

IEA, INC.

# 2022 - 2023 IAQ Walkthrough



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## Saint Paul Public Schools Groveland Park Elementary School

Walkthrough Date:  
Tuesday, February 14, 2023  
Retest Date: March 22, 2023

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## Project Description

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IEA conducted an Indoor Air Quality (IAQ) walkthrough at Groveland Park Elementary School by IEA representative, Jon Gorostiaga. 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.

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## Building Information

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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 and inoperable windows in the exterior rooms within the building.
- The building was originally constructed in 1921.
- There are additions to the building, in the following year(s): 1934 and 1980.
- 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 <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					439	0.7	45.3	40.0
1320 GYMNASIUM	0	No		No	432	0.8	24.3	71.1
1311 OFFICE	1	No		No	817	0.6	26.3	70.2
1301 OFFICE	0	No		No	803	0.6	26.3	69.8
1302 CHILD CARE	4	No		No	858	0.7	27.4	69.1
1319	0	No		No	555	0.5	25.1	70.0
1321 STAFF LOUNGE	0	No		No	499	0.5	24.9	70.3
1200 LIBRARY	1	No		No	525	0.5	24.9	70.2
1201 OFFICE	2	No		No	515	0.5	25.1	70.5
1135	25	No		No	911	0.5	26.3	72.0
1123	5	No		No	578	0.6	25.1	72.1
1120 KITCHEN	3	No		No	541	0.5	25.6	72.7
1118 KITCHEN OFFICE	1	No		No	826	0.6	25.6	73.0
1113	26	No		No	669	0.6	25.7	72.3
1105	19	No		No	582	0.5	24.8	71.8
1101 CAFETERIA	5	No		No	470	0.5	24.3	71.2
2138	30	No		No	885	0.4	26.7	72.9
2142	25	No		No	930	0.5	28.0	73.0
2139	21	No		No	777	0.5	25.6	73.2
2137	30	No		No	1,415	0.5	31.0	73.8
RETEST 2137	27	No		No	833	0.0	24.5	71.0
2024 NURSE OFFICE	1	No		No	567	0.5	22.6	75.6
NURSE COT ROOM	0	No		No	619	0.5	24.2	77.0
2130 NURSE WAITING	1	No		No	570	0.6	21.4	77.7

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
2021 NURSE OFFICE	1	No		No	562	0.6	21.8	76.8
2000 MAIN OFFICE	3	No		No	577	0.6	22.5	75.9
2012 OFFICE	0	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	634	0.5	23.1	75.7
2011 OFFICE	1	No		No	629	0.5	23.1	75.6
2014 STAFF WORKROOM	0	No		No	548	0.5	22.9	74.8
2015 OFFICE	1	No		No	577	0.4	23.7	73.8
2123	23	No		No	634	0.4	24.5	74.3
2113	21	No		No	920	0.4	27.7	74.8
2109	1	No		No	495	0.4	22.3	74.5
2103	1	No		No	516	0.4	23.1	73.2
2102	22	No		No	853	0.3	26.8	71.6
2104	23	No		No	848	0.3	26.9	71.4
3136 STAFF LOUNGE	2	No		No	654	0.4	25.2	72.9
3138	23	No		No	1,095	0.4	28.8	73.0
3142	1	No		No	803	0.4	25.4	73.6
3139	1	No		No	660	0.5	24.8	72.3
3137	6	No		No	735	0.3	24.9	72.1
3123	4	No	<ul style="list-style-type: none"> <li>Plants</li> </ul>	No	621	0.4	24.8	73.4
3124	11	No		No	752	0.4	25.5	74.5
3121 OFFICE	0	No		No	509	0.6	24.3	74.3
3120 OFFICE	1	No		No	599	0.4	25.5	72.9
3114	2	No		No	724	0.4	26.1	73.4
3113	6	No		No	638	0.5	25.0	73.4
3108	2	No		No	821	0.4	26.0	73.6
3109	1	No		No	558	0.5	24.6	73.4
3104	30	No		No	1,264	0.4	30.0	72.5
RETEST 3104	28	No		No	1,012	0.0	23.6	71.1
3103	26	No		No	743	0.4	28.7	71.1

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
3102	30	No		No	1,022	0.4	30.3	70.7

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## Summary of Concerns & Recommendations

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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.

- 2137
- 3104

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 22, 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 forty-nine (49) 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.

- 2000 MAIN OFFICE
- 2011 OFFICE
- 2012 OFFICE
- 2021 NURSE OFFICE
- 2024 NURSE OFFICE
- 2130 NURSE WAITING
- NURSE COT ROOM

### **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.

- 2012 OFFICE

## **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.

- 3123