

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

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December 6, 2022

Signature on File

TO: Dacyany Ibarrondo, Principal
Ramblewood Elementary School

FROM: Carol Gagnon, Project Manager
Environmental Health & Safety Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

For Custodial Supervisor Use Only

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Custodial Issues Addressed

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Custodial Issues Not Addressed

On December 5, 2022, I conducted an assessment at **Ramblewood Elementary School, Building 80**. Attached are findings and recommendations.

This IAQ Assessment did not identify any existing conditions impacting IAQ resulting from the circumstances identified during the 2022 Thanksgiving Break. Additional deficiencies related to general building maintenance were identified for correction to prevent any future IAQ concerns. Recommendations were identified for building occupants (i.e. reduce personal items and clutter) to support on-site staff cleaning activities.

Due to individual sensitivities and predisposing health factors, it is possible that some building occupants may elicit a health response to allergens and/or conditions noted during the evaluation. Therefore, to further improve IAQ, prevent development of future IAQ-related problems, and to reduce the potential for IAQ-related complaints by building occupants, the IAQ Assessment Team recommends appropriate follow up of any item/s identified and noted in the attached evaluation.

Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site-based staff to generate a work order through MAXIMO. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all site based custodial issues have been appropriately addressed.

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact us at 754-321-4200.

CG: lb

Enc.

cc: Sam Bays, Task Assigned Executive Director, Facilities & Construction Management
Shelley Meloni, Director, Pre-Construction
Greg Neiman, Area Supervisor, Zone 1
Scott Gillen, Manager, Zone 2
Dale Spear, Manager, Zone 3
Allen Behnke, Area Manager Trades
Benjamin Osborne, Manager Custodial
Broward Teachers Union
Federation of Public Employees

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
INFO		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling						
Walls						
Floor						

Cleaning crew doing work on first floor south side classrooms during inspection.
 No actuators on fresh air dampeners in mechanical rooms 852B or 872B.
 Exterior caulking observed to be in poor condition/gaps/cracking on multiple windows and exterior vent/metal inserts.
 Plants (fake and live), room cluttered, non approved chemicals, stuffed animals, food not in sealed containers, cardboard boxes still issues.
 Window sills repaired in most rooms but not painted.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-850	73.5	72 - 78	44.0	30% - 60%	522	MAX 700 > Ambient
Noticeable Odor	No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in	No		No		
Walls	Drywall	No		No		
Floor	12" x 12" Vinyl	No		No		

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Room cluttered, stuffed animals and cardboard boxes present.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-850B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor	No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in	No		No		
Walls	Drywall	No		No		
Floor	12" x 12" Vinyl	No		No		

Former AC closet. Wall repair around metal panel was not completed, but PPO was onsite working in the room.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-856	71.8	72 - 78	47.8	30% - 60%	494	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Room had stuffed animals and live plant in trash can.

AECOM/PPO: Old supply vent, return vent, set of blinds, spare ceiling tiles and window screen need to be removed from room and put back in second floor hallway (per HFSP).

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-856B		72 - 78		30% - 60%		MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Former AC closet. Wall repair at metal panel completed.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-855	70.7	72 - 78	56.9	30% - 60%	525	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Window sills repaired but east window sill had wet readings. No spotting wood desks or tables. Supply and return grills clean. Room had stuffed animals, live and fake plants. Blinds clean.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-855B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel completed.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-854	71.1	72 - 78	61.3	30% - 60%	546	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Window sills repaired but east window sill had wet readings. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Room cluttered, food not in sealed containers.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-854B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel completed.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-853	70.6	72 - 78	62.6	30% - 60%	551	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Fake and live plants present, room cluttered.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-853B		72 - 78		30% - 60%		MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Former AC closet. Wall repair at metal panel completed.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range	
80-876	71.4	72 - 78	46.5	30% - 60%	484	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?		Amount of material affected
Ceiling	2' X 2' Lay in		No		No		
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Fake plants present.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-876B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel completed.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-875	71.6	72 - 78	48.3	30% - 60%	468	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Window sills repaired and dry. No spotting wood desks or tables. Supply grills clean. East side return grill dusty-cleaning underway. Blinds clean. Room contains fake plants and cardboard boxes. Dirt on floor where area carpet was located pending cleaning.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-875B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel completed.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-874	70.1	72 - 78	47.9	30% - 60%	471	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Room contains fake and live plants, and cardboard boxes. Food not in sealed containers.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-874B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Former AC Closet. Wall repair at metal panel pending, large gap to exterior with visible light on left side.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-873	69.3	72 - 78	49.3	30% - 60%	478	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills repaired but east window sill had wet readings. No spotting wood desks or tables. Supply and return grills clean. Blinds clean. Room contains cardboard boxes.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-873B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel pending, large gap to exterior with visible light on top edge. Work is scheduled with PPO.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-870	71.8	72 - 78	46.0	30% - 60%	471	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Window sills repaired and dry. No spotting wood desks or tables. Supply and return grills dusty. Blinds clean. Room contains stuffed animals. Cobwebs in low corners pending cleaning.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-870B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in		No		No	
Walls	Drywall		No		No	
Floor	12" x 12" Vinyl		No		No	

Former AC closet. Wall repair at metal panel completed.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-871	72.2	72 - 78	45.9	30% - 60%	480	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills dry and pending repair. Blinds clean. Return and supply grills clean. No spotting wood desks or tables. Food not in sealed containers. Stuffed animals and fake plants in room.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-872	72.2	72 - 78	48.7	30% - 60%	536	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills dry and repaired. Blinds clean. Supply grills clean. Return grill dirty. No spotting wood desks or tables. Room had cardboard boxes and fake plants. Food not in sealed containers,

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-872B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	metal	No	No			
Walls	Drywall/concrete	No	No			
Floor	Concrete	No	No			

Mechanical room for second floor. Drywall wall cut repaired. Pending actuator installation on fresh air intake dampener.

Multiple Room IAQ Assessment

Ramblewood Elementary School

Evaluation Date December 5, 2022

Time of Day 9:35

Outdoor Conditions Temperature 77.6 Relative Humidity 62.7 Ambient CO2 453

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-851	73.5	72 - 78	69.1	30% - 60%	623	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills dry and repaired. Blinds clean. Supply grills clean. Return grill dusty. No spotting wood desks or tables. Room contained fake and live plants, non approved chemicals, room cluttered, essential oil diffuser. Relative humidity was elevated as floor was still damp from cleaning team.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-852	74.0	72 - 78	64.4	30% - 60%	655	MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	2' X 2' Lay in	No	No			
Walls	Drywall	No	No			
Floor	12" x 12" Vinyl	No	No			

Window sills dry and repaired. Blinds clean. Supply grills clean. Both return grills dusty. No spotting wood desks or tables. Room contained stuffed animals, live plants. Room is cluttered. Relative humidity was elevated as floor was still damp from cleaning team.

FISH	Temperature	Range	Relative Humidity	Range	CO2	Range
80-852B		72 - 78		30% - 60%		MAX 700 > Ambient
Noticeable Odor		No	Visible water damage / staining?		Visible Spotting?	
Ceiling	metal	No	No			
Walls	Drywall/concrete	No	No			
Floor	Concrete	No	No			

Mechanical room for first floor. Drywall wall cut repaired. Pending actuator installation on fresh air intake dampener. Spray foam debris on floor. Piping penetration into room not fully sealed bottom edge of thermal system insulation, repair pending.

Ramblewood Elementary School IAQ inspection building 80 on 12/05/2022

Corrective actions to be completed by site based staff	FISH	Estimated completion date
Store food in sealed plastic containers	854, 874, 871, 872	
Remove cardboard boxes, store in plastic containers	850, 872, 873, 874, 875	
Clean cobwebs from low corners	870	(cleaning crew 12/5/22 end of day)
Room too cluttered to clean properly/reduce clutter	850, 851, 852, 853, 854, 874	
Clean supply/ return grills	851 (return), 852 (returns), 870, 872 (return), 875 (E return)	(cleaning crew 12/5/22 end of day)
Remove non approved chemicals	851	
Remove essential oil diffuser from room	851	
Remove/clean fake plants in room	851, 853, 855, 871, 872, 874, 875, 876	
Remove live plants from room	851, 852, 853, 855, 856, 874	
Remove stuffed animals from room, allergen source	850, 852, 856, 870, 871	
Clean floor where carpet was	875	(cleaning crew 12/5/22 end of day)

Ramblewood Elementary School IAQ inspection building 80 on 12/05/2022		
Corrective actions to be completed by PPO	FISH	Estimated completion date
Evaluate/repair historical water damage at window sills	871	per PPO 12/23/22 lift required, level 2
Fill in gaps around exterior wall metal panel	873B, 874B	per PPO 12/23/22 lift required, level 2
Fill in gaps at chilled water pipe entry into exterior wall	852B not completed bottom of piping	per PPO 12/6/22, level 1
Repair chilled water pipe exterior insulation	852B	Per PPO vendor pending start date requested ASAP, level 1
Evaluate/repair exterior window caulking	All exterior windows	Per PPO 1st floor 12/10/22, 2nd floor 12/23/22 lift required, level 1 and 2
Evaluate/repair exterior vent caulking	All exterior BARD vents on "B" rooms	Per PPO 1st floor 12/10/22, 2nd floor 12/23/22 lift required, level 1 and 2
Evaluate reason for wet readings east side repaired window sills	855, 854, 873	Per PPO 1st floor 12/10/22, 2nd floor 12/23/22 lift required, level 1 and 2
Install fresh air dampener actuators	852B, 872B	Per PPO EMS vendor pending PO, level 1 and 2
Remove debris from mechanical room	852B (spray foam sealant)	

Corrective actions to be completed by AECOM	FISH
Remove old supply grill, return vent, blinds, ceiling tiles, window screen that belong to 2nd floor hallway per HFSP	856