

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Hubbs Lifelong Learning

Walkthrough Date:
Wednesday, January 11, 2023
Retest Date: March 23, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Hubbs Lifelong Learning by IEA representative, Sashya Wandmaker. 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 one (1) floor.
- The building has not had recent construction.
- There are inoperable windows in the exterior rooms within the building.
- The building was originally constructed in 1993.
- The building does utilize walk-off mats.
- There are no below grade floors.
- There are no 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					439	0.9	84.0	32.0
1109	1	No		No	617	0.8	20.5	73.4
1110	1	No		No	573	0.8	20.3	72.7
1209	2	No		No	550	0.8	18.8	72.3
1212	0	No		No	584	0.9	19.6	72.7
1215	5	No	• Stained Ceiling Tiles	No	628	1.0	21.9	73.4
1214	9	No		No	709	1.1	21.3	72.3
1216	0	No		No	557	0.9	22.1	72.5
1213	13	No		No	928	1.1	21.7	74.5
1210	0	No		No	565	1.1	17.4	75.9
1211	1	No		No	588	1.1	16.9	76.5
1217	0	No		No	581	1.1	17.2	74.7
1218	0	Yes Fragrance		No	554	1.1	17.6	73.9
1219	0	No		No	517	1.0	17.4	73.4
1220	0	No		No	563	1.0	18.2	72.9
1205	1	No		No	627	0.9	20.5	72.3
1206	19	No		No	1,060	0.9	23.1	72.0
1204	22	No		No	1,313	0.9	25.3	72.3
RETEST 1204	25	No		No	1,457	0.0	23.4	70.6
1203	1	No		No	611	0.9	19.0	72.3
1201 LOUNGE	4	No		No	655	0.8	19.9	72.3
1507	0	No		No	575	0.8	19.9	71.1
1506	0	No		No	609	0.7	19.7	71.2

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1505	2	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	645	0.7	20.5	71.1
1504	3	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	670	0.7	21.0	71.1
1501	1	No		No	640	0.7	20.9	71.2
1503	0	No	<ul style="list-style-type: none"> Stained Ceiling Tiles Plants 	No	607	0.7	20.2	70.7
1502	1	No		No	652	0.7	20.7	70.2
1000 LOBBY	1	No	<ul style="list-style-type: none"> Plants 	No	620	0.7	20.8	70.5
1005	0	No		No	582	0.7	19.9	70.5
1003	1	No		No	688	0.7	21.1	70.2
1002	1	No		No	637	0.6	20.9	70.3
1001	1	No		No	632	0.7	20.6	70.7
1004	0	No		No	620	0.7	20.4	70.7
1101	2	Yes Fragrance		No	629	0.6	20.0	70.9
1102	1	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	628	0.7	20.1	70.9
1103	1	No		No	630	0.6	20.0	71.1
1104	0	No		No	596	0.7	19.9	70.9
1105	0	No		No	597	0.6	20.1	70.7
1107	0	No		No	616	0.6	20.0	70.7
1106	0	No		No	593	0.6	20.1	70.5
1108	0	No		No	578	0.6	19.7	70.7
1509	1	No		No	674	0.6	20.7	70.7
1512	0	No		No	625	0.6	20.7	70.0
1510	0	No		No	596	0.6	21.0	70.3
1513	1	No		No	642	0.6	21.3	69.1
1301/1401	13	No		No	901	0.6	24.0	69.3
1402	14	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	898	0.6	22.9	70.3
1404	0	No		No	600	0.6	21.4	70.5
1403	0	No		No	630	0.6	20.5	70.0
1405	0	No		No	635	0.6	21.6	69.8

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1307/1407	5	No		No	784	0.6	22.3	70.2
1406	0	No		No	628	0.6	20.2	70.5
1409	0	No		No	662	0.6	20.2	70.7
1408	10	No	<ul style="list-style-type: none"> Plants 	No	708	0.6	18.6	73.4
1413	21	No	<ul style="list-style-type: none"> Bubbling/Peeling Paint: See Appendix A 	No	1,223	0.8	23.9	73.2
RETEST 1413	12	No		No	745	0.0	19.8	68.0
1415	0	No		No	838	0.6	19.6	75.7
1416	18	No		No	1,123	0.9	20.4	76.1
RETEST 1416	16	No		No	1,032	0.0	21.4	69.0
1411	0	No		No	792	0.7	18.8	74.8
1410	0	No		No	779	0.7	18.6	74.8
1417	0	No		No	681	0.7	18.9	72.3
1418	0	No		No	696	0.6	19.2	72.7
1422	0	No		No	671	0.6	18.9	72.7
1421	1	No		No	713	0.6	18.4	73.4
1420	0	No		No	663	0.6	18.4	73.8
1425	0	No		No	676	0.6	18.5	73.6
1426	0	No		No	696	0.5	20.0	71.1
1427	0	No		No	667	0.5	20.2	70.7
1428	0	No		No	682	0.5	20.2	71.1
1429	0	No		No	669	0.5	19.8	71.1
1419	1	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	823	0.5	21.3	71.6
1316	11	No		No	894	0.6	22.0	71.1
1320	0	No		No	676	0.5	20.3	70.9
1319	0	No		No	682	0.5	21.5	70.2
1317/1318	0	No		No	674	0.5	21.1	69.4
1315	0	No		No	675	0.5	21.6	68.7
1309	6	No		No	812	0.4	23.3	68.9
1313	0	No		No	709	0.4	21.8	69.4

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1308	0	No		No	697	0.5	21.3	69.6
1302	1	No	• Plants	No	726	0.5	21.0	70.7
1303	0	No		No	683	0.5	20.9	70.7
1304	0	No	• Plants	No	699	0.5	21.0	70.3
1305	0	No		No	680	0.5	20.7	70.5
1306	0	No		No	704	0.5	21.0	70.7
1310	3	No		No	934	0.5	21.8	70.7
1312	2	No		No	897	0.6	22.7	70.2
1311	2	No		No	1,067	0.6	24.4	70.3

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 carbon dioxide measurements above 1,200 ppm in the room(s) listed below. IEA considers carbon dioxide measurements above 1,200 ppm as an indication of a possible ventilation issue. The ventilation system(s) serving the location(s) with these levels should be evaluated.

- 1204
- RETEST 1204
- 1413

After IEA completed the initial IAQ walkthrough, the ventilation system(s) serving rooms with carbon dioxide measurements at or above 1,100 ppm were evaluated by SPPS. After ventilation adjustments or repairs were made, IEA returned to those rooms on March 23, 2023, to repeat the walkthrough. The "retest" data is included in this report for reference.

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 eighty-eight (88) 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.

- 1210
- 1415
- 1211
- 1416

Odors

Odors were detected during the site visit in the building. If the source of the odor cannot be easily identified, IEA can provide further investigation or recommendations.

- 1101 *Fragrance*
- 1218 *Fragrance*

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.

- 1102
- 1215
- 1402
- 1419
- 1503
- 1504
- 1505

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.

- 1413

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.

- 1000 LOBBY
- 1302
- 1304
- 1408
- 1503

Appendix A

Photo Documentation



1413

Bubbling/Peeling Paint