

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Saint Paul Music Academy

Walkthrough Date:
Wednesday, November 30, 2022

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Saint Paul Music Academy by IEA representative, Brian Bergstrom. 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 two (2) 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 1970.
- There are additions to the building, in the following year(s): 1973.
- 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					427	0.2	75.0	17.0
1218 CUSTODIAL OFFICE	0	No		No	660	0.2	15.5	73.0
1211	6	No		No	675	0.1	12.2	71.7
1209	24	No		No	1,333	0.0	19.4	72.4
1206	0	No		No	802	0.1	13.6	71.1
1207	0	No		No	626	0.0	14.1	71.5
1204	3	No		No	534	0.0	12.7	70.9
1205	3	No		No	532	0.0	12.8	71.1
1312	0	No		No	570	0.2	13.9	69.7
1313	0	No		No	671	0.0	16.6	70.1
1311	0	No		No	683	0.0	17.3	70.3
1309	4	No		No	947	0.0	17.4	71.1
1307	12	No		No	1,071	0.0	16.7	71.1
1306	11	No		No	881	0.0	14.7	72.1
1305	8	No		No	914	0.1	16.8	71.4
1304	20	No		No	1,166	0.2	15.9	69.1
1303	32	No		No	1,618	0.1	26.7	70.2
1302	3	No		No	995	0.1	17.5	69.0
1317	0	No		No	1,239	0.0	23.9	70.4
1320	0	No		No	867	0.0	16.2	71.1
1321	0	No		No	787	0.8	16.8	71.2
1203	2	No		No	666	0.0	14.6	71.5
1202	23	No		No	840	0.0	17.1	72.0

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1201	17	No		No	903	0.0	18.0	72.2
1216	0	No		No	812	0.0	18.1	72.4
1106 GYMNASIUM	36	No		Yes Air Supply, Ceiling Tiles Around Air Supply	812	0.0	14.9	70.6
1104	18	No		No	992	0.0	18.2	71.3
1103	15	No	• Plants	No	969	0.0	20.2	70.8
1105	19	No	• Aquariums (fish)	No	1,143	0.1	23.5	69.6
1108	0	No		No	699	0.0	16.8	70.9
1110	2	No		No	727	0.0	17.1	70.4
1116	0	No		No	568	0.6	14.9	67.6
1111	2	No		No	929	0.0	19.3	67.8
1219	0	No		No	748	0.0	17.1	68.8
2001 MAIN OFFICE	3	No		No	879	0.0	17.0	69.9
PRINCIPAL'S OFFICE 2	2	No		No	813	0.0	16.0	70.0
2005	0	No		No	809	0.0	15.9	69.9
2006	3	No		No	860	0.0	16.8	69.7
2213	0	No		No	904	0.1	14.1	76.0
2212	0	No		No	984	0.0	14.5	74.7
2211	0	No		No	989	0.2	14.1	74.1
2007	0	No		No	808	0.0	16.3	69.8
2008	0	No		No	800	0.0	15.9	69.8
2009	0	No		No	792	0.0	15.7	69.0
2010 NURSE	3	No		No	860	0.0	18.6	69.2
2002	2	No		No	840	0.1	17.7	70.0
2103	1	No		No	972	0.0	17.9	70.6
2016	1	No		No	885	0.0	17.6	71.5
2102	20	No		No	1,018	0.0	18.0	71.5

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2101	2	No		No	1,018	0.1	19.0	71.3
2201	15	No	• Plants	No	1,269	0.0	20.4	71.5
2202	20	No		No	1,256	0.0	19.7	71.3
2210	0	No		No	844	0.1	13.7	73.3
2209	13	No		No	1,160	0.2	16.6	72.0
2208	15	No		No	1,028	0.1	15.9	71.6
2207	0	No		No	682	0.0	11.9	70.6
2204	2	No		No	701	0.2	13.1	70.5
MEDIA CENTER	15	No		No	785	0.0	14.6	70.8
2104	9	No		No	1,290	0.1	19.9	70.7
2105	20	No		No	1,750	0.0	26.5	71.5
2107	20	No		No	1,762	0.1	25.5	71.2
2106	23	No		No	1,503	0.0	23.4	71.6
2313	0	No		No	990	0.0	18.9	70.6
2312	1	No		No	960	0.0	14.6	71.0
2310	0	No		No	1,060	0.0	16.2	70.1
2311	0	No		No	1,114	0.0	17.0	69.3
2309	17	No		No	1,359	0.0	21.7	71.2
2308	0	No		No	684	0.1	11.2	71.3
2307	26	No		No	1,580	0.0	20.4	71.8
2306	23	No		No	1,251	0.0	20.4	72.4
2305	24	No		No	921	0.0	16.6	72.5
2304	23	No		No	1,361	0.0	18.5	72.6
1303	22	No		No	1,306	0.0	20.0	72.4
2302	3	No		No	1,290	0.0	18.3	72.4
2301	5	No		No	1,052	0.0	16.7	72.2
2317	4	No		No	1,318	0.1	21.3	72.2
2319	0	No		No	1,016	0.0	15.9	72.5
2300	2	No		No	1,064	0.0	18.4	72.8

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1308	0	No		No	1,119	0.1	16.5	71.8
1301	8	No		No	1,212	0.0	18.3	71.9
CAFETERIA	89	No		No	1,012	0.0	20.8	69.7
1210	15	No		No	866	0.1	13.3	69.8

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.

- 1209
- 1301
- 1303
- 1303
- 1317
- 2104
- 2105
- 2106
- 2107
- 2201
- 2202
- 2302
- 2304
- 2306
- 2307
- 2309
- 2317

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-one (81) 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.

- 1111
- 1116
- 2213

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.

- 1103
- 2201

Live Animals / Aquariums

IEA observed live animal(s). Prior to having animals, the Building Principal should be consulted. Consult parents about potential allergies in a take-home note with students or during parent-teacher conferences. IEA recommends that the animal and cages/cases are regularly cleaned/maintained and stored away from air supply and return vents.

- 1105

Dust Accumulation

IEA observed dust accumulation in the following room(s) and recommend that the specified area is wiped clean using a damp rag.

- 1106 GYMNASIUM *Air Supply, Ceiling Tiles Around Air Supply*