

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Bridge View School

Walkthrough Date:
Tuesday, November 29, 2022
Retest Date: March 21, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Bridge View 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.

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 one (1) floor.
- The building has not had recent construction.
- There are inoperable windows in the exterior rooms within the building.
- The building was originally constructed in 1973.
- 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 ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					250	0.5	29.0	28.5
1105 EXERCISE ROOM	0	No		No	345	0.2	26.9	68.9
1106 OFFICE	3	No		No	610	0.2	26.0	70.2
1111	0	No		No	908	0.4	29.1	70.9
1113	0	No		No	1,077	0.3	26.1	70.3
1112	0	No		No	1,007	0.4	24.6	70.0
1201 AND 1202 GYMNASIUM	0	No		No	736	0.3	24.4	70.0
1301 STAFF	2	No		No	617	0.3	24.1	71.2
1301A STAFF KITCHEN	0	No		No	930	0.2	24.0	71.4
1321	4	No		No	753	0.3	23.5	70.7
1320	7	No	• Plants	No	983	0.3	24.1	69.8
1302 LIBRARY	0	Yes Stuffy		No	522	0.2	23.4	71.2
1303	5	No		No	1,068	0.3	24.1	71.4
1318	2	No	• Plants	No	657	0.3	23.1	70.9
1317 LOUNGE	8	No		No	822	0.3	25.1	71.2
1316	0	No		No	421	0.3	23.0	70.0
1315	3	No	• Plants	No	714	0.3	23.9	69.3
1311	5	No		No	1,499	0.2	23.8	69.8
RETEST 1311	8	No		No	723	0.1	19.4	70.4
1306	1	No		No	1,825	0.3	24.2	70.3
RETEST 1306	0	No		No	499	0.0	17.2	70.1
1610	8	No		No	1,912	0.3	24.8	69.6
RETEST 1610	9	No		No	636	0.0	18.8	70.8
1609	9	No		No	949	0.2	24.8	69.6

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1602	10	No		No	847	0.3	25.8	69.4
1603	12	No		No	1,777	0.2	26.6	69.1
RETEST 1603	11	No		No	1,444	0.0	18.9	70.3
1608	2	No		No	1,343	0.3	24.7	68.7
RETEST 1608	5	No		No	583	0.0	17.1	70.2
1607	7	No		No	1,232	0.2	25.9	68.0
RETEST 1607	8	No		No	718	0.0	18.6	69.7
1606	0	No		No	919	0.2	25.8	67.3
1605	0	No		No	959	0.2	25.8	66.9
1604	0	No		No	656	0.2	25.3	68.0
1500 CAFETERIA	3	No		No	1,014	0.2	24.6	69.3
1501 KITCHEN	2	No		No	644	0.2	27.3	70.0
1401	3	No		No	454	0.3	25.3	68.9
1402	0	No		No	630	0.2	25.3	68.7
1408	2	Yes Fragrance		No	473	0.2	24.4	69.3
1407	0	No		No	643	0.2	24.2	69.4
1403	2	No		No	409	0.3	24.9	68.4
1404	4	No		No	717	0.2	25.1	68.9
1406	0	No		No	518	0.2	23.9	69.3
1405	2	No		No	475	0.2	23.8	70.3
1001 OFFICE	1	No		No	385	0.2	23.9	70.9
1007 COPY ROOM	0	No		No	777	0.2	24.8	72.0
1005 OFFICE	0	No		No	970	0.3	23.0	71.6
1004 OFFICE	0	No		No	570	0.3	23.4	72.5
1003 PRINCIPLE	0	No		No	397	0.3	22.9	73.0
1008 CONFERENCE	0	No		No	834	0.3	23.1	72.7
1009 HEALTH OFFICE	1	No		No	522	0.3	23.4	73.0
1009A NURSE STORAGE	1	No		No	541	0.3	24.1	73.8

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.

- 1306
- 1311
- 1603
- 1607
- 1608
- 1610
- RETEST 1603

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 21, 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 fifty-one (51) 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.

- 1605
- 1606

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.

- 1302 LIBRARY *Stuffy*
- 1408 *Fragrance*

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.

- 1315
- 1320
- 1318