

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools LEAP High School

Walkthrough Date:
Thursday, January 12, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at LEAP High School by IEA representative, David McNeill. This walkthrough was conducted with the intent of gathering basic air quality and visual observations which will assist the District in making informed and proactive decisions to improve and maintain acceptable air quality in the building. This walkthrough is based upon the Environmental Protection Agency's (EPA's) Tools for Schools IAQ guidelines.

Some observations gathered during the walkthrough may identify issues which may require additional testing, evaluation or further investigation.

The findings, conclusions and recommendations presented herein are believed to be accurate and representative of the building on the date and time of the walkthrough.

GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained from Saint Paul Public Schools at the indicated locations. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary and may not become evident without further assessment.

The report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted indoor air quality practices. Other than as provided in the preceding sentence, no warranties are extended or made.

Building Information

General information regarding the building was collected during the walkthrough. The information gathered during this process is a vital component, as it is helpful in determining how these items may play a role in possible IAQ related issues.

Below is a summary of the information gathered during the walkthrough:

- The building has four (4) floors.
- The building has not had recent construction.
- There are operable windows in the exterior rooms within the building.
- The building was originally constructed in 1924.
- There are additions to the building, in the following year(s): 1966 and 1992.
- The building does utilize walk-off mats.
- There are below grade floors.
- There are tunnels under portions of the building.

Observations Summary and Air Quality Measurements

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					444	0.2	79.9	24.1
3103	0	No		No	577	1.6	20.5	71.8
3104	12	No	• Plants	No	899	0.2	18.3	72.6
3102	6	No	• Stained Ceiling Tiles	No	566	0.2	16.5	72.4
3202	0	No		No	549	0.3	17.0	71.9
3201	0	No	• Stained Ceiling Tiles	No	473	0.2	17.0	70.5
3204	1	No		No	577	0.2	18.0	70.1
3203	20	No	• Stained Ceiling Tiles	No	1,002	0.1	21.8	70.3
3205	10	No		No	618	0.1	18.9	70.7
3206	15	No		No	623	0.1	18.6	70.8
3302	0	No	• Bubbling/Peeling Paint: See Appendix A	No	608	0.3	17.8	73.0
3304	2	No		No	690	0.3	18.0	72.3
3306	0	No	• Bubbling/Peeling Paint: See Appendix A	No	590	0.1	17.6	71.6
3307	0	No		No	507	0.3	18.7	67.7
2305	0	No		No	544	0.1	19.7	68.3
2304	0	No	• Housekeeping: See Appendix A	No	606	0.1	19.1	69.0
2303	8	No		No	638	0.1	19.4	70.0
2304	20	No		No	692	0.1	19.7	70.6
2003	1	No		No	585	0.4	18.6	70.5
2003E	3	No		No	610	0.1	18.8	70.8

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2003D	0	No		No	589	0.1	17.5	71.3
2003C	1	No		No	603	0.1	17.8	71.1
2003B	0	No		No	569	0.1	17.4	71.6
2003A	0	No		No	568	0.2	17.5	71.5
2002	2	No	<ul style="list-style-type: none"> Bubbling/Peeling Paint: See Appendix A 	No	622	0.1	18.6	71.1
2001	0	No		No	558	0.1	17.5	71.0
2001E	0	No		No	578	0.1	17.1	71.6
2001D	0	No		No	555	0.1	17.0	72.2
2001C	0	No		No	567	0.1	16.6	72.4
2001B	0	No		No	549	0.1	16.6	72.6
2102	5	No		No	593	0.1	17.1	72.5
2103	15	No		No	675	0.4	18.0	71.6
2107	0	No		No	498	0.1	14.6	73.4
2104	5	No		No	625	0.1	16.3	73.1
2106	0	No		No	457	0.2	15.0	71.6
1109	0	No		No	620	0.1	18.9	69.8
1108	2	No		No	553	0.1	17.3	70.8
1204	3	No		No	452	0.1	16.0	69.8
1204B	1	No		No	451	0.1	16.4	69.6
1107	0	No	<ul style="list-style-type: none"> Housekeeping: Storage 	No	549	0.1	17.6	69.9
1106	1	No		No	525	0.1	18.8	68.6
1105	0	No		No	559	0.1	18.8	68.7
1103	1	No		No	593	0.1	20.0	69.4
1102	1	No		No	601	0.1	18.9	70.0
1102A	0	No		No	587	0.1	18.3	69.6
1101	8	No		No	710	0.1	19.8	70.1

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1001	6	No		No	618	0.1	18.8	71.0
1002	0	No		No	576	0.1	17.6	71.3
1003	0	No		No	634	0.1	17.9	71.8
1302	0	No	<ul style="list-style-type: none"> Bubbling/Peeling Paint: See Appendix A 	No	570	0.1	17.6	71.1
1303	0	No		No	564	0.1	18.4	70.4
1304	5	No	<ul style="list-style-type: none"> Bubbling/Peeling Paint: See Appendix A 	No	628	0.1	17.9	73.1
1205S	1	No		No	509	0.1	14.2	71.6
1205N	2	No		No	452	0.1	14.4	71.5
1401N	2	No		No	535	0.3	17.6	69.3
1401S	1	No		No	510	0.2	17.5	68.8
1406	0	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	545	0.1	18.7	68.0
1202	0	No		No	496	0.1	17.6	70.0
1201	15	No		No	630	0.1	18.2	70.1
CAFETERIA	45	No		No	729	0.1	20.5	72.0
KITCHEN	3	No		No	703	0.1	20.1	72.5
KITCHEN OFFICE	2	No		No	714	0.1	20.4	72.4

Summary of Concerns & Recommendations

See below for IEA's list of concern areas and recommendations:

Indoor Air Quality Parameters/Guidelines

IEA recorded area(s) with humidity levels outside the ASHRAE recommended range of 30 - 60%. Relative humidity levels identified in area(s) listed below were found to be outside these guidelines. Low humidity levels tend to dry mucous membranes which may result in increased susceptibility to irritation. Elevated humidity levels can lead to condensation and provide conditions conducive to fungal growth. Low relative humidity is common in buildings during the heating season. An evaluation of the ventilation system controls, performance and operation is recommended.

- IEA identified sixty-one (61) rooms with relative humidity levels below 30%. However, this is common for non-humidified buildings during the heating season and is not considered an issue.

IEA recorded area(s) with temperatures outside the recommended range. During the heating season, ASHRAE recommends that temperatures be between 68°F and 75°F. Evaluation of temperature controls and/or ventilation system performance and operation is recommended.

- 3307

Stained Ceiling Tiles

Stained ceiling tiles were found in the room(s) shown below. The impacted ceiling tiles should be removed and replaced, and the cause of the moisture repaired.

- 1406
- 3102
- 3201
- 3203

Bubbling/Peeling Paint Concerns

IEA observed bubbling/peeling paint in area(s) within the room(s) listed below.

Bubbling/peeling paint can be caused by moisture issues. IEA recommends investigating the cause and repairing the paint. IEA recommends ensuring that the paint is not lead-based prior to disturbance.

- 1302
- 1304
- 2002
- 3302
- 3306

Plants

Plants in an occupied location can be a source of allergens to sensitized individuals due to the pollen and soil mold. It is recommended that plants be removed from locations occupied by sensitized individuals. If plants are to remain in the area, IEA recommends that plants should not be placed near air unit ventilators or air supply diffusers. Additionally, plants should be watered from the bottom. These measures will help control pollen and mold spores from becoming airborne.

- 3104

Poor Housekeeping

Area(s) identified by IEA as having poor housekeeping (excessive clutter, excessive dust/debris on horizontal surfaces, etc.) were documented within the building. Poor housekeeping can limit building maintenance from conducting a proper cleaning of the area. This can result in elevated potential for allergen issues in sensitized individuals due to dirt and debris loading. Poor housekeeping can also allow for pest (insects and rodents) issues in the space.

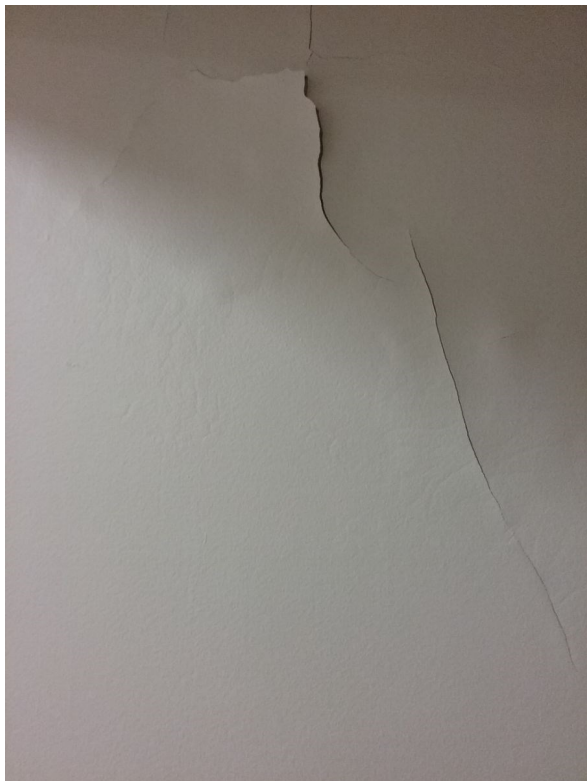
- 1107

Storage

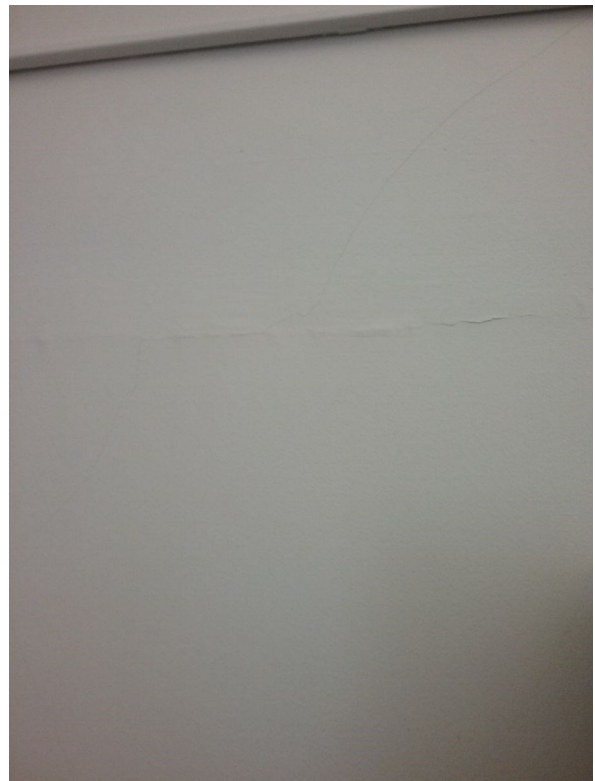
- 2304

Appendix A

Photo Documentation



3302
Bubbling/Peeling Paint



3306
Bubbling/Peeling Paint



2304
Housekeeping



2002
Bubbling/Peeling Paint



1302

Bubbling/Peeling Paint



1304

Bubbling/Peeling Paint