



October 10, 2023

Brian Dean
Lowell Housing Authority
350 Moody St
P.O. Box 60
Lowell, MA 01853-0060

Re: Pre-Renovation Asbestos Inspection Report for
Basement-657 Merrimack Street, Lowell, MA
Project # 23-681

Dear Mr. Dean:

At your request *Test-All Environmental Services, Inc.* conducted a pre-renovation inspection for suspect asbestos containing materials in the basement of 657 Merrimack Street, Lowell, MA. As part of the inspection seventy-one (71) samples of suspect materials were collected and analyzed for asbestos content. The inspection was conducted by Carl Pennor, MA DOS Asbestos Inspector License #AI 001719 on September 29, 2023. This report outlines the initial visual survey, sampling, and summary of analytical results provided by *Test-All*.

A. Summary of Asbestos Containing Building Materials:

1. The following building materials and general location were identified as **asbestos-Containing materials**:

Asbestos Containing Material Summary Table				
Material (ACM)	General Location	Conditions F/NF	Estimated Quantity	Sample #s
Textured Ceiling & Joint Compound	Water Heater Room, Storage Room @ Pump & Water Heater Room, Storage @ Elevators, Hall @ Telecom Room and Door B, Hall @ Laundry Room, Transformer Room, Hall @ Workshop, Workshop, Trash Room, Hall @ Garage, Hall @ Bathrooms & Bathroom, Appliance Storage	Spot Damage F	NA	657-06, 11, 12, 20, 22, 23, 32, 33, 34, 35, 36, 37, 38, 41, 51 3% chrysotile

Please See Section D Conclusions & Recommendations

Note: Chrysotile & Amosite are types of asbestos
SF = square feet NA= Not Applicable
F = Friable NF = Nonfriable

Asbestos Containing Material Summary Table				
Material (ACM)	General Location	Conditions F/NF	Estimated Quantity	Sample #s
Wall Joint Compound	Storage Room @ Elevators, Hall @ Bathroom, Room Across Bathroom, Appliance Storage, Kitchen	Good F	NA	681-13, 40, 50, 52, 61 2% chrysotile
Floor Tile Mastic & Non-ACM Floor Tile	Hall @ Elevators, Hall @ Laundry	Good NF	NA	681-18, 19, 28, 29, 30, 31 2% chrysotile
Multi-Layered Floor Tile Bottom Layer ACM	Room Across Bathroom	Good NF	NA	681-44, 46, 48 2% chrysotile
Foam Insulation Adhesive	Section 8 Exterior Walls	Good NF	NA	681-55, 56 2% chrysotile

Please See Section D Conclusions & Recommendations

Note: Chrysotile & Amosite are types of asbestos
SF = square feet NA= Not Applicable
F = Friable NF = Nonfriable

B. Summary of Non-Asbestos Building Materials:

1. The suspect materials listed below were sampled, analyzed and found **not to contain asbestos**. The exact sampling location and analytical results are provided in the analytical data table appendix. These materials may be classified and treated as non-asbestos materials.

Non-Asbestos Material Summary Table		
Material (Non-ACM)	General Location	Sample #s
Covebase & Associated Adhesive	Pump Room, Storage @ Pump & Water Heater Room, Storage @ Elevators, Hall @ Elevators, Hall @ Laundry, Hall @ Bath, Appliance Storage @ Bathroom	681-01, 02, 09, 10, 14, 15, 16, 17, 24, 25, 26, 27, 42, 43, 58, 59
Textured Ceiling	Pump Room	681-03
Joint Compound	Pump Room, Storage @ Pump & Water Heater Room, Telecom Closet @ Door B, Section 8 Offices	681-04, 05, 07, 08, 21, 62
2' x 2' Ceiling Tile	Hall @ Bath, Section 8 Offices	681-39, 57

Non-Asbestos Material Summary Table		
Material (Non-ACM)	General Location	Sample #s
Floor Tile Mastic	Room Across Bathroom, Section 8 Offices Beneath Ceramic Floor Tile	681-45, 47, 49, 65, 68, 71
Floor Tile Thinset & Associated Grout	Section 8 Offices	681-63, 64, 66, 67, 69, 70

C. Bulk Sampling:

1. Bulk samples were collected in a random manner and transported via chain of custody to the Asbestos Identification Laboratory, located in Woburn, MA. Samples were analyzed by Polarized Light Microscopy per EPA method 600/R-93-116, July 1993. The detection limit of the EPA recommended method is one percent asbestos by weight. Materials containing greater than one per cent asbestos are treated as asbestos-containing as determined by the EPA. The laboratory is certified by the National Institute of Standards and Technologies NIST/NVLAP Program (NVLAP# 102079-0) and the Massachusetts Department of Occupational Safety (DOS), # 000162.

D. Conclusions and Recommendations

1. All asbestos containing materials must be removed and disposed of by a MA Licensed Asbestos Abatement Contractor prior to building demolition or any activity that may disturb the material.
2. This report is for the identification of asbestos containing materials only and is not intended to be used as a work plan/specification for the purposes of removal and disposal. Test-All recommends that an asbestos abatement/hazardous material removal specification be drafted prior to the commencement of work.
3. The entire basement excluding the Section 8 Offices has textured ceiling. The majority of the textured ceiling & associated joint compound is asbestos containing except for areas where repairs have been made.
4. The mastic from the non-asbestos containing 12" x 12" floor tile located in the laundry room and hallways is asbestos containing. It appears that asbestos containing mastic was used when these floor tiles were replaced as the remainder of the mastic sampled outside of these areas associated with the original asbestos containing floor tile was non-asbestos containing.
5. Based on laboratory analytical results the original walls in the basement were constructed with asbestos containing joint compound. However, some of the partition walls have been replaced. All of the walls can be included in the abatement contractors scope of work or additional testing can be done to eliminate some of the walls from the abatement contractors scope of work.

6. Quantities will be added to the Abatement Specification once the scope of work is defined.

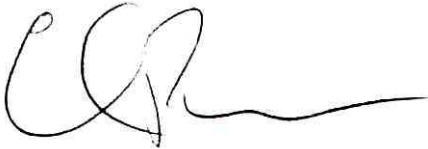
E. Remarks:

1. Any additional suspect materials not identified in this report which become exposed during building renovation and maintenance and should be sampled and analyzed for asbestos content.
2. Areas within walls, drywall encased columns and above ceilings were inspected (if present) in accessible representative locations. However, each individual enclosed area was not inspected. Accessible areas beneath such surfaces were examined and sampled, and material quantities were estimated based on these observations.
3. Homogeneous materials observed to be non-suspect by the inspector include concrete floors, wood flooring/joists, concrete pads which hold equipment, black/brown vinyl flexible duct connectors, fiberglass matt insulation, armaflex (neoprene) insulation and wiring.

Attached please find sample analytical results. Please contact me at your convenience with questions or if you need additional information. Thank you for the opportunity to provide you with our services.

Sincerely,

Test All Environmental Services, Inc.

A handwritten signature in black ink, appearing to read 'CP', followed by a long horizontal flourish.

Carl Pennor



Asbestos Identification Laboratory.

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com Email:
mikemanning@asbestosidentificationlab.com



Batch: 104986

Carl Pennor
Test-All
96 Lancaster Farm Rd.
Salem, NH 03079

Project Information

LHA,
657 Merrimack St.,
Lowell,
MA

Method: BULK PLM ANALYSIS,
EPA/600/R-93/116

Dear Carl Pennor,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The Analysis Method is BULK PLM ANALYSIS, EPA/600/R-93/116. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Carl Pennor for your business.

Michael Manning
Owner/Director

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
01	Cove Base	Pump Room	tan	Non-Fibrous 100	None Detected
1147933					
02	Cove Base Adhesive	Pump Room	multi	Non-Fibrous 100	None Detected
1147934					
03	Text Ceiling	Pump Room	white	Non-Fibrous 100	None Detected
1147935					
04	Wall JC	Pump Room	white	Non-Fibrous 100	None Detected
1147936					
05	Wall JC	Pump Room	white	Non-Fibrous 100	None Detected
1147937					
06	Text Ceiling	Water Heater Rm	white	Non-Fibrous 97	Detected Chrysotile 3
1147938					
07	Wall JC	Storage at Pump and Water Heater Rm	white	Non-Fibrous 100	None Detected
1147939					
08	Wall JC	Storage at Pump and Water Heater Rm	white	Non-Fibrous 100	None Detected
1147940					
09	Cove Base	Storage at Pump and Water Heater Rm	tan	Non-Fibrous 100	None Detected
1147941					
10	Cove Base Adhesive	Storage at Pump and Water Heater Rm	tan	Non-Fibrous 100	None Detected
1147942					
11	Text Ceiling	Storage at Pump and Water Heater Rm	white	Non-Fibrous 97	Detected Chrysotile 3
1147943					
12	Text Ceiling	Storage at Elevators	white	Non-Fibrous 97	Detected Chrysotile 3
1147944					
13	Wall JC	Storage at Elevators	white	Non-Fibrous 98	Detected Chrysotile 2
1147945					
14	Cove Base	Storage at Elevators	tan	Non-Fibrous 100	None Detected
1147946					
15	Cove Base Adhesive	Storage at Elevators	tan	Non-Fibrous 100	None Detected
1147947					
16	Cove Base	Hall at Elevators	black	Non-Fibrous 100	None Detected
1147948					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
17	Cove Base Adhesive	Hall at Elevators	tan	Non-Fibrous 100	None Detected
1147949					
18	FI Tile	Hall at Elevators	brown	Non-Fibrous 100	None Detected
1147950					
19	FI Tile Mastic	Hall at Elevators	multi	Non-Fibrous 98	Detected Chrysotile 2
1147951					
20	Text Ceiling	Hall at Telecom Rm and Door B	white	Non-Fibrous 97	Detected Chrysotile 3
1147952					
21	Wall Joint Compound	Telecom Closet at Door B	white	Non-Fibrous 100	None Detected
1147953					
22	Text Ceiling	Hall at Laundry Rm	white	Non-Fibrous 97	Detected Chrysotile 3
1147954					
23	Text Ceiling	Hall at Laundry Rm	white	Non-Fibrous 97	Detected Chrysotile 3
1147955					
24	2" Cove Base	Hall at Laundry Rm	brown	Non-Fibrous 100	None Detected
1147956					
25	Adhesive from #24	Hall at Laundry Rm	multi	Cellulose 5	None Detected
1147957				Non-Fibrous 95	
26	4" Cove Base	Hall at Laundry Rm	black	Non-Fibrous 100	None Detected
1147958					
27	Adhesive from #26	Hall at Laundry Rm	tan	Non-Fibrous 100	None Detected
1147959					
28	Floor Tile	Hall at Laundry Rm	white	Non-Fibrous 100	None Detected
1147960					
29	Floor Tile Mastic	Hall at Laundry Rm	multi	Non-Fibrous 98	Detected Chrysotile 2
1147961					
30	Floor Tile	Hall at Laundry Rm	white	Non-Fibrous 100	None Detected
1147962					
31	Floor Tile Mastic	Hall at Laundry Rm	multi	Non-Fibrous 98	Detected Chrysotile 2
1147963					
32	Text Ceiling	Transformer Rm	white	Non-Fibrous 98	Detected Chrysotile 2
1147964					

FieldID	Material	Location	Color	Non-Asbestos %		Asbestos %
LabID						
33	Text Ceiling	Transformer Rm	white	Non-Fibrous 98	Detected Chrysotile 2	
1147965						
34	Text Ceiling	Hall at Workshop	white	Non-Fibrous 98	Detected Chrysotile 2	
1147966						
35	Text Ceiling	Workshop	white	Non-Fibrous 98	Detected Chrysotile 2	
1147967						
36	Text Ceiling	Trash Rm	white	Non-Fibrous 98	Detected Chrysotile 2	
1147968						
37	Text Ceiling	Hall at Garage Door	white	Non-Fibrous 98	Detected Chrysotile 2	
1147969						
38	Text Ceiling	Hall at Bathroom	white	Non-Fibrous 98	Detected Chrysotile 2	
1147970						
39	2'x2' Ceiling Tile	Hall at Bathroom	gray	Fiberglass 20	None Detected	
1147971				Mineral Wool 30		
				Cellulose 40		
				Non-Fibrous 10		
40	Joint Compound	Hall at Bathroom	tan	Non-Fibrous 98	Detected Chrysotile 2	
1147972						
41	Text Ceiling	Hall and Admin Bath	white	Non-Fibrous 98	Detected Chrysotile 2	
1147973						
42	Cove Base	Hall at Bath	gray	Non-Fibrous 100	None Detected	
1147974						
43	Cove Base Adhesive	Hall at Bath	tan	Non-Fibrous 100	None Detected	
1147975						
44	Top FI Tile	Rm Across Hall Bath	gray	Non-Fibrous 100	None Detected	
1147976						
45	Mastic from #44	Rm Across Hall Bath	tan	Non-Fibrous 100	None Detected	
1147977						
46	2nd Layer FI Tile	Rm Across Hall Bath	white	Non-Fibrous 100	None Detected	
1147978						
47	Orange Mastic from #46	Rm Across Hall Bath	tan	Non-Fibrous 100	None Detected	
1147979						
48	Bottom Layer FI Tile	Rm Across Hall Bath	tan	Non-Fibrous 98	Detected Chrysotile 2	
1147980						

Carl Pennor Test-All 96 Lancaster Farm Rd. Salem, NH 03079		Project Information LHA, 657 Merrimack St., Lowell, MA		Method: BULK PLM ANALYSIS, EPA/600/R-93/116	
FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
49	Black Mastic from #48	Rm Across Hall Bath	black	Synthetic 5	None Detected
1147981				Non-Fibrous 95	
50	Joint Compound	Rm Across Hall Bath	tan	Non-Fibrous 98	Detected Chrysotile 2
1147982					
51	Text Ceiling	Appliance Storage at Bathroom	white	Non-Fibrous 98	Detected Chrysotile 2
1147983					
52	Wall Joint Compound	Appliance Storage at Bathroom	white	Non-Fibrous 98	Detected Chrysotile 2
1147984					
53	Cove Base	Appliance Storage at Bathroom	gray	Non-Fibrous 100	None Detected
1147985					
54	Cove Base Adhesive	Appliance Storage at Bathroom	tan	Non-Fibrous 100	None Detected
1147986					
55	Green Foam Ins Adhesive	Admin Offices	white	Non-Fibrous 98	Detected Chrysotile 2
1147987					
56	Green Foam Ins Adhesive	Admin Offices	white	Non-Fibrous 98	Detected Chrysotile 2
1147988					
57	2'x2' Ceiling Tile	Admin Offices	gray	Fiberglass 20	None Detected
1147989				Mineral Wool 30	
				Cellulose 40	
				Non-Fibrous 10	
58	Cove Base	Admin Offices File Rm	gray	Non-Fibrous 100	None Detected
1147990					
59	Cove Base Adhesive	Admin Offices File Rm	tan	Non-Fibrous 100	None Detected
1147991					
60	Joint Compound	Admin at Sec. 8	white	Non-Fibrous 100	None Detected
1147992					
61	Joint Compound	Admin at Kitchen	tan	Non-Fibrous 98	Detected Chrysotile 2
1147993					
62	Joint Compound	Admin File Rm	white	Non-Fibrous 100	None Detected
1147994					
63	FI Tile Grout	Admin at HVAC Closet	gray	Non-Fibrous 100	None Detected
1147995					
64	FI Tile Thinset	Admin at HVAC Closet	gray	Non-Fibrous 100	None Detected
1147996					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
65	Black Mastic	Admin at HVAC Closet	black	Synthetic 5	None Detected
1147997				Non-Fibrous 95	
66	FI Tile Grout	Admin File Storage	gray	Non-Fibrous 100	None Detected
1147998					
67	FI Tile Thinset	Admin File Storage	gray	Non-Fibrous 100	None Detected
1147999					
68	Black Mastic	Admin File Storage	black	Synthetic 5	None Detected
1148000				Non-Fibrous 95	
69	FI Tile Grout	Admin Kitchen	gray	Non-Fibrous 100	None Detected
1148001					
70	FI Tile Thinset	Admin Kitchen	gray	Non-Fibrous 100	None Detected
1148002					
71	Black Mastic	Admin Kitchen	black	Synthetic 5	None Detected
1148003				Non-Fibrous 95	

Client: LHA
 Location: 657 Merrimack St, Lowell, MA

Project #: _____
 Date: 9/29/20
 Sampled by: C. Pennor

Sample #	Location	Material	Asbestos Analysis		
			PLM	TEM	Point Count
01	Pump Room	Coarse	x		
02		Coarse Adhesive	x		
03		TEXT Ceiling	x		
04		Wall Jc	x		
05			x		
06	Water Heater Rm	TEXT Ceiling	x		
07	Storage @ Pump & Water Heater Rm	Wall Jc	x		
08			x		
09		Coarse	x		
10		Coarse Adhesive	x		
11		TEXT Ceiling	x		
12	Storage @ Elevators		x		
13		Wall Jc	x		
14		Coarse	x		
15		Coarse Adhesive	x		
16	Hall @ Elevators	Coarse	x		
17		Coarse Adhesive	x		
18		FI Tile	x		
19		FI Tile Mastic	x		
20	Hall @ Telecom Rm & Door B	TEXT Ceiling	x		

Relinquished by: Carl Pennor

Turnaround: Rush 24-Hr 48-Hr

Received by: _____ Date/Time _____

3-Day 4-Day 5-Day

Relinquished by: _____ Date/Time _____

Received by: MB 10/2/23 Date/Time _____

Date/Time _____

Date Needed

48 HR
1-A

Client: _____
 Location: _____

Project #: _____
 Date: _____
 Sampled by: C. Pennor

Sample #	Location	Material	Asbestos Analysis		
			PLM	TEM	Point Count
21	Telecomm closet @ Pool D	Wall Joint Compound	x		
22	Hall @ Laundry rm	Text Ceiling	x		
23			x		
24		2" Caedase	x		
25		Adhesive from #24	x		
26		4" Caedase	x		
27		Adhesive from #26	x		
28		Floor Tile	x		
29		Floor Tile Mastic	x		
30		Floor Tile	x		
31		Floor Tile Mastic	x		
32	Transformer rm	Text Ceiling	x		
33			x		
34	Hall @ Workshop		x		
35	Workshop		x		
36	Trash rm		x		
37	Hall @ Garage door		x		
38	Hall @ Bathroom		x		
39		2'x2' Ceiling Tile	x		
40		Joint Compound	x		

Relinquished by: Carl Pennor
 Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____

Turnaround: Rush 24-Hr 48-Hr

3-Day 4-Day 5-Day

Date Needed

Client: _____
 Location: _____

Project #: _____
 Date: _____
 Sampled by: C. Pennor

Sample #	Location	Material	Asbestos Analysis		
			PLM	TEM	Point Count
41	Hall & Admin Bath	TEXT Ceiling	x		
42	Hall @ Bath	COVERASE	x		
43	↓ V	COVERASE Adhesive	x		
44	Rm across Hall Bath	TOP fl Tile	x		
45		Mastic from #44	x		
46		2nd layer fl Tile	x		
47		Orange mastic from #46	x		
48		Bottom layer fl Tile	x		
49		Purple Mastic from #48	x		
50		JOINT Compound	x		
51	Appliance Storage @ Bathroom	TEXT Ceiling	x		
52		WAN JOINT Compound	x		
53		COVERASE	x		
54		COVERASE Adhesive	x		
55	Admin Office	Green Form Ins Adhesive	x		
56		↓ V	x		
57	Fire	2'x2' Ceiling Tile	x		
58	Admin Office FIRE RM	COVERASE	x		
59		COVERASE Adhesive	x		
60	Admin @ Sec-8	JOINT Compound	x		

Relinquished by: Carl Pennor

Turnaround: Rush 24-Hr 48-Hr

Received by: _____ Date/Time _____

3-Day 4-Day 5-Day

Relinquished by: _____ Date/Time _____

Received by: _____ Date/Time _____

Date/Time _____

Date Needed

Client: _____
 Location: _____

Project #: _____
 Date: _____
 Sampled by: C. Pennor

Sample #	Location	Material	Asbestos Analysis		
			PLM	TEM	Point Count
61	Admin & Kitchen	JOINT Compound	x		
62	Admin File Rm	↓ ↓	x		
63	Admin & HVAC closet	RT Tile Grout	x		
64	↓	RT Tile Thinset	x		
65	↓	Quack Mastic	x		
66	Admin File Storage	RT Tile Grout	x		
67	↓	RT Tile Thinset	x		
68	↓	Quack Mastic	x		
69	Admin Kitchen	RT Tile Grout	x		
70	↓	RT Tile Thinset	x		
71	↓	Quack Mastic	x		
			x		
			x		
			x		
			x		
			x		
			x		
			x		
			x		
			x		

Relinquished by: Carl Pennor
 Received by: _____ Date/Time _____
 Relinquished by: _____ Date/Time _____
 Received by: _____ Date/Time _____
 _____ Date/Time _____

Turnaround: Rush 24-Hr 48-Hr

3-Day 4-Day 5-Day

Date Needed