

IEA, INC.

2022 - 2023 IAQ Walkthrough



Contact Us:

BROOKLYN PARK OFFICE

9201 W. BROADWAY, #600
BROOKLYN PARK, MN 55445
763-315-7900

MANKATO OFFICE

610 N. RIVERFRONT DRIVE
MANKATO, MN 56001
507-345-8818

ROCHESTER OFFICE

210 WOOD LAKE DRIVE SE
ROCHESTER, MN 55904
507-281-6664

BRAINERD OFFICE

601 NW 5TH STREET SUITE #4
BRAINERD, MN 56401
218-454-0703

MARSHALL OFFICE

1420 EAST COLLEGE DRIVE
MARSHALL, MN 56258
507-476-3599

VIRGINIA OFFICE

5525 EMERALD AVENUE
MOUNTAIN IRON, MN 55768
218-410-9521

www.ieasafety.com

info@ieasafety.com

800-233-9513

Saint Paul Public Schools Horace Mann School

Walkthrough Date:
Friday, February 17, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Horace Mann School 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 three (3) 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 1930.
- There are additions to the building, in the following year(s): 1939, 1954 and 1995.
- 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					420	9.0	74.0	7.0
CUSTODIAL OFFICE	1	No		Yes Tops of pipes	614	0.4	15.4	68.7
0204	1	No		No	583	0.2	10.3	70.0
1001	1	No	• Plants	No	597	0.3	11.3	69.5
105	1	No		No	596	0.1	11.7	69.5
1002	1	No		No	628	0.2	11.7	69.9
1003 WORKROOM	1	No		No	617	0.4	10.8	69.4
1101	28	No	• Live Animals • Plants	No	846	0.2	32.7	70.0
MEDIA CENTER	24	No		Yes Air Supply, Wall next to air supply	714	0.3	10.7	69.1
1102	28	No	• Plants	No	764	0.1	12.3	70.0
1003	20	No	• Stained Ceiling Tiles	Yes Air Return	860	0.4	11.7	68.7
1306	19	No		Yes Ceiling Tiles Around Air Supply	768	0.0	10.4	71.2
GYMNASIUM	24	No	• Bubbling/Peeling Paint: Throughout ceiling	Yes Tops of ductwork	547	0.3	9.5	71.1
1307	18	No	• Live Animals	No	801	0.3	11.8	70.7
1504	50	No		Yes Air Return	623	0.1	8.8	71.1
KITCHEN	1	No		Yes Air Supply	1,214	1.7	13.7	70.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1505D	1	No		No	1,378	1.3	15.0	71.2
1303	0	No		No	685	0.1	9.4	72.7
1202	24	No	• Plants	No	800	0.1	10.6	73.9
1205	23	No	• Plants	No	711	0.1	10.0	74.2
1204	24	No		No	714	0.2	10.0	75.5
0210	0	No	• Stained Ceiling Tiles	No	553	0.3	8.8	71.2
0210A	3	No		No	584	0.1	9.8	71.5
0206	0	No		No	543	0.0	8.5	72.1
1203	2	No	• Plants	No	700	0.7	8.8	74.0
1601	2	No	• Plants	No	555	0.3	7.9	72.6
1603	23	No		No	846	0.2	10.7	72.3
1605	24	No		No	817	0.2	10.9	72.7
1600S LOCKER BAY WORK AREA	0	No		No	684	0.4	9.3	72.4
2205	24	No	• Plants	No	900	0.1	11.2	72.0
2206	26	No	• Plants	No	887	0.1	11.0	73.2
2204	2	No	• Taxidermy	No	581	0.1	8.6	70.4
2207	6	No	• Stained Ceiling Tiles	No	608	0.0	8.8	73.4
2202	1	No		No	619	0.3	8.5	72.5
3201	2	No		No	652	0.2	8.3	71.8
2301	3	No	• Stained Ceiling Tiles	No	546	0.1	8.2	72.1
2303	28	No	• Stained Ceiling Tiles • Plants	No	711	0.3	9.5	71.7
2305	23	No		No	695	0.1	9.4	72.2
2300S LOCKER BAY WORK AREA	40	No		No	627	0.3	8.7	72.5
2302	2	No		No	529	0.2	7.3	72.2
2304	16	No		No	619	0.2	8.8	71.2
2309	5	No		No	623	0.3	8.1	71.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2102	0	No	- Stained Ceiling Tiles - Plants	No	629	0.1	9.1	71.1
2103	15	No		No	768	0.0	12.1	73.8
2104	1	No		No	535	0.3	8.0	72.1
2105	24	No		No	807	0.1	11.3	72.7
WORK AREA OUTSIDE 2102	0	No	Plants	No	601	0.2	9.0	71.3
2308	0	Yes Essential oils		No	514	0.3	8.0	71.5
1501	0	No		No	484	0.3	7.1	71.6

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.

- 1505D
- KITCHEN

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 forty-seven (47) 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.

- 1204

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.

- 2308 *Essential oils*

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.

- 0210
- 1003
- 2102
- 2207
- 2301
- 2303

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.

- GYMNASIUM *Throughout ceiling*

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.

- 1001
- 1101
- 1102
- 1202
- 1203
- 1205
- 1601
- 2102
- 2205
- 2206
- 2303
- WORK AREA OUTSIDE 2102

Taxidermy

IEA observed area(s) with taxidermy mounts present. Individuals with allergies or asthma may be sensitive to dust, animal fur, or dander, and may have a reaction when exposed to these allergens. IEA recommends using an alternative to taxidermy mounts if allergen symptoms are found by occupants within the classroom.

- 2204

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.

- 1101
- 1307

Dust Accumulation

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

- | | | | |
|--------------------|--|----------------|--|
| • 1003 | <i>Air Return</i> | • GYMNASIUM | <i>Tops of ductwork</i> |
| • 1306 | <i>Ceiling Tiles Around Air Supply</i> | • KITCHEN | <i>Air Supply</i> |
| • 1504 | <i>Air Return</i> | • MEDIA CENTER | <i>Air Supply, Wall next to air supply</i> |
| • CUSTODIAL OFFICE | <i>Tops of pipes</i> | | |