



Contact Us:

BROOKLYN PARK OFFICE

9201 W. BROADWAY, #600
BROOKLYN PARK, MN 55445
763-315-7900

MANKATO OFFICE

610 N. RIVERFRONT DRIVE
MANKATO, MN 56001
507-345-8818

ROCHESTER OFFICE

210 WOOD LAKE DRIVE SE
ROCHESTER, MN 55904
507-281-6664

BRAINERD OFFICE

601 NW 5TH STREET SUITE #4
BRAINERD, MN 56401
218-454-0703

MARSHALL OFFICE

1420 EAST COLLEGE DRIVE
MARSHALL, MN 56258
507-476-3599

VIRGINIA OFFICE

5525 EMERALD AVENUE
MOUNTAIN IRON, MN 55768
218-410-9521

www.ieasafety.com

info@ieasafety.com

800-233-9513

Springfield Public Schools
K-12

Inspection Date
04-04-2019



Observations and Air Quality Measurements

Observations and air sampling results are outlined in the following table:

Room / Location	Time	Number of Occupants	CO2 (ppm)	CO (ppm)	RH (%)	Temp. (F)	Comments/Observations
C167	9:40 AM	0	506	1	23	73	
C172	10:14 AM	18	949	1	27	73	Stained ceiling/ceiling tiles
C176	10:15 AM	0	716	1	23	75	Window open
C165 District Office	10:17 AM	3	589	0	21	75	
C179	10:19 AM	0	535	0	22	75	Stained ceiling/ceiling tiles
Technology & Community Education	10:20 AM	2	564	0	21	74	
C125	10:22 AM	12	617	1	23	74	
C124	10:23 AM	23	763	0	24	74	
C123	10:24 AM	1	589	0	22	72	
C120 Lounge	10:26 AM	0	530	0	23	73	
C148	10:27 AM	1	583	0	22	74	Stained ceiling/ceiling tiles
C150 Media Center	10:28 AM	2	434	0	22	73	Stained ceiling/ceiling tiles
Media Center Office	10:30 AM	1	477	0	22	73	
C151	10:31 AM	0	459	0	22	73	Stained ceiling/ceiling tiles
C138	10:31 AM	11	588	0	24	72	Plants, Taxidermy
C218	10:33 AM	0	886	0	25	74	Bubbling/peeling paint, Window open
C217	10:36 AM	0	921	0	23	75	Window open
C216	10:38 AM	20	908	0	24	75	
C221	10:39 AM	0	713	0	22	76	
C207 HS Office	10:41 AM	4	683	0	21	76	
DeBerg Office	10:42 AM	0	773	0	21	76	
C211 Conference Room	10:43 AM	0	650	0	21	76	Stained ceiling/ceiling tiles
HS Principal's Office	10:44 AM	0	624	0	21	76	
C212	10:45 AM	7	1249	0	26	77	Stained ceiling/ceiling tiles
C227	10:46 AM	18	1036	0	25	78	
C213	10:48 AM	4	665	0	21	77	
C236	10:49 AM	10	1215	0	24	76	Window open
C235	10:51 AM	24	1118	0	26	77	Window open
C232	10:52 AM	1	621	0	20	77	Bubbling/peeling paint
C234	10:53 AM	0	848	0	23	75	
C233	10:54 AM	0	591	0	21	76	Stained ceiling/ceiling tiles
C201	10:55 AM	4	532	1	22	74	Stained ceiling/ceiling tiles
B201	10:57 AM	15	748	0	24	74	Stained ceiling/ceiling tiles
B205	10:58 AM	3	760	0	24	74	Stained ceiling/ceiling tiles
B206	10:59 AM	16	842	0	24	75	Window open
B208	11:00 AM	2	836	0	24	75	Window open
B191 Auditorium	11:09 AM	0	536	0	23	70	
B178	11:11 AM	14	590	0	24	74	
B151 Gym	11:22 AM	20	729	0	25	76	
B140 Band	11:23 AM	3	662	0	23	76	Stained ceiling/ceiling tiles, Bubbling/peeling paint

Room / Location	Time	Number of Occupants	CO2 (ppm)	CO (ppm)	RH (%)	Temp. (F)	Comments/Observations
B121	11:24 AM	9	798	0	25	76	Aquariums, Plants
B126	11:26 AM	1	1197	0	27	76	
C102 Elementary Gym	11:27 AM	0	595	0	26	75	Stained ceiling/ceiling tiles, Bubbling/peeling paint, Window open
C112 Wrestling Room	11:28 AM	0	501	0	22	74	
B113 Music	11:30 AM	0	1106	0	27	74	
B110 Cafeteria	11:32 AM	100	1450	0	32	77	
C132	11:36 AM	12	620	0	25	73	
C133	11:39 AM	0	823	0	25	74	
C145	11:40 AM	0	621	0	24	73	
A116	11:43 AM	0	673	0	25	72	
A117	11:44 AM	1	1399	0	30	73	
A118	11:45 AM	22	1012	0	29	74	Window open
A119	11:47 AM	22	1360	0	30	74	Stained ceiling/ceiling tiles
A120	11:48 AM	24	1052	0	29	73	
A121	11:50 AM	22	951	0	28	72	
Elementary Office	11:51 AM	2	932	0	27	73	
Elementary Principal's Office	11:52 AM	0	861	0	26	73	
Conference Room	11:53 AM	6	1065	0	27	74	
A122	11:54 AM	2	968	0	27	74	
A132	11:55 AM	0	950	0	26	75	Stained ceiling/ceiling tiles
A134	11:56 AM	0	1093	0	27	74	
A135	11:57 AM	0	583	0	24	74	
A136	11:58 AM	0	577	0	24	72	
A137	11:58 AM	1	1441	0	32	71	
A138	12:04 PM	15	1577	0	34	71	
A141	12:05 PM	13	934	0	30	71	
A142	12:06 PM	19	1004	0	31	70	
A143	12:08 PM	24	1050	0	31	72	
A109	12:10 PM	0	1100	0	30	72	
A108	12:11 PM	2	866	0	28	72	
A106	12:12 PM	12	777	0	27	73	
A102	12:13 PM	14	800	0	27	74	Stained ceiling/ceiling tiles
A101	12:15 PM	15	805	0	26	73	

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 humidity levels outside the ASHRAE recommended range of 30-60%. Relative humidity levels identified in areas 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. An evaluation of the ventilation system controls, performance and operation is recommended. Low relative humidity is common in buildings during the heating season.

C167	C172	C176	District Office
C179	Tech & Community Ed	C125	C124
C123	C120 Lounge	C148	Media Center
C151	C138	C218	C217
C216	C221	HS Office	DeBerg Office
HS Conf Room	HS Principal's Office	C212	C227
C213	C236	C235	C232
C234	C233	C201	B201
B205	B206	B208	Auditorium
B178	HS Gym	Band	B121
B126	ES Gym	C112 Wrestling	B113 Music
C132	A118	A120	A121
C133	C145	A116	A132
A134	A135	A136	ES Office
ES Principal's Office	ES Conf Room	A122	A108
A106	A102	A101	

IEA recorded area(s) with carbon dioxide measurements over 1,200 ppm in the building. IEA considers carbon dioxide measurements above 1,200 ppm as an indication of a possible ventilation issue. The air-handling system serving the location 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.

C212	C236	Cafeteria	A117
A119	A137	A138	

IEA recorded area(s) with temperatures outside the recommended range. During the heating season, ASHRAE recommends that temperatures be between 68° and 75°F. Evaluation of temperature controls and/or ventilation system performance and operation is recommended.

C221	HS Office	DeBerg Office	HS Conf Room
HS Principal's Office	C212	C227	C213
C236	C235	C232	C233
HS Gym	Band	B121	B126
Cafeteria			

Water Stained Ceiling Concerns

Water-impacted ceiling materials should be replaced when discoloration or water staining is observed. Water-impacted ceiling materials can be a source for microbial growth. The source for the moisture infiltration should be investigated and repaired.

C172	C179	C148	Media Center
C151	HS Conf Room	C212	C233
C201	B201	B205	Band
A132	ES Gym	A102	

Bubbling/Peeling Paint Concerns

IEA observed bubbling/peeling paint in area(s) throughout the building. 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.

C218	C232	Band	ES Gym
------	------	------	--------

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 plans be removed from locations occupied by sensitized individuals. If plants are to remain in the area, the following actions are recommended:

- Water plans from the bottom to aid in preventing fungal growth on the soil surface
- Do not locate plants on top of air 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, this will limit air currents over the plants and may prevent pollen or mold spores from becoming airborne.

C138	B121
------	------

Taxidermy

IEA observed area(s) with taxidermy mounts present. Individuals with allergies or asthma may be sensitive to dust, animal fur, dander, body fluids, and feces and may have a reaction when exposed to these allergens. IEA recommends using an alternative to animals if allergen symptoms are found by occupants within the classroom.

C138

Live Animals

During the walkthrough, IEA observed live animal(s). Prior to having animals, the District Nurse should be consulted to verify children's allergies. Consult parents about potential allergies in a take-home note with students or during parent-teacher conferences. IEA recommends that sensitive students are located away from the animal and that cages are regularly cleaned.

B121

Poor Airflow

Poor airflow was identified in area(s) of the building during the site visit. If the building is occupied, air handling systems should be set to operate in "occupied" mode. If poor airflow is identified while systems are in "occupied" mode, a ventilation and controls assessment is recommended.

C176	C218	C212	A117
A137	A138		

APPENDIX A

Staff Survey Responses

Room Number/Work Area	Overall, are you comfortable with the indoor air quality in your work area?	Do you have carpet or rugs in your work area?	Do you have pets in your work area?	Do you have any furniture, other than standard desks, in your work area?	Are there any water stains in your work area?	Is there any visible mold or mildew in your work area?	Finally, please include any comments you have regarding IAQ. If you so choose, please leave your email address so we can contact you.
C124	Yes	Yes	No	No	No	No	
English Department	Yes	Yes	Yes	Yes	No	No	
C172 -Preschool Room	Yes	Yes	No	Yes	Yes	No	
B113	No	Yes	No	Yes	No	No	
District Office	Yes	Yes	No	Yes	Yes	No	
Computer Lab B201	Yes	Yes	No	Yes	Yes	No	
Elementary office	Yes	Yes	No	No	No	No	
gym	Yes	No	No	No	No	No	
C216	Yes	No	No	No	No	No	
C236	Yes	No	No	No	No	No	
A137	No	Yes	No	Yes		No	I would like someone to follow me for one day in my classroom when it is the beginning of the school year or end of the year. On days that are humid outside, my classroom becomes a very difficult place to be. Again, I challenge any adult to follow me for a day when it is 85 degrees and humid. Their is no air movement, there is moisture on the walls, and it is a miserable environment for both teachers/students.
123	Yes	No	No	No	No	No	
228	Yes	Yes	No	Yes	Yes	Yes	
Elem Gym	Yes	Yes	No	No	Yes	No	

C234	Yes	No	No	Yes	No	No	We learn to dress in layers around here because, no matter what month it is, some days it feels like a sauna and other days a person is shivering all day.
A136	Yes	Yes	No	Yes	No	No	
B178	Yes	No	No	No	No	No	
	Yes	Yes	No	Yes	No	No	
A138	Yes	Yes	No	Yes	No	No	troy.hoyt@springfield.mntm.org
Elementary Office	No	Yes	No	No	Yes	Yes	Temperature control is a primary concern. Would like greater flexibility and a more responsive thermostat.
A120	Yes	Yes	No	Yes	Yes	No	
C148	Yes	Yes	No	Yes	Yes	No	
A108	Yes	Yes	No	No	No	No	
116A	Yes	Yes	No	Yes	No	No	
A119	No	Yes	No	Yes	Yes	No	The air exchangers are SO noisy. I don't feel the filter does an adequate job of trapping allergens, dust, and germs.
Tech Office	Yes	Yes	No	Yes	Yes	No	
Kindergarten	No	Yes	No	Yes	Yes	No	
High School	Yes	Yes	No	No	No	No	
B206	Yes	Yes	No	Yes	No	No	
High School	Yes	Yes	No	Yes	Yes	No	
A121	Yes	Yes	No	Yes	No	No	
Prek	No	Yes	No	Yes	Yes	No	
C235 Second Floor, North Hallway	Yes	No	No	No	No	No	
	No	Yes	No	Yes	Yes	Yes	
A101	No	Yes	No	Yes	Yes	No	I still do not have heat in my classroom, so there is no air movement, which caused it to be very dry. But, the part has shipped and will hopefully be here soon.
High School Office	Yes	Yes	No	Yes	No	No	
C179	Yes	Yes	No	Yes	Yes	No	
	Yes	Yes	No	Yes	No	No	
A117	Yes	Yes	No	Yes	No	No	
Elementary Classroom	Yes	Yes	No	Yes	No	No	