

IEA, INC.

# 2022 - 2023 IAQ Walkthrough



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## Saint Paul Public Schools Journeys Secondary School

Walkthrough Date:  
Tuesday, January 17, 2023

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## Project Description

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IEA conducted an Indoor Air Quality (IAQ) walkthrough at Journeys Secondary 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.

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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 four (4) 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 1932.
- 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					382	0.9	85.0	34.0
CUSTODIAL OFFICE	1	No	<ul style="list-style-type: none"> <li>Moisture Impacted Materials: See Appendix A</li> </ul>	No	542	0.6	25.3	77.6
1114	1	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: Above nurses desk; See Appendix A</li> </ul>	No	454	0.6	24.4	74.5
1112	0	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: NE corner of room; See Appendix A</li> </ul>	No	464	0.5	24.6	73.4
1111	5	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: NW corner around pipe</li> </ul>	No	603	0.6	25.9	73.9
1110 WOODSHOP	0	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: SW corner in front of window; See Appendix A</li> </ul>	No	453	0.6	24.3	73.8
1109	1	No		No	517	0.6	25.0	73.8
1106	0	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: On ceiling in front of window; See Appendix A</li> </ul>	No	460	0.6	24.1	74.1
1104	0	No		No	462	0.5	23.9	74.5
1104A	0	No		No	469	0.5	24.5	73.9
1001	2	No		No	494	0.6	24.2	74.5
1003	0	No		No	481	0.6	24.3	74.1
1005	1	No		No	504	0.5	24.5	74.3
1004	0	No		No	464	0.5	24.3	74.1
1006	0	No		No	476	0.6	24.3	73.9
1101	1	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: See Appendix A</li> </ul>	No	502	0.5	24.8	73.9
1116	0	No	<ul style="list-style-type: none"> <li>Bubbling/Peeling Paint: Around windows</li> </ul>	No	459	0.5	24.7	73.6

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
1116A OFFICE	0	No	• Bubbling/Peeling Paint: Throughout ceiling	No	451	0.5	24.8	72.9
1118	4	No		No	503	0.5	24.7	73.9
1115 CAFETERIA	6	No	• Bubbling/Peeling Paint: NE corner of rom	No	468	0.5	25.1	73.2
STAGE	0	No	• Bubbling/Peeling Paint: Ne corner area of stage	No	431	0.5	25.6	72.3
1117 KITCHEN	2	No		No	455	0.5	27.7	72.7
2114	1	No	• Bubbling/Peeling Paint: See Appendix A	No	477	0.5	25.6	72.3
2115	1	No		No	478	0.5	25.5	72.5
2112 MEDIA CENTER	1	No		No	459	0.5	24.8	73.2
2112A	0	No		No	463	0.5	25.2	73.4
2112B	1	No		No	508	0.5	24.8	73.4
2108	2	No		No	507	0.5	25.1	73.4
2106	0	No		No	453	0.5	24.3	73.6
2104	0	No		No	460	0.5	24.3	73.4
2105	1	No	• Bubbling/Peeling Paint: East side of windows • Plants	No	490	0.5	25.0	73.6
2102	2	No	• Bubbling/Peeling Paint: Associated with pipes; See Appendix A	No	534	0.5	24.7	74.7
2101	6	No		No	544	0.5	25.7	75.4
3101	5	No	• Stained Ceiling Tiles	No	470	0.5	24.8	73.8
3102	0	No	• Bubbling/Peeling Paint: East Wall; See Appendix A	No	456	0.5	23.7	74.8
3105	2	No	• Bubbling/Peeling Paint: Throughout ceiling	No	484	0.5	23.7	75.4
3104	0	No		No	446	0.5	23.6	74.7
3107	1	No	• Bubbling/Peeling Paint: Ceiling above window	No	455	0.5	24.3	73.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
3106	5	No	• Plants	No	522	0.5	24.8	74.1
3108	4	No	• Bubbling/Peeling Paint: Throughout ceiling	No	524	0.5	25.1	73.9
3112	0	No	• Bubbling/Peeling Paint: On ceiling in front of windows; Under windows on West side	No	464	0.5	24.4	73.6
3113	3	No		No	437	0.6	26.1	70.7
3114	0	No		No	505	0.4	25.9	72.5
3114A	1	No	• Bubbling/Peeling Paint: Underneath windows	No	498	0.5	25.8	72.5
3115	3	No	• Bubbling/Peeling Paint: Throughout ceiling	No	468	0.5	24.1	74.1
3111	1	No		No	486	0.6	24.3	74.3
3116	1	No	• Bubbling/Peeling Paint: On wall underneath windows; On ceiling above windows.	No	460	0.5	24.5	73.8
2107	2	No	• Stained Ceiling Tiles	No	590	0.5	26.4	73.4

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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 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.

- 2101
- 3105
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### **Moisture-Impacted Building Material Concerns**

Moisture-impacted building materials should be repaired or replaced when discoloration or water staining is observed. Moisture-impacted building materials can be a source for microbial growth. The source for the moisture infiltration should be investigated and repaired if not easily identified.

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### **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.

- 2107
- 3101

### **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.

- |                |                                      |         |  |
|----------------|--------------------------------------|---------|--|
| • 1101         |                                      | • 2114  |  |
| • 1106         | <i>On ceiling in front of window</i> | • 3102  | <i>East Wall</i>   |
| • 1110         | <i>SW corner in front of window</i>  | • 3105  | <i>Throughout ceiling</i>  |
| WOODSHOP       |                                      | • 3107  | <i>Ceiling above window</i>  |
| • 1111         | <i>NW corner around pipe</i>         | • 3108  | <i>Throughout ceiling</i>  |
| • 1112         | <i>NE corner of room</i>             | • 3112  | <i>On ceiling in front of windows ; Under windows on West side</i> |
| • 1114         | <i>Above nurses desk</i>             | • 3114A | <i>Underneath windows</i>  |
| • 1115         | <i>NE corner of rom</i>              | • 3115  | <i>Throughout ceiling</i>  |
| CAFETERIA      |                                      | • 3116  | <i>On wall underneath windows ; On ceiling above windows.</i>      |
| • 1116         | <i>Around windows</i>                | • STAGE | <i>Ne corner area of stage</i>                                     |
| • 1116A OFFICE | <i>Throughout ceiling</i>            |         |  |
| • 2102         | <i>Associated with pipes</i>         |         |  |
| • 2105         | <i>East side of windows</i>          |         |  |

### **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.

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|--------|--------|
| • 2105 | • 3106 |
|--------|--------|

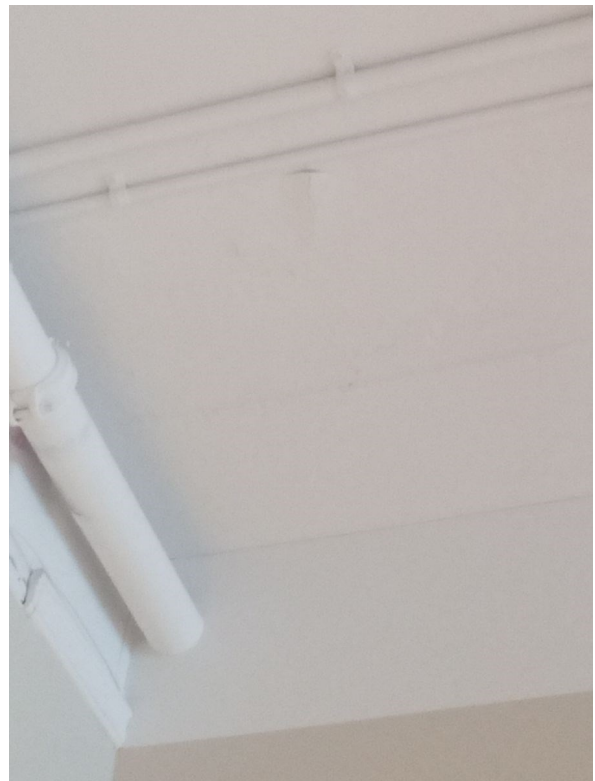


## **Appendix A**

### Photo Documentation



**CUSTODIAL OFFICE**  
Moisture Impacted Materials



**1114**  
Bubbling/Peeling Paint



**1112**  
Bubbling/Peeling Paint



**1110 WOODSHOP**  
Bubbling/Peeling Paint



1106

Bubbling/Peeling Paint



1101

Bubbling/Peeling Paint



2114

Bubbling/Peeling Paint



2102

Bubbling/Peeling Paint



3102

Bubbling/Peeling Paint