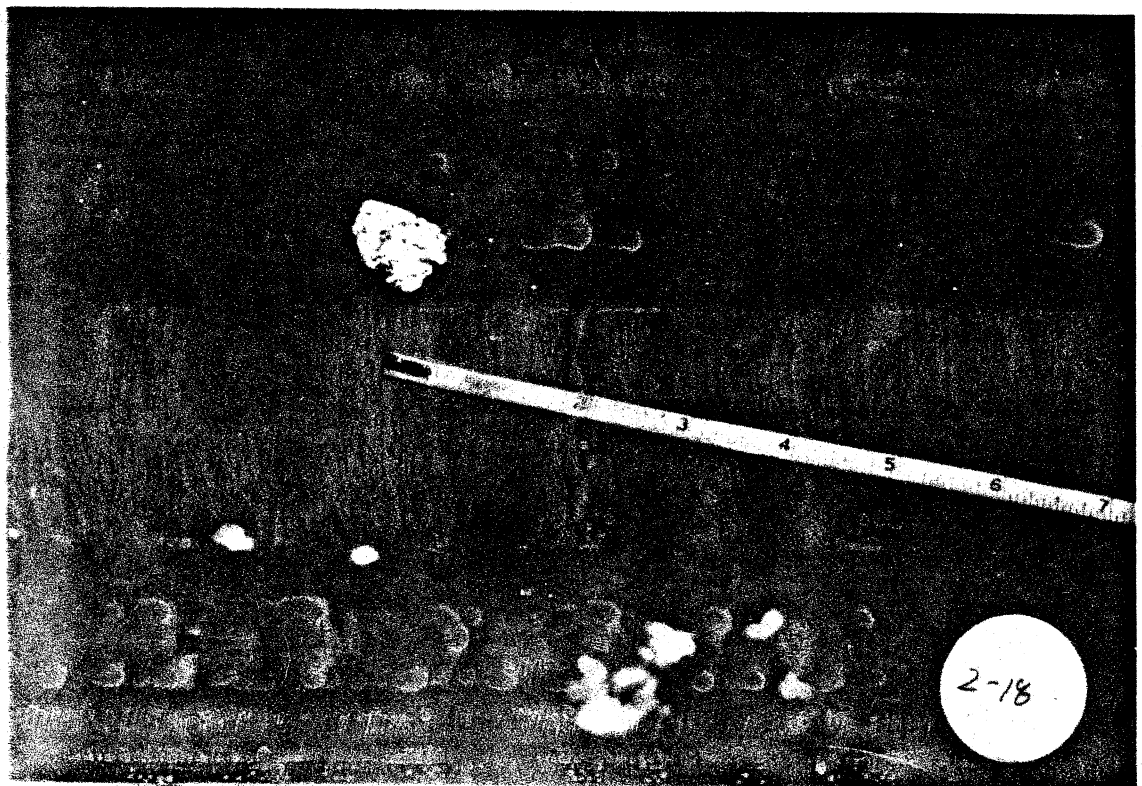
6.

[2-20]

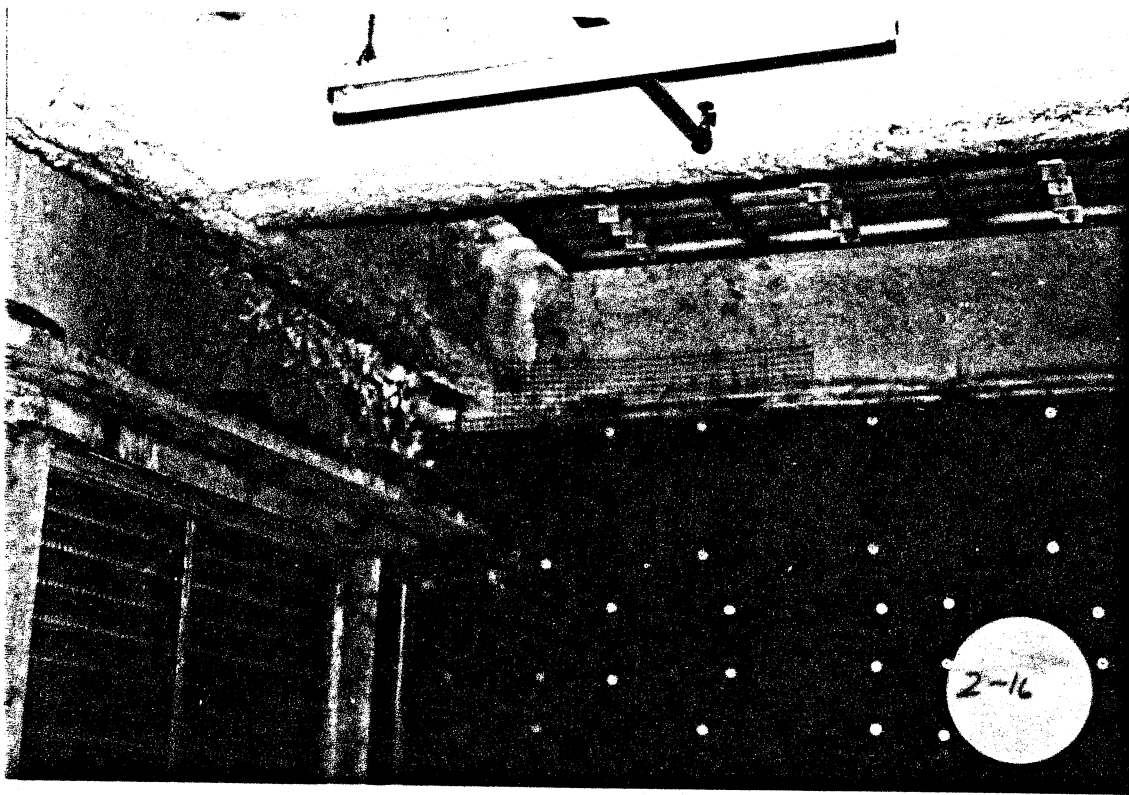
Fire Brick



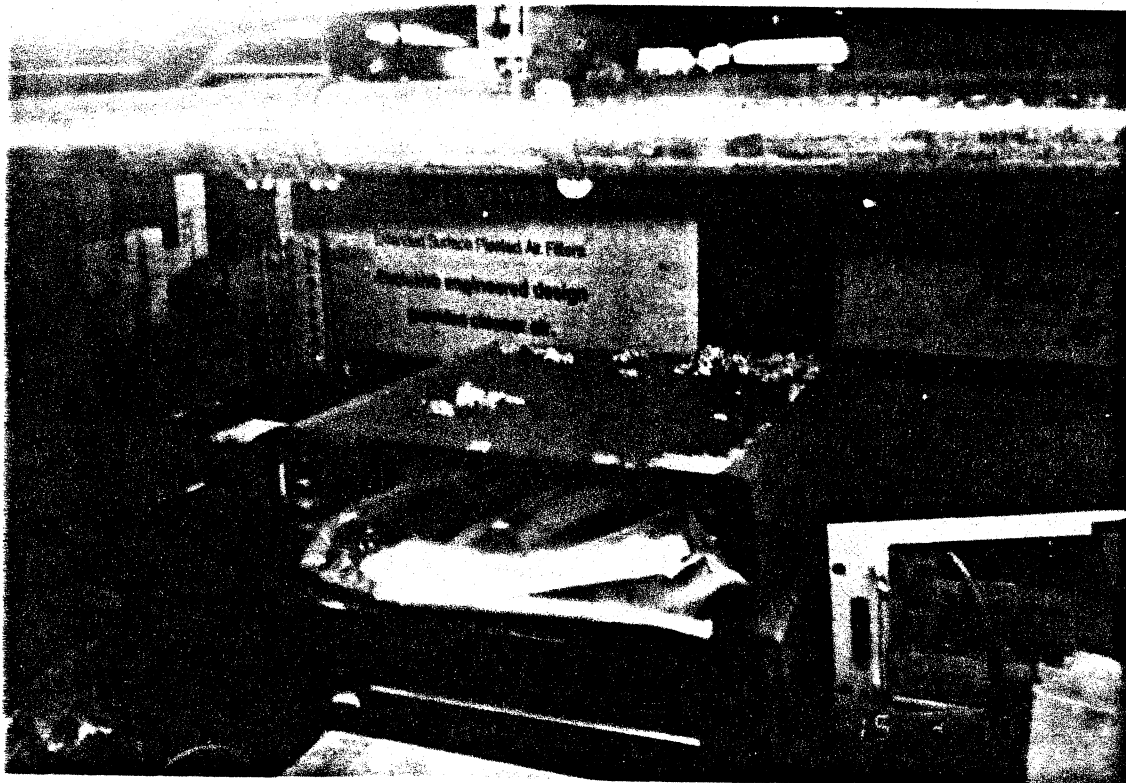
7. [1-04] Brown & Speckled Floor Tile



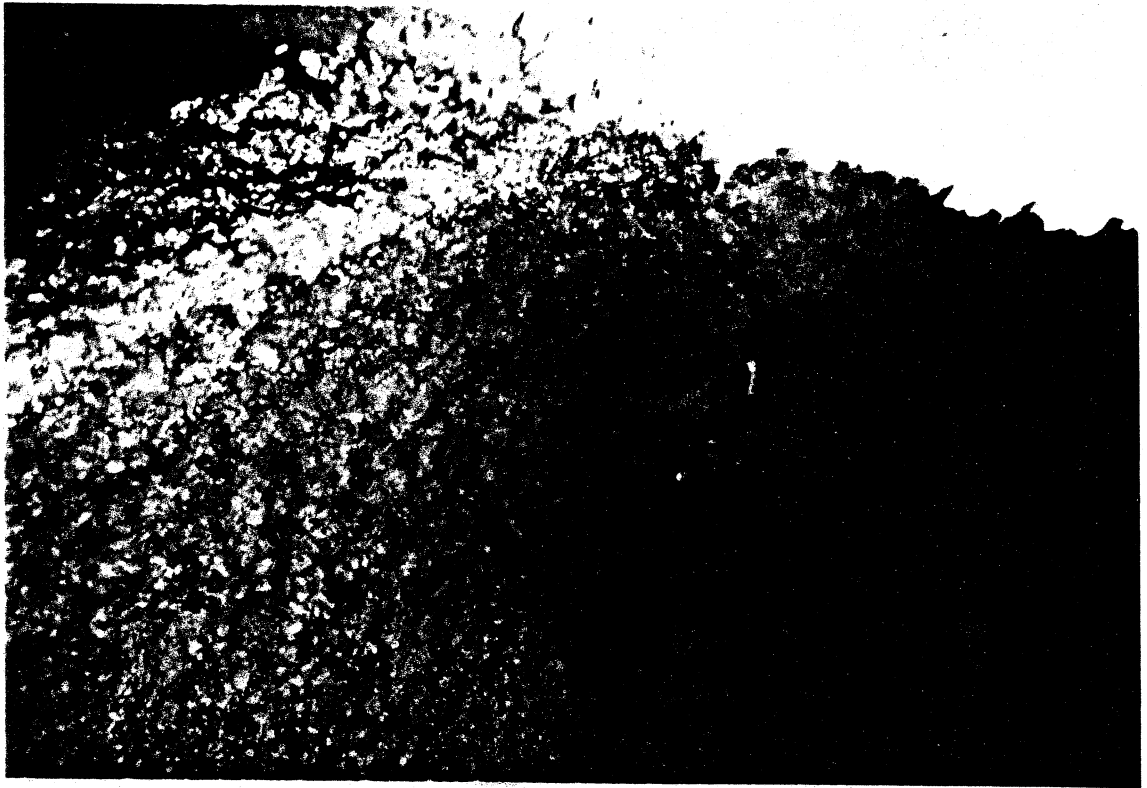
8. [2-18] Typical Debris on Floor Room 611



9. [2-16] Typical FP on Air Plenum 613



10. [15-10] Debris on Stored Material
Room Behind Passage 610



11.

[15-08]

Monokote Spray Material
(Non-ACM) Over ACM Fireproofing

APPENDIX D
SUMMARY OF BULK SAMPLES
PREVIOUSLY TAKEN

APPENDIX D

APPENDIX D
BULK SAMPLES TAKEN PREVIOUSLY
ALASKA STATE MUSEUM - JUNEAU

- 1986 Evidence indicates that two bulk samples were taken by the Department of Labor of materials from the collections area in the basement of the museum. A sample of some dust showed no asbestos, however, the other sample was taken of the fireproofing from the overhead beams in the collections office area and found to contain 5% to 10% chrysotile asbestos.
- 1985 The Department of Labor collected three bulk samples, two fireproofing and one pipe insulation, in the boiler room of the museum. The pipe insulation was found to contain 5% to 7% chrysolite. The fireproofing was found to be free of asbestos.
- 1979 Environmental Health Services conducted an asbestos survey in the museum. Eighteen air samples and eight bulk samples were taken. Of the bulk samples, five were dust samples and found to contain no asbestos. Three insulation samples were analyzed and found to contain 1% to 2% chrysotile asbestos.

APPENDIX D
 BULK SAMPLES TAKEN PREVIOUSLY
 STATE OFFICE BUILDING
 JUNEAU, ALASKA

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
10/88	JSOB-A-1021	+	Fireproofing	Janitor Room #1108, Floor 11	HMI
10/88	JSOB-B-1021	+	Fireproofing	Janitor Room #1108, Floor 11	HMI
8/88	1	-	Dust	Computer Room	State
8/88	2	-	Filter Material	Air Conditioner #2	State
8/88	3	+	Fireproofing (Old)	Storage Room over Vault, Floor 6	State
8/88	4	-	Fireproofing (New)	Storage Room over Vault, Floor 6	State
8/88	5	-	Floor Dust	Storage Room over Vault, Floor 6	State
8/88	6	-	Dust	Rm #610 Passage to Fan Room	State
8/88	7	-	Fireproofing	Rm #610 Passage to Fan Room	State
8/88	8	-	Floor Dust	NSS	State
6/88	JSOB 55	+	Tape Joint Compound	Stairs between 9th & 10th Floors	HMI
6/88	JSOB 56	+	Fireproofing	Center Office Space, Floor 11	HMI
6/88	JSOB 57	+	Fireproofing	Rm #1108, Floor 11	HMI
6/88	JSOB 58	-	Filter Paper Bulk	Rm #609, Floor 6	HMI
6/88	JSOB 59	-	Filter Paper Bulk	Rm #710, Floor 7	HMI
6/88	JSOB 60	-	Filter Paper Bulk	Rm #710, Floor 7	HMI

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
6/88	JSOB 61	-	Filter Paper Bulk	Rm #709, Floor 7	HMI
6/88	JSOB 62	-	Filter Paper Bulk	Rm #709, Floor 7	HMI
6/88	JSOB 63	-	Filter Paper Bulk	Rm #609, Floor 6	HMI
6/88	JSOB 64	-	Filter Paper Bulk	Rm #610, Floor 6	HMI
6/88	JSOB 65	-	Filter Paper Bulk	Rm #610, Floor 6	HMI
4/88	JSOB-01	-	Fireproofing	Rm #735, Floor 7	HMI
4/88	JSOB-02	-	Thermal Insul.	Mudded Elbow, Rm #735, Floor 7	HMI
4/88	JSOB-03	-	Thermal Insul.	Mudded Elbow, Rm #735, Floor 7	HMI
4/88	JSOB-04	-	Cloth Covering	Tank, Rm #735, Floor 7	HMI
4/88	JSOB-05	-	Thermal Insul.	Mudded Fitting Overhead in Rm #735	HMI
4/88	JSOB-06	+	Asbestos Cloth	Wraps large valves/Chiller Unit, Rm #736	HMI
4/88	JSOB-07	+	Thermal Insul.	Fitting painted Lt. Blue, Rm #736	HMI
4/88	JSOB-08	-	Cloth Covering	Covers mud/fiberglass, Rm #736	HMI
4/88	JSOB-09	-	Drywall Material	End of Pipe Chase, Floor 7	HMI
4/88	JSOB-10	+	Debris (Fireprf)	Pipe Chase Floor, Floor 7	HMI
4/88	JSOB-11	-	Thermal Insul.	Elbow of Generator Exhaust, Rm #733	HMI
4/88	JSOB-12	-	Fireproofing	Above Drop Ceiling in Hallway between Maint. Eng. Office and Loading Dock Area	HMI
4/88	JSOB-13	-	Ceiling Panel	Same as JSOB-12, Panels Typical Floor 7	HMI

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
4/88	JSOB-14	-	Debris (fireprf)	Fallen on ceiling panels, Hall, Floor 7	HMI
4/88	JSOB-15	-	Fireproofing	Rm #729, Floor 7	HMI
4/88	JSOB-16	-	Ceiling Panel	Photo Processing Lab, Floor 7	HMI
4/88	JSOB-17	+	Fireproofing	Audio-visual Section/St Lib., Floor 7	HMI
4/88	JSOB-18	-	Wall Panel	Wall panel, St. Lib. A/V, Floor 7	HMI
4/88	JSOB-19	+	Fireproofing	General Services & Supply, Floor 7	HMI
4/88	JSOB-20	-	Thermal Insul.	Mudded Elbow, Janitor's Closet, Floor 7	HMI
4/88	JSOB-21	+	Fireproofing	Central MicroFilm Rm, Rm #749, Floor 7	HMI
4/88	JSOB-22	+	Fireproofing	Longevity Bonus Program-Pioneers Section	HMI
4/88	JSOB-23	+	Fireproofing	End of Hallway @ Elev., Floor 7	HMI
4/88	JSOB-24	+	Debris (Fireprf)	Fallen on Ceiling Panel, Above Dept. Retirements & Benefits Reception Desk, Floor 6	HMI
4/88	JSOB-25	+	Debris (Fireprf)	On Ceiling Panel, Hall betwn Legislative Finance and Div. of Leg. Audit Offices, Floor 6	HMI
4/88	JSOB-26	+	Debris (Fireprf)	On Ceiling Panel, Betwn Retirement Benefit Reception and Leg. Audit Offices, Floor 6	HMI
4/88	JSOB-27	+	Debris (Fireprf)	On Ceiling Panel, Maint Hallway, Floor 6	HMI
4/88	JSOB-28	+	Fireproofing	Rm #610, Floor 6	HMI
4/88	JSOB-29	+	Fireproofing	Rm #610, Floor 6	HMI
4/88	JSOB-30	-	Debris (Fireprf)	Computer Paper Stor. Rm, Floor 6	HMI

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
4/88	JSOB-31	+	Fireproofing	Hall between 506B & 508, Floor 5	HMI
4/88	JSOB-32	+	Debris (Fireprf)	On Ceiling Panel, Intersections of Halls near Restrooms, Floor 5.	HMI
4/88	JSOB-33	+	Debris (Fireprf)	On Ceiling Panel, Data Processing Training Classroom, Floor 5.	HMI
4/88	JSOB-34	+	Fireproofing	Scaffold Storage. Rm #816, Floor 8	HMI
4/88	JSOB-35	-	Cement. Debris	State Library, Front of Book Return, Floor 8	HMI
4/88	JSOB-36	+	Debris (Fireprf)	State Library, U.S. Documents, Floor 8	HMI
4/88	JSOB-37	+	Debris (Fireprf)	State Library, Pipe Chase Floor, Floor 8	HMI
4/88	JSOB-38	-	Debris (Fireprf)	On Ceiling Panel, Sky Bridge Entry Area, Floor 8.	HMI
4/88	JSOB-39	+	Fireproofing	Copier Rm, RM# 908 & 909, Floor 9	HMI
4/88	JSOB-40	+	Debris (Fireprf)	On Ceiling Panel, Business Development Reception Desk, Floor 9	HMI
4/88	JSOB-41	+	Debris (Fireprf)	On Ceiling Panel, Hall near Admin. Div., Floor 10	HMI
4/88	JSOB-42	+	Fireproofing	Labor Relations, Floor 10	HMI
4/88	JSOB-43	+	Fireproofing	Public Offices Commission, Floor 10	HMI
4/88	JSOB-44	-	Debris (Fireprf)	Child Support Enforcement Offices, Floor 11	HMI
4/88	JSOB-45	-	Fireproofing	Document Processing, Floor 11	HMI
4/88	JSOB-46	-	Fireproofing	Treas. Div. Cash Mut. Section, Floor 11	HMI

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
4/88	JSOB-47	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-48	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-49	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-50	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-51	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-52	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-53	-	Debris	Supply Fan Filter, Floors 6-7	HMI
4/88	JSOB-54	-	Debris	Supply Fan Filter, Floors 6-7	HMI
3/88	JSOB 11W	+	Fireproofing	Rm #1104, Column G-4, Floor 11	Maint
3/88	JSOB 11E	+	Fireproofing	Rm #1108, Column C-8, Floor 11	Maint
3/88	JSOB 10W	-	Fireproofing	Rm #1004, Column G-4, Floor 10	Maint
3/88	JSOB 10E	+	Fireproofing	Rm #1008, Column C-8, Floor 10	Maint
3/88	JSOB 9W	+	Fireproofing	Rm #904, Column G-4, Floor 9	Maint
3/88	JSOB 9E	+	Fireproofing	Rm #908, Column C-8, Floor 9	Maint
3/88	JSOB 8W	-	Fireproofing	Rm #807 Hallway, Col G-5, Floor 8	Maint
3/88	JSOB 8E	+	Fireproofing	Rm #812, Column C-7, Floor 8	Maint
3/88	"Boiler Room"	+	Fireproofing	Rm #735, Column A-8, Floor 7	Maint
3/88	"Loading Dock"	-	Fireproofing	Loading Dock	Maint
3/88	JSOB 7-S(MECH)	+	Fireproofing	Rm #719, Column F-7, Floor 7	Maint

DATE	SAMPLE #	ACM	MATERIAL	LOCATION	TAKEN BY
3/88	JSOB 7-S	+	Fireproofing	Rm #701, Column J-9, Floor 7	Maint
3/88	JSOB 7-N	+	Fireproofing	Rm #705, Column J-5, Floor 7	Maint
3/88	JSOB 7-N(MECH)	+	Fireproofing	Rm #720, Column F-5, Floor 7	Maint
3/88	JSOB 6-S(MECH)	+	Fireproofing	Rm #615, Column G-8, Floor 6	Maint
3/88	JSOB 6-S	+	Fireproofing	Rm #601, Column J-9, Floor 6	Maint
3/88	JSOB 6-N(MECH)	+	Fireproofing	Rm #616, Column G-4, Floor 6	Maint
3/88	JSOB 6-N	+	Fireproofing	Rm #605, Column J-5, Floor 6	Maint
3/88	JSOB 5-S	+	Fireproofing	Rm #501, Column J-9, Floor 5	Maint
3/88	JSOB 5-N	+	Fireproofing	Rm #505, Column J-5, Floor 5	Maint
3/88	DOT&PF #P3S	-	Fireproofing	Parking Level 3, Column J10	DOT/PF
3/88	DOT&PF #P3N	-	Fireproofing	Parking Level 3, Column J6	DOT/PF
3/88	DOT&PF #P2S	-	Fireproofing	Parking Level 2, Column J10	DOT/PF
3/88	DOT&PF #P2N	-	Fireproofing	Parking Level 2, Column J6	DOT/PF
3/88	DOT&PF #P1S	-	Fireproofing	Parking Level 1, Column J10	DOT/PF
3/88	DOT&PF #P1N	-	Fireproofing	Parking Level 1, Column J6	DOT/PF
10/84	B-1	-	Ceiling Tile	Floor 11	DOL
10/84	B-2	+	Fireproofing	Rm #1104, Floor 11	DOL
10/84	B-3	+	Fireproofing	Rm #1108, Floor 11	DOL
10/84	B-4	+	Fireproofing	Fan Room, Floor 11	DOL

APPENDIX E
LABORATORY REPORTS
&
CHAIN OF CUSTODY FORMS

APPENDIX E



NORTHERN TESTING LABORATORIES, INC.

600 UNIVERSITY PLAZA WEST, SUITE A
2505 FAIRBANKS STREET

FAIRBANKS, ALASKA 99709
ANCHORAGE, ALASKA 99503

907-479-3115
907-277-8378

ARCTIC SLOPE CONSULTING GROUP
3801 S. CUSHMAN
FAIRBANKS, ALASKA 99701

Date Arrived: 03/13/89
Time Arrived: 1530
Date Sampled: 03/9-11/89
Time Sampled: VARIES
Date Completed: 03/27/89

ARCTIC SLOPE
CONSULTING GROUP

Project SOA/SE Asbestos

APR 17 1989

Project No. 3716

File xc: Stuart, Edie

ATTN: KATHLEEN EDIC

Project: SE ASBESTOS-J.S.O.B. & MUSEUM

Sample ID #	Filter #	# Fibers Counted	# Fields Counted	Sample Time (minutes)	Flow Rate (l/m)	Fibers/cc	TWA	Fibers/mm2	Lower Limit of Detection (LLD), fibers/cc
031489-1M	MA-1	22.5	100	120	3	.031		28.7	.027
031489-2M	MA-7	10.5	100	125	2.5	< .031		13.4	.031
031489-3M	MA-14	6	100	680	4	< .004		7.6	.004
031489-4M	JSB-A-2	14	100	180	2.7	< .020		17.8	.020
031489-5M	JSB-A-6	8	100	195	2.8	< .018		10.2	.018
031489-6M	JSB-A-7	10	100	60	2.8	< .058		12.7	.058
031489-7M	JSB-A-11	19	100	120	2.8	< .029		24.2	.029
031489-8M	JSB-A-12	19.5	100	180	2.8	.019		24.8	.019
031489-9M	JSB-A-23	9.5	100	195	2.8	< .018		12.1	.018
031489-10M	JSB-A-28	15	100	195	2	< .025		19.1	.025
031489-11M	JSB-A-29	16.5	100	188	14	< .004		21.0	.004
031489-12M	JSB-A-35	21	100	925	10	.001		26.8	.001
031489-13M	JSB-A-37	26.5	100	240	2.5	.022		33.8	.016

Reported By:

Donna L. Hawkins

Date:

March 27-89

DONNA L. HAWKINS, PROJECT CHEMIST



NORTHERN TESTING LABORATORIES, INC.

600 UNIVERSITY PLAZA WEST, SUITE A
2505 FAIRBANKS ST.

FAIRBANKS, ALASKA 99709
ANCHORAGE, ALASKA 99503

907-479-3115
907-277-8378

Client: **Arctic Slope Consulting Group**
Address: 3801 S. Cushman
Fairbanks, Alaska 99707
Attn: Kathleen Edic

Date Arrived: 03/13/89 **ARCTIC SLOPE**
Time Arrived: 1530 **CONSULTING GROUP**
Date Sampled: ~~March 9, 1989~~
Time Sampled: Various *5:04/SE Asbestos*

APR 17 1989

Project No. 3718

File xc: Stuart Edic

PROJECT: SE ASBESTOS J.S.O.B. & MUSEUM

N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	% Amosite		
031489-14M	MB-2A	ND*	ND	25% Cellulose	75%
031489-15M	MB-2B	1-2%	ND	20% Cellulose	78%
031489-16M	MB-2C	1-2%	ND	20% Cellulose	78%
031489-17M	MB-3A	15%	ND	None	85%
031489-18M	MB-3B	15%	ND	None	85%
031489-19M	MB-3C	10%	ND	None	90%
031489-20M	MB-4	ND	ND	85% Cellulose 5% Mineral wool	10%
031489-21M	MB-5	ND	ND	70% Glass fibers	30%
031489-22M	MB-6A				
	Plaster layer	ND	ND	40% Glass fibers	60%
031489-23M	MB-6B				
	Backing	ND	ND	95% Cellulose	5%
031489-24M	MB-6C				
	Plaster layer	ND	ND	5% Glass fibers	95%
031489-25M	MB-8				
	Backing	ND	ND	90%	10%
031489-25M	MB-8	20%	ND	None	80%
031489-26M	MB-9				
		ND	ND	20% Cellulose 20% Synthetics **	60%
031489-27M	MB-10A	ND	ND	None	>99%

*None Detected (<1% fibers found)

** Synthetic Fibers including: rayon, polyester, nylon, orlon, etc.

N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	%Amosite		
031489-28M	MB-10B	30%	ND	None	70%
031489-29M	MB-10C	ND	ND	2% Cellulose	98%
031489-30M	MB-11	ND	ND	None	>99%
031489-31M	MB-12	ND	ND	35% Cellulose 35% Glass fibers	30%
031489-32M	MB-13	ND	ND	60% Cellulose 30% Mineral wool	10%
031489-34M	JSB-B-1A	45%	ND	None	55%
031489-35M	JSB-B-1B	45%	ND	None	55%
031489-36M	JSB-B-1C	ND	ND	40% Cellulose	60%
031489-37M	JSB-B-3	ND	ND	20% Mineral wool 50% Cellulose	30%
031489-38M	JSB-B-4A	ND	ND	1% Mineral wool 1% Cellulose	98%
031489-39M	JSB-B-4B	ND	ND	1% Cellulose	>99%
031489-40M	JSB-B-4C	ND	ND	None	>99%
031489-41M	JSB-B-5A Plaster layer Backing	ND ND	ND ND	10% Glass fibers 80% Cellulose	90% 20%
031489-42M	JSB-B-5B Plaster layer Backing	ND ND	ND ND	10% Glass fibers 70% Cellulose	90% 30%
031489-43M	JSB-B-5C Plaster layer Plaster backing Paper backing	ND ND ND	ND ND ND	10% Glass fibers 25% Glass fibers 80% Cellulose	90% 75% 20%
031489-44M	JSB-B-8	ND	ND	60% Cellulose 1% Glass fibers	39%
031489-45M	JSB-B-9A	ND	ND	30% Cellulose 10% Mineral wool	60%
031489-46M	JSB-B-9B	35%	ND	None	65%

*None Detected (<1% fibers found)

** Synthetic Fibers including: rayon, polyester, nylon, orlon, etc.

N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	% Amosite		
031489-47M	JSB-B-9C	10%	ND	30% Cellulose 10% Mineral wool	60%
031489-48M	JSB-B-10A	ND	ND	40% Mineral wool 30% Cellulose	30%
031489-49M	JSB-B-10B	ND	ND	40% Mineral wool 30% Cellulose	30%
031489-50M	JSB-B-10C	ND	ND	40% Mineral wool 40% Cellulose	20%
031489-51M	JSB-B-13A	ND	ND	35% Cellulose	65%
031489-52M	JSB-B-13B	40%	ND	None	60%
031489-53M	JSB-B-14A	ND	ND	60% Glass fibers	40%
031489-54M	JSB-B-14B	ND	ND	30% Cellulose 40% Mineral wool	30%
031489- 55M	JSB-B-14C	ND	ND	30% Cellulose 30% Mineral wool	40%
031489-56M	JSB-B-15A	35%	ND	1%-2% Mineral wool	63%
031489-57M	JSB-B-15B	ND	ND	70% Mineral wool	30%
031489-58M	JSB-B-15C	ND	ND	70% Mineral wool	30%
031489-59M	JSB-B-16A	ND	ND	5% Cellulose (Found in Mastic Layer)	95%
031489-60M	JSB-B-16B	ND	ND	50% Cellulose (Found in Mastic Layer)	50%
031489-61M	JSB-B-16C	ND	ND	None	>99%
031489-62M	JSB-B-17A				
	Plaster Layer Backing	ND ND	ND ND	10% Mineral wool 90% Cellulose	90% 10%
031489-63M	JSB-B-17B				
	Plaster Layer Backing	ND ND	ND ND	15% Mineral wool 90% Cellulose	85% 10%

*None Detected (<1% fibers found)

** Synthetic fibers including: rayon, polyester, nylon, orlon, etc.

N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	%Amosite		
031489-64M	JSB-B-17C Plaster Layer Backing	ND ND	ND ND	10% Mineral wool 90% Cellulose	90% 10%
031489-65M	JSB-B-18A Plaster Layer Backing	ND ND	ND ND	30% Mineral wool 60% Cellulose	70% 4
031489-66M	JSB-B-18B Plaster Layer Backing	ND ND	ND ND	15% Mineral wool 60% Cellulose	85% 40%
031489-67M	JSB-B-18C Plaster Layer Backing	ND ND	ND ND	10% Mineral wool 60% Cellulose	90% 40%
031489-68M	JSB-B-19	ND	ND	None	>99%
031489-69M	JSB-B-20A Mastic (Unashed Tile) Ashed Tile	ND ND	ND ND	60% Cellulose None	40% >99%
031489-70M	JSB-B-20B	ND	ND	None	>99%
031489-71M	JSB-B-20C	ND	ND	None	>99%
031489-72M	JSB-B-21A	ND	ND	1-2% Cellulose	98%
031489-73M	JSB-B-21B	ND	ND	20% Cellulose 1% Mineral wool	79%
031489-74M	JSB-B-21C	ND	ND	None	>99%
031489-75M	JSB-B-22A	ND	ND	None	>99%
031489-76M	JSB-B-22B	ND	ND	None	>99%
031489-77M	JSB-B-22C	ND	ND	None	>99%
031489-78M	JSB-B-24A	ND	ND	None	>99%
031489-79M	JSB-B-24B	1-5%	ND	None	95%
031489-80M	JSB-B-24C	ND	ND	None	>99%

*None Detected (<1% fibers found)

** Synthetic Fibers including: rayon, polyester, nylon, orlon, etc.

N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	% Amosite		
031489-81M	JSB-B-25				
	Textile	ND	ND	80% Cellulose	20%
	Loose Dust	ND	ND	10% Cellulose	
				3% Mineral wool	87%
031489-82M	JSB-B-26				
	Textile	ND	ND	80% Cellulose	20%
	Loose Dust	ND	ND	15% Cellulose	
				5% Mineral wool	80%
031489-83M	JSB-B-27				
	Textile	ND	ND	95% Cellulose	5%
	Loose Dust	ND	ND	35% Cellulose	
				5% Mineral wool	60%
031489-84M	JSB-B-30	ND	ND	60% Glass wool	40%
031489-85M	JSB-B-31	ND	ND	None	>99%
031489-86M	JSB-B-32				
	Round Gasket	60%	ND	None	40%
	Half Moon Gasket	75%	ND	None	25%
	Grey Gasket	10-15%	ND	None	85%
031489-87M	JSB-B-33	ND	ND	40% Cellulose	60%
031489-88M	JSB-B-34				
	Fire Brick	ND	ND	None	>99%
	Backing	1-2%	ND	None	98%
031489-89M	JSB-B-36	ND	ND	95% Mineral wool	5%
031489-90M	JSB-B-38	ND	ND	95% Mineral wool	
				1% Cellulose	
				1% Synthetics	3%
031489-91M	JSB-B-39A	ND	ND	None	>99%
031489-92M	JSB-B-39B	ND	ND	None	>99%
031489-93M	JSB-B-39C	ND	ND	1% Cellulose	99%
031489-94M	JSB-B-40	ND	ND	95% Glass fiber	5%

*None Detected (<1% fibers found)

** Synthetic Fibers including: rayon, polyester, nylon, orlon, etc.

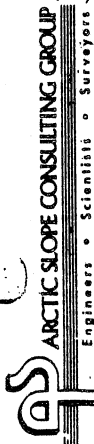
N.T.L. Sample I.D. #	A.S.C.G. Location #	ASBESTOS		OTHER FIBERS	NON FIBER
		% Chrysotile	% Amosite		
031489-95M	JSB-B-101				
	Mastic	ND	ND	2-3% Mineral wool	97%
	Sample Body	ND	ND	None	>99%
031489-96M	JSB-B-102	ND	ND	95% Glass fiber	5%
031489-97M	JSB-B-103	ND	ND	95% Glass fiber	5%
031489-98M	JSB-B-104	ND	ND	70% Glass fiber	30%
031489-99M	JSB-B-105	ND	ND	95% Glass fiber	5%
031489-100M	JSB-B-106	ND	ND	90% Glass fiber	10%

Reported By: Donna L. Hawkins
 Donna L. Hawkins, Project Chemist

Date: March 29, 1989

*None Detected (<1% fibers found)

** Synthetic Fibers including: rayon, polyester, nylon, orlon, etc.



Arctic Slope Consulting Group 6700 Arctic Spur Road Anchorage, Alaska 99518
 3801 South Cushman Fairbanks, Alaska 99701

CHAIN OF CUSTODY No: 00001

1. Packed by: _____ Seal # _____
2. Seal Intact Upon Receipt by Sampling Co.: Yes _____ No _____
3. Condition of Contents: _____
4. Sealed for Shipping by: _____
5. Initial Contents Temp.: _____ °C Sp-1 # _____
6. Sampling Status: Done _____ Continuing Until _____
7. Seal Intact Upon Receipt by Laboratory: Yes _____ No _____
8. Contents Temperature Upon Receipt by Lab: _____ °C
9. Condition of Contents: _____

Attn: NTI - FVBKS
 Client: STATE OF ALASKA
 Project: SEE APPENDS # 3716
 Sampling Co.: _____
 Sampling Site: JUNEAU, AK - MUSEUM
 Team Leader: ROBERT L. STUART

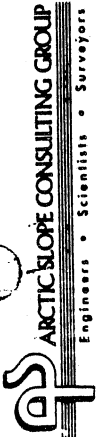
Date	Time	Sample ID/Description	Sample Type	No. Containers	Analysis Parameters	Remarks	
3/6	S	MB-2A TO MB-6C	BULK	11			
3/6	A	MA-1	AIR	1		SAMPLED	
3/6	R	MA-7	AIR	1		MARKED	
3/6	E	MB-8 TO MB-11	BULK	6		READ ALL	
3/7		MB-12 TO MB-13	BULK	2		THREE.	
3/9		MA-14	AIR	1			
		* SEE ATTACHED SHEET FOR					
		SAMPLE DESCRIPTIONS & #s.					

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed) _____ Date _____ Time _____
 Received by: (signed) [Signature] Date 3/13/00 Time 1530
 1 KARL WOODS

SHIPPING DETAILS

Delivered to Shipper by: _____
 Method of Shipment: _____ Airbill # _____
 Received for Lab: _____ Signed: _____ Date/Time: _____



6700 Arctic Spur Road Anchorage, Alaska 99518
3801 South Cushman Fairbanks, Alaska 99701

CHAIN OF CUSTODY

No. 00002

Attn: NIL- FRBKS
Client: STATE OF ALASKA
Project: SEE NOTES #3710
Sampling Co.: JUNEAU - J.S.O.B.
Sampling Site: ROBERT L. STUART
Team Leader: _____

- Packed by: _____ Seal # _____
- Seal intact Upon Receipt by Sampling Co.: Yes _____ No _____
- Condition of Contents: _____
- Sealed for Shipping by: _____
- Initial Contents Temp.: _____ °C Seal # _____
- Sampling Status: Done _____ Continuing Until _____
- Seal Intact Upon Receipt by Laboratory: Yes _____ No _____
- Contents Temperature Upon Receipt by Lab: _____ °C
- Condition of Contents: _____

Date	Time	Sample ID/Description	Sample Type	No. Containers	Analysis Parameters	Remarks	
2/17		J5B-1A TO J5B-1B	BULK	3			
2/17		J5B-A-2	AIR	1	SAMPLES A B, C		
2/17		J5B-B-3 TO J5B-B-4C	BULK	4	IMPURED	READ	
2/18		J5B-B-5A TO J5B-B-5C	BULK	3			
2/18		J5D-A-6	AIR	1			
2/18		J5B-A-7	AIR	1			
2/18		J5B-B-8 TO J5B-B-9A TO 9C	BULK	4			
		* SEE ATTACHED SHEET SAMPLE LIST FOR SAMPLE #S & DESCRIPTIONS					

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed) [Signature] Date 3/3/89 Time 1530

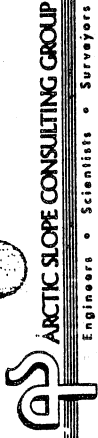
Received by: (signed) [Signature] Airbill # _____

Delivered to Shipper by: _____ Signed: _____ Date/Time _____

Method of Shipment: _____

Received for Lab: _____ Signed: _____ Date/Time _____

Act-No. _____



6700 Arctic Spur Road Anchorage, Alaska 99518
 3801 South Cushman Fairbanks, Alaska 99701

CHAIN OF CUSTODY

No. 00003

1. Packed by: _____ Seal # _____
2. Seal Intact Upon Receipt by Sampling Co.: Yes _____ No _____
3. Condition of Contents: _____
4. Sealed for Shipping by: _____
5. Initial Contents Temp.: _____ °C ~~Seal # _____~~
6. Sampling Status: Done _____ Continuing Until _____
7. Seal Intact Upon Receipt by Laboratory: Yes _____ No _____
8. Contents Temperature Upon Receipt by Lab: _____ °C
9. Condition of Contents: _____

Attn: HIL - FRBKS
 Client: State of Alaska
 Project: SE ASBESTOS
 Sampling Co.: _____
 Sampling Site: Juneau - J.S.O.B.
 Team Leader: PLS

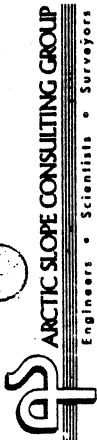
Date	Time	Sample ID/Description	Sample Type	No. Containers	Analysis Parameters	Remarks
3/9		JSP-A-11	AIR	1		
3/9		JSP-A-12	AIR	1		* see attached for list
Varies		JSP-B-10A - 10C	BULK	3		sample descriptions.
3/9		JSP-B-10A TO JSP-B-15C	BULK	8		sample
Varies		JSP-B-16A TO 16C	BULK	3		sample marked all 3.
Varies		JSP-B-17A TO 17C	BULK	3		samples - read
3/9		JSP-B-18 A TO 18C	BULK	3		A, B, C
3/9		JSP-B-B-19	BULK	1		
Varies		JSP-B-20A TO 20C	BULK	3		
Varies		JSP-B-21A TO 21C	BULK	3		

SHIPPING DETAILS

Delivered to Shipper by: _____
 Method of Shipment: _____ Airbill # _____
 Received for Lab: _____ Signed: _____ Date/Time: _____

CUSTODY TRANSFERS PRIOR-TO-SHIPPING

Relinquished by: (signed) _____ Date _____ Time _____
 Received by: (signed) [Signature] Date 3/30/99 Time 1530



Engineers • Scientists • Surveyors

6700 Arctic Spur Road Anchorage, Alaska 99518
 3801 South Cushman Fairbanks, Alaska 99701

CHAIN OF CUSTODY

No. 0004

- 1. Packed by: _____ Seal # _____
- 2. Seal Intact Upon Receipt by Sampling Co.: Yes _____ No _____
- 3. Condition of Contents: _____
- 4. Sealed for Shipping by: _____
- 5. Initial Contents Temp.: _____ °C Seal # _____
- 6. Sampling Status: Done _____ Continuing Until _____
- 7. Seal Intact Upon Receipt by Laboratory: Yes _____ No _____
- 8. Contents Temperature Upon Receipt by Lab: _____ °C
- 9. Condition of Contents: _____

Attn: HTL - Frbks

Client: STATE OF ALASKA

Project: SE ABRESIDS #3716

Sampling Co.: _____

Sampling Site: JUNEAU - J.S.D.B.

Team Leader: RLS

Date	Time	Sample ID/Description	Sample Type	No. Containers	Analysis Parameters	Remarks
Varis		JSB-B-22A TO 22C	BULK	3		* see Attached Sample
3/10		JSB-A-23	AIR	1		List for description of samples.
Varis		JSB-B-24A TO 24C	BULK	3		
3/10		JSB-B-25 TO JSB-B-27	BULK	3		
3/10		JSB-A-28	AIR	1		
3/10		JSB-A-29	AIR	1		
3/10		JSB-B-30 TO JSB-B-34	BULK	5		
3/10		JSB-B-35	AIR	1		
3/10		JSB-B-36	BULK	1		

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed) _____ Date _____ Time _____

Received by: (signed) [Signature] Date 3/13/09 Time 1530

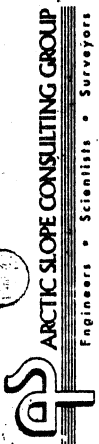
SHIPPING DETAILS

Delivered to Shipper by: _____

Method of Shipment: _____ Airbill # _____

Received for Lab: _____ Signed: _____ Date/Time _____

Act-No. _____



ARCTIC SLOPE CONSULTING GROUP 6700 Arctic Spur Road Anchorage, Alaska 99518
 3801 South Cushman Fairbanks, Alaska 99701

CHAIN OF CUSTODY No. 00005

1. Packed by: _____ Seal # _____
2. Seal Intact Upon Receipt by Sampling Co.: Yes _____ No _____
3. Condition of Contents: _____
4. Sealed for Shipping by: _____
5. Initial Contents Temp.: _____ °C Seal # _____
6. Sampling Status: Done _____ Continuing Until _____
7. Seal Intact Upon Receipt by Laboratory: Yes _____ No _____
8. Contents Temperature Upon Receipt by Lab: _____ °C
9. Condition of Contents: _____

Attn: NHL-PRBS
 Client: STATE OF ALASKA
 Project: SE PERSEIDS
 Sampling Co.: JUNEAU - J.S.D.B.
 Sampling Site: RLB
 Team Leader: _____

Date	Time	Sample ID/Description	Sample Type	No. Containers	Analysis Parameters	Remarks
2/11	✓	JSB-A-37	Air	1		
2/11	✓	JSB-B-38 TO JSB-B-40	BULK	5		
2/19	✓	JSB-B-101 TO JSB-B-105	BULK	5		
2/10	✓	JSB-B-106	BULK	1		
		* See Attached Sample List for complete descriptions				

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed) _____ Date _____ Time _____
 Received by: (signed) Matthew D. [Signature] Date 3/13/87 Time 1530

Delivered to Shipper by: _____
 Method of Shipment: _____ Airbill # _____
 Received for Lab: _____ Signed: _____ Date/Time _____
 Subject No. _____

SHIPPING DETAILS

APPENDIX F
TRAINED PERSONNEL
&
EQUIPMENT AVAILABLE

APPENDIX F

**APPENDIX F
DOT/PF - SOUTHEAST REGION
TRAINED PERSONNEL & EQUIPMENT**

o **TRAINED PERSONNEL**

<u>PERSONNEL</u>	<u>ASBESTOS WORKER CERT. NO.</u>
Tom Lunstrom	2765
Rudy Walker	2139
Dan Cashen	1821
Nathan Mason	2766
Paul Frederick	1822
Bill Jones	1155
* _____	_____
_____	_____
_____	_____
_____	_____

o **EQUIPMENT/MATERIALS**

<u>ITEM</u>	<u>RECOMMENDED</u>	<u>ON HAND</u>	<u>REMARKS</u>
Respirators	1 for each worker	6	Individual Issue Need to change filters, etc. periodically.
Hepa Vac	2 each	2	
Klean Kube Filters	1 each 1 extra for each respirator	1 *	Order as needed
Tyvek Suits	1 case	*	Order as needed
6 mil Bags marked Asbestos	1 case	*	Order as needed
Warning Signs	4 each	*	
Encapsulant	1 case	*	Order as needed
Duct Tape	6 rolls	*	Order as needed
Glove Bags	24 each	*	Order as needed
Polyethylene Sheeting	1 roll	*	Order as needed

* DPT/PF to fill in and keep updated.

APPENDIX G
PERMIT FOR DISTURBANCE
OR
POTENTIAL DISTURBANCE OF ACM

APPENDIX G

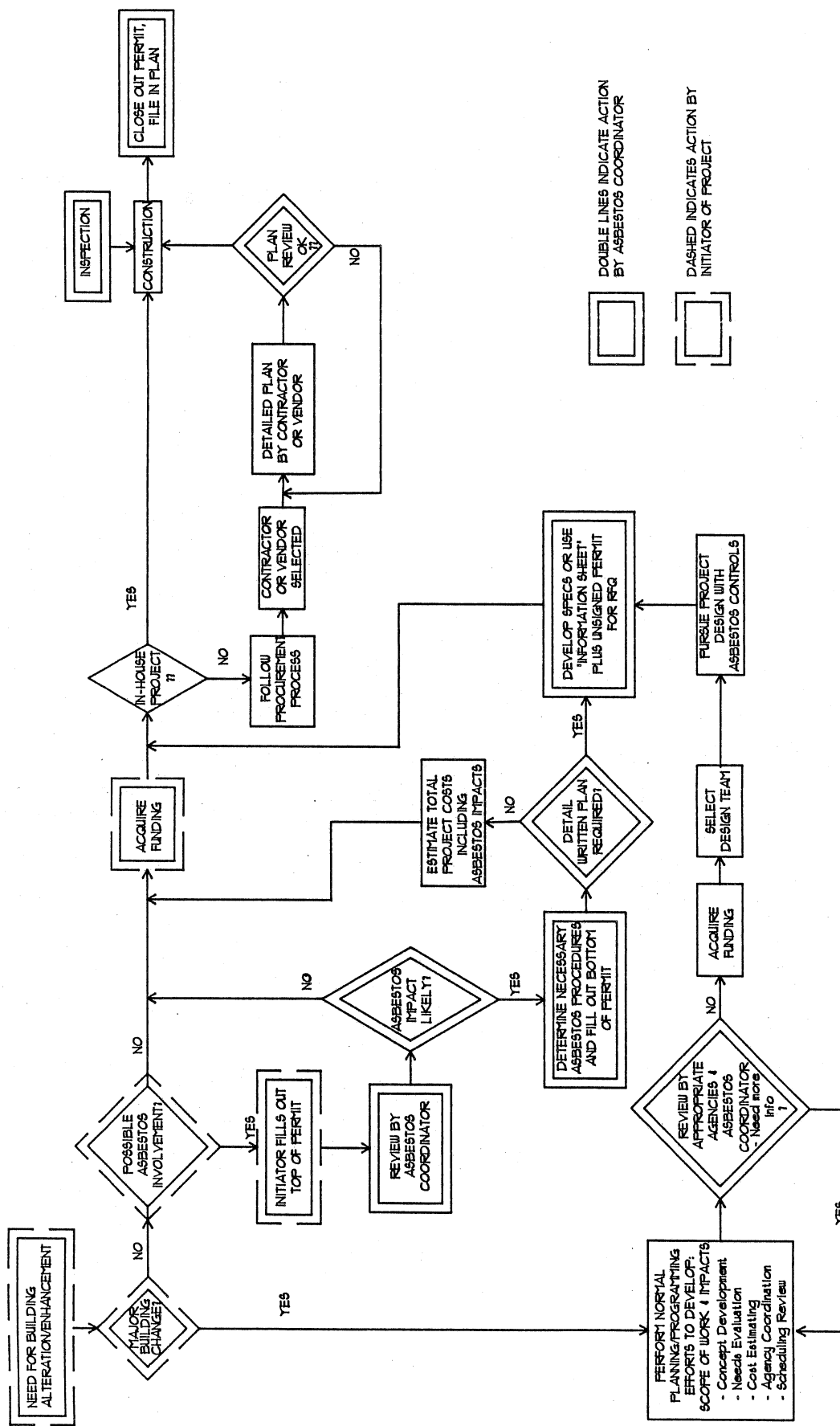
APPENDIX G

THE ASBESTOS PERMIT SYSTEM

The Asbestos Permit system is the method whereby the Asbestos Coordinator (AC) assures that work planned, scheduled or authorized in the JSOB or the Museum does not disturb ACM or does not release asbestos fibers. The beginning of the permit process must start, however, with the initiator of the proposed work, a person who may not be the AC or anyone on the AC's staff. All likely initiators of work that may affect the building's ACM must be aware of the locations of the ACM and the effects of work on that ACM. Items II and III of the Information Sheet (Appendix I) have that information.

Once the initiator has determined a possible asbestos disturbance, the next step is for the initiator to fill out the "top" of the permit. This defines the location and nature of the proposed work and is the responsibility of the initiator. Determining the actual likelihood of the ACM disturbance is the next step, and is the responsibility of the AC. If ACM disturbance is not likely, the AC can return the permit application noting "no ACM involvement, based on the scope of work described" or the AC can set more definite restrictions to assure that there is no disturbance. For example, for work in a mechanical room that was not likely to contact the ceiling or hard ACM fittings, the AC could specify in the permit, "contractor's workers must have Mr. Doe (of the AC's staff, an asbestos-qualified worker) accompany the Contractor's workers on their first access to the room. Mr. Doe will explain the location of ACM to the workers, their duty to not disturb ACM, and the reporting procedures if the ACM is accidentally disturbed".

In the case of contract or advertised work, a partially filled out permit can be developed by the AC to accompany the bidding documents. This partial permit and the Information Sheet should accompany (and be a part of) requests for bids or quotations for any work that may involve ACM. (A more general notice should be put in all P.O.'s and R.F.Q.'s issued, see Appendix H). In the case of larger projects, either asbestos abatement projects or conventional construction or renovation projects that incidentally involve asbestos, a definite asbestos design and bid document phase is required. For these large projects, the permit itself is generally not required, but the principals involved in the permitting process, especially the review and approval of the bid documents by the AC, are an important part of the process. For larger projects, definite specifications such as those outlined in Appendix J are required.



DOUBLE LINES INDICATE ACTION BY ASBESTOS COORDINATOR

DASHED INDICATES ACTION BY INITIATOR OF PROJECT

THE ASBESTOS PERMIT SYSTEM

RAF/KUE -- SEPTEMBER 1983

APPENDIX G

DOT/PF - SOUTHEAST REGION

PERMIT APPLICATION FOR PERFORMING WORK THAT MAY DISTURB ACM WORK

(Top Part to be Completed by Person Requesting Permit)

1. Exact location of area involved (including building number, room number, location within room, etc) (attach sketches)

2. Description of work involved (attach sketches or specifications)

3. Starting Date _____ Anticipated Completion Date _____
4. Name and telephone number of contact person _____

(Bottom Part to be Completed by Asbestos Coordinator)

5. Approximate amount of asbestos present (linear feet, square feet, size of tank, etc.) _____

6. Asbestos Control methods to be used (i.e., glovebag, HEPA vacuum, wet methods, etc.) _____

7. Protective equipment to be used (respirator, coveralls, etc.) _____

8. Personnel Training/Certification Required _____

9. Air Monitoring/Testing Requirements _____

10. Inspections Required/Scheduled _____

11. HVAC Lockout Procedures _____

12. Detailed Work Plan Required? [] No, [] Yes, Details Required _____

Permit Stipulations Accepted: _____
(Name and Signature of Person Requesting Permit)

Permit Issued: _____
(Name and Signature of Asbestos Coordinator)

Permit Number: _____ Date: _____

Work Completed. This Form Filed in Plan _____
(Signature of Asbestos Coordinator)

Date: _____

Attach to Completed Permit
(Check if applicable)

- [] Air Monitoring Results
- [] Personnel Monitoring Results
- [] Photographs
- [] As Built Sketches
- [] Other (list)

APPENDIX H
NOTIFICATION FOR VENDORS

APPENDIX H

APPENDIX H

NOTIFICATION FOR VENDORS

Here is a brief paragraph, suggested for inclusion in all State procurement that may involve access by the vendor into the JSOB or the Museum.

NOTICE: Certain State of Alaska operated buildings have asbestos-containing material (ACM) in some of the building components. The Juneau State Office Building and the Alaska State Museum in particular have ACM as fireproofing on structural steel that lays above the ceilings. Much of the pipe insulation and floor tile are also ACM. It is the responsibility of all vendors who enter State buildings to do work that may disturb fireproofing, pipe insulation, vinyl flooring or floor tile to discuss their intended work with the State's Asbestos Coordinator who will provide details regarding ACM at the proposed work location. Failure to properly coordinate work may result in damage to ACM which could in turn release asbestos fibers into the air. Airborne asbestos fibers have been associated with lung cancer and other serious diseases.

APPENDIX I
INFORMATION SHEET

APPENDIX I

APPENDIX I

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

SOUTHEASTERN REGION, MAINTENANCE & OPERATIONS

P.O. BOX 3-1000
JUNEAU, ALASKA 99802
(907) 789-8221

INFORMATION SHEET

ASBESTOS-CONTAINING MATERIAL IN STATE FACILITIES Information for State Maintenance Workers and Contractors

INTRODUCTION

This information sheet has general information about asbestos containing material (ACM) in the Juneau State Office Building and the Alaska State Museum, and outlines specifications and work procedures for work that may affect the ACM. There is to be no work that may affect the ACM unless a permit specific to the task is issued by the Asbestos Coordinator. That permit may have information and instructions that add to or supersede this general information. The specifications and procedures in this sheet are the minimum requirements for work and are included either directly or by reference in all work in the JSOB or Museum that may affect ACM unless the permit specifically changes this.

I. HEALTH RISKS

A. Breathing airborne asbestos fibers has been associated with:

- Asbestosis - a serious lung disease
- Lung cancer
- Mesothelioma - a cancer of the lining of the lung or abdominal cavities

B. Airborne asbestos fiber levels in buildings are much lower than those in industrial workplaces where serious health effects have been observed. However, it is still important to minimize exposure to asbestos fibers by following proper work practices.

II. IDENTIFICATION OF AREAS WHERE ACM IS KNOWN TO EXIST

A. State Office Building, 333 Willoughby Avenue, Juneau, Alaska

1. Sprayed-on Fireproofing: ACM is present in the form of sprayed-on cementitious fireproofing on structural steel members and the underside of the steel floor decking on Floors 5 through 11. This material is typically exposed to view in mechanical equipment areas, most of which are not normally accessible to the public. In restrooms, stairwells and utility areas, the ACM is typically concealed behind gypsum wallboard shaft enclosures, walls and ceilings, and is found above the suspended "lay-in" acoustical tile ceilings found in all office areas. Debris from the fireproofing lays on the topside of ceiling tiles and both the debris and the tiles should be assumed to be ACM. The exposed sprayed-on fireproofing visible on structural steel members on parking levels P-1 through P-3 has been determined not to be ACM.
2. Pipe Fitting Insulation: Insulation of pipe fittings is ACM.
3. Vinyl Asbestos Tile: The floor is assumed to be ACM.

B. Alaska State Museum, 395 Whittier Street, Juneau, Alaska

1. Acoustical Surfacing Material - Acoustical surfacing used on the ceiling in the museum lobby and ramp display area contains asbestos.
2. Sprayed-on Fireproofing - ACM is present throughout the entire building as fireproofing on the structural steel members, generally above the ceilings.
3. Suspended Ceiling Tiles - The suspended "lay-in" acoustical tile ceilings found throughout the museum are considered to be contaminated because of the deteriorating ACM fireproofing above and the fireproofing debris that has been deposited on the tiles.
4. Thermal Systems Insulation - Pipe and fitting insulation located throughout the building contains ACM. The tank in the boiler room is also insulated with ACM.
5. Vinyl Asbestos Tile - All vinyl floor tile including the vinyl tile under the carpet should be assumed to be ACM.

III. TYPICAL WORK WHICH MAY INVOLVE OPERATIONS IN PROXIMITY TO OR DISTURBING ACM:

- A. Particular attention is directed to existing conditions in above-ceiling spaces where previous work has dislodged various amounts of ACM, which may be found laying on the upper surfaces of suspended ceiling panels, piping, ductwork and other objects located above the ceilings. All work above the ceilings requires special precautions, including asbestos-qualified workers and a permit from the Asbestos Coordinator.
- B. Installing floor pedestals for electrical, telephone and communication service to office area work stations. new installations involve drilling a hole in the floor, which dislodges ACM from the underside of the steel floor decking below.
- C. Installing, removing or relocating electrical conduit, telecommunications cable and required accessories. Generally, electrical conduit is required by code to be supported by the building structure, while cables may simply lie on the upper surface of acoustical ceiling panels.
- D. Installing, removing or relocating heating, ventilating and air condition (HVAC) ductwork, air mixing boxes, control tubing, and air distribution troffers.
- E. Installing, removing or relocating domestic water lines, heating hot water supply and return lines, fire sprinkler and halon piping, and drain and waste piping. Other activities closely related to these systems include insulating pipe, cleaning out drain leaders and fixing pipe leaks.
- F. Construction of or modification of suspended acoustical ceiling systems, including replacement of acoustical tile panels.
- G. Installation, servicing or replacement of lighting fixtures, unless such work can be performed without moving the fixture body or accessing the adjacent space above the plane of the suspended ceiling.
- H. Any other work procedure which involves removal of ACM to install hangers or to provide clearance for new equipment, piping or electrical raceways or devices, or where the potential for disturbing ACM exists due to confined work space.

IV. PERMIT SYSTEM

A permit is required for any activity that might result in the release of asbestos fibers by disturbance of ACM. A copy of a permit is attached to this information sheet. The permits are applied for by the person needing to do the work, reviewed by the Asbestos Coordinator, signed by the person needing to do the work, then issued by the Asbestos Coordinator. The permit serves to:

- ° Notify the Asbestos Coordinator that work is scheduled that may affect ACM.
- ° Allow the Asbestos Coordinator the opportunity to review the proposed work and decide if it may affect the ACM. If it will not affect the ACM, the permit serves as notice of the bounds of work to assure it does not affect the ACM.
- ° For work that is likely to affect ACM, the permit allows the Asbestos Coordinator to set the asbestos-related requirements of the work, worker training, safety controls and so on.
- ° The completed permit serves as a record of work on or around ACM, if ACM is removed or enclosed as part of the work, the permit serves as a record of that abatement.

V. GENERAL WORK PROCEDURES

The following work procedures will be followed as specified by the permit or as requested by the Asbestos Coordinator or his designee.

- A. The contractor shall provide a specific written plan regarding the proposed work, including protective equipment and work procedures to be used, what hygienic facilities will be provided, air monitoring, and contractor versus State furnished equipment.
- B. Asbestos-qualified Workers: The contractor shall submit to the Asbestos Coordinator for each proposed worker, a copy of the workers' Alaska asbestos certification and evidence of workers' asbestos physical.
- C. Contact the M & O building maintenance foreman to make arrangement for turning off ventilating and air-handling equipment serving the work area. Insure "lock out" of critical controls.
- D. Post signs around the work area stating that work involving ACM is underway and warning unauthorized personnel to stay clear. Provide appropriate barriers to keep unauthorized personnel at least 20 feet away from the work area. If it is not practicable to isolate the immediate work area in this manner, the entire area must be vacated.
- E. If suspended ceiling tiles must be removed to accomplish the work, construct or erect a temporary work enclosure around the ceiling space to be opened, ("Klean Kube" or equivalent) to prevent contamination outside of the immediate work area, as described in Appendix G, Alaska Department of Labor Occupational Safety and Health Standards, Construction Code [Asbestos]. To pass conduit or cable, set up Klean Kube at each pull point or splice.
- F. For all ACM work, remove furniture and other objects from the immediate area. Those articles which cannot be conveniently moved shall be covered with 6-mil polyethylene sheeting, secured in place. Cover the floor with a sufficiently large sheet of 6-mil polyethylene sheeting to catch all debris which may fall from the opened suspended ceiling or overhead work area.

- G. Workers shall wear two layers of disposable coveralls, with all other clothing removed, and approved PAPP's or tight-fitting full face respirators with dual HEPA filters when working in ceiling spaces or elsewhere where exposure to asbestos fibers might be expected.
- H. Remove any loose known or suspected ACM debris and dust from the immediate work area, using a HEPA-filter vacuum cleaner and/or damp wiping techniques. Clean the upper surfaces of removed ceiling tile and adjacent in-place tiles with a HEPA-filtered vacuum cleaner. To minimize dust, mist the upper surfaces of ceiling tile with amended water, using an airless spray bottle, while work is underway. Do not spray water around electrical equipment or where this technique would cause damage.
- I. Small amounts of ACM which are disturbed or removed in conjunction with work shall be thoroughly wetted with amended water and captured on the polyethylene sheeting or with a HEPA-filtered vacuum cleaner. It is important to keep all ACM debris wet.
- J. ACM shall not be abraded, sanded or unnecessarily disturbed. If the use of power tools is necessary, wet methods shall be used to prevent the release of dust and airborne asbestos fibers, or the nozzle of a HEPA-filtered vacuum cleaner shall be attached to the power tool in such a way to capture all dust and chips produced by the tool. If it is not practicable to attach the nozzle to the power tool, hold the HEPA-filtered vacuum cleaner nozzle as closely as possible to the power tool's point of contact with the ACM.
- K. At the conclusion of work in ceiling spaces, HEPA-vacuum the interior of the enclosure and any other contaminated areas, replace removed ceiling tile and thoroughly wet-wipe the enclosure, tools and equipment used in the work. Deposit all ACM debris and protective polyethylene sheeting in labeled 6-mil polyethylene bags and dispose of legally in an approved asbestos dump site. Before leaving the work area, workers shall vacuum off the outer set of protective coveralls, remove the outer set, and don a second, clean, outer set of disposable coveralls before proceeding to the change area. Workers shall then remove both sets of coveralls and shower at the change area. Dispose of all used coveralls as ACM debris.

- L. For work on ACM-insulated pipe, or wherever the technique is applicable, use glove bags. Detailed procedures are found in Appendix G, Alaska Department of Labor Occupational Safety and Health Standards, Construction Code [Asbestos].
- M. No new asbestos-containing materials shall be installed in any State facility.
- N. Agency Notification: Abatement of ACM requires notification of the E.P.A. and Alaska Department of Labor (ADOL). Amounts of ACM less than 260 linear feet or 160 square feet do not require E.P.A. notification. Maintenance work which involves small scale asbestos abatements incidental to the maintenance work do not require ADOL notification.
- O. Disposal Techniques: All ACM waste shall be wetted, double bagged with warning material bags, and transported to a DEC approved disposal site in vehicles by an asbestos-qualified worker who has extra bags, wetting agents and clean-up tool in the vehicle. The workers will get a receipt from the landfill that has the date, time, number and/or weight of bags or containers, and the signature of the landfill supervisor or designate.

APPENDIX J

OUTLINE OF ASCG AND NIBS "GENERIC"

INDEXES OF ASBESTOS ABATEMENT SPECIFICATIONS

APPENDIX J

ASBESTOS ABATEMENT FOR
CSI GENERIC

SECTION 01019
SUMMARY OF WORK FOR
ASBESTOS ABATEMENT

PART 1 GENERAL

- 1.01 WORK COVERED BY CONTRACT DOCUMENTS
- 1.02 DESCRIPTION OF WORK
- 1.03 TITLE TO MATERIALS
- 1.04 PROTECTION OF EXISTING WORK TO REMAIN
- 1.05 RELATED REQUIREMENTS
 - A. Section 01062: Regulations, Licenses and Qualifications
 - B. Section 01342: Submittal Procedures for Asbestos Abatement
 - C. Section 02075: Asbestos Abatement

END OF SECTION

ASBESTOS ABATEMENT FOR
CSI GENERIC

SECTION 01062
REGULATIONS, LICENSES
AND QUALIFICATIONS

PART 1 GENERAL

- 1.01 WORK INCLUDED
 - A. EPA Notification
 - B. Regulatory Compliance
 - C. Applicable Regulations
 - D. Licenses and Qualifications
- 1.02 RELATED WORK
 - A. Section 01019: Summary of Work for Asbestos Abatement
 - B. Section 01342: Submittal Procedures for Asbestos Abatement
 - C. Section 02075: Asbestos Abatement
- 1.03 SUMMARY OF REQUIREMENTS

ASBESTOS ABATEMENT FOR
CSI GENERIC

SECTION 01062
REGULATIONS, LICENSES
AND QUALIFICATIONS

- 1.04 EPA NOTIFICATION
- 1.05 REGULATORY COMPLIANCE
- 1.06 APPLICABLE REGULATIONS
- 1.07 LICENSES AND QUALIFICATIONS

PART 2 NOT USED

PART 3 NOT USED

END OF SECTION

ASBESTOS ABATEMENT FOR
CSI GENERIC

SECTION 01342
SUBMITTAL PROCEDURES
FOR ASBESTOS ABATEMENT

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Submittal Procedures
- B. Required Submittals
- C. Resubmission Requirements
- D. As-Builts Required

1.02 RELATED WORK

- A. Section 01019: Summary of Work for Asbestos Abatement
- B. Section 01062: Regulations, Licenses and Qualifications
- C. Section 02075: Asbestos Abatement

1.03 SUBMITTALS

1.04 REQUIRED SUBMITTALS

1.05 RESUBMISSION REQUIREMENTS

1.06 AS-BUILTS

END OF SECTION
Appendix J, Page 2 of 3

PART 1 GENERAL

- A. Definitions
- B. Abbreviations
- C. Matters of Interpretation
- D. Medical Requirements
- E. Training and Certification
- F. Personnel Protection
- G. Air Monitoring
- H. Preparation Materials
- I. Removal Materials and Equipment
- J. Encapsulation
- K. Materials for Finish Surface Cleaning
- L. Disposal Containers
- M. Containment Area Precleaning
- N. Sealing of Containment Area
- O. Deactivation of Air Handling Systems in Containment Area
- P. Enclosure and Isolation of Containment Area
- Q. Barriers and Entry Points to Contaminated Area
- R. Decontamination Stations
- S. Electrical Power in Containment Area
- T. Fire Protection in Containment Area
- U. Ventilation in Containment Area - Negative Air
- V. ACM Removal in Containment Area
- W. Air Clearance for Containment Area
- X. Waste Loadout and Disposal
- Y. Glovebag Removal of ACM
- Z. Removal of Units with ACM Intact
- AA. Removal of Nonfriable Asbestos, General Controls
- AB. CAB Removal
- AC. AC Pipe Removal
- AD. Resilient Floor Covering and Adhesive Removal
- AE. Roof Felts and Coatings Removal
- AF. Air Clearance Glovebag and Nonfriable Asbestos Removal Areas
- AG. Work Site Cleaning

1.02 RELATED WORK

- A. Section 01019: Summary of Work for Asbestos Abatement
- B. Section 01062: Regulations, Licenses and Qualifications
- C. Section 01342: Submittal Procedures for Asbestos Abatement

END OF SECTION



ASBESTOS ABATEMENT & MANAGEMENT IN BUILDINGS

MODEL GUIDE
SPECIFICATIONS

An authoritative, comprehensive model guide specifications on asbestos abatement in buildings, addressing all four categories of abatement and management:

- Maintenance and Repair
- Encapsulation
- Enclosure
- Removal



National Institute of
BUILDING SCIENCES

C O P Y R I G H T

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Second Printing August, 1987

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Introduction

The National Institute of Building Sciences (NIBS) is pleased to provide these Model Guide Specifications, Asbestos Abatement in Buildings as a resource for persons interested in asbestos abatement in buildings. This material is offered in response to a national need for authoritative advice and guidance in the design and execution of abatement of asbestos-containing materials (ACM) in the following four categories of activity:

- 1) maintenance and repair
- 2) encapsulation
- 3) enclosure
- 4) removal

A number of user groups are expected to benefit from the direct use of this information. Of primary interest to design professionals (architects and engineers), building owners, and abatement contractors, this document provides an outline of important information on specifying asbestos abatement and maintenance and repair of ACM in buildings. Regulatory agencies may also find valuable information in the Model Guide Specifications. It is expected that, over time, a more consistent approach to asbestos abatement projects will evolve through the proper use of this guidance material.

As a consensus document, these Model Guide Specifications reflect the concerns and viewpoints of many members of the Institute's Asbestos Task Force who contributed time and effort to define model procedures that may be used to achieve quality and consistency in asbestos abatement work. This document was developed by the consulting firm of ENTEK, Environmental & Technical Services, Inc., under contract to the Institute. Refinements to materials prepared by the contractor were made over a twelve month period through a series of highly technical review sessions and written correspondence. Experts from a broad cross-section of building science disciplines helped shape the Model Guide Specifications and special recognition is due many individuals and organizations.

The development of these Model Guide Specifications resulted from action by the Association of Wall and Ceiling Industries, International and other building community organizations. These organizations requested the Institute to form the NIBS Asbestos Task Force to provide the leadership necessary to develop and publish these Model Guide Specifications as a building community wide effort. The Institute and all others involved in bonafide asbestos abatement efforts are indebted to the initiative and participation of these organizations.

The many contributors who participated in various stages of the preparation of the document are listed in Appendix A, Participants, NIBS' Asbestos Task Force. A vast quantity of technical data and sample specifications were reviewed by the Task Force, the contractor, and the Institute's staff during the formulation of the final text.

Background

Airborne asbestos in buildings can be a significant environmental problem. Various health effects have been linked with industrial exposure to airborne asbestos, and the extensive use of asbestos-containing materials in buildings has raised concerns about exposure to asbestos in non-industrial settings. Surveys conducted by the United States Environmental Protection Agency (EPA) estimate that asbestos containing materials can be found in approximately 31,000 schools and 733,000 other public and commercial buildings in this country.

In buildings, ACM is typically found in four forms: (1) sprayed or troweled on ceilings and walls (surfacing material); (2) in thermal insulation around pipes, ducts, boilers, tanks (pipe and boiler insulation); (3) fire proofing on structural members; (4) in a variety of other products such as ceiling and floor tiles, roofing felts and shingles, and wall boards. In general, ACM in the first two categories is of greatest concern, especially if it is friable. Friable means material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

The presence of asbestos in a building, if not air-borne, does not mean that the health of building occupants is necessarily endangered. The historical concern about exposure to asbestos in buildings is based on evidence linking various respiratory diseases with occupational exposure in the shipbuilding, mining, milling, and fabricating industries. As long as ACM in buildings remains in good condition and is not disturbed, exposure is unlikely. When building maintenance, repair, renovation or other activities disturb ACM, or if it is damaged, asbestos fibers may be released creating a potential hazard to workers engaged in or in the proximity of these activities and, if performed without proper safety precautions, building occupants. Although not required to do so by federal law, the prudent building owner may wish to take steps to limit building occupants' exposure to airborne asbestos.

In 1983 the EPA prepared and distributed "Guidance for Controlling Friable Asbestos-Containing Materials in Buildings" (USEPA 1983a). Since this guidance was published, the EPA has gathered additional information and has gained valuable experience through its continuing Asbestos-in-Buildings Program. In June of 1985, EPA substantially revised and re-issued the guidance document to reflect comments and suggestions of building owners, architects, engineers, contractors, hygienists, physicians, academicians and others. (EPA 560/5-85-024, June 1985). This document is widely known as the "Purple Book."

The National Institute of Building Sciences contributed to the 1985 revisions to the EPA's document. The resulting EPA publication is a comprehensive document with background data that would also be useful to users of this document. The NIBS' Model Guide Specifications are technically consistent with the EPA's document and should be considered complementary to the procedures and recommendations set forth by the EPA.

Proliferation of guide specification materials concerning asbestos abatement in buildings has occurred as a result of heightened public concern over the unknown risks posed by asbestos. Variations in style, format and content in these specifications, and uncertainty as to applicable procedures, standards and regulations have caused confusion among architects, engineers, contractors, public health professionals, and building owners and users. Some agencies have developed asbestos abatement guide specifications with format, organization, and content unfamiliar to building owners, design professionals, and contractors. This has contributed to the need for action by NIBS to prepare accurate and comprehensive guidance in a format usable by the building community.

The Institute's Model Guide Specifications for asbestos abatement in buildings are provided in response to a national need for authoritative advice and guidance. The building community at large recognized the void that existed in its knowledge base concerning treatment of asbestos containing materials. Through NIBS, a highly qualified building community Task Force was formed to develop this document to fill that void. Information provided in the Model Guide Specifications has been developed by the building community for use by the building community and its many sectors. The Institute, in its convening and monitoring role, is pleased to assist architects, engineers, building owners, industrial hygienists, contractors, and others as they attempt to determine proper abatement actions and maintain a healthy and safe built environment.

Regulatory Concerns

In response to federal statutes, testing for ACM is required in primary and secondary schools only. At present, no federal regulations require testing for other public or commercial buildings. Further, although asbestos abatement related legislation has been introduced in the Congress, no federal current federal statutes or regulations require abatement actions (removal, enclosure, or encapsulation) or repair unless the building containing asbestos containing materials in stipulated quantities is to be demolished. Decisions to take specific abatement actions are generally the responsibility of each owner.

OSHA (Occupational Safety and Health Administration) regulations specifying work practices and the EPA rules governing the handling and disposal of asbestos apply to abatement actions. State regulations on these issues vary and may be more stringent than federal requirements. Statutes and regulations are rapidly being promulgated and revised at all levels of government. It is imperative that owners, architects, engineers, abatement contractors, and others research federal and applicable state and local regulations before undertaking any asbestos abatement. The Model Guide Specifications do not supersede any provision of federal or state law and should be used only in conjunction with appropriate requirements of federal and applicable state and local regulations. In many instances, the Model Guide Specifications point out specific clauses and provisions where the owner, architect, or contractor must refer to federal or state requirements in writing or amending specification materials for project use.

Asbestos Abatement

An asbestos abatement project is essentially a construction project with some components that are similar to highly specialized demolition or renovation work. However, asbestos abatement is not a typical demolition or renovation project. Great care must be taken by everyone involved and asbestos-related work should be approached as environmental decontamination. Asbestos abatement should be undertaken only after the identification of ACM in a building and the development of a management plan which establishes the appropriate type of actions to be taken.

Once a building owner determines the need for abatement action, the process usually starts with the owner engaging the services of a qualified architect or engineer to determine the project requirements. These project requirements are defined in the contract documents. The contract documents should include the form of agreement, general, supplementary and other conditions, drawings, specifications, addenda, and amendments. It is imperative that the various documents comprising the contract be carefully coordinated.

Portions of the contract documents are issued, as a bid package, for competitive bidding or for negotiation with a pre-selected contractor. The qualified low bidder, if the job is bid rather than negotiated, is usually selected and becomes the contractor responsible for providing the labor, equipment, and materials necessary to complete the project.

Roles and Responsibilities

It is unusual for an architectural/engineering (A/E) firm to have the expertise needed for all of the technical aspects of an asbestos abatement project; thus, an environmental consultant may be needed. It is critical to the success of a project that both the contract document preparation skills of an A/E and the specialized technical knowledge of an environmental consultant be obtained. Qualified certified industrial hygienists, risk assessment specialists, air sampling technicians, indoor air quality experts, and chemists are among the broad range of professionals whose services may be necessary for an abatement project.

It is important that the building owner seeking qualified A/E and environmental services thoroughly evaluate candidate consultants through review of the firm's past work and other qualifications. Similarly, the owner should determine the qualifications of potential contractors before or during the bidding process. The owner may seek information from organizations for which a contractor has performed similar work and evaluate information about the contractor's staff, equipment, experience, and other relevant information categories.

Although the participants may vary somewhat in an asbestos abatement project, the contractual relationships among building owners, architects and engineers, and contractors are similar to the time-honored relationships in other, more traditional, types of construction.

During the construction phase, the design professional usually certifies the contractor's payment requests, processes change orders and ultimately certifies the project's completion. The roles and responsibilities which exist among the involved parties are usually expressed in great detail in a series of contracts. For most projects the contracts used are standard forms issued by a professional organization, such as the American Institute of Architects. To act in his interest during the construction phase, the owner may hire a project representative, who will remain on the job on a full time basis to determine whether the work is performed in accordance with the contract requirements as technically defined by the drawings and specifications. This person may be authorized to make decisions with regard to the work or give directions to the contractor on the owner's behalf.

The history of asbestos abatement includes numerous problems that have arisen from improper technical specifications and other contract documents issued by either environmental consultants or architects/engineers working alone. The Model Guide Specifications are intended to provide a basis for the preparation of technical project specifications as a part of a comprehensive set of contract documents.

The preparation of the balance of the contract documents (eg. drawings, owner-contractor agreement, general, supplementary, or other conditions, addenda, and modifications issued after execution of the contract) is a typical professional service available by architect/engineer firms and as such is not discussed in detail in this publication.

Defining the scope of the work is the responsibility of the design team. The owner should be aware that he is contracting for services specifically defined in the contract documents, and not for simply removing all asbestos, or, "making the building safe." The contractor is entitled to rely on the contract documents as the basis for his work.

In arriving at a contract price, the contractor is entitled to rely on the accuracy of the scope of work defined by the contract documents. If work has been omitted from the drawings and specifications, or is improperly described, the contractor is entitled to an equitable change order in accordance with terms of the contract.

The contractor's responsibility is to supply the labor, materials and equipment necessary to complete the work. He is not called upon to determine whether a building presents a health hazard or is safe to re-enter after abatement work is complete. These are determinations made by the owner's professional representatives.

Cautions

It is recognized that every building owner may not make use of licensed and qualified design professionals or qualified environmental consultants in the assessment and design of an abatement project. However, it is unlawful in most states for anyone other than a licensed architect or

engineer to design, specify, or administer construction or renovation projects. In such states, where it is unlawful for building renovation work to be conducted without a licensed design professional, building owners must comply with applicable laws and regulations. If there is a question as to these requirements, contact the state's regulatory authority having jurisdiction over the project.

The Model Guide Specifications are not to be photocopied directly from this document and issued to a contractor as the basis for performing asbestos abatement work. Careful review and editing by a qualified design professional, with the assistance of qualified environmental consultants, of all applicable specification sections are necessary to achieve accuracy and coordination of work required and correct application to particular projects. Using material directly from this publication will be counterproductive and contractors may be misguided by such action. Consult with qualified design professionals in the use of this document to develop project-specific asbestos abatement specifications.

Based on recent reports by design professionals, contractors, insurers, and government representatives, liability insurance covering asbestos abatement work is either scarce or unavailable. For the foreseeable future, such insurance may not be available for architects and engineers practicing asbestos abatement design. Although alternative solutions such as indemnification have been discussed, current law does not permit federal agencies to indemnify A/E's or contractors. Although ad hoc solutions may be available for some projects, suitable long term solutions have not yet been identified.

Because of the unavailability of this insurance, many A/E's have elected not to perform asbestos abatement design work. However, because there is an increasing need for these services, the unavailability of insurance notwithstanding, other A/E firms have decided to specialize in asbestos abatement design. As a result, building owners may decide to contract with one design team for asbestos abatement work and another team for traditional building design services, all for a single building project.

It must be understood that asbestos-containing materials used in buildings were originally specified for their durability, thermal or acoustical properties. The use of asbestos as a building material was accepted and common practice prior to 1973. Building owners which happen to have asbestos in their buildings should clearly understand that the ACM was originally specified and installed for important functional or life-safety reasons. Removing the ACM or in some way modifying the ACM (encapsulating, enclosing, or encasing) may present serious problems regarding the performance of certain building elements related to fire safety or other functions. Care should be taken to consult with building, fire and other applicable officials to assure that the building remains in compliance with applicable laws and regulations before, during, and after an asbestos abatement project.

There has been extensive litigation arising from the use of asbestos in buildings. Similar risks may arise from the asbestos abatement process.

In order to minimize such risks, building owners and their architects, engineers, consultants and contractors must use accurate technical information, and prudent judgment in choosing and implementing an abatement procedure.

Project Administration

In asbestos abatement projects, the standard contractual relationships among the owner, design professional and contractor vary from traditional construction practice in the area of on-site project administration. The duties, responsibilities and limits of authority of an owner's project representative have been well defined by past construction practice as a passive observer who reports to the design professional or owner. In an asbestos abatement contract this individual should have a much more active role with greater authority and responsibility. The project administrator is extremely important to the project. The owner should take great care in selecting a qualified individual for this position.

In a matter of minutes, serious violations of proper asbestos abatement procedures can occur with the possibility of contamination of the building outside the work area or danger to the worker. In an abatement project, the owner is paying for a procedure rather than a finished project for which compliance can be determined by inspection only at completion. If the procedure is improperly carried out, asbestos fibers can be disseminated beyond the work site or asbestos contamination could remain after completion of work. The only protection the owner has is continuous on-site monitoring of the work by a professional able to make judgments at the work site. This professional is essentially responsible to the owner for contract enforcement.

The project administrator needs to be an air-monitoring technician and microscopist trained in contract administration and asbestos abatement techniques. This individual will take air samples and analyze them in a lab set up at the job site. This air monitoring is carried out to insure that airborne fiber levels in the work-site remain under control and asbestos fibers do not drift out of the work and into the rest of the building or outdoors. Frequently, an almost immediate turn around time on air sample analysis is needed if airborne fiber counts are high or contamination beyond the work-site threatens.

As the abatement process proceeds, there is generally continuous interaction between the project administrator, as the owner's quality control agent, and the contractor. During this interaction, the project administrator must be aware of his responsibility and authority with respect to the contract between the owner and contractor. It is possible for the project administrator to compromise the owner's contract by becoming over involved with direction to the contractor or even assisting in the work.

It is critical that the project administrator be aware of the line between quality control for the owner and usurping the contractor's responsibility to perform the work. If this line is crossed, the

responsibility and corresponding liability for successful abatement could in part be transferred from the contractor to the owner.

The project administrator will usually be the most technically knowledgeable individual on the job site and will continually be called upon to interpret the contract requirements to meet specific conditions that arise during the work. As such, this person must be an expert in the reasons and purpose for the procedures specified so that they can be adapted to a particular situation and still maintain the intent of the contract.

To protect the owner's interest, the project administrator should have specific authority from the owner to stop all work if a hazardous situation arises. This guide specification contains performance requirements in specific areas (eg. airborne fiber counts, integrity of work place isolation) that call for work to stop if the requirements are not met.

Use of other Documents

This Model Guide Specification is coordinated with and formatted in a way consistent with "MASTERSPEC"¹, a subscription guide specification service available from the American Institute of Architects Service Corporation. To the extent possible, this guide specification contains necessary "boiler-plate" language from certain MASTERSPEC sections, reproduced and incorporated herein with the permission of the AIA Service Corporation. Where reference is made to the AIA's written specification or contract materials not contained in this document, users should contact the American Institute of Architects Service Corporation for required materials.

The following sections are essentially "MASTERSPEC" sections edited and with material added.

- 01043 Project Coordination - Asbestos Abatement
- 01091 Definitions and Standards - Asbestos Abatement
- 01313 Schedules, Reports, Payments - Asbestos Abatement
- 01340 Shop Drawings, Product Data & Samples
- 01632 Products and Substitutions
- 01701 Project Closeout - Asbestos Abatement
- 09251 Gypsum Drywall - Asbestos Enclosures

¹. MASTERSPEC is a registered trademark of the American Institute of Architects Service Corporation.

Acknowledgements

The Institute is grateful for the excellent work of the Asbestos Task Force which evolved this document and is indebted to the fine leadership of Wayne P. Ellis, former Chairman of ASTM, for serving as chairman of the Task Force, presiding over the meetings, and insuring that the many points of view were adequately addressed throughout the project. In addition, the Institute wishes to recognize the active participation and technical contribution made by the Task Force Steering Committee comprised of the following individuals:

Albert L. Apter	Hercules Demolition Corporation of Virginia
Bruce Atlas	City of New York, Department of General Services
William Baker	National Association of Demolition Contractors
John Biechman	BOMA, International
Brian Bramell	Alternative Ways Inc.
John S. Bush, Jr.	USG Corporation
Gene Erwin	Assn. of the Wall & Ceiling Industries, International
Steve Hays	The Project Management Group
Stewart Huey	National Asbestos Council
Hal Levin	University of California, Berkeley
Chris Matthews	U.S. Naval Facilities Engineering Command
Sheldon Steinbeck	American Council on Education
James Parker	General Services Administration
Robert L. Petterson	AIA Service Corporation
Stephen Schanamann	Environmental Protection Agency
Charles F. Tarr, Jr.	New Jersey, Dept. of Community Affairs
Frederick C. Treadway	Specialty Systems, Inc.
John F. Welch	Safe Buildings Alliance

Contractor: ENTEK, Environmental & Technical Services, Inc. Key members of the contractor's team were:

Roger G. Morse, AIA
Robert N. Sawyer, M.D., FACPM

General Legal Reviewer: Arthur T. Kornblut, Esquire.



Abstract

The Model Guide Specification, Asbestos Abatement in Buildings is a compilation of specification sections which are compatible with, and based on the format of, "MASTERSPEC," a subscription guide specification service of the American Institute of Architects Service Corporation. The sections are arranged according to the Construction Specifications Institute's "Masterformat." The Model Guide Specification addresses three primary methods of asbestos abatement; encapsulation, enclosure, and removal; and can also be used as a guide for writing specifications for use as the basis of an asbestos maintenance and repair program contract. The sections typically used for each of those activities are listed separately.

The Model Asbestos Abatement Guide Specification has more than thirty sections which contain general and administrative requirements and sections directly addressing technical asbestos abatement work. The technical sections are organized in general sections and groups of sections specifically oriented to: 1) repair and maintenance; 2) encapsulation; 3) enclosure; 4) removal; and 5) decontamination of the work area.

General and Administrative Requirements supporting all five types of action include: summary of the work; project coordination; definitions and standards; schedules, reports, and payments; shop drawings, product data and samples; and products and substitutions.

Abatement work sections include: applicable codes, regulations, notices and permits, temporary facilities, temporary enclosures, negative pressure systems, decontamination units, worker protection, respiratory protection, test laboratory services, and disposal of asbestos-containing materials.

Asbestos removal work procedures include: cutting and patching, removal of asbestos containing materials, removal of asbestos contaminated soil, and disposal of asbestos containing waste material.

Asbestos enclosure procedures are described in Section 09251, Gypsum Drywall - Asbestos Enclosures. Although the use of gypsum drywall systems as an enclosure for ACM is the only method included in the Guide Specifications, other types of architectural and structural materials can be used as well. Metal panels, concrete, masonry, wood, and other suitable systems may be considered by design professionals. Guide specifications for such systems are included in "MASTERSPEC."

Asbestos encapsulation procedures are addressed in specification sections on Encapsulation of Asbestos-containing Materials, and Repair of Insulation and Lagging.

Decontamination of the work area is described in sections on Cleaning and Decontamination Procedures, Project Decontamination - Microfibers, Work Area Clearance, and Project Closeout - Asbestos Abatement.

Repair and maintenance procedures are specified in sections on Local Area Protection, Worker Protection - Repair and Maintenance, Respiratory Protection, Entry into Controlled Areas, and Disturbance of Small Areas of Asbestos Containing Materials.

USING THE
MODEL GUIDE SPECIFICATIONS, ASBESTOS ABATEMENT IN BUILDINGS

Contract Documents:

The Model Guide Specifications, Asbestos Abatement in Buildings are intended for use as the basis for preparing technical project specifications used to describe the work to be performed by an abatement contractor. The components of a comprehensive set of Contract Documents include:

DRAWINGS: A graphic description of the work sufficiently specific that qualified contractors are able to determine the extent of the work and the quantity of material and labor needed to complete the project. Descriptions of the work which tell the contractor to remove, enclose, or encapsulate or perform some such operation on "all the asbestos" in a given building will usually result in enormous uncertainty on the part of the bidders. This uncertainty normally translates into higher cost and disputes about the extent of the work.

OWNER CONTRACTOR AGREEMENT: Standard agreements for building construction projects such as AIA Document A101, "Standard Form of Agreement Between Owner and Contractor" published by the American Institute of Architects may be used for asbestos abatement work in buildings. Such documents identify the contract documents, set the time for commencement and substantial completion of the work, set the contract sum and schedule for progress payments, and establish miscellaneous provisions.

GENERAL CONDITIONS: Published standard form documents such as AIA Document A201 "General Conditions of the Contract for Construction" published by the American Institute of Architects. Such documents detail the responsibilities of each party involved in the construction process, and other general contract requirements. The AIA document is a generalized form and discusses the role of the Owner, Contractor and Owner's Representative.

SUPPLEMENTARY CONDITIONS: Where portions of the General Conditions are inappropriate for a specific project or do not include needed provisions, the Supplementary Conditions are used to make the modifications and additions needed. In asbestos abatement projects the criteria for qualifying contractors and specialized insurance requirements are frequently identified in this section.

OTHER CONDITIONS: Scheduling or liquidated damages (penalty) provisions sufficiently important that they are spelled out in special specification sections as additional Supplementary Conditions.

TECHNICAL SPECIFICATIONS: Technical specifications are typically organized in the CSI sixteen divisions and three part section format.

These specifications give the details of materials and work practices which must be followed. The Model Guide Specifications are a compilation of technical specification sections which include alternative procedures, and explanatory notes to the specifier.

ADDENDA: changes to the drawings, specifications, or other bid documents issued prior to the execution of the Owner-Contractor agreement.

CHANGE ORDERS (Modifications): are used to detail changes in the work which occur after executing the Owner-Contractor Agreement.

Using the Model Asbestos Abatement Guide Specification Sections:

The Model Guide Specification, Asbestos Abatement in Buildings is a compilation of specification sections compatible with the AIA Service Corporation's "MASTERSPEC" which can be used as a guide to assemble a technical specification for asbestos abatement work involving:

- Removal of Asbestos-Containing Materials
- Encapsulation of Asbestos-Containing Materials
- Enclosure of Asbestos-Containing Materials

In addition, the Model Guide Specifications can be used for writing the specifications necessary for defining portions of an asbestos management and control program appropriate for an outside contractor to carry out. These sections are addressed under the section entitled Asbestos Maintenance and Repair.

Sections in the Model Guide Specifications are arranged according to the Construction Specification Institute's "Masterformat" which has become the standard for presentation of specification material in the construction industry. "Masterformat" organizes specification material into sixteen divisions which correspond to related construction activities. In developing specification sections for asbestos abatement it was found that most of the activities to be described fell in Division 1 which contains temporary facilities, quality control testing, and administrative requirements. The specification sections for removal operations fall in Division 2 as specialized demolition. Enclosure and encapsulation sections are included in Division 9 as interior finish work. Repair and encapsulation of pipe insulation belongs in Division 15 Mechanical.

To make the Model Guide Specifications easy to use, they are in a format compatible with "MASTERSPEC,"^{CM} a subscription guide specification service published by the AIA Service Corporation. "MASTERSPEC" is a series of specification sections written in a uniform format which can be used to develop a project specification by selecting the appropriate sections from over 130 sections available. Because this service is widely used by architects and engineers, the Model Guide Specifications

can be made compatible with "MASTERSPEC" assuring that they can easily be used by firms already using that system, and that they are well coordinated with the standard contract document forms published by the AIA.

In the text of the technical sections of the Model Guide Specification notes are included to provide additional guidance to the user. These notes must be deleted after a project specification is prepared using this guidance document. The following is an example of the format and style of the notes:

NOTES ARE ALWAYS PRINTED IN CAPITAL LETTERS AND ARE INDENTED JUST AS THIS PARAGRAPH IS PRINTED. ALWAYS DELETE THESE NOTES WHEN PRINTING A SET OF PROJECT SPECIFICATIONS.

In writing project specifications, the Model Guide Specifications, Asbestos Abatement in Buildings is used by selecting the sections appropriate for the project requirements and editing them as necessary. Some sections are necessary for any type of abatement project. Other sections contain specific requirements and will be appropriate only for a specific types of abatement projects.

The following outlines the specification sections needed to describe the different types of work required for a complete abatement project. The sections are presented in a chronological order according to typical sequencing of the work:

General and Administrative Requirements: are set forth in sections:

- 01013 Summary of the Work - Asbestos Abatement
- 01043 Project Coordination - Asbestos Abatement
- 01091 Definitions and Standards - Asbestos Abatement
- 01313 Schedules, Reports, Payments - Asbestos Abatement
- 01340 Shop Drawings, Product Data and Samples
- 01632 Products and Substitutions

Abatement Work: requirements are set forth in the following sections:

01092 Codes and Regulations - Asbestos Abatement: sets forth many governmental regulations and industry standards which are adopted by reference and made a part of the specification. Notices and permits which must be made to governmental authorities before start of work are also to be described in this section. Some guidance documents developed by public and private organizations to assist asbestos abatement are also listed in this section.

01503 Temporary Facilities - Asbestos Abatement: sets forth the support facilities needed such as electrical and plumbing connections for the decontamination unit and office space for the Project Administrator.

01526 Temporary Enclosures: details the requirements for the sheet plastic barriers isolating the work area from the balance of the building.

01513 Negative Pressure System: sets forth the procedures to set up the negative air machines and ventilation of the work area.

01563 Decontamination Units: explains the setup and operation of the personnel and material decontaminations units.

01560 Worker Protection - Asbestos Abatement: describes the equipment and procedures for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.

01562 Respiratory Protection: establishes procedures and equipment for adequate protection against inhalation of airborne asbestos fibers.

01410 Test Laboratory Services: describes air monitoring by the owner to insure that the building beyond the work area remains uncontaminated. Air monitoring to determine required respiratory protection is the responsibility of the Contractor.

Asbestos Removal Work Procedures: are described in the following specification sections:

- 01046 Cutting and Patching - Asbestos-Containing Materials
- 02081 Removal of Asbestos-Containing Materials
- 02082 Removal of Asbestos-Contaminated Soil
- 02084 Disposal of Asbestos-Containing Waste Material

Enclosure Procedures: Masonry, metal panels, wood, and plastic can and have been used for enclosure. If any of these materials are used, the appropriate section should be added to the specification. The following describes the use of gypsum drywall enclosures:

09251 Gypsum Drywall Asbestos Enclosures

Encapsulation Procedures: are described in the following:

- 09805 Encapsulation of Asbestos-Containing Materials
- 15254 Repair of Insulation and Lagging

Decontamination of the Work Area: after completion of abatement work, is described in the following sections:

01712 Cleaning and Decontamination Procedures - set forth procedures to be used on contaminated objects and rooms which are not part of an abatement work area.

01711 Project Decontamination - describes the sequence of cleaning and decontamination procedures to be followed during removal of the sheet plastic barriers isolating a work area.

01713 Project Decontamination Microfibers - describes the special procedures required to clean an area of contamination by asbestos fibers too small to seen with an optical microscope.

01714 Work Area Clearance - describes the analytical methods used to determine if the work area has been successfully cleaned of contamination.

Section 01701 Project Closeout: details the closeout procedures to end the project once abatement work is complete including final paperwork requirements.

Repair and Maintenance: procedures are specified in the following sections. Generally these involve activities where asbestos fibers are collected at the point of generation so that enclosure of an area with plastic barriers is unnecessary:

- 01527 Local Area Preparation
- 01561 Worker Protection - Repair and Maintenance
- 01562 Respiratory Protection
- 01528 Entry Into Controlled Areas
- 02083 Disturbance of Small Areas of Asbestos Containing Materials

Tables of Contents are included, which indicate the sections necessary to assemble a comprehensive set of technical specifications for the abatement or repair procedure indicated.

MASTER TABLE OF CONTENTS
OF ALL TECHNICAL SPECIFICATIONS SECTIONS

DIVISION 1 - GENERAL REQUIREMENTS

- 01013 Summary of Work - Asbestos Abatement
- 01043 Project Coordination - Asbestos Abatement
- 01046 Cutting & Patching - Asbestos-Containing Materials
- 01091 Definitions and Standards - Asbestos Abatement
- 01092 Codes & Regulations - Asbestos Abatement
- 01313 Schedules, Reports, Payments - Asbestos Abatement
- 01340 Shop Drawings, Product Data & Samples
- 01410 Test Laboratory Services
- 01503 Temporary Facilities - Asbestos Abatement
- 01513 Negative Pressure System
- 01526 Temporary Enclosures
- 01527 Local Area Protection
- 01528 Entry Into Controlled Areas
- 01560 Worker Protection - Asbestos Abatement
- 01561 Worker Protection - Repair & Maintenance
- 01562 Respiratory Protection
- 01563 Decontamination Units
- 01632 Products and Substitutions
- 01701 Project Closeout - Asbestos Abatement
- 01711 Project Decontamination
- 01712 Cleaning & Decontamination Procedures
- 01713 Project Decontamination - Microfibers
- 01714 Work Area Clearance

DIVISION 2 - SITE WORK

- 02061 Building Demolition - Asbestos Abatement
- 02081 Removal of Asbestos - Containing Materials
- 02082 Removal of Asbestos-Contaminated Soil
- 02083 Disturbance of Small Areas Asbestos - Containing Materials
- 02084 Disposal of Asbestos Containing Waste Material

DIVISION 9 - FINISHES

- 09251 Gypsum Drywall - Asbestos Enclosure
- 09805 Encapsulation of Asbestos - Containing Materials

DIVISION 15 - MECHANICAL

- 15254 Repair of Insulation and Lagging

TECHNICAL SPECIFICATIONS
REMOVAL OF ASBESTOS-CONTAINING MATERIAL

The specification sections below are taken from the "Master Table of Contents." They are those sections which are normally required for a comprehensive specification for removal work.

DIVISION 1 - GENERAL REQUIREMENTS

01013 Summary of Work - Asbestos Abatement
01043 Project Coordination - Asbestos Abatement
01046 Cutting & Patching - Asbestos-Containing Materials
01091 Definitions and Standards - Asbestos Abatement
01092 Codes & Regulations - Asbestos Abatement
01313 Schedules, Reports, Payments, Asbestos Abatement
01340 Shop Drawings, Product Data & Samples
01410 Test Laboratory Services
01503 Temporary Facilities - Asbestos Abatement
01513 Negative Pressure System
01526 Temporary Enclosures
01560 Worker Protection - Asbestos Abatement
01562 Respiratory Protection
01563 Decontamination Units
01632 Products and Substitutions
01701 Project Closeout - Asbestos Abatement
01711 Project Decontamination
01712 Cleaning & Decontamination Procedures
01713 Project Decontamination - Microfibers
01714 Work Area Clearance

DIVISION 2 - SITE WORK

02061 Building Demolition-Asbestos Abatement
02081 Removal of Asbestos-Containing Materials
02082 Removal of Asbestos-Contaminated Soil
02084 Disposal of Asbestos Containing Waste Material

TECHNICAL SPECIFICATIONS

ENCAPSULATION OF ASBESTOS-CONTAINING MATERIALS

The specification sections below are taken from the "Master Table of contents." They are those sections which are normally required for a comprehensive specification for encapsulation work.

DIVISION 1 - GENERAL REQUIREMENTS

- 01013 Summary of Work - Asbestos Abatement
- 01043 Project Coordination - Asbestos Abatement
- 01046 Cutting & Patching - Asbestos-Containing Materials
- 01091 Definitions and Standards - Asbestos Abatement
- 01092 Codes & Regulations - Asbestos Abatement
- 01313 Schedules, Reports, Payments, Asbestos Abatement
- 01340 Shop Drawings, Product Data & Samples
- 01410 Test Laboratory Services
- 01503 Temporary Facilities - Asbestos Abatement
- 01513 Negative Pressure System
- 01526 Temporary Enclosures
- 01560 Worker Protection - Asbestos Abatement
- 01562 Respiratory Protection
- 01563 Decontamination Units
- 01632 Products and Substitutions
- 01701 Project Closeout - Asbestos Abatement
- 01711 Project Decontamination
- 01712 Cleaning & Decontamination Procedures
- 01714 Work Area Clearance

DIVISION 2 - SITE WORK

- 02084 Disposal of Asbestos Containing Waste Material

DIVISION 9 - FINISHES

- 09805 Encapsulation of Asbestos-Containing Materials

DIVISION 15 - MECHANICAL

- 15254 Repair of Insulation and Lagging

Concrete is frequently used as a soil encapsulant. If it is to be used as such, then the appropriate section should be added to the specification.

TECHNICAL SPECIFICATIONS
ENCLOSURE OF ASBESTOS-CONTAINING MATERIALS

The specification sections below are taken from the "Master Table of Contents." They are those sections which are normally required for a comprehensive specification for enclosure work.

DIVISION 1 - GENERAL REQUIREMENTS

01013	Summary of Work - Asbestos Abatement
01043	Project Coordination - Asbestos Abatement
01046	Cutting & Patching - Asbestos-Containing Materials
01091	Definitions and Standards - Asbestos Abatement
01092	Codes & Regulations - Asbestos Abatement
01093	Notices and Permits - Asbestos Abatement
01313	Schedules, Reports, Payments, Asbestos Abatement
01340	Shop Drawings, Product Data & Samples
01410	Test Laboratory Services
01503	Temporary Facilities - Asbestos Abatement
01513	Negative Pressure System
01526	Temporary Enclosures
01527	Local Area Protection
01560	Worker Protection - Asbestos Abatement
01562	Respiratory Protection
01563	Decontamination Units
01632	Products and Substitutions
01701	Project Closeout - Asbestos Abatement
01711	Project Decontamination
01712	Cleaning & Decontamination Procedures
01714	Work Area Clearance

DIVISION 2 - SITE WORK

02083	Disturbance of Small Areas Asbestos - Containing Materials
02084	Disposal of Asbestos Containing Waste Material

DIVISION 9 - FINISHES

09251	Gypsum Drywall - Asbestos Enclosures
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Masonry, metal panels, wood, plastic all can and have been used for enclosure. If used, the appropriate sections should be added to the specification.

TECHNICAL SPECIFICATIONS

MAINTENANCE OF ASBESTOS-CONTAINING MATERIALS

The specification sections below are taken from the "Master Table of Contents." They are those sections which are normally required for a comprehensive specification for repair and maintenance.

DIVISION 1 - GENERAL REQUIREMENTS

- 01013 Summary of Work - Asbestos Abatement
- 01043 Project Coordination - Asbestos Abatement
- 01046 Cutting & Patching - Asbestos-Containing Materials
- 01091 Definitions and Standards - Asbestos Abatement
- 01092 Codes & Regulations - Asbestos Abatement
- 01313 Schedules, Reports, Payments, Asbestos Abatement
- 01340 Shop Drawings, Product Data & Samples
- 01527 Local Area Protection
- 01528 Entry Into Controlled Areas
- 01561 Worker Protection - Repair & Maintenance
- 01562 Respiratory Protection
- 01632 Products and Substitutions
- 01712 Cleaning & Decontamination Procedures

DIVISION 2 - SITE WORK

- 02083 Disturbance of Small Areas Asbestos - Containing Materials
- 02084 Disposal of Asbestos Containing Waste Material

DIVISION 9 - FINISHES

- 09805 Encapsulation of Asbestos-Containing Materials

DIVISION 15 - MECHANICAL

- 15254 Repair of Insulation and Lagging

APPENDIX K
INFORMATION & TRAINING RECORDS

APPENDIX K

APPENDIX K-1
OCCUPANT INFORMATION LETTERS

APPENDIX K-1

APPENDIX K-1

OCCUPANT INFORMATION LETTERS

DRAFT OF LETTER TO ALL EMPLOYEES

A letter is written to all employees of both the JSOB and the Museum. Special information for each building is indicated by (for the JSOB) and [for the Museum], need for State input is indicated by {-----}.

The State's consultant, Arctic Slope Consulting Group, ASCG, recently completed an asbestos survey and management plan of both the Juneau State Office Building and the Alaska State Museum. The completed report was distributed to {department heads, collective bargaining units, etc.} and a copy is {on reserve in both the Alaska State Library and the Juneau Public Library}.

ASCG's findings confirmed our earlier investigations regarding asbestos. Briefly, asbestos containing material (ACM) is present in (JSOB) [Museum]. Non-friable ACM, that is hard material that is not likely to release asbestos fibers, is found in pipe and other thermal system insulation, and floor tile and floor tile mastic (glue that holds the tile in place). Friable ACM, that is softer material that is likely to release fibers if disturbed, is present in the fireproofing that is sprayed on the structural steel. The ACM fireproofing is generally behind a barrier, usually the ceiling. Debris from this fireproofing in some cases lays on the topside of the ceiling and has fallen down between some of the fixed partition walls.

The ACM fireproofing or its debris are not exposed to general building occupants. All the monitoring of the air for airborne asbestos fibers either did not indicate any asbestos fibers in the air of the buildings or indicated levels of fibers well below acceptable limits. ASCG has characterized both buildings as "lot risk" buildings. Our immediate objectives therefore are to enclose the few areas where some of the fireproofing is exposed - usually mechanical or storage rooms, and to undertake a management system that assures that the ACM is not disturbed.

A permit is required from the Asbestos Coordinator {name and number} for all work above the ceilings or in walls. Work in these areas such as running computer or electronic cable is frequently done by outside vendors who are being alerted about the permit system. All employees can help by not lifting the ceiling tiles and avoiding any damage to exposed pipe insulation. If you note any damage to the ceiling such as a plumbing leak, please notify both the Asbestos Coordinator and the appropriate maintenance supervisor.

By continuing to avoid damage to the ACM, we can continue to minimize our exposure to airborne asbestos fibers.

K - 2

WORKER TRAINING RECORD

K - 2

WORKER TRAINING RECORD

WORKER TRAINING RECORD

INDIVIDUAL'S NAME

INDIVIDUAL'S IDENTIFICATION NUMBER

PERMANENT ADDRESS

EMERGENCY CONTACT PERSON

PERMANENT CITY, STATE AND ZIP

EMERGENCY CONTACT PHONE NUMBER

HOME PHONE NUMBER

ATTENDING PHYSICIAN

ATTENDING PHYSICIAN'S PHONE NUMBER

ASBESTOS TRAINING HISTORY

COURSE DATE	COURSE LOCATION	COURSE TITLE	TRAINING CENTER NAME	HRS. OF INSTRUCT.	CERT. NUMBER

THIS INDIVIDUAL IS QUALIFIED TO PERFORM THE FOLLOWING TYPE(S) OF ASBESTOS-RELATED WORK.

1) RESTRICTED TO MAINTENANCE WORK WHICH DOES NOT INVOLVE THE DISTURBANCE OF ASBESTOS-CONTAINING BUILDING MATERIALS

Signature

Title

Date

2) MAY PERFORM "SMALL-SCALE, SHORT-DURATION" WORK AS DEFINED BY THE APPLICABLE RULES AND REGULATIONS, UNDER PROPER SUPERVISION.

3) MAY PERFORM "SMALL-SCALE, SHORT DURATION" WORK AS DEFINED BY THE RULES AND REGULATIONS, AND IS QUALIFIED TO SUPERVISE OTHER WORKERS PERFORMING THE SAME TYPE OF WORK.

4) MAY PERFORM WORK IN ANY TYPE OF ASBESTOS REMOVAL PROJECT UNDER PROPER SUPERVISION.

5) MAY PERFORM WORK ON ANY TYPE OF ASBESTOS REMOVAL PROJECT AND IS QUALIFIED TO SUPERVISE OTHERS PERFORMING THE SAME TYPE OF WORK.

APPENDIX K-3

ASBESTOS AWARENESS TRAINING OUTLINE

APPENDIX K-3

APPENDIX K-3

ASBESTOS AWARENESS TRAINING OUTLINE

(Taken from Worker Awareness Training information)

§ 763.92 Training and periodic surveillance

(a) Training. (1) The local education agency [State] shall ensure, prior to the implementation of the O & M provisions of the management plan, that all members of its maintenance and custodial staff (custodians, electricians, heating/air conditioning engineers, plumbers, etc.) who may work in a building that contains ACBM receive awareness training of at least 2 hours, whether or not they are required to work with ACBM. New custodial and maintenance employees shall be trained within 60 days after commencement of employment. Training shall include, but not be limited to:

- (i) Information regarding asbestos and its various uses and forms.
- (ii) Information on the health effects associated with asbestos exposure.
- (iii) Locations of ACBM identified throughout each school [office or other] building in which they work.
- (iv) Recognition of damage, deterioration, and delamination of ACBM.
- (v) Name and telephone number of the person designated [Asbestos Coordinator] to carry out general local education agency responsibilities under § 763.84 and the availability and location of the management plan

APPENDIX L
MEDICAL FORMS

APPENDIX L

L - 1

SAMPLE MEDICAL LETTER

L - 1

SAMPLE MEDICAL LETTER

APPENDIX L-1
SAMPLE MEDICAL LETTER
DOT/PF - SOUTHEAST REGION

Date

MEDICAL PROVIDER
MEDICAL PROVIDER ADDRESS
CITY, STATE ZIP

RE: Asbestos Physical for _____, SSN _____, DOB _____

This letter is your authorization to perform a physical examination for Mr. _____, on _____, 1987 at _____ a.p.m. In accordance with OSHA regulation 29 CFR 1926.58 this examination is to be comprised of the following elements:

1. A medical work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems.
2. A physical examination directed to the pulmonary and gastrointestinal systems.
3. A chest roentgenogram to be administered at the discretion of the physician.
4. Pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV₁).
5. Interpretation and classification of chest roentgenograms in accordance with the following:
 - a. Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted classification system and recorded on a Roentgenographic Interpretation Form. Form CSD/NIOSH (M) 2.8.
 - b. Roentgenograms shall be interpreted and classified only by a B-reader, a board eligible/certified radiologist, or an experienced physician with known expertise in pneumoconioses.
 - c. All interpreters, whenever interpreting chest roentgenograms made during this physical, shall have immediately available for reference a complete set of the ILO-U/C International Classification of Radiographs for Pneumoconioses, 1980.

6. A written report consisting of the following:
 - a. The results of the medical examination.
 - b. The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos, tremolite, anthophyllite, or actinolite.
 - c. Any recommended limitations on the employee or on the use of personal protective equipment such as respirators.
 - d. A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos, tremolite, anthophyllite, or actinolite exposure.

Attached to this letter of authorization is a copy of the appropriate filled out questionnaire from Appendix D of 29 CFR 1926.58.

Mr. _____ will have a relatively low exposure to asbestos fibers. His duties consist of sampling to determine the presence (or absence) of asbestos in buildings, preparation (in an asbestos free office environment) of plans and specifications for the abatement of asbestos hazards, and inspection of asbestos abatement work (generally of short duration). He will wear a dual-cartridge respirator during sampling and either a PAPR or a Type "C" supplied air respirator for inspection. His exposure will be to less than 0.01 fibers per cubic centimeter and only occur during 10 to 15 percent of his annual working time.

Please send the written reports and your invoice to this office.

Sincerely,

REQUESTOR
REQUESTOR TITLE
XC:

L - 2

INITIAL EXAMINATION

L - 2

INITIAL EXAMINATION

OCCUPATIONAL HISTORY

17A. Have you ever worked full time 1. Yes ___ 2. No ___
(30 hours per week or more) for 6 months
or more?

B. Have you ever worked for a year or more in 1. Yes ___ 2. No ___
any dusty job? 3. Does not apply ___
Specify job/industry _____ Total Years Worked ___

Was dust exposure:.....1. Mild ___ 2. Moderate ___ 3. Severe ___

C. Have you ever been exposed to gas or 1. Yes ___ 2. No ___
chemical fumes in your work? 3. Does not apply ___
Specify job/industry _____ Total Years Worked ___

Was exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

D. What has been your usual occupation or job - - the one you have
worked at the longest?

1. Job/Occupation _____

2. Number of years employed in this occupation _____

3. Position/Job Title _____

4. Business, field, or industry _____

(Record on lines the years in which you have worked in any of these
industries, e.g. 1960-1969)

E. In a mine?1. Yes ___ 2. No ___

F. In a quarry?1. Yes ___ 2. No ___

G. In a foundry?.....1. Yes ___ 2. No ___

H. In a pottery?.....1. Yes ___ 2. No ___

I. In a cotton, flax or hemp mill?1. Yes ___ 2. No ___

J. With asbestos?1. Yes ___ 2. No ___

PAST MEDICAL HISTORY

18A. Do you consider yourself to be in good health?... 1. Yes 2. No
If "NO", state reason _____

B. Have you any defect of vision? 1. Yes 2. No
If "YES", state nature of defect _____

C. Have you any hearing defect?..... 1. Yes 2. No
If "YES", state nature of defect _____

D. Are you suffering from or have you ever suffered from:

- a. Epilepsy (or fits, seizures, convulsions)?.... 1. Yes 2. No
- b. Rheumatic fever?..... 1. Yes 2. No
- c. Kidney disease?..... 1. Yes 2. No
- d. Bladder disease? 1. Yes 2. No
- e. Diabetes? 1. Yes 2. No
- f. Jaundice? 1. Yes 2. No

CHEST COLDS AND CHEST ILLNESSES

19A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time) 1. Yes 2. No
3. Don't get colds

20A. During the past 3 years, have you had any chest illnesses that have kept you off work, indoors at home, or in bed? 1. Yes 2. No

IF "YES" TO 20A:

B. Did you produce phlegm with any of these chest illnesses? 1. Yes 2. No
3. Does not apply

C. In the last 3 years, how many such illnesses with (increased) phlegm did you have which lasted a week or more? Number of illnesses
No such illnesses

21. Did you have any lung trouble before the age of 16? 1. Yes 2. No

22. Have you ever had any of the following?

1A. Attacks of bronchitis? 1. Yes 2. No

IF YES TO 1A:

B. Was it confirmed by a doctor? 1. Yes 2. No

- C. At what age was your first attack?
3. Does not apply _____
1. Age in years _____
2. Does not apply _____
- 2A. Pneumonia (include bronchopneumonia)? 1. Yes _____ 2. No _____
- IF YES TO 2A:
- B. Was it confirmed by a doctor?..... 1. Yes _____ 2. No _____
3. Does not apply _____
- C. At what age did you first have it? 1. Age in years _____
2. Does not apply _____
- 3A. Hay Fever? 1. Yes _____ 2. No _____
- IF YES TO 3A:
- B. Was it confirmed by a doctor? 1. Yes _____ 2. No _____
3. Does not apply _____
- C. At what age did it start? 1. Age in years _____
2. Does not apply _____
- 23A. Have you ever had chronic bronchitis? 1. Yes _____ 2. No _____
- IF YES TO 23A:
- B. Do you still have it? 1. Yes _____ 2. No _____
3. Does not apply _____
- C. Was it confirmed by a doctor? 1. Yes _____ 2. No _____
3. Does not apply _____
- D. At what age did it start? 1. Age in years _____
2. Does not apply _____
- 24A. Have you ever had emphysema? 1. Yes _____ 2. No _____
- IF YES TO 24A:
- B. Do you still have it? 1. Yes _____ 2. No _____
3. Does not apply _____
- C. Was it confirmed by a doctor? 1. Yes _____ 2. No _____
3. Does not apply _____
- D. At what age did it start? 1. Age in years _____
2. Does not apply _____

ASCG - Initial Medical Questionnaire

25A. Have you ever had asthma? 1. Yes ___ 2. No ___

IF YES TO 25A:

B. Do you still have it? 1. Yes ___ 2. No ___
3. Does not apply ___

C. Was it confirmed by a doctor? 1. Yes ___ 2. No ___
3. Does not apply ___

D. At what age did it start? 1. Age in years ___
2. Does not apply ___

E. If you no longer have it, at what age did it ... 1. Age in years ___
stop? 2. Does not apply ___

26. Have you ever had:

A. Any other chest illness?..... 1. Yes ___ 2. No ___

If "YES", please specify _____

B. Any chest operations? 1. Yes ___ 2. No ___

If "YES", please specify _____

C. Any chest injuries? 1. Yes ___ 2. No ___

If "YES", please specify _____

27A. Has a doctor ever told you that you had heart 1. Yes ___ 2. No ___
trouble?

IF YES TO 27A:

B. Have you had treatment for heart trouble 1. Yes ___ 2. No ___
in the past 10 years? 3. Does not apply ___

28A. Has a doctor ever told you that you had high .. 1. Yes ___ 2. No ___
blood pressure?

IF YES TO 28A:

B. Have you had any treatment for high blood..... 1. Yes ___ 2. No ___
pressure (hypertension) in the past 10 years? 3. Does not apply ___

29. When did you last have your chest X-rayed? (Year) _____

28 29 30 31

30. Where did you last have your chest X-rayed? _____

What was the outcome? _____

FAMILY HISTORY

31. Were either of your natural parents ever told by a doctor that they had a chronic lung condition such as:

	FATHER			MOTHER		
	1. YES	2. NO	3. DON'T KNOW	1. YES	2. NO	3. DON'T KNOW
A. Chronic bronchitis	_____	_____	_____	_____	_____	_____
B. Emphysema.....	_____	_____	_____	_____	_____	_____
C. Asthma	_____	_____	_____	_____	_____	_____
D. Lung Cancer	_____	_____	_____	_____	_____	_____
E. Other Chest Conditions ..	_____	_____	_____	_____	_____	_____
F. Is parent currently	_____	_____	_____	_____	_____	_____
alive?						
G. Please specify:	Age if living _____	Age if living _____		Age if living _____	Age if living _____	
	Age at death _____	Age at death _____		Age at death _____	Age at death _____	
	Don't know _____	Don't know _____		Don't know _____	Don't know _____	
H. Please specify cause of death	_____			_____		

COUGH

32A. Do you usually have a cough? 1. Yes _____ 2. No _____
 (Count a cough with first smoke or on first going out of doors. Exclude clearing of throat.)
 [If "NO", skip to question 32C.]

B. Do you usually cough as much as 4 to 6 times a day 4 or more days out of the week? 1. Yes _____ 2. No _____

C. Do you usually cough at all on getting up or ... first thing in the morning? 1. Yes _____ 2. No _____

ASCG - Initial Medical Questionnaire

D. Do you usually cough at all during the rest of the day or at night? 1. Yes ____ 2. No ____

IF "YES" TO ANY OF THE ABOVE (32A, B, C, or D), ANSWER THE FOLLOWING:
IF "NO" TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E. Do you usually cough like this on most days for 3 consecutive months or more during the year? 1. Yes ____ 2. No ____
3. Does not apply ____

F. For how many years have you had the cough?..... 1. Number of years ____
2. Does not apply ____

33A. Do you usually bring up phlegm from your chest? 1. Yes ____ 2. No ____
(Count phlegm with the first smoke or on first going out of doors. Exclude phlegm from the nose. Count swallowed phlegm.) [If "NO", skip to 33C]

B. Do you usually bring up phlegm like this as much as twice a day 4 or more days out of the week? 1. Yes ____ 2. No ____

C. Do you usually bring up phlegm at all on getting up or first thing in the morning? 1. Yes ____ 2. No ____

D. Do you usually bring up phlegm at all during the rest of the day or at night? 1. Yes ____ 2. No ____

IF "YES" TO ANY OF THE ABOVE (33A, B, C, or D), ANSWER THE FOLLOWING:
IF "NO" TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E. Do you bring up phlegm like this on most days for 3 consecutive months or more during the year? 1. Yes ____ 2. No ____
3. Does not apply ____

F. For how many years have you had trouble with phlegm? 1. Number of years ____
2. Does not apply ____

EPISODES OF COUGH AND PHLEGM

34A. Have you had periods or episodes of (increased*) cough and phlegm lasting for 3 weeks or more each year? *(For persons who usually have cough and/or phlegm.) 1. Yes ____ 2. No ____

IF "YES" TO 34A:

B. For how long have you had at least 1 such episode per year? 1. Number of years ____
2. Does not apply ____

WHEEZING

35A. Does your chest ever sound wheezy or whistling:

- 1. When you have a cold?..... 1. Yes ___ 2. No ___
- 2. Occasionally apart from colds? 1. Yes ___ 2. No ___
- 3. Most days or nights? 1. Yes ___ 2. No ___

IF "YES" TO 1, 2, OR 3 IN 35A:

- B. For how many years has this been present?..... 1. Number of years ___
2. Does not apply ___

36A. Have you ever had an attack of wheezing that has made you feel short of breath? 1. Yes ___ 2. No ___

IF "YES" TO 36A:

- B. How old were you when you had your first such attack? 1. Age in years ___
2. Does not apply ___

C. Have you had 2 or more such episodes?..... 1. Yes ___ 2. No ___
3. Does not apply ___

D. Have you ever required medicine or treatment for the(se) attack(s)? 1. Yes ___ 2. No ___
3. Does not apply ___

BREATHLESSNESS

37. If disabled from walking by any condition other than heart or lung disease, please describe and proceed to question 39A.
Nature of condition(s)? _____

38A. Are you troubled by shortness of breath when hurrying on the level or walking up a slight hill? 1. Yes ___ 2. No ___

IF "YES" TO 38A:

B. Do you have to walk slower than people of your age on the level because of breathlessness? 1. Yes ___ 2. No ___
3. Does not apply ___

C. Do you ever have to stop for breath when walking at your own pace on the level? 1. Yes ___ 2. No ___
3. Does not apply ___

ASCG - Initial Medical Questionnaire

D. Do you ever have to stop for breath after walking about 100 yards (or after a few minutes) on the level?

1. Yes _____ 2. No _____
3. Does not apply _____

E. Are you too breathless to leave the house or breathless on dressing or climbing one flight of stairs?

1. Yes _____ 2. No _____
3. Does not apply _____

TOBACCO SMOKING

39A. Have you ever smoked cigarettes?
(No means less than 20 packs of cigarettes or 12 oz. of tobacco in a lifetime or less than 1 cigarette a day for 1 year.)

1. Yes _____ 2. No _____

IF "YES" TO 39A:

FOR PERSONS WHO HAVE EVER SMOKED CIGARETTES

B. Do you now smoke cigarettes (as of one month ago)?

1. Yes _____ 2. No _____
3. Does not apply _____

C. How old were you when you first started regular cigarette smoking?

1. Age in years _____
2. Does not apply _____

D. If you have stopped smoking cigarettes completely, how old were you when you stopped?

1. Age when stopped _____
2. Still smoking _____
3. Does not apply _____

E. How many cigarettes do you smoke per day now?

1. Cigarettes/day _____
2. Does not apply _____

F. On the average of the entire time you smoked, how many cigarettes did you smoke per day?

1. Cigarettes/day _____
2. Does not apply _____

G. Do or did you inhale the cigarette smoke?

1. Never smoked _____
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

40A. Have you ever smoked a pipe regularly?
(Yes means more than 12 oz. of tobacco in a lifetime.)

1. Yes _____ 2. No _____

IF "YES" TO 40A:

FOR PERSONS WHO HAVE EVER SMOKED A PIPE

B. 1. How old were you when you started to smoke a pipe regularly 1. Age in years _____

2. If you have stopped smoking a pipe completely, how old were you when you stopped? 1. Age when stopped _____
2. Still smoking _____
3. Does not apply _____

C. On the average over the entire time you smoked a pipe, how much pipe tobacco did you smoke per week? (a standard pouch of tobacco contains 1 1/2 oz.) 1. Ounces per week _____
2. Does not apply _____

D. How much pipe tobacco are you smoking now? 1. Ounces per week _____
2. Not currently smoking a pipe _____

E. Do you or did you inhale the pipe smoke?..... 1. Never smoked _____
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

41A. Have you ever smoked cigars regularly?..... 1. Yes _____ 2. No _____
(Yes means more than 1 cigar a week for a year.)

F "YES" TO 41A:
FOR PERSONS WHO HAVE EVER SMOKED CIGARS

B. 1. How old were you when you started smoking cigars regularly? 1. Age in years _____

2. If you have stopped smoking cigars completely, how old were you when you stopped? 1. Age when stopped _____
2. Still smoking _____
3. Does not apply _____

C. On the average over the entire time you smoked cigars, how many cigars did you smoke per week? 1. Cigars per week _____
2. Does not apply _____

D. How many cigars are you smoking per week now? 1. Cigars per week _____
2. Check if not now smoking cigars _____

E. Do or did you inhale the cigar smoke? 1. Never smoked _____
2. Not at all _____
3. Slightly _____
4. Moderately _____
5. Deeply _____

SIGNATURE _____

DATE _____

L - 3

PERIODIC EXAMINATION

L - 3

PERIODIC EXAMINATION

D. In the past year, what was your:

1. Job/Occupation _____

2. Position/Job Title _____

RECENT MEDICAL HISTORY

13A. Do you consider yourself to be in good health? 1. Yes _____ 2. No _____

If "NO", state reason _____

13B. In the past year, have you developed:

a. Epilepsy (or fits, seizures, convulsions)? 1. Yes _____ 2. No _____

b. Rheumatic fever? _____ 1. Yes _____ 2. No _____

c. Kidney disease? _____ 1. Yes _____ 2. No _____

d. Bladder disease? _____ 1. Yes _____ 2. No _____

e. Diabetes? _____ 1. Yes _____ 2. No _____

f. Jaundice? _____ 1. Yes _____ 2. No _____

g. Cancer? _____ 1. Yes _____ 2. No _____

CHEST COLDS AND CHEST ILLNESSES

14. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time) 1. Yes _____ 2. No _____
3. Don't get colds _____

15A. During the past year, have you had any chest illnesses that have kept you off work, indoors at home, or in bed? 1. Yes _____ 2. No _____
3. Does not apply _____

IF "YES" TO 15A:

B. Did you produce phlegm with any of these chest illnesses? 1. Yes _____ 2. No _____
3. Does not apply _____

C. In the last year, how many such illnesses with (increased) phlegm did you have which lasted a week or more? _____ Number of illnesses _____
No such illnesses _____

RESPIRATORY SYSTEM

16A. In the past year, have you had any of the following:

	<u>YES</u>	<u>NO</u>	<u>Further Comment on Positive Answers</u>
1A. Asthma? _____	___	___	_____
2A. Bronchitis? _____	___	___	_____
3A. Hay Fever? _____	___	___	_____
4A. Other Allergies? _____	___	___	_____
5A. Pneumonia? _____	___	___	_____
6A. Tuberculosis? _____	___	___	_____
7A. Chest Surgery? _____	___	___	_____
8A. Other Lung Problems? _____	___	___	_____
9A. Heart Disease? _____	___	___	_____

16B. Do you currently have:

1B. Frequent colds? _____	___	___	_____
2B. Chronic cough? _____	___	___	_____
3B. Shortness of breath when walking or climbing one flight of stairs?	___	___	_____

16C. Do you currently:

1C. Wheeze? _____	___	___	_____
2C. Cough up phlegm? _____	___	___	_____
3C. Smoke cigarettes? _____	___	___	Packs per day _____ How many years _____

SIGNATURE _____ DATE _____

APPENDIX M
PERIODIC SURVEILLANCE
&
REINSPECTION FORMATS

APPENDIX M

M - 1

**PERIODIC SURVEILLANCE
FORMAT & CHECKLIST**

M - 1

SURVEILLANCE FORMAT/CHECKLIST

**APPENDIX M-1
DOT/PF - SOUTHEAST REGION**

PERIODIC SURVEILLANCE

- Notes: 1. This section is utilized to establish procedures to follow during the required interim inspections and is extracted from Section X of the Outline furnished by the State of Alaska for compliance with the Asbestos Hazard Emergency Response Act.
2. Also included in this Appendix is a form suitable for the field inspection record. It could be used as an attachment in support of the below format. Photos should be compared from the management or subsequent surveillances.
3. When a periodic surveillance is complete, the results should be reported in the below format and submitted to the designated person. Because the management plan is a "Living Plan," after receipt by the designated person (Asbestos Coordinator), the Periodic Surveillance Reports should be filed chronologically in the Management Plan Notebook.

1. Inspection Schedule

- 1.1 Date of Last Inspection by Accredited Building Inspector
- 1.2 Date of Last Periodic Inspection
- 1.3 Date of This Periodic Inspection

2. Individual Performing Inspection

- 2.1 Name
- 2.2 Training Qualifications
- 2.3 Date(s) of Training

3. Scope of Inspection

- 3.1 Building Identification
- 3.2 Identify Areas Inspected

- 3.2.1 All areas identified in management plan as ACBM or assumed ACBM
- 3.2.2 Changes in condition of material

4. Submit Report to Designated Person

Note: This is a required action, but it is not necessary to formally address this item in the management plan submittal.

5. Responsibilities of Designated Person

Note: This is a required action, but it is not necessary to formally address this item in the management plan submittal.

APPENDIX M-1 (CONTINUED)
DOT/PF - SOUTHEAST REGION

- 5.1 Review Periodic Surveillance Report
- 5.2 Identify Potential Problem Areas
- 5.3 Initiate Correct Action Based on O & M Procedures
- 5.4 Include a Copy of Periodic Surveillance Report in the Management Plan

M - 2

REINSPECTION FORMAT

M - 2

REINSPECTION FORMAT

**APPENDIX M-2
DOT/PF - SOUTHEAST REGION**

REINSPECTIONS

Notes:

1. This section is extracted from Section IX of the outline furnished by the State of Alaska for compliance with the Asbestos Hazard Emergency Response Act.
2. At least once every three (3) years after the management plan is in effect or earlier, as deemed necessary by periodic surveillance reports, a complete reinspection of all friable known or assumed ACBM must be conducted by an accredited building inspector in accordance with the procedures established in 40 CFR Part 763 (763.85). Updated information obtained during these reinspections is to be used to prepare an updated report. A copy of the report must be submitted to the designated person identified in Section I for inclusion in the management plan within 30 days of reinspection.
3. When a reinspection is complete, the results should be reported in the below format and submitted to the designated person. Because the management plan is a "Living Plan", after approval by the designated person, the reinspection should be filed chronologically in the Management Plan Notebook.

1. Reinspection Date

2. Inspector

- 2.1 Name
- 2.2 Business Affiliation
- 2.3 Address
- 2.4 City
- 2.5 State
- 2.6 Zip
- 2.7 Telephone Number
- 2.8 Accreditation Course (Copy of certificate)
- 2.9 Date of Accreditation
- 2.10 Refresher Course/Date (Copy of certificate)
- 2.11 Signature

3. Known or Assumed ACBM

- 3.1 Visual Reinspection
- 3.2 Reinspect

4. Materials Previously Identified as Nonfriable

- 4.1 Inspect
- 4.2 Identify Homogeneous Areas of Newly Friable ACBM

APPENDIX M-2 (CONTINUED)
DOT/PF - SOUTHEAST REGION

REINSPECTIONS

- 4.2.1 Identification Scheme
- 4.2.2 Drawings/Sketches
- 4.2.3 Description of Material
- 4.2.4 Quantity
- 4.2.5 Sampling Scheme

- 4.3 Bulk Samples
 - 4.3.1 Sample Identification Data Sheets
 - 4.3.2 Sketches/Drawings of Locations
 - 4.3.3 Selection Method
 - 4.3.4 Accredited Sampler(s) if other than 2 above
 - 4.3.5 Signature

- 4.4 Laboratory
 - 4.4.1 Accreditation

- 4.5 Assessments
 - 4.5.1 Functional Space Data Sheets
 - 4.5.2 Accredited Inspector(s) if other than 2 above
 - 4.5.3 Signature

APPENDIX N
ESTIMATES

APPENDIX N

N - 1

MUSEUM PROGRAMMING COST ESTIMATES

N - 1

MUSEUM PROGRAMMING COST ESTIMATES

Appendix N-1
Programmed Cost Estimates
Alaska State Museum - Juneau
General Priorities

Asbestos Material Type	Location	Quantity	Unit Cost	Total Cost	Remarks
Acoustical Material	Lobby Area/ Ramp Ceiling	2,045 CF	\$ 30/SF	\$61,350	Removal and Replacement
Sprayed-on Fireproofing	Throughout Bldg	8,000 CF	\$150/CF	\$1,200,000	*
Vinyl Asbestos Tile - Known	Rms. 109,113,117 202,205,206,207 208,209,210,211	1,300 SF	\$ 15/SF	\$19,500	Removal Only
Vinyl Asbestos Tile - Assumed	Rms. 101,102, Recept-Gift Shop 108,112,114,115, 116,201,212	11,329 SF	\$ 12/SF	\$135,840	Removal Only
Tank Insulation	Boiler Rm 011 Fan Room 012	44 SF	Lump Sum	\$ 1,500	Unit Removal of Tank and Insulation
Pipe Insulation <=4" Dia. > 4" Dia.	Throughout Bldg.	1,125 LF 100 LF	\$ 30/EA \$ 40/EA	\$33,750 \$ 4,000	Removal and Reinsulation Removal and Reinsulation
Fitting Insulation <=4" Dia.	Throughout Bldg.	175 EA 50 EA	\$ 35/EA \$ 45/EA	\$ 6,125 \$ 2,250	Removal and Reinsulation Removal and Reinsulation

* Price includes removal of fireproofing, ceiling tile; cleaning of all electrical, mechanical and plumbing systems; replacement of fireproofing and ceiling tile.

Appendix N-1
Programmed Cost Estimates
Alaska State Museum - Juneau
Special Case Priorities

Asbestos Material Type	Location	Quantity	Unit Cost	Total Cost	Remarks
Sprayed-on Fireproofing	Elevator Shaft & Top of Elevator	60 CF	\$200/CF	\$12,000	Removal and Replacement
Sprayed-on Fireproofing	Janitor 117 Access under Ramp	285 CF	\$200 CF	\$57,000	Removal and Replacement
Sprayed-on Fireproofing	Mech./Utility Shaft 013 (runs from basement to 2nd floor)	50 CF	\$200/CF	\$10,000	Removal and Replacement
Water Damaged Ceiling Tile	Storage 09 Ground Floor	200 SF	\$ 15/SF	\$ 3,000	Removal and Replacement
Sprayed-on Fireproofing	Boiler Rm 011 Fan Room 012	290 CF	\$200/CF	\$58,000	Removal and Replacement
Damaged Fittings and Hard Pipe Insulation	Throughout Building*	15 EA* 100 LF*	\$ 35/LF \$ 30/LF	\$ 525 \$ 3,000	Removal and Replacement Removal and Replacement

N - 2

JSOB PROGRAMMING COST ESTIMATES

N - 2

JSOB PROGRAMMING COST ESTIMATES

Appendix N-2
 Programmed Cost Estimate
 Juneau State Office Building
 General Priorities

Asbestos Material Type	Location	Quantity	Unit Cost	Total Cost	Remarks
Sprayed-on Fireproofing - Parking Areas	Levels 1, 2 & 3	23,500 CF	-	-	All previous sampling shows fireproofing to be negative in parking areas only.
Sprayed-on Fireproofing - Main Mechanical	Levels 6 & 7 All Main Mech Rms and Associated Plenums	5,525 CF	\$100/CF	\$552,500	Removal and Replacement
Sprayed-on Fireproofing - Exposed in other areas	Throughout Bldg All other areas open to fire- proofing	10,125 CF	\$100/CF	\$1,012,500	Removal and Replacement
Sprayed-on Fireproofing - Above ceilings	Throughout Bldg	106,000 CF	\$150/CF	\$15,900,000	Removal and Replacement
Vinyl Asbestos Tile - Known	Rm 701 Longevity Area	200 SF	\$ 15/SF	\$ 3,000	Removal Only

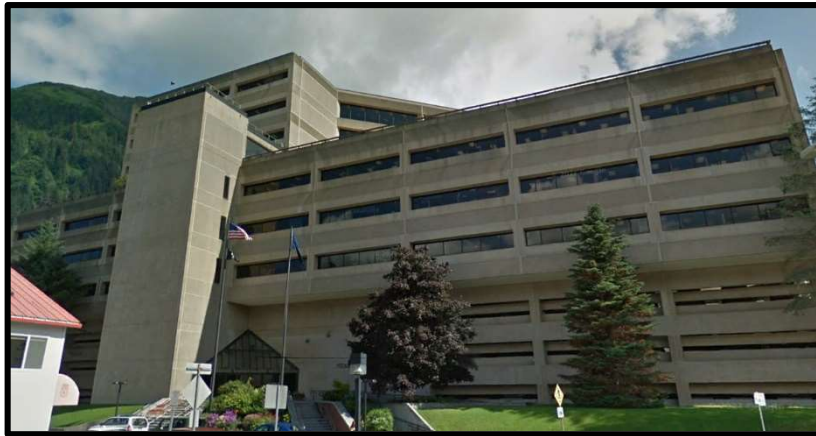
Asbestos Material Type	Location	Quantity	Unit Cost	Total Cost	Remarks
Vinyl Asbestos Tile Suspected	Throughout Building	7,300 SF	-	-	More sampling needed?
Tank Insulation	Emergency Generator Rm 733	460 SF	Lump Sum	\$ 10,000	Unit Removal
Fire Brick	Boiler Rm 735	1,040 SF	-	-	Encapsulated as is
Fitting Insulation	Throughout Bldg	1,950 EA	\$ 35/EA	\$ 68,250	Removal by Glovebag & Reinsulation

Appendix N-2
Programmed Cost Estimates
Juneau State Office Building
Special Case Priorities

Asbestos Material Type	Location	Quantity	Unit Cost	Total Cost
Sprayed-on Fireproofing	Elevator Shafts & Top of Elevators	2,250 CF	\$100/CF	\$225,000
Sprayed-on Fireproofing	Loading Area 732	310 CF	\$100/CF	\$31,000
Sprayed-on Fireproofing	Pipe Gallery 737	410 CF	\$100/CF	\$41,000
Fittings Exposed to the Public	Loading Area 732 Stairway #3 (Level 6-7)	32 EA	\$35/EA	\$1,120
Damaged Fittings	Throughout Building	100 EA	\$35/EA	\$3,500

Appendix 8

**LIMITED AIR SAMPLING REPORT
JUNEAU STATE OFFICE BUILDING
333 WILLOUGHBY AVE
JUNEAU, ALASKA
Program # 25RC013611, 25RC013612
OCTOBER 14, 2022**



Prepared for:

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TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY.....	1
2.0	BACKGROUND.....	1
3.0	SCOPE OF WORK.....	2
4.0	METHODOLOGY.....	2
4.1	Visual Dust Inspection.....	2
4.2	Environmental Air Sampling.....	2
5.0	FIELD ACTIVITIES.....	3
6.0	SAMPLE RESULTS.....	3
6.1	Visible Dust Survey.....	3
6.2	Air Sampling Results.....	4
6.3	Quality Control Summary.....	5
7.0	ANALYSIS AND DISCUSSION.....	5
8.0	CONCLUSIONS AND RECOMMENDATIONS.....	5
9.0	LIMITATIONS.....	7
10.0	SIGNATURES OF ENVIRONMENTAL PROFESSIONALS.....	7

LIST OF APPENDICES

Appendix 1: Figures

Appendix 2: Laboratory Data Summary Tables

Appendix 3: Site Photographs

Appendix 4: Laboratory Reports



ACRONYMS AND ABBREVIATIONS

ACM	asbestos containing materials
ADOT&PF	Alaska Department of Transportation and Public Facilities
AMP	asbestos management plan
f/cc	fibers per cubic centimeter
GWB	gypsum wall board
JSBO	Juneau State Office Building
L, mL	Liter, milliliter
O&M	operations and maintenance
OSHA	Occupational Health and Safety Administration's
PCM	phase-contrast microscopy
PEL	permissible exposure limit
R&M	R&M Consulting
TWA	time weighted average



1.0 EXECUTIVE SUMMARY

In April 2022, the Alaska Department of Transportation and Public Facilities (ADOT&PF) retained R&M Consulting (R&M) to conduct limited asbestos in air sampling and bulk materials sampling at the Juneau State Office Building (JSOB). As the previous Asbestos Management Plan (AMP) for the JSOB was written in 1989, the contract also included submission of an updated AMP. R&M subcontracted **NORTECH** to perform the work and associated reporting. The goal of the project was to determine if employees working within the building are exposed to airborne asbestos in concentrations exceeding the Occupational Health and Safety Administration's (OSHA) permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter of air (f/cc) over an eight-hour time weighted average (TWA), document asbestos containing materials (ACM) located within the building and their condition, and to update the AMP.

NORTECH conducted a visible dust survey in areas where air samples were collected. Dust levels were generally low (between Level 0 and Level 1) within office and public spaces. Level 2 dust was observed in some areas, such as the tops of refrigerators and cabinets within break room areas, and floor level heat registers blocked by desks or furniture.

NORTECH completed air sampling within accessible occupied spaces on Floors 5 – 11 of the JSOB between June 29, 2022, and July 15, 2022. The sixth floor was completed on September 22, 2022, as **NORTECH** did not have access to the Legislative Audit area until then. A total of 129 valid samples were collected throughout the seven sampled floors. Results ranged from below detection laboratory detection levels to 0.004 f/cc, and were below the OSHA PEL of 0.1 f/cc.

The purpose of this Limited Air Sampling Report is to document **NORTECH's** air sampling efforts, sample locations, and results. Bulk material sampling, condition assessment, and an updated AMP will be discussed in other documents.

2.0 BACKGROUND

The Juneau State Office Building was constructed in 1973 and currently consists of an 11 – story building containing both public and office spaces as well as mechanical and maintenance areas. The bottom four floors of the building consist of a dedicated parking garage.

ACM is known to occur throughout the building, most notably in the spray on fireproofing found throughout the building. While spray on fireproofing is generally located above a suspended ceiling (either ceiling tiles or gypsum wall board (GWB) in public and office areas, it is exposed in air return, mechanical, maintenance, and some storage areas throughout the building. However, as holes and unsealed protrusions were observed in ceilings throughout the building, ceilings should not be considered a barrier to the dispersion of airborne asbestos.

Known abatement of spray on fireproofing was completed in limited areas in 2010-2011 and included:

- Sixth Floor
 - Mechanical spaces
 - Telephone/electrical room
- Seventh Floor
 - Mechanical spaces
 - Compactor room
 - Envelope Room

- Telephone/electrical room
- Fire/signal room

Although spray on fireproofing was abated to the extent possible prior to spraying on non-ACM fireproofing, residual ACM fireproofing was expected to remain on the pan decking and support beams. Specifications for the abatement work indicated that after abatement, and prior to spraying on the non-ACM fireproofing, a sealant would be sprayed on the pan decking and support beams to seal any potential ACM remaining on the structures. The specifications also state wall cavities within the project area were assumed to be contaminated spaces. The contractor was responsible for sealing and enclosing the accessible wall openings to prevent the spread of potential ACM within the cavities.

Limited air sampling has been conducted throughout the building between 2007 and early 2022. The majority of the air sampling was associated with the 2010/2011 abatement work. Air sampling results ranged from below detection levels to 0.005 f/cc in 2007-2011 samples, and were below the OSHA PEL. Air samples collected in early 2022 and associated with installation of a totem pole in the 8th floor atrium, ranged from below laboratory detection to 0.0271 f/cc and were also below the OSHA PEL.

3.0 SCOPE OF WORK

The scope of work discussed in this report includes a visual dust inspection within occupied areas where air sampling occurred, and semi-aggressive air sampling within occupied spaces. Air sampling occurred during nights or weekends when workers were not present.

4.0 METHODOLOGY

4.1 Visual Dust Inspection

A visual dust inspection was conducted on floors 5 – 11 within accessible occupied spaces. General dust levels were noted, with areas of greater dust specifically designated. Dust levels are subjective, and were rated using the following scale:

Level 0 – Clean surface with no visual accumulation of dust

Level 1 – Light layer of dust with substrate visible

Level 2 – Layer of dust partially obscures substrate in various areas

Level 3 – Layer of dust completely obscures substrate

Level 4 – Layers of dust completely obscures substrate with the addition of lumps of debris

4.2 Environmental Air Sampling

NORTECH conducted an initial walkthrough of each floor to determine areas where low-flow air sampling pumps would be deployed. As sampling was conducted during nights or weekends when the HVAC was not at full capacity, box or oscillating fans were used to circulate air in the general areas where air pumps were deployed. Two systems control the air supply to the building, one servicing the northern half of the building, one servicing the southern half. Pump locations were chosen based on the following criteria:

- High traffic areas
- Higher than average dust concentration areas
 - If present
- Availability of nearby outlets to plug in fans
- Equal numbers of samples in northern and southern halves of each floor

Fans were placed so that air circulation would occur in the areas near the pumps, mimicking occupied conditions. Figures 2-8 in Appendix 1 show air sample locations.

Prior to deployment, each pump was calibrated to a flow rate of 3.5 – 4.0 L/minute and recorded on the field forms. Pump calibration was checked again at the time of collection and recorded on the field sheet so that an average flow rate for each pump could be calculated. Start and stop times were also recorded on field forms. Average flow rate and time deployed (in minutes) were used to calculate total volume of air pumped through each cassette. Air samples were deployed for eight hours and were submitted to EMSL for analysis of asbestos via phase-contrast microscopy (PCM) using NIOSH method 7400.

5.0 FIELD ACTIVITIES

NORTECH personnel Jennifer Stoutamore and Sean Heaney conducted air sampling activities and a visual dust assessment between June 29 and July 18, 2022. Due to scheduling difficulties, air sampling was not completed in the Legislative Audit offices on the sixth floor until September 22, 2022.

Air sampling initially occurred using 14 rented low flow pumps and eight **NORTECH** owned low flow pumps. However, during sampling of the ninth floor 13 of the 14 rental pumps failed and were flashing “fault” when personnel collected the pumps at the end of the eight-hour deployment. **NORTECH** contacted the vendor and was informed that replacement pumps were not available. Although **NORTECH** was able to secure an additional 14 pumps from another vendor, those pumps also failed on the first night they were deployed.

Due to the failure of pumps from two separate vendors, air sampling on floors 5, 6, 7, and 9 were conducted using the eight **NORTECH** pumps. As only eight reliable pumps were available, **NORTECH** made the decision to decrease the number of samples on floors 5-7 from 20 to 16 in order to remain as close as possible to the original sampling timeline.

In addition to office and public space samples, **NORTECH** also collected samples from the 8th floor atrium security desk, and the 9th and 10th floor walkways by the elevators. These samples were added as the elevators are considered high traffic areas, though do not necessarily fall under the definition of “occupied space”.

6.0 SAMPLE RESULTS

6.1 Visible Dust Survey

Visible dust within office and public occupied spaces was noted during a walkthrough of each floor. While dust surveys are subjective, the same personnel conducted the survey on each floor. As the same personnel conducted the survey on all floors, while subjective, the survey is considered consistent throughout the project area.

Level 0 – 1 dust was observed throughout most of the occupied areas of floors 5 – 11 of the building. Level 1 dust was most likely to be noted on horizontal surfaces not associated with desks or high use areas. Examples of areas where Level 1 dust was most commonly observed were the ledges of interior windows on floors 9 – 11 which overlooked the central atrium (Photo 1, Appendix 2) and floor level heat registers.



Level 2 dust was generally observed in low visibility areas, such as the tops of cabinets or refrigerators in the break rooms, and hard to see or reach floor level heat registers behind desks. Level 2 dust was more likely to be observed in the lower levels (floors 5 – 7) than upper levels (floors 8 – 11). Occupied spaces on floors 5 – 7 were also more likely to contain older and more worn looking furniture, cubicle dividers, and flooring (both vinyl and carpet) than the upper floors.

The highest occurrences of Level 2 dust were observed in the Legislative Audit Offices on the sixth floor and the IT Control Room on the fifth floor. These spaces correspond to areas within the building that are not routinely cleaned due to access restrictions.

In general, the low levels of observed dust indicate good housekeeping practices throughout the building. Although Level 2 dust was more likely to be observed in occupied spaces on lower floors, this may be due to desks on these floors being more likely to obscure access to the floor level heat registers than desks in upper-level floors.

Dust levels between the dropped ceiling and pan decking were also noted within occupied spaces, mechanical and fan rooms, and plenum spaces. However, as that portion of the dust survey includes all accessible areas of the building, dust survey results for areas above dropped ceilings will be discussed in the bulk sampling report.

6.2 Air Sampling Results

NORTECH collected a total of 129 air samples from the 5th – 11th floors within occupied spaces of the building. Samples were collected using PCM cartridges and analyzed for asbestos via NIOSH Method 7400. Table 1 summarizes sample numbers, detections, and range of results for each floor. Laboratory data, by floor, is summarized in Appendix 2.

Table 1
Summary of Air Sample Laboratory Results

Floor	# Valid Samples	# Detections	Result Range (F/cc)
5	16	0	ND
6	16	1	ND-0.0016
7	16	0	ND
8	21	2	ND-0.002
9	21	0	ND
10	19	16	ND - 0.004
11	20	6	ND - 0.002

6.3 Quality Control Summary

No data quality issues were reported by the laboratory. **NORTECH** reviewed the laboratory reports and did not find potential data quality issues. Laboratory reporting limits were below the OSHA PEL for airborne asbestos of 0.1 f/cc, and reported results are considered valid and usable.

NORTECH does not consider decreasing sampling from 20 samples per floor (collected on floors 8 – 11) to 16 samples (collected on floors 5 – 7) to have affected data quality or usability. Floors 5 – 7 generally had less area considered occupied space as more of these floors are dedicated to mechanical and maintenance areas. Therefore, decreasing the number of samples did not translate into fewer samples per square footage of occupied space.

As only eight pumps were available to sample the lower floors, sampling took place over multiple nights. Sampling over time gives a better indication of long-term conditions as opposed to the “snap shot” of conditions captured during a single sampling event. As samples on the lower floors were collected over a few days, using the same methods and equipment as samples collected on upper floors, data quality is not affected and data between floors can be compared.

7.0 ANALYSIS AND DISCUSSION

Air samples were collected from the JSOB interior space that were representative of the typical breathing air in the office building. Floors five to eleven were sampled, mostly when the building was unoccupied after business hours. The exception was half of the eighth floor which was not occupied during sampling activities.

Air sample results were analyzed by phase-contrast microscopy (PCM) utilizing method NIOSH 7400. Air sample results analyzed by this method report the number of total detectable fibers present in the air including asbestos fibers and non-asbestos fibers. Sample results were compared to the OSHA PEL of 0.1 f/cc. The OSHA PEL is used to determine the limit of acceptable concentrations for employee exposure to asbestos over an 8-hour time weighted average and is generally considered protective of life and health.

Air sample results ranged from non-detect to 0.004 f/cc. Approximately 19% (25 samples) of the 129 submitted samples had detections above the laboratory detection limit but below the OSHA PEL. The maximum detected value was 0.004 f/cc which represents 4% of the OSHA PEL of 0.1 f/cc. Dust levels were reasonable with good housekeeping practices observed in the occupied spaces.

Based on the low levels of fibers detected in the air samples, **NORTECH** has found no evidence of widespread or localized asbestos contamination in the breathing air that is suspected to be dangerous to life or health of building occupants. **NORTECH** is currently in the process of assessing the concentration of asbestos in suspect building materials and the condition of those building materials and will present those findings in a forthcoming report.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The Juneau State Office Building has had several asbestos air monitoring and abatement projects in the years from 2007-present. The sampling effort described in this report is part of an effort to continue to monitor the levels of asbestos in the air for the purposes of protecting the



life and health of the building occupants. Additional work to assess the building materials is planned for later this year. The purpose of this effort will be to document the location and concentration of asbestos containing materials to assist with updating the building Asbestos Management Plan.

Based on the field observations and laboratory results from the 2022 air sampling results **NORTECH** has developed the following conclusions and recommendations regarding asbestos in the JSOB:

Area Air Monitoring Results

- A total of 129 Air Samples (Area Air Monitoring Samples) were collected from floors 5-11 of the JSOB
 - The OSHA PEL level is 0.1 f/cc and is generally considered to be the limit for asbestos employee exposure that is protective of life and health.
 - A total of 104 of the samples were found to be non-detect for the presence of fibers.
 - A total of 25 of the samples had detections above the reporting level but below the OSHA PEL of 0.1.
 - The highest detection in the area air monitoring samples was 0.004 f/cc which represents 4% of the OSHA PEL.
 - No evidence of widespread or localized asbestos contamination was detected in the breathing air that is suspected to be dangerous to life or health to building occupants.

Recommendations

- Employees and other building occupants should continue to follow the current recommendations in the building Asbestos Management Plan
 - Suspect and known asbestos containing materials are still present in the building and should be kept intact and in good condition. Damage to suspect ACM building materials should be repaired as quickly as possible by individuals trained for operations and maintenance (O&M) asbestos operations.
- **NORTECH** will finish the assessment of the suspect building materials. The final report is anticipated being available before the end of 2022.
- **NORTECH** will update the building's 1989 AMP upon completion of a condition survey of known ACM within the building and all air and bulk sample results are available



9.0 LIMITATIONS

NORTECH conducted the activities described in this report according to industry standards and performed with the standard of care and competence of the environmental engineering profession. Sample results presented provide information about the air quality conditions during the time period that sampling was conducted, and in the locations where sampling took place. Therefore, while these limitations are considered reasonable and adequate for the purposes of this report, actual site conditions may differ and change over time.

10.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Reviewed by:

A handwritten signature in black ink that reads "Jennifer Stoutamore".

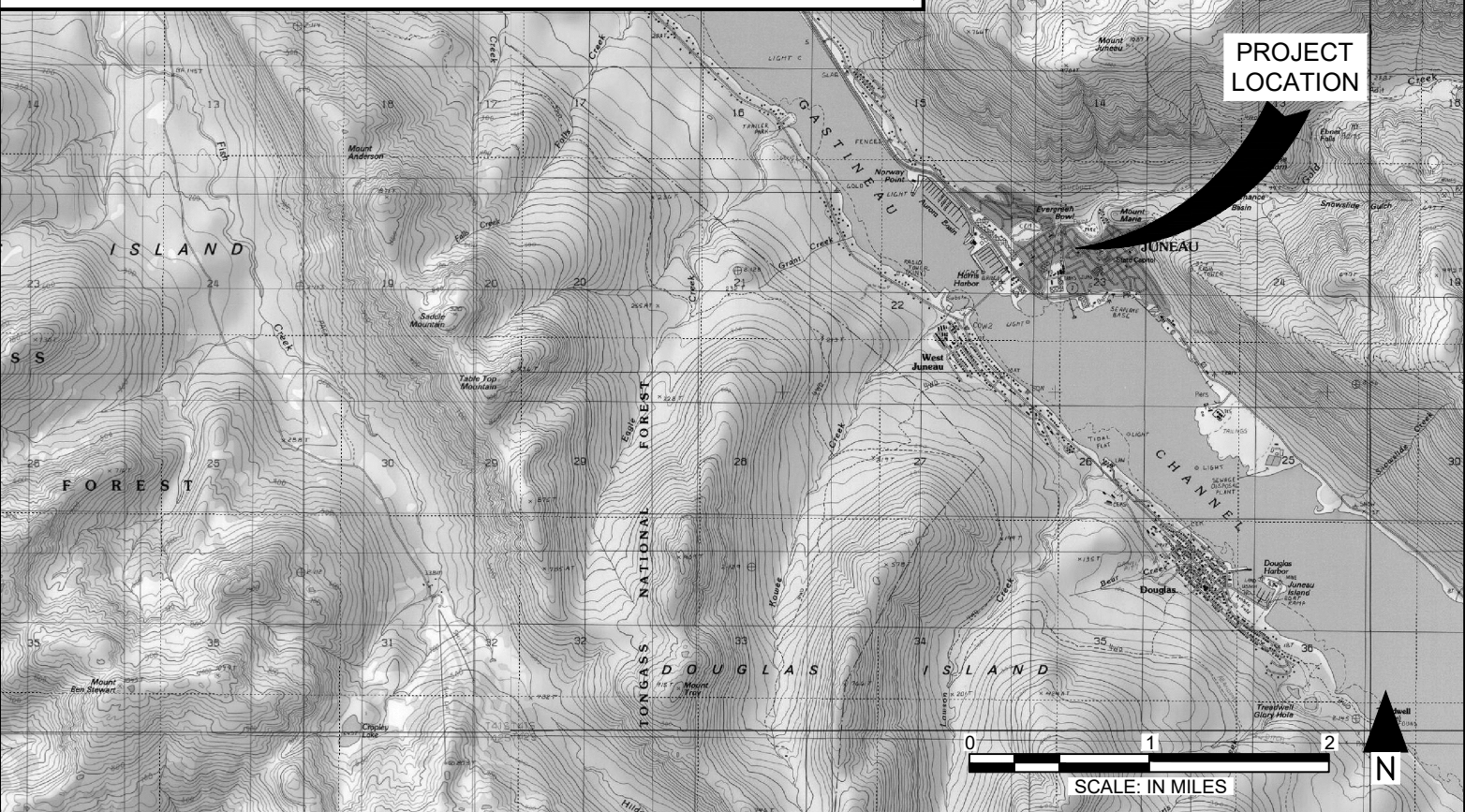
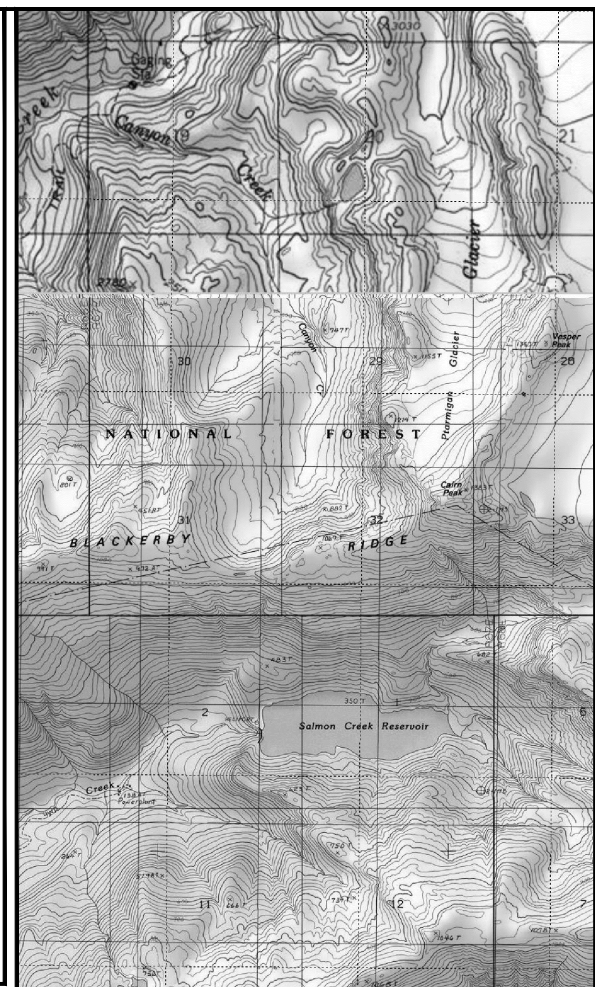
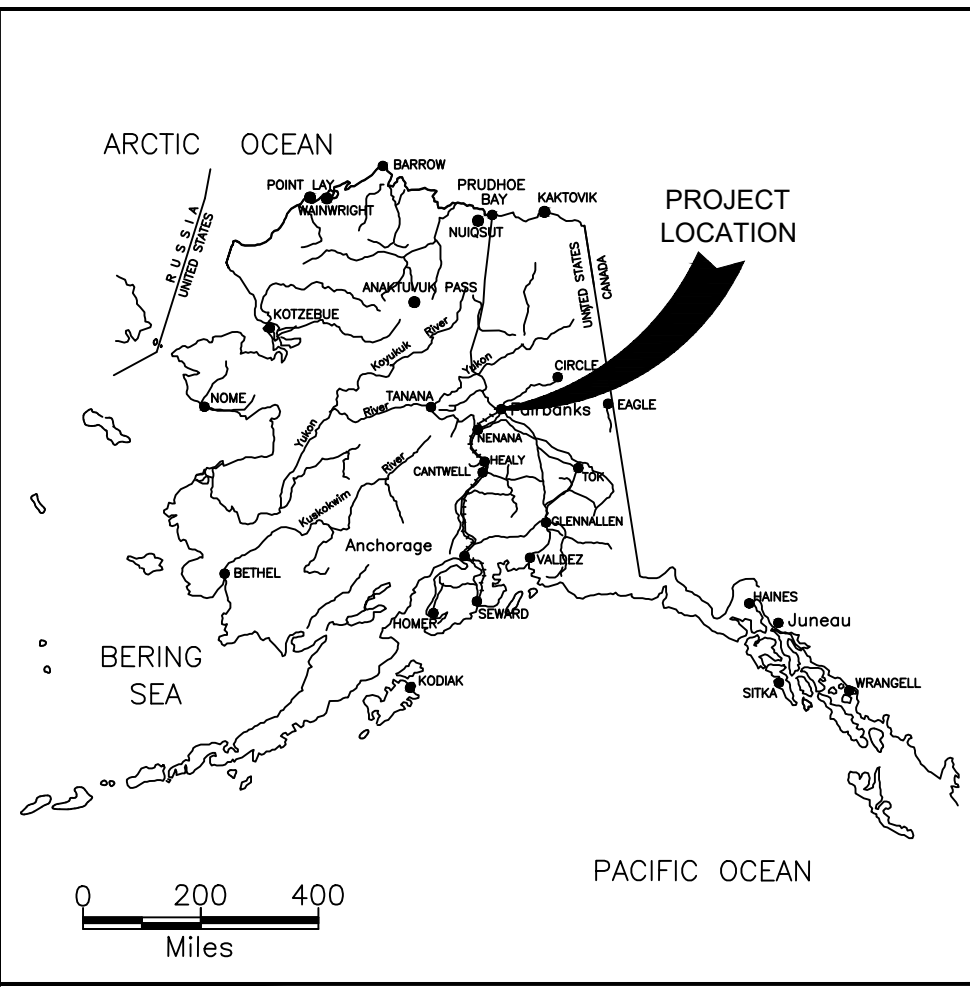
Jennifer Stoutamore, QEP
Staff Professional

A handwritten signature in black ink that reads "Jason Ginter".

Jason Ginter, PMP
Principal, Juneau Technical Manager

Appendix 1

Figures



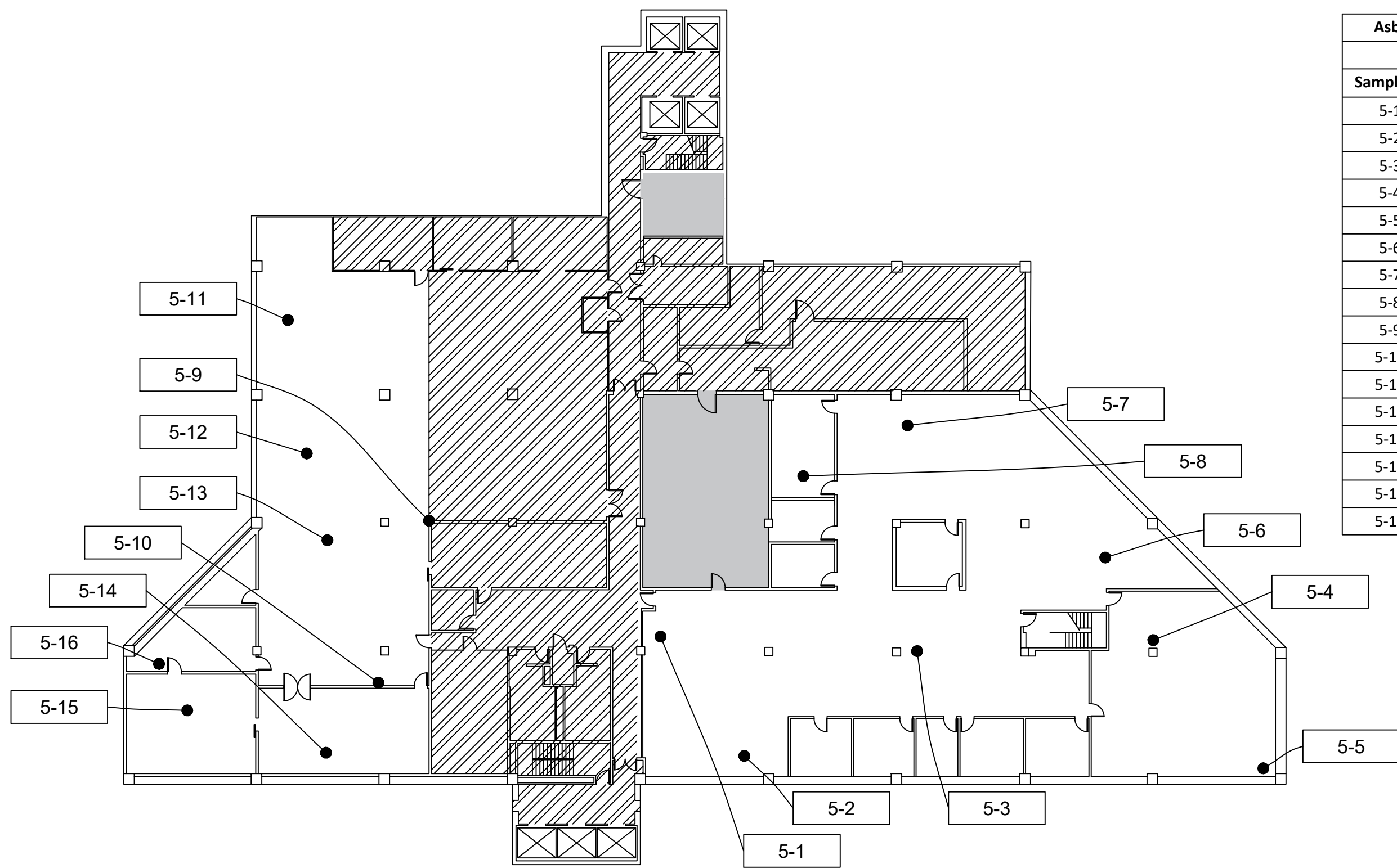
ENVIRONMENT, ENERGY, HEALTH & SAFETY CONSULTANTS
 2400 College Road, Fairbanks, AK. 99709, 907-452-5688
 3105 Lakeshore Dr., Anchorage, AK. 99517 907-222-2445
 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813

Location & Vicinity Maps
 ADOT State Office Building Asbestos Air Monitoring
 Juneau, Alaska

DATE: 10/10/2022	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(air)b

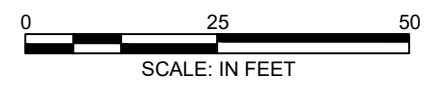
FIGURE
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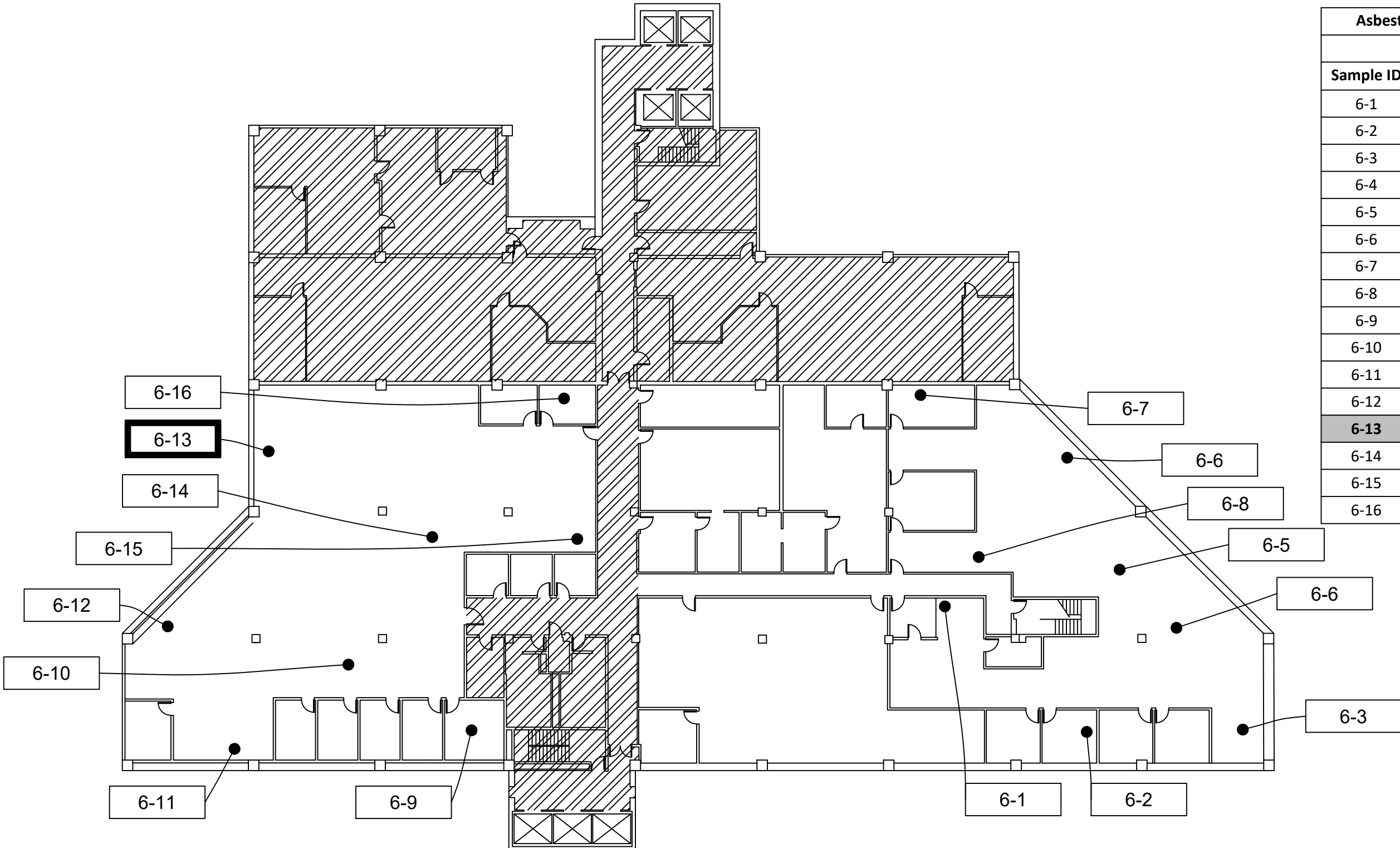
Asbestos Air Monitoring Results - 5th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
5-1	<0.0015
5-2	<0.0015
5-3	<0.0015
5-4	<0.0015
5-5	<0.0015
5-6	<0.0015
5-7	<0.0015
5-8	<0.0015
5-9	<0.0015
5-10	<0.0016
5-11	<0.0016
5-12	<0.0014
5-13	<0.0016
5-14	<0.0016
5-15	<0.0016
5-16	<0.0017



LEGEND

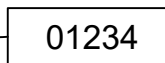
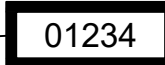
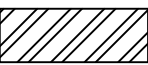

- 01234 ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
 - 01234 ASBESTOS AIR SAMPLE LOCATION (DETECTION)
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS
- AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 - NON-OCCUPIED SPACE - NO SAMPLES COLLECTED

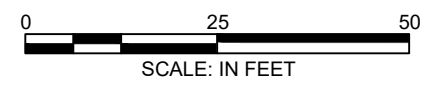


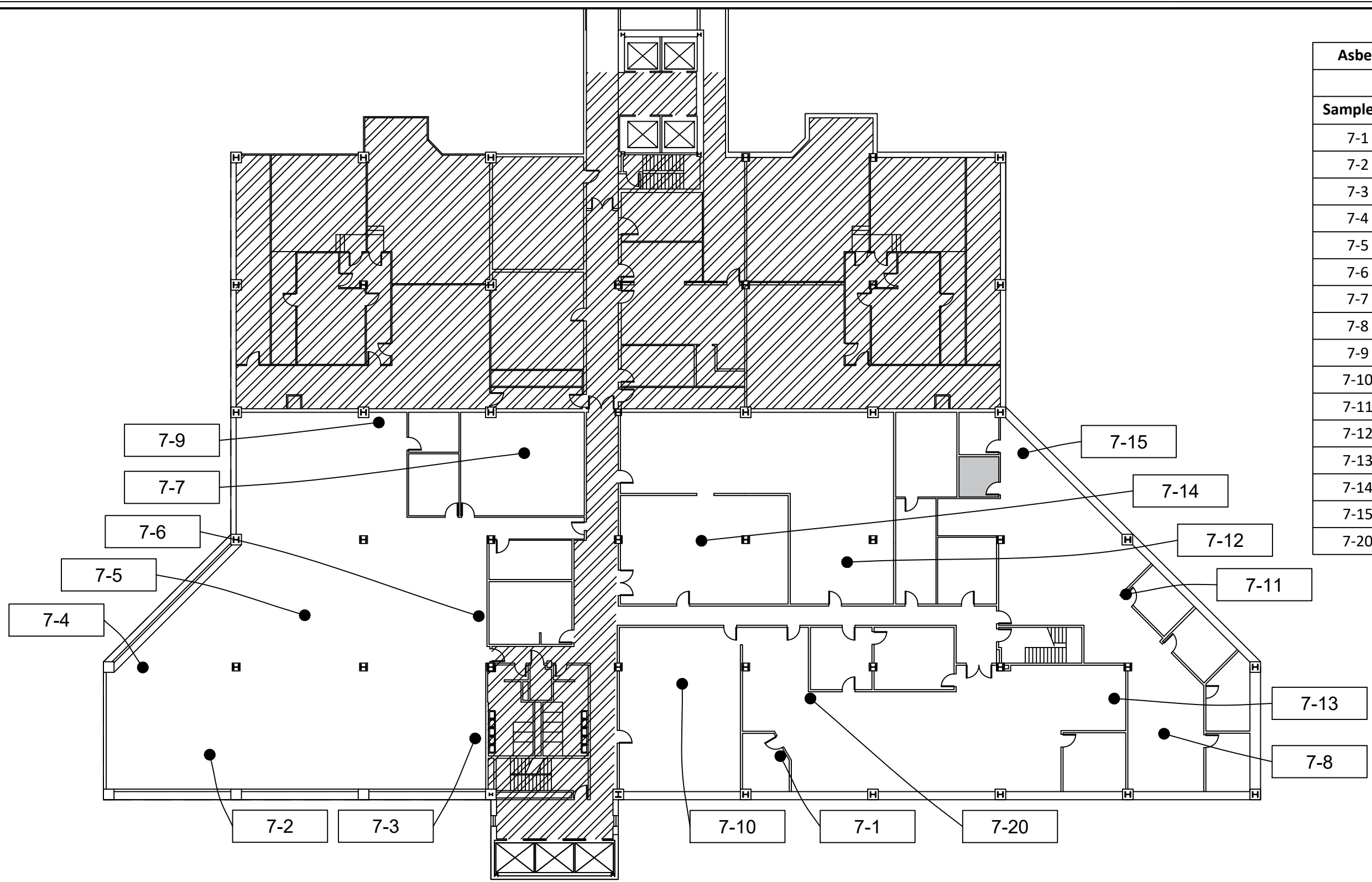


Asbestos Air Monitoring Results - 6th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
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6-2	<0.0019
6-3	<0.0019
6-4	<0.0019
6-5	<0.0019
6-6	<0.0019
6-7	<0.0019
6-8	<0.0019
6-9	<0.0015
6-10	<0.0015
6-11	<0.0015
6-12	<0.0015
6-13	0.0016
6-14	<0.0016
6-15	<0.0016
6-16	<0.0016

LEGEND

-  ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
 -  ASBESTOS AIR SAMPLE LOCATION (DETECTION)
 -  NON-OCCUPIED SPACE - NO SAMPLES COLLECTED
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

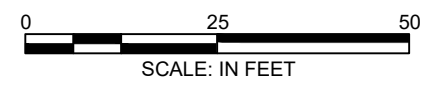




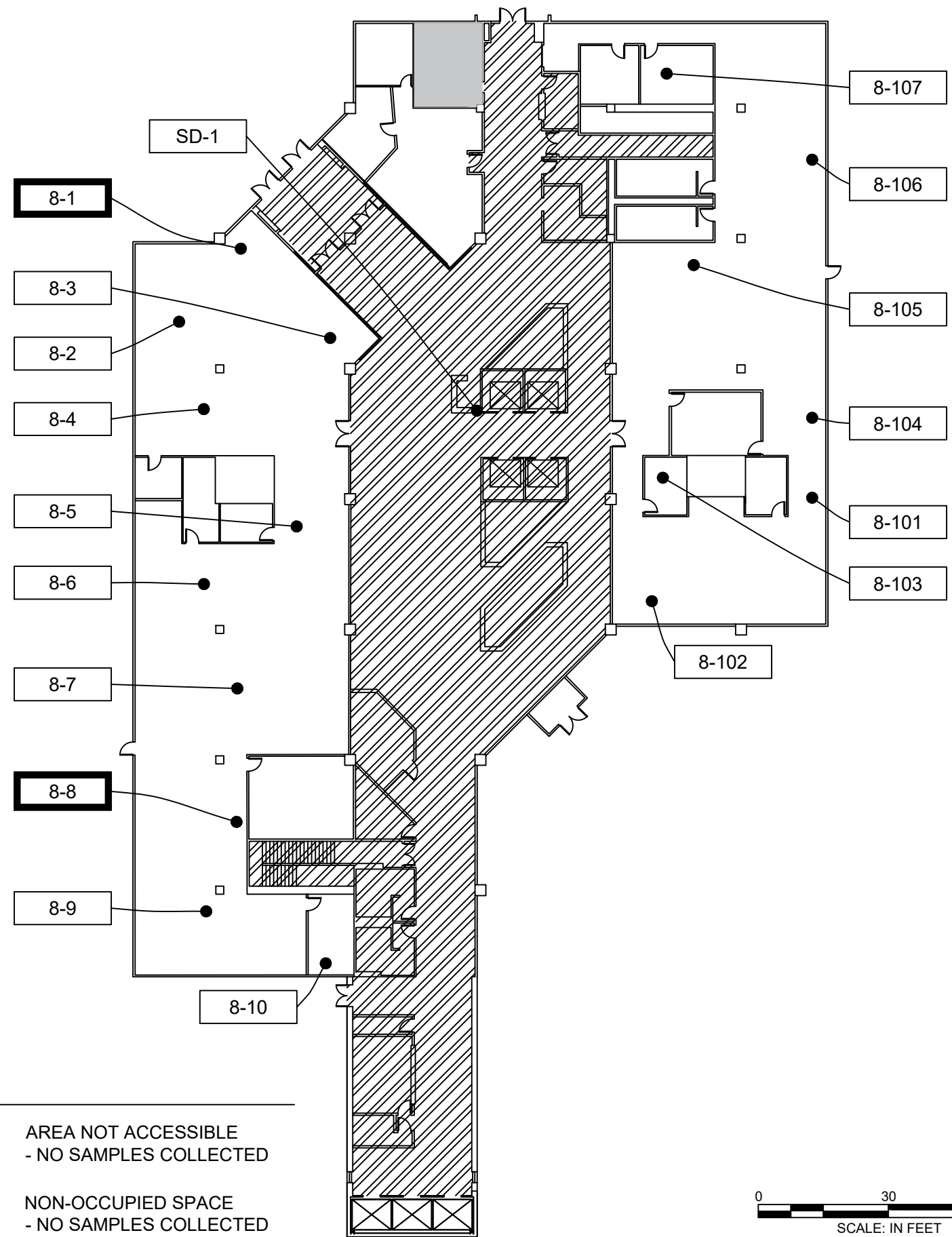
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Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
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7-9	<0.0015
7-10	<0.0015
7-11	<0.0015
7-12	<0.0014
7-13	<0.0015
7-14	<0.0015
7-15	<0.0015
7-20	<0.0016

LEGEND

- 01234 ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
- 01234 ASBESTOS AIR SAMPLE LOCATION (DETECTION)
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS
- AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
- NON-OCCUPIED SPACE - NO SAMPLES COLLECTED



Asbestos Air Monitoring Results - 8th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
8-1	0.002
8-2	<0.002
8-3	<0.002
8-4	<0.002
8-5	<0.002
8-6	0.002
8-7	<0.002
8-8	<0.002
8-9	<0.002
8-10	<0.002
8-101	<0.0015
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8-103	<0.0015
8-104	<0.0015
8-105	<0.0015
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8-107	<0.0015
SD-1	<0.0015



LEGEND

01234

ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)

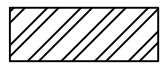
SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



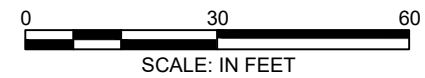
AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED

01234

ASBESTOS AIR SAMPLE LOCATION (DETECTION)



NON-OCCUPIED SPACE - NO SAMPLES COLLECTED



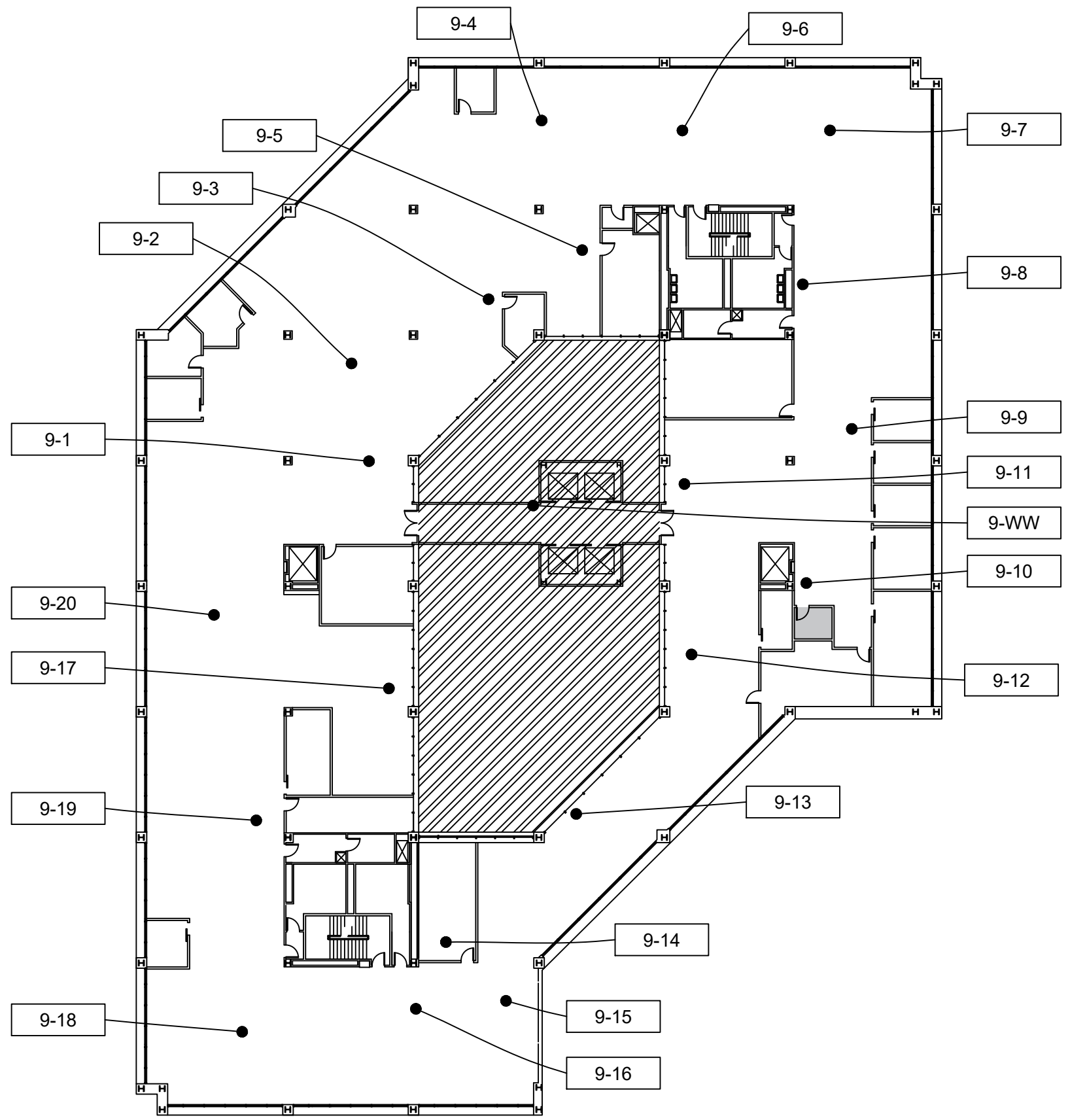
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 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813

8th Floor – Lobby, Atrium, & Offices
 ADOT State Office Building Asbestos Air Monitoring
 Juneau, Alaska

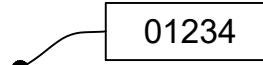

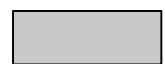
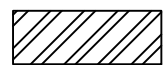
DATE: 10/10/2022	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(air)b

FIGURE 5

Asbestos Air Monitoring Results - 9th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
9-1	<0.0015
9-2	<0.0016
9-3	<0.0015
9-4	<0.0015
9-5	<0.0016
9-6	<0.0016
9-7	<0.0016
9-8	<0.0015
9-9	<0.0015
9-10	<0.0016
9-11	<0.0015
9-12	<0.0015
9-13	<0.0015
9-14	<0.0015
9-15	<0.0015
9-16	<0.0015
9-17	<0.0016
9-18	<0.0015
9-19	<0.0015
9-20	<0.0015
9-WW	<0.0015



LEGEND

-  ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
 -  ASBESTOS AIR SAMPLE LOCATION (DETECTION)
 -  AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 -  NON-OCCUPIED SPACE - NO SAMPLES COLLECTED
- } SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



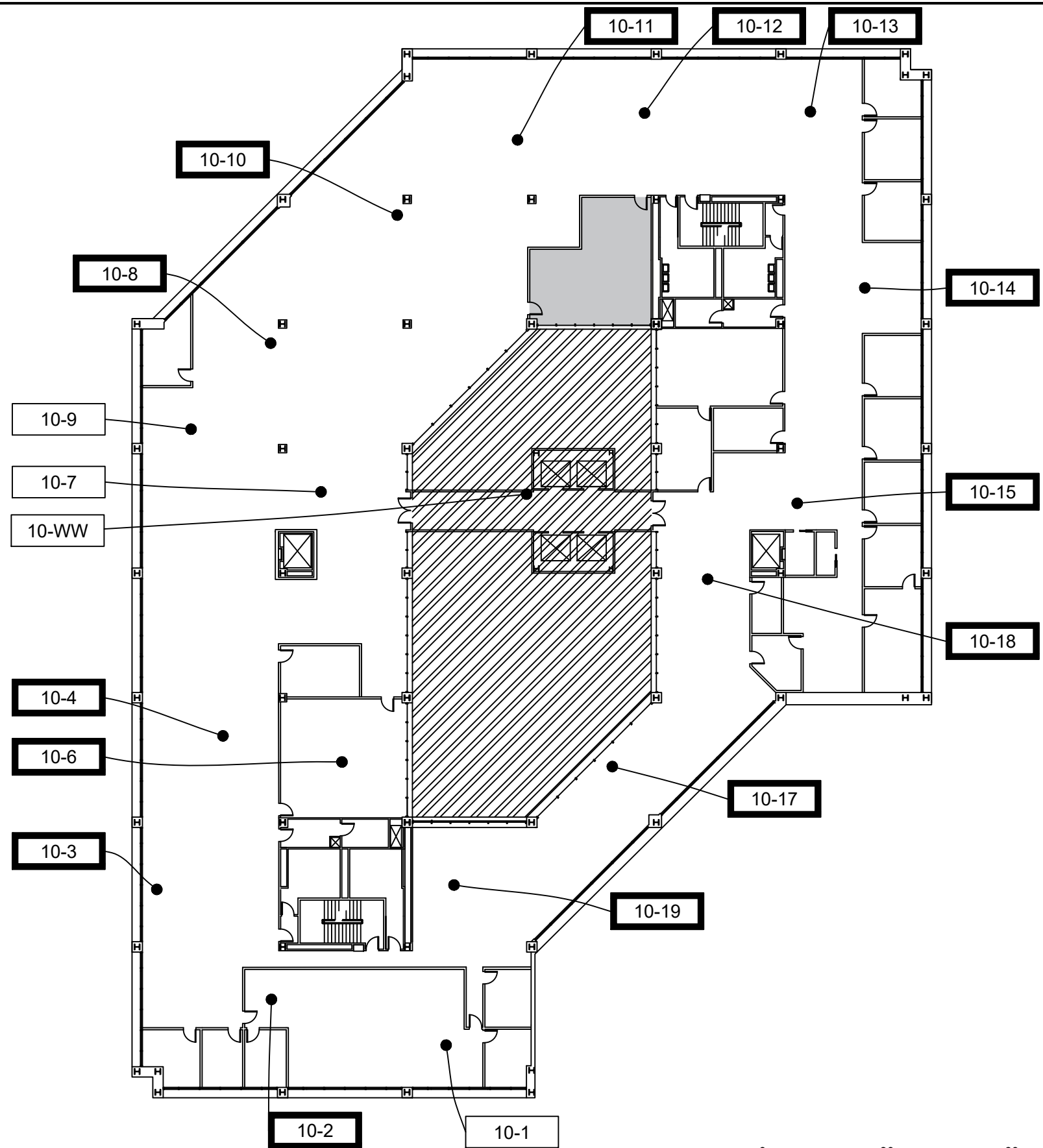
ENVIRONMENT, ENERGY, HEALTH & SAFETY CONSULTANTS
 2400 College Road, Fairbanks, AK. 99709, 907-452-5688
 3105 Lakeshore Dr., Anchorage, AK. 99517 907-222-2445
 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813

9th Floor – Offices
 ADOT State Office Building Asbestos Air Monitoring
 Juneau, Alaska

DATE: 10/10/2022	SCALE: As Shown
PROJ MGR: JLS	PROJECT: 22-2502
DRAWN: SPH	DWG. NO.: 222502(air)b

FIGURE
6

Asbestos Air Monitoring Results - 10th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
10-1	<0.001
10-2	0.002
10-3	0.002
10-4	0.002
10-5	0.002
10-6	0.001
10-7	<0.001
10-8	0.002
10-9	<0.002
10-10	0.004
10-11	0.001
10-12	0.002
10-13	0.002
10-14	0.002
10-15	0.003
10-17	0.002
10-18	0.002
10-19	0.002
10-20	0.003
10-WW	<0.0015



LEGEND

- ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
 - ASBESTOS AIR SAMPLE LOCATION (DETECTION)
 - AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 - NON-OCCUPIED SPACE - NO SAMPLES COLLECTED
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS



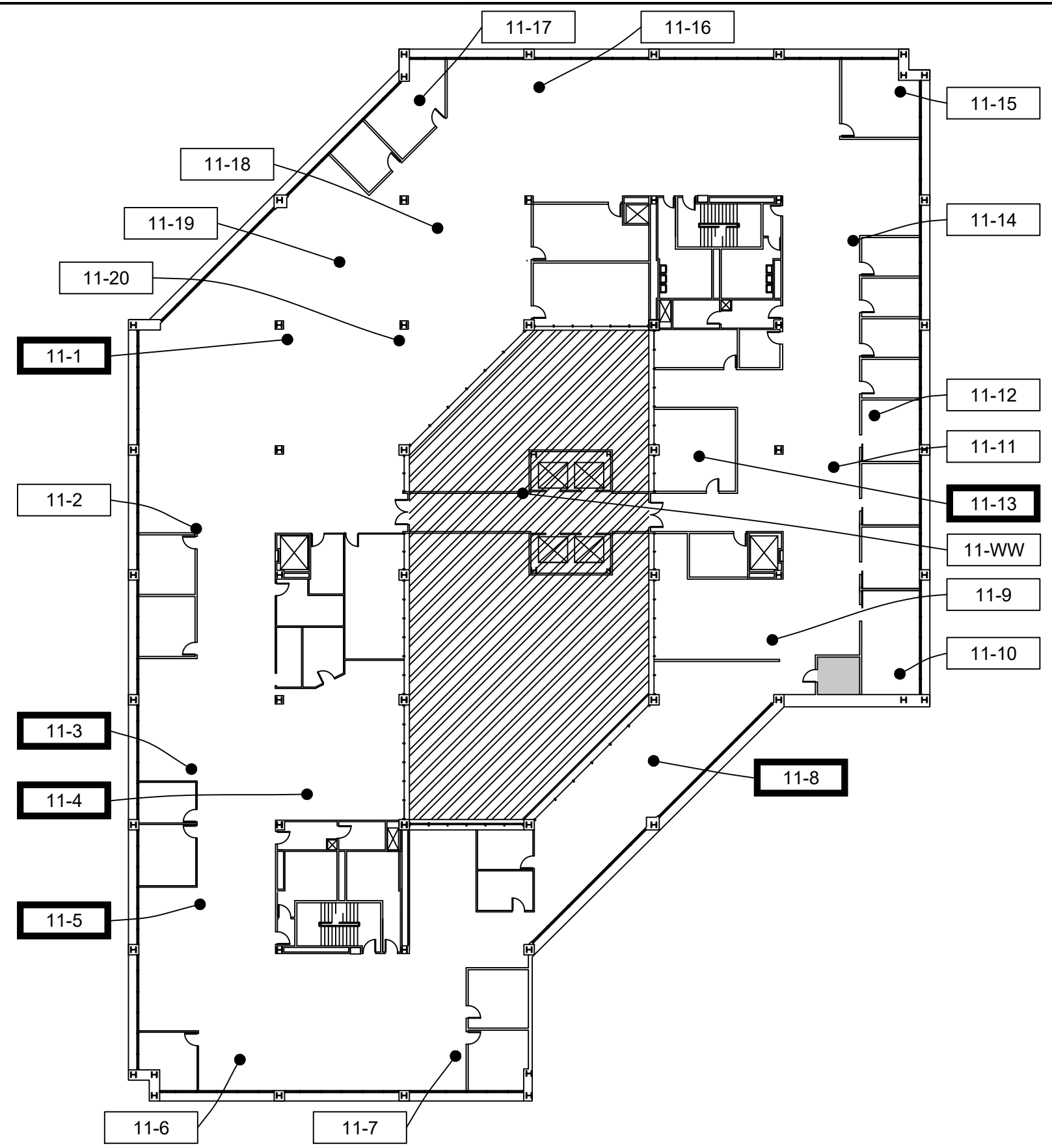
ENVIRONMENT, ENERGY, HEALTH & SAFETY CONSULTANTS
 2400 College Road, Fairbanks, AK. 99709, 907-452-5688
 3105 Lakeshore Dr., Anchorage, AK. 99517 907-222-2445
 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813

10th Floor – Offices
 ADOT State Office Building Asbestos Air Monitoring
 Juneau, Alaska

DATE: 10/10/2022 SCALE: As Shown
 PROJ MGR: JLS PROJECT: 22-2502
 DRAWN: SPH DWG. NO.: 222502(air)b

FIGURE
7

Asbestos Air Monitoring Results - 11th Floor	
Method: NIOSH 7400	
Sample ID	Results (fibers/cubic centimeter)
11-1	0.002
11-2	<0.001
11-3	0.002
11-4	0.002
11-5	0.001
11-6	<0.001
11-7	<0.001
11-8	0.001
11-9	<0.001
11-10	<0.001
11-11	<0.001
11-12	<0.001
11-13	0.002
11-14	<0.001
11-15	<0.001
11-16	<0.001
11-17	<0.001
11-18	<0.001
11-19	<0.001
11-20	<0.001
11-WW	<0.0016



LEGEND

- ASBESTOS AIR SAMPLE LOCATION (NO DETECTION)
 - ASBESTOS AIR SAMPLE LOCATION (DETECTION)
 - AREA NOT ACCESSIBLE - NO SAMPLES COLLECTED
 - NON-OCCUPIED SPACE - NO SAMPLES COLLECTED
- SEE TABULATED RESULTS FOR SAMPLE NUMBER & RESULTS

Appendix 2

Tables

Sample	Time			Flow Rate			Total Volume	Results
	Start	Stop	Minutes	Start	Stop	Average	Liters	F/cc
5-1	17.08	1.24	496	3.9	3.3	3.6	1785.6	<0.0015
5-2	17.10	1.26	496	4.0	3.3	3.7	1810.4	<0.0015
5-3	17.12	1.27	495	4.0	3.1	3.6	1757.25	<0.0015
5-4	17.15	1.29	494	4.0	3.2	3.6	1778.4	<0.0015
5-5	17.16	1.29	493	4.0	3.2	3.6	1774.8	<0.0015
5-6	17.18	1.30	492	4.0	3.2	3.6	1771.2	<0.0015
5-7	17.20	1.31	491	4.0	3.2	3.6	1767.6	<0.0015
5-8	17.21	1.32	491	4.0	3.4	3.7	1816.7	<0.0015
5-9	12.24	20.22	478	4.0	3.2	3.6	1720.8	<0.0015
5-10	12.25	20.23	487	4.0	3.2	3.6	1753.2	<0.0016
5-11	12.27	20.24	477	4.0	3.1	3.6	1693.35	<0.0016
5-12	12.29	20.24	475	3.9	3.2	3.6	1686.25	<0.0014
5-13	12.31	20.25	474	4.0	3.2	3.6	1706.4	<0.0016
5-14	12.34	20.26	472	4.0	3.2	3.6	1699.2	<0.0016
5-15	12.35	20.26	471	4.0	3.1	3.6	1672.05	<0.0016
5-16	12.45	20.27	462	3.9	3.0	3.5	1593.9	<0.0017
6-9	7.49	16.18	509	4.0	3.3	3.7	1857.85	<0.0015
6-10	7.51	16.17	506	4.0	3.2	3.2	1619.2	<0.0015
6-11	7.53	16.10	503	4.0	3.2	3.6	1810.8	<0.0015
6-12	7.54	16.14	500	4.0	3.1	3.6	1775	<0.0015
6-13	7.57	16.13	496	3.9	3.6	3.7	1847.6	0.0016
6-14	7.58	16.12	494	3.9	3.0	3.5	1704.3	<0.0016
6-15	8.01	16.09	488	4.0	3.1	3.6	1732.4	<0.0016
6-16	8.03	16.07	484	3.9	3.2	3.6	1718.2	<0.0016
7-1	21.05	4.52	467	3.9	3.3	3.6	1681.2	<0.0016
7-2	21.01	4.42	461	3.8	3.3	3.55	1636.55	<0.0016
7-3	21.00	4.43	483	3.8	3.2	3.5	1690.5	<0.0016
7-4	20.58	4.40	462	4.0	3.3	3.65	1686.3	<0.0016
7-5	20.56	4.40	464	3.8	3.2	3.5	1624	<0.0017
7-6	20.54	4.39	465	3.9	3.2	3.55	1650.75	<0.0016
7-7	18.42	3.08	506	4.0	3.4	3.7	1872.2	<0.0014
7-8	20.29	4.47	498	3.8	3.2	3.5	1743	<0.0015
7-9	18.41	3.08	507	4.0	3.2	3.6	1825.2	<0.0015
7-10	18.51	3.13	502	3.9	3.3	3.6	1807.2	<0.0015
7-11	18.55	3.12	497	4.0	3.3	3.65	1814.05	<0.0015
7-12	18.39	3.04	505	4.0	3.4	3.7	1868.5	<0.0014
7-13	18.52	3.15	503	3.9	3.3	3.6	1810.8	<0.0015
7-14	18.40	3.04	504	3.9	3.2	3.55	1789.2	<0.0015
7-15	18.55	3.12	497	4.0	3.2	3.6	1789.2	<0.0015
7-16	Pump Fault, No sample					-	-	-
7-17	Pump Fault, No sample					-	-	-
7-18	Pump Fault, No sample					-	-	-
7-19	Pump Fault, No sample					-	-	-
7-20	21.06	4.53	467	4	3.3	3.65	1704.55	<0.0016

Sample	Time			Flow Rate			Total Volume	Results
	Start	Stop	Minutes	Start	Stop	Average	Liters	F/cc
8-1	14.18	21.16	418	4.0	4.0	4.0	1672	0.002
8-2	14.18	21.17	419	4.0	4.0	4.0	1676	<0.002
8-3	14.19	21.18	419	4.0	4.0	4.0	1676	<0.002
8-4	14.19	21.2	421	4.0	4.0	4.0	1684	<0.002
8-5	14.2	21.26	420	4.0	4.0	4.0	1680	<0.002
8-6	14.2	21.22	422	4.0	4.0	4.0	1688	<0.002
8-7	12.21	21.22	421	4.0	4.0	4.0	1684	<0.002
8-8	14.21	21.23	422	4.0	4.0	4.0	1688	0.002
8-9	14.22	21.24	422	4.0	4.0	4.0	1688	<0.002
8-10	14.23	21.25	422	4.0	4.0	4.0	1688	<0.002
8-101	23.45	8.18	513	3.8	3.1	3.5	1769.85	<0.0015
8-102	23.47	8.18	511	3.9	3.3	3.6	1839.6	<0.0015
8-103	0.00	8.18	498	3.9	3.2	3.6	1767.9	<0.0015
8-104	0.02	8.19	497	3.9	3.2	3.6	1764.35	<0.0015
8-105	0.04	8.19	495	4.0	3.3	3.7	1806.75	<0.0015
8-106	0.07	8.2	493	4.0	3.2	3.6	1774.8	<0.0015
8-107	0.08	8.2	492	3.9	3.1	3.5	1722	<0.0015
SD-1	0.53	8.15	502	3.8	3.4	3.6	1807.2	<0.0015
9-1	20.15	4.13	478	4.0	3.3	3.7	1744.7	<0.0015
9-2	20.15	4.13	478	4.0	3.2	3.6	1720.8	<0.0016
9-3	20.15	4.13	478	3.9	3.4	3.7	1744.7	<00.015
9-4	20.14	4.14	480	4.0	3.3	3.7	1752	<00.015
9-5	20.14	4.14	481	3.9	3.2	3.6	1707.55	<0.0016
9-6	20.14	4.15	481	3.9	3.2	3.6	1707.55	<0.0016
9-7	20.13	4.15	482	4.0	3.2	3.6	1735.2	<0.0016
9-8	20.13	4.16	483	4.0	3.4	3.7	1787.1	<00.015
9-9	19.11	3.18	477	3.7	3.8	3.7	1776.825	<00.015
9-10	16.29	45.00	496	3.8	3.2	3.5	1736	<0.0016
9-11	19.12	3.10	478	4.0	3.4	3.7	1768.6	<00.015
9-12	16.28	45.00	497	3.9	3.3	3.6	1789.2	<00.015
9-13	16.28	0.45	497	3.9	3.3	3.6	1789.2	<00.015
9-14	19.13	3.13	480	4.0	3.3	3.7	1752	<00.015
9-15	16.27	0.46	499	4.0	3.2	3.6	1796.4	<00.015
9-16	16.27	0.46	499	4.0	3.1	3.6	1771.45	<00.015
9-17	19.13	3.15	482	4.0	3.2	3.6	1735.2	<0.0016
9-18	16.26	3.15	482	4.0	3.2	3.6	1735.2	<00.015
9-19	16.26	0.46	500	3.9	3.3	3.6	1800	<00.015
9-20	16.26	0.47	501	4.0	3.1	3.6	1778.55	<00.015
9-ww	19.03	3.07	484	4.0	3.3	3.7	1766.6	<0.0015

Sample	Time			Flow Rate			Total Volume	Results
	Start	Stop	Minutes	Start	Stop	Average	Liters	F/cc
10-1	18.05	2.09	484	4.0	4.0	4.0	1936	<0.001
10-2	18.05	2.10	485	4.0	4.0	4.0	1940	0.002
10-3	18.06	2.10	484	4.0	4.0	4.0	1936	0.002
10-4	18.06	2.13	487	4.0	4.0	4.0	1948	0.002
10-5	18.07	2.15	488	4.0	4.0	4.0	1952	0.002
10-6	18.10	2.17	487	4.0	4.0	4.0	1948	0.001
10-7	18.11	2.22	491	4.0	4.0	4.0	1964	<0.001
10-8	18.12	2.25	493	4.0	4.0	4.0	1972	0.002
10-9	18.12	2.25	493	4.0	3.3	3.6	1787	<0.002
10-10	18.15	2.26	491	4.0	3.3	3.6	1780	0.004
10-11	18.15	2.29	494	4.0	4.0	4.0	1976	0.001
10-12	18.17	2.29	492	4.0	4.0	4.0	1968	0.002
10-13	18.20	2.29	489	4.0	4.0	4.0	1956	0.002
10-14	18.21	2.32	491	4.0	3.3	3.6	1780	0.002
10-15	18.23	2.34	491	4.0	4.0	4.0	1964	0.003
10-16	Pump Fault, No sample					-	-	-
10-17	18.25	2.35	490	4.0	3.3	3.6	1776	0.002
10-18	18.25	2.36	491	4.0	3.8	3.9	1903	0.002
10-19	18.29	2.36	493	4.0	3.3	3.6	1787	0.002
10-20	18.08	2.16	488	4.0	3.3	3.6	1769	0.003
10-WW	19.01	3.06	484	3.3	3.6	3.5	1670	<0.0015
11-1	18.34	2.46	492	4.0	4.0	4.0	1968	0.002
11-2	18.34	2.52	498	4.0	4.0	4.0	1992	<0.001
11-3	18.35	2.54	499	4.0	4.0	4.0	1996	0.002
11-4	18.37	2.59	502	4.0	4.0	4.0	2008	0.002
11-5	18.38	3.03	505	4.0	4.0	4.0	2020	0.001
11-6	18.40	3.05	505	4.0	4.0	4.0	2020	<0.001
11-7	18.42	3.07	505	4.0	4.0	4.0	2020	<0.001
11-8	18.47	3.08	501	4.0	4.0	4.0	2004	0.001
11-9	18.47	3.15	508	4.0	4.0	4.0	2032	<0.001
11-10	18.47	3.18	511	4.0	4.0	4.0	2044	<0.001
11-11	18.48	3.19	511	4.0	4.0	4.0	2044	<0.001
11-12	18.49	3.23	514	4.0	4.0	4.0	2056	<0.001
11-13	18.50	3.48	538	4.0	4.0	4.0	2152	0.002
11-14	18.51	3.25	514	4.0	4.0	4.0	2056	<0.001
11-15	18.53	3.31	518	4.0	4.0	4.0	2072	<0.001
11-16	18.55	3.35	520	4.0	4.0	4.0	2080	<0.001
11-17	18.56	3.38	522	4.0	4.0	4.0	2088	<0.001
11-18	18.57	3.41	524	4.0	4.0	4.0	2096	<0.001
11-19	18.58	3.43	525	4.0	4.0	4.0	2100	<0.001
11-20	19.00	3.45	525	4.0	4.0	4.0	2100	<0.001
11-WW	19	3	483	3.9	3.1	5.0	2415	<0.0016

Appendix 3

Site Photographs



Photo 1: Example of Dust Level 1: light layer of dust with substrate visible.

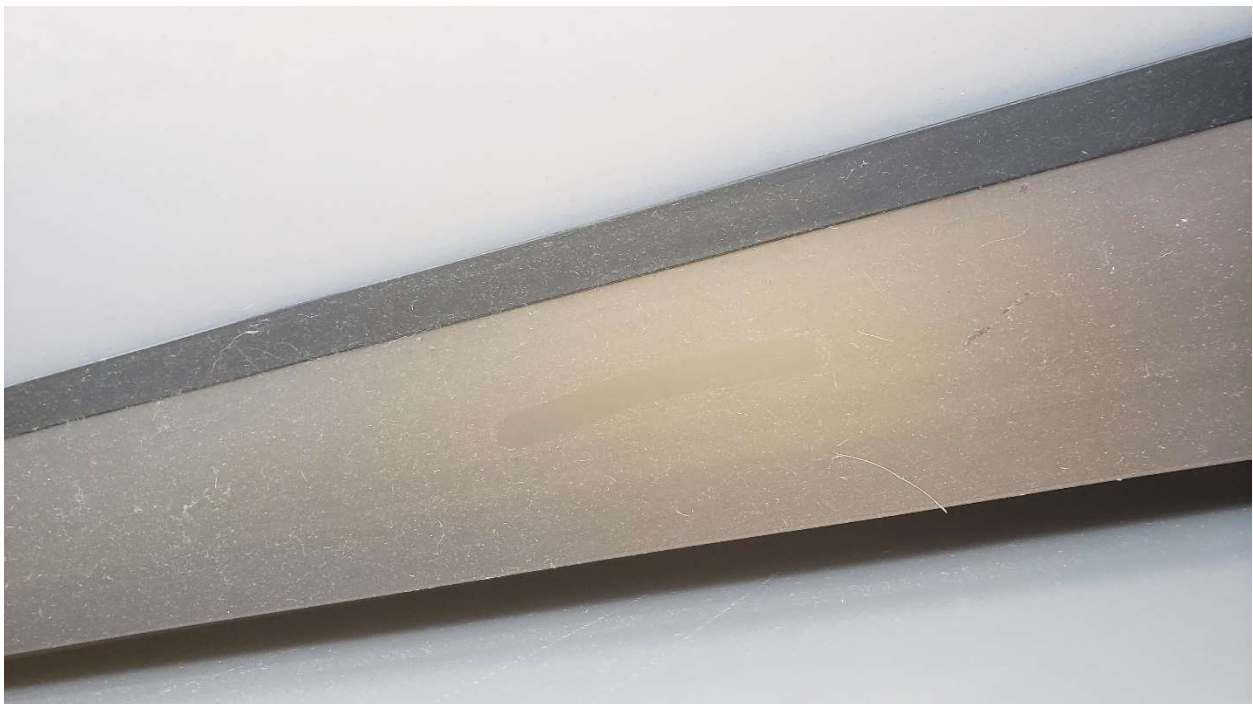


Photo 2: Example of Dust Level 2: layer of dust that partially obscures substrate in some areas



Photo 3: Example 1 of air sampling pump placement.



Photo 4: Example 2 of air sampling pump placement.

Appendix 4

Laboratory Report



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202023

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/25/2022 08:50 AM
Analysis Date: 07/27/2022
Collected Date: 07/15/2022

Project: Juneau SOB

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
5-1 512202023-0001	Receptionist desk	07/15/2022	1786	<5.5	100	0.0015	<7.01	<0.0015	
5-2 512202023-0002	Desuree berg. Shelf above desk	07/15/2022	1810	<5.5	100	0.0015	<7.01	<0.0015	
5-3 512202023-0003	Top corner of Erde Essary cubicle	07/15/2022	1757	<5.5	100	0.0015	<7.01	<0.0015	
5-4 512202023-0004	Top of desk, Jessica Naract	07/15/2022	1778	<5.5	100	0.0015	<7.01	<0.0015	
5-5 512202023-0005	Top of shelf above desk, Aaron Cook	07/15/2022	1799	<5.5	100	0.0015	<7.01	<0.0015	
5-6 512202023-0006	Matt Culbreth top of file cabinet	07/15/2022	1771	<5.5	100	0.0015	<7.01	<0.0015	
5-7 512202023-0007	Desk in middle of computer repair	07/15/2022	1768	<5.5	100	0.0015	<7.01	<0.0015	
5-8 512202023-0008	Conference room desk	07/15/2022	1817	<5.5	100	0.0015	<7.01	<0.0015	
5-9 512202023-0009	Chain link fence to customer area	07/15/2022	1745	<5.5	100	0.0015	<7.01	<0.0015	
5-10 512202023-0010	Storage near offices	07/15/2022	1721	<5.5	100	0.0016	<7.01	<0.0016	
5-11 512202023-0011	Storage shelving	07/15/2022	1693	<5.5	100	0.0016	<7.01	<0.0016	
5-12 512202023-0012	Desk storage area near services	07/15/2022	1886	<5.5	100	0.0014	<7.01	<0.0014	
5-13 512202023-0013	Top of equipment (storage)	07/15/2022	1706	<5.5	100	0.0016	<7.01	<0.0016	
5-14 512202023-0014	Top of control desk	07/15/2022	1699	<5.5	100	0.0016	<7.01	<0.0016	

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Limit of detection is 7 fibers/mm². Fiber counts outside the recommended fiber density range of the method (100-1300 f/mm²) have greater than optimal variability and are probably biased. Field blank results, when available, are used to blank correct results. NIOSH 7400 requires field blanks be submitted at a rate of 10%, with a minimum of 2 per set. Measurement of uncertainty available upon request. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Intra-laboratory Sr values: 5-20 fibers = 0.26, 21-50 fibers = 0.19, 51-100 fibers = 0.18. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.34.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/27/2022 11:44 AM



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108
Tel/Fax: (206) 269-6310 / (206) 900-8789
<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202023
Customer ID: NORT69
Customer PO:
Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/25/2022 08:50 AM
Analysis Date: 07/27/2022
Collected Date: 07/15/2022

Project: Juneau SOB

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
5-15	Top of work desk, adjacent printer	07/15/2022	1672	<5.5	100	0.0016	<7.01	<0.0016	
512202023-0015									
5-16	Break room shelving	07/15/2022	1594	<5.5	100	0.0017	<7.01	<0.0017	
512202023-0016									

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Ehrin Stephens PCM 16

Ehrin Stephens, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/27/2022 11:44 AM

#512202023



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>	PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau, AK</u>	DATE: <u>7/15/22</u>
CLIENT: <u>DOT + PF</u>	SHEET NO. <u>1 OF 2</u>
CLIENT PROJECT:	

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 day</u>	NUMBER OF SAMPLES <u>16</u>	ROTOMETER IDENTIFICATION <u>LV01</u>
COLLECTED BY (signature) <u>[Signature]</u>	COLLECTION DATE <u>7/15 - 7/16/22</u>	SELECTED LABORATORY	ANALYST SIGNATURE
RELINQUISHED BY <u>[Signature]</u>	DATE / TIME <u>7/16/22</u>	SAMPLES RECEIVED BY	DATE / TIME

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	S-1	Receptionist desk	1708	3.9		
	Sample Type Env	Task N/A	STOP TIME 0124	FLOW (l/min) 3.3		
	Pump ID# C	PPE N/A	TOTAL TIME 496	AVG FLOW 3.6	VOLUME (L) 1786	TWA
	S-2	Residue Berg, shelf above desk	1710	4.0		
	Sample Type Env	Task N/A	STOP TIME 0126	FLOW (l/min) 3.3		
	Pump ID# 3	PPE N/A	TOTAL TIME 496	AVG FLOW 3.65	VOLUME (L) 1810	TWA
	S-3	Top corner of For Essary cubicle	1712	4.0		
	Sample Type Env	Task N/A	STOP TIME 0127	FLOW (l/min) 3.1		
	Pump ID# E	PPE N/A	TOTAL TIME 495	AVG FLOW 3.55	VOLUME (L) 1757	TWA
	S-4	Top of desk, Jessura Nardt	1715	4.0		
	Sample Type Env	Task N/A	STOP TIME 0129	FLOW (l/min) 3.2		
	Pump ID# 1	PPE N/A	TOTAL TIME 494	AVG FLOW 3.6	VOLUME (L) 1778	TWA
	S-5	Top of shelf above desk Aaron Cook	1716	4.0		
	Sample Type Env	Task N/A	STOP TIME 0129	FLOW (l/min) 3.3		
	Pump ID# B	PPE N/A	TOTAL TIME 493	AVG FLOW 3.65	VOLUME (L) 1799	TWA
	S-6	Matt Culbreth top of file cabinet	1718	4.0		
	Sample Type Env	Task N/A	STOP TIME 0130	FLOW (l/min) 3.2		
	Pump ID# A	PPE N/A	TOTAL TIME 492	AVG FLOW 3.6	VOLUME (L) 1771	TWA
	S-7	Desk in middle of computer repair	1720	4.0		
	Sample Type Env	Task N/A	STOP TIME 0131	FLOW (l/min) 3.2		
	Pump ID# D	PPE N/A	TOTAL TIME 491	AVG FLOW 3.6	VOLUME (L) 1768	TWA

Reviewed by: Carolya Yeo C/Asst 7/25/22 8:50 AM

ENSE FOLDER: 7060 400 6529



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HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5888

PROJECT NAME: <u>Juneau SOB</u>	PROJECT NO.: <u>27-802</u>
LOCATION: <u>Juneau, AK</u>	DATE: <u>7/16/22</u>
CLIENT: <u>DOT+PF</u>	SHEET NO. <u>2 OF 2</u>
CLIENT PROJECT:	

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	5-8	Conference room desk	1721	4.0		
	Sample Type Env	Task N/A	STOP TIME 0132	FLOW (l/min) 3.4		
	Pump ID# 4	PPE N/A	TOTAL TIME 491	AVG FLOW 3.7	VOLUME (L) 1817	TWA
	5-9	chain link fence to ^{customed} area	1224	4.0		
	Sample Type Env	Task N/A	STOP TIME 2022	FLOW (l/min) 3.3		
	Pump ID# A	PPE N/A	TOTAL TIME 478	AVG FLOW 3.65	VOLUME (L) 1745	TWA
	5-10	Storage near offices	1225	4.0		
	Sample Type Env	Task N/A	STOP TIME 2023	FLOW (l/min) 3.2		
	Pump ID# B	PPE N/A	TOTAL TIME 478	AVG FLOW 3.6	VOLUME (L) 1721	TWA
	5-11	Storage shelving	1227	4.0		
	Sample Type Env	Task N/A	STOP TIME 2024	FLOW (l/min) 3.1		
	Pump ID# 3	PPE N/A	TOTAL TIME 477	AVG FLOW 3.55	VOLUME (L) 1693	TWA
	5-12	desk storage area near servers	1229	3.9		
	Sample Type ENV	Task N/A	STOP TIME 2024	FLOW (l/min) 3.2		
	Pump ID# C	PPE N/A	TOTAL TIME 475	AVG FLOW 3.55	VOLUME (L) 1686	TWA
	5-13	top of equipment (storage)	1231	4.0		
	Sample Type Env	Task N/A	STOP TIME 2025	FLOW (l/min) 3.2		
	Pump ID# 4	PPE N/A	TOTAL TIME 474	AVG FLOW 3.6	VOLUME (L) 1706	TWA
	5-14	top of control desk	1234	4.0		
	Sample Type Env	Task N/A	STOP TIME 2026	FLOW (l/min) 3.2		
	Pump ID# D	PPE N/A	TOTAL TIME 472	AVG FLOW 3.6	VOLUME (L) 1699	TWA
	5-15	top of work desk, adjacent printer	1235	4.0		
	Sample Type Env	Task N/A	STOP TIME 2026	FLOW (l/min) 3.1		
	Pump ID# 1	PPE N/A	TOTAL TIME 471	AVG FLOW 3.55	VOLUME (L) 1672	TWA
	5-16	break room shelving	1245	3.9		
	Sample Type Env	Task N/A	STOP TIME 2027	FLOW (l/min) 3.0		
	Pump ID# E	PPE N/A	TOTAL TIME 462	AVG FLOW 3.45	VOLUME (L) 1594	TWA



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

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<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202600

Customer ID: NORT69

Customer PO: 22-2502

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 09/28/2022 10:27 AM
Analysis Date: 10/03/2022
Collected Date: 09/26/2022

Project: 22-2502 / Juneau State Office Bld.

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
6-01A 512202600-0001	Front desk	09/26/2022	1392	<5.5	100	0.0019	<7.01	<0.0019	
6-02A 512202600-0002	Kris Curtis office	09/26/2022	1386	<5.5	100	0.0019	<7.01	<0.0019	
6-03A 512202600-0003	Loren Lou waige office	09/26/2022	1401	<5.5	100	0.0019	<7.01	<0.0019	
6-04A 512202600-0004	Ben Landes	09/26/2022	1398	<5.5	100	0.0019	<7.01	<0.0019	
6-05A 512202600-0005	ACL station	09/26/2022	1401	<5.5	100	0.0019	<7.01	<0.0019	
6-06A 512202600-0006	Across from tayo desk	09/26/2022	1401	<5.5	100	0.0019	<7.01	<0.0019	
6-07A 512202600-0007	Breakroom	09/26/2022	1404	<5.5	100	0.0019	<7.01	<0.0019	
6-08A 512202600-0008	Outside conf. room	09/26/2022	1407	<5.5	100	0.0019	<7.01	<0.0019	

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Ehrin Stephens PCM 8

Ehrin Stephens, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 10/03/2022 09:29 AM



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HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau State office Bld</u>		PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau</u>		DATE: <u>9/22/22</u>
CLIENT:		SHEET NO. 1 OF
CLIENT PROJECT: <u>22-2502</u>		

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 days</u>	NUMBER OF SAMPLES <u>8</u>	ROTOMETER IDENTIFICATION <u>JNU</u>
---	---------------------------------------	-------------------------------	--

COLLECTED BY (signature) <u>Jennifer Stoddard</u>	COLLECTION DATE <u>9/22/22</u>	SELECTED LABORATORY <u>EMSL</u>	ANALYST SIGNATURE
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RELINQUISHED BY <u>Jennifer Stoddard</u>	DATE / TIME <u>9/26/22</u>	SAMPLES RECEIVED BY <u>Caroline Lee</u>	DATE / TIME <u>9/28/22 10:27 AM</u>
---	-------------------------------	--	--

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	<u>6-01A</u>	<u>Front desk</u>	<u>1910</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0300</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>2025</u>	PPE <u>---</u>	TOTAL TIME (m) <u>4164</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1392</u>	TWA
	<u>6-02A</u>	<u>Kris Curtis office</u>	<u>1920</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0302</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>2026</u>	PPE <u>---</u>	TOTAL TIME <u>462</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1386</u>	TWA
	<u>6-03A</u>	<u>Loren LaWage office</u>	<u>1920</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0307</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>1009</u>	PPE <u>---</u>	TOTAL TIME <u>467</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1401</u>	TWA
	<u>6-04A</u>	<u>Ben Landes</u>	<u>1923</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0309</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>1007</u>	PPE <u>---</u>	TOTAL TIME <u>466</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1398</u>	TWA
	<u>6-05A</u>	<u>ACL station</u>	<u>1924</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0311</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>0202</u>	PPE <u>---</u>	TOTAL TIME <u>467</u>	AVG FLOW <u>3.0</u>	VOLUME (L)	TWA
	<u>6-06A</u>	<u>Across from Tayo desk</u>	<u>20 1926</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0313</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>2019</u>	PPE <u>---</u>	TOTAL TIME <u>467</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1401</u>	TWA
	<u>6-07A</u>	<u>Break room</u>	<u>1927</u>	<u>3.0</u>		
	Sample Type <u>Area</u>	Task <u>Legislative Audit</u>	STOP TIME <u>0315</u>	FLOW (l/min) <u>3.0</u>		
	Pump ID# <u>1013</u>	PPE <u>---</u>	TOTAL TIME <u>468</u>	AVG FLOW <u>3.0</u>	VOLUME (L) <u>1404</u>	TWA

EMSL FedEx: 7964 8263 9584



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PHONE: 907-452-5688

PROJECT NAME:	
LOCATION:	PROJECT NO.:
CLIENT:	DATE:
CLIENT PROJECT: 22-2502	SHEET NO. 2 OF 2

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) PCM TEM	TURNAROUND REQUESTED	NUMBER OF SAMPLES	ROTOMETER IDENTIFICATION
COLLECTED BY (signature)	COLLECTION DATE	SELECTED LABORATORY	ANALYST SIGNATURE
RELINQUISHED BY	DATE / TIME	SAMPLES RECEIVED BY	DATE / TIME

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-08A	outside Conf. room	1228	3.2		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	As Area	Legislative Audit	0317	3.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1014	—	469	3.0	1407	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA



EMSL Analytical, Inc.

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<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512202082

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 08/01/2022 09:09 AM
Analysis Date: 08/02/2022
Collected Date: 07/17/2022

Project: Juneau SOB

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
6-9 512202082-0001	Desk of Ajay Desei	07/17/2022	1858	<5.5	100	0.0015	<7.01	<0.0015	
6-10 512202082-0002	Top of cabinet across from Betsy Wood	07/17/2022	1822	<5.5	100	0.0015	<7.01	<0.0015	
6-11 512202082-0003	Desk of Sara Taylor	07/17/2022	1811	<5.5	100	0.0015	<7.01	<0.0015	
6-12 512202082-0004	Desk of topper of Lisa Templeton	07/17/2022	1775	<5.5	100	0.0015	<7.01	<0.0015	
6-13 512202082-0005	Top of file cabinet adjacent printer	07/17/2022	1701	5.5	100	0.0016	7.01	0.0016	
6-14 512202082-0006	Top of storage - Sharon Heidersdorf	07/17/2022	1704	<5.5	100	0.0016	<7.01	<0.0016	
6-15 512202082-0007	Corner empty cubicle, top of cabinet	07/17/2022	1732	<5.5	100	0.0016	<7.01	<0.0016	
6-16 512202082-0008	Kris Humbert monitor riser	07/17/2022	1718	<5.5	100	0.0016	<7.01	<0.0016	

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Claudiu Nistor PCM 8

Erin Stephens, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 08/04/2022 08:16 AM



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>		PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau, AK</u>		DATE: <u>7/17/22</u>
CLIENT: <u>DOT + PF</u>		SHEET NO. 1 OF <u>2</u>
CLIENT PROJECT:		

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle)		TURNAROUND REQUESTED	NUMBER OF SAMPLES		ROTOMETER IDENTIFICATION	
PCM TEM		3 day	8		LV01	
COLLECTED BY (signature) <u>Sean Heaney</u>		COLLECTION DATE	SELECTED LABORATORY		ANALYST SIGNATURE	
<u>[Signature]</u>		<u>7/17 - 7/18/22</u>				
RELINQUISHED BY <u>Sean Heaney</u>		DATE / TIME	SAMPLES RECEIVED BY		DATE / TIME	
<u>[Signature]</u>		<u>7/27/22</u>				
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-9	Desk of Ajay Desai	0749	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1618	3.3		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	A	N/A	509 min	3.65	1858	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-10	top of cabinet across from Betsyward	0751	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1617	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	B	N/A	506 min	3.6	1822	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-11	Desk of Sara Taylor	0753	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1616	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	4	N/A	503 min	3.6	1811	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-12	Desk top of Loza Templeton	0754	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1614	3.1		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	D	N/A	500 min	3.55	1775	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-13	top of file cabinet adjacent printer	0757	3.9		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1613	3.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1	N/A	496 min	3.95	1701	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-14	top of storage - Sharm Heidersdorf	0758	3.9		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1612	3.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	E	N/A	494 min	3.95	1704	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-15	Corner empty cubicle, top of cabinet	0801	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	1609	3.1		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	3	N/A	488 min	3.55	1732	



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: Juneau SOB	PROJECT NO.: 22-2902
LOCATION: Juneau, Ak	DATE: 7/17/22
CLIENT: DOT+PF	SHEET NO. 2 OF 2
CLIENT PROJECT:	

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	6-16	Mrs Humbert monitor cer	0803	3.9		
	Sample Type Env	Task N/A	STOP TIME 1607	FLOW (l/min) 3.2		
	Pump ID# C	PPE N/A	TOTAL TIME 484 min	AVG FLOW 3.55	VOLUME (L) 1718	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnaslab@EMSL.com

EMSL Order: 042217329
Customer ID: NORT69
Customer PO:
Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688
Fax: (907) 452-5694
Received Date: 07/19/2022 09:10 AM
Analysis Date: 07/22/2022
Collected Date: 07/13/2022

Project: Juneau SOB / Juneau AK / DOT and PF / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
7-1 042217329-0001	Office Desk	07/13/2022	1681	<5.5	100	0.0016	<7.01	<0.0016	
7-2 042217329-0002	Desk Adjacent Qians	07/13/2022	1637	<5.5	100	0.0016	<7.01	<0.0016	
7-3 042217329-0003	Theresa Desk	07/13/2022	1667	<5.5	100	0.0016	<7.01	<0.0016	
7-4 042217329-0004	Mail Desk	07/13/2022	1686	<5.5	100	0.0016	<7.01	<0.0016	
7-5 042217329-0005	File Cabinet Near Kids Corner	07/13/2022	1624	<5.5	100	0.0017	<7.01	<0.0017	
7-6 042217329-0006	Top of File Cabinet	07/13/2022	1651	<5.5	100	0.0016	<7.01	<0.0016	
7-7 042217329-0007	Top of Work Desk	07/13/2022	1872	<5.5	100	0.0014	<7.01	<0.0014	
7-8 042217329-0008	Open Area Top of File Cabinet	07/13/2022	1743	<5.5	100	0.0015	<7.01	<0.0015	
7-9 042217329-0009	Top of File Cabinet	07/13/2022	1825	<5.5	100	0.0015	<7.01	<0.0015	
7-10 042217329-0010	Central Cubicle Table	07/13/2022	1807	<5.5	100	0.0015	<7.01	<0.0015	
7-11 042217329-0011	Top of File Cabinet in Office	07/13/2022	1814	<5.5	100	0.0015	<7.01	<0.0015	
7-12 042217329-0012	Top of Central Desk	07/13/2022	1869	<5.5	100	0.0014	<7.01	<0.0014	
7-13 042217329-0013	DHSS Corner Cabinet Top of Shelves	07/13/2022	1811	<5.5	100	0.0015	<7.01	<0.0015	
7-14 042217329-0014	Top of Work Cart	07/13/2022	1789	<5.5	100	0.0015	<7.01	<0.0015	
7-15 042217329-0015	Desk Outside Breakroom	07/13/2022	1789	<5.5	100	0.0015	<7.01	<0.0015	

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Limit of detection is 7 fibers/mm². Fiber counts outside the recommended fiber density range of the method (100-1300 f/mm²) have greater than optimal variability and are probably biased. Field blank results, when available, are used to blank correct results. NIOSH 7400 requires field blanks be submitted at a rate of 10%, with a minimum of 2 per set. Measurement of uncertainty available upon request. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Intra-laboratory Sr values: 5-20 fibers = 0.33, 21-50 fibers = 0.23, 51-100 fibers = 0.14. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.34.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, AIHA-LAP, LLC--IHLAP Accredited #100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 07/22/2022 10:24 AM



EMSL Analytical, Inc.

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EMSL Order: 042217329
Customer ID: NORT69
Customer PO:
Project ID:

Attention: Sean Heaney
Nortech Environmental & Engineer Cnslt.
2400 College Road
Fairbanks, AK 99709

Phone: (907) 452-5688
Fax: (907) 452-5694
Received Date: 07/19/2022 09:10 AM
Analysis Date: 07/22/2022
Collected Date: 07/13/2022

Project: Juneau SOB / Juneau AK / DOT and PF / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
7-20	DHSS Jennifer Desk	07/13/2022	1705	<5.5	100	0.0016	<7.01	<0.0016	
042217329-0016									

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Sarah Kleinbrahm PCM 16

Samantha Rundstrom, Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Limit of detection is 7 fibers/mm². Fiber counts outside the recommended fiber density range of the method (100-1300 f/mm²) have greater than optimal variability and are probably biased. Field blank results, when available, are used to blank correct results. NIOSH 7400 requires field blanks be submitted at a rate of 10%, with a minimum of 2 per set. Measurement of uncertainty available upon request. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Intra-laboratory Sr values: 5-20 fibers = 0.33, 21-50 fibers = 0.23, 51-100 fibers = 0.14. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.34.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, AIHA-LAP, LLC-IHLAP Accredited #100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Initial report from: 07/22/2022 10:24 AM



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SO3</u>	PROJECT NO.: <u>22-7502</u>
LOCATION: <u>Juneau, AK</u>	DATE: <u>7/13/22</u>
CLIENT: <u>DOT + PF</u>	SHEET NO. 1 OF <u>2</u>
CLIENT PROJECT:	

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3-day</u>	NUMBER OF SAMPLES <u>16</u> <u>mc</u>	ROTOMETER IDENTIFICATION <u>LV01</u>
COLLECTED BY (signature) <u>[Signature]</u>	COLLECTION DATE <u>7/13-7/15/22</u>	SELECTED LABORATORY	ANALYST SIGNATURE <u>[Signature]</u>
RELINQUISHED BY <u>[Signature]</u>	DATE / TIME <u>7/15/22</u>	SAMPLES RECEIVED BY	DATE / TIME

RECEIVED
 EMSL
 H.J.J.
 CINNAMINS
 2022 JUL 19 AM 11:11

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	<u>7-1</u>	<u>office desk</u>	<u>2105</u>	<u>3.9</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0452</u>	<u>3.3</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>D</u>	<u>N/A</u>	<u>467 min</u>	<u>3.6</u>	<u>1681</u>	
	<u>7-2</u>	<u>desk adjacent Qians</u>	<u>2101</u>	<u>3.8</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0442</u>	<u>3.3</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>4</u>	<u>N/A</u>	<u>461 min</u>	<u>3.55</u>	<u>1637</u>	
	<u>7-3</u>	<u>Theresa desk</u>	<u>2100</u>	<u>3.8</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0443</u>	<u>3.2</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>1</u>	<u>N/A</u>	<u>463 min</u>	<u>3.6</u>	<u>1667</u>	
	<u>7-4</u>	<u>mail desk</u>	<u>2058</u>	<u>4.0</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0440</u>	<u>3.3</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>A</u>	<u>N/A</u>	<u>462 min</u>	<u>3.65</u>	<u>1686</u>	
	<u>7-5</u>	<u>file cabinet near "Kudos Corner"</u>	<u>2056</u>	<u>3.8</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0440</u>	<u>3.2</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>E</u>	<u>N/A</u>	<u>464 min</u>	<u>3.5</u>	<u>1624</u>	
	<u>7-6</u>	<u>top of file cabinet</u>	<u>2054</u>	<u>3.9</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0439</u>	<u>3.2</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>3</u>	<u>N/A</u>	<u>465 min</u>	<u>3.55</u>	<u>1651</u>	
	<u>7-7</u>	<u>top of work desk</u>	<u>1842</u>	<u>4.0</u>		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	<u>Env</u>	<u>N/A</u>	<u>0308</u>	<u>3.4</u>		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	<u>B</u>	<u>N/A</u>	<u>506 min</u>	<u>3.7</u>	<u>1872</u>	

[Signature] ex 7/19/22 9:00 AM



SUSTAINABLE ENVIRONMENT, ENERGY,
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2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: Juneau SOB	PROJECT NO.: 22-2502
LOCATION: Juneau, AK	DATE: 7/13/23
CLIENT: DOT + PF	SHEET NO. 2 OF 2
CLIENT PROJECT:	

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	7-8	open area top of file cabinet	2029	3.8		
	Env	N/A	STOP TIME 0447	FLOW (l/min) 3.2		
	Pump ID# C	PPE N/A	TOTAL TIME 498 min	AVG FLOW 3.5	VOLUME (L) 1743	TWA
	7-9	top of file cabinet	1841	4.0		
	Env	N/A	STOP TIME 0308	FLOW (l/min) 3.2		
	Pump ID# 3	PPE N/A	TOTAL TIME 507 min	AVG FLOW 3.6	VOLUME (L) 1825	TWA
	7-10	Central cubical table	1851	3.9		
	Env	N/A	STOP TIME 0313	FLOW (l/min) 3.3		
	Pump ID# C	PPE N/A	TOTAL TIME 502 min	AVG FLOW 3.6	VOLUME (L) 1807	TWA
	7-11	top of file cabinet in office	1855	4.0		
	Env	N/A	STOP TIME 0312	FLOW (l/min) 3.3		
	Pump ID# 9	PPE N/A	TOTAL TIME 497 min	AVG FLOW 3.65	VOLUME (L) 1814	TWA
	7-12	top of central desk	1839	4.0		
	Env	N/A	STOP TIME 0304	FLOW (l/min) 3.4		
	Pump ID# D	PPE N/A	TOTAL TIME 505 min	AVG FLOW 3.7	VOLUME (L) 1869	TWA
	7-13	DHS corner cubical, top of shelves	1852	3.9		
	Env	N/A	STOP TIME 0315	FLOW (l/min) 3.3		
	Pump ID# E	PPE N/A	TOTAL TIME 503 min	AVG FLOW 3.6	VOLUME (L) 1811	TWA
	7-14	top of workcart	1840	3.9		
	Env	N/A	STOP TIME 0304	FLOW (l/min) 3.2		
	Pump ID# A	PPE N/A	TOTAL TIME 504 min	AVG FLOW 3.55	VOLUME (L) 1789	TWA
	7-15	desk outside breakroom	1855	4.0		
	Env	N/A	STOP TIME 0312	FLOW (l/min) 3.2		
	Pump ID# I	PPE N/A	TOTAL TIME 497 min	AVG FLOW 3.6	VOLUME (L) 1789	TWA
	7-20	DHS, Jennifer desk	2106	4.0		
	Env	N/A	STOP TIME 0453	FLOW (l/min) 3.3		
	Pump ID# B	PPE N/A	TOTAL TIME 467 min	AVG FLOW 3.65	VOLUME (L) 1705	TWA

(16) MC



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Phone/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201823
Customer ID: NORT69
Customer PO: 22-2502
Project ID:

Attention: Jennifer Stoutamore Nortech Environmental & Engineer Cnslt. 5438 Shaune Drive Suite B Juneau, AK 99801	Phone: (907) 586-6813 Fax: (907) 452-5694 Received Date: 07/05/2022 8:37 AM Analysis Date: Collected Date: 06/30/2022
Project: 22-2502 / State Office Bld Assessment	

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019 (with 8 Hour Time Weighted Average)

Other Samples

Sample	Activity	Sample Start Date	Sample End Date	Rate (l/min)	Volume (Liters)	Fibers	Field	LOD (fib/cc)	Fibers/mm ²	Fibers/cc
8-1 512201823-0001	Area, 8th floor cubicle	06/30/2022 2:18 PM	06/30/2022 9:16 PM	4	1672	7.0	100	0.002	8.92	0.002
		Included in TWA								
8-2 512201823-0002	Area, 8th floor cubicle	06/30/2022 2:18 PM	06/30/2022 9:17 PM	4	1676	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-3 512201823-0003	Area, 8th floor cubicle	06/30/2022 2:19 PM	06/30/2022 9:18 PM	4	1676	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-4 512201823-0004	Area, 8th floor cubicle	06/30/2022 2:19 PM	06/30/2022 9:20 PM	4	1684	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-5 512201823-0005	Area, 8th floor by nursing	06/30/2022 2:20 PM	06/30/2022 9:26 PM	4	1704	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-6 512201823-0006	Area, 8th floor, outside storage	06/30/2022 2:20 PM	06/30/2022 9:22 PM	4	1688	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-7 512201823-0007	Area, 8th floor	06/30/2022 2:21 PM	06/30/2022 9:22 PM	4	1684	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-8 512201823-0008	Area, 8th floor conf. room	06/30/2022 2:21 PM	06/30/2022 9:23 PM	4	1688	5.5	100	0.002	7.01	0.002
		Included in TWA								
8-9 512201823-0009	Area, 8th floor cubicle	06/30/2022 2:22 PM	06/30/2022 9:24 PM	4	1688	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
8-10 512201823-0010	Area, 8th floor breakroom	06/30/2022 2:23 PM	06/30/2022 9:25 PM	4	1688	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								

Analyst(s): _____

Ehrin Stephens (10)

Ehrin Stephens, Laboratory Manager
or other approved signatory

TWA results above are based on information provided by the client. This information is assumed correct and that exposure time is equivalent to the sample times. Limit of detection is 7 fibers/mm². Interlaboratory Sr values: 5-20 fibers = 0.35, 21-50 fibers = 0.30, 51-100 fibers = 0.20. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL. Results have been blank corrected as applicable. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Initial report from: 07/07/2022 11:27:33

#512201823



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>State office Bld Assessment</u>	
LOCATION: <u>Juneau</u>	PROJECT NO.: <u>22-250</u>
CLIENT: <u>ADOT & PF</u>	DATE: <u>6/30/22</u>
CLIENT PROJECT:	SHEET NO. 1 OF <u>2</u>

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle)		TURNAROUND REQUESTED	NUMBER OF SAMPLES		ROTOMETER IDENTIFICATION	
ES PCM TEM +8 Hr TWA		3 day	20		Juneau	
COLLECTED BY (signature)		COLLECTION DATE	SELECTED LABORATORY		ANALYST SIGNATURE	
<i>Jennifer Stortomme</i>		6/30/22	EMSL			
RELINQUISHED BY		DATE / TIME	SAMPLES RECEIVED BY		DATE / TIME	
<i>Jennifer Stortomme</i>		6/30/22 0845				
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-1	8th floor cubicle	1418	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2114	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1	—	418	4.0	1672	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-2	8th floor cubicle	1418	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2117	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	20110701008	—	419	4.0	1676	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-3	8th floor cubicle	1419	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2118	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	20110302020	—	419	4.0	1676	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-4	8th floor cubicle	419	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2120	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	50602004	—	421	4.0	1684	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-5	8th floor, by nursing	1420	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2126	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	B	—	420	4.0	1680	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-6	8th floor, outside storage	1420	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2122	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	2005020202	—	422	4.0	1688	
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-7	8th floor	1421	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	air	area	2122	4.0		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	D	—	421	4.0	1684	



SUSTAINABLE ENVIRONMENT, ENERGY,
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2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME:	
LOCATION:	PROJECT NO.:
CLIENT:	DATE:
CLIENT PROJECT:	SHEET NO. OF

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-8	8th floor conf. room	1421	4.0		
	air	area	STOP TIME 2123	FLOW (l/min) 4.0		
	Pump ID# 3	PPE —	TOTAL TIME 422	AVG FLOW 4.0	VOLUME (L) 1688	TWA
	8-9	8th floor cubicle	1422	4.0		
	air	area	STOP TIME 2124	FLOW (l/min) 4.0		
	Pump ID# 20110701007	PPE —	TOTAL TIME 422	AVG FLOW 4.0	VOLUME (L) 1688	TWA
	8-10	8th floor breakroom	1423	4.0		
	air	area	STOP TIME 2125	FLOW (l/min) 4.0		
	Pump ID# C	PPE —	TOTAL TIME 422	AVG FLOW 4.0	VOLUME (L) 1688	TWA

Received by: Carolyn Yeo *Cy Yeo*

Date/Time: 7/5/22 8:37 AM

FedEx: 2750-3436-

5865



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

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<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201901

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/13/2022 01:40 PM
Analysis Date: 07/18/2022
Collected Date: 07/09/2022

Project: Juneau SOB / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
8-101 512201901-0001	Top of file cabinet	07/09/2022	1796	<5.5	100	0.0015	<7.01	<0.0015	
8-102 512201901-0002	Edge of cubicle	07/09/2022	1840	<5.5	100	0.0015	<7.01	<0.0015	
8-103 512201901-0003	Conference desk	07/09/2022	1768	<5.5	100	0.0015	<7.01	<0.0015	
8-104 512201901-0004	Top of file cabinet	07/09/2022	1764	<5.5	100	0.0015	<7.01	<0.0015	
8-105 512201901-0005	Edge of cubicle	07/09/2022	1807	<5.5	100	0.0015	<7.01	<0.0015	
8-106 512201901-0006	Top of desk	07/09/2022	1775	<5.5	100	0.0015	<7.01	<0.0015	
8-107 512201901-0007	Top of conference table	07/09/2022	1722	<5.5	100	0.0016	<7.01	<0.0016	
SD-1 512201901-0008	Security desk	07/09/2022	1807	<5.5	100	0.0015	<7.01	<0.0015	

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s): _____

Ehrin Stephens PCM 8

Ehrin Stephens, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/18/2022 11:38 AM

#512201901



SUSTAINABLE ENVIRONMENT, ENERGY,
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2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>	PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau, AK</u>	DATE: <u>7/9/22</u>
CLIENT:	SHEET NO. 1 OF 2
CLIENT PROJECT:	

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 days</u>	NUMBER OF SAMPLES <u>8</u>	ROTOMETER IDENTIFICATION <u>Lv01</u>
COLLECTED BY (signature) <u>[Signature]</u>	COLLECTION DATE <u>7/8-7/9</u>	SELECTED LABORATORY <u>EMSL</u>	ANALYST SIGNATURE
RELINQUISHED BY <u>Sean Henney</u>	DATE / TIME <u>7/9/22 1030</u>	SAMPLES RECEIVED BY	DATE / TIME

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	8-101	top of file cabinet	2345	3.8		
	Env	Task	STOP TIME 0818	FLOW (l/min) 3.1		
	Pump ID# E	PPE N/A	TOTAL TIME 513 min	AVG FLOW 3.5	VOLUME (L) 1796	TWA
	8-102	Edge of cubicle	2347	3.9		
	Env	Task	STOP TIME 0818	FLOW (l/min) 3.3		
	Pump ID# 3	PPE N/A	TOTAL TIME 511 min	AVG FLOW 3.6	VOLUME (L) 1840	TWA
	8-103	Conference desk	0000	3.9		
	Env	Task	STOP TIME 0818	FLOW (l/min) 3.2		
	Pump ID# B	PPE N/A	TOTAL TIME 498 min	AVG FLOW 3.55	VOLUME (L) 1768	TWA
	8-104	top of file cabinet	0002	3.9		
	Env	Task	STOP TIME 0819	FLOW (l/min) 3.2		
	Pump ID# A	PPE N/A	TOTAL TIME 497 min	AVG FLOW 3.55	VOLUME (L) 1764	TWA
	8-105	edge of cubicle	0004	4.0		
	Env	Task	STOP TIME 0819	FLOW (l/min) 3.3		
	Pump ID# C	PPE N/A	TOTAL TIME 495 min	AVG FLOW 3.65	VOLUME (L) 1807	TWA
	8-106	top of desk	0007	4.0		
	Env	Task	STOP TIME 0820	FLOW (l/min) 3.2		
	Pump ID# D	PPE N/A	TOTAL TIME 493 min	AVG FLOW 3.6	VOLUME (L) 1775	TWA
	8-107	top of conference table	0008	3.9		
	Env	Task	STOP TIME 0820	FLOW (l/min) 3.1		
	Pump ID# I	PPE N/A	TOTAL TIME 492 min	AVG FLOW 3.5	VOLUME (L) 1722	TWA

Received: Claudia Nishr 7/13/22 13:40
Page 1 of 2 96510920



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PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>	
LOCATION: <u>Juneau, AK</u>	PROJECT NO.: <u>22-2662</u>
CLIENT:	DATE: <u>7/19/22</u>
CLIENT PROJECT:	SHEET NO. <u>2</u> OF <u>2</u>

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 days</u>	NUMBER OF SAMPLES <u>8</u>	ROTOMETER IDENTIFICATION
COLLECTED BY (signature) <u>[Signature]</u>	COLLECTION DATE <u>7/18-7/19</u>	SELECTED LABORATORY <u>EMSL</u>	ANALYST SIGNATURE
RELINQUISHED BY <u>Sean Healey</u> <u>[Signature]</u>	DATE / TIME <u>7/19/22 1030</u>	SAMPLES RECEIVED BY	DATE / TIME

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	<u>SD-1</u>	<u>Security Desk</u>	<u>2853</u>	<u>3.8</u>		
	Sample Type <u>Env</u>	Task	STOP TIME <u>0815</u>	FLOW (l/min) <u>3.4</u>		
	Pump ID# <u>#4</u>	PPE <u>NIA</u>	TOTAL TIME <u>502</u>	AVG FLOW <u>3.6</u>	VOLUME (L) <u>1807</u>	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA



EMSL Analytical, Inc.

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EMSL Order: 512201909

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/14/2022 09:05 AM
Analysis Date: 07/18/2022 - 07/19/2022
Collected Date: 07/09/2022

Project: Juneau SOB / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
9-1 512201909-0001	Insurance Welcome Desk	07/09/2022	1745	<5.5	100	0.0015	<7.01	<0.0015	
9-2 512201909-0002	Insurance "Free" Pole	07/09/2022	1721	<5.5	100	0.0016	<7.01	<0.0016	
9-3 512201909-0003	File Cabinets by "Info Services"	07/09/2022	1745	<5.5	100	0.0015	<7.01	<0.0015	
9-4 512201909-0004	Bradley Johnson Cubicle	07/09/2022	1752	<5.5	100	0.0015	<7.01	<0.0015	
9-5 512201909-0005	CBPL Mail Station	07/09/2022	1704	<5.5	100	0.0016	<7.01	<0.0016	
9-6 512201909-0006	Jerry Hannasch Cubicle	07/09/2022	1708	<5.5	100	0.0016	<7.01	<0.0016	
9-7 512201909-0007	Files by Warren Gorden Desk	07/09/2022	1735	<5.5	100	0.0016	<7.01	<0.0016	
9-8 512201909-0008	Files by Conference Room	07/09/2022	1787	<5.5	100	0.0015	<7.01	<0.0015	
9-9 512201909-0009	Files Across from Conference Room	07/09/2022	1741	<5.5	100	0.0015	<7.01	<0.0015	
9-10 512201909-0010	Copier Top	07/09/2022	1736	<5.5	100	0.0016	<7.01	<0.0016	
9-11 512201909-0011	Receptionist Area/Desk	07/09/2022	1769	<5.5	100	0.0015	<7.01	<0.0015	
9-12 512201909-0012	Melissa Kookosh Desk	07/09/2022	1789	<5.5	100	0.0015	<7.01	<0.0015	
9-13 512201909-0013	Hannah Lager Desk	07/09/2022	1789	<5.5	100	0.0015	<7.01	<0.0015	
9-14 512201909-0014	Conference Room Table	07/09/2022	1752	<5.5	100	0.0015	<7.01	<0.0015	
9-15 512201909-0015	Admin/Procurement	07/09/2022	1796	<5.5	100	0.0015	<7.01	<0.0015	
9-16	Outside Men's Bathroom	07/09/2022	1771	<5.5	100	0.0015	<7.01	<0.0015	

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/19/2022 08:44 AM



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EMSL Order: 512201909

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
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5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/14/2022 09:05 AM
Analysis Date: 07/18/2022 - 07/19/2022
Collected Date: 07/09/2022

Project: Juneau SOB / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
<i>512201909-0016</i>									
9-17	Open Desk Area	07/09/2022	1735	<5.5	100	0.0016	<7.01	<0.0016	
<i>512201909-0017</i>									
9-18	Admin/Info Tech	07/09/2022	1800	<5.5	100	0.0015	<7.01	<0.0015	
<i>512201909-0018</i>									
9-19	Near Mail Room Supply	07/09/2022	1804	<5.5	100	0.0015	<7.01	<0.0015	
<i>512201909-0019</i>									
9-20	Regional and Community Affairs	07/09/2022	1779	<5.5	100	0.0015	<7.01	<0.0015	
<i>512201909-0020</i>									

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Claudiu Nistor PCM 20

Erin Stephens, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/19/2022 08:44 AM

#512201909



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>		PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau, AK</u>		DATE: <u>7/12/22</u>
CLIENT: <u>DOT & PF</u>		SHEET NO. 1 OF <u>3</u>
CLIENT PROJECT:		

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 day</u>	NUMBER OF SAMPLES <u>20</u>	ROTOMETER IDENTIFICATION
COLLECTED BY (signature) <u>Sean Heaney</u>	COLLECTION DATE <u>7/19 - 7/12/22</u>	SELECTED LABORATORY	ANALYST SIGNATURE
RELINQUISHED BY <u>[Signature]</u>	DATE / TIME <u>7/12/22</u>	SAMPLES RECEIVED BY <u>Claudia Nidor</u> EMSL	DATE / TIME <u>7/14/22</u> <u>9:05 AM</u> <u>2754 9892 9670</u> Fedex

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	9-1	Insurance welcome desk	2015	4.0		
	Env	N/A	0413	3.3		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	4	N/A	478 min	3.65	1745	
	9-2	Insurance "free" pole	2015	4.0		
	Env	N/A	0413	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1	N/A	478 min	3.6	1721	
	9-3	File cabinets by "info services"	2015	3.9		
	Env	N/A	0413	3.4		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	0	N/A	478 min	3.65	1745	
	9-4	Bradley Johnson cubicle	2014	4.0		
	Env	N/A	0414	3.3		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	C	N/A	480 min	3.65	1752	
	9-5	CBPL Mail station	2014	3.9		
	Env	N/A	0414	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	E	N/A	480 min	3.55	1704	
	9-6	Jerry Hannasch cubicle	2014	3.9		
	Env	N/A	0415	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	3	N/A	481 min	3.55	1708	
	9-7	files by Warren Gordon desk	2013	4.0		
	Env	N/A	0415	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	B	N/A	482 min	3.6	1735	

#512201909



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2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>	PROJECT NO.: <u>22-202</u>
LOCATION: <u>Juneau, AK.</u>	DATE: <u>7/12/22</u>
CLIENT: <u>DOT + PF</u>	SHEET NO. <u>2 OF 3</u>
CLIENT PROJECT:	

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	9-8	files by conference room	2013	4.0		
	Env	Task N/A	STOP TIME 0416	FLOW (l/min) 3.4		
	Pump ID# A	PPE N/A	TOTAL TIME 483 min	AVG FLOW 3.7	VOLUME (L) 1787	TWA
	9-9	files across from conference room	1911	4.0		
	Env	Task N/A	STOP TIME 0308	FLOW (l/min) 3.3		
	Pump ID# D	PPE N/A	TOTAL TIME 477 min	AVG FLOW 3.65	VOLUME (L) 1741	TWA
	9-10	Copier top	1629	3.8		
	Env	Task N/A	STOP TIME 0045	FLOW (l/min) 3.2		
	Pump ID# E	PPE N/A	TOTAL TIME 496 min	AVG FLOW 3.5	VOLUME (L) 1736	TWA
	9-11	Receptionist area/desk	1912	4.0		
	Env	Task N/A	STOP TIME 0310	FLOW (l/min) 3.4		
	Pump ID# C	PPE N/A	TOTAL TIME 478 min	AVG FLOW 3.7	VOLUME (L) 1769	TWA
	9-12	Melissa Kookosh desk	1628	3.9		
	Env	Task N/A	STOP TIME 0045	FLOW (l/min) 3.3		
	Pump ID# A	PPE N/A	TOTAL TIME 497 min	AVG FLOW 3.6	VOLUME (L) 1789	TWA
	9-13	Hannah Lager desk	1628	4.0		
	Env	Task N/A	STOP TIME 0045	FLOW (l/min) 3.2		
	Pump ID# 4	PPE N/A	TOTAL TIME 497 min	AVG FLOW 3.6	VOLUME (L) 1789	TWA
	9-14	Conference room table	1913	4.0		
	Env	Task N/A	STOP TIME 0313	FLOW (l/min) 3.3		
	Pump ID# 3	PPE N/A	TOTAL TIME 480 min	AVG FLOW 3.65	VOLUME (L) 1752	TWA
	9-15	Admin/procurement	1627	4.0		
	Env	Task N/A	STOP TIME 0046	FLOW (l/min) 3.2		
	Pump ID# D	PPE N/A	TOTAL TIME 499 min	AVG FLOW 3.6	VOLUME (L) 1796	TWA
	9-16	outside men's bathroom	1627	4.0		
	Env	Task N/A	STOP TIME 0046	FLOW (l/min) 3.1		
	Pump ID# C	PPE N/A	TOTAL TIME 499 min	AVG FLOW 3.55	VOLUME (L) 1771	TWA

#512201909



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PHONE: 907-452-5688

PROJECT NAME: <u>Juncos SOB</u>	PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juncos, AK</u>	DATE: <u>7/12/22</u>
CLIENT: <u>DOT + PE</u>	SHEET NO. <u>3</u> OF <u>3</u>
CLIENT PROJECT:	

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	9-17	open desk area	1913	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	0315	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1	N/A	482	3.6	1735	
	9-18	Admin / Info Tech	1626	3.9		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	0046	3.3		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	3	N/A	500 min	3.6	1800	
	9-19	near mail room supply	1626	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	0047	3.2		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1	N/A	501 min	3.6	1804	
	9-20	Regional + Community Affairs	1626	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Env	N/A	0047	3.1		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	B	N/A	501 min	3.55	1779	
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA



EMSL Analytical, Inc.

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Phone/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201847
Customer ID: NORT69
Customer PO:
Project ID:

Attention: Jennifer Stoutamore
 Nortech Environmental & Engineer Cnslt.
 5438 Shaune Drive Suite B
 Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/07/2022 9:39 AM
Analysis Date: 07/11/2022
Collected Date: 07/05/2022

Project: Juneau SOB 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019 (with 8 Hour Time Weighted Average)

Other Samples

Sample	Activity	Sample Start Date	Sample End Date	Rate (l/min)	Volume (Liters)	Fibers	Field	LOD (fib/cc)	Fibers/mm ²	Fibers/cc
10-1 512201847-0001	Aaron Geiston Office	07/05/2022 6:05 PM	07/06/2022 2:09 AM	4	1936	<5.5	100	0.001	<7.0	<0.001
		Included in TWA								
10-2 512201847-0002	Across from LR Conf. Room	07/05/2022 6:05 PM	07/06/2022 2:10 AM	4	1940	7.0	100	0.001	8.92	0.002
		Included in TWA								
10-3 512201847-0003	DW Eddy and Ovellette Cubicles	07/05/2022 6:06 PM	07/06/2022 2:10 AM	4	1936	7.0	100	0.001	8.92	0.002
		Included in TWA								
10-4 512201847-0004	Across from Microwave	07/05/2022 6:06 PM	07/06/2022 2:13 AM	4	1948	8.5	100	0.001	10.8	0.002
		Included in TWA								
10-5 512201847-0005	Katie Nystrom Cubicle	07/05/2022 6:07 PM	07/06/2022 2:15 AM	4	1952	8.0	100	0.001	10.2	0.002
		Included in TWA								
10-6 512201847-0006	Large Conference Room	07/05/2022 6:10 PM	07/06/2022 2:17 AM	4	1948	5.5	100	0.001	7.01	0.001
		Included in TWA								
10-7 512201847-0007	IRIS Middle Desk	07/05/2022 6:11 PM	07/06/2022 2:22 AM	4	1964	<5.5	100	0.001	<7.0	<0.001
		Included in TWA								
10-8 512201847-0008	Payroll Recycle Area	07/05/2022 6:12 PM	07/06/2022 2:25 AM	4	1972	8.5	100	0.001	10.8	0.002
		Included in TWA								
10-9 512201847-0009	Paul Affatato	07/05/2022 6:12 PM	07/06/2022 2:25 AM	3.6	1774.8	<5.5	100	0.002	<7.0	<0.002
		Included in TWA								
10-10 512201847-0010	Payroll Printer	07/05/2022 6:15 PM	07/06/2022 2:26 AM	3.6	1767.6	13.0	100	0.002	16.6	0.004
		Included in TWA								
10-11 512201847-0011	Ardrie Morgan Cubicle	07/05/2022 6:15 PM	07/06/2022 2:29 AM	4	1976	5.5	100	0.001	7.01	0.001
		Included in TWA								
10-12 512201847-0012	Wright-Semour Coffee Machine	07/05/2022 6:17 PM	07/06/2022 2:29 AM	4	1968	6.5	100	0.001	8.28	0.002
		Included in TWA								
10-13 512201847-0013	AAC/Awards Bookcase	07/05/2022 6:20 PM	07/06/2022 2:29 AM	4	1956	10.0	100	0.001	12.7	0.002
		Included in TWA								

TWA results above are based on information provided by the client. This information is assumed correct and that exposure time is equivalent to the sample times. Limit of detection is 7 fibers/mm². Interlaboratory Sr values: 5-20 fibers = 0.35, 21-50 fibers = 0.30, 51-100 fibers = 0.20. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL. Results have been blank corrected as applicable. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Initial report from: 07/11/2022 16:02:37



EMSL Analytical, Inc.

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Phone/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201847
Customer ID: NORT69
Customer PO:
Project ID:

Attention: Jennifer Stoutamore Nortech Environmental & Engineer Cnslt. 5438 Shaune Drive Suite B Juneau, AK 99801	Phone: (907) 586-6813 Fax: (907) 452-5694 Received Date: 07/07/2022 9:39 AM Analysis Date: 07/11/2022 Collected Date: 07/05/2022
Project: Juneau SOB 22-2502	

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019 (with 8 Hour Time Weighted Average)

Other Samples

Sample	Activity	Sample Start Date	Sample End Date	Rate (l/min)	Volume (Liters)	Fibers	Field	LOD (fib/cc)	Fibers/mm ²	Fibers/cc
10-14	Risk Management Bookcase	07/05/2022 6:21 PM	07/06/2022 2:32 AM	3.6	1767.6	7.5	100	0.002	9.55	0.002
512201847-0014		Included in TWA								
10-15	DOA Main Desk	07/05/2022 6:23 PM	07/06/2022 2:34 AM	4	1964	13.0	100	0.001	16.6	0.003
512201847-0015		Included in TWA								
10-16	DOA HQ Middle Office	07/05/2022	07/06/2022							
512201847-0016		Not Submitted								
10-17	Galano Cubicle	07/05/2022 6:25 PM	07/06/2022 2:35 AM	3.6	1764	8.0	100	0.002	10.2	0.002
512201847-0017		Included in TWA								
10-18	Across from Admin Serv.	07/05/2022 6:25 PM	07/06/2022 2:36 AM	3.9	1914.9	9.5	100	0.001	12.1	0.002
512201847-0018		Included in TWA								
10-19	Cricket Cubicle	07/05/2022 6:29 PM	07/06/2022 2:36 AM	3.6	1753.2	8.5	100	0.002	10.8	0.002
512201847-0019		Included in TWA								
10-20	Giefer Supply Desk	07/05/2022 6:08 PM	07/06/2022 2:16 AM	3.6	1756.8	11.0	100	0.002	14	0.003
512201847-0020		Included in TWA								

Analyst(s): _____

Claudiu Nistor (19)

Ehrin Stephens, Laboratory Manager
or other approved signatory

TWA results above are based on information provided by the client. This information is assumed correct and that exposure time is equivalent to the sample times. Limit of detection is 7 fibers/mm². Interlaboratory Sr values: 5-20 fibers = 0.35, 21-50 fibers = 0.30, 51-100 fibers = 0.20. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL. Results have been blank corrected as applicable. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Initial report from: 07/11/2022 16:02:37

#512201847



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PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB 22-2502</u>		PROJECT NO.: <u>22-2502</u>
LOCATION: <u>10th Floor 22-2502</u>		DATE: <u>7/5/22</u>
CLIENT: <u>CBI</u>		SHEET NO. <u>1 OF 3</u>
CLIENT PROJECT:		

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM <u>+8hr TWA</u>	TURNAROUND REQUESTED <u>3 day</u>	NUMBER OF SAMPLES	ROTOMETER IDENTIFICATION <u>Juneau</u>
COLLECTED BY (signature) <u>Heather Stanton</u>	COLLECTION DATE <u>7/5/2022</u>	SELECTED LABORATORY <u>EMSL</u>	ANALYST SIGNATURE
RELINQUISHED BY <u>Heather Stanton</u>	DATE / TIME <u>7/6/22 0845</u>	SAMPLES RECEIVED BY	DATE / TIME

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	10-10	Aaron Ekistan office	1805	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0209</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>50202023</u>	PPE	TOTAL TIME <u>484</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1936</u>	TWA
	10-2	across from LR Conf. Rm	1805	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0210</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>20110302019</u>	PPE	TOTAL TIME <u>485</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1940</u>	TWA
	10-3	dw Eddy: Ouellette cubicles	1800	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0210</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID#	PPE	TOTAL TIME <u>484</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1936</u>	TWA
	10-4	across from microwave	1800	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0213</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>20110701012</u>	PPE	TOTAL TIME <u>487</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1948</u>	TWA
	10-5	Katie Nystrom cubicle	1807	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0219</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>5020202075</u>	PPE	TOTAL TIME <u>488</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1952</u>	TWA
	10-6	Large Conference Room	1810	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0217</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>50002001</u>	PPE	TOTAL TIME <u>487</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1948</u>	TWA
	10-7	IRIS middle desk	1811	4.0		
	Sample Type <u>Air</u>	Task	STOP TIME <u>0222</u>	FLOW (l/min) <u>4.0</u>		
	Pump ID# <u>20110701003</u>	PPE	TOTAL TIME <u>491</u>	AVG FLOW <u>4.0</u>	VOLUME (L) <u>1964</u>	TWA

Received by: Caroline Ye Cyfu

Date/Time: 7/7/22 9:39

FedEx: 2751 9931 4490 10/0000

#512201847



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PHONE: 907-452-5688

PROJECT NAME:	
LOCATION:	PROJECT NO.:
CLIENT:	DATE:
CLIENT PROJECT:	SHEET NO 2 OF 3

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	10-8	Payroll recycle area	1812	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0225	4-φ		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	201070100		493	4.φ	1972	
	10-9	Paul Affatato	1812	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0225	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	C		493	3.6	1774.8	
	10-10	Payroll Printer	1815	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0226	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	A		491	3.6	1767.6	
	10-11	Andre Morgan vehicle	1815	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0229	4-φ		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	20110701011		492	4-φ	1976	
	10-12	Wright-Semour coffee machine	1817	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0229	4-φ		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	50602004		492	4-φ	1968	
	10-13	AAI/Awards bookcase	1818	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0229	4-φ		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	2010302020		489	4-φ	1956	
	10-14	Risk Management bookcase	1821	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0232	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	1		491	3.6	1767.6	
	10-15	DoA main desk	1823	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Air		0234	4-φ		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	2010701608		491	4-φ	1964	
	10-16	DoA HQ middle office	1823	4-φ		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	2010701007					

↳ Pump fault not on, no sample



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PHONE: 907-452-5888

PROJECT NAME:		PROJECT NO.:
LOCATION:		DATE:
CLIENT:		SHEET NO. 3 of 3
CLIENT PROJECT:		

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	10-17	Gabano cubicle	1825	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	AV		0235	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	B		490	3.6	1764	
	10-18	Access from Admin Serv.	1825	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
			0236	3.75		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	2005020	2021	491	3.9	1914.9	
	10-19	Cricket cubicle	1829	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	AV		0236	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	5		493	3.6	1774.8	
	10-20	Griener supply desk	1808	4.0		
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	AV		0216	3.25		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	D		488	3.6	1756.8	
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA



EMSL Analytical, Inc.

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<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201822
Customer ID: NORT69
Customer PO: 22-2502
Project ID:

Attention: Jennifer Stoutamore Nortech Environmental & Engineer Cnslt. 5438 Shaune Drive Suite B Juneau, AK 99801	Phone: (907) 586-6813 Fax: (907) 452-5694 Received Date: 07/01/2022 1:05 PM Analysis Date: Collected Date: 06/29/2022
Project: 22-2502	

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019 (with 8 Hour Time Weighted Average)

Other Samples

Sample	Activity	Sample Start Date	Sample End Date	Rate (l/min)	Volume (Liters)	Fibers	Field	LOD (fib/cc)	Fibers/mm ²	Fibers/cc
11-1	Charitable gaming main line	06/29/2022 6:34 PM	06/30/2022 2:46 AM	4	1968	7.5	100	0.001	9.55	0.002
512201822-0001	Customer Set 1 Included in TWA									
11-2	Treasury division	06/29/2022 6:34 PM	06/30/2022 2:52 AM	4	1992	<5.5	100	0.001	<7.0	<0.001
512201822-0002	Customer Set 1 Included in TWA									
11-3	Desk Conner Bell	06/29/2022 6:35 PM	06/30/2022 2:54 AM	4	1996	6.5	100	0.001	8.28	0.002
512201822-0003	Customer Set 1 Included in TWA									
11-4	Desk Franz Kugemann	06/29/2022 6:37 PM	06/30/2022 2:59 AM	4	2008	8.5	100	0.001	10.8	0.002
512201822-0004	Customer Set 1 Included in TWA									
11-5	Cash management desk	06/29/2022 6:38 PM	06/30/2022 3:03 AM	4	2020	6.0	100	0.001	7.64	0.001
512201822-0005	Customer Set 1 Included in TWA									
11-6	Treasury division	06/29/2022 6:40 PM	06/30/2022 3:05 AM	4	2020	<5.5	100	0.001	<7.0	<0.001
512201822-0006	Customer Set 1 Included in TWA									
11-7	Treasury division	06/29/2022 6:42 PM	06/30/2022 3:07 AM	4	2020	<5.5	100	0.001	<7.0	<0.001
512201822-0007	Customer Set 1 Included in TWA									
11-8	Desk general grievous	06/29/2022 6:47 PM	06/30/2022 3:08 AM	4	2004	6.0	100	0.001	7.64	0.001
512201822-0008	Customer Set 1 Included in TWA									
11-9	AK business authority desk	06/29/2022 6:47 PM	06/30/2022 3:15 AM	4	2032	<5.5	100	0.001	<7.0	<0.001
512201822-0009	Customer Set 1 Included in TWA									
11-10	Commissioner's office	06/29/2022 6:47 PM	06/30/2022 3:18 AM	4	2044	<5.5	100	0.001	<7.0	<0.001
512201822-0010	Customer Set 1 Included in TWA									
11-11	Admin services desk	06/29/2022 6:48 PM	06/30/2022 3:19 AM	4	2044	<5.5	100	0.001	<7.0	<0.001
512201822-0011	Customer Set 1 Included in TWA									
11-12	Eric unicorn desk	06/29/2022 6:49 PM	06/30/2022 3:23 AM	4	2056	<5.5	100	0.001	<7.0	<0.001
512201822-0012	Customer Set 1 Included in TWA									
11-13	Conference room A	06/29/2022 6:50 PM	06/30/2022 3:48 AM	4	2152	9.0	100	0.001	11.5	0.002
512201822-0013	Customer Set 1 Included in TWA									
11-14	Budget snack bar	06/29/2022 6:51 PM	06/30/2022 3:25 AM	4	2056	<5.5	100	0.001	<7.0	<0.001
512201822-0014	Customer Set 1 Included in TWA									

TWA results above are based on information provided by the client. This information is assumed correct and that exposure time is equivalent to the sample times. Limit of detection is 7 fibers/mm². Interlaboratory Sr values: 5-20 fibers = 0.35, 21-50 fibers = 0.30, 51-100 fibers = 0.20. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL. Results have been blank corrected as applicable. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Initial report from: 07/07/2022 09:13:37



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Phone/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201822
Customer ID: NORT69
Customer PO: 22-2502
Project ID:

Attention: Jennifer Stoutamore Nortech Environmental & Engineer Cnslt. 5438 Shaune Drive Suite B Juneau, AK 99801	Phone: (907) 586-6813 Fax: (907) 452-5694 Received Date: 07/01/2022 1:05 PM Analysis Date: Collected Date: 06/29/2022
Project: 22-2502	

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019 (with 8 Hour Time Weighted Average)

Other Samples

Sample	Activity	Sample Start Date	Sample End Date	Rate (l/min)	Volume (Liters)	Fibers	Field	LOD (fib/cc)	Fibers/mm ²	Fibers/cc
11-15	PFD corner conference room	06/29/2022 6:53 PM	06/30/2022 3:31 AM	4	2072	<5.5	100	0.001	<7.0	<0.001
512201822-0015	Customer Set 1 Included in TWA									
11-16	Desk Lyn church	06/29/2022 6:55 PM	06/30/2022 3:35 AM	4	2080	<5.5	100	0.001	<7.0	<0.001
512201822-0016	Customer Set 1 Included in TWA									
11-17	By request corner office	06/29/2022 6:56 PM	06/30/2022 3:38 AM	4	2088	<5.5	100	0.001	<7.0	<0.001
512201822-0017	Customer Set 1 Included in TWA									
11-18	PFD office quad	06/29/2022 6:57 PM	06/30/2022 3:41 AM	4	2096	<5.5	100	0.001	<7.0	<0.001
512201822-0018	Customer Set 1 Included in TWA									
11-19	Printer by trail reid	06/29/2022 6:58 PM	06/30/2022 3:43 AM	4	2100	<5.5	100	0.001	<7.0	<0.001
512201822-0019	Customer Set 1 Included in TWA									
11-20	Across from Jacob Stephenson desk	06/29/2022 7:00 PM	06/30/2022 3:45 AM	4	2100	<5.5	100	0.001	<7.0	<0.001
512201822-0020	Customer Set 1 Included in TWA									

Analyst(s): _____

Ehrin Stephens (20)

Ehrin Stephens, Laboratory Manager
or other approved signatory

TWA results above are based on information provided by the client. This information is assumed correct and that exposure time is equivalent to the sample times. Limit of detection is 7 fibers/mm². Interlaboratory Sr values: 5-20 fibers = 0.35, 21-50 fibers = 0.30, 51-100 fibers = 0.20. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL. Results have been blank corrected as applicable. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Initial report from: 07/07/2022 09:13:37



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

#512201822

PHONE:
FAX:

Company Name : NORTECH		EMSL Customer ID:	
Street: 5438 Shaune Drive Suite B		City: Juneau	State/Province: AK
Zip/Postal Code: 99801	Country: USA	Telephone #: 907 586 6813	Fax #:
Report To (Name): Jennifer Stoutamore		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: jstoutamore@nortechengr.com		Purchase Order: 22-2502	
Project Name/Number: 22-2502		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: Alaska		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different - If Bill to is Different note instructions in Comments** <i>Third Party Billing requires written authorization from third party</i>			
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
PCM - Air <input type="checkbox"/> Check if samples are from NY <input checked="" type="checkbox"/> NIOSH 7400 <input checked="" type="checkbox"/> w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) <input type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	TEM- Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only) Other: <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name: Jennifer Stoutamore		Samplers Signature: <i>Jennifer Stoutamore</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
11-1	charitable gaming main line	1968	6/29/22
11-2	Treasury Division	1992	6/29/2022
11-3	Desk Conner Bell	1996	6/29/2022
11-4	Desk Franz Kugemann	2008	6/29/2022
11-5	Cash Management Desk	2020	6/29/2022
Client Sample # (s): 11-1 - 11-20		Total # of Samples: 20	
Relinquished (Client): <i>Jennifer Stoutamore</i> Date: 6/30/22		Time: 0830	
Received (Lab): <i>David Nis</i> Date: 7/1/22		Time: 13:05	
Comments/Special Instructions: Please bill to NORTECH 2400 College Road, Fairbanks AK 99709 (email: ap@nortechengr.com)		2749 8259 9402 Feder	



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

#512201822

PHONE:

FAX:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
11-6	Treasury Division	2020	6/29/2022
11-7	Treasury Division	2020	6/29/2022
11-8	Desk General Grievous	2004	6/29/2022
11-9	AK Business Authority Desk	2032	6/29/2022
11-10	Commissioner's Office	2044	6/29/2022
11-11	Admin Services Desk	2044	6/29/2022
11-12	Eric Unicorn Desk	2056	6/29/2022
11-13	Conference Room A	2152	6/29/2022
11-14	Budget Snack Bar	2056	6/29/2022
11-15	PFD Corner Conference Room	2072	6/29/2022
11-16	Desk Lyn Church	2080	6/29/2022
11-17	By Request Corner Office	2088	6/29/2022
11-18	PFD Office Quad	2096	6/29/2022
11-19	Printer by Trail Reid	2100	6/29/2022
11-20	Across from Jacob Stephenson desk	2100	6/29/2022
*Comments/Special Instructions:			



EMSL Analytical, Inc.

5900 4th Avenue S, Suite 100, 1st Floor Seattle, WA 98108

Tel/Fax: (206) 269-6310 / (206) 900-8789

<http://www.emsl.com> / seattlelab@emsl.com

EMSL Order: 512201917

Customer ID: NORT69

Customer PO:

Project ID:

Attention: Jennifer Stoutamore
Nortech Environmental & Engineer Cnslt.
5438 Shaune Drive Suite B
Juneau, AK 99801

Phone: (907) 586-6813
Fax: (907) 452-5694
Received Date: 07/14/2022 09:05 AM
Analysis Date: 07/19/2022
Collected Date: 07/11/2022

Project: Juneau SOB / 22-2502

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm ²	Fibers/cc	Notes
11-WW 512201917-0001	11th floor walkway	07/11/2022	1691	<5.5	100	0.0016	<7.01	<0.0016	
10-WW 512201917-0002	10th floor walkway	07/11/2022	1742	<5.5	100	0.0015	<7.01	<0.0015	
9-WW 512201917-0003	9th floor walkway	07/11/2022	1777	<5.5	100	0.0015	<7.01	<0.0015	

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Claudiu Nistor PCM 3

Ehrin Stephens, Laboratory Manager
or other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Limit of detection is 7 fibers/mm². Fiber counts outside the recommended fiber density range of the method (100-1300 f/mm²) have greater than optimal variability and are probably biased. Field blank results, when available, are used to blank correct results. NIOSH 7400 requires field blanks be submitted at a rate of 10%, with a minimum of 2 per set. Measurement of uncertainty available upon request. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Intra-laboratory Sr values: 5-20 fibers = 0.26, 21-50 fibers = 0.19, 51-100 fibers = 0.18. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.34.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from: 07/19/2022 08:42 AM

512201917



SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY, PROFESSIONAL SERVICES
2400 COLLEGE ROAD, FAIRBANKS, AK 99709
PHONE: 907-452-5688

PROJECT NAME: <u>Juneau SOB</u>		PROJECT NO.: <u>22-2502</u>
LOCATION: <u>Juneau, AK</u>		DATE: <u>07/11/22</u>
CLIENT: <u>DOT & PF</u>		SHEET NO 1 OF 1
CLIENT PROJECT:		

FIELD DATA SHEET - ASBESTOS AIR MONITORING LOG - CHAIN OF CUSTODY

ANALYSIS REQUESTED (circle) <u>PCM</u> TEM	TURNAROUND REQUESTED <u>3 day</u>	NUMBER OF SAMPLES <u>3</u>	ROTOMETER IDENTIFICATION
COLLECTED BY (signature) <u>[Signature]</u>	COLLECTION DATE <u>7/11 - 7/12/22</u>	SELECTED LABORATORY	ANALYST SIGNATURE
RELINQUISHED BY <u>[Signature]</u>	DATE / TIME <u>7/12/22</u>	SAMPLES RECEIVED BY <u>Clodie Nish ENSL</u>	DATE / TIME <u>7/14/22 9:05 AM</u> <u>27549892 9670 Fedex</u>

LAB ID#	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	11-WW	11th floor walkway	1901	3.9		
	Sample Type Env	Task N/A	STOP TIME 0304	FLOW (l/min) 3.1		
	Pump ID# E	PPE N/A	TOTAL TIME 483 min	AVG FLOW 3.5	VOLUME (L) 1691	TWA
	10-WW	10th floor walkway	1902	3.9		
	Sample Type Env	Task N/A	STOP TIME 0306	FLOW (l/min) 3.3		
	Pump ID# A	PPE N/A	TOTAL TIME 484 min	AVG FLOW 3.6	VOLUME (L) 1742	TWA
	9-WW	9th floor walkway	1903	4.0		
	Sample Type Env	Task N/A	STOP TIME 0307	FLOW (l/min) 3.3		
	Pump ID# 4	PPE N/A	TOTAL TIME 484 min	AVG FLOW 3.65	VOLUME (L) 1777	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA
	Sample ID#	Location / Name of Worker Cert#	START TIME	FLOW (l/min)	FIBERS / FIELDS	RESULTS Fibers/cc
	Sample Type	Task	STOP TIME	FLOW (l/min)		
	Pump ID#	PPE	TOTAL TIME	AVG FLOW	VOLUME (L)	TWA

Appendix 5: Cleaning Activities Record

Blank Cleaning Activities Record Form
(Form 5) located in Appendix 9

Appendix 6: Operations and Maintenance Activities Records

Blank Operations & Maintenance Activities and
Preventative Measures Form
(Form 6) located in Appendix 9

Appendix 7: Minor and Major Release Episode Records

Blank Major/Minor Fiber Release Form
(Form 7) located in Appendix 9

Appendix 8: Implementation of Response Action Records

Blank Preventative Measures and
Response Actions Form
(Form 8) located in Appendix 9

Appendix 9: Blank AMP Forms

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 1 – CONTACT INFORMATION

Building Owner Information	
Owing Agency:	Telephone Number:
Address:	
Name of Building:	Telephone Number:
Address:	

Designated Person Information			
Name of Designated Person:		Telephone Number:	
Address:			
Course Name:	Training Agency:	Date:	Hours of Training:

Management Planner(s)			
The following management planner(s) has developed/contributed to this plan and is accredited under the state accreditation program or another state's accreditation program or an EP-approved course.			
Name:		Telephone Number:	
Firm:			
Address:			
State of Accreditation/Accreditation Number:			
Course Name:	Date:	Training Agency:	
Name:		Telephone Number:	
Firm:			
Address:			
State of Accreditation/Accreditation Number:			
Course Name:	Date:	Training Agency:	

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 2 – ANNUAL SURVEILLANCE REPORT

Annual Surveillance Report:

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
1	1-09B	Tan chunky fireproofing	Good		
5	5-01B	Gray fireproofing	Good		
5	5-02B	White joint compound	Damaged		
5	5-09B	Beige floor tile	Damaged		
5	5-09B	Black mastic	Damaged		
5	5-50B	Light gray fireproofing	Good		
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			

Building Name:**Address:**

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
7	7-03B	White joint compound	Good		
7	7-04B	Gray joint compound	Good		
7	7-07B	Light tan mastic	Good		
7	7-08B	White joint compound	Good		
7	7-10B	Gray joint compound	Good		
7	7-12B	Tan mastic	Good		
7	7-13B	Black mastic	Good		
7	7-31B	Black mastic	Good		
7	7-50B	Gray fireproofing	Good		
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			

Building Name:**Address:**

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
		Gray spray-on fireproofing			
9	9-11B	Brown mastic	Damaged		
9	9-16B	Brown mastic	Good		
9	9-17B	White joint compound	Damaged		
9	9-17B	Brown mastic	Damaged		
9	9-22B	White joint compound	Good		
9	9-24B	Gray/tan joint compound	Damaged		
10	10-06B	White joint compound	Good		
10	10-17B	White joint compound	Good		

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed
11	11-01B	White joint compound	Good		
11	11-02B	Brown/yellow mastic	Good		
11	11-04B	White joint compound	Good		
11	11-05B	Black sealant	Damaged		
11	11-08B	Tan/white joint compound	Damaged		
11	11-12B	White mastic	Good		
11	11-14B	White joint compound	Good		
11	11-15B	Brown/yellow mastic	Damaged		
11	11-18B	Brown/yellow mastic	Good		
11	11-21B	White joint compound	Good		
11	11-24B	White joint compound	Good		

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

Floor #	Sample #	Description of ACM	ACBM Condition/Last Surveillance*	Current ACBM Condition*	Date ACBM Removed

*If no change in condition, write N/C

Surveillance Inspector's Name	Surveillance Inspector's Signature	Date
--------------------------------------	---	-------------

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 3 – INSPECTION COVER SHEET

Type of Inspection: <input type="checkbox"/> Initial Inspection <input type="checkbox"/> Reinspection	
Date of Inspection:	
Building Assessed:	Telephone Number:
Address:	
Date of Original Building Construction:	

Provided the date, description, and location of additions/renovations for this building e.g., new structural additions or application of surfacing material or fireproofing insulation. (Provide all heating system information in next section.)

Type of heating system:

Has any part of the heating system, including boiler(s), hot water pipes, water heater, etc., been renovated or replaced?
Yes No

Provide date, description and location of heating system renovations/replacements for this building:

The following inspector(s) conducted the inspection and is accredited under the state accreditation program, or another state’s accreditation program or an EPA-approved course.

1	Name	State of Accreditation/Acc. No.	Signature	Date
	Firm	Address	Telephone Number	
	Course	Date	Training Agency	
2	Name	State of Accreditation/Acc. No.	Signature	Date
	Firm	Address	Telephone Number	
	Course	Date	Training Agency	

ATTACHMENTS
<ul style="list-style-type: none"> • Copy of inspection report

REINSPECTION DEFINITIONS

- **Good:**
 - Non-TSI: Material with no visible damage or deterioration, or showing only very limited damage or deterioration
 - TSI: Material with no visible damage or deterioration, or showing only very limited damage or deterioration
- **Damaged:**
 - Non-TSI: Material whose surface is crumbling, blistered, water-stained, gouged, marred or otherwise abraded over less than 1/10 of the surface if it evenly distributed, ¼ if damage is localized.
 - TSI: Material with one or more of the following:
 - A few water stains or less than 1/10 of insulation with missing jackets
 - Crushed insulation or water stains, gouges, punctures, or mars on up to 1/10 of the insulation if evenly distributed, ¼ if localized
- **Significantly Damaged:**
 - Non-TSI: Material with one or more of the following:
 - Surface is crumbling or blistered over at least 1/10 of the surface if the damage is evenly distributed, or ¼ if localized
 - 1/10 if evenly distributed or ¼ if localized of material hanging from the surface, deteriorated, or showing adhesive failure
 - Water stains, gouges, or mars over at least 1/10 of the surface if damage is evenly distributed, ¼ if localized
 - TSI: Material with one or more of the following characteristics:
 - Missing jackets on at least 1/10 of the piping or equipment
 - Crushed or heavily gouged or punctured insulation on at least 1/10 of pipe runs/risers, boiler, tank, duct, etc. if the damage is evenly distributed, ¼ if it is localized

DISTURBANCE TYPES

- Potential for human contact with the material
- Potential for disturbance via vibration
- Potential for air erosion

FUNCTIONAL SPACES

- A) Parking: The four levels of the parking garage
- B) Mechanical Rooms: fan rooms and mechanical rooms
- C) Stairways/corridors/elevator interiors/lobbies
- D) Storage, janitorial/custodial, and maintenance rooms
- E) Office Areas
- F) Structural Spaces

HOMOGENOUS AREA

Homogenous areas are defined as areas of surfacing material or thermal system insulation that is uniform in color and texture. For instance, “Seventh floor spray on fireproofing”.

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 4 – HOMOGENOUS AREA/BULK SAMPLE SUMMARY

Type of Inspection: <input type="checkbox"/> Initial Inspection <input type="checkbox"/> Reinspection
Date of Inspection:
Building Assessed/Addressed:

Sample ID								
Functional Space	A	B	C	D	E	F	Location	
Homogenous Area								
Description							Notes	
Category	Cat 1 F		Cat 1 NF		Cat 2 NF			
Condition	Good		Damaged		Sign. Damaged			
Disturbance	Low		Moderate		High			
Sample ID								
Functional Space	A	B	C	D	E	F	Location	
Homogenous Area								
Description							Notes	
Category	Cat 1 F		Cat 1 NF		Cat 2 NF			
Condition	Good		Damaged		Sign. Damaged			
Disturbance	Low		Moderate		High			

Building Name:**Address:**

(Number ___ of ___, make copies as necessary)

Sample ID								
Functional Space	A	B	C	D	E	F	Location	
Homogenous Area								
Description							Notes	
Category	Cat 1 F		Cat 1 NF		Cat 2 NF			
Condition	Good		Damaged		Sign. Damaged			
Disturbance	Low		Moderate		High			
Sample ID								
Functional Space	A	B	C	D	E	F	Location	
Homogenous Area								
Description							Notes	
Category	Cat 1 F		Cat 1 NF		Cat 2 NF			
Condition	Good		Damaged		Sign. Damaged			
Disturbance	Low		Moderate		High			
Sample ID								
Functional Space	A	B	C	D	E	F	Location	
Homogenous Area								
Description							Notes	
Category	Cat 1 F		Cat 1 NF		Cat 2 NF			
Condition	Good		Damaged		Sign. Damaged			
Disturbance	Low		Moderate		High			

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 5 – CLEANING RECORD

Cleaning: Cleaning after initial inspection
 Cleaning prior to and after planned work above drop ceiling wiles where friable ACM is present.

Date of Cleaning:

Location Cleaned:

Cleaning methods used:

Names of persons performing the cleaning:

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 6 – OPERATIONS & MAINTENANCE ACTIVITIES AND PREVENTATIVE MEASURES

Building Assessed/Address:

Room Functional Space:

Provide the description of the activity, including preventative measures used, and the location where the activity occurred for those operation and maintenance activities specified under 40 CFR § 7663.91(d) and, under 40 CFR § 763.94(g), for any major asbestos activity conducted under 40 CFR § 763.91(e):

Provide the start and completion dates of the activity:

Provide the name of each person performing the activity and for a major asbestos activity, provide the name, signature, state of accreditation and, if applicable, the accreditation number of each person performing the activity:

If ACM is removed, provide the name and location of the storage or disposal site of the ACM:

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 7 – MAJOR/MINOR FIBER RELEASE EPISODE

Type of episode: Major Fiber Release Minor Fiber Release

Date of episode:

Describe the fiber release episode, including the location, type of ACBM, method of repair, and preventative measure or response action taken:

Provide names of each person performing the work:

If ACBM is removed, the name and location of the storage and disposal site for the ACM:

Building Name:

Address:

(Number ___ of ___, make copies as necessary)

AMP FORM 8 – PREVENTATIVE MEASURES AND RESPONSE ACTIONS

Building Assessed/Address:

Room Functional Space:

Provide a detailed description of each preventative measure and response action taken for friable and nonfriable ACM and friable and nonfriable suspected ACM assumed to be ACM, including methods used, and the location (list all HA's) where the measure or action was taken:

Provide the reason for selecting the preventative measure or response action:

Provide the actual start and completion dates for each preventative measure and response action:

Provide the names and addresses of all contractors involved and, if applicable, their state of accreditation and accreditation numbers:

If ACM is removed, provide the name and location of the storage or disposal site of the ACM:

ATTACHMENTS

- Air sampling documentation required under 40 CFR §763.94(b)(2) at the completion of certain response actions specified under 40 CFR § 763.90(i): name and signature of person collecting any air sample required to be collected, locations where samples were collected, date of collection, name and address of the lab analyzing the samples, date of analysis, results of analysis, method of analysis, name and signature of the person performing the analysis, and a statement that the lab meets the applicable requirements of 40 CFR § 763.90(i)(2)(ii).