

# managing risk with responsibility

Aston A. Henry, Supervisor
Risk Management Department

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Setpember 2	0, 2012 Signature on File	For Custodial Supervisor Use Only
TO:	Bradford Mattair, Principal <b>Parkway Middle School</b>	Custodial Issues Addressed Custodial Issues Not Addressed
FROM:	Richard Rosa, Project Manager Facilities Design and Construction	
SUBJECT:	Indoor Air Quality (IAQ) Assessment	

On September 18, 2012, Robert Krickovich and I conducted an assessment at **Parkway Middle 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 754-321-1907.

cc: Directors, School Performance & Accountability Shelley Meloni, Executive Director, Facilities Design and Construction Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division Aston Henry, Supervisor, Risk Management Sonja Coley, Senior Project Manager, Facilities Design and Construction Broward Teachers Union Federation of Public Employees

RR/tc Enc.

IAQ Assessment					
Park	kway Middle Evaluation Dat	te September 18, 2012	Time of Day 12	2:30	
Outdoor Conditions Tempera	ature 89 Relative	e Humidity 62.1	Ambient CO2 42	22	
		Range         CO <sup>2</sup> 0% - 60%         634	Range # Oc MAX 700 > Ambient	cupants	
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
CeilingPlasterWallsDrywall/Ceramic tileFloorQuarry Tile	No           No           No           No	No No			
Ceiling CleanYesWalls CleanYesFlooring CleanYes	HVAC Supply Grills Clean Inside of Supply Duct Clean	N/a N/A	HVAC Return Grills Clean Inside of Return Duct Clean	N/a N/A	
Room Surfaces No Clean	Ceiling at Supply Grills Clean	N/a			
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	Yes Yes Yes	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No	
Mechanical Equipment Location Filters Installed Properly N/A Condensate Pan Clean N/A		N/A N/A	Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A	
Fresh Air Intake Location Pollutant Sources Near Air Intake	not applicable Not Applicable	<ul><li>▼</li></ul>	Fresh Air Intake Free of Obstruction	N/A	
Observations 105 is the kitchen without air con	nditioning - Minor dust on surf	iaces			

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IAQ Assessment					
Park	way Middle Evaluation Date	e September 18, 2012	2 Time of Day 3:30		
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 422		
		Range         CO <sup>2</sup> % - 60%         1848			
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling     2' x 4'       Walls     Drywall       Floor     12" x 12" Vinyl	Yes Yes No	No No	< 1 sq ft drip stains, possible roof leak		
Ceiling CleanNoWalls CleanNoFlooring CleanYesRoom SurfacesNoCleanYes	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	Yes Yes	HVAC Return Grills Clean Yes Inside of Return Duct Clean Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room		
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A	-	eiling No N/A	Mechanical Room Clean N/A Inside of HVAC Unit Clean N/A		
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	▼	Fresh Air Intake Free Yes Yes		
Observations The fresh air grill ties into return The fresh air grill is dirty and the		-	underside of the walkway ceiling. ust.		

Thoroughly clean horizontal surfaces	▼
Replace stained ceiling tiles after repairs	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
Wipe down walls with Wexcide	▼
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Repair HVAC to reduce CO2 level in classroom	▼
Evaluate and repair cause of stained ceiling tiles	▼
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	IAQ Assess	ment		
Par	kway Middle Evaluation Dat	September 18, 2012	2 Time of Day 3	3:30
Outdoor Conditions Temper	ature 89 Relative	e Humidity 62.1	Ambient CO2 42	22
		Range         CO <sup>2</sup> % - 60%         1155		35
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'	Yes	No	3 tiles < 1 sq ft	
Walls   Drywall     Floor   12" x 12" Vinyl	No           No	No		
Ceiling Clean No Walls Clean Yes	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
Flooring Clean Yes	Inside of Supply Duct Clean	N/A	Inside of Return Duct Clean	N/A
Room Surfaces No Clean	Ceiling at Supply Grills Clean	Yes		
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	N/A	Air Fresheners	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	in Room	
Mechanical Equipment Location	Hung from exterior corridor co	eiling	Mechanical Room Clean	N/A
Filters Installed Properly Yes	s Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Exterior corridor	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	Grass and landscape	▼	of Obstruction	
Observations				
The fresh air grill ties into return The fresh air grill is dirty and th				ceiling.

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Thoroughly clean horizontal surfaces	▼
Replace stained ceiling tiles after repairs	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
Clean HVAC supply and return grills with Wexcide	▼
Wipe down walls with Wexcide	▼

Repair HVAC to reduce CO2 levels	▼
Evaluate and repair cause of stained ceiling tiles	▼
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	IAQ Assessr	nent		
Park	way Middle Evaluation Date	e September 18, 201	2 Time of Day 1	2:45
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 4	22
		Range CO % - 60% 199		ccupants 29
Noticeable Odor Yes Ceiling 2' x 4'	Visible water damage / staining? No	Visible microbial growth?	Amount of material affected	
Walls     Drywall       Floor     12" x 12" Vinyl	Yes	No	4 sq ft	
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean Inside of Supply	No N/A	HVAC Return Grills Clean Inside of Return	No N/A
Flooring Clean Yes Room Surfaces No Clean	Duct Clean Ceiling at Supply Grills Clean	Yes	Duct Clean	
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No Yes
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A		eiling No N/A	Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	<ul><li>▼</li></ul>	Fresh Air Intake Free of Obstruction	Yes
Observations				

The odor appeared to be perfume with scented air fresheners. An air cleaner labeled (Germ Guard) was in the room. The peeling paint is located under the windows, evaluate all the areas under the windows; too many boxes stored against the wall. The fresh air grill ties into return air duct located outside the classroom hung on the underside of the walkway ceiling. The fresh air grill is dirty and the filter needs changing. Window screens are full of dust.

Corrective Actions to be Completed by Site Based Staff

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Thoroughly clean horizontal surfaces	▼
Replace stained ceiling tiles after repairs	▼
Clean HVAC supply and return grills with Wexcide	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Remove chemicals and/or air fresheners	▼
Encourage occupant to reduce clutter	▼
Thoroughly clean window screens	▼

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	IAQ Assessn	nent		
Park	kway Middle Evaluation Date	e September 18, 2012	2 Time of Day	3:15
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 4	22
		Range         CO           % - 60%         1592		ccupants 30
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling     2' x 4'       Walls     Drywall       Floor     12" x 12" Vinyl	No           No           No	No No		
Ceiling CleanNoWalls CleanYesFlooring CleanYesRoom SurfacesNoCleanYes	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	No N/A	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A	-	eiling No N/A	Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	▼ ▼	Fresh Air Intake Free of Obstruction	Yes
Observations				
The fresh air grill ties into return The fresh air grill is dirty and the microbial growth and dust are vi		v screens are full of d		

Thoroughly clean elevated surfaces	▼
Clean HVAC supply and return grills with Wexcide	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
Encourage occupant to reduce clutter	▼
Thoroughly clean blinds	▼
Clean ceilings around HVAC supply grills	▼

Repair HVAC to reduce CO2 levels	▼
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IAQ Assessment				
Park	way Middle Evaluation Dat	September 18, 2012	Time of Day	1:15
Outdoor Conditions Tempera	ature 89 Relative	e Humidity 62.1	Ambient CO2 42	22
		Range         CO <sup>2</sup> % - 60%         880	Range # Oc MAX 700 > Ambient	ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'	No	No		
Walls Drywall	No	No		
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes
Room Surfaces No	Ceiling at Supply Grills Clean	Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No Yes
Mechanical Equipment Location	Hung from exterior corridor co	eiling	Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Exterior corridor	▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Grass and landscape	▼		
Observations				
The fresh air grill ties into return The fresh air grill is dirty and the				/ ceiling.

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Set temperature to 72 - 78 degrees	▼
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	IAQ Assessr	nent		
Park	way Middle Evaluation Dat	September 18, 2012	2 Time of Day 1	1:45
Outdoor Conditions Tempera	ture 89 Relative	e Humidity 62.1	Ambient CO2 42	22
		Range         CO <sup>2</sup> % - 60%         1296		28
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'	No	No		
Walls Drywall	No	No		
Floor 12" x 12" Vinyl	No	Νο		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	No N/A	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Room Surfaces No Clean	Ceiling at Supply Grills Clean	Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location	Hung from exterior corridor co	eiling	Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	Νο	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Exterior corridor	▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape	▼		
Observations				
The fresh air grill ties into return The fresh air grill is dirty and the				/ ceiling.

Thoroughly clean elevated surfaces	▼
Clean HVAC supply and return grills with Wexcide	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
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	Set temperature to 72 - 78 degrees	▼
	Repair HVAC to reduce CO2 levels	▼
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	IAQ Assessm	nent		
Park	kway Middle Evaluation Date	September 18, 2012	Time of Day 2	2:15
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 42	22
		Range         CO <sup>2</sup> % - 60%         1085		24
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling     2' x 4'       Walls     Drywall       Floor     12" x 12" Vinyl	No           No           No           No	No No		
Ceiling CleanYesWalls CleanYesFlooring CleanYesRoom SurfacesNoCleanYes	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	No N/A Yes	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A			Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	<ul><li>▼</li></ul>	Fresh Air Intake Free of Obstruction	Yes
Observations				
	n air duct located outside the cla e filter needs changing. Window			/ ceiling.

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Se	et temperature to 72 - 78 degrees	▼
Re	epair HVAC to reduce CO2 levels	▼
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	IAQ Assessr	nent		
Park	kway Middle Evaluation Date	e September 18, 2012	Time of Day 2	2:30
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 42	22
		Range         CO <sup>2</sup> % - 60%         1153		31
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'		No		
Walls Drywall	No	No		
Floor 12" x 12" Vinyl	Yes	No	water soluble glue	
Ceiling Clean Yes Walls Clean Yes Flooring Clean No	HVAC Supply Grills Clean Inside of Supply Duct Clean	No N/A	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Room Surfaces No	Ceiling at Supply Grills Clean	Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A			Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	<ul><li>▼</li></ul>	Fresh Air Intake Free of Obstruction	Yes
Observations				
The fresh air grill ties into return The fresh air grill is dirty and the				<sup>,</sup> ceiling.

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Thoroughly clean horizontal surfaces	▼
Clean HVAC supply and return grills with Wexcide	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
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Repair HVAC to reduce CO2 levels	▼
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	IAQ Assessi	ment		
Park	way Middle Evaluation Dat	e September 18, 2012	2 Time of Day	3:00
Outdoor Conditions Tempera	ature 89 Relative	Humidity 62.1	Ambient CO2 4	22
		Range         CO           % - 60%         1318		ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling     2' x 4'       Walls     Drywall       Floor     12" x 12" Vinyl	No No	No No No		
Ceiling CleanNoWalls CleanYesFlooring CleanYesRoom Surfaces CleanNo	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	No N/A	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean N/A		eiling No N/A	Mechanical Room Clean Inside of HVAC Unit Clean	N/A N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake	Exterior corridor Grass and landscape	▼ ▼	Fresh Air Intake Free of Obstruction	Yes
Observations				
The fresh air grill ties into return The fresh air grill is dirty and the and dust are visible. Boxes are a	e filter needs changing. Windov			

Thoroughly clean elevated surfaces	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
Clean HVAC supply and return grills with Wexcide	▼
Encourage occupant to reduce clutter	▼
Thoroughly clean blinds	▼
Clean ceilings around HVAC supply grills	▼

Repair HVAC to reduce CO2 levels	▼
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	IAQ Assessr	ment		
Park	way Middle Evaluation Dat	te September 18, 2012	2 Time of Day 2	2:45
Outdoor Conditions Tempera	ature 89 Relative	e Humidity 62.1	Ambient CO2 42	22
		Range Co <sup>2</sup> % - 60% 635		cupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4' Walls Drywall	Yes No	No	30 sq ft	
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean No Walls Clean Yes	HVAC Supply Grills Clean Inside of Supply	Yes	HVAC Return Grills Clean Inside of Return	Yes
Flooring Clean Yes Room Surfaces No Clean	Duct Clean Ceiling at Supply Grills Clean	Yes	Duct Clean	163
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No Room Cluttered Yes	Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	Hung from exterior corridor co	eiling	Mechanical Room Clean	N/A
Filters Installed Properly Yes	5 Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Exterior corridor	▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape	▼		
Observations				
The peeling paint is located in a	cove near the top of the windo	ws. The fresh air grill	ties into return air duct loc	cated

outside the classroom hung on the underside of the walkway ceiling. The fresh air grill is dirty and the filter needs changing. Window screens are full of dust. Wipe blinds, microbial growth and dust are visible. Boxes are along the wall,everywhere.

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

Thoroughly clean elevated surfaces	▼
Replace stained ceiling tiles after repairs	▼
Remove and replace fresh air filter	▼
Clean fresh air grill with Wexcide	▼
Thoroughly clean window screens	▼
Thoroughly clean blinds	▼
Encourage occupant to reduce clutter	▼
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Evaluate and repair cause of stained ceiling tiles	▼
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