

**THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA**

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

**TELEPHONE (754) 321-4200**

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August 29, 2016

Signature on File

TO: Charles McCanna, Principal  
**Nova Blanche Forman Elementary**

FROM: Robert Krickovich, Coordinator, LEA  
Environmental Health & Safety Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

<u>For Custodial Supervisor Use Only</u>	
<input type="checkbox"/>	Custodial Issues Addressed
<input type="checkbox"/>	Custodial Issues Not Addressed
<hr/>	
<hr/>	

On August 25, 2016, I conducted an assessment at **Nova Blanche Forman Elementary School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed.

The IAQ assessment did identify one or more existing conditions impacting IAQ and has generated appropriate work orders to correct deficiencies in systems and maintenance that could contribute to decreased indoor air quality. At the time of the assessment, these concerns were not an immediate health or safety concern to building occupants. However, due to individual sensitivities and predisposing health factors, it is possible that some building occupants may elicit a health response to agents and / or conditions identified 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 each item identified and listed 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 COMPASS. 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.

RK:smn  
Enc.

- cc: Shelley Meloni, Director, Pre-Construction
- Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
- Broward Teachers Union
- Federation of Public Employees
- Gerald Devio, Supervisor II Custodial
- Benjamin Osborne, Supervisor II Custodial
- Rich Volpi, Supervisor II Custodial
- Mark Murray, Supervisor II Custodial
- Sam Bays, Director, Maintenance Operations
- Kurt Wirz, Area Manager Trades

# IAQ Assessment

Nova Blanche Elementary

Evaluation Date

Time of Day

Outdoor Conditions    Temperature     Relative Humidity     Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<input type="text" value="101D"/>	<input type="text" value="71.4"/>	<input type="text" value="72 - 78"/>	<input type="text" value="83.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="698"/>	<input type="text" value="MAX 700 &gt; Ambient"/>	<input type="text" value="2"/>
Noticeable Odor		<input type="text" value="Yes"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="6 stained - 2 microbial growth"/>
Walls	<input type="text" value="Plaster"/>		<input type="text" value="No"/>		<input type="text" value="Yes"/>		<input type="text" value="Spotty on walls and shelves"/>
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>

Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean	<input type="text" value="No"/>	HVAC Return Grills Clean	<input type="text" value="No"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean	<input type="text" value="No"/>	Inside of Return Duct Clean	<input type="text" value="No"/>
Flooring Clean	<input type="text" value="No"/>	Ceiling at Supply Grills Clean	<input type="text" value="Yes"/>		
Room Surfaces Clean	<input type="text" value="No"/>				

Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working	<input type="text" value="N/A"/>	Unapproved Chemicals / Cleaners in Room	<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet	<input type="text" value="N/A"/>	Air Fresheners in Room	<input type="text" value="No"/>
Room Cluttered	<input type="text" value="Yes"/>	Food if Stored in Room is in Sealed Containers	<input type="text" value="N/A"/>		

Mechanical Equipment Location	<input type="text" value="Roof Top"/>		Mechanical Room Clean	<input type="text" value="N/A"/>	
Filters Installed Properly	<input type="text" value="N/A"/>	Filters Clean	<input type="text" value="N/A"/>	Inside of HVAC Unit Clean	<input type="text" value="N/A"/>
Condensate Pan Clean	<input type="text" value="N/A"/>	Cooling Coil Clean	<input type="text" value="N/A"/>		

Fresh Air Intake Location	<input type="text" value="Roof top"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="None"/>		

**Observations**

**Musty Odor in room - Boxes and papers stored in room - Spotty microbial growth on shelving and walls - 6 stained ceiling tiles, 2 with microbial growth - Humidity elevated**

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**Corrective Actions to be Completed by Site Based Staff**

Encourage occupant to reduce clutter	▼
Thoroughly clean ALL surfaces	▼
Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair cause of stained ceiling tile	▼
Remove and replace stained ceiling tiles	▼
Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean entire HVAC system - unit and drops	▼
	▼
	▼
	▼







# IAQ Assessment

Nova Blanche Elementary

Evaluation Date

Time of Day

Outdoor Conditions    Temperature     Relative Humidity     Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants	
<input type="text" value="851"/>	<input type="text" value="74.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="80.0"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="1250"/>	<input type="text" value="MAX 700 &gt; Ambient"/>	<input type="text" value="24"/>	
Noticeable Odor		<input type="text" value="No"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="No"/>		<input type="text" value="Yes"/>		<input type="text" value="8 tiles @ Supply Grills"/>	
Walls	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>	
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
Ceiling Clean		<input type="text" value="Yes"/>	HVAC Supply Grills Clean		<input type="text" value="No"/>	HVAC Return Grills Clean		<input type="text" value="Yes"/>
Walls Clean		<input type="text" value="Yes"/>	Inside of Supply Duct Clean		<input type="text" value="No"/>	Inside of Return Duct Clean		<input type="text" value="Yes"/>
Flooring Clean		<input type="text" value="Yes"/>	Ceiling at Supply Grills Clean		<input type="text" value="No"/>			
Room Surfaces Clean		<input type="text" value="Yes"/>						
Trash Removed		<input type="text" value="Yes"/>	Exhaust Fans Working		<input type="text" value="Yes"/>	Unapproved Chemicals / Cleaners in Room		<input type="text" value="No"/>
Signs of Pests		<input type="text" value="No"/>	Drain Traps Wet		<input type="text" value="Yes"/>	Air Fresheners in Room		<input type="text" value="No"/>
Room Cluttered		<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers		<input type="text" value="N/A"/>			
Mechanical Equipment Location			<input type="text" value="BARD in room"/>			Mechanical Room Clean		<input type="text" value="N/A"/>
Filters Installed Properly		<input type="text" value="N/A"/>	Filters Clean		<input type="text" value="N/A"/>	Inside of HVAC Unit Clean		<input type="text" value="N/A"/>
Condensate Pan Clean		<input type="text" value="N/A"/>	Cooling Coil Clean		<input type="text" value="N/A"/>			
Fresh Air Intake Location			<input type="text" value="Outside of Unit"/>			Fresh Air Intake Free of Obstruction		<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake			<input type="text" value="None"/>					

**Observations**

<b>Inside of Supply grills dirty - inside of supply duct dirty - Humidity elevated - CO2 Elevated</b>

**Corrective Actions to be Completed by Site Based Staff**

Remove and replace stained ceiling tile @	▼
HVAC Supply grills	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Repair HVAC to reduce CO2	▼
Clean entire HVAC system - unit and drops	▼
	▼
	▼
	▼
	▼









# IAQ Assessment

Nova Blanche Elementary

Evaluation Date August 25, 2016

Time of Day 1:33 PM

Outdoor Conditions    Temperature 94.8

Relative Humidity 61.5

Ambient CO2 519

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">855</span>	<span style="border: 1px solid black; padding: 2px;">74.3</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">63.8</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">2083</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">26</span>
Noticeable Odor		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">Drywall</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>

Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Inside of Return Duct Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Ceiling at Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>		
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>				

Trash Removed	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Exhaust Fans Working	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Unapproved Chemicals / Cleaners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">No</span>	Food if Stored in Room is in Sealed Containers	<span style="border: 1px solid black; padding: 2px;">N/A</span>		

Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">BARD in room</span>		Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>		

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Outside of Unit</span> ▼	Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">Yes</span>
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">None</span> ▼		

**Observations**

**Musty Odor in Room - Humidity Elevated - CO2 Elevated -**

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**Corrective Actions to be Completed by Site Based Staff**

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	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Repair HVAC to reduce CO2	▼
Clean entire HVAC system - unit and drops	▼
	▼
	▼
	▼
	▼