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Jordan Public Schools



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2016-2017 IAQ Walkthrough

Jordan Middle School

Inspection Date:

February 28, 2017



Project Description

IEA conducted an annual IAQ walkthrough survey for Jordan Middle School. This survey was conducted using a standardized protocol with the intent of gathering basic air quality data which will assist the district in making informed and proactive decisions to improve and maintain acceptable air quality in Jordan Public Schools. This survey satisfies and follows the "EPA Tools for Schools" IAQ guidelines.

Observations gathered during the walkthrough survey may identify issues which require additional testing, evaluation, or further investigation.

The protocol used for conducting the IAQ walkthrough survey includes two primary components:

- **Collect General Building Information:** A brief interview with building maintenance personnel for each facility to collect information on use of the building, water infiltration, and/or indoor air quality concern areas, and recent renovations or upgrades to the building.
- **Walkthrough Evaluation:** Conduct a walkthrough of the occupied spaces in each building to document obvious water intrusion problems, obvious ventilation failures/problems, obvious building/structure failures and/or problems, overall cleanliness of buildings and classrooms, and the need for operation and maintenance programs.

The two components of the walkthrough investigation are interrelated. Therefore, effective interpretation and evaluation of indoor air quality issues must rely on the information obtained in both phases of the investigation.

IEA employs an internal review process throughout the survey and in developing a written final report. The findings, conclusions, and recommendations presented herein are believed to be accurate and representative of Jordan Middle School at the time of the survey.



Building Description

Building description does not apply to this building.



Observations and Air Quality Measurements

Building Observations (with Air Sampling Results)

Observations and air sampling results collected on February 28, 2017 are outlined in the following table:

Room # or Location	Time	# of Occ.	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)	Comments
MAIN OFFICE	1:27 PM	3	577	0	30	68	
400	1:30 PM	1	644	0	29	70	
419	1:32 PM	7	741	0	29	71	
419 B	1:34 PM	4	855	0	30	71	
419C	1:35 PM	5	788	0	29	71	
417	1:38 PM	32	845	0	30	71	
416	1:40 PM	4	813	0	29	71	
411	1:41 PM	23	1029	0	30	71	
409-410	1:43 PM	29	1108	0	20	71	
412	1:45 PM	3	802	0	29	70	
407	1:46 PM	30	918	0	30	71	
406	1:48 PM	16	1032	0	30	72	
404	1:50 PM	26	1016	0	30	72	
305	1:52 PM	4	606	0	27	71	
304	1:54 PM	2	600	0	27	71	
GYM	1:56 PM	2	635	0	27	70	
302	1:57 PM	0	498	0	26	70	
301	1:59 PM	13	520	0	27	71	Wood Odor from Shop Class
301B	2:01 PM	0	451	0	25	72	
311	2:08 PM	1	517	0	27	71	
300	2:10 PM	0	659	0	28	72	
211 KITCHEN	2:13 PM	0	516	0	27	71	
COMMONS	2:22 PM	3	528	0	27	70	
214	2:24 PM	0	624	0	29	70	
220	2:25 PM	3	1151	0	31	71	
218	2:27 PM	0	1149	0	31	71	
222 CHOIR	2:29 PM	42	1427	0	33	72	
224	2:30 PM	2	583	0	25	72	
232	2:31 PM	0	564	0	25	72	
235	2:34 PM	1	578	0	25	72	
212	2:36 PM	0	753	0	27	72	
206	2:38 PM	0	674	0	27	71	
200	2:40 PM	24	842	0	29	72	
202	2:41 PM	24	1331	0	33	72	
204	2:43 PM	24	707	0	26	73	
109	2:46 PM	1	555	0	26	71	
112	2:49 PM	26	975	0	30	72	
116	2:51 PM	1	601	0	26	72	
118	2:53 PM	12	996	0	29	72	
120	2:54 PM	0	754	0	27	72	



JORDAN PUBLIC SCHOOLS
JORDAN MIDDLE SCHOOL

Observations and air sampling results collected on February 28, 2017 are outlined in the following table:

Room # or Location	Time	# of Occ.	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)	Comments
122	2:56 PM	25	838	0	28	72	
123	2:57 PM	25	874	0	29	71	
127	2:59 PM	0	700	0	27	72	
FITNESS CENTER - CERC	3:03 PM	1	582	0	28	70	
GYM - CERC	3:05 PM	4	748	0	30	70	
UPPER TRACK - CERC	3:08 PM	0	707	0	29	70	
600-601 - CERC	3:10 PM	0	638	0	29	71	
UPPER COMMONS - CERC	3:12 PM	2	628	0	28	72	
LOWER COMMONS - CERC	3:13 PM	10	674	0	28	72	
OUTDOORS	3:14 PM	0	405	1	33	55	

ppm = parts per million



Summary of Identified Concerns

Obvious moisture issues

- No obvious moisture issues were observed

Overall cleanliness of building and classrooms

- The following area(s) contained plants:
 - LOWER COMMONS - CERC
 - MAIN OFFICE - 224
- The following odor(s) were observed during the site survey:

<u>Room #</u>	<u>Odor Description</u>
301	Wood Odor from Shop Class

Obvious ventilation failures and/or problems

- The following area(s) had carbon dioxide (CO₂) levels that were higher than 1,200 ppm:
 - 202
 - 222 CHOIR

Obvious building/structural failures and/or problems

- No obvious interior or exterior structural issues were observed at the time of the site survey.

Assess the need for O&M programs (e.g., ventilation, carpet, building components)

- O&M issues identified above may require changes to the existing building O&M program. See the following recommendations.



Recommendations

Carbon dioxide measurements over 1,200 ppm were detected in the building. IEA considers carbon dioxide measurements above 1,200 ppm as an indication of a possible ventilation issue. The air-handling systems serving the locations with these levels should be evaluated. Possible issues with air distribution and/or the control system may be the source for the carbon dioxide measurements.

ASHRAE recommends an indoor relative humidity range of 30-60%. Relative humidity levels identified in one or more areas of this building were outside these guidelines. Low humidity levels tend to dry mucous membranes which may result in increased susceptibility to irritation. An evaluation of the ventilation system controls, performance, and operation is recommended.

Low relative humidity is common in buildings during the heating season.

Plants in an occupied location can be a source of allergen to sensitized individuals due to 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, the following actions are recommended:

- Water plants from the bottom to aid in preventing fungal growth on the soil surface
- Do not locate plants on top of unit ventilators, if present in a room, to prevent soil and leaves from falling into the units.

Do not locate plants near air supply diffusers which will limit air currents over the plants and may prevent pollen or mold spores from becoming airborne.

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