

IEA, INC.

# 2022 - 2023 IAQ Walkthrough



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## Saint Paul Public Schools RiverEast School

Walkthrough Date:  
Monday, February 6, 2023

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## Project Description

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IEA conducted an Indoor Air Quality (IAQ) walkthrough at RiverEast School by IEA representative, Eddie Anderson. 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 one (1) floor.
- The building has not had recent construction.
- There are operable windows in the exterior rooms within the building.
- The building was originally constructed in 1111.
- 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 <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					800	0.5	16.7	21.6
1102	0	No		No	464	0.1	11.1	72.0
1103	0	No		No	455	0.1	10.5	72.9
1105	0	No	• Condensation	No	461	0.1	10.6	72.7
1106	0	No		No	451	0.1	10.4	72.6
1107	1	No		No	481	0.1	10.8	73.0
1104A	4	No		No	492	0.1	11.0	73.5
1104B	3	No		No	495	0.1	10.8	74.6
1112	0	No		No	485	0.2	10.1	73.9
1110	0	No		No	484	0.1	10.5	74.0
1120A	1	Yes Fragrance		No	510	0.1	9.9	75.7
1120	1	No		No	583	0.2	10.2	75.6
1121	0	No		No	475	0.2	9.7	73.8
1711	0	No		No	450	0.2	10.3	72.4
1710	0	No		No	462	0.1	0.2	71.8
1705	0	Yes Stuffy		No	552	0.1	11.5	71.6
1701	4	No		No	578	0.1	12.3	72.0
1701A	0	No		No	526	0.1	11.6	72.1
1701B	1	No		No	460	0.1	11.2	71.7
1702	6	No		No	731	0.1	0.1	71.6

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
1702A	2	No		No	623	0.1	0.1	71.6
1703	0	No		No	521	0.1	11.3	71.4
1713	0	No		No	475	0.1	11.6	71.1
1707	0	No		No	548	0.1	11.9	71.2
1708	0	No		No	537	0.1	12.4	71.3
1612	0	No		No	498	0.1	10.9	71.6
1611	0	No		No	453	0.1	10.8	71.3
1601A	0	No		No	606	0.1	12.4	70.6
1601	3	No		No	574	0.1	12.1	71.5
1602	1	No		No	506	0.1	11.4	72.6
1602A	0	No		No	476	0.1	11.1	72.9
1607	0	No		No	456	0.1	11.2	71.9
1608	0	No		No	722	0.1	42.8	71.7
1603	0	Yes Fragrance		No	532	0.1	11.8	71.6
1606	0	No		No	466	0.1	12.7	71.1
1303	0	Yes Fragrance		No	524	0.1	11.6	71.4
1304	0	No		No	469	0.1	10.6	70.7
1305	0	Yes Stuffy		No	604	0.1	11.9	70.5
1504	0	No		No	493	0.1	10.5	70.3
1505	0	No		No	465	0.1	11.6	70.5
1507	0	No		No	479	0.1	12.0	70.6
1510	0	No		No	475	0.1	11.9	70.9
1503	6	No		No	629	0.1	13.3	71.3
1503A	0	No		No	617	0.1	12.4	71.8

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
1503B	1	No		No	452	0.1	11.0	71.6
1502	1	No		No	483	0.1	11.3	71.8
1502A	0	No		No	507	0.1	11.9	72.3
1501	2	No		No	495	0.1	11.8	72.4
1501A	0	No		No	508	0.1	12.3	72.2
1501B	0	No		No	484	0.1	11.7	72.9
1511	0	No		No	652	0.1	12.4	72.7
1512	0	No		No	525	0.1	11.8	72.1
1513	0	No		No	478	0.1	11.2	71.8
1515	0	No		No	491	0.1	10.8	72.0
1415	0	No	• Taxidermy	No	628	0.1	12.3	72.4
1413	0	No		No	438	0.1	10.7	72.2
1412	0	Yes Stuffy		No	485	0.1	11.8	71.8
1411	0	No		No	735	0.1	13.1	71.7
1401	5	No		No	553	0.1	12.9	72.3
1401A	0	No		No	523	0.1	12.7	72.7
1402B	1	Yes Fragrance		No	482	0.1	12.6	73.7
1402	4	No		No	488	0.1	11.5	73.5
1402A	1	No		No	459	0.1	11.5	73.1
1402B	1	No		No	498	0.1	11.1	73.1
1403	1	No	• Plants	No	480	0.1	11.7	73.1
1403A	0	No		No	466	0.1	12.1	73.0
1407	0	No		No	525	0.1	11.7	72.4
1406	0	No		No	572	0.1	12.5	72.2
1405	0	No		No	529	0.1	11.6	71.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
1404	0	No		No	463	0.1	11.0	71.5
1309	6	No		No	756	0.1	15.8	71.7
1308	1	No		No	480	0.1	12.2	72.0
1307	1	No		No	483	0.1	12.5	72.0
1306	1	No		No	488	0.1	11.9	72.0
GYMNASIUM	4	No		No	558	0.2	11.7	69.4
1148	1	No		No	536	0.1	13.7	69.8
1147	1	No		No	499	0.1	12.2	70.3
1146	1	No		No	499	0.1	12.0	70.2
1145	7	No		No	727	0.1	15.5	71.1
KITCHEN	3	No		No	506	0.1	13.7	72.2
1142	0	No		No	625	0.1	14.1	72.8
1133	1	No		No	476	0.1	12.1	72.0
1125	0	No		No	517	0.1	12.5	72.2
1126	0	No		No	482	0.1	12.2	72.5
1127	0	No		No	457	0.1	11.7	72.3
1706	0	No		No	669	0.1	13.6	72.7
1108	0	No		No	495	0.1	12.5	72.7
1109	0	No		No	516	0.1	11.8	72.4
1601B	3	No		No	898	0.1	14.1	71.9

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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 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-seven (87) 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.

- 1120
- 1120A

### **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.

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|---------|------------------|--------|------------------|
| • 1120A | <i>Fragrance</i> | • 1412 | <i>Stuffy</i>    |
| • 1303  | <i>Fragrance</i> | • 1603 | <i>Fragrance</i> |
| • 1305  | <i>Stuffy</i>    | • 1705 | <i>Stuffy</i>    |
| • 1402B | <i>Fragrance</i> |        |                  |

### **Condensation Concerns**

IEA located area(s) where condensation was forming. Condensation on interior sources can increase the humidity in the area and may become a source of microbial growth. Temperature differentials that cause condensation on surfaces may suggest a ventilation concern and should be evaluated. Window condensation and frost can also contribute to condensation during extreme cold outdoor temperatures.

- 1105



**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.

- 1403

**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.

- 1415