

IEA, INC.

2021 - 2022 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 John A. Johnson Elementary School

Walkthrough Date:
Wednesday, November 24, 2021

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at John A. Johnson Elementary School 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 four (4) floors.
- The building was originally constructed in 1911.
- There are additions to the building, in the following year(s): 1925, 1926, and 2000.
- There are operable windows in the exterior rooms within the building.
- The building does utilize walk-off mats.
- There are below grade floors.
- There are no tunnels under portions of the building.

Observations Summary and Air Quality Measurements

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS						341	2.0	47.8	43.0
2002 MAIN OFFICE	3	Carpet, VCT	No		No	396	1.5	25.0	70.1
2002E	1	Carpet	No		No	408	1.9	24.7	70.1
2002B	0	Carpet	No		No	394	2.0	24.8	70.0
2002C	0	Carpet	No		No	416	2.0	24.5	69.5
2001	0	Carpet	No		No	438	1.9	24.7	71.6
2003A	1	VCT	No		No	483	2.1	25.6	70.6
2003B	0	VCT	No		No	436	2.0	24.6	71.0
2003	0	VCT	No		No	452	2.1	25.3	70.6
2003D	0	VCT	No		No	465	2.0	24.4	70.6
2003E	0	VCT	No		No	450	2.0	24.1	70.9
2003F	0	VCT	No		No	443	1.9	24.2	69.6
2004	0	Carpet	No		No	462	2.1	24.5	71.0
2005	1	Carpet, VCT	No		No	482	1.9	23.5	72.4
2005A	0	Carpet	No		No	491	2.1	22.6	72.8
2103	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	461	2.2	23.2	71.8
2103D	0	Carpet	No		No	475	2.1	23.6	70.8
2103C	0	Carpet	No		No	456	1.9	24.2	70.7
2103B	1	Carpet	No		No	506	1.8	24.4	71.2
2104	0	Carpet, VCT	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	451	1.8	24.7	69.8
2107	0	Carpet	No		No	463	1.9	24.7	70.3
2107F	0	Carpet	No		No	483	1.8	24.3	70.6

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2107E	0	Carpet	No		No	482	1.8	24.2	70.5
2107D	0	Carpet	No		No	490	1.8	24.4	69.9
2107C	0	Carpet	No		No	469	1.6	24.5	70.6
2109	0	VCT	No		No	454	1.7	24.1	71.0
2113	0	VCT	No		No	441	1.7	23.7	71.2
2115	0	Carpet	No		No	475	1.6	24.1	71.0
2108	4	Carpet, VCT	No		No	498	1.7	24.7	70.8
2102	0	Carpet	No		No	455	1.7	24.4	71.7
2314	0	VCT	No		No	503	1.7	23.6	71.8
2301	5	Carpet, VCT	No		No	500	1.6	24.3	71.4
2319	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	491	1.6	24.0	71.4
2320	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	535	1.6	24.5	70.7
2317	5	Carpet, VCT	No		No	505	1.5	24.8	70.6
2315	9	Carpet, VCT	No		No	587	1.3	25.5	70.8
2316	0	Carpet	No		No	557	1.4	24.8	70.9
2313	0	VCT	No		No	476	1.3	23.6	71.4
1105	12	VCT	No		No	449	1.3	24.4	70.4
1105C	0	Tile / Quarry	No		No	500	1.4	25.0	69.9
1105J	4	Tile / Quarry	No		No	425	1.2	24.4	70.2
3005	2	Carpet	No		No	562	1.3	23.1	72.3
3400	0	Carpet	No		No	529	1.3	22.1	73.0
3402	1	Carpet	No		No	539	1.4	22.5	73.2
3403	0	Carpet	No		No	507	1.3	21.5	73.8
3404	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	514	1.5	21.9	73.1
3405	0	Carpet	No		No	530	1.6	22.6	72.5
3406	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	520	1.5	22.6	72.4

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
3407	0	Carpet	No		No	527	1.5	22.7	72.3
3408	1	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles Plants 	No	588	1.4	24.7	72.4
3409	1	Carpet	No		No	583	1.3	22.7	72.7
3410	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	565	1.3	23.0	72.2
3301	15	Carpet	No		No	643	1.3	24.6	72.9
3301B	0	Carpet	No		No	577	1.4	23.8	71.8
3301A	0	Carpet	No		No	601	1.4	23.2	71.6
3202	0	Carpet, VCT	No		No	543	1.3	22.6	73.6
4204	1	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	591	1.6	21.3	74.2
4206	0	Carpet	No		No	560	1.4	20.8	74.3
4301	0	Carpet	No		No	537	1.5	22.5	71.9
4301B	0	Carpet	No		No	514	1.3	23.9	70.3
4301A	0	Carpet	No		No	534	1.4	24.5	69.7
4303	21	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	814	1.1	25.9	72.0
4303A	0	Carpet	No		No	664	1.1	22.9	73.0
4303B	0	Carpet	No		No	604	1.2	23.5	72.3
4305	15	Carpet	No		No	778	1.2	24.8	72.8
4307	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	541	1.2	22.6	72.2
4309	0	Carpet	No		No	533	1.2	23.4	70.6
4311	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	530	1.1	21.8	72.4
4111	1	Carpet	No		No	535	1.2	22.8	71.8
4113	2	Carpet	No		No	541	1.2	23.4	72.0
4113A	0	Carpet	No		No	550	1.2	23.3	72.0

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
4331B	0	Carpet	No		No	616	1.2	24.1	71.9
4115	21	Carpet	No	• Plants	No	674	1.2	23.7	73.2
4117	12	Carpet	No	• Aquariums (fish)	No	658	1.3	24.0	73.3
4117B	0	Carpet	No		No	656	1.4	23.9	72.9
4117A	0	Carpet	No		No	531	1.3	23.3	72.1
4201	0	Carpet	No	• Stained Ceiling Tiles • Aquariums (fish) • Plants	No	479	1.2	23.1	71.4
4203	0	Carpet	No	• Plants	No	501	1.2	23.5	71.5
4205	1	Carpet	No		No	524	1.1	23.4	71.6
4207	0	VCT	No		No	502	1.1	23.2	71.4
3003	0	Carpet	No		No	488	1.3	22.4	71.9
3001	0	Carpet	No		No	490	1.2	22.8	71.9
3111	0	Carpet	No		No	485	1.2	22.4	71.7
3113	1	Carpet	No		No	502	1.2	23.8	70.3
3113A	1	Carpet	No	• Stained Ceiling Tiles	No	533	1.2	25.2	69.4
3113B	0	Carpet	No		No	528	1.2	24.8	69.6
3115	15	Carpet	No		No	546	1.0	25.3	70.4
3117	21	Carpet	No		No	613	1.0	25.0	71.3
3117B	2	Carpet	No		No	692	1.1	24.5	72.1
3117A	0	Carpet	No		No	619	1.1	22.6	71.7
3201	20	Carpet, VCT	No		No	552	1.3	23.9	71.7
3201B	0	Carpet	No		No	563	1.1	22.6	73.1
3203	15	Carpet, VCT	No		No	533	1.3	22.2	73.5
3303	0	Carpet	No		No	508	1.4	22.7	72.4
3303B	0	Carpet	No	• Stained Ceiling Tiles	No	488	1.3	22.9	72.0
3303A	0	Carpet	No		No	488	1.3	23.5	71.9

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
3305	0	Carpet	No		No	509	1.3	23.2	71.9
3305B	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	504	1.3	23.6	71.0

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 ninety-seven (97) 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.

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.

- 2103
- 2104
- 2319
- 2320
- 3113A
- 3303B
- 3305B
- 3404
- 3406
- 3408
- 3410
- 4201
- 4204
- 4303
- 4307
- 4311

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.

- 3408
- 4115
- 4201
- 4203

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.

- 4117
- 4201