

IEA, INC.

2020 - 2021 IAQ Walkthrough



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Fridley ISD #14 Hayes Elementary School

Walkthrough Date & Time:
Monday, April 5, 2021
12:00 PM to 2:00 PM

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Hayes 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 Fridley ISD #14 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 was originally constructed in 1965.
- There are additions to the building, in the following year(s): 1988, 2013 and 2016.
- 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						413	1.2	33.7	74.0
CAFETERIA	25	Tile	No		Yes Ceiling Tiles Around Air Supply	545	1.5	31.6	74.8
MEDIA CENTER	0	Carpet	No	• Stained Ceiling Tiles	No	455	1.8	27.5	74.1
300B	0	Carpet, Rugs	No		Yes Air Return	477	1.7	27.5	74.1
MEDIA CENTER OFFICE	1	Carpet	No	• Stained Ceiling Tiles	No	516	1.5	28.5	74.8
120	1	Carpet	No		No	877	1.7	28.7	74.4
127	20	Tile	No		No	1,082	1.6	32.3	74.6
118	0	Carpet	No		No	934	1.5	30.2	74.3
125	0	Carpet, Rugs	No		No	846	1.3	27.7	75.0
116	7	Carpet, Rugs	No		No	987	1.5	28.8	74.9
123	19	Carpet	No		No	1,195	1.3	31.4	74.1
121	14	Carpet	No		No	1,018	1.3	30.9	74.5
114	0	Carpet, Rugs	No		No	1,011	1.5	30.3	74.5
119	1	Carpet	No		No	922	1.4	30.0	74.2
112	16	Carpet	No		No	1,182	1.4	31.9	74.6

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
144	3	Tile, Rugs	No	• Stained Ceiling Tiles	No	600	1.1	32.3	74.3
143	0	Tile, Rugs	No		No	617	1.3	30.7	74.2
142	0	Wood, Rugs	No		No	687	1.1	32.7	73.7
141	1	Tile, Rugs	No		No	1,889	1.3	34.2	74.0
140	1	Tile, Rugs	No		No	669	1.3	33.6	72.7
145	1	Tile, Rugs	No	• Stained Ceiling Tiles	No	851	1.2	31.6	73.8
146	0	Tile, Rugs	No		No	830	1.1	31.7	74.8
147	0	Tile, Rugs	No		No	781	1.1	30.9	74.1
148	0	Tile, Rugs	No	• Plants	No	879	1.3	30.6	74.3
117	0	Carpet	No		No	611	1.1	32.9	74.7
110	1	Carpet	No		No	666	1.3	32.2	74.7
115	19	Carpet, Rugs	No		No	780	1.1	33.4	74.9
113	17	Carpet, Rugs	No		No	729	1.2	34.2	74.4
111	0	Carpet	No		No	621	1.1	31.6	74.9
109	19	Carpet, Rugs	No		Yes Air Intake	726	1.2	33.9	74.4
106	3	Carpet, Rugs	No		No	624	1.1	32.2	74.3

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
GYMNASIUM	16	Wood	No		No	604	1.3	30.0	74.2
107	0	Carpet	No		No	676	1.2	30.8	74.7
105	0	Tile, Rugs	No		No	720	1.1	32.0	74.7
104	0	Tile, Rugs	No		No	523	1.3	31.0	74.7
102	0	Tile, Rugs	No		No	513	1.1	33.4	74.1
103	0	Tile, Rugs	No		No	675	1.1	32.2	74.7
101	1	Tile	No		No	535	1.1	33.0	74.1
MAIN OFFICE	1	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	Yes Air Return	723	1.3	29.7	74.1
MAIN OFFICE FORMER NURSE'S OFFICE	0	Tile	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	657	1.3	28.5	74.1
MRS IVERSON'S OFFICE	2	Carpet	No		No	739	1.1	28.0	75.0
MAIN OFFICE CONFERENCE ROOM	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	744	1.1	28.0	74.4
139	2	Carpet	No	<ul style="list-style-type: none"> Plants 	No	771	1.3	28.7	74.5
137	0	Carpet	No		No	760	1.3	27.9	74.2
135	0	Carpet	No		No	760	1.1	27.1	74.1
133	2	Carpet, Rugs	No		No	831	1.4	29.8	74.1
126	4	Carpet, Tile	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	930	1.3	26.7	74.4
131	0	Carpet	No		No	794	1.2	29.1	74.6

Room / Location	Number of Occupants	Flooring Type	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
129	0	Carpet, Rugs	No		No	800	1.1	27.8	74.3
124	0	Carpet	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	826	1.3	29.3	74.7
122	1	Carpet	Yes Musty		No	926	1.1	29.8	74.9
CUSTODIAL OFFICE	1	Terrazzo, Rugs	No	<ul style="list-style-type: none"> Stained Ceiling Tiles Suspect Microbial Growth: Ceiling tile with sprinkler 	No	695	1.2	33.4	74.3

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.

- 141

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 nineteen (19) 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.

Odors

Odors were detected during the site visit in the building. If the source for the odor cannot be easily identified, it is recommended that further investigation be conducted by a professional consulting service.

- 122 *Musty*

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.

- 124
- 126
- 144
- 145
- CUSTODIAL OFFICE
- MAIN OFFICE
- MAIN OFFICE CONFERENCE ROOM
- MAIN OFFICE FORMER NURSE'S OFFICE
- MEDIA CENTER
- MEDIA CENTER OFFICE

Suspect Microbial Growth Concerns

IEA observed building materials with possible microbial growth that should be removed and/or cleaned under controlled conditions, per the Minnesota Department of Health *Recommended Best Practices for Mold Remediation in Minnesota Schools* guidelines (<https://www.health.state.mn.us/communities/environment/air/docs/schools/remediation.pdf>) or following the Institute of Inspection, Cleaning and Restoration (IICRC) S520 Standard and Guide for Professional Mold Remediation to prevent possible contamination of adjacent locations and impact to building occupants. Further assessment or fungal sampling may be necessary to identify a scope of work for a professional mold remediation contractor.

- CUSTODIAL OFFICE *Ceiling tile with sprinkler*

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.

- 139
- 148

Dust Accumulation

IEA observed dust accumulation in the following room(s) and recommend that the specified area is wiped clean using a damp rag.

- 109 *Air Intake*
- 300B *Air Return*
- CAFETERIA *Ceiling Tiles Around Air Supply*
- MAIN OFFICE *Air Return*