

# MOLD INSPECTION TRAINING PROGRAM

PREPARED FOR & PRESENTED TO  
NEW YORK CITY HOUSING AUTHORITY

STUDENT MANUAL

**EEA**

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## **PREFACE**

This training course manual has been created to provide staff of the New York City Housing Authority (NYCHA) with that organization's standard procedures, guidance and a general managers directive (GM) as prepared by NYCHA for NYCHA staff. The procedures and practices detailed in these pages incorporate current procedures at the time of printing. The reader should be advised that as procedures evolve, so do the methods for identifying and remediating mold contamination. Therefore, we emphasize the need for the reader to obtain the most up to date information available.

Standardized procedures, technical expertise and common sense are major components of a successful project. The reader is encouraged to improve further on the techniques provided in this manual as experience is gained through field practice. This will ensure that the mold industry continues to evolve to improve all facets of remediation and worker protection.

## **ACKNOWLEDGEMENTS & REFERENCES**

It would be impossible to acknowledge all of the individuals who have contributed to the development of this course manual in some fashion or manner. Environmental Education Associates, Inc. is extremely grateful to those who have generously shared their knowledge, expertise and experiences throughout the development process. Special thanks to Alisa Raab, Charlotte McLellan and Marvin Jean-Jacques who contributed to the creation of this manual and associated training courses.

## **DISCLAIMER**

This manual was developed using NYCHA documents. This manual has no official weight or legal merit outside NYCHA. Procedures and practices contained in this manual have not been reviewed or approved by regulatory agencies. It is the responsibility of the user to verify compliance with all applicable federal, state or local regulatory agencies.

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**NYCHA STANDARD PROCEDURE MANUAL**  
**SP 040:14:1**

# NYCHA STANDARD PROCEDURE MANUAL

## SP 040:14:1, MOLD/MILDEW CONTROL IN NYCHA RESIDENTIAL BUILDINGS

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		Date: 	Vito Mustaciolo General Manager	

**I. PURPOSE**

This Standard Procedure establishes responsive measures to mold and its root causes in New York City Housing Authority (NYCHA) public housing locations and creates protocols to protect the health of residents and staff when remediating mold and identifying and correcting its root causes.

**II. POLICY**

It is the policy of NYCHA to establish a cooperative partnership between staff and residents to quickly identify mold and its root causes. NYCHA will promptly remove mold from NYCHA locations and correct the root cause of the mold growth (i.e., the moisture source and/or inadequate ventilation).

**III. APPLICABILITY**

This Standard Procedure applies to staff responsible for the operation and maintenance of NYCHA public housing developments that receive Section 9 subsidies from the U.S. Department of Housing and Urban Development (HUD). This procedure does not apply to Permanent Affordability Commitment Together (PACT) developments.

**IV. INTRODUCTION TO MOLD AND MOISTURE CONTROL**

Moisture control is the key to mold control. Mold will often grow in moist or wet indoor areas. Common sites for indoor mold growth include bathroom and kitchen walls and ceilings, cabinet bases and walls beneath sinks, interior surfaces of walls, ceilings below leaks from above or directly below roofs, and areas around windows where moisture condenses. Common sources or causes of water or moisture problems include condensation of shower vapors on bathroom walls and ceilings, condensation in wall cavities from inadequately insulated cold water pipes, leaks from plumbing pipes, roof and facade leaks, and drain backups/overflows.

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The general approach to preventing mold growth in buildings is to keep exterior moisture out of the building, and to control moisture from internal sources. To this end, it is important to establish a cooperative partnership between NYCHA staff and residents so that conditions that require attention are identified and dealt with promptly.

Exposures from residential excessive moisture and mold have been associated with increased risks for respiratory symptoms, asthma, hypersensitivity pneumonitis, rhinosinusitis, bronchitis, and respiratory infections. NYCHA staff must take action to detect and correct leaks, condensation problems, and floods as soon as they are discovered. The potential for building structural damage, mold growth, and increased adverse health effects can and must be reduced by limiting the buildup of indoor moisture.

### Top Ten Things NYCHA Staff Should Know About Mold & Moisture

1. Potential health effects and symptoms associated with exposure to mold and excessive moisture include allergic reactions, asthma, and other respiratory complaints.
2. Mold can be found almost anywhere; it can grow on virtually any substance if moisture is present. For example, there are molds that can grow on sheetrock, painted plaster and concrete, wood, paper, carpet, foods, and even dusty inorganic building materials.
3. There is no practical way to eliminate all mold and mold spores in the indoor environment; the way to control indoor mold growth is to control moisture.
4. If mold is a problem in an apartment or building, we must clean up the mold and eliminate the sources of moisture.
5. Fix the source of the water problem or leak to prevent mold growth, including repairing leaky roofs and façades and restoring adequate exhaust ventilation in bathrooms and kitchens.
6. Reduce indoor humidity (to 30-60%) to decrease potential for mold growth by: venting bathrooms and kitchens; using air conditioners and de-humidifiers; and increasing ventilation. Staff shall ensure that mechanical ventilation is functioning (clear lateral ductwork and operable roof fans). Further, staff can use a hygrometer to check the relative humidity in a resident's apartment.
7. Clean and dry any damp or wet building materials within 24-48 hours to prevent mold growth. Advise residents to clean and dry any damp furnishing and other personal property within 24-48 hours.
8. Clean minor levels of mold off hard surfaces with water and detergent, and dry completely. Absorbent materials, such as sheetrock, that are moldy may need to be replaced.
9. Prevent condensation: reduce the potential for condensation on cold surfaces by assuring that cold water pipes in wall cavities are properly insulated.

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10. If needed as a result of asthma, individuals with mold and/or excessive moisture in their apartments are entitled to reasonable accommodations from NYCHA.

### V. DEFINITIONS

#### A. Anemometer

An anemometer is an instrument used to measure the air flow or speed of air.

#### B. Borescope

A borescope is an instrument with a camera used to inspect for leaks or moisture behind a wall through an opening in the wall. It can also be used to observe conditions in other hard to reach places, such as inside an exhaust vent.

#### C. Complex Repairs

Repairs that need skilled trades or other specialized staff to address and may require multiple visits to the apartment.

#### D. Craft

The craft is the type of worker (e.g. maintenance worker, painter) assigned to remediate mold and moisture or make other related repairs.

#### E. Cubic Feet Per Minute (CFM)

CFM is the unit of measure for air flow measurements.

#### F. HEPA Vacuum

A HEPA vacuum uses a high efficiency particulate air (HEPA) filter that is at least 99.97% efficient in removing microscopic particles, i.e. monodisperse air particles of 0.3 micrometers in diameter.

#### G. Hygrometer

A hygrometer is an instrument used for measuring the moisture content (i.e. humidity levels) in the air inside an apartment.

#### H. Independent Data Analyst

An individual or advisory firm who is independently selected and is qualified in forensic data analysis.

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### I. Independent Mold Analyst

An individual or advisory firm who is independently selected, is licensed as a mold assessor by the New York State Department of Labor, and is certified as an industrial hygienist by the American Industrial Hygiene Association.

### J. Informer Work Management (iWM) App

Informer Work Management is a work order application available on the handheld device.

### K. Inspector

An inspector is a property maintenance supervisor or assistant property maintenance supervisor trained and authorized to perform initial inspections and quality assurance inspections using the iWM app on the handheld device. The property manager is also an authorized inspector.

### L. Initial Inspection

The process by which NYCHA diagnoses and documents a mold or excessive moisture condition.

### M. Large Remediation Job

A large remediation job is the remediation of one hundred (100) or more square feet of mold in a room. Large remediation jobs are performed by lead abatement workers or a certified contractor.

### N. Mold

Mold is a fungus that grows on, and sometimes in, damp surfaces and objects. Live spores act like seeds, forming new mold growth (colonies) when they find the right conditions. Mold is most likely to grow where there is water or excessive moisture such as in bathrooms. Mold at NYCHA is measured by the square footage identified in each room.

The term “mildew” is sometimes used to refer to some kinds of mold.

### O. Moisture Meter

A moisture meter is an instrument used to measure the subsurface moisture content of a given structure (e.g. walls, ceilings, floors, and components such as kitchen and bathroom cabinets).



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### P. Mold Resistant Paint

Mold resistant paint contains a chemical fungicide that discourages the growth of mold on surfaces. There must be no mold present when the paint is applied.

### Q. Mold Resistant Sheetrock

Mold resistant sheetrock is paperless sheetrock with a fiberglass face that is designed to discourage the growth of mold.

### R. Ombudsperson

An independent, Special Master appointed individual, as described in Section VI of the *Baez et. Al. v. NYCHA Modified Amended Stipulation and Order of Settlement*, who has the authority to investigate mold and excessive moisture complaints and to order appropriate relief.

### S. Quality Assurance Inspection

The process by which the inspector confirms that the root cause of mold was effectively addressed, and all child work orders were appropriately completed.

### T. Root Cause

The root cause is the fundamental reason for the occurrence of mold, water damage, or moisture. The root cause could be the source of water or excessive moisture (e.g. leaking pipes or fixtures, condensation) or the lack of ventilation (e.g. blocked exhaust ducts, closed windows). Identifying and correcting the root cause in response to a mold complaint is essential to ensuring that the mold or moisture condition related to that root cause does not reoccur.

### U. Simple Repairs

Repairs that can be completed by a caretaker or maintenance worker in a single visit to the apartment.

### V. Special Master

An individual who was appointed by the U.S. Attorney's Office for the Southern District of New York to investigate NYCHA's failure to comply with the *Baez Consent Decree* and to make recommendations to the Court concerning steps that should be taken to bring NYCHA into compliance.

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## W. Wet Measurement

A structure is considered to be wet when the moisture meter measurement is equal to or greater than 599 (on a scale of 0 to 999).

## VI. REVIEW CYCLE

Healthy Homes shall review this Standard Procedure at least once every three (3) years; and advise the Compliance Department via email if no changes are needed or submit its revisions to the procedure by submitting *NYCHA Form 022.008, Procedure Development Request*.

## VII. RESPONSIBILITIES

### A. Office of Mold Assessment & Remediation

The Office of Mold Assessment & Remediation shall:

1. Monitor key development-level mold-related indicators including, but not limited to, parent and child mold work order completion time frames, and mold reoccurrence and unfounded inspection rates.
2. Perform random inspections at developments with high rates of mold reoccurrence or unfounded inspections and report findings to the regional asset manager.
3. Monitor the efficiency of mold work order scheduling and provide follow up recommendations to the regional asset manager or skilled trades deputy director, as applicable.

### B. Property Management

1. The property management department director shall:
  - a. Monitor key development-level mold-related indicators in Maximo including, but not limited to, scheduled appointments, parent and child mold work order completion time frames, and mold reoccurrence and unfounded inspection rates.
  - b. Assign supervisory staff to perform random inspections at developments, as needed.
2. The regional asset manager shall:
  - a. Monitor development property management operations and hold property managers and property maintenance supervisors accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.

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- b. Investigate and respond to inspection reports prepared by the Office of Mold Assessment & Remediation.
3. The Property Management Department skilled trades deputy director shall:
  - a. Monitor skilled trades administrators, borough schedulers, and skilled trades supervisors and hold them accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
  - b. Respond to recommendations from the Office of Mold Assessment & Remediation.
4. Skilled trades administrators shall schedule skilled trades workers to complete complex repairs within 15 days.
5. The borough scheduler shall:
  - a. Review the Maximo scheduled appointments screen daily.
  - b. Monitor Maximo daily for new parent mold and quality assurance inspection work orders.
  - c. Monitor Maximo for the timely completion of parent and child mold work orders and immediately address delays.
  - d. Ensure immediate scheduling of parent and child work orders to prevent delays.
    - (1) Initial inspections must be scheduled for a date no more than 4 calendar days after the date of the parent work order creation.
    - (2) Schedule child work orders for simple repairs to be completed by Property Management within 7 days.
    - (3) Quality assurance inspections must be scheduled and completed between 30-45 days after the last child work order is closed.
  - e. Assign in Maximo the property maintenance supervisor, assistant property maintenance supervisor, or property manager to work orders to conduct initial and quality assurance inspections.
  - f. Identify and schedule all work orders with the status of Waiting To Schedule (WTSCH) and Failed to Schedule (FAILSCH).
  - g. Reschedule appointments for mold related work orders as needed.
  - h. Coordinate the scheduling of skilled trades workers with the Property Management Department Planning Unit skilled trades administrator; the director of the

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Maintenance, Repair & Skilled Trades Department (MRST); and the Healthy Homes Lead Hazard Control Department Abatement and Clearance Unit.

6. The property manager shall:
  - a. Closely monitor the customer service delivery aspects of this Standard Procedure to ensure NYCHA's commitments to residents are addressed.
  - b. Work closely with the property maintenance supervisor to ensure that property management staff:
    - (1) Visit apartments for all mold work appointments as scheduled.
    - (2) Record resident outreach attempts in the Tenant Data System (TDS)
7. The property maintenance supervisor shall:
  - a. Conduct mold initial inspections and quality assurance inspections using mold-related tools and equipment.
  - b. Work closely with property maintenance staff to ensure that property maintenance staff:
    - (1) Accompany the property maintenance supervisor during initial inspections and quality assurance inspections, as required.
    - (2) Visit apartments for all mold work order appointments as scheduled.
8. The assistant property maintenance supervisor shall perform the tasks in Section 7.a-b directly above in addition to the property maintenance supervisor.

### C. Maintenance, Repair & Skilled Trades Department (MRST)

1. The director shall
  - a. Monitor MRST skilled trades administrators and MRST skilled trades supervisors and hold them accountable for monitoring all mold-related work orders in Maximo and addressing conditions in compliance with protocols established for remediating mold and identifying and correcting root causes.
  - b. Respond to recommendations from the Office of Mold Assessment & Remediation.
2. MRST skilled trades administrators shall schedule skilled trades workers to complete complex repairs within 15 days.

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### D. Lead Hazard Control Department

The supervisor of the Abatement and Clearance Unit shall oversee staff for large remediation jobs and coordinate scheduling work with Environmental Field Operations in MRST and the borough scheduler.

<b>NOTE:</b>	Once abatement work is complete, Property Management Department staff is responsible for coordinating and scheduling remaining repairs.
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### E. Employees Who Remediate or Correct the Root Causes of Mold

Employees shall follow the protocols in Section VIII.C and D, as applicable, when remediating mold and related conditions or correcting probable root causes.

### F. All NYCHA Employees Performing Work in Apartments

Any employee performing work in a resident apartment who observes a mold condition shall create a parent mold work order either on the handheld device or submit a paper mold work order to the property management office.

## VIII. PROCEDURE

### A. Creating and Scheduling Mold Service Requests

#### 1. Creating Parent Mold Work Orders

##### a. Resident Service Requests to the CCC

When a resident calls the Customer Contact Center (CCC) to make a service request involving mold or mildew, a parent mold work order is created in Maximo. The resident is required to select a scheduled date for the initial inspection within 4 calendar days of the date of the call.

If the resident is unable to schedule a date within 4 calendar days of the date of the call, the resident is advised that NYCHA will visit the apartment the same day in an attempt to conduct the inspection; and that NYCHA will return to the apartment within 48 hours to reattempt to conduct the inspection and may use its Right of Entry to access the apartment for that purpose. See Section VIII.F, Tenant Not Home Policy.

<b>NOTE:</b>	<ul style="list-style-type: none"><li>When residents are advised in the morning of a business day, the same day means that NYCHA will visit the apartment to attempt to conduct the inspection by that afternoon. When residents are advised in the afternoon of a business day or on weekends or holidays, the same day means that NYCHA will visit the apartment to attempt to conduct the inspection by the morning of the next business day.</li></ul>
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- See Standard Procedure 040:09:6, *Customer Contact Center* for information on the processing and scheduling of service requests to the CCC

### b. Resident Service Requests Through the MyNYCHA App

When a resident submits a mold/mildew service request through the MyNYCHA App a parent mold work order is created in Maximo. The resident is required to select a scheduled date for the initial inspection.

If the resident is unable to schedule a date within 4 calendar days of the date of the request, the resident is advised that NYCHA will visit the apartment the same day in an attempt to conduct the inspection; and that NYCHA will return to the apartment within 48 hours to reattempt to conduct the inspection and may use its Right of Entry to access the apartment for that purpose. See Section VIII.F, Tenant Not Home Policy.

### c. Property Management Staff Initiates Work Orders

(1) When property management staff or other NYCHA employees view mold conditions in a resident apartment while performing other work or an inspection, they must:

- (a) Create a parent mold work order in Maximo using the iWM app on the handheld device; or
- (b) Complete and submit a paper Maximo mold work order to the property management office the same day.

(2) The property maintenance supervisor or assistant property maintenance supervisor ensures that property management office staff immediately creates a parent mold work order in Maximo from any submitted paper mold work order.

<b>NOTE:</b>	See Standard Procedure 040:09:7, <i>Managing Maintenance Work Orders</i> for definitions of Siebel and Maximo; information on planning, completing, and closing out work orders in the Siebel and Maximo applications; and for the definitions of and relationships between parent and child work orders.
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## 2. Supervisory Review of All Mold Work Orders

The borough scheduler must review all mold work orders in Maximo at least daily.

- a. If an initial inspection generated through a call to the CCC or via the MyNYCHA App is not scheduled, the borough scheduler must assign an inspector to visit the

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apartment that same day to conduct the initial inspection, or issue *NYCHA Form 042.727, 48 Hour Notice of Health and Safety Repairs* to the apartment.

- b. If an initial inspection created by NYCHA staff in Maximo is not scheduled, the borough scheduler must:
  - (1) Contact the resident to schedule the appointment for the initial inspection within 4 calendar days from the parent work order creation date.
  - (2) If the resident is unable to schedule an appointment within 4 calendar days from the parent work order creation date, the borough scheduler must advise the resident that:
    - (a) NYCHA will visit the apartment that same day in an attempt to conduct the inspection; and
    - (b) NYCHA will return to the apartment within 48 hours to reattempt to conduct the inspection and may use its Right of Entry to access the apartment. See Section VIII.F, Tenant Not Home Policy.

<b>NOTE:</b>	<ul style="list-style-type: none"><li>• Initial inspections must be scheduled for a date within 4 calendar days of the creation of the parent mold work order.</li><li>• All attempts to contact residents must be recorded in the Interview Details (Option 8) in the Tenant Data System (TDS).</li></ul>
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### B. Inspecting Mold Conditions in Apartments

On the scheduled date provided on the parent mold work order, the inspector visits the resident's apartment to inspect the mold condition, identify the probable root cause(s), and determine appropriate next steps to remediate the mold, any related conditions, and correct the root cause(s).

<b>NOTE:</b>	Initial inspections are performed using the handheld device. If a handheld device is not operating during the initial inspection, the inspector must record the inspection results on a Maximo paper mold inspection work order and immediately enter the results into Maximo following the initial inspection.
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#### 1. Preparing for the Mold Initial Inspection

Prior to visiting the apartment on the day of the initial inspection appointment, the inspector:

- a. Reviews the Maximo work order history for the apartment to determine if there is a history of mold or moisture complaints.

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- b. Checks the mold inspection tool kit to ensure that the following instruments are in working order: anemometer, hygrometer, and moisture meter.
- c. Assigns a maintenance worker to accompany them on the initial inspection, or to be on call, to immediately remediate mold and related conditions or to identify and correct root causes, when possible. The maintenance worker must bring an anemometer, a borescope and tools appropriate for making wall-breaks, and a HEPA vacuum.
- d. Must make a courtesy call to the resident via the handheld device on the way to the initial inspection to remind them of the inspection. If the resident does not answer the call, the inspector must still go to the apartment at the scheduled time.

<b>NOTE:</b>	If the resident or other adult is not home to allow access to the apartment for a scheduled mold related appointment, see Section VIII.F, Tenant Not Home Policy.
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### 2. Discussing the Mold Condition with the Resident

Upon arriving at the apartment, the inspector:

- a. Makes best efforts to interview an adult listed on the household composition about any history of mold and moisture in the apartment.
- b. Adds the information to the handheld device if there is a history.

### 3. Conducting the Initial Inspection

The inspector conducts the initial inspection using the handheld device.

#### a. Inspecting for Mold, Water Damage, and Moisture

The inspector:

- (1) Visually inspects the room or area identified in the mold work order for mold growth and records the total estimated square footage of mold on each wall (1-4), floor, ceiling, and any components.
- (2) Visually inspects the room for water damage and records the location of the water damage (e.g. the specific wall(s), floor, ceiling, or component).
- (3) Uses the moisture meter to measure the walls, floor, ceiling, and components in the room for subsurface moisture and records if a measurement is equal to or greater than 599 (i.e. a wet measurement).



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The inspector must take multiple measurements of each surface or component and record if a measurement is equal to or greater than 599.

### b. General Evaluation of Room Conditions

If a mold, water damage, or moisture (i.e., a wet measurement) condition is found, the inspector must conduct a general evaluation of the room and the opposing common walls in adjoining rooms and common areas.

<b>NOTE:</b>	While the inspector is evaluating the opposing side of common walls in adjoining rooms and common areas, if mold conditions are identified in an adjoining room that are not likely from the same root cause, the inspector shall create a parent mold work order on the handheld device.  The inspector should complete this mold work order for the adjoining room at the time of the initial inspection.
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(1) Records the surface structure (e.g. concrete, plaster, sheetrock) and framing structure (e.g. wood, steel) of the room's walls, floor, ceiling, and component(s).

(2) Uses the hygrometer to take a humidity reading of the room and records the humidity level.

(3) If the room is a kitchen or bathroom:

Indicates if there is mechanical ventilation.

(a) If there is mechanical ventilation:

The inspector checks the ventilation by using the anemometer to take an air flow measurement in cubic feet per minute (CFM) and records the result in the handheld device.

i. Maximo automatically generates child work orders:

aa. To clean the horizontal vent ductwork.

ba. To check the roof fan if the CFM is less than 25.

<b>NOTE:</b>	The user must ensure the anemometer is properly calibrated by: i. Entering the correct size of the exhaust duct (i.e. the height and width in inches); and ii. Ensuring that the Free Air Percentage is set to 55%. See Appendix C for instructions on how to use the anemometer. Users must follow the manufacturer's instructions when using inspection tools.
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(b) If there is a window:

- i. The inspector checks that the window is operating properly and records the result in the handheld device.
- ii. Maximo automatically generates a child work order to repair the window if it is not operating properly.

(4) If the room is a bathroom:

Checks if the toilet base and shower enclosure are caulked and records the results in the handheld device.

- (a) Maximo automatically generates a child work order to caulk the toilet base and/or shower enclosure if they are not caulked.

(5) Visually inspects the room for signs of pest infestation and records the results in the handheld device.

- (a) Maximo automatically generates a child work order for an exterminator when there is evidence of pests.

### c. Identifying the Probable Root Cause(s) and Remediation Methods

The inspector determines the probable root cause(s) for any wall, floor, ceiling, or component identified in Section VIII.B.3.a above as having mold, water damage, or moisture (i.e. a wet measurement).

(1) The inspector:

- (a) Selects on the handheld device a probable root cause from the following options:
  - i. Bathtub/shower
  - ii. Caulking
  - iii. Exterior wall (winter)
  - iv. Façade
  - v. Grouting
  - vi. Lack of pipe insulation in wall
  - vii. Leak in apartment above/beside

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- viii. Plumbing – In Unit
- ix. Resident – Cause
- x. Roof
- xi. Shower moisture
- xii. Sink
- xiii. Toilet
- xiv. Toilet bowl/tank needs barrier
- xv. Tub surround

- (b) Selects the ceiling, wall(s), floor, or component(s) identified in Section VIII.B.3.a above that have the same probable root cause (e.g., both the mold on the ceiling and water damage on the wall have a probable root cause of Shower Moisture).
- (c) Indicates if a wall break is required to inspect or correct the probable root cause.
  - i. If a wall break is required, the inspector must conduct the wall break with the assistance of a maintenance worker as part of the initial inspection.
  - ii. Maximo will create a work order and alert staff if they are required to follow the Renovation, Repair, and Painting (RRP) rules.

<b>NOTE:</b>	Lead-safe work practices and RRP certified workers must be used if (i) Maximo identifies that RRP work is required (the apartment is presumed or known to contain lead-based paint) <u>and</u> (ii) any work would disturb more than 2 square feet of a painted surface per room, or more than 10 percent of the total surface area on an interior or exterior type of component with a small surface area.
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- (d) If the probable root cause is not Resident – Cause:
  - i. Selects one or more Failure Class/Problem Codes, as applicable, from the limited set of options in the dropdown menu for that probable root cause.
  - ii. Selects the appropriate craft required to make the repair for each Failure Class/Problem Code selected.

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(e) If the probable root cause is Resident – Cause

Selects on the handheld device the specific instruction provided to the resident in Section VIII.B.5 below for each probable root cause that is Resident – Cause.

(f) Selects the remediation method and craft from a dropdown menu of limited options for the selected wall(s), floor, ceiling, or component(s).

- (2) Maximo automatically generates child work orders for the Failure Class/Problem Codes (except when the probable root cause is Resident – Cause) and the remediation methods selected.
- (3) If there are any additional probable root causes, the inspector repeats the steps in Section VIII.B.3.c(1) above for each probable root cause.
- (4) If the inspector is unable to determine the probable root cause of a mold, water damage, or moisture (i.e. wet measurement) condition they must immediately contact the Office of Mold Assessment & Remediation by email at:

[mold.busters@nycha.nyc.gov](mailto:mold.busters@nycha.nyc.gov)

d. Completing the Initial Inspection

To complete the initial inspection:

- (1) The inspector must take multiple photo(s) of the condition(s) identified, including at least one close-up photo of the condition(s) and at least one photo of the larger area, using the handheld device and upload the photo(s) into the parent work order in Maximo.
- (2) If the condition is unfounded (i.e., there was no mold, water damage, or wet measurement condition identified):

The inspector must take and upload photo(s) of the condition reported by the resident as mold and upload the photo(s) into the parent work order in Maximo.

<b>NOTE:</b>	For clarity, the inspector should record key information obtained during the inspection in the notes field of the iWM app on an unfounded work order.
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#### 4. Reviewing the Work Plan

Upon completion of the initial inspection, the inspector:

## NYCHA STANDARD PROCEDURE MANUAL

- a. Reviews the child work orders (i.e. the work plan) in the handheld device to confirm the work plan is correct and complete.
  - b. Identifies the outcomes of the inspection on *NYCHA Form 060.845, Mold Inspection Receipt*.
5. Reviewing the Initial Inspection Results with the Resident
- a. When Mold, Water Damage, or a Moisture Condition is Identified

The inspector:

- (1) Gives *NYCHA Form 060.303, Controlling Mold in Your Apartment* to the resident and reviews with the resident the general recommendations on the form for preventing and cleaning mold and the importance of identifying and correcting the root cause(s) of mold to avoid reoccurrence.
- (2) Gives *NYCHA Form 060.845, Mold Inspection Receipt* to the resident and reviews the following with the resident:
  - (a) The initial inspection outcome (founded or unfounded).
  - (b) The requirement that NYCHA conduct a quality assurance inspection between 30-45 days after all work is completed.
  - (c) The required timeframe for the completion of all work.
  - (d) The name and contact information of the ombudsperson.
- (3) Indicates in the handheld device that both *NYCHA Form 060.303, Controlling Mold in Your Apartment* and *NYCHA Form 060.845, Mold Inspection Receipt* were provided to and discussed with the resident.
- (4) Advises the resident that the property management office will contact them to schedule any additional appointments needed.
- (5) Advises the resident that NYCHA will mail them *NYCHA Form 060.846, Mold Inspection Review* which details the following information:
  - (a) The initial inspection and probable root cause findings.
  - (b) The next step(s) to remediate the mold, excessive moisture, or related condition and correct the root cause.
  - (c) The specific instruction(s) on how to correct the probable root cause if the probable root cause is Resident – Cause.

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<b>NOTE:</b>	See Management Manual, Chapter II, Rent and Rent Collection, Section XV.A and Appendix 8 for details on when and how to make a social service referral to the Family Partnerships Department if there are housekeeping or safety hazards in an apartment.
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- (d) The requirement that NYCHA conduct a quality assurance inspection between 30-45 days after all work is completed.
  - (e) The required timeframe for the completion of all work.
  - (f) The name and contact information of the ombudsperson.
- b. When the Mold Condition is Unfounded

The inspector:

- (1) Discusses the initial inspection findings with the resident.
- (2) Gives *NYCHA Form 060.303, Controlling Mold in Your Apartment* to the resident and reviews with the resident the general recommendations on the form for preventing and cleaning mold and the importance of identifying and correcting the root cause(s) of mold to avoid reoccurrence.
- (3) Requests that the resident sign the unfounded work order on the handheld device.
- (4) Indicates in the handheld device if the resident refused to sign or if the resident disagrees that the mold condition is unfounded.
- (5) Provides the resident with *NYCHA Form 060.845, Mold Inspection Receipt* including the name and contact information of the ombudsperson.
- (6) Closes the mold work order as Unfounded.
- (7) Provides the name and contact information of the ombudsperson.

<b>NOTE:</b>	If when following the Tenant Not Home Policy in Section VIII.F, NYCHA conducts an initial inspection when a tenant is not home, the inspector must leave the following in the apartment: <i>NYCHA Form 060.303, Controlling Mold in Your Apartment, NYCHA Form 060.845, Mold Inspection Receipt</i> , and a hard copy of the work order.
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### C. Remediating Mold and Related Conditions

<b>NOTE:</b>	See Appendix B for a list of HA numbers for ordering specialized tools and supplies.
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1. All remediation work must conform to the protocols in the following documents:
  - a. Standard Procedure 050:20:1, *Lead Safe Housing Procedure*
  - b. Appendix A, Remediation Methods
  - c. *Interim Guidance on Wall Breaks*
  - d. *Interim Guidance on Pipe Insulation*

<b>NOTE:</b>	If cracked or crumbling 9 by 9 vinyl floor tile is present, staff must: <ul style="list-style-type: none"><li>• Cover the exposed area of floor with plastic</li><li>• Tape all edges securely with duct tape</li><li>• Instruct the resident not to disturb the covered area</li><li>• Contact the Technical Services Department's Asbestos Unit for further instructions.</li></ul>
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2. All work must be documented with photographs, including at least one close-up photo of the condition(s) and at least one photo of the larger area.

Employees must take and upload photos of the work into Maximo using the handheld device. Required photos include:

- a. The condition before work is performed.
- b. The condition after work is completed.
- c. Other photos as needed to demonstrate that work behind a surface was completed to standard, e.g. photos of insulated pipes, mold free areas.

<b>NOTE:</b>	Lead-safe work practices and RRP certified workers must be used if (i) Maximo identifies that RRP work is required (the apartment is presumed or known to contain lead-based paint) <u>and</u> (ii) any work would disturb more than 2 square feet of a painted surface per room, or more than 10 percent of the total surface area on an interior or exterior type of component with a small surface area.
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3. Employees must document the materials used in the Materials section of the mold-related child work order including, as applicable, the specific paint (mold resistant or standard) and sheetrock (mold resistant or standard).

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### 4. Personal Protective Equipment (PPE)

#### a. Mold Remediation of Less than 100 Square Feet

Employees are recommended to use the following:

- (1) An N95 disposable respirator (i.e., a dust mask) or more protective respirator (such as an N100 disposable respirator) in accordance with the OSHA respiratory protection standard (29 CFR 1910.134)
- (2) Disposable protective clothing covering both head and shoes
- (3) Gloves
- (4) Eye protection

#### b. Mold Remediation of 100 Square Feet or More (Large Remediation Jobs) Performed by Lead Abatement Workers or Certified Contractors

Employees must use the following:

- (1) A minimum of a half-face elastomeric respirator with a P-100 filter used in accordance with OSHA respiratory protection standard (29 CFR 1910.134)
- (2) Disposable protective clothing covering both head and shoes
- (3) Gloves
- (4) Eye protection

<b>NOTE:</b>	Employees using respirators must follow the requirements in <i>SP 001:17:2, Respiratory Protection Safety Program.</i>
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### D. Correcting Root Causes

#### 1. Employees must ensure that all repairs to correct root causes:

- a. Are completed to industry standards.
- b. Conform to the protocols in the following documents:

- (1) Standard Procedure 050:20:1, *Lead Safe Housing Procedure*
- (2) *Interim Guidance on Wall Breaks*
- (3) *Interim Guidance on Pipe Insulation*



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### (4) *Interim Guidance on Roof Fan Inspections*

- c. Are documented with photographs per the guidelines in Section VIII.C.2. above.

## 2. Instructions for Specific Tasks

### a. Additional Pipe Insulation Instruction

- (1) When performing any wall break including instances where the probable root cause is the lack of pipe insulation in the wall, employees must install or replace pipe insulation in any area inside the wall cavity where the employee determines that the insulation is missing or defective. The employee creating the wall break shall create an opening of sufficient size to allow visibility of all pipes within the wall cavity with assistance of the borescope.
- (2) Lead-safe work practices and RRP certified workers must be used if (i) Maximo identifies that RRP work is required (the apartment is presumed or known to contain lead-based paint) and (ii) any work would disturb more than 2 square feet of a painted surface per room, or more than 10 percent of the total surface area on an interior or exterior type of component with a small surface area.
- (3) If the current insulation in the wall cavity is a suspected asbestos-containing material, then no further work must be conducted, the hole must be sealed with either Masonite or 6 mm poly sheeting and duct tape, and a work order must be created for testing/abatement by the Technical Services Department's Asbestos Unit.

### b. Instructions for Cleaning Horizontal Vent Ductwork

When cleaning horizontal vent ductwork from inside the apartment, employees:

- (1) Remove the face of the grill to the vertical shaft and HEPA-vacuum the grill and the interior and exterior of the horizontal vent ductwork.
- (2) Must use caution when cleaning the fire damper inside the ductwork.

## 3. Personal Protective Equipment (PPE)

Employees must use the PPE required to perform their specific task. An employee should refer any questions about the required PPE to their supervisor or contact the Office of Safety and Security at 212-306-8800.

Please refer to the *Personal Protective Equipment (PPE) and Other Safety Equipment Catalogue* for HA numbers and item descriptions. The catalogue is located on the SafeNYCHA webpage on NYCHA Connect/Departments.

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### E. Time Frames to Respond to Mold and Related Issues

#### 1. Service Level Goals

- a. Flooding conditions must be abated within 24 hours provided that NYCHA has access to the impacted areas. All standing water relating to the flood must be removed, and water-soaked areas, with the exception of residents' personal property, must be dried within 48 hours. Residents must be advised to clean and dry any damp furnishing and other personal property within 24-48 hours.

- b. Initial Inspection and Child Work Orders

All simple repairs must be completed within 7 calendar days from the date the parent mold work order was created. Complex repairs must be completed within 15 calendar days from the date the parent mold work order was created.

Given this timeframe the initial inspection must be completed within 4 calendar days from the date the parent mold work order was created.

These standards may be reviewed and updated based on performance.

- c. Quality Assurance Inspections

The quality assurance inspection must be completed between 30-45 calendar days after the last child work order has been closed.

### F. Tenant Not Home Policy

If the resident or another adult eighteen years of age or older is not home to provide access for a scheduled appointment for a mold inspection or related child work order, or a quality assurance inspection, NYCHA employees must follow the steps in Standard Procedure 040:17:3, *Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Paint*.

### G. Reasonable Accommodations

1. If needed as a result of a medical disability or a breathing or respiratory disorder including asthma, residents in apartments with mold and/or excessive and/or uncontrolled moisture conditions are entitled to reasonable accommodations from NYCHA. Such accommodations may include, but are not limited to, the following:
  - a. The right to install and operate an additional air conditioning unit in their apartment if the electrical system permits an additional unit;
  - b. Temporary relocation during mold and moisture remediation;

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- c. Permanent relocation to other NYCHA housing if the apartment is uninhabitable and another apartment is available; and/or
  - d. The use of enhanced dust suppression methods during mold remediation.
2. Property management staff or CCC customer information representatives must check the “reasonable accommodation” flag on the Maximo mold work order or Siebel service request if a resident asks for a reasonable accommodation.
  3. See Standard Procedure 040:12:1, *Reasonable Accommodations in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders*, to learn more about the responsibilities of NYCHA staff to review reasonable accommodation requests, and the applicable terms, forms, and policies for reasonable accommodations.

### H. Quality Assurance

#### 1. Quality Assurance Inspections

- a. Maximo automatically generates a quality assurance inspection work order twenty-five (25) calendar days after the last child work order is closed for all apartments where a mold, water damage, or moisture (i.e. a wet measurement) condition was identified during the inspection. The target start date is automatically populated as 30 calendar days after the last child work order is closed and the target end date is populated as 45 calendar days after the last child work order is closed.
- b. Once the quality assurance inspection work order is generated, the borough scheduler:
  - (1) Assigns the property maintenance supervisor, assistant property maintenance supervisor, or property manager to conduct the quality assurance inspection; and
  - (2) Ensures that property management staff contacts the resident and schedules the quality assurance inspection to take place between 30-45 calendar days after the last child work order is closed.

<b>NOTE:</b>	<ul style="list-style-type: none"><li>• For quality assurance purposes, whenever possible the inspector conducting the quality assurance inspection should be different than the inspector who performed the initial inspection.</li><li>• Quality assurance inspections are performed using the handheld device. If a handheld device is not operating during the quality assurance inspection, the inspector must record the results on a paper quality assurance inspection work order and enter the results into Maximo immediately following the quality assurance inspection.</li></ul>
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### c. Preparing for the Quality Assurance Inspection

Prior to visiting the apartment on the day of the quality assurance inspection appointment, the inspector:

- (1) Checks the mold inspection tool kit, to ensure that the following instruments are in working order: anemometer, hygrometer, and moisture meter. Brings all the tools on the quality assurance inspection in case a full new initial inspection is needed.
- (2) Assigns a maintenance worker to accompany them on the quality assurance inspection or be on call in case there is follow up work or a full new initial inspection is required. The maintenance worker must bring a borescope and tools appropriate for making wall-breaks.
- (3) Must make a courtesy call to the resident via the handheld device on the way to the quality assurance inspection to remind them of the appointment. If the resident does not answer the call, the inspector must still go to the apartment at the scheduled time.

### d. Conducting the Quality Assurance Inspection

#### (1) Inspecting for Mold, Water Damage, and Moisture

##### (a) The inspector:

- i. Visually inspects for mold any wall, floor, ceiling, or component identified in the initial inspection as having mold and records the results in the handheld device.
  - ii. Visually inspects for water damage any wall, floor, ceiling, or component identified in the initial inspection as having water damage and records the results in the handheld device.
  - iii. Uses the moisture meter to measure for subsurface moisture any, wall, floor, ceiling, or component that measured wet during the initial inspection and records the results in the handheld device.
- (b) If mold, water damage, or moisture (i.e. a wet measurement) is found during the quality assurance inspection:
- i. The inspector immediately stops the quality assurance inspection and completes and closes the quality assurance inspection work order.
  - ii. Maximo automatically generates a new parent mold work order.

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iii. The inspector immediately conducts a full inspection following the steps in Section VIII.B.3-5.

(c) If no mold, water damage, or moisture (i.e. a wet measurement) is found, the inspector continues with the quality assurance inspection.

(2) If an air flow measurement was taken during the initial inspection:

The inspector uses an anemometer to take an air flow measurement in cubic feet per minute (CFM) of the kitchen or bathroom exhaust vent.

<b>NOTE:</b>	The user must ensure the anemometer is properly calibrated by: i. Entering the correct size of the exhaust duct (i.e. the height and width in inches); and ii. Ensuring that the Free Air Percentage is set to 55%. See Appendix C for instructions on how to use the anemometer. Users must follow the manufacturer's instructions when using inspection tools.
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(3) Confirms that all work (i.e. child work orders) to remediate mold and correct root causes and related conditions was satisfactorily completed.

(a) The inspector:

- i. Reviews the work actuals of the child work orders using the handheld device.
- ii. Visually inspects all completed work in the apartment related to the child work orders.

(b) If all work was satisfactorily completed:

The inspector completes the quality assurance inspection by taking photo(s) of the inspection area free of mold, water damage, and/or moisture and uploading the photo(s) into Maximo.

(c) If any work was not satisfactorily completed:

The inspector:

- i. Immediately creates a child work order in Maximo.
- ii. Takes and uploads a photograph of the unsatisfactory work into Maximo if the work is visible in the apartment.
- iii. Closes the existing quality assurance inspection work order.

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- iv. Follows up with supervisor of the staff person(s) who performed the work to report the unsatisfactory work and ensure the work is completed.

<b>NOTE:</b>	See Section XII, Non-Compliance, for steps to address work that is not performed to standard.
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### e. Reviewing the Quality Assurance Inspection with the Resident

#### (1) Quality Assurance Inspection Complete – All Work Satisfactorily Completed

The inspector:

- (a) Reviews the quality assurance inspection findings with the resident.
- (b) Requests that the resident sign the quality assurance inspection work order on the handheld device confirming that mold and any related conditions are not present and that all work was completed satisfactorily.
- (c) Indicates on the handheld device if the resident refuses to sign or is dissatisfied with the work.
- (d) Closes the quality assurance inspection work order.

#### (2) Additional Work Needed

If additional work is needed, the inspector advises the resident of:

- (a) The next steps to complete the work and the required timeframe for completion of all work.
- (b) The requirement for a new quality assurance inspection once the work is completed.

## 2. Performance Reporting

The Office of Mold Assessment and Remediation assigns:

- a. Staff to review reports to identify developments with:
  - (1) High parent mold work order completion time frames.
  - (2) High rates of unfounded mold work orders.
  - (3) High reoccurrence rates for mold work orders.

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- b. Supervisory staff trained in mold inspections to:
- (1) Visit developments and inspect randomly selected apartments with high rates of unfounded or reoccurring (as applicable) mold work orders.
  - (2) Report findings on the underlying issue, i.e. a building system and/or mold inspection and remediation process issue.
  - (3) Provide follow up recommendations to the regional asset manager.
    - (a) For building system issues, the supervisory staff may, for example, recommend additional repairs.
    - (b) For process issues, the regional asset manager follows up with the property manager and property maintenance supervisor to address the process issue which could include providing additional training, reviewing key accountabilities, or providing progressive discipline.
- c. Staff trained in scheduling mold work orders to:
- (1) Provide follow up recommendations to the Property Management Department skilled trades deputy director or regional asset manager; or the director of MRST.
    - (a) For building system issues, the Office of Mold Assessment & Remediation staff may, for example, recommend additional repairs.
    - (b) For process issues, recommendations could include providing additional training, reviewing key accountabilities, and/or providing progressive discipline.
      - i. The Property Management Department skilled trades deputy director addresses issues with the borough scheduler, skilled trades administrators, and skilled trades supervisors.
      - ii. The director of MRST addresses issues with MRST skilled trades administrators and MRST skilled trades supervisors.
      - iii. The regional asset manager addresses issues with the property manager and property maintenance supervisor.

## IX. OUTPUTS, REPORTS, AND RECORDKEEPING

### A. Outputs

1. Mold in NYCHA apartments is remediated and the root causes are identified and corrected within the allowable timeframes.
2. Mold recurrence (same apartment/same room) is reduced.

### B. Reports

Operations reports to be developed with the independent data analyst.

### C. Recordkeeping

The IT Business Solutions Technology Department's Maximo Team retains electronically created and stored completed work orders for at least seven (7) years.

## X. TRAINING REQUIREMENTS

The Human Resources Department's Learning and Development section in conjunction with Operations shall provide or contract to provide the following training, as applicable. The training shall be provided initially and once every two years thereafter.

### A. Inspections

Training on inspection tools and methods as well as conducting and documenting inspections.

### B. Building Sciences

Training on identifying the root causes of mold and on the methods to correct the root causes to prevent the reoccurrence of mold.

### C. Remediation Methods

Training on how to safely and effectively remediate mold and its root causes.

## XI. PERFORMANCE METRICS

- A. Average number of days to complete repairs and close mold work orders.
- B. Average number of days to complete initial inspections.
- C. Percent of mold work orders for reoccurring mold.



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### XII. NON-COMPLIANCE

- A. If unsatisfactory work is identified during a quality assurance inspection described in Section VIII.H, or at any other time, supervisory staff must take one or more of the following actions:
1. Identify areas for follow up training for the employee and ensure training is scheduled and provided.
  2. Reinforce with the employee(s) the job expectations, accountabilities, and the progressive discipline process.
- B. Failure to comply with the requirements of this Standard Procedure may result in disciplinary actions.

### XIII. FORMS

- A. NYCHA Form 042.727, 48 Hour Notice for Health & Safety Repairs
- B. NYCHA Form 060.303, Controlling Mold in Your Apartment
- C. NYCHA Form 060.845, Mold Inspection Receipt
- D. NYCHA Form 060.846, Mold Inspection Review

**XIV. WORKFLOW**

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**XV. REVIEW/REVISION HISTORY PAGE**

**MOLD/MILDEW CONTROL IN NYCHA RESIDENTIAL BUILDINGS**

**SP 040:14:1**

<b>Review/Revision</b>	<b>Review/Revision Date</b>	<b>Sections Amended</b>
1.	Not applicable -- new Standard Procedure	The Standard Procedure was posted as a draft on the Forms & Reference Library on May 19, 2014. NYCHA staff used the posted draft as agency policy beginning on the effective date of May 21, 2014.
2.	6/3/2015	Banner
3.	6/3/2015	VI, Assessment of Mold/Mildew: The First Staff Visit
4.	12/19/18	Procedure updated and organized into current Standard Procedure format.
5.	12/19/18	Section I, Purpose
6.	12/19/18	Section II, Policy
7.	12/19/18	Section III, Applicability
8.	12/19/18	Added Section IV, Introduction to Mold and Moisture Control
9.	12/19/18	Added Section V, Definitions
10.	12/19/18	Section VI, Review Cycle
11.	12/19/18	Added Section VII, Responsibilities
12.	12/19/18	Added Section VIII, Procedure
13.	12/19/18	Added Section IX, Outputs, Reports, and Recordkeeping
14.	12/19/18	Added Section X, Training Requirements
15.	12/19/18	Added Section XI, Performance Metrics
16.	12/19/18	Added Section XII, Non-Compliance
17.	12/19/18	Section XIII, Forms
18.	12/19/18	Added Section XIV, Workflow
19.	12/19/18	Added Section XV, Review/Revision History Page
20.	12/19/18	Added Section XVI, Appendices
21.	12/19/18	Removed previous appendices A-G
22.	12/19/18	Added Appendix A, Remediation Methods
23.	12/19/18	Added Appendix B, HA Numbers for Mold Related Tools and Supplies
24.	12/19/18	Added Appendix C, Instructions for Using the Anemometer
25.	1/3/19	Section VIII.C, Remediating Mold and Related Conditions
26.	1/3/19	Section VIII.D, Correcting Root Causes
27.	10/17/19	Section VIII.G, Procedure
28.	2/26/20	Banner

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29.	2/26/20	Section II, Policy
30.	2/26/20	Section III, Applicability
31.	2/26/20	Section IV, Introduction to Mold and Moisture Control
32.	2/26/20	Section V, Definitions
33.	2/26/20	Section VI, Review Cycle
34.	2/26/20	Section VII, Responsibilities
35.	2/26/20	Section VIII, Procedure, Subsections A-H
36.	2/26/20	Section IX, Outputs, Reports, and Recordkeeping
37.	2/26/20	Section X, Training Requirements
38.	2/26/20	Section XII, Non-Compliance
39.	2/26/20	Appendix A, Remediation Methods
40.	2/26/20	Appendix B, HA Numbers for Mold Related Tools and Supplies
41.	2/26/20	Appendix C, Instructions for Using the Anemometer
42.		
43.		
44.		
45.		
46.		
47.		

## XVI. APPENDICES

### Appendix A – Remediation Methods

#### 1. Ceiling: Painted Concrete (Leak or Condensation; All Rooms)

- a. HEPA-vacuum and clean with a detergent solution surfaces displaying water damage, mold growth, and/or that measure wet.
- b. Wet-scrape or wire-brush any loose paint.
- c. Repaint with mold standard paint. In bathrooms and kitchens repaint with mold resistant paint.

#### 2. Ceiling: Sheetrock with Steel Framing (Leak; All Rooms)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. Replace sheetrock. In bathrooms and kitchens replace with mold resistant sheetrock.
- c. Repaint with standard paint. In bathrooms and kitchens repaint with mold resistant paint.

#### 3. Ceiling: Sheetrock with Wood Framing (Leak; All Rooms)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. HEPA-vacuum and clean with a soap or detergent solution any wood framing components displaying water damage and/or minor levels of mold growth.
- c. Paint any wood framing components displaying water damage and/or minor levels of mold growth conditions with mold resistant paint.
- d. Remove and replace wood framing displaying significant mold growth.
- e. Replace sheetrock. In bathrooms and kitchens replace with mold resistant sheetrock.
- f. Repaint with standard paint. In bathrooms and kitchens repaint with mold resistant paint.

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### 4. Ceiling Sheetrock with Steel Framing (Condensation; Bathroom or Kitchen)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. Replace with mold resistant sheetrock.
- c. Repaint with mold resistant paint.

### 5. Ceiling: Sheetrock with Steel Framing (Condensation; Other Rooms)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. Replace sheetrock.
- c. Repaint with standard paint.

### 6. Ceiling: Sheetrock with Wood Framing (Condensation; Bathroom or Kitchen)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. HEPA-vacuum and clean with a soap or detergent solution any wood framing components displaying water damage and/or minor levels of mold growth.
- c. Paint any wood framing components displaying water damage and/or minor levels of mold growth conditions with mold resistant paint.
- d. Remove and replace wood framing displaying significant mold growth.
- e. Replace with mold resistant sheetrock.
- f. Repaint with mold resistant paint.

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### 7. Walls: Painted Plaster (Leak or Condensation; All Rooms)

- a. HEPA-vacuum and clean with a detergent solution surfaces displaying water damage, mold growth, and/or that measure wet.
- b. Wet-scrape to remove the affected paint and top-coated plaster or skim-coating to which the paint is adhered. Continue wet-scraping to a point of at least 12 inches beyond any visible water damage, mold growth, and/or areas that measure wet.
- c. Repaint with mold resistant paint.

### 8. Walls: Sheetrock with Steel Framing (Leak or Condensation; All Rooms)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet.
- b. Replace sheetrock. In bathrooms and kitchens replace with mold resistant sheetrock.
- c. Repaint with standard paint. In bathrooms and kitchens repaint with mold resistant paint.

### 9. Walls: Sheetrock with Wood Framing (Leak or Condensation; All Rooms)

- a. Remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. Continue removal to a point of at least 6 inches beyond any visible water damage or mold growth on the front or back sides of the sheetrock and/or areas that measure wet or to the next available framing member. If mold growth is observed on the exposed adjacent wall, remove and dispose of sheetrock displaying visible water damage, mold growth, and/or that measure wet. In areas where significant water damage, mold growth, or moisture is present on sheetrock, use a HEPA-vacuum at the point of dust generation during the sheetrock removal work.
- b. HEPA-vacuum and clean with a soap or detergent solution any wood framing components displaying water damage and/or minor levels of mold growth.
- c. Paint any wood framing components displaying water damage and/or minor levels of mold growth conditions with mold resistant paint.
- d. Remove and replace wood framing displaying significant mold growth.
- e. Replace sheetrock. In bathrooms and kitchens replace with mold resistant sheetrock.
- f. Repaint with standard paint. In bathrooms and kitchens repaint with mold resistant paint.

### 10. Floors: Finished Wood Floors (Leak or Condensation; All Rooms)

- a. Remove and dispose of finished wood floorboards displaying significant water damage (buckling) and/or that measure wet. Continue removal to a point of at least 12 inches

## NYCHA STANDARD PROCEDURE MANUAL

beyond any visible mold growth on the top and/or bottom sides of finished wood floorboards, plywood sub-flooring, and/or sleepers or to the perimeter of the room.

- b. If wet, water-damage, and/or mold growth conditions reach the perimeter of a room, evaluate flooring in the adjacent room to determine if additional removal work is necessary.
- c. Replace flooring.

### **11. Floors: Ceramic Floors (Leak or Condensation; All Rooms)**

- a. Clean surfaces thoroughly using a low-toxicity household cleaner with slightly abrasive properties.

### **12. Floors: Vinyl Floor Tiles (Leak or Condensation; All Rooms)**

- a. Remove and dispose of water-damaged vinyl floor tiles or tiles measuring wet.
- b. HEPA-vacuum underlying concrete slab and clean using a detergent solution.
- c. Replace floor tiles.

### **13. Kitchen Cabinetry and Bathroom Vanities (Significant Mold)**

- a. Remove and dispose of cabinetry.
- b. Replace cabinetry.

### **14. Bathtub and Shower Grout or Caulking**

- a. Where grout or caulking displays heavy and widespread levels of mold growth, dig out existing grout or caulking and replace with an approved mold resistant product.

### **15. Minor Mold Growth (On Painted Surfaces, Shower Grout, Cabinets, etc.)**

- a. Clean surfaces thoroughly using a low-toxicity household cleaner with slightly abrasive properties.



## NYCHA STANDARD PROCEDURE MANUAL

### Appendix B – HA Numbers for Mold Related Tools and Supplies

#### 1. Supplies

HA #	Material Item	Material Item Specification	Application
1404922227	Foster 40-50 Paint	5 Gallon Container	Used as per remediation method
1214922226	Plas-tec	4 X 8 Sheet	Provide waterproof barrier behind toilet
1219924836	Heavy Duty Adhesive,	Multipurpose Type for Various Construction Projects, Liquid Nails # LN603	Adhesive for plastic panel
1220991245	White Tub & Tile Sealant Caulking Silicone	10.1 oz Cartridge Packed 24/box G.E. SCS1702	Sealing base of toilets and shower walls
0304920052	Micro Filter	Micro Filter, 10 Quantity Replacement Filters	Used with backpack vacuum
0806938344	Microbiowash		Detergent
080657583	ShockWave		Detergent

#### 2. Tools

HA #	Material Item	Material Item Specification	Application
2016125015	Putty Knife	1-1/4" Stiff Blade	Spread adhesive for plastic panel
2016125020	Putty Knife	1-1/2", Flex Professional Type, Stanley #28241	Spread adhesive for plastic panel
2022922432	V-Notched Trowel	Flat Top for Flooring, 9" X 1/8" X 1/16"	Spread adhesive for plastic panel
2022922431	Roller	3" J-Type, Use for Plastic Laminate	Press plastic panel into adhesive and ensure good bond

## NYCHA STANDARD PROCEDURE MANUAL

HA #	Material Item	Material Item Specification	Application
2022922433	Drywall Type T Square	48" X 2", Aluminum, Anodized Finish, 5-Rivet Construction, 1 mm Graduations	Assist in cutting plastic panel
2022991858	Plexiglass Cutter	Heavy Duty, Fletcher #05-120	Assist in cutting plastic panel
2006924266	Spiral Saw	6 Amp, 120 Volt, Complete Kit with Zip Mate, Circle Cutter Guide & Dust Vault, Rotozip # SS560VSC-31	Assist in cutting plastic panel
0304920051	HEPA Vacuum Cleaner	1 1/2" Static-Dissipating Vacuum Hose, 50' Extension Cord, Two Intercept Micro Filters, 17" Crevice Tool, 3" Dust Brush w/ Reduce, 5" Upholstery Tool, Xover Floor Tool, 42 to 59" Aluminum Telescoping Wand	Assist in controlling airborne particles
1701920185	Moisture Meter	Rugged construction, large backlit display, pin moisture measurement, non-invasive measurement up to 3/4" - 20mm below the surface	Assist in detecting excessive moisture
1701921776	VAC Smart and Wireless Probe Kit	Thermal Anemometer, Vane Anemometer, Thermo-Hygrometers, and Infrared Thermometer	Assist in measuring air velocity, temperature, relative humidity, wet bulb/dew point, and volume flow
1701920186	Vane Anemometer Wireless Smart Probe	Bluetooth Vane Anemometer, 3 AAA Batteries, Certificate of Calibration	Assist in volume-flow measurements and balancing multi-outlet ventilation systems using several instruments
1701920187	Hygrometer Smart and Wireless Probe	Bluetooth Hygrometer, 3 AAA Batteries, Certificate of Calibration	Assist in measuring humidity and temperature
1701920188	Infrared Thermometer	Bluetooth Infrared Thermometer, 3 AAA Batteries, Certificate of Calibration	Assist in non-contact temperature readings from a distance

## NYCHA STANDARD PROCEDURE MANUAL

HA #	Material Item	Material Item Specification	Application
2003928503	Seesnake Micro Inspection Camera	Model CA-300 with 3 ft. cable, complete with accessories, Rigid #37888	Record and save still images and videos of problems in hard-to-reach areas

# NYCHA STANDARD PROCEDURE MANUAL

## Appendix C – Instructions for Using the Anemometer

### A. Switching On and Off

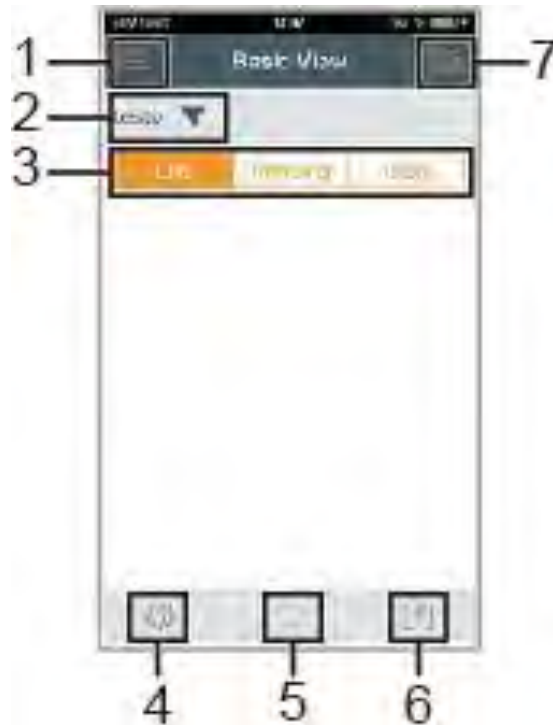
1. Open the Testo App on your NYCHA issued handheld device. Once the Testo App is open, turn on your Anemometer using the instructions below:
  - i. Press the large button shown as number 1 in the image below.
  - ii. The LED light should start blinking yellow.



2. The Testo device should automatically pair with your NYCHA issued handheld device. You will know the Anemometer has successfully paired when the LED light turns green. **(Note: For best results, do not operate more than one Testo device at a time.)**

# NYCHA STANDARD PROCEDURE MANUAL

## B. Overview of the Operating Controls



1. Choice of applications
2. Display of connected Smart Probes
3. 3-panel switch between the 3 informational views (list, graphic diagram, table)
4. Measurement settings. (The menu changes depending on which Smart Probe is connected and which particular device is selected)
5. Restarts the measuring value recordings in graph and table format. Allows you to freeze and unfreeze the reading
6. Export the reading
7. Options menu

## NYCHA STANDARD PROCEDURE MANUAL

### C. Configuring the Testo App to Take an Airflow Reading

1. From the Start up Screen, select **Measurement Settings**
2. On the next selection screen, select **Volume Flow (Outlet)**
  - a. Select settings. This selection screen will let you choose your configuration for measurement



## NYCHA STANDARD PROCEDURE MANUAL

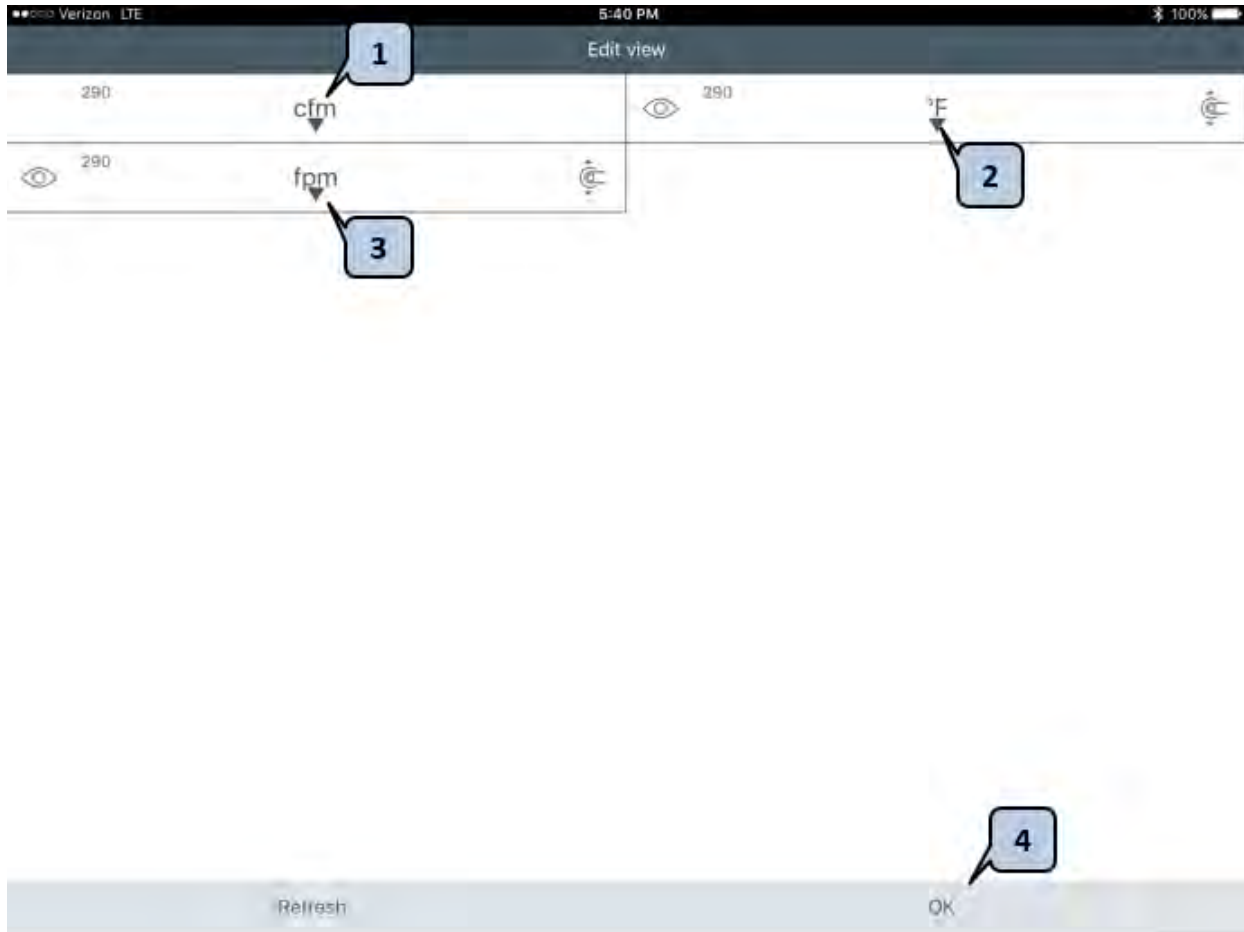
### Configuring the Testo App to Take an Airflow Reading (Continued)

1. On the Configure Measurement screen (Pictured Below), choose **Single** measurement
2. Below that setting, there is a setting for either a rectangular or round air duct measurement
  - a. Choose the **Rectangular measurement**
3. Ensure that the length and width in your App is set to inches
  - a. If the unit of measure is not in inches, use the drop-down triangle symbol to change your unit of measure to inches.
4. Input the length and width of the air duct you are measuring
5. Change Free Area to **55%**
6. Ensure the setting for return air is selected
7. Hit **OK** to save your settings.

The screenshot shows the 'Configure measurement' screen of the Testo app. At the top, the status bar shows 'Verizon LTE', '5:40 PM', and '100%' battery. The screen title is 'Configure measurement'. Below the title, there are three radio button options: 'Single' (selected), 'Multi-point avg.', and 'Time avg.'. Below these are two radio button options for duct shape: 'Rectangular' (selected) and 'Round'. Under the 'Rectangular' option, there are two input fields: 'Length:' with a value of '30.0' and 'Width:' with a value of '40.0'. Both fields have a unit dropdown menu currently set to 'cm'. Below the input fields is a 'Free area' field with a value of '100%' and an information icon. At the bottom, there are two radio button options for air type: 'Return air' (selected) and 'Supply air'. At the very bottom of the screen are 'Cancel' and 'OK' buttons. Numbered callouts (1-6) point to the 'Single' button, the 'Rectangular' button, the unit dropdown menu, the 'Length' and 'Width' input fields, the 'Free area' field, and the 'Return air' button respectively.

## NYCHA STANDARD PROCEDURE MANUAL

- D. In the following screen adjust your units to the following:
1. Change unit of measure to **Cubic Feet per minute (CFM)**
  2. Change temperature units to **Fahrenheit (°F)**
  3. Change unit of measure to **Feet Per Minute (FPM)**
  4. Select **OK** at the bottom of the screen to save your unit selections





## NYCHA STANDARD PROCEDURE MANUAL

### E. Taking a Flow Measurement

To take a measurement, place the anemometer so it is flush with the face of the air duct grill.

1. Your results will be displayed on the Volume Flow (outlet) screen (Pictured Below)
2. To freeze a flow measurement, hit the Start and Stop button at the bottom of your screen

Hitting the Start and Stop button multiple times will allow you to save multiple readings.



# NYCHA STANDARD PROCEDURE MANUAL

## F. Output Results

To view a table of results:

1. Return to the Main Menu screen
2. Select the **Volume Flow (outlet)**



Below is the **Volume Flow (outlet)** screen:



# **INTERIM GUIDANCE ON WALL BREAKS**

**NEW YORK CITY HOUSING AUTHORITY  
MANAGEMENT SERVICES DEPARTMENT**

Interim Guidance on Wall Breaks  
Updated: December 16, 2016

When opening a wall to perform or prepare for repairs, staff must take the necessary precautions to protect residents and staff from mold, asbestos, and lead. This guidance (which supplements the wall break procedures detailed in GM3666) details the steps staff must take before, during, and after the wall break. Instructions on temporary wall closures are also included in this guidance; temporary wall closures are an important customer service practice that must be implemented until permanent repairs can be completed.

Maintenance workers, bricklayers, carpenters, plumbers, plasterers and roofers are responsible for performing repairs that require wall breaks, and are responsible for following the below guidance.

**Work area preparation**

After determining that a wall break must be performed, staff must immediately obtain the necessary supplies before proceeding with repairs. Supplies include, but are not limited to, 6 mil polyethylene sheets, duct tape, a spray bottle, and a sheet of pre-cut Masonite. Lay polyethylene sheets on all horizontal surfaces in the immediate vicinity of the wall opening and secure them with duct tape. **Just prior** to starting work, mist with water the surface area to be opened to reduce the amount of dust produced from the wall break.

If you are working in a development with known lead-based paint or lead components (listed in Appendix A and B of GM3666), polyethylene sheets should cover all horizontal surfaces in the room where the repairs occur. The entrance door should also be covered and weighted at the base to prevent dust from entering other rooms. In these developments, you should make every effort to keep the wall opening under two (2) square feet to limit the amount of dust produced. If the wall break must be greater than two (2) square feet, you must follow the Level 4 dust control instructions detailed in Appendix C of GM3666.

**Precautions while performing repairs; temporary wall closure**

Where possible, score painted walls with a utility knife or use a pry bar or chisel to open a glazed wall. Sawing and drilling should be avoided, if possible, as they produce significantly more dust and make containment and clean up more difficult.

The wall opening should measure 1' by 1' when done for exploratory purposes (e.g., locating a leak), 2' by 2' for smaller repairs, and 4' by 4' for larger repairs. By opening the wall according to these standard sizes, staff can quickly and easily create a temporary closure using pre-cut Masonite. Developments should maintain a stock of Masonite cut in these sizes to fit the standard wall opening.

Staff **must** make a temporary closure over the opening so that residents are not left with an open wall until final repairs can be completed. Staff should place a pre-cut Masonite sheet over the opening and screw in to secure it. The edges should be covered with duct tape to seal it.

When the wall opening is performed on a tub wall, staff must waterproof the temporary Masonite closure. Use a new piece of polyethylene sheeting to cover the affected wall from the side and top edges to the tub ledge and extend 12 inches past the corner onto the adjacent wall, securing all edges with duct tape. Carefully cut an opening for the tub spout and shower controls, and tape down edges as thoroughly as possible.

**Please note: Staff are required to detail that a wall opening has been performed on a tub wall in the notes section of the work order. The subsequent permanent repairs must be expedited in order to prevent potential damage to apartments below. To do so, staff must also notify the development supervisor(s), who will inform the Planning Unit that the follow-up work order must be prioritized.**

#### **Clean up**

Once the temporary wall closure is complete, use a HEPA-filter vacuum to remove dust, then wet wipe the work area using a clean rag or moistened towel to remove any remaining dust. If you suspect lead is present, use a clean rag or moistened towel with lead-specific detergent to wipe down the work area.



# **INTERIM GUIDANCE ON PIPE INSULATION**

## NEW YORK CITY HOUSING AUTHORITY MANAGEMENT SERVICES DEPARTMENT

Interim Guidance on Pipe Insulation  
Updated: December 16, 2016

### Background

When performing repairs that require a wall break and/or repairs to water/ fire system piping or heat supply lines, NYCHA has the opportunity to quickly and efficiently retrofit piping with insulation in accordance with New York City code.<sup>1</sup> This Interim Guidance provides information on how to inspect and install insulation when a wall break has been performed in the course of completing a repair.

Maintenance workers, bricklayers, carpenters, plumbers, plasterers and roofers are responsible for conducting repairs that require wall breaks and/or repairs to water piping. Thus, maintenance workers and the aforementioned trades will be responsible for following the below guidance.

### Process Details

For repairs requiring a wall containing pipes to be opened, maintenance and applicable skilled trades staff are instructed to inspect pipes, valves and fittings exposed for the presence of insulation. For apartment repairs, staff must inspect all domestic water pipes for insulation. In public space, staff must inspect water/ fire system piping or heat supply lines affected by the repair. All new piping (other than waste, vent piping and heat return lines) must be insulated and any repairs that require removal of insulation must include replacing the removed insulation.

If there is no insulation present, staff must install insulation on all pipes, valves and fittings exposed and accessible as a result of the wall break. Where possible, one-inch thick insulation should be installed. If pipe spacing prevents one-inch insulation to be installed, half-inch thick insulation should be installed. Owens Corning ASJ Max insulation of both sizes and related materials (or other manufactured insulation approved by Supply Chain Operations) will be available in the development storeroom for maintenance and skilled trades staff to install on water pipes of various sizes. The full list of insulation and related materials is included in Appendix A. Should they not be available in the development storeroom at the time of the appointment, staff should make a temporary closure to the wall opening using Masonite until the material is obtained at which point work may resume. (Please follow Interim Guidance for Wall Breaks)

Maintenance workers and applicable skilled trades staff are responsible for fully inspecting the pipes exposed and accessible after the wall is opened. Should they find these pipes lack insulation, they must install the insulation during the course of the repair. Staff should consult the manufacturer's installation instructions for additional information. Staff issued with a handheld device must take a photo of the installed insulation once they have completed the installation, select the appropriate insulation remedy codes and attach the photo to the work order in Maximo.

If staff finds that insulation is ripped, damaged or unsecured, staff should remove what remains of the old insulation, and then install insulation around all pipes, valves and fittings that are exposed and accessible as a result of the repair. In the event staff suspects existing insulation may contain asbestos, they are to report it to

<sup>1</sup> 2014 NYC Local Law No. 12, NYC Administrative Code §28-316.1



the development and follow the existing process for testing and abatement. Once insulation has been tested and/or abated, staff should resume installation as outlined above.

Superintendents, assistant superintendents, and skilled trades supervisors are responsible for ensuring that maintenance and skilled trades staff have properly inspected pipes and installed insulation and adhered to policy and procedure outlined in this interim guidance. Superintendents and supervisors should review the work orders where insulation has been installed and view the attached photos to evaluate the installation.

Additionally, superintendents and development staff are responsible for ensuring that an adequate supply of insulation is in stock, monitoring the supply, and ordering additional insulation, when necessary.

Appendix A: Insulation Materials and Supplies	
HA Number	Description
INSULATION	
1207923960*	INSULATION, FIBERGLASS, FOR 1/2" PIPE SIZE, 1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722579 OR GRAINGER # 45FM38
1207923801*	FOR 1/2" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722470 OR GRAINGER #4LFC9
1207923802	INSULATION, FIBERGLASS, FOR 1/2" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722571 OR GRAINGER #4LFE2
1207923803	INSULATION, FIBERGLASS, FOR 1/2" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #200257 OR GRAINGER #4LFF4
1207923961*	INSULATION, FIBERGLASS, FOR 3/4" PIPE SIZE, 1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722597 OR GRAINGER # 40PP22
1207923804*	FOR 3/4" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722471 OR GRAINGER #4LFD1
1207923805	FOR 3/4" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722575 OR GRAINGER #4LFE3
1207923806	FOR 3/4" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722619 OR GRAINGER #4LFF5
1207923962*	INSULATION, FIBERGLASS, FOR 1" PIPE SIZE, 1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722609 OR GRAINGER # 40PP32
1207923807*	FOR 1" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722564 OR GRAINGER #4LFD2
1207923808	FOR 1" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722580 OR GRAINGER #4LFE4
1207923809	FOR 1" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722612 OR GRAINGER #4LFF6
1207923963*	INSULATION, FIBERGLASS, FOR 1-1/2" PIPE SIZE, 1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722602 OR GRAINGER # 40PP18
1207923810*	FOR 1-1/2" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722596 OR GRAINGER #4LFD4
1207923811	FOR 1-1/2" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722594 OR GRAINGER #4LFE6
1207923812	FOR 1-1/2" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722606 OR GRAINGER #4LFF8
1207923964**	INSULATION, FIBERGLASS, FOR 2" PIPE SIZE, 1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH
1207923813**	FOR 2" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722586 OR GRAINGER #4LFD5

1207923814	FOR 2" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #200267 OR GRAINGER #4LFE7
1207923815	FOR 2" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722587 OR GRAINGER #4LFF9
1207923816**	FOR 2-1/2" PIPE SIZE, 1" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722599 OR GRAINGER #4LFD6
1207923817	FOR 2-1/2" PIPE SIZE, 1-1/2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722583 OR GRAINGER #4LFE8
1207923818	FOR 2-1/2" PIPE SIZE, 2" WALL THICKNESS, HINGED WITH SELF SEALING LAP, 3 FT LENGTH, OWENS CORNING #722589 OR GRAINGER #4LFG1
TAPE	
1207923819	FOR FIBERGLASS PIPE INSULATION, 3" WIDE X 150 FT, PRESSURE SENSITIVE ADHESIVE, RATED 0 TO 150 DEG F., OWENS CORNING #531700 OR GRAINGER #4LFJ3
1207923820	FOR PIPE INSULATION, 1" X 108 FT, PRESSURE SENSITIVE ADHESIVE, RATED 0 TO 150 DEG F., VINYL, OWENS CORNING #PVC201 OR GRAINGER #6WXE4
<p><i>* For insulation marked with a single asterisk (*), developments must maintain a stock of 40 units. For insulation marked with a double asterisk (**), 20 units must be maintained in stock. Developments must also maintain a stock of 10 rolls of both styles of tape.</i></p>	

**ROOF FAN INSPECTIONS AT  
NYCHA RESIDENTIAL BUILDINGS  
(SP 050:21:1)**

**NYCHA STANDARD PROCEDURE MANUAL**

**SP 050:21:1, ROOF FAN INSPECTIONS AT NYCHA RESIDENTIAL BUILDINGS**

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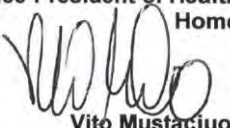
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# NYCHA STANDARD PROCEDURE MANUAL

NEW YORK CITY HOUSING AUTHORITY

STANDARD PROCEDURE

SUBJECT	PROCEDURE OWNER	APPROVED DATE	APPROVED BY	INDEX NO.
ROOF FAN INSPECTIONS AT NYCHA RESIDENTIAL BUILDINGS	HEALTHY HOMES  PUBLIC HOUSING OPERATIONS	7/30/2021  Date: _____	 Rassoul Azarnejad Vice-President of Healthy Homes   Vito Mustaciuolo Chief Operating Officer	050:21:1

## I. PURPOSE

The purpose of this Standard Procedure is to provide instructions to NYCHA employees to perform inspections, maintenance, and repairs of roof fans.

## II. POLICY

It is the policy of NYCHA to:

- A. Ensure roof fans are operating continuously, 24 hours per day, where possible;
- B. Inspect roof fans monthly to ensure roof fans are operating properly;
- C. Conduct detailed quality assurance inspections of roof fans;
- D. Perform preventative maintenance on roof fans;
- E. Return all inoperative or malfunctioning fans to service within 21 calendar days from the date of inspection; and
- F. Follow the requirements of the *Baez et. al. v. NYCHA Modified Amended Stipulation and Order of Settlement* (United States District Court, Southern District of New York).
- G. The inspection instructions in Section VII.A. of this Standard Procedure also are followed if an individual roof fan inspection work order is generated from a mold inspection, leak, or excessive moisture

## III. APPLICABILITY

This Standard Procedure applies to all NYCHA employees who perform roof fan inspections in NYCHA public housing developments, and the employees who monitor the inspections. This procedure does not apply to Permanent Affordability Commitment Together (PACT) developments.

## NYCHA STANDARD PROCEDURE MANUAL

### IV. DEFINITIONS

#### A. Belt Driven Roof Fan

A type of fan where the fan wheel is affixed to a pulley that is driven by a motor and associated belt.

#### B. Craft

The type of worker assigned to a work order. For each failure class or problem code, Maximo lists a default craft and other possible crafts that can be assigned. Titles that can be assigned such work orders include roofers, machinists, and electricians.

#### C. Direct Drive Roof Fan

A type of fan where the fan wheel is directly affixed to the motor.

#### D. Fan Timer

A device that limits the operating hours of fans; it is NYCHA's policy that all fan timers must be overridden or disconnected to ensure continuous fan operation.

#### E. High Efficiency Particulate Air (HEPA) Vacuum

A vacuum that uses a HEPA filter and is at least 99.97% efficient in removing microscopic particles (i.e., monodisperse air particles of 0.3 micrometers in diameter).

#### F. Informer Work Management App (iWM App)

A computer software work order application used by NYCHA to support maintenance and repairs, accessed by employees on handheld devices.

#### G. Maximo

A computer software application used by NYCHA to support inspections, maintenance, and repairs.

#### H. Malfunctioning Roof Fan

A roof fan identified during a monthly roof fan inspection as needing repair or replacement. A roof fan is considered to be malfunctioning if it meets one or more of the following conditions: is not operable, no air exhausts from the fan, the fan exhibits excessive noise or vibration, or the belt is not in satisfactory condition.

## NYCHA STANDARD PROCEDURE MANUAL

### I. Rubber Isolator (Double Studded)

A specialized rubber washer installed on screws used to affix the fan housing to the riser that reduces vibration and noise.

### J. Vendor

A third party under contract with NYCHA.

### K. Ventilation Riser

A vertical shaft (commonly constructed of galvanized steel) that connects bathroom, kitchen, and common space horizontal vents to roof fans.

## V. REVIEW CYCLE

The Healthy Homes Department's Office of Mold Assessment and Remediation and Department of Public Housing Operations shall review this Standard Procedure at least once every three years; and advise the Compliance Department's Procedures Unit via email if no changes are needed or submit its revisions to the procedure by submitting *NYCHA Form 022.008, Procedure Development Request*.

## VI. RESPONSIBILITIES

The following departments and titles have responsibilities in this Standard Procedure. See Appendix A - Position Duty Statements, for the summary of duties by title or department.

### A. Operations Departments

1. Borough vice-presidents
2. Neighborhood administrators
3. Property managers
4. Property maintenance supervisors
5. Assistant property maintenance supervisors
6. Skilled Trades deputy directors
7. Skilled Trades employees (Property Management)
8. Skilled Trades employees (Technical Services Department)

## NYCHA STANDARD PROCEDURE MANUAL

9. Borough Planning supervisors
  10. Maintenance workers
- B. Healthy Homes Department
1. Office of Mold Assessment and Remediation senior manager
  2. Employees in the Office of Mold Assessment and Remediation Analytics and Process Change Unit
- C. Office of Quality Assurance
1. Director
  2. Inspectors
3. Quality assurance officer

### VII. PROCEDURE

#### A. Monthly Roof Fan Inspections

1. Maximo automatically generates a monthly roof fan inspection work order (IN) for each building that contains roof fans.
  - a. The work orders are viewable on the iWM App on the handheld devices provided to employees who perform inspections for ease of use and data collection purposes.

<b>NOTE:</b>	If an employee performing roof work observes problems or potential problems with a roof fan, they must create a roof fan inspection work order.
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2. The development property maintenance supervisor or assistant property maintenance supervisor monitors Maximo for monthly roof fan inspections.
3. The development property maintenance supervisor, assistant property maintenance supervisor, or maintenance worker (inspector) performs monthly roof fan inspections.
4. Defective roof fans are required to be returned to service within 21 calendar days of a monthly inspection.
  - a. If an individual roof fan inspection work order is generated as a result of a mold inspection, leak, or excessive moisture, these inspection work orders and related work must be addressed within 21 calendar days.



## NYCHA STANDARD PROCEDURE MANUAL

- b. Work orders resulting as a response to a resident complaint regarding apartment ventilation are remediated based on the 21-day period provisions.

<b>NOTE:</b>	If the timeframes related to this Standard Procedure cannot be met because of weather conditions, the inspector adds that information into the notes section of the work order.
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- 5. Fan repairs may be performed by either in-house staff or a vendor.
  - a. If a development has less than 15 roof fans, repairs usually are made by NYCHA employees. If a development has 15 or more roof fans, a vendor performs the repairs.
  - b. If a vendor is required to make roof fan repairs, the inspector contacts the Property Management Borough Office. The Borough Office identifies the vendor and coordinates the repairs.
- 6. Fan repairs must be made in accordance with the manufacturer's specifications.
- 7. If a fan motor needs to be replaced and the fan model number cannot be identified because the manufacturer's name plate is illegible or missing, the inspector reviews Development Blueprints or the Document Management and Archival System (DMAS) for Heating and Ventilation plans. To access DMAS, go to [nycha.zlinkfm.com](http://nycha.zlinkfm.com). Users must have an account to get access.

<b>NOTE:</b>	To request access to DMAS, go to the Service Desk on the NYCHA Connect home page and select the option for DMAS.
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- 8. Replacement fans must be sized to meet the horsepower, RPM, and other characteristics as per original specifications, with the following exceptions:
  - a. All roof fans are to be replaced with direct drive fans.
  - b. Replacement fans must be specified to operate 24 hours per day, seven days per week.
- 9. To prepare for the monthly roof fan inspection, the inspector brings the following equipment to the location:
  - a. Equipment to open roof fans (including but not limited to screw drivers).
  - b. Spare fan belts (if belt driven fans are present on the roof).
  - c. Spare bolts, nails, and rubber isolators to make limited repairs described below in section VII.A.10.c.

## NYCHA STANDARD PROCEDURE MANUAL

- d. Equipment to access all roof fans on a roof, if required, based on the needs of each development.

<b>NOTE:</b>	<p>Some fans are located on the roof above the elevator machine room or other areas that are elevated above the main roof or on a sub-roof. These areas typically require ladders to access. Detailed roof drawings can be obtained from DMAS.</p> <p>To access DMAS, go to <a href="http://nycha.zlinkfm.com">nycha.zlinkfm.com</a>. Users must have an account to get access. See Section VII.A.7. above for instructions on how to request access to DMAS.</p>
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10. On the Inspection Tab in Maximo, there are tasks listed with questions for inspectors to answer related to the following items. The inspection questions are available on the handheld device. The answer choices are pre-loaded from Maximo and must be selected by the inspector.

- a. Verifying fan timer overrides.

<b>NOTE:</b>	It is NYCHA's policy that roof fans must be operable for 24 hours per day, seven days per week.
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- (1) On the inspection work order, Fan Timer Task, Question 1, asks whether the fan timers have been overridden to allow fans to operate continuously.
- (2) If the fan timers have not been overridden, the inspector:
  - (a) Locates and bypasses the existing roof fan timer(s) by removing the Off Pin and then tripping the Override or Bypass Switch (see Appendix B – Override/Bypass Switch Supplemental Information). Fan timers can be in a basement or a roof top distribution room.
  - (b) After the timers are bypassed, secures the timer cover.
  - (c) Attaches a sign to indicate that the timer was bypassed. Use Appendix C – Standard Bypass Sign.

## NYCHA STANDARD PROCEDURE MANUAL

### b. Physically inspecting each roof fan.

- (1) During this phase of the inspection, the inspector determines if the roof fan is in proper working condition by answering the following questions with a 'Yes' or 'No.'
  - (a) Is the roof fan operable?
  - (b) Is the air exhausting from the fan?
  - (c) Is the roof fan exhibiting excessive noise or vibration?
- (2) The inspector then is asked to select the fan's motor drive which can be either:
  - (a) Belt-driven (typical on older model fans); or
  - (b) Direct-driven (typical on newer model fans).
- (3) If 'belt-driven' is selected, the inspector opens the roof fan housing to observe the belt-driven motor.
  - (a) To observe the condition of the belt, the inspector opens the hood and **immediately** shuts down the motor using the switch located within the housing. **This is required to avoid serious injury or death.**
  - (b) The inspector answers 'Is the belt in satisfactory condition?' in one of three ways:
    - i. Yes (satisfactory- belt is not broken, no signs of cracking or cuts)
    - ii. CAT (corrective action taken)

The inspector chooses this if they note a deficiency and correct it successfully. With this selection, Maximo automatically creates a closed work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'BELTS DML.'
    - iii. No (unsatisfactory- belt is broken or shows **any** signs of visible wear, including cracking or cuts)

The inspector chooses this if they note a deficiency and the deficiency is not corrected. With this selection, Maximo automatically creates a work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'BELTS DML.'

## NYCHA STANDARD PROCEDURE MANUAL

- (4) If 'direct-driven' is selected, the inspector does not answer any more questions regarding the proper working condition of any belt items and proceeds directly below to Section VII.A.10.b.(5).
  - (5) The inspection is complete, and no further questions are asked if the inspector answers:
    - (a) 'Yes' to 'Is the roof fan operable,' **and**
    - (b) 'Yes' to 'Is the air exhausting from the fan,' **and**
    - (c) 'No' to 'Is the roof fan exhibiting excessive noise or vibration,' **and**
    - (d) 'Yes' to 'Is the belt in satisfactory condition' (for belt-driven roof fans).
  - (6) The inspection continues with the items in sections VII.A.10.c. and VII.A.10.d. (directly below) if the inspector answers:
    - (a) 'No' to 'Is the roof fan operable,' **and/or**
    - (b) 'No' to 'Is the air exhausting from the fan,' **and/or**
    - (c) 'Yes' to 'Is the roof fan exhibiting excessive noise or vibration,' **and/or**
    - (d) 'No' to 'Is the belt in satisfactory condition' (for belt-driven roof fans).
- c. For the inspection question determining if the roof fan is exhibiting excessive noise or vibration:
- (1) If the fan is not exhibiting excessive noise or vibration, the inspector responds 'No.'
  - (2) If the fan is exhibiting excessive noise or vibration, the inspector responds 'Yes,' and:
    - (a) Evaluates whether corrective action can be taken during the inspection by performing one or more of the following tasks:
      - i. Tightening, replacing, or installing of appropriate bolts connecting the fan housing to the base plate.
      - ii. Installing new or replacing worn out rubber isolators (double studded) associated with the fan housing bolts.
      - iii. Removing foreign objects located within the fan housing.

## NYCHA STANDARD PROCEDURE MANUAL

- (3) If the actions taken during the inspection as outlined directly above in section c.(2)(a) eliminates the excessive noise or vibration, the inspector responds 'CAT' (corrective action taken).
- (a) If corrective action was taken because of the fan wheel, the inspector selects the response 'CAT-FANWHEEL.' Maximo automatically creates a closed work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'FANHOUSINGDL.'
  - (b) If corrective action was taken because of a loose pulley, the inspector selects the response 'CAT-PULLEY LOOSE.' Maximo automatically creates a closed work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'PULLEYDAMAGED.'
- (4) If any actions were taken during the inspection, as outlined directly above in section c.(2)(a), but the excessive noise or vibration continues, the inspector chooses one of the following responses:
- (a) If the issue is related to the fan wheel, the inspector selects the response 'YES-FANWHEEL.' Maximo automatically creates a work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'FANHOUSINGDL.'
  - (b) If the issue is related to a damaged pulley, the inspector selects the response 'YES-PULLEY DAMAGED.' Maximo automatically creates a work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'PULLEYDAMAGED.'

## NYCHA STANDARD PROCEDURE MANUAL

<b>NOTE:</b>	<p>Common causes of excessive noise or vibration include the following:</p> <ol style="list-style-type: none"><li>1. Belt is too tight or too loose</li><li>2. Defective bearings</li><li>3. Imbalanced fan wheel</li><li>4. Wheel improperly aligned and rubbing against the inside of the fan housing</li><li>5. Loose drive or motor pulleys</li><li>6. Foreign objects in fan wheel or housing</li></ol> <p>Common causes of reduced air flow include:</p> <ol style="list-style-type: none"><li>1. High system resistance caused by dirty or closed backdraft dampers</li><li>2. The fan is running backwards</li><li>3. Excessive dirt buildup on the fan wheel</li><li>4. Improper wheel alignment</li></ol> <p>Common causes of a non-operational fan motor include:</p> <ol style="list-style-type: none"><li>1. Faulty electrical wiring</li><li>2. Motor failure</li></ol> <p>Common causes of air not exhausting from a fan:</p> <ol style="list-style-type: none"><li>1. Non-functioning unit</li><li>2. Bird-screen blocked with heavy dust build-up</li></ol> <p>For manufacturer's troubleshooting and maintenance recommendations, if the fan is a Direct Drive model (G) or Belt Drive model (GB) manufactured by Greenheck, refer to Appendix D, Greenheck Roof Fans Information. If the fan is not a G or GB model manufactured by Greenheck, check the name of the manufacturer and the model number to search online for the appropriate manufacturer's manual.</p>
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d. Is there a potential motor failure or no power to the motor?

- (1) If the fan does not have a potential motor failure and there is power to the motor, the inspector responds 'No.'
- (2) If the fan does have a potential motor failure and/or there is no power to the motor, the inspector attempts to fix the issue, if possible. The two main causes of motor failure or no power to the motor are (1) faulty electrical wiring or (2) the motor has reached the end of its lifecycle.
  - (a) If the cause of the motor failure is faulty electrical wiring and the inspector's actions taken during the inspection resolve faulty electrical wiring, the inspector responds 'CAT-FAULTY ELECTRICAL WIRING.' Maximo automatically creates a closed work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'FANOOO.'

## NYCHA STANDARD PROCEDURE MANUAL

(3) If actions taken during the inspection do not resolve the issue, the inspector chooses one of the following responses:

- (a) If the issue is faulty electrical wiring, the inspector responds 'YES-FAULTY ELECTRICAL WIRING.' Maximo automatically creates a work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'FANOOO' or 'EXPOSEDWIRES' or 'FUSEMOOO' or 'NOPOWER.'
- (b) If the issue is a motor failure, the inspector responds 'YES-MOTOR FAILURE.' Maximo automatically creates a work order against the roof fan asset with a failure class of 'ROOFFAN' and a problem code of 'FANOOO.'

### B. Child Work Orders

When a child work order is created during a roof fan inspection:

1. The property maintenance supervisor or assistant property maintenance supervisor coordinates the scheduling of skilled trades crafts with the Property Management Department Planning Unit or Technical Services Department.
2. The Property Management Department skilled trades deputy director or Technical Services Department deputy director assigns the appropriate craft to perform the repairs.
3. Property managers approve any work ordered that is performed by a vendor.

### C. Oversight

1. Department of Healthy Homes
  - a. Office of Mold Assessment and Remediation Analytics and Process Change Unit employees review the results of autogenerated monthly roof fan inspections to:
    - (1) Identify developments with lengthy child work order completion time frames (greater than 21 days between the roof fan inspection and repair/replacement of the malfunctioning roof fan);
    - (2) Identify developments with high rates of inoperable roof fans (greater than five percent of the roof fans at the development are reported as inoperable within a single month); and
    - (3) Provide reporting and related actionable recommendations to Operations Management pertaining to developments with lengthy child work order completion time frames and high rates of inoperable roof fans to ensure Baez Consent Decree requirements for roof fans are met.

## NYCHA STANDARD PROCEDURE MANUAL

### 2. Department of Operations

- a. Borough vice-presidents monitor the progress of child work orders and completion of inspections.
- b. Neighborhood administrators:
  - (1) Ensure property managers and property maintenance supervisors monitor roof fan-related work orders in Maximo and address conditions in compliance with this Standard Procedure.
  - (2) Follow up with property managers and property maintenance supervisors to address process issues, including but not limited to providing additional training, reviewing key accountabilities, and/or commencing progressive discipline.
- c. Property maintenance supervisors monitor Maximo for the timely completion of roof fan child work orders and address delays.
- d. Property Management Department skilled trades deputy directors investigate and respond to reports prepared by the Performance Management Department regarding skilled trades issues.

### 3. Department of Quality Assurance

The Office of Quality Assurance reviews randomly selected roof fan work orders to ensure that industry standards are being met. Refer to NYCHA Standard Procedure 059:17:1, *Public Housing Quality Assurance Program*. Quality assurance inspectors generate quality assurance inspection work orders from their handheld devices when on-site.

## VIII. OUTPUTS, REPORTS, AND RECORDKEEPING

### A. Outputs

1. Roof fans operating properly 24 hours per day, seven days per week.
2. Reduced mold conditions in apartments where the root cause was determined to be poor ventilation.
3. All roof fans in NYCHA public housing developments inspected at least once per month.
4. Malfunctioning roof fans repaired or replaced within 21 days of a monthly inspection.



## NYCHA STANDARD PROCEDURE MANUAL

### B. Reports

1. The Office of Mold Assessment and Remediation provides a quarterly report on the results of roof fan inspections and work completion times.

### C. Recordkeeping

1. The Information Technology Department Maximo Unit retains electronically created and stored completed work orders for at least seven years.

## IX. TRAINING REQUIREMENTS

- A. All property managers and property maintenance supervisors must review this Standard Procedure and review it with applicable staff.

## X. PERFORMANCE METRICS

- A. Completion rate of monthly roof fan inspections.
- B. Number of fan repairs required.
- C. Average time to return roof fans to operation.

## XI. NON-COMPLIANCE

- A. NYCHA employees who perform inspections, maintenance, and repairs of roof fans are required to comply with this Standard Procedure.
- B. If unsatisfactory work is identified during either a monthly or quality assurance inspection as described in this Standard Procedure, or at any other time, supervisory employees must:
  1. Identify areas of training for staff and ensure such training is provided.
  2. Reinforce with the relevant employee(s) the job expectations, accountabilities, and the progressive discipline process.
- C. Failure to comply with the requirements of this Standard Procedure may result in disciplinary actions.
- D. Departments are required to take corrective action to bring NYCHA into compliance.

## XII. FORMS

This section intentionally left blank.

**XIII. WORKFLOW**

This section intentionally left blank.

NYCHA STANDARD PROCEDURE MANUAL

XIV. REVIEW/REVISION HISTORY PAGE

ROOF FAN INSPECTIONS AT NYCHA RESIDENTIAL BUILDINGS

SP 050:21:1

Review/ Revision	Review/ Revision Date	Sections Amended
1.		
2.		
3.		

## NYCHA STANDARD PROCEDURE MANUAL

### XV. APPENDICES

#### Appendix A – Position Duty Statements

##### 1. Operations Departments

###### a. Borough Vice-Presidents

(1) Monitor the progress of child work orders and completion of inspections.

###### b. Neighborhood Administrators

(1) Ensure property managers and property maintenance supervisors monitor roof fan-related work orders in Maximo and address conditions in compliance with this Standard Procedure.

(2) Follow up with property managers and property maintenance supervisors to address process issues, including but not limited to providing additional training, reviewing key accountabilities, and/or commencing progressive discipline.

###### c. Property Managers

(1) Approve any work ordered that is performed by a vendor.

###### d. Property Maintenance Supervisors

(1) Monitor Maximo for monthly roof fan inspections.

(2) Perform monthly roof fan inspections, including any actions that can be taken during the inspections to eliminate identified problems.

(3) When a work order is created based on an inspection, coordinate the scheduling of skilled trades crafts with the Property Management Department Planning Unit or Maintenance, Repairs, and Skilled Trades Department.

(4) Monitor Maximo for the timely completion of roof fan child work orders and address delays.

###### e. Assistant Property Maintenance Supervisors

(1) Monitor Maximo for monthly roof fan inspections.

(2) Perform monthly roof fan inspections, including any actions that can be taken during the inspections to eliminate identified problems.

## NYCHA STANDARD PROCEDURE MANUAL

- (3) When a work order is created based on an inspection, coordinate the scheduling of skilled trades crafts with the Property Management Department Planning Unit or Maintenance, Repairs, and Skilled Trades Department.
  - f. Skilled Trades Deputy Directors
    - (1) Assign the appropriate craft to perform repairs. Skilled Trades titles that perform work on roof fans include roofers, machinists, and electricians.
    - (2) Investigate and respond to reports prepared by the Performance Management Department regarding skilled trades issues.
  - g. Skilled Trades Employees (Property Management)
    - (1) Perform the work created by child work orders.
  - h. Skilled Trades Employees (Technical Services Department)
    - (1) Perform the work created by child work orders.
  - i. Borough Planning Unit Supervisors
    - (1) When a work order is created based on an inspection, coordinate the scheduling of skilled trades crafts with the property maintenance supervisor.
  - j. Maintenance Workers
    - (1) Perform monthly roof fan inspections, including any actions that can be taken during the inspections to eliminate identified problems.
2. Department of Healthy Homes
- a. Office of Mold Assessment and Remediation Senior Manager
    - (1) Manages the duties performed by Office of Mold Assessment and Remediation employees in this standard procedure.
  - b. Employees in the Office of Mold Assessment and Remediation Analytics and Process Change Unit
    - (1) Review the results of autogenerated monthly roof fan inspections.

## NYCHA STANDARD PROCEDURE MANUAL

### 3. Office of Quality Assurance

#### a. Director

(1) Performs duties as outlined in NYCHA Standard Procedure 059:17:1, *Public Housing Quality Assurance Program*.

#### b. Inspectors

(1) Perform duties as outlined in NYCHA Standard Procedure 059:17:1, *Public Housing Quality Assurance Program*.

#### c. Quality Assurance Officer

(1) Perform duties as outlined in NYCHA Standard Procedure 059:17:1, *Public Housing Quality Assurance Program*.

# NYCHA STANDARD PROCEDURE MANUAL

## Appendix B – Override/Bypass Switch Supplemental Information

### Typical Time Clock

1. Remove On/Off Pins- Blue Arrows
2. Lift Protective Wire Cover
3. Trip Override lever into On Position
4. Verify Roof Fans Operating
5. Close Cover and Secure
6. Post Signage stating clock on Bypass



### Override Lever



# NYCHA STANDARD PROCEDURE MANUAL

## Time Clock equipped with Separate Bypass Switch

1. Remove On/Off Pins- Blue Arrow
2. Trip Override Lever into On Position or use manual Bypass Switch- Green Arrows
3. Verify Roof Fans Operating
4. Close Cover and Secure
5. Post Signage stating Clock on Bypass



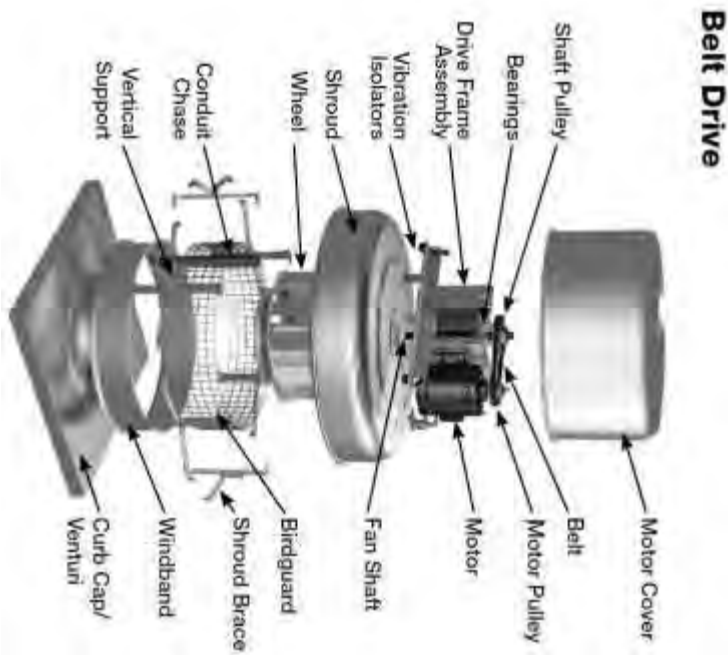
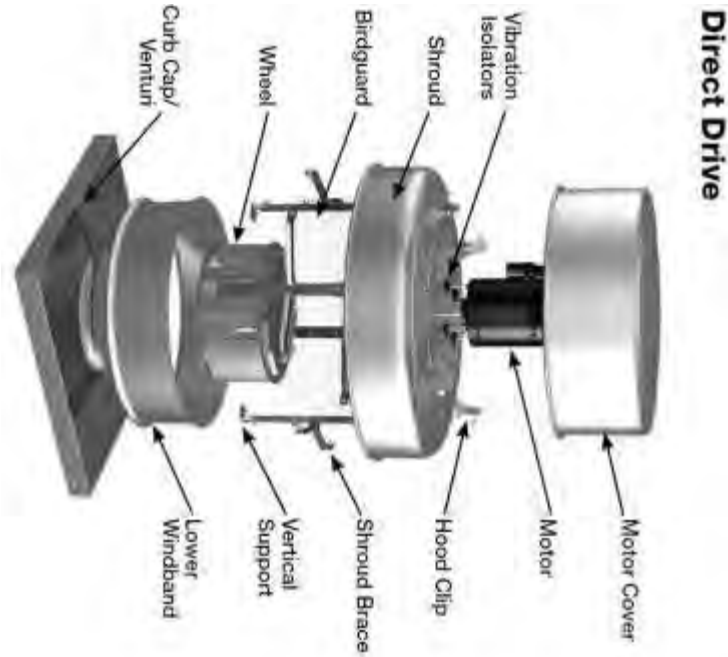


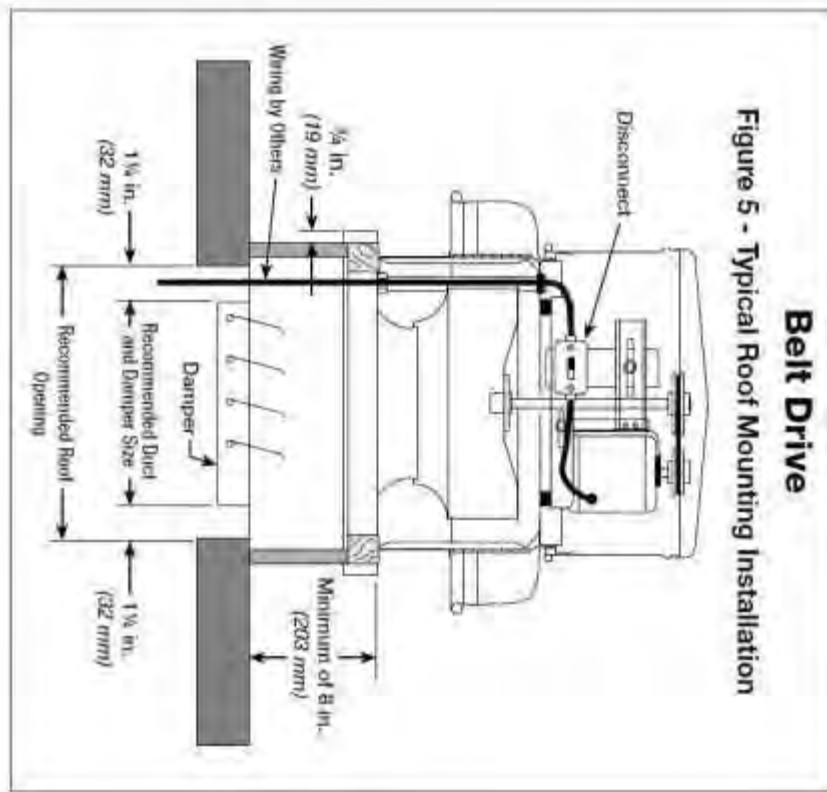
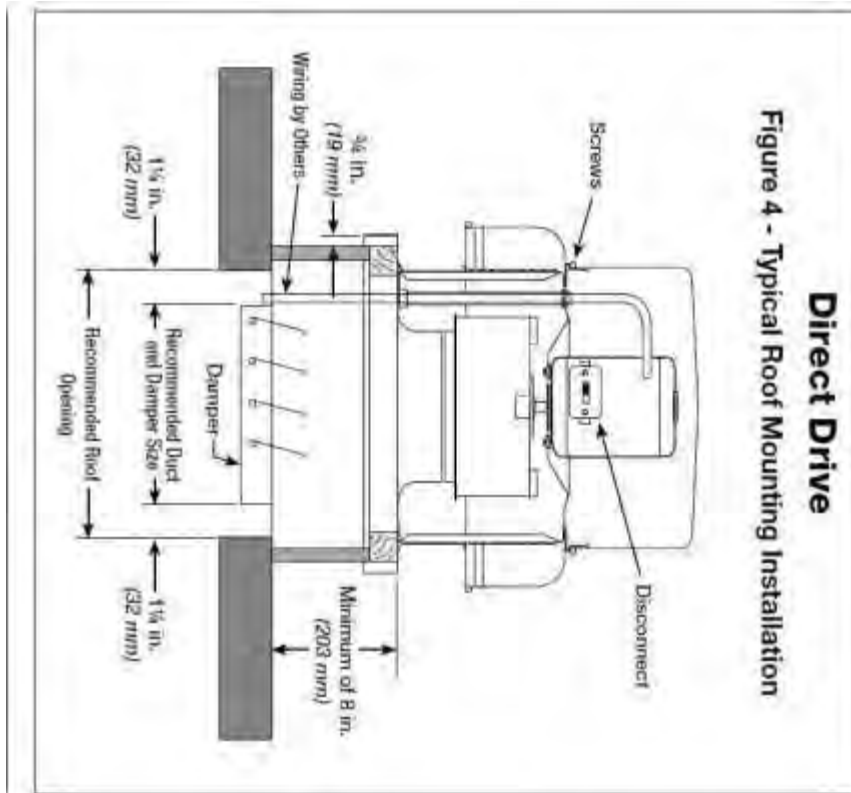
Appendix C – Standard Bypass Sign

**ATTENTION:  
TIMER IS  
ON BYPASS.  
  
ROOF FAN  
MUST OPERATE  
CONTINUOUSLY.**

# NYCHA STANDARD PROCEDURE MANUAL

## Appendix D – Greenheck Roof Fans Information



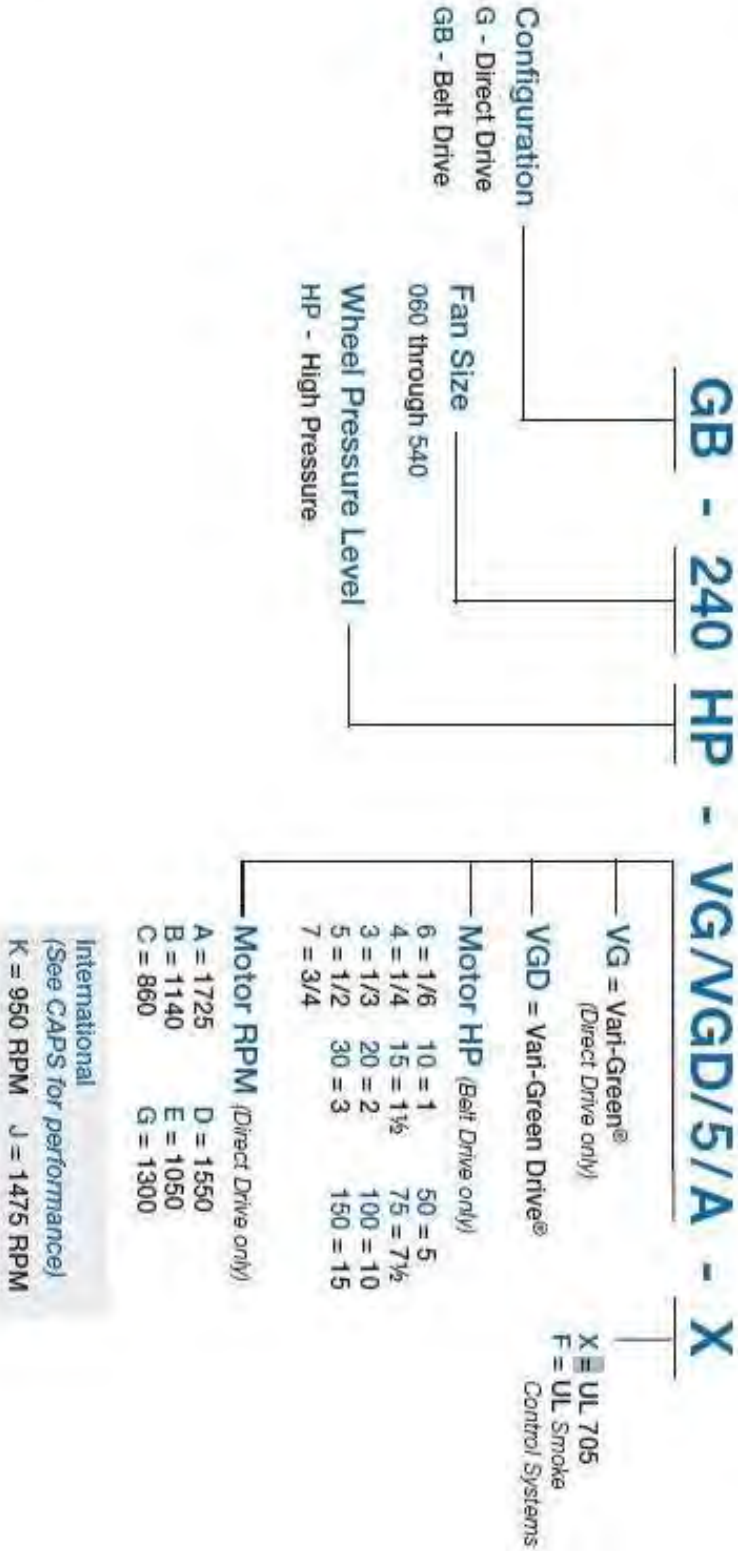


## NYCHA STANDARD PROCEDURE MANUAL

PROBLEM	CAUSE	CORRECTIVE ACTION
Excessive noise or vibration	Wheel rubbing inlet	Adjust wheel and/or inlet cone. Tighten wheel hub or bearing collars on shaft.
	V-belt drive	Tighten pulleys on motor/fan shaft. Adjust belt tension. Align pulleys properly, see page 6, Figures 9 and 10. Replace worn belts or pulleys.
	Bearings	Replace defective bearing(s). Lubricate bearings. Tighten collars and fasteners.
	Wheel unbalance	Clean all dirt off wheel. Check wheel balance, rebalance in place if necessary.
	Belts too tight or too loose	Adjust tension, see page 7, Figure 12a-b.
	Wheel improperly aligned and rubbing	Center wheel on inlet, see page 6, Figure 7.
	Loose drive or motor pulleys	Align and tighten. See "Pre-Starting Checks", see page 6 and 7.
	Foreign objects in wheel or housing	Remove objects, check for damage or unbalance.
	Fan base not securely anchored	Secure properly.
	Motor hood loose and rattling	Tighten fasteners to secure the motor hood.
High horsepower	Defective or loose motor bearings	Replace motor with same frame size, RPM-HR.
	Fan	Check rotation of wheel, see page 6, Figure 8. Reduce fan speed.
Fan does not operate	Duct system	Resize ductwork. Check proper operation of face and bypass dampers. Check filters and access doors.
	Electrical supply	Check fuses/circuit breakers. Check for switches off. Check for correct supply voltage.
	Drive	Check for broken belts. Tighten loose pulleys or belts.
Motor overloads or overheats	Motor	Ensure motor is correct horsepower and not tripping overload protector.
	Lubrication	Check for excessive or insufficient grease in the bearing.
	Mechanical	Replace damaged bearing. Relieve excessive belt tension. Align bearings. Check for bent shaft.
	Belt slippage	Adjust tension or replace bad belts, see pages 6 and 7.
	Over/Under line voltage	Contact power company.
	Incorrect wheel rotation	Check motor wiring, see page 5, Figure 4. Confirm wheel rotation, see page 6, Figure 8.
	Wheel RPM too high	Check drives or slow down fan by opening variable pitch pulley on motor shaft.
	Undersized motor	Check motor ratings with catalog speed and air capacity chart.
Reduced airflow	Motor wired incorrectly	Check motor wiring to wiring diagram located on fan motor.
	System resistance too high	Check system: Proper operation of backdraft or control dampers, obstruction in ductwork, clean dirty filters.
	Unit running backwards	Correct as shown on page 6, Figure 8.
	Excessive dirt buildup on wheels	Clean wheel.
	Improper wheel alignment	Center wheel on inlet, see "Pre-Starting Checks" on page 6.
	Dampers closed	Inspect and repair.
	Blocked duct/clogged filter	Clean or replace.
	Belt slippage	Replace and adjust tension.
Speed too slow	Check for correct drives.	

## Model Number Code

The model number code system is designed to completely identify the fan. The correct code letters must be specified to designate belt or direct drive. The remainder of the model code is determined by the size and performance.





**NYCHA STANDARD PROCEDURE MANUAL  
(SP 040:18:2)  
LEAD SAFETY FOR RENOVATION, REPAIR &  
PAINTING**

**NYCHA STANDARD PROCEDURE MANUAL**

**SP 040:18:2, LEAD SAFETY FOR RENOVATION, REPAIR, AND PAINTING**

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SUBJECT	PROCEDURE OWNER	APPROVED DATE	APPROVED BY	INDEX NO.
LEAD SAFETY FOR RENOVATION, REPAIR, AND PAINTING	OPERATIONS	Date: <u>2/31/18</u>	 Cathy Pennington Executive Vice-President of Operations  Vito Mustaciuolo General Manager	040:18:2

## I. PURPOSE

The purpose of this Standard Procedure is to provide instructions to employees on how to comply with applicable federal and local lead-based paint requirements when performing renovation, repair, and painting (RRP) work in public housing apartments, common areas, or exteriors where lead-based paint may be present.

This Standard Procedure does not provide complete operational instructions for performing RRP work. For more detailed information, please refer to the *Renovation, Repair, and Painting Training Manual* on the Forms and Reference Library in the Other Publications section.

## II. POLICY

It is the policy of NYCHA to follow the requirements set forth in federal and local laws and regulations for performing RRP work, including but not limited to:

- A. Lead-Based Paint Poisoning Prevention Act, as amended (42 U.S.C. 4821 et seq.)
- B. Residential Lead-Based Paint Hazard Reduction Act of 1992 (42 U.S.C. 4851 et seq.)
- C. U.S. Department of Housing and Urban Development (HUD) regulations at 24 CFR Part 35 ("Lead Law")
- D. U.S. Environmental Protection Agency (EPA) regulations at 40 CFR Part 745 Subpart E ("RRP Rule")
- E. Local Law 1, NYC Admin. Code §§ 27-2056 ("New York City Childhood Lead Poisoning Prevention Act of 2003")

## III. APPLICABILITY

Maximo flags locations in which lead-based paint is or may be present, and identifies when RRP requirements must be met. If a Maximo work order identifies that RRP is required, all painted surfaces must be presumed to be lead-based paint.

## NYCHA STANDARD PROCEDURE MANUAL

This Standard Procedure applies to all RRP work in apartments, common areas, or exteriors, if Maximo identifies the work order as such, and if:

- A. The work disturbs two (2) square feet or more of presumed lead-based paint per room, or more than 10 percent of a single small component per room, in apartments and common areas; or
- B. The work disturbs more than 20 square feet of lead-based paint on exteriors.

### IV. DEFINITIONS

#### A. Certified Renovator

An individual who successfully completes a renovator course accredited by the federal Environmental Protection Agency (EPA) or an EPA-authorized State or Tribal program.

#### B. Child-Occupied Facility

A building, or portion of a building, constructed prior to 1978, that meets all three (3) of the following conditions:

- 1. Visited regularly by the same child, younger than six (6) years old;
- 2. The visits are on at least two different days within any week, provided that each day's visit lasts at least three (3) hours; and
- 3. Combined weekly visits last at least six (6) hours, and the combined annual visits last at least 60 hours.

#### C. Common Area

Part of a residential property available for use by occupants of more than one apartment, including, but not limited to, hallways, stairways, laundry rooms, recreational rooms, community centers, on-site day care facilities, garages, and exteriors.

#### D. Component

A specific design or structural element or fixture distinguished by its form, function, and location. Examples include, but are not limited to:

- 1. Counter tops
- 2. Doors and trim
- 3. Walls

## NYCHA STANDARD PROCEDURE MANUAL

4. Window sills and sashes

5. Windows and trim

### E. Containment

A system of temporary barriers used to isolate a work area so that no dust or debris escapes while work is being performed.

### F. Disposable Soft Wipe Method

A method of cleaning that uses a flip mop with wet disposable soft wipes.

### G. Disturbed Paint Surface

A paint surface that is scraped, sanded, cut, penetrated, or otherwise affected by work in a manner that could potentially create a lead-based paint hazard by generating dust, fumes, or paint chips.

### H. Dust Clearance Examination

An examination to confirm no lead dust remains in a work area after it is cleaned. The examination includes a visual inspection and a dust wipe.

### I. Emergency Renovations and Repairs

Unscheduled renovation and repair activities that were not planned but result from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, or threatens equipment and/or property with significant damage.

### J. Exterior

Any area outside of a building, including but not limited to exterior walls, playgrounds, and boundary fences.

### K. HEPA Vacuum

A vacuum with filters that is capable of trapping extremely small particles. HEPA stands for High-Efficiency Particulate Air.

### L. Maximo

A computer software application used by NYCHA to support maintenance and repairs.

## NYCHA STANDARD PROCEDURE MANUAL

### M. Renovation

Any activity that disturbs painted surfaces and includes most repair, remodeling, and maintenance activities including windows replacement.

### N. Renovation, Repair, and Painting (RRP) Certification

A certification provided by trainers approved by the EPA after a worker has successfully completed a Certified Renovator training program. A worker must have up-to-date RRP certification to perform RRP work that might disturb lead-based paint.

### O. Two-Bucket Method

A method of cleaning that uses one bucket filled with a cleaning agent/water solution, and another bucket filled with clean water.

### P. Vendor

A third party under contract with NYCHA.

## V. REVIEW CYCLE

The Department of Operations shall review this Standard Procedure every one (1) year, or earlier if necessary; and advise the Department of Procedures Development and Administration via e-mail if no changes are needed, or submit its revisions to the procedure by submitting NYCHA Form 022.008, *Procedure Development Request*.

## VI. RESPONSIBILITIES

This Standard Procedure applies to the following titles who may perform RRP work, and their supervisors:

### A. Operations Departments

1. Property Managers
2. Assistant Property Managers
3. Property Maintenance Supervisors
4. Assistant Property Maintenance Supervisors
5. Maintenance Workers
6. Supervisor Bricklayers

## NYCHA STANDARD PROCEDURE MANUAL

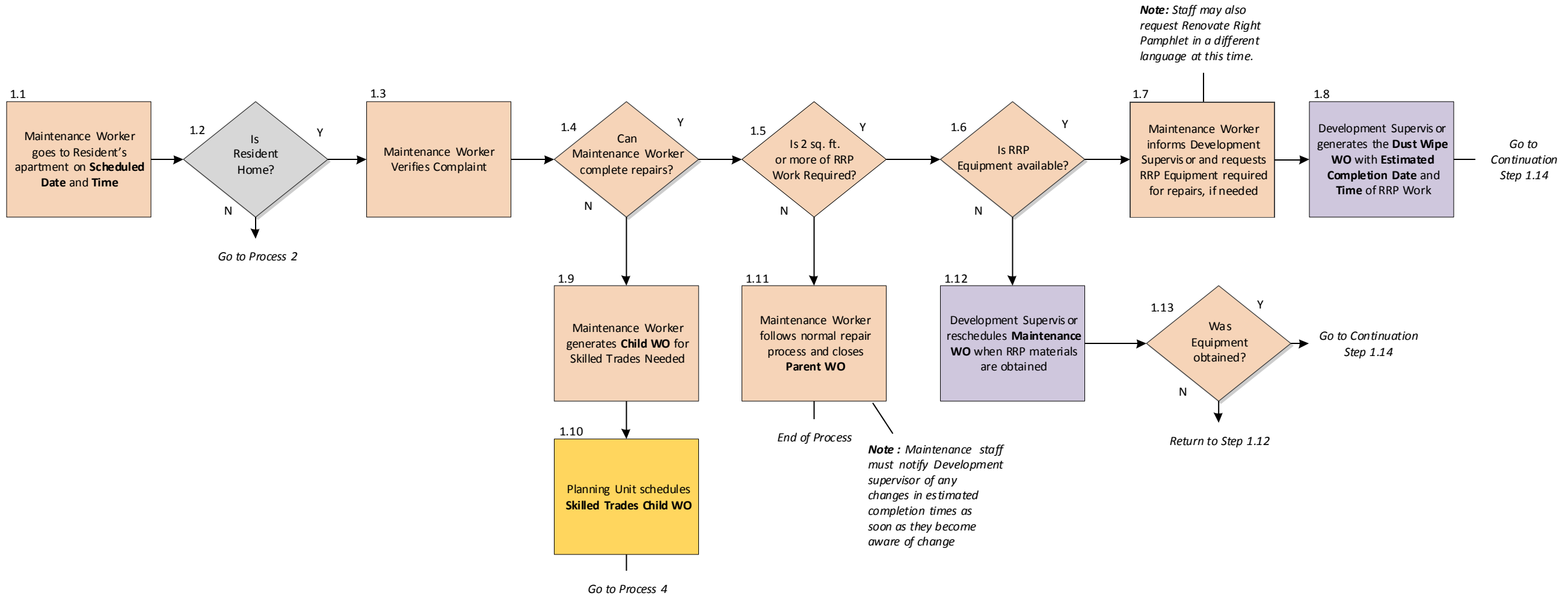
7. Bricklayers
  8. Supervisor Carpenters
  9. Carpenters
  10. Supervisor Painters
  11. Painters
  12. Apprentices (Painter)
  13. Supervisor Plasterers
  14. Plasterers
  15. Supervisor Plumbers
  16. Plumbers
  17. Plumber's Helpers
  18. Electricians
  19. Emergency Services Aides
  20. Caretaker Ps
  21. Mason's Helpers
  22. Asbestos Handlers
- B. Lead Hazard Control Department
1. Lead Abatement Workers
  2. Contract Administrator
  3. Environmental Health and Safety Coordinator
- C. Human Resources Department
1. Deputy Director of Learning and Development

## NYCHA STANDARD PROCEDURE MANUAL

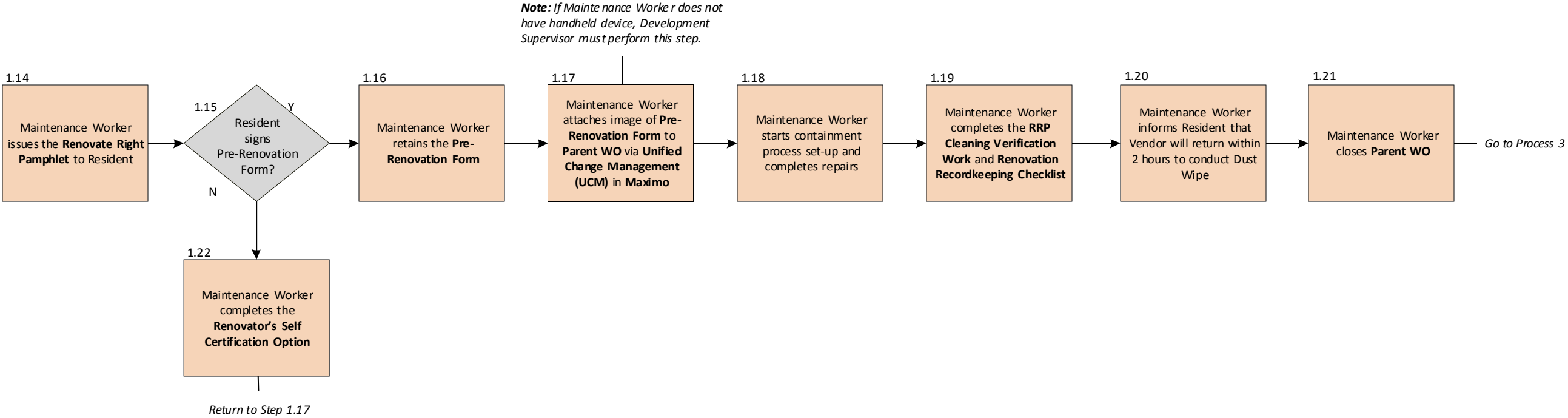
### VII. WORKFLOW

In addition to the flow charts which begin on the following page, also refer to Appendix XV.B., RRP Supplemental Workflow.

# Process 1: Maintenance Worker Verifies Complaint

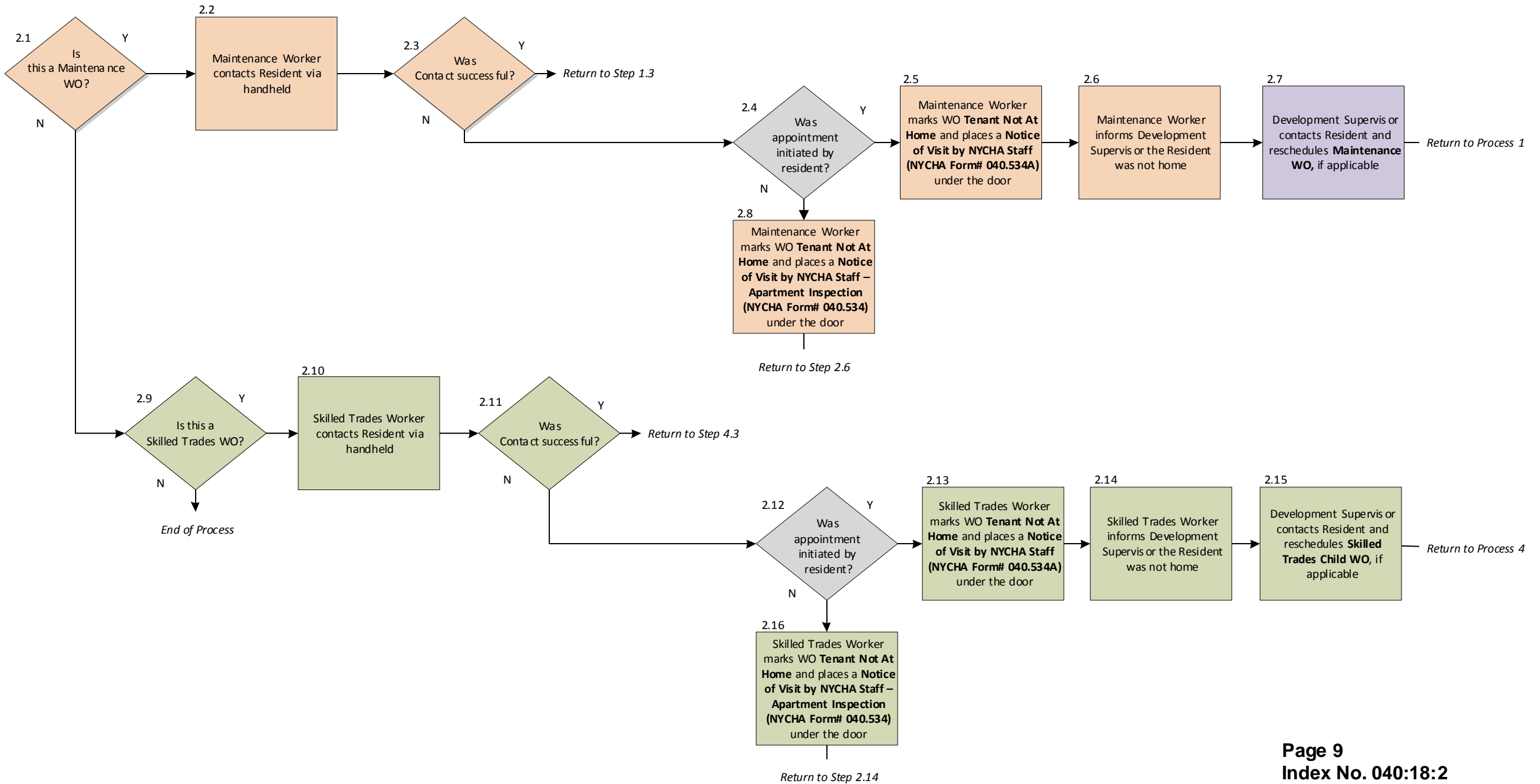


# Process 1: Maintenance Worker Verifies Complaint (Continuation)



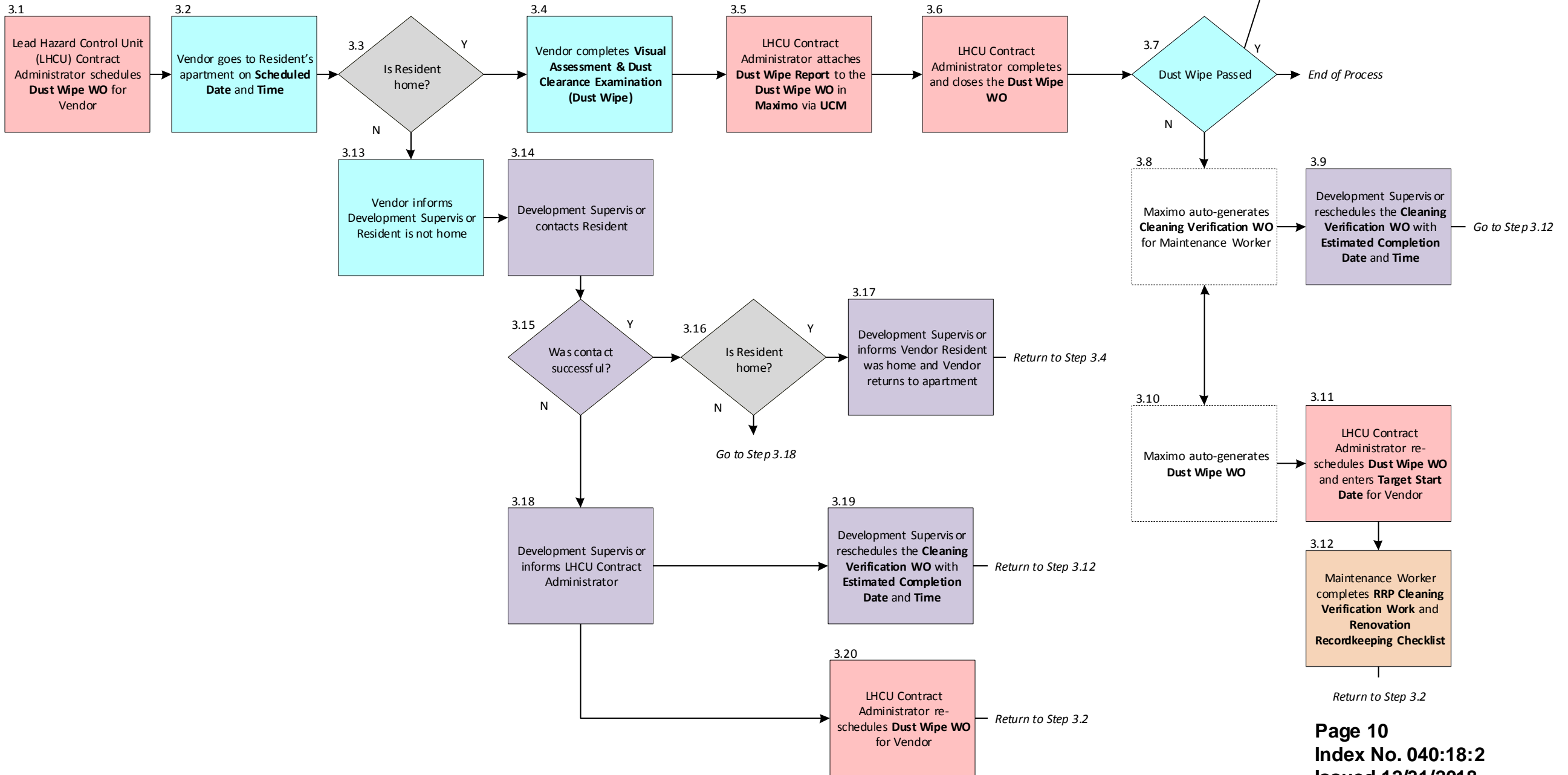


# Process 2: Tenant Not Home

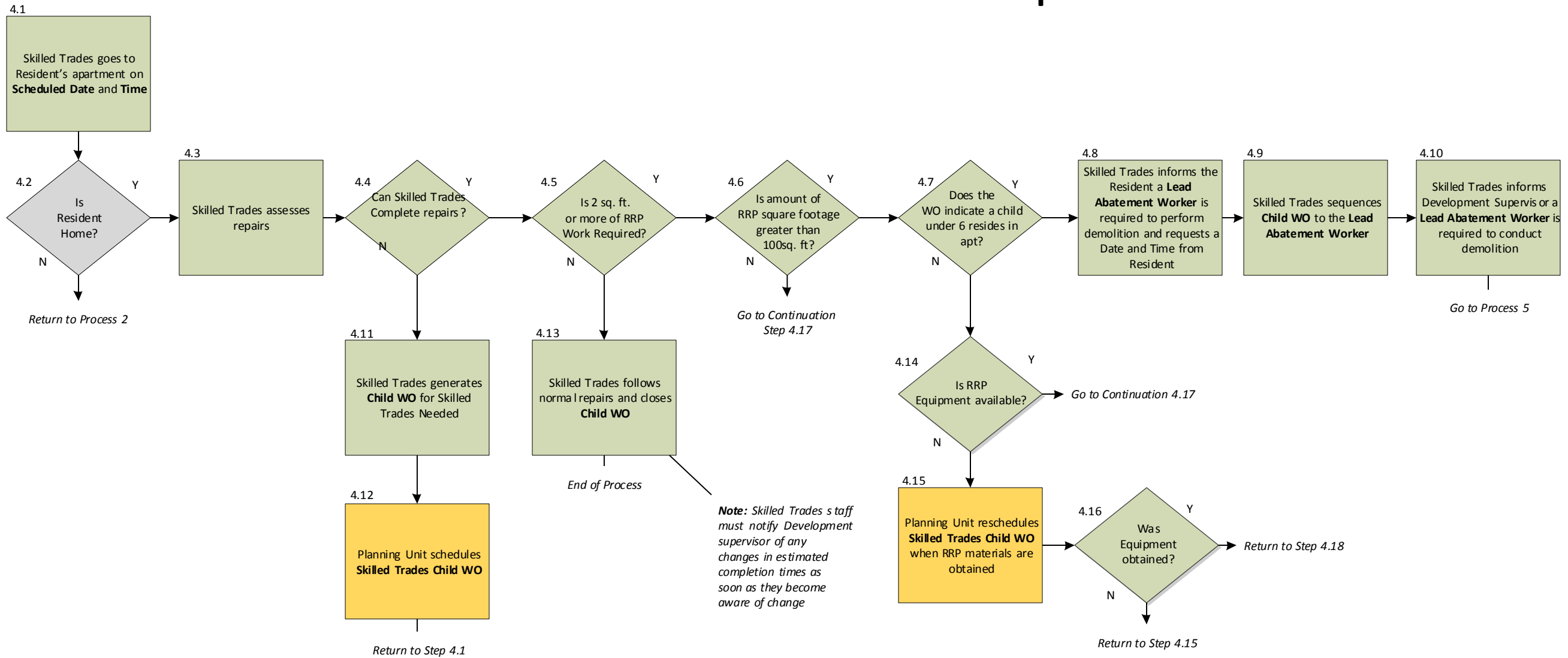


# Process 3: Vendor Conducts Dust Clearance Examination

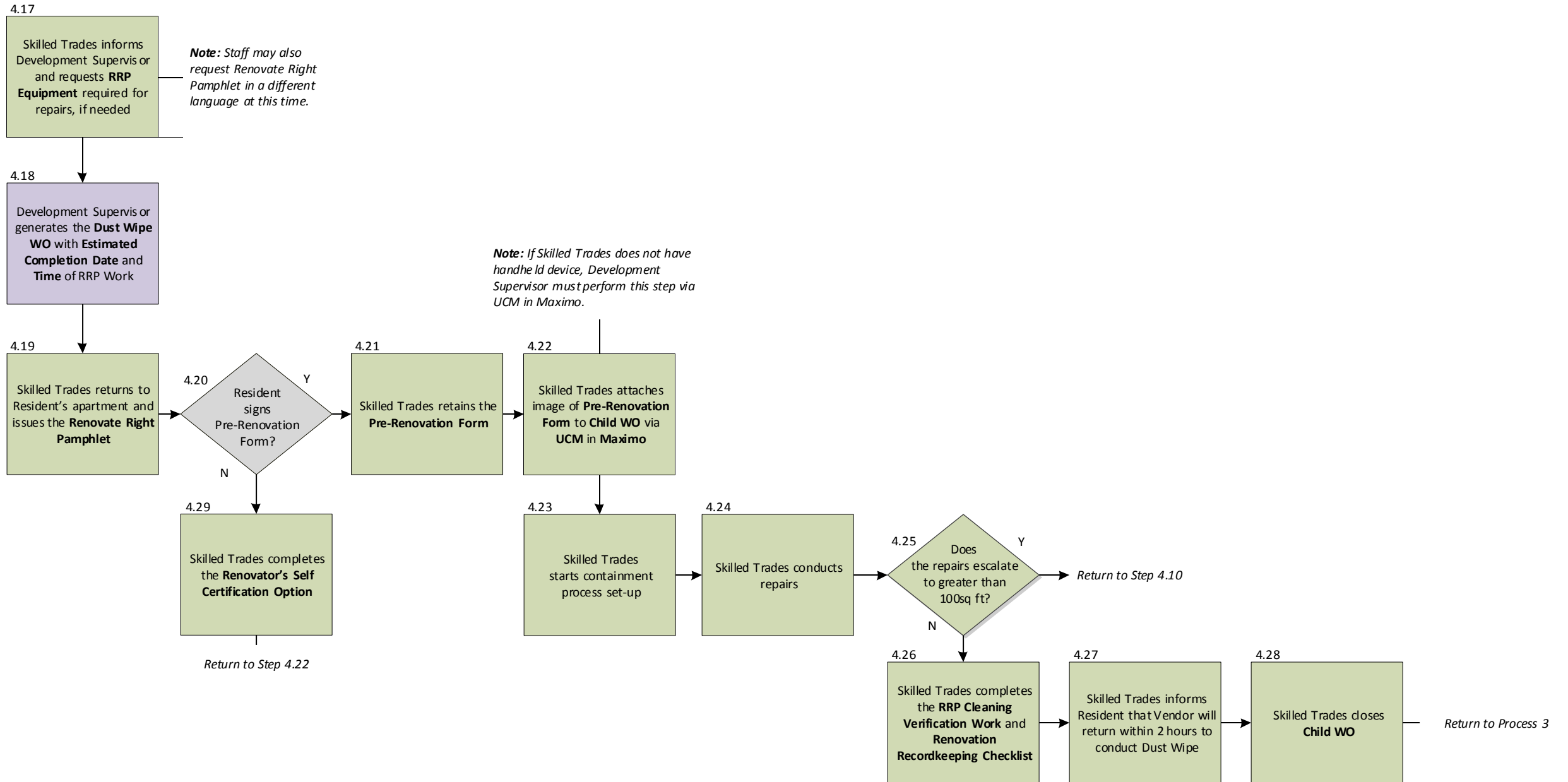
*Note: Dust Clearance results may be available within 8 hours dependent on date and time of collection.*



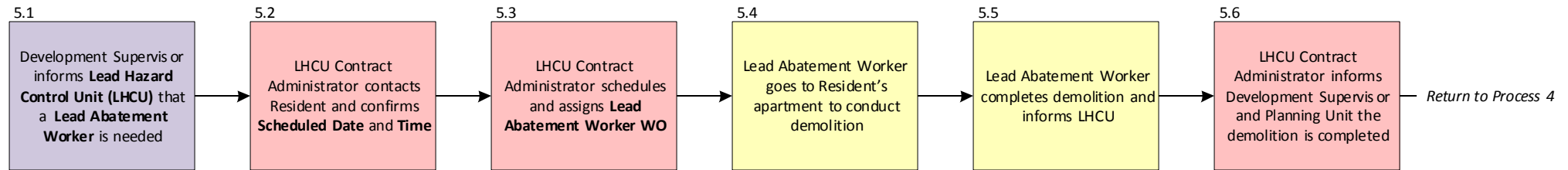
# Process 4: Skilled Trades Verifies Complaint



# Process 4: Skilled Trades Verifies Complaint (Continuation)



# Process 5: Lead Abatement Worker Conducts Demolition



## VIII. PROCEDURE

### A. Assigning Certified Renovators

**Only Certified Renovators can perform Renovation, Repair, and Painting (RRP) work that requires RRP certification.**

1. A maintenance work order is created in Maximo.
  - a. Maximo displays one of the following messages on all corrective maintenance (CM) work orders – printed or handheld – where lead-safe practices may be required:
    - (1) “CAUTION: If paint is disturbed, work must be assigned to only RRP-certified staff/vendor and Lead Safe Work Practices must be followed.” (Orange message)
    - (2) “ACTION REQUIRED: RRP-certified staff/vendor must be used and Lead Safe Work Practices must be followed.” (Red message)
  - b. For the work to be performed, Maximo reflects in work order tracking the Failure Class/Problem Codes for which Certified Renovators are required. The list is available at this link:  
<http://connect/private/Operations/PM/Interim%20Guidance1/Lead%20Safe>.
  - c. To locate the complete list of apartments that require RRP:
    - (1) Go to the Locations application in Maximo
    - (2) On the top left of the screen, expand the public queries icon
    - (3) Select ‘RRP required NYCHA Apartments’
  - d. Supervisors are not permitted to assign work that requires a Certified Renovator to employees who are not Certified Renovators. If an employee who is not a Certified Renovator is assigned to complete a work order that has the ACTION REQUIRED message noted above, the employee must tell their immediate supervisor that they are not certified to complete the work order.
  - e. In Assignment Manager and ESD Dispatching, the Labor List has a field to indicate which employees are Certified Renovators. The RRP certification information is imported from the Human Resources Database daily.
2. A maintenance worker verifies the work that needs to be performed.
3. If during verification, the maintenance worker disturbs more than two (2) square feet or more of presumed lead-based paint, then RRP procedure must be followed.

<b>NOTE:</b>	From this point forward, the NYCHA worker performing the RRP work is referred to as the employee.
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#### 4. Determination of RRP Work

- a. For all Maximo work orders where lead-safe practices may be required, the employee brings the equipment required to perform RRP work when they go to the work site. If additional supplies are needed, the employee contacts the supervisor to have it delivered to the location. See Section VIII.E., Employee Safety, and Section VIII.F., Supplies, below.
- b. When the employee goes to the work site, the employee determines if lead-based RRP work is required based on the following criteria.
  - (1) Work must be performed by a Certified Renovator if an interior surface that will be disturbed is two (2) square feet or more, or more than 10 percent of a small component per room or area.
  - (2) Work must be performed by a Certified Renovator if an exterior surface:
    - (a) Has more than 20 square feet of lead-based paint; or
    - (b) More than 10 percent of the total surface area of a component with a small surface area contains lead-based paint.
  - (3) Work must be performed by a Certified Renovator if the work includes window replacement, demolition, or activities involving prohibited practices (see Section VII.H.6., below).
- c. If the employee determines lead-based RRP work is required or if the estimated completion date or time changes, they make the indication on the work order in Maximo and immediately inform the development's property maintenance supervisor. The supervisor then contacts the contract administrator, who notifies the vendor of the change.
- d. If the employee determines RRP work on an interior surface will disturb more than 100 square feet of lead-based paint per room, or will include the removal of two or more painted windows, the work must be completed by lead abatement workers if:
  - (1) A child younger than six (6) years old lives in the apartment, as identified in Maximo; or
  - (2) The work is in a child-occupied facility.

For more information, see Section VIII.K., Work Disturbing More Than 100 Square Feet or Removing Two or More Painted Windows, below.

<b>NOTE:</b>	Employees should follow proper safety and dust control measures even when RRP work is determined to not be required, as described in the following sections: VIII.E., Employee Safety; VIII.G., Setting Up; VIII.H., Performing Work; and VIII.I., Cleaning Up.
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- e. If the employee determines lead-based RRP work is not required, they follow the normal repair process.

## 5. Vendors

- a. Property maintenance supervisors ensure vendor employees:
  - (1) Are Certified Renovators.
  - (2) Have their RRP certificates on file at the development.
  - (3) Follow lead-safe work practices under federal and local law and regulations.
  - (4) Provide the required notifications.
- b. Developments provide vendors with the vendor notice explaining these obligations. See Appendix A, Lead Safe Practices Vendor Notice.

## 6. Exemption for Emergency Renovations

- a. The cleaning and cleaning verification requirements set forth in this policy are required for emergency renovations.
- b. For emergency renovations immediately necessary to safeguard against imminent danger to human life, health, or safety, or to protect property from further major damage, tenants must be protected from exposure to lead in dust and debris generated by such emergency actions to the extent practicable. Such emergencies include, but are not limited to, when property is damaged by:
  - (1) Natural disaster
  - (2) Fire
  - (3) Structural collapse
  - (4) Cascading water
  - (5) Lack of utilities



- c. The exemptions listed below only apply to repairs immediately necessary to respond to the emergency.
- (1) Emergency renovations are exempt from requiring Certified Renovators to perform the work, to the extent necessary to respond to the emergency.
  - (2) The RRP requirements listed in the following sections are not required to be followed during an emergency renovation, to the extent necessary to respond to the emergency:
    - (a) Section VIII.B., Pre-Renovation Notice to Residents
    - (b) Section VIII.G., Setting Up
    - (c) Section VIII.H., Performing Work

<b>NOTE:</b>	RRP requirements apply to any work undertaken subsequent to or above and beyond such emergency actions.
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## B. Pre-Renovation Notice to Residents

1. The property manager and/or the property maintenance supervisor ensures sufficient copies of the EPA pamphlets, NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*, and NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*, are available in the management office.
2. Work cannot begin in any location without all required documentation in this section being completed.

<b>NOTE:</b>	If the scope, locations, and/or scheduled work start and end dates change after NYCHA Form 060.632A, <i>Pre-Renovation Form</i> , and/or NYCHA Form 088.183, <i>Resident Renovation Notification Common Area</i> are provided, the employee provides an updated notice with the revised information. The updated notice must be provided before the work beyond what was described in the original notice begins.
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### 3. Apartments

Resident notification for RRP work in apartments can be accomplished via hand delivery or via mail with a Certificate of Mailing.

a. Hand Delivery

- (1) The employee provides a hard copy of NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*, or NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*, to the affected apartment(s).
- (2) The pamphlet must be provided no earlier than 60 days before, and no later than immediately before, beginning a renovation applicable to this Standard Procedure.
- (3) The employee uses NYCHA Form 060.632A, *Pre-Renovation Form*, to:
  - (a) Obtain the written acknowledgement of receipt from an adult representative in the apartment; or
  - (b) Document that the pamphlet was delivered but the employee was unable to obtain written acknowledgement.
- (4) The property maintenance supervisor ensures the completed form is uploaded to the Maximo work order, via either photo or scanning.

b. Mail with a Certificate of Mailing

If the pamphlet is sent via mail with a Certificate of Mailing, it must be sent no earlier than 60 days before, and no later than seven (7) days before beginning the renovation. See NYCHA Standard Procedure 005:11:1, *Mail Center Operations*, for more information.

4. Common Areas and Exteriors

A development notifies the residents of the affected apartments in a building no more than 60 days before, and no less than immediately before, beginning a renovation in a common area.

a. The information provided in the notice must include:

- (1) A description of the nature and location of the work
- (2) The scheduled work start and end dates
- (3) Information on how to obtain a copy of NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*, and NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*.

b. The information may be provided by the following methods:

- (1) Posting copies of NYCHA Form 088.183, *Resident Renovation Notification Common Area*, where they are likely to be seen by the residents of all affected apartments; or

<b>NOTE:</b>	For recordkeeping purposes, if the employee has a NYCHA-issued handheld device, the employee takes a photo of the posted forms and uploads them to the Maximo work order.  If the employee does not have a NYCHA-issued handheld device, the employee informs the property maintenance supervisor, who ensures a copy of the form is uploaded to the Maximo work order.
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- (2) Hand delivery of NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*, or NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*, to every affected apartment in the building; or
- (3) Mail NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*, or NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*, with a Certificate of Mailing, to every affected apartment in the building
  - (a) If the pamphlet is sent via mail with a Certificate of Mailing, it must be sent no less than seven (7) days before beginning the renovation. See NYCHA Standard Procedure 005:11:1, *Mail Center Operations*, for more information.

## 5. Child-Occupied Facilities

If an apartment or common area is considered a child-occupied facility, the employee:

- a. Provides NYCHA Form 060.632A, *Pre-Renovation Form*, to a representative of the facility; and
- b. Posts NYCHA Form 088.183, *Resident Renovation Notification Common Area*, in the work area; or
- c. Provides a copy of the form to the parents or guardians of all children who use the facility.

## C. Dust Wipe Work Orders

Any time RRP work is required, a dust wipe work order must be created. The dust wipe work order is created before RRP work begins to facilitate scheduling of the dust wipe vendor.

1. A dust wipe work order can be created by paper or handheld device.

a. Paper Work Order

The employee informs the property maintenance supervisor or assistant property maintenance supervisor of the need to create a dust wipe work order in Maximo for a vendor to perform a wipe inspection upon completion of the work.

b. Handheld Device Work Order

The employee selects the 'Yes' button on their handheld device. This automatically creates a dust wipe work order and sends an e-mail to the property maintenance supervisor and Lead Hazard Control Department contract administrator.

2. The property maintenance supervisor or assistant property maintenance supervisor:

a. Generates the work order with the following codes:

(1) Owner group: TSDECS

(2) Failure class: Lead

(3) Problem code: leadindustclearance

b. Enters the estimated date and time of completion of the work in the Target Start section.

<b>NOTE:</b>	If the estimated completion date or time changes, the development's property maintenance supervisor immediately contacts the contract administrator, who notifies the vendor of the change.
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3. The Lead Hazard Control Department contract administrator schedules a dust wipe work order for a vendor based on the target start date entered on the parent work order.

a. The vendor is required to be on-site to perform a dust clearance examination in accordance with the terms of their contract.

D. Renovation, Repair, and Painting Work

1. Employees must have their certifications, including any refresher course certifications, with them on-site when they perform RRP work.

a. Employees must carry a physical copy of the certification with them; or

b. Must have an electronic copy of the certification on their mobile device.

2. The employee sets up containment of the work area. See Section VIII.G., Setting Up, below.
3. The employee performs the work. See Section VIII.H., Performing Work, below.
4. The employee cleans the work area. See Section VIII.I., Cleaning Up, below.
5. The employee begins the clearance process. See Section VIII.J., Clearance, below.

<b>NOTE:</b>	If a tenant is not home during any part of the work process, refer to the Tenant Not Home flow chart above in Section VII.B.
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#### E. Employee Safety

##### 1. Personal Protective Equipment (PPE)

- a. All employees performing work under this Standard Procedure are recommended to use the following:

- (1) Disposable coveralls, including hood and shoe covering
- (2) Gloves
- (3) Head covering
- (4) Respiratory protection (Disposable N-100, P-100, or R-100 respirators)
- (5) Safety goggles

##### 2. Make It Safe

If an employee recognizes a hazard that could cause harm to themselves or co-workers, they must stop the hazardous task, or stop working in the hazardous condition. Please refer to NYCHA Standard Procedure 001:15:3, *Make It Safe Process*, for more information.

#### F. Supplies

1. The property manager and property maintenance supervisor ensure an adequate amount of supplies from the list below are maintained. It is recommended that each HEPA vacuum be packaged as a set by including all the items listed below and assigned to employees as needed.
  - a. HEPA vacuum and filters

- b. 6 mil polyethylene sheeting (for floors)
  - c. 2 mil polyethylene sheeting (for furniture and fixtures)
  - d. 6 mil polyethylene bags
  - e. Flip mops
  - f. Wet disposable soft wipes
  - g. 2 string mops
  - h. 2 buckets and wringer(s)
  - i. Lead-specific cleaning detergent
  - j. Water mister or spray bottle
  - k. Duct tape
  - l. Painters tape
  - m. Utility knife
  - n. Paper towels / rags
  - o. NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*
  - p. NYCHA Form 088.182, *Renovation, Repair, and Painting Safety Sign*
2. Employees can check with the property maintenance supervisor or assistant property maintenance supervisor for the location of the required supplies at the development.
- a. If all of the required supplies are not available, the employee changes the status of the work order to 'awaiting material,' and reschedules the work.
  - b. If the work is an emergency renovation and all of the required supplies are not available, the employee ascertains if the work can be completed with the materials that are present.

## G. Setting Up

### 1. Signage

#### a. Outside the Work Area

- (1) Employees post NYCHA Form 088.182, *Renovation, Repair, and Painting Safety Sign*, before work begins.
- (2) The signs are posted at each entrance to a work area to define the work area, and/or at each main and secondary entrance to a building.
- (3) The signs must remain until cleaning verification is completed.
- (4) Translations of NYCHA Form 088.182, *Renovation, Repair, and Painting Safety Sign*, are kept in the Property Management Office. They are provided to any resident who requests one.
  - (a) Spanish: NYCHA Form TR088182\_02
  - (b) Russian: NYCHA Form TR088182\_03
  - (c) Chinese: NYCHA Form TR088182\_04

#### b. Inside the Work Area

The employees post NYCHA Form 088.182, *Renovation, Repair, and Painting Safety Sign*, inside each contained work area.

### 2. Site preparation

Before beginning the RRP work, the employees prepare the work area using the following actions.

#### a. Apartments, Common Areas, and Child-Occupied Facilities

- (1) In apartments, discuss the following with the resident:
  - (a) Extent of containment needed
  - (b) How the containment area will be prepared
  - (c) Advise residents not to enter the containment area until after clean-up
  - (d) Direct residents not to allow children to enter any area in which plastic sheeting is being used or stored due to the risk of suffocation

- (2) Secure the apartment and/or work area against unauthorized entry.
- (3) Move all objects out of the room, if possible.
- (4) Cover all items which were not moved from the work area with one layer of disposable polyethylene sheeting. The sheeting must be taped together with duct tape, and taped to the floors or bottom of the walls or baseboards, to form a continuous barrier to the penetration of dust.
- (5) Cover the floor of the work area with one layer of six-mil disposable polyethylene sheeting, and tape the sheeting down to prevent movement. The floor sheeting must extend six (6) feet in all directions from the work area where practical, unless vertical containment is installed. Use two layers of sheeting to cover wall-to-wall carpeting, overlapping the seams by at least six (6) inches.
  - (a) If vertical containment is used, the floor covering may stop at the vertical barrier, if it is impermeable, extends from the floor to the ceiling, and is tightly sealed at all floors, ceiling, and walls.
- (6) Cover the work area entrance or vertical containment doorway with one layer of sheeting. Tape the sheeting to the top of the door frame or vertical containment high point and weigh down the bottom to create a seal. Create a door flap on the sheeting that allows access into the work area.
- (7) Close and cover all forced air systems (HVAC) in the work area with one layer of disposable polyethylene sheeting, including bathroom vents, common area vents, exhaust vents, and hall vents.
- (8) Close windows, and where applicable, cover the windows with one layer of sheeting to prevent dust and debris from settling on windowsills.
- (9) In kitchens and bathrooms, cover counter tops, cabinets, sink base cabinets, and all other horizontal surfaces with sheeting, to ensure that all doors and drawers are sealed.
- (10) In kitchens:
  - (a) Cover the stove with sheeting and seal. Ensure that the stove is off and cool to the touch before covering.
  - (b) Cover and seal the refrigerator with sheeting. Prior to covering, cut slits in the sheeting to allow for ventilation.



## b. Exteriors

### (1) Work Area Perimeter

- (a) Create a 20-foot perimeter around the work area if space allows.
- (b) Use signs with orange cones, saw horses, warning tape, and/or ropes to mark off the work area.
- (c) Extend the work area farther if needed; for example, when paint on the second story of a building is disturbed.
- (d) Cover nearby vegetable gardens and children's play areas.

### (2) Doors and Windows

- (a) Close all doors and windows on the same floor within 20 feet of the work area, and all windows on all floors below that are the same horizontal distance from the renovation.
- (b) If the doors and windows of apartments are less than 20 feet from the work area, consider asking the residents of those affected apartments to close the affected windows and doors. If this is not possible, erect a vertical containment wall at the property line.

#### (c) Doors Used as Entrances to the Work Area

Cover any doors used as entrances to the work area or vertical containment doorway with one layer of sheeting. Tape the sheeting to the top of the door frame or vertical containment high point and weigh down the bottom to create a seal. Create a door flap on the sheeting that allows access into the work area.

### (3) Ground

- (a) Cover the ground with plastic sheeting or other impermeable material
- (b) If there is enough space, extend the sheeting a minimum of 10 feet beyond the perimeter of surfaces being worked on or to a sufficient distance to contain dust, whichever is greater, unless the property line prevents 10 feet of such ground cover in which case the employee must erect a vertical containment.
  - i. If a vertical containment is erected closer to the work area than the minimum ground containment distance, the ground containment may stop at the edge of the vertical containment.

#### (4) Vertical Containment

Vertical containment must be erected when work is done within 10 feet of the property line.

#### (5) Other Items

- (a) Cover any items that cannot be relocated out of the work area.
- (b) Tape the protective sheeting to the wall of the building or use a 2x4 wrapped in protective sheeting to hold the material next to the wall. Use heavy objects to weigh the other edges of the protective sheeting to the ground to secure.
- (c) When using ladders on plastic sheeting, place a sturdy piece of plywood on the plastic and then set the ladder on the plywood to prevent the ladder from puncturing the plastic and to provide a stable surface for the ladder. If plywood is used, take special care to secure it to the ground so that it does not move.

#### H. Performing Work

While performing the work, employees observe the following guidelines:

1. Using the spray water bottle, spray the surfaces that will be disturbed to limit the creation and dispersal of dust. Periodically rewet the area while working.
2. For painted surfaces, if a component is to be removed from an underlying surface, score the perimeter/edge of the component with a utility knife to minimize the quantity of painted surface that is impacted.
3. If power tools are used that impact lead-based paint, only those equipped with a vacuum attachment connected to a HEPA vacuum are allowed to be used.
4. Observe safety precautions in contained work areas:
  - a. Do not eat or drink in the work area.
  - b. Keep polyethylene sheeting away from open flames, e.g. stoves and blowtorches.
  - c. Exercise caution when spraying in the vicinity of electrical outlets.
  - d. Prevent children and pets from entering the work area.
5. Immediately repair torn sheeting using duct tape for minor tears. Total sheet replacement may be necessary for major tears.

6. The following work practices are prohibited:

- a. Open flame burning or torching of painted surfaces.
- b. Use of machines that remove paint or other surface coatings through high-speed operation, unless they have shrouds or containment systems and are equipped with a HEPA vacuum attachment.
- c. Operating a heat gun on painted surfaces above 1100 degrees Fahrenheit or charring the paint.
- d. Paint stripping using a volatile stripper in poorly ventilated space.
- e. Dry sanding or scraping, except within one (1) foot of electrical fixtures (e.g. switches, outlets, light fixtures, breaker boxes).

I. Cleaning Up

1. Work That Exceeds Eight Hours

If work is not completed at the end of an eight-hour shift, at the end of work on each day:

- a. The work area must be contained to prevent the release of leaded dust and debris into other areas and other safety, health, or environmental hazards; and
- b. The work area must be cleaned within at least 10 feet of the containment area to remove any visible dust or debris, and so other areas of the apartment or common area are accessible.

<b>NOTE:</b>	If after the above containment and cleaning is performed tenants still do not have access to sleeping areas, bathrooms, and kitchens, employees must refer to NYCHA Standard Procedure 002:06:01, <i>Planned Relocation</i> .
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2. After work is completed, employees clean up in the following sequence:

- a. Worksite
- b. Vacuuming
- c. All horizontal surfaces except floors
- d. Floors, including two (2) feet beyond the containment area in all directions from the work area

### 3. Worksite

- a. Remove all containment that interferes with cleaning the work area. Any containment that does not impact cleanup must remain in place until after clearance.

(1) Instruct the resident to not enter the work area until containment is removed.

- b. Pick up all debris too large for a vacuum cleaner and place it in six-mil polyethylene bags and/or a covered cart. Avoid puncturing bags with pointed or jagged pieces of debris.

- c. With a spray bottle, moisten the polyethylene sheeting and fold it inward.

- d. Place the plastic sheeting into six-mil polyethylene bags and/or a covered cart.

(1) Close all bags with an airtight gooseneck seal:

(a) Twist the bag

(a) Fold it over on itself

(b) Wrap it with duct tape

(c) Dispose of it with regular household waste

- e. Clean all tools.

### 4. Vacuuming

- a. Vacuum remaining dust and debris in the work area at a moderate speed. A HEPA vacuum is required. Never dry sweep dust or debris.

- b. First, vacuum every inch of all horizontal surfaces except floors, such as window sills, window troughs, countertops, light fixtures, cabinets, cabinet door edges, and any other horizontal surface where dust can accumulate.

- c. Then, vacuum floors starting at the far end of the room, working toward the entrance.

- d. If work was performed in kitchen, vacuum the condenser and fan area underneath the refrigerator.

- e. Avoid stepping on already vacuumed floors when moving to a new section.

### 5. Cleaning of Horizontal Surfaces Except Floors

- a. Use the disposable soft wipe method (preferred) or the two-bucket method.

- b. Wipe all horizontal surfaces except floors, such as window sills, window troughs, countertops, light fixtures, cabinets, cabinet door edges, and any other horizontal surface where dust can accumulate.
- c. Clean all horizontal surfaces except floors until wipes are clear of dust.

#### 6. Cleaning of Floors

- a. Use the disposable soft wipe method (preferred) or the two-bucket method.
  - (1) If using the two-bucket method, before mopping, dump the water from the clean rinse bucket used for the horizontal surfaces and refill it with clean cold water.
- b. Mop all floors starting at the far end of the room, working towards the entrance.
- c. Avoid stepping on already mopped floors when moving to a new section.
- d. If using the two-bucket method, discard dirty water in the toilet.
  - (1) For work in common areas, discard dirty water in empty five-gallon pails, put lids on them, and transport them to the nearest toilet to discard.
- e. Clean all floors until wipes are clear of dust.

#### 7. Employees close the work order after completing cleaning activities.

### J. Clearance

#### 1. Apartments, Common Areas, and Child-Occupied Facilities

- a. The employee who performed the RRP work fills out NYCHA Form 088.184, *Staff Renovation Recordkeeping Checklist*.
  - (1) If a vendor performed the RRP work, the vendor fills out NYCHA Form 088.181, *Vendor Renovation Recordkeeping Checklist*.
- b. The dust wipe vendor performs a dust clearance examination within two (2) hours of completion of the work order.

<b>NOTE:</b>	If a vendor performed the RRP work, a separate vendor must perform the dust clearance examination.
--------------	--

- c. The Lead Hazard Control Department contract administrator closes the dust wipe vendor work order.

- d. Dust wipe results may be available within eight (8) hours of completion of a dust clearance examination dependent on the date and time of the examination.
- e. If the dust wipe vendor does not clear the work site, or the tenant is not home, the Lead Hazard Control Department contract administrator generates a new clearance work order for staff to re-clean the work area, as outlined above in Section VIII.C., Dust Wipe Work Order. Employees then must repeat the tasks outlined above in Section VIII.I., Cleaning Up.

## 2. Exteriors

For exterior work, HUD requires only a visual assessment of the work area to pass clearance. No dust or soil testing is required.

### a. Visual inspection

- (1) A vendor conducts a visual inspection after cleaning is completed.
- (2) If dust, debris, or residue is present on surfaces in and below the work area, including window sills and the ground, these conditions must be eliminated by re-cleaning.
- (3) After re-cleaning, the vendor conducts another visual inspection.
- (4) After all areas pass inspection, warning signs may be removed.

## K. Work Disturbing More Than 100 Square Feet or Removing Two or More Painted Windows

For more information, refer to the Lead Abatement Worker Conducts Demolition flow chart above in Section VII.E.

### 1. Identifying Work Area

- a. When the employee verifies the work that needs to be performed as outlined above in Section VIII.A.4., they determine the total square footage of the painted area that will be disturbed in each room, and whether any work areas have two or more painted windows that will be removed.
- b. If the total area being disturbed in any room is more than 100 square feet of lead-based paint, or involves the removal of two or more painted windows, the employee confirms if a child younger than six (6) years old lives in the apartment, as identified in Maximo, or if the room is in a child-occupied facility.
- c. If a child younger than six (6) years old lives in the apartment, as identified in Maximo, or the room is in a child-occupied facility, the employee does not proceed with the work in that room.

- d. The employee informs the property maintenance supervisor of the need for a lead abatement worker.
- e. The property maintenance supervisor creates a work order for lead abatement worker demolition and contacts the Lead Hazard Control Department.

<b>NOTE:</b>	If the work order includes work in additional rooms that have less than 100 square feet of lead-based paint being disturbed, and/or areas that do not involve removing two or more painted windows, employees proceed with the RRP work in those rooms and areas.
--------------	---

- 2. **After RRP work begins, if an employee determines the size of the area will exceed the original scope of work and now will exceed 100 square feet of lead-based paint being disturbed, or will involve the removal of two or more painted windows, the employee immediately stops work in that room and refers to Sections VIII.K.1.b.-VIII.K.1.d. directly above.**
- 3. The property maintenance supervisor coordinates with the relevant trade(s) for restoration work after the lead abatement workers complete their work.
- 4. Notice of Commencement
  - a. The Lead Hazard Control Department environmental health and safety coordinator files a notice of commencement of work with the New York City Department of Mental Health and Hygiene (DOHMH) not less than 10 days prior to beginning the work. The form is found at:  
<https://www1.nyc.gov/assets/doh/downloads/pdf/lead/lead-notificationform.pdf>.
  - b. If work is required to begin in less than 10 days, the notice of commencement must be filed as soon as practicable but prior to beginning the work.
  - c. The notice must be filled out completely and submitted according to the instructions on the form.
    - (1) Fill in the 'Building Owner Information' section with the following: New York City Housing Authority, 250 Broadway, New York, NY, 10007, 212-306-3000.
  - d. A copy of the notice of commencement of work must be posted between 24 and 96 hours before work begins. It must be posted at the entrance to the building and the entrance of the specific apartment where work will take place.
  - e. Any changes to the information included in the notice of commencement of work must be filed with DOHMH prior to starting work, or if work already started, within 24 hours of any such change.

## **IX. OUTPUTS, REPORTS, AND RECORDKEEPING**

### A. Outputs

1. Completing identified tasks within required timelines and compliance standards
2. Providing all required notifications to residents, including posting all required notices
3. Retaining all required documents in identified locations

### B. Reports

Reports related to this Standard Procedure are maintained in the NYCHA Data Warehouse on NYCHA Connect. Reports are generated upon request or as needed.

### C. Recordkeeping

1. Developments retain hard copies of all forms associated with this Standard Procedure for no less than 10 years from the completion date of work.
  - a. The vendor provides hard copies of NYCHA Form 088.181, *Vendor Renovation Recordkeeping Checklist*, to the property maintenance supervisor.
2. Digital forms associated with this Standard Procedure are retained in Maximo.

## **X. TRAINING REQUIREMENTS**

### A. The Human Resources Department Learning and Development-Registration Unit:

1. Serves as a liaison for obtaining training.
2. Tracks training certifications.
3. Schedules new employees for training.

### B. All new employees who this Standard Procedure applies to are required to:

1. Attend Renovation, Repair, and Painting training.
2. Receive their certification by achieving a successful result on the exam administered at the end of the training. The training certification is valid for five (5) years.



## **XI. PERFORMANCE METRICS**

- A. Pass/fail rate of dust wipes
- B. Average number of days to close a dust wipe work order
- C. Percentage of dust wipe work orders closed within established timelines
- D. Percentage of work orders delayed caused by a lack of RRP materials
- E. Percentage of RRP compliance observations in complete adherence to the RRP rule

## **XII. NON-COMPLIANCE**

- A. NYCHA staff performing or overseeing RRP work are required to comply with this Standard Procedure and any federal, state, or city regulations pertaining to the work described in it.
- B. Departments are required to take corrective action to bring NYCHA into compliance.

## **XIII. FORMS**

The following forms and signs are located on the Forms and Reference Library.

- A. NYCHA Form 060.632, *The Lead-Safe Certified Guide to Renovate Right*
- B. NYCHA Form TR060632\_02, *The Lead-Safe Certified Guide to Renovate Right Spanish Translation*
- C. NYCHA Form 060.632A, *Pre-Renovation Form*
- D. NYCHA Form 088.181, *Vendor Renovation Recordkeeping Checklist*
- E. NYCHA Form 088.182, *Renovation, Repair, and Painting Safety Sign*
- F. NYCHA Form TR088.182\_02, *Renovation, Repair, and Painting Safety Sign, Spanish Translation*
- G. NYCHA Form TR088.182\_03, *Renovation, Repair, and Painting Safety Sign, Russian Translation*
- H. NYCHA Form TR088.182\_04, *Renovation, Repair, and Painting Safety Sign, Chinese translation*
- I. NYCHA Form 088.183, *Resident Renovation Notification Common Area*
- J. NYCHA Form 088.184, *Staff Renovation Recordkeeping Checklist*

## XIV. REVIEW/REVISION HISTORY PAGE

### LEAD SAFETY FOR RENOVATION, REPAIR, AND PAINTING

040:18:2

Review/ Revision	Review/ Revision Date	Sections Amended
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

## **XV. APPENDICES**

### A. Lead Safe Practices Vendor Notice

Appendix appears on following page.



# Lead Safe Practices Vendor Notice

Dear Vendor:

Please be advised that your firm and your staff are required to comply with Lead Safe Work practice requirements as part of general maintenance and repair in accordance with NYC Local Law 1 and/or HUD requirements and must be RRP certified.

If vendor employees enter the apartment and determine that the amount of painted surface being disturbed is greater than 2 square feet or 10% of the component, vendor employees are required to follow Lead Safe Practices and:

- Provide a paper copy of the [EPA Renovate Right Brochure](#) to the resident before commencing work.
- Collect the completed Occupant Confirmation form (found in the brochure) from the resident.
- Indicate the work order # on the Occupant Confirmation form.
- Immediately inform the Property Maintenance Supervisor or Assistant Property Maintenance Supervisor of the need for clearance dust wipes.
- Return the Occupant Confirmation form to the Property Maintenance Supervisor.

Please be advised that your staff can obtain copies of the Renovate Right Brochure from the Development Office.

B. RRP Supplemental Workflow

Appendix begins on following page.

RRP Supplemental Workflow

Row #	Step #	Action Description	YES	Go to Process	NO	Go to Process
<b>PROCESS 1: Maintenance Worker Verifies Complaint</b>						
1	1.1	Maintenance Worker goes to Resident's apartment on Scheduled Date and Time				
2	1.2	Is Resident Home?	YES	Go to Step 1.3	NO	Go to Process 3
3	1.3	Maintenance Worker Verifies Complaint				
4	1.4	Can Maintenance Worker complete repairs?	YES	Go to Step 1.7	NO	Go to Step 1.9 & 1.10
5	1.5	Is 2 sq. ft. or more of RRP Work Required?	YES		NO	Go to Step 1.11
6	1.6	Is RRP Equipment available?	YES		NO	Go to Step 1.12 & 1.13
7	1.7	Maintenance Worker informs Development Supervisor and requests any additional RRP Equipment required for repairs to be brought to apartment, if needed. (HEPA Vac, respirator, additional sheathing, duct and painters tape etc.)				
8	1.8	Development Supervisor generates the Dust Wipe WO with Estimated Completion Date and Time of RRP Work				
9	1.9	Maintenance Worker generates Child WO for Skilled Trades Needed				
11	1.10	Planning Unit schedules Skilled Trades Child WO		Go to Process 4		
12	1.11	Maintenance Worker follows normal repair process and closes Parent WO. Note: Maintenance staff must notify Development supervisor of any changes in estimated completion times as soon as they become aware of change				
13	1.12	Development Supervisor reschedules Maintenance WO when RRP materials are obtained		End		
14	1.13	Was Equipment obtained?				
15	1.14	Maintenance Worker issues the Renovate Right Pamphlet to Resident Note: Staff may request different language pamphlet.	YES	Go to Step 1.15	NO	Return to Step 1.13
16	1.15	Resident signs Pre-Renovation Form?				
17	1.16	Maintenance Worker retains the Pre-Renovation Form	YES	Go to Step 1.17	NO	Go to Step 1.22
18	1.17	Maintenance Worker attaches Pre-Renovation Form to Parent WO via Unified Change Management (UCM) in Maximo Note: If Maintenance Worker does not have handheld device, Development Supervisor must perform this step.				
19	1.18	Maintenance Worker starts containment process set-up and completes repairs				
20	1.19	Maintenance Worker completes the RRP Cleaning Verification Work and Renovation Recordkeeping Checklist				
21	1.20	Maintenance Worker informs Resident that Vendor will return within 2 hours to conduct Dust Wipe				
22	1.21	Maintenance Worker closes Parent WO		Go to Process 3		
23	1.22	Maintenance Worker completes the Renovator's Self Certification Option		Return to Step 1.17		

RRP Supplemental Workflow

Row #	Step #	Action Description	YES	Go to Process	NO	Go to Process
<b>PROCESS 2: Tenant Not Home</b>						
29	2.1	Is this a Maintenance WO?	YES	Go to Step 2.2	NO	Go to Step 2.9
30	2.2	Maintenance Worker contacts Resident via handheld				
31	2.3	Was Contact successful?	YES	Return to Step 1.3	NO	Go to Step 2.4
32	2.4	Was appointment initiated by resident?	YES	Go to Step 2.5	NO	Go to Step 2.8
33	2.5	Maintenance Worker marks WO Tenant Not At Home and places a Notice of Visit by NYCHA Staff (NYCHA Form# 040.534A) under the door				
34	2.6	Maintenance Worker informs Development Supervisor the Resident was not home				
35	2.7	Development Supervisor contacts Resident and reschedules Maintenance WO, if applicable				
36	2.8	Maintenance Worker marks WO Tenant Not At Home and places a Notice of Visit by NYCHA Staff – Apartment Inspection (NYCHA Form# 040.534) under the door				
37	2.9	Is this a Skilled Trades WO?	YES	Go to Step 2.10	NO	End of Process
38	2.10	Skilled Trades Worker contacts Resident via handheld				
39	2.11	Was Contact successful?	YES	Return to Step 4.3	NO	Go to Step 2.12
40	2.12	Was appointment initiated by resident?	YES	Go to Step 2.13	NO	Go to Step 2.16
41	2.13	Skilled Trades Worker marks WO Tenant Not At Home and places a Notice of Visit by NYCHA Staff (NYCHA Form# 040.534A) under the door				
42	2.14	Skilled Trades Worker informs Development Supervisor the Resident was not home				
43	2.15	Development Supervisor contacts Resident and reschedules Skilled Trades Child WO, if applicable				
44	2.16	Skilled Trades Worker marks WO Tenant Not At Home and places a Notice of Visit by NYCHA Staff – Apartment Inspection (NYCHA Form# 040.534) under the door		Return to Step 2.14		

RRP Supplemental Workflow

Row #	Step #	Action Description	YES	Go to Process	NO	Go to Process
<b>PROCESS 3: Vendor Conducts Dust Clearance Examination</b>						
51	3.1	Lead Hazard Control Unit (LHCU) Contract Administrator schedules Dust Wipe WO for Vendor				
52	3.2	Vendor goes to Resident's apartment on Scheduled Date and Time				
53	3.3	Is Resident home?	YES	Go to Step 3.4	NO	Go to Step 3.13
54	3.4	Vendor completes Visual Assessment & Dust Clearance Examination (Dust Wipe)				
55	3.5	LHCU Contract Administrator attaches Dust Wipe Report to the Dust Wipe WO in Maximo via UCM				
56	3.6	LHCU Contract Administrator completes and closes the Dust Wipe WO				
57	3.7	Dust Wipe Passed Note: Dust Clearance results may be available within 8 hours dependent on date and time of collection.	YES	End of Process	NO	Go to Step 3.8
58	3.8	Maximo auto-generates Cleaning Verification WO for Maintenance Worker				
59	3.9	Development Supervisor reschedules the Cleaning Verification WO with Estimated Completion Date and Time				
60	3.10	Maximo auto-generates Dust Wipe WO				
61	3.11	LHCU Contract Administrator re-schedules Dust Wipe WO and enters Target Start Date for Vendor				
62	3.12	Maintenance Worker completes RRP Cleaning Verification Work and Renovation Recordkeeping Checklist		Return to Step 3.12		
63	3.13	Vendor informs Development Supervisor Resident is not home				
64	3.14	Development Supervisor contacts Resident				
65	3.15	Was contact successful?				
66	3.16	Is Resident home?	YES	Go to Step 3.17	NO	Go to Step 3.18
67	3.17	Development Supervisor informs Vendor Resident was home and Vendor returns to apartment		Return to Step 3.4		
68	3.18	Development Supervisor informs LHCU Contract Administrator				
69	3.19	Development Supervisor reschedules the Cleaning Verification WO with Estimated Completion Date and Time		Return to Step 3.12		
70	3.20	LHCU Contract Administrator re-schedules Dust Wipe WO for Vendor		Return to Step 4.2		



RRP Supplemental Workflow

Row #	Step #	Action Description	YES	Go to Process	NO	Go to Process
<b>PROCESS 4: Skilled Trades Verifies Complaint</b>						
76	4.1	Skilled Trades goes to Resident's apartment on Scheduled Date and Time				
77	4.2	Is Resident Home?	YES	Go to Step 4.3	NO	Return to Process 3
78	4.3	Skilled Trades assesses repairs				
79	4.4	Can Skilled Trades Complete repairs?	YES	Go to Step 4.8	NO	Go to Step 4.11 & 4.12
80	4.5	Is 2 sq. ft. or more of RRP Work Required?	YES		NO	Go to Step 4.13
81	4.6	Is amount of RRP square footage greater than 100sq. ft?	YES		NO	Go to Step 4.17
82	4.7	Does the WO indicate a child under 6 resides in apt?	YES		NO	Go to Step 4.14
83	4.8	Skilled Trades informs the Resident a Lead Abatement Worker is required to perform demolition and requests a Date and Time from Resident				
84	4.9	Skilled Trades sequences Child WO to the Lead Abatement Worker				
85	4.10	Skilled Trades informs Development Supervisor a Lead Abatement Worker is required to conduct demolition				
86	4.11	Skilled Trades generates Child WO for Skilled Trades Needed				
87	4.12	Planning Unit schedules Skilled Trades Child WO		Return to Step 4.1		
88	4.13	Skilled Trades follows normal repairs and closes Child WO. Note: Skilled Trades staff must notify Development supervisor of any changes in estimated completion times as soon as they become aware of change				
89	4.14	Is RRP Equipment available?	YES	Go to Step 4.17	NO	Go to Step 4.15
90	4.15	Planning Unit reschedules Skilled Trades Child WO when RRP materials are obtained				
91	4.16	Was Equipment obtained?	YES	Return to Step 4.18	NO	Return to Step 4.18
92	4.17	Skilled Trades informs Development Supervisor and requests RRP Equipment required for repairs, if needed				
93	4.18	Development Supervisor generates the Dust Wipe WO with Estimated Completion Date and Time of RRP Work				
94	4.19	Skilled Trades returns to Resident's apartment and issues the Renovate Right Pamphlet Note: Staff may request different language pamphlet.				
95	4.20	Resident signs Pre-Renovation Form?				
96	4.21	Skilled Trades retains the Pre-Renovation Form				
97	4.22	Skilled Trades attaches photo of Pre-Renovation Form to Child WO via UCM in Hand Held Device Note: If Skilled Trades does not have handheld device, Development Supervisor must perform this step via UCM in Maximo.				
98	4.23	Skilled Trades starts containment process set-up				
99	4.24	Skilled Trades conducts repairs				
100	4.25	Does the repairs escalate to greater than 100sq ft?	YES	Return to Step 4.10	NO	Go to Step 4.26
101	4.26	Skilled Trades completes the RRP Cleaning Verification Work and Renovation Recordkeeping Checklist				
102	4.27	Skilled Trades informs Resident that Vendor will return within 2 hours to conduct Dust Wipe				
103	4.28	Skilled Trades closes		Return to Process 3		

RRP Supplemental Workflow

Row #	Step #	Action Description	YES	Go to Process	NO	Go to Process
<b>PROCESS 5: Lead Abatement Worker Conducts Demolition</b>						
105	5.1	Development Supervisor informs Lead Hazard Control Unit (LHCU) that a Lead Abatement Worker is needed				
106	5.2	LHCU Contract Administrator contacts Resident and confirms Scheduled Date and Time				
107	5.3	LHCU Contract Administrator schedules and assigns Lead Abatement Worker WO				
108	5.4	Lead Abatement Worker goes to Resident's apartment to conduct demolition				
109	5.5	Lead Abatement Worker completes demolition and informs LHCU				
110	5.6	LHCU Contract Administrator informs Development Supervisor and Planning Unit the demolition is completed		Return to Process 4		

# **MOLD RESIDENT DOCUMENTS**



# Controlling Mold in Your Apartment

## What Is Mold?

The New York City Department of Health and Mental Hygiene (DOHMH) defines mold as a fungus that grows in damp areas like bathrooms and kitchens. Mold comes in various colors and textures and produces a musty, stale, or earthy odor. Mold can cause allergic reactions or other health problems in some people and can trigger asthma attacks.

## How to Clean Mold Safely in Your Home:

According to DOHMH, mold should be cleaned/remediated by trained building maintenance staff. Mold on bathroom tile grout (around bathtubs) is common. Residents can control this growth with thorough and frequent use of household cleaners. Residents can also clean minor discoloration (gold or light-brown spots) that forms on bathroom walls/ceilings after showering to help prevent mold growth.

- However, residents with asthma or mold allergies should **not** conduct this work.
- The use of bleach can be hazardous and should be used **only** in diluted solutions (1 part bleach to 10 parts water).

## Tips for Preventing Mold:

Mold growth is **always** the result of excessive moisture, which can occur from:

- 1) Rainwater leaking through roofs or entering through building walls.
- 2) Plumbing leaks (either from within the apartment or from above).
- 3) Condensation (drops of water) that forms on surfaces when warm, moist (humid) air comes into contact with cooler surfaces.
- 4) Lack of adequate ventilation (air flow).

Rainwater, plumbing leaks, and broken rooftop fans are not within residents' control. These problems require repair by trained staff. However, **condensation (drops of water and steam) is a common cause** of excessive moisture that promotes mold, especially in bathrooms.

**Here's what you can do** to limit excessive moisture and the potential for mold in your bathroom:

- **Exhaust ventilation** is the key to controlling high humidity in bathrooms. Make sure your bathroom exhaust works by holding a piece of tissue to the bathroom exhaust grill to ensure there is suction (the tissue should stick to grill). If there is no suction, call the Customer Contact Center.
- If your bathroom exhaust vent grill is clogged with dust, report the issue by calling the Customer Contact Center.
- Don't use shower racks/clothes lines above bathtubs.
- Open bathroom windows and doors after showering.
- In the summertime, use an air conditioner.
- Open windows slightly when the weather allows.
- Request repairs for leaky plumbing or other water leaks as soon as possible.

**If you have** mold growth, excessive moisture, or a plumbing or rainwater leak, please call the Customer Contact Center at 718-707-7771 to report the issue.



**NEW YORK CITY HOUSING AUTHORITY**  
**Public Housing Department**  
<<DEVELOPMENT NAME>>

Work Order #: \_\_\_\_\_

Date: \_\_\_\_\_

**Mold Inspection Receipt**

NYCHA has not found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak and is closing your work order as “unfounded”.

NYCHA has found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak. NYCHA will send you the Mold Inspection Review form, which will include the findings of this inspection.

NYCHA is committed to completing all mold and excessive moisture work orders within 7 days for simple repairs and 15 days for complex repairs, starting from the date that the initial complaint is reported to the Customer Contact Center. If resident access is not provided for the scheduled follow-up appointments, NYCHA may use its right to access a tenant’s apartment, immediately after providing 48 hours’ notice, as indicated in the NYCHA Resident Lease Agreement.

A final Quality Assurance re-inspection will be conducted by NYCHA staff 30 to 45 days after the necessary work orders are completed to ensure that the mold and excessive moisture remediation work was done correctly and effectively.

A translation of this document is available in your management office.
La traducción de este documento está disponible en la Oficina de Administración de su residencial.
所居公房管理處備有文件譯本可供索取。
Перевод этого документа находится в Вашем домоуправлении.





**NEW YORK CITY HOUSING AUTHORITY**  
**Public Housing Department**  
<<DEVELOPMENT NAME>>

Notice – Mold Inspection Review

<<DATE>>

<<Name>>  
<<ADDRESS LINE 1>>  
<<ADDRESS LINE 2>>

On <<INSPECTION DATE>> NYCHA conducted the initial inspection for Work Order # <<NUMBER>>. NYCHA has found mold, water damage, and/or a moisture level indicating excessive moisture and/or a possible leak.

The probable root cause is: <<insert probable root cause>>

Based on this root cause and the remediation method selected, follow-up work orders have been automatically generated. Below is a summary of the work that is needed to correct this root cause and remediate the mold or moisture condition:

Work Order #	Failure Class	Problem Code	Craft	Estimated Scheduled Date

If you do not have a scheduled date listed above, NYCHA will contact you to schedule appointments needed to complete the repairs or to discuss next steps if capital repairs are needed to remediate mold or moisture in your unit.

NYCHA is committed to completing all mold and excessive moisture work orders within 7 days for simple repairs and 15 days for complex repairs, starting from the date that the initial complaint is reported to the Customer Contact Center. If resident access is not provided for the scheduled follow-up appointments, NYCHA may use its right to access a tenant’s apartment, immediately after providing 48 hours’ notice, as indicated in the NYCHA Resident Lease Agreement.

A final Quality Assurance re-inspection will be conducted by NYCHA staff 30 to 45 days after the necessary work orders are completed to ensure that the mold and excessive moisture remediation work was done correctly and effectively.

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La traducción de este documento está disponible en  
la Oficina de Administración de su residencial.

所居公房管理處備有文件譯本可供索取。

Перевод этого документа находится в Вашем домоуправлении.

# CARETAKE X MEMO

**From:** Operations

**To:** All Neighborhood Administrators, All Property managers, All Property Maintenance Supervisors (PMS), All Assistant Property Maintenance Supervisors (APMS), All Supervisors of Caretakers, All Caretakers X

**CC:** Office of the General Manager, Environmental Health & Safety (EH&S), Compliance Department, Office of Quality Assurance, Learning & Development (L&D), Human Resource Department, Materials Management Office, Operations VPs, Borough Skilled Trades Deputies and Administrators, Borough Supervisor of Painters

## **New York City Housing Authority**

### **Guidance: Responsibility of Caretaker X Staff to Remove up to 20 Square Feet of Mold**

June 29, 2021

Operations Partners,

NYCHA is expanding the square footage to which Caretaker X staff may be assigned to remove mold at selected developments. This change is being implemented to improve response times to mold cases under 20 square feet. The following guidance outlines this change and staff responsibilities. This change will go in effect **on June 30<sup>th</sup>, 2021**.

#### **Part I: Project Overview**

Currently, Caretakers X are not assigned to remove mold over 10 square feet. Anything larger is typically assigned to a painter. On June 30<sup>th</sup> 2021, NYCHA will increase the square footage on the total amount of mold that Caretaker X staff may be assigned to remove. Following this policy change, mold conditions up to 20 square feet may be assigned at certain sites to a Caretaker X to remove. The goal of this policy revision is to allow more work to be performed by trained development-based staff and thereby decrease the amount of time it takes to remove mold from NYCHA apartments.

As a reminder, mold removal may require the disturbance of painted surfaces, to include those with presumed/verified lead-based paint. As such, only Caretaker Xs who have received RRP training and hold a valid Certified Renovator credential may perform this work whenever the size of the work area exceeds 2 square feet. Supervisors assigning the work must ensure 1) work is assigned to trained and qualified staff, and 2) RRP protocols are being followed.

During Phase I of the roll-out, the change will **impact developments that are not presumed to be positive for lead-based paint. (Please see Table 1 (Part VII) of this memo for the list of locations that are in Phase I).**

Locations that are presumed to be lead positive, and are not on the attached list, will continue to assign Caretaker Xs to remove mold up to 10 square feet.

During Phase II, the change will be applicable to all developments.

Beginning on June 30<sup>th</sup>, 2021, Phase I developments that are on the list below will be able to assign larger mold cleaning tasks to Caretaker X staff. As part of this enhancement, Maximo will automatically assign mold removal work orders to the craft of Caretaker X with the owner group set to the development where the work order is located. Development Supervisors must then assign a Caretaker X who completed Mold Busters training to the remediation work. Provided work is done on paper work orders, the Supervisors must coordinate for the work orders to be closed.

Wherever possible, OMAR is recommending that mold inspectors bring a Caretaker X to the inspection. Upon verification of a mold condition up to 20 square feet in size, inspectors could assign the Caretaker X to immediately begin removing the mold. This proactive approach will allow staff to clean most mold conditions as soon as they are discovered. If it is not possible to bring a Caretaker X to the inspection, OMAR recommends that staff sequence mold cleaning work for a same day response.

It is our hope that this policy change will help NYCHA address mold conditions throughout the authority by using our existing resources more efficiently.

## **Part II: Training Requirements**

Any Caretaker X who has completed the one-day Mold Busters Remediation Methods Training conducted by EEA will be able to remove up to 20 square feet of mold. Caretaker X's should receive RRP training if they have not already been certified. Note: development Supervisors must not assign Caretaker X's to complete these assignments without these required trainings.

## **Part III. Responsibilities**

### **Caretaker X:**

- Remove up to 20 square feet of mold with OMAR and NYCHA approved detergent. Staff will work in accordance with the remediation methods outlined in the SP 040:14:1 *Mold/ Mildew Control in NYCHA Residential Buildings*.
- Remove/clean mold in unit as soon as possible but no later than within seven (7) days after the initial condition is detected and reported.
- Setting up and removal of containment in situations that require containment i.e. existing dust control procedure for areas covered asbestos, lead, mold and other health hazards.
- Clean walkways and work areas with a damp cloth or mop and a detergent solution. For jobs larger than 10 square feet, all surfaces in the work area must be HEPA vacuumed and then cleaned with a damp cloth or mop and a detergent solution. All areas must be visibly clean prior to the removal of containment.

### **Development Supervisors (Property Maintenance Supervisor, Assistant Property Maintenance Supervisor, Supervisor of Caretakers):**

- Assign Caretakers X who completed the required training to remove up to 20 sq feet of mold.
- Ensure that assigned Caretakers X visit apartments for mold removal work orders as scheduled and perform the work.
- Ensure Caretakers X are using NYCHA and OMAR approved cleaning supplies, tools, and personal protective equipment (PPE).
- Ensure that Caretakers X visit apartments for all mold cleaning appointments as scheduled.
- Ensure RRP guidelines are followed.

## Part IV: Tools and Supplies

As this policy goes in effect, the property maintenance supervisor and assistant property maintenance supervisor should ensure that their developments have enough tools and supplies to accommodate the expected growth in mold removal work. Please check your development's stock of cleaning supplies and solutions in the storage room and restock, if needed.

As outlined in the SP 040:14:1 *Mold/ Mildew Control in NYCHA Residential Buildings*, NYCHA's staff should use the following NYCHA and OMAR approved supplies when cleaning mold:

- ShockWave – Detergent (HA# 080657583)
- Biowash - Detergent (HA# 0806938344)
- Foster First Defense 4080 – Disinfectant (HA# 0806962366)
- Zinsser JOMAX - House Cleaner and Mildew Killer (HA# 0806962365)

Please note that the Safety Data Sheets (SDS) for each of these chemicals are available in the Property Maintenance office and all staff should review these prior to usage. All chemicals should be applied following the guidelines contained within each SDS. If staff have any questions on these chemicals, please contact the Environmental Health and Safety Department at [ehs@nycha.nyc.gov](mailto:ehs@nycha.nyc.gov).

## Part V: Personal Protective Equipment (PPE)

As outlined in the SP 040:14:1 *Mold/ Mildew Control in NYCHA Residential Buildings*, NYCHA recommends staff use Personal Protective Equipment when addressing mold conditions. Any employee who wishes to use Personal Protective Equipment will have the option to use the following items for any mold job that is less than 100 square feet:

- N95 disposable respirators, or approved equivalent.
- Disposable protective clothing.
- Gloves.
- Eye protection.

## Part VI: Oversight

The Compliance Department, EHS, and OMAR will continue to monitor key performance indicators and trends to ensure that mold removal work is done in accordance with the timeframes and protocols outlined in the SP 040:14:1 *Mold/ Mildew Control in NYCHA Residential Buildings* and analyze and investigate any potential deviations.

**Part VII: List of Developments Included in the Project**

<b>Development</b>	<b>TDS</b>
1010 EAST 178TH STREET	180
104-14 TAPSCOTT STREET	242
1162-1176 WASHINGTON AVENUE	233
1471 WATSON AVENUE	214
303 VERNON AVENUE	156
45 ALLEN STREET	265
ADAMS	118
AMSTERDAM ADDITION	187
ATLANTIC TERMINAL SITE 4B	256
AUDUBON	125
BAILEY AVENUE-WEST 193RD STREET	202
BAISLEY PARK	91
BARUCH HOUSES ADDITION	198
BAY VIEW	92
BEACH 41ST STREET	165
BEDFORD-STUYVESANT REHAB	311
BELMONT-SUTTER AREA	345
BERRY	52
BETHUNE GARDENS	160
BORINQUEN PLAZA I	243
BORINQUEN PLAZA II	271
BOSTON ROAD PLAZA	189
BOSTON SECOR	138
BOULEVARD	46
BOYNTON AVENUE REHAB	346
BRACETTI PLAZA	264
BRONX RIVER ADDITION	157
BROWN	325
BROWNSVILLE	16
BUSHWICK	86
BUTLER	113
CAMPOS PLAZA II	286
CAREY GARDENS	166
CARLETON MANOR	164
CARVER	58
CASSIDY-LAFAYETTE	206
CHELSEA	134
CHELSEA ADDITION	176
CLAREMONT PARKWAY-FRANKLIN AVENUE	334
CLAREMONT REHAB (GROUP 2)	307

<b>Development</b>	<b>TDS</b>
CLAREMONT REHAB (GROUP 3)	308
CLAREMONT REHAB (GROUP 5)	336
CLINTON	123
COLLEGE AVENUE-EAST 165TH STREET	236
CONEY ISLAND	94
CONEY ISLAND I (SITE 1B)	239
CONEY ISLAND I (SITE 8)	238
CONEY ISLAND I (SITES 4 & 5)	216
CONLON LIHFE TOWERS	232
CORSI HOUSES	199
CROWN HEIGHTS	312
CYPRESS HILLS	70
DAVIDSON	190
DE HOSTOS APARTMENTS	155
DOUGLASS ADDITION	148
DOUGLASS I	82
DOUGLASS II	582
DREW-HAMILTON	111
EAGLE AVENUE-EAST 163RD STREET	224
EAST 152ND STREET-COURTLANDT AVENUE	237
EAST 180TH STREET-MONTEREY AVENUE	208
EAST NEW YORK CITY LINE	263
EDENWALD	57
FARRAGUT	29
FENIMORE-LEFFERTS	205
FIorentino PLAZA	207
FOREST	59
FORT INDEPENDENCE STREET-HEATH AVENUE	197
FULTON	136
GARVEY (GROUP A)	252
GLEBE AVENUE-WESTCHESTER AVENUE	225
GOMPERS	100
GOWANUS	25
HABER	142
HARBORVIEW TERRACE	262
HERNANDEZ	184
HOLMES TOWERS	159
HOWARD	72
HOWARD AVENUE	339
HOWARD AVENUE-PARK PLACE	365
HUGHES APARTMENTS	168
HYLAN	109



<b>Development</b>	<b>TDS</b>
INGERSOLL	14
INTERNATIONAL TOWER	316
ISAACS	139
JACKSON	120
JEFFERSON	64
KING TOWERS	30
KINGSBOROUGH EXTENSION	161
LA GUARDIA	76
LA GUARDIA ADDITION	152
LAFAYETTE	122
LATIMER GARDENS	186
LEAVITT STREET-34TH AVENUE	201
LEHMAN	101
LENOX ROAD-ROCKAWAY PARKWAY	348
LINDEN	95
LOW HOUSES	169
LOWER EAST SIDE I INFILL	326
LOWER EAST SIDE II	337
LOWER EAST SIDE REHAB (GROUP 5)	292
MARCY	21
MARSHALL PLAZA	344
MCKINLEY	103
MELROSE	28
MELTZER TOWER	183
METRO NORTH PLAZA	181
MIDDLETOWN PLAZA	191
MOORE	129
MORRIS I	102
MORRIS II	502
MORRIS PARK SENIOR CITIZENS HOME	277
MORRISANIA	130
MORRISANIA AIR RIGHTS	267
MOTT HAVEN	121
NEW LANE AREA	314
OCEAN BAY APARTMENTS (OCEANSIDE)	51
OCEAN HILL APARTMENTS	162
OCEAN HILL-BROWNSVILLE	313
O'DWYER GARDENS	172
PARK ROCK REHAB	351
PATTERSON	24
PENNSYLVANIA AVENUE-WORTMAN AVENUE	194
PINK	89

<b>Development</b>	<b>TDS</b>
QUEENSBRIDGE SOUTH	5
RALPH AVENUE REHAB	352
RANDALL AVENUE-BALCOM AVENUE	245
REDFERN	55
REHAB PROGRAM (COLLEGE POINT)	143
REHAB PROGRAM (WISE REHAB)	517
REID APARTMENTS	167
ROBBINS PLAZA	218
ROBINSON	241
ROOSEVELT I	135
ROOSEVELT II	177
RUTGERS	99
RUTLAND TOWERS	282
SACK WERN	280
SAINT MARY'S PARK	93
SAMUEL (CITY)	377
SARATOGA VILLAGE	158
SHEEPSHEAD BAY	36
SHELTON HOUSE	279
SOTOMAYOR	67
SOUTH BRONX AREA (SITE 402)	305
SOUTH JAMAICA I	8
STEBBINS AVENUE-HEWITT PLACE	353
STERLING PLACE REHABS (SAINT JOHNS-STERLING)	366
STERLING PLACE REHABS (STERLING-BUFFALO)	368
STUYVESANT GARDENS I	221
STUYVESANT GARDENS II	333
SUTTER AVENUE-UNION STREET	369
TAFT	97
TAPSCOTT STREET REHAB	354
TAYLOR STREET-WYTHE AVENUE	234
TELLER AVENUE-EAST 166TH STREET	223
THOMAS APARTMENTS	268
THROGGS NECK ADDITION	193
TILDEN	96
TOMPKINS	131
TWIN PARKS EAST (SITE 9)	287
TWO BRIDGES URA (SITE 7)	266
UNION AVENUE-EAST 163RD STREET	342
UNION AVENUE-EAST 166TH STREET	356
UNITY PLAZA (SITES 17,24,25A)	240
UPACA (SITE 5)	343

<b>Development</b>	<b>TDS</b>
UPACA (SITE 6)	355
VAN DYKE II	146
VANDALIA AVENUE	315
VLADECK	6
VLADECK II	7
WAGNER	74
WASHINGTON	62
WEST BRIGHTON I	116
WEST BRIGHTON II	175
WEST TREMONT AVENUE-SEDGWICK AVENUE	246
WHITE	124
WHITMAN	514
WOODSON	182
WSUR (BROWNSTONES)	178
WSUR (SITE B) 74 WEST 92ND STREET	173
WSUR (SITE C) 589 AMSTERDAM AVENUE	174
WYCKOFF GARDENS	163



**INFORMER WORK MANAGEMENT (IWM)  
TRAINING COURSE FOR MOLD INSPECTION**



# Welcome to the Handheld Informer Work Management (iWM)

## Training Course for Mold Inspection

Today's Instructor:



## iWM Mobile Application Training - Agenda

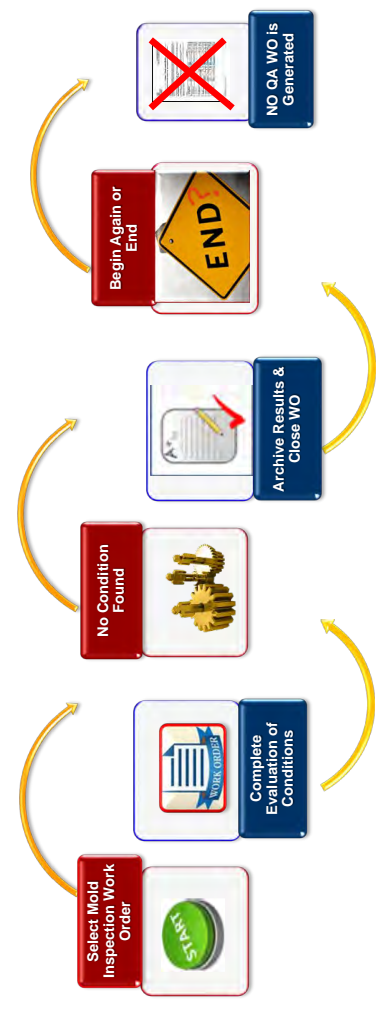
- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along: End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along: End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

Unassigned	All
3	3
<p><b>SOUTH JAMAICA 1</b> 10636 197TH STREET TOILET WaterRunning Bathtoom 01 Reporder: 06/27/18 DE:008</p>	
<p><b>SOUTH JAMAICA 1</b> 10704 197TH STREET WINDOWGLASS Kitchen 01 Reporder: 06/27/18 DE:008</p>	
<p><b>SOUTH JAMAICA 1</b> 10704 197TH STREET EXTERMINATION Unit 026 Reporder: 06/27/18 QA:AT</p>	
<p><b>SOUTH JAMAICA 1</b> 10704 197TH STREET CEILING NEEDSPAINTING Inbore 011</p>	



## MOLD/MILDEW WO Workflow

### NO Mold was Found....



## MOLD/MILDEW WO Workflow - (Continued)

### Mold is Found ...Doing the Work (Part 1)...



# MOLD/MILDEW WO Workflow - (Continued)

## Mold is Found ...Doing the Work (Part 2)...

Environmental Education Associates, Inc.  
NYCHA Mold Inspection Student Handouts



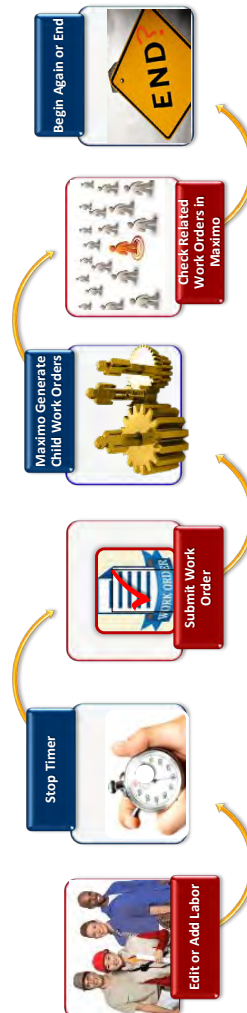
# Work Order Workflow

## Doing the work...



# Work Order Workflow

## Ending the work...



# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
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- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

Unassigned	All
3	3
SOUTH JAMAICA I 10626 19TH STREET TOILET 0803.007.020.020.KIT01 Reporter: 06/27/18 05/08/18	58958838 Unscheduled WATERRUNNING Bathroom 01 CM / MOLD
SOUTH JAMAICA I 10704 19TH STREET WINDOWGLASS 0803.007.020.020.KIT01 Reporter: 06/27/18 05/08/18	58958835 Unscheduled WILLINOI STAYUP Kitchen 01 CM / MOLD
SOUTH JAMAICA I 10704 19TH STREET EXTENSION 0803.007.020.020 Reporter: 06/27/18 05/08/18	58958833 Unscheduled ROACHES Unit 026 CM / MOLD
SOUTH JAMAICA I 10704 19TH STREET 0803.007.020.020.KIT01 Reporter: 06/27/18 05/08/18	58958832 Unscheduled NEEDSPAINING CENING Kitchen 01

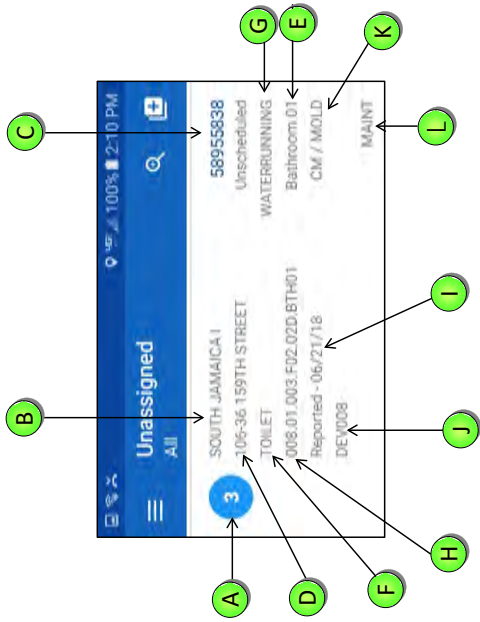
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## View Work Order Details

The WO List screen shows a detailed summary about each WO.

- A** Priority
- B** Development
- C** WO Number
- D** Address
- E** Room/Location
- F** Failure Class
- G** Problem Code
- H** Location String
- I** Reported By Date
- J** Owner Group
- K** WO Type
- L** Craft

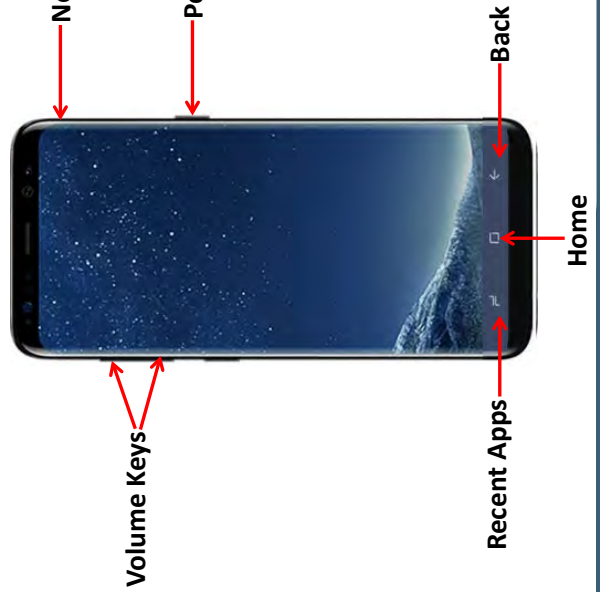
Environmental Education Associates, Inc.  
NYCHA Mold Inspection Student Handouts



**005.01.001.F02.02C.KIT01**  
Development #/ Building / Stair Hall / Floor / Apartment / Room  
**005. 01. 001. F02. 02C. KIT01**

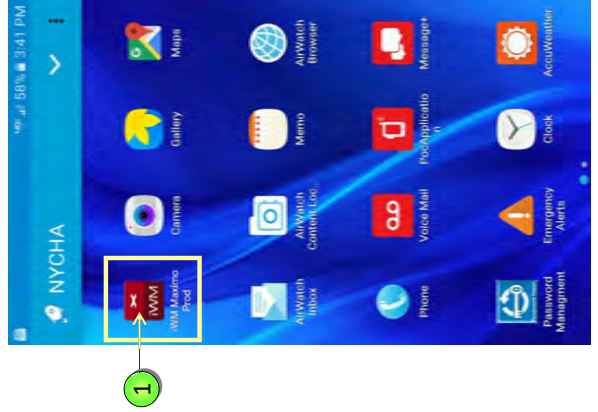
- ### Examples of NYCHA Locations:
- Developments
  - Buildings
  - Stair Halls
  - Floors
  - Apartments
  - Rooms (bedroom, bathroom, etc.)
  - Heating Plumbing Line
  - Grounds
  - Elevators
  - Community Centers

## Samsung Galaxy S8 Buttons



## Launch the iWM Application

1 Tap on the Work Management Application to access the Log In screen.



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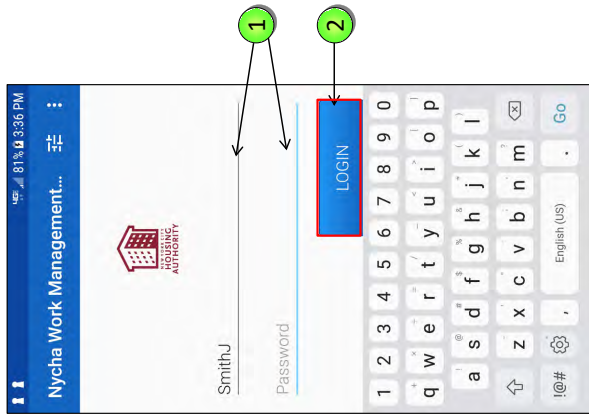
# Log In To iWM Application

1 Enter User Name and Password

2 Tap LOGIN

\* It is the same User Name and Password as **Maximo**, and Your Computer.

**NOTE:** Make sure you are in an area that has good cell service.



# Menu

1 Show My Work Orders: Shows open WOs assigned to the user who is logged-in.

2 Show Assigned Work Orders: Shows Open WOs that are assigned to other users in the user's area (Development or Borough)

3 Show Unassigned Work Orders: Shows Open WOs that are not assigned to any person.

4 Show Court Work Orders Today: Shows Open WOs where resident has an appointment for today.

5 Show Reinspection Work Orders: Shows all automatically generated WOs as a result of the completed QA Mold Inspection.



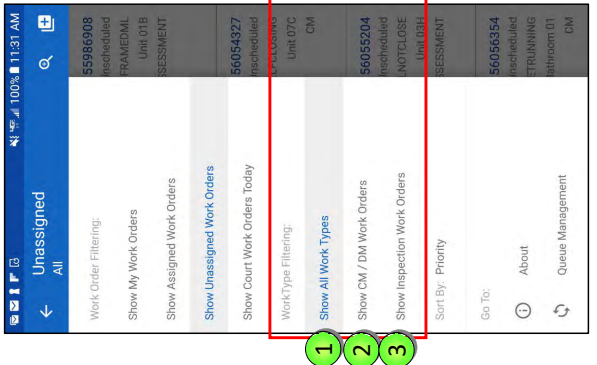
# Viewing Work Orders - Types

Work Orders can be filtered and sorted by Work Order type, there is no default.

1 Show All Work Types displays all open Work Orders for the Development.

2 Show CM / DM Work Orders displays all Corrective Maintenance and Deferred Maintenance Work Orders.

3 Show Inspection Work Orders displays all the Inspection Work Orders.



# How to View Work Orders - Sorting

The Menu is displayed. There are five options in which to sort your Work Orders:

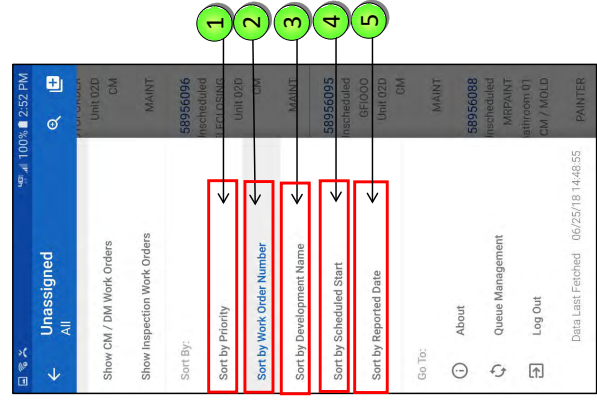
1 Sort by Priority defaults Work Orders based upon Priority level, with highest priorities first.

2 Sort by Work Order Number sorts the Work Orders in a descending order.

3 Sort By Development Name sorts the Work Orders by Development name in descending order.


4 Sort by Scheduled Start sorts Work Orders based on the Date and Time the work is scheduled to begin.

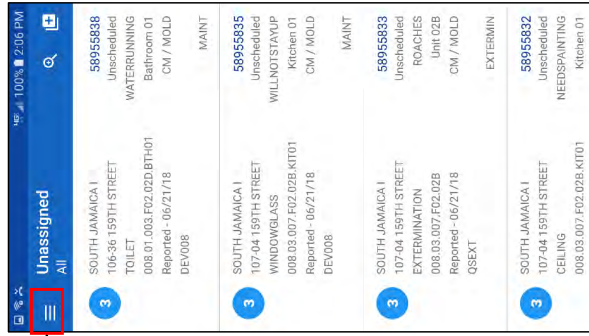
5 Sort by Reported Date sorts Work Orders based on the Dates the complaint was made.




# Viewing Work Orders


All of the WOs that you'll always see are in the user's area/location (**Borough Wide Development / Managed BY**).

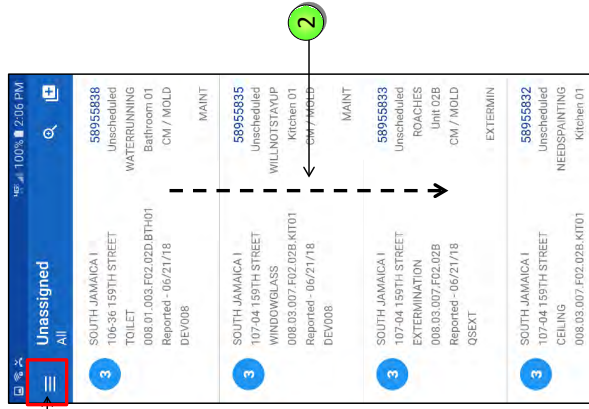
1 Tap  the **Menu** Button to go to the list of **Unassigned Work Orders** in a different way.




# Viewing Work Orders – (Continued)

1 Tap  the **Menu** or **Go To** button to go back to the **Menu** screen.

2 To **Refresh** your screen manually slide your finger **down**  the screen.

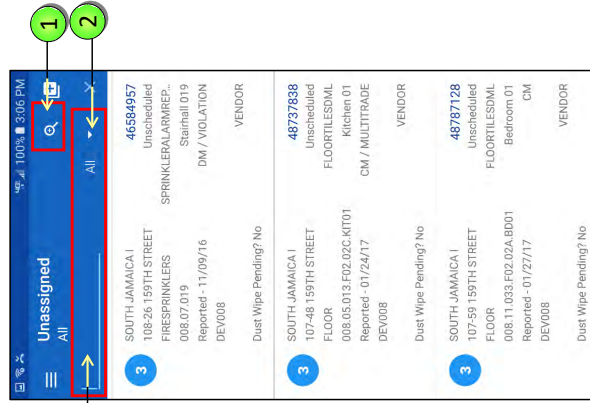


# How To Search For Work Orders


1 You can search for Work Orders by tapping on the **small magnifying glass** .

2 The default search criteria is **ALL** where you can use the keyboard and type a Work Order number to search for.

3 Use the keyboard and start typing the **first few numbers** of a WO and the system displays all the Work Orders that start or begin with these numbers.



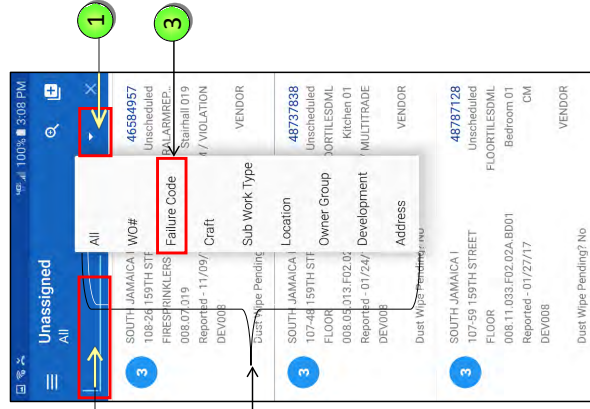
# How To Search For Work Orders

1 To search for more criteria, tap on  the **down arrow** and a list displays with all available search options.

2 You can search by **ALL, Work Order Number, Failure Code, Craft, Sub Work Type, Location, Owner Group, Development, and Address**. Select the search option you wish to explore and type a new search criteria.

3 Tap on **Failure Code** and use the keyboard and start typing for this example, **door**.

4 The system displays all the WOs with this criteria.



# How To Perform Multiple Searches – (Continued)

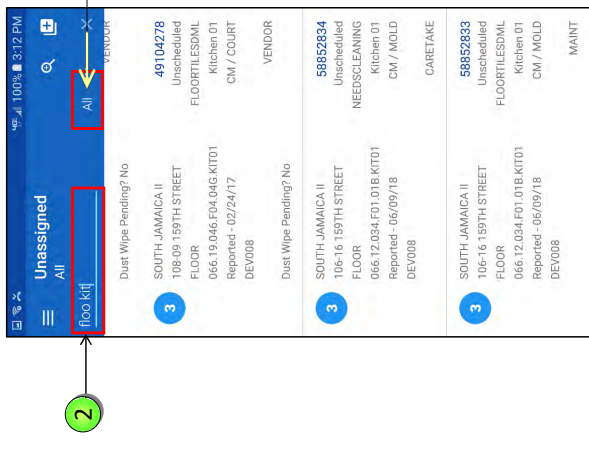
You can search for more than **ONE** criteria at once

By using the **ALL** option you can then start typing what you are searching for **separating each field by a space**. The system displays all available Work Orders that matches your search options.

**1** Tap **ALL**

**2** Type on the corresponding line leaving a space in between **Floor Kit**

**3** Tap **DONE** on the device keyboard



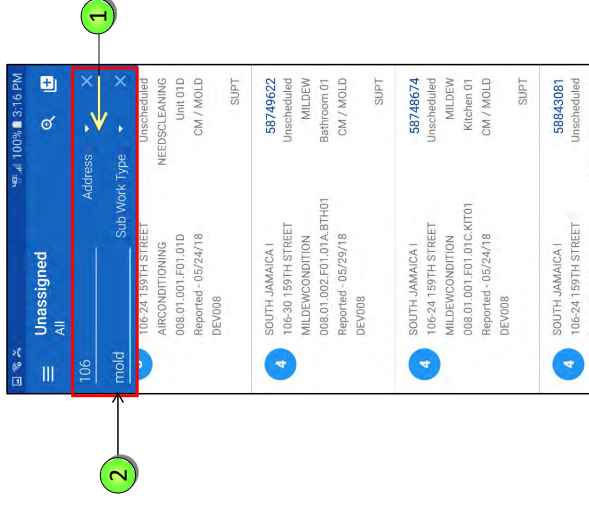
# How To Perform Multiple Searches – (Continued)

You can search for more than **ONE** criteria at once by using Multi-level Search:

**1** Tap on the **small magnifying glass** then tap on **the down arrow** and choose **Address** from search options list, and type on the corresponding line **106**.

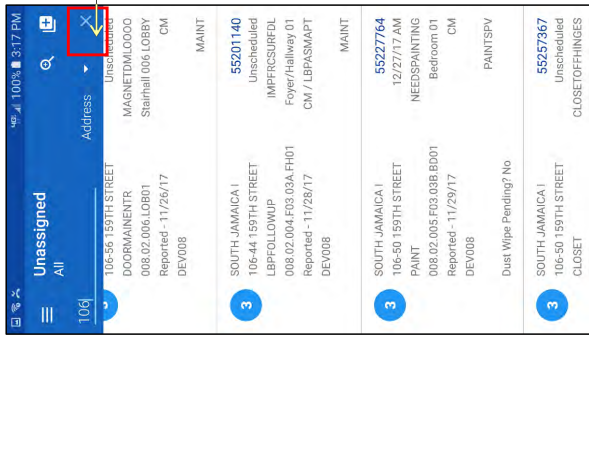
**2** Tap on the **small magnifying glass** then tap on **the down arrow** and choose **Sub Work Type** from search options list, and type on the corresponding line **mold**.

**3** Tap on the device **backward arrow** to remove the keyboard to see the list.



# Viewing Work Orders

**1** Tap on the **X** to collapse any search options that you do not want.



# How To Search For Work Orders – ONLY Supervisors

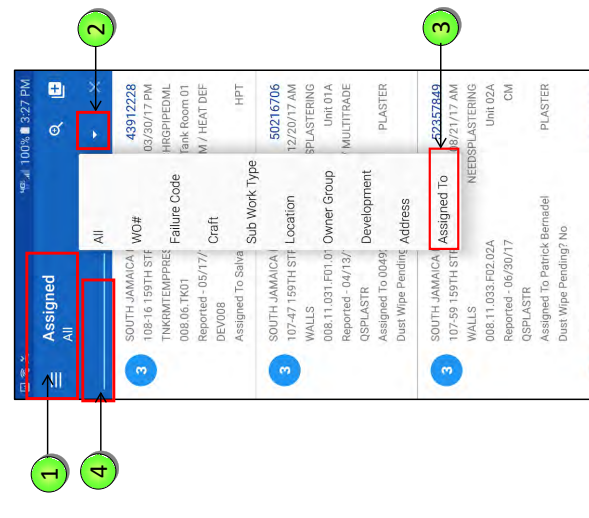
**1** Tap **Show Assigned Work Orders** from the Menu screen.

**2** To search for a particular worker assignment, tap on the **down arrow** and a list displays with all available search options.

**3** Select **Assigned To** search option from the criteria list.

**4** Type the worker name on the keyboard, then tap **DONE** on the keyboard. The system displays all the Work Orders assigned to this worker.

**NOTE:** The **Assigned To** option **ONLY** appears when **Show Assigned Worker Orders** is selected. You can only search for one name at a time.





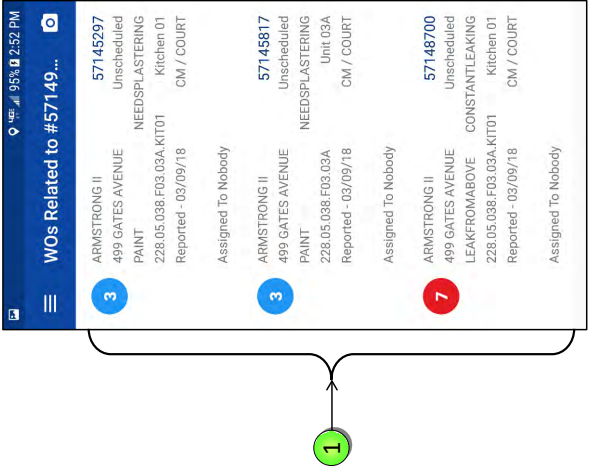
# Viewing Related Work Orders

1 **Related Work Order** - An open Work Order for the same apartment and non-apartment locations display.



# Viewing Related Work Orders – (Continued)

1 After viewing the Related Work Order listing, tap the device back arrow to the Work Order Details screen redisplay.



# Mold Work Orders Process - Inspection

1 The first Parent Work Order appears in:

- Show Unassigned Work Orders
- Show CM /DM Work Orders

**NOTE:** If the Work Order is assigned to a worker it will appear in **Show Assigned Work Orders** or **Show My Work Orders**.



# Mold Work Orders Process - QA

1 The first QA Work Order appears in:

- Show Unassigned Work Orders
- Show Inspection Work Orders

**NOTE:** The QA Work Order is automatically generated in **Maximo 25-days**, and the new **Target Start Date** will be set to **30 days** after the last Child Work Order is closed (or **25-days** after the mold inspection gets closed if no children are created).

The **Target Finish Date** is set to **15 days** after the **Target Start Date**. If either **Target Start Date** or **Target Finish Date** fall on a weekend or a holiday, then **next business day**.



# Mold Re-Inspection Work Orders Process

The first Re-Inspection Work Order appears in:

- Show Reinspection Work Orders
- Show CM / DM Work Orders

**NOTE:** Maximo creates the Re-Inspection Work Order immediately and the person who submits the QA Work Order, should see the Reinspection Work Order on his device and right there and then complete and submit Re-Inspection results.



# iWM Mobile Application Training - Agenda

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- 2. Sort, Search and Select WOs from Menu List
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- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

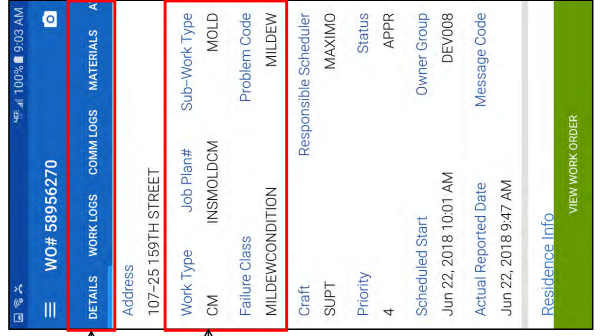


# View Work Order Details

The user can review the Work Order Details by scrolling up and down on the Details tab.

The fields below are unique for the Mold Inspection Work Order:

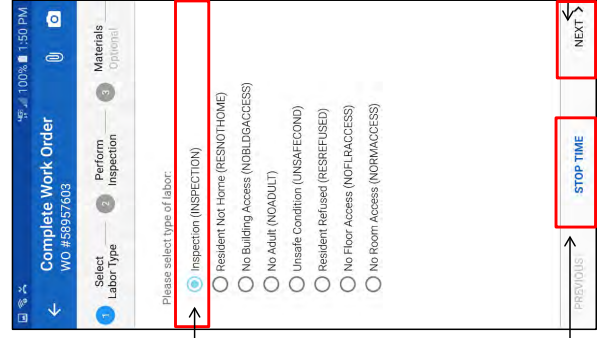
- Work Type = CM
- Job Plan# = INSMOLDCM
- Sub-work Type = MOLD
- Failure Class = MILDEWCONDITION
- Problem Code = MILDEW



# View and Select Labor - Start the Timer

After reviewing the Work Order Details the user is now ready to begin the work. START TIME is displayed at the bottom of the screen.

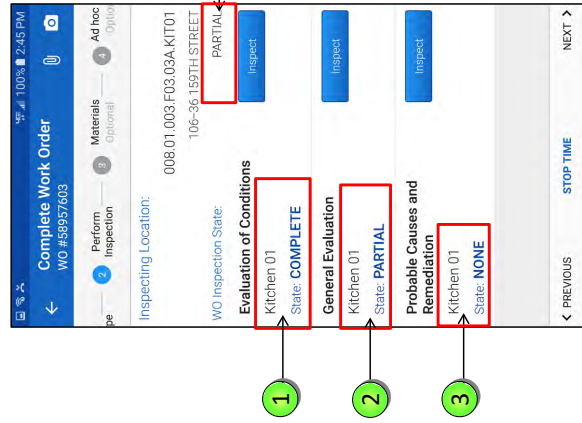
- 1 Tap on START TIME
- 2 Select Inspection
- 3 Tap NEXT



# Inspection Status

On Perform Inspection screen you can see the **WO Inspection State**. This is the current **State** of the Inspection.

- 1 **COMPLETE** – All required results have been entered.
- 2 **PARTIAL** – Some results have been entered, but not **ALL** required results.
- 3 **NONE** – No results have been entered.
- 4 **NOTE: WO Inspection State** of the whole WO will appear on this screen and on the **Work Order List** screen.



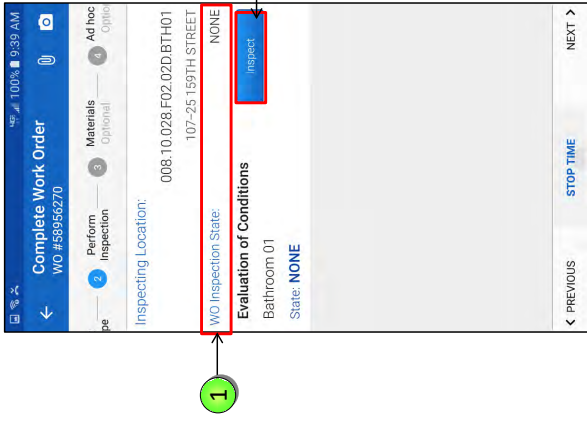
# Perform Inspection

The first task in a series of tasks is  
**Task 1: Evaluation of Conditions**

- 1
- 2

The **WO Inspection State** is **NONE**.

Tap **INSPECT**



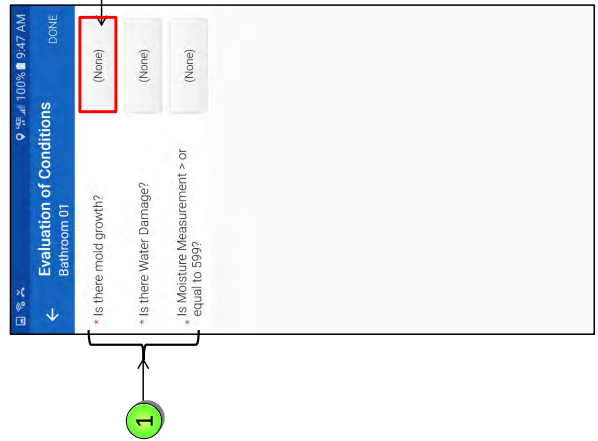
# Evaluation of Mold Growth – (Continued)

Items that must be inspected are marked by a red asterisk (\*)

All questions that have an asterisk (\*) are mandatory.

- 1 **Evaluation of Conditions** requires evaluation for:
  - **Mold Growth (Yes/No)**
  - **Water Damaged (Yes/No)**
  - **Moisture Measurement >= 599 (Yes/No)**

Tap **NONE** next to **Is there mold growth?**

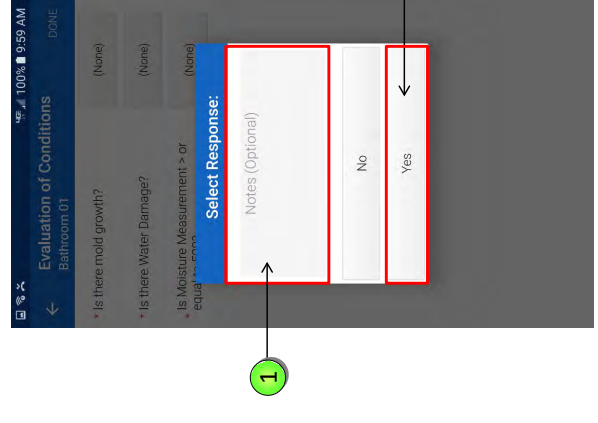


The **Select Response** window display 3 options:

- **Notes (optional)**
- **No**
- **Yes**

In the **Notes** field, the user can input free-text information.

Tap **YES**

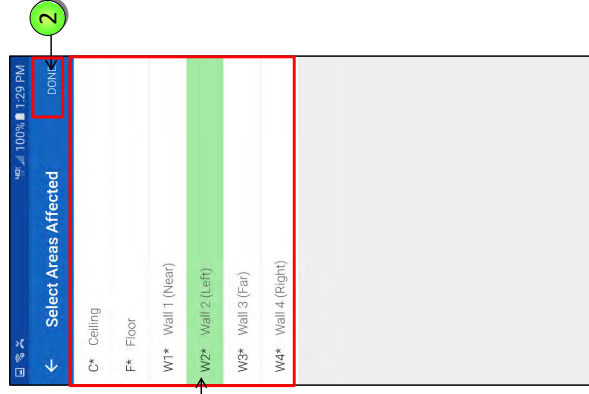


## Evaluation of Mold Growth – (Continued)



1 Tap on **W2\* Wall 2 (left)**, the system highlights it in Green.

2 Tap **DONE**



## Evaluation of Mold Growth – (Continued)

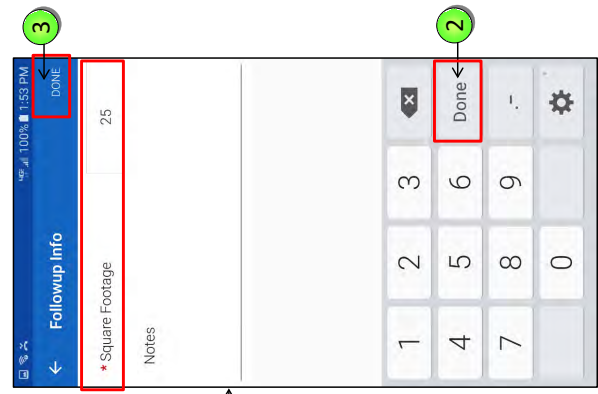


1 Tap inside the field and the device keyboard displays.

2 Type **25**

3 Tap **DONE** on the device keyboard

4 Tap **DONE**



1 The **FollowUp Info** screen displays, the **Square Footage** which is a **Mandatory** field:

1 Tap **SQUARE FOOTAGE**

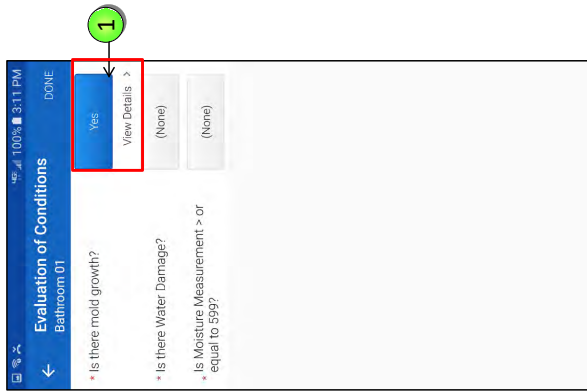
**NOTE:** Square footage is the total of all areas added together.




## Evaluation of Mold Growth – (Continued)

Once the user completes the mold growth inspection, the **View Details** appear below the **Yes** button.

1




The **View Details** screen displays a summary of the inspection performed.

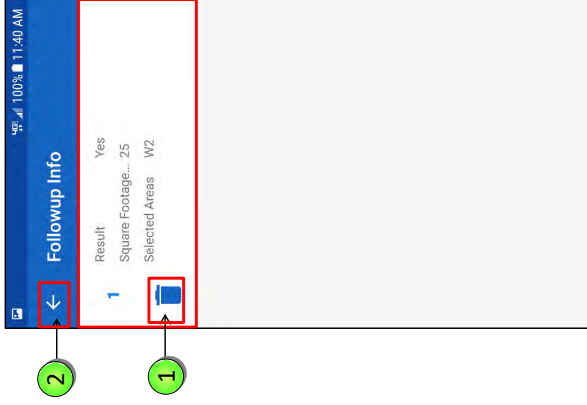
**NOTE:** to change the answers entered, tap on the **Garbage Pail** icon , to erase the information entered.

Confirm the message in the Pop-up Window, **“Are you sure you want to delete this result?”** tap **Yes**.

1

Tap the **back arrow**  to return to the **Evaluation of Conditions** screen.

2



## Evaluation of Mold Growth – (Continued)

## Evaluation of Water Damage

The second Mandatory question on the **Evaluation of Conditions** screen is: **“is there Water Damage?”**

1

Tap **NONE** next to **is there Water Damage?**



The **Select Response** window display 3 options:

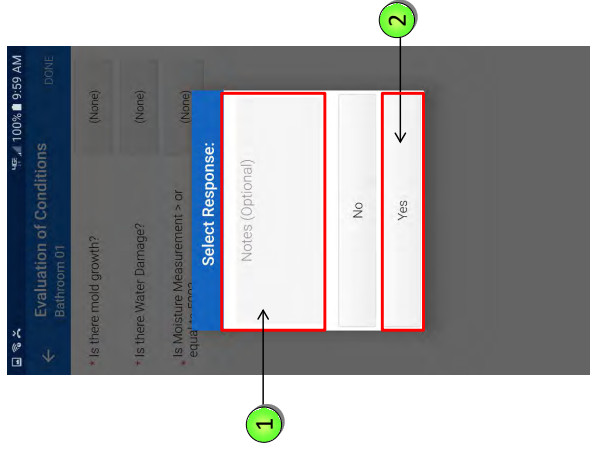
- **Notes** (optional)
- **NO**
- **Yes**

1

In the **Notes** field, the user can input free-text information.

2

Tap **YES**



## Evaluation of Water Damage – (Continued)

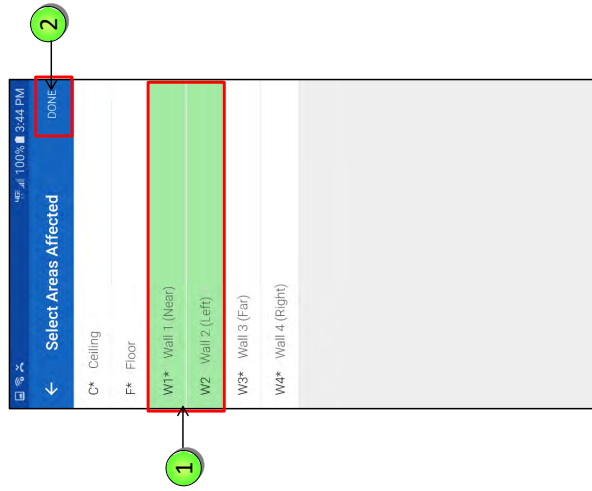


## Evaluation of Water Damage – (Continued)

1 Tap and select two affected areas:

W1\* Wall 1 (Near)  
W2\* Wall 2 (Left)

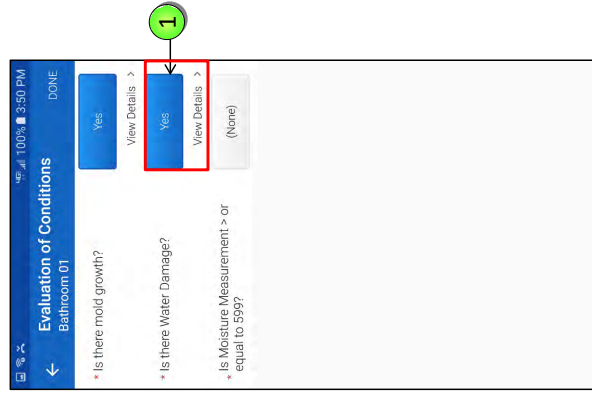
2 Tap DONE



## Evaluation of Water Damage – (Continued)

1 The Evaluation of Conditions screen has now two mandatory questions answered.

2 Tap on the View Details to see the summary of the Inspection that was performed.



## Evaluation of Water Damage – (Continued)

1 Review the entered Result in the FollowUp Info Screen.

2 Tap the back arrow ← to return to the Evaluation of Conditions screen.

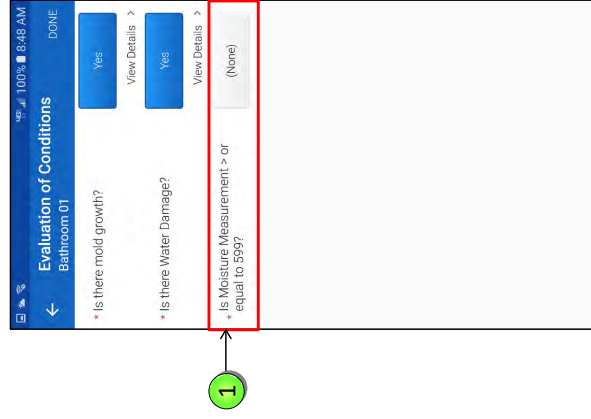


## Evaluate Moisture Measurement Level

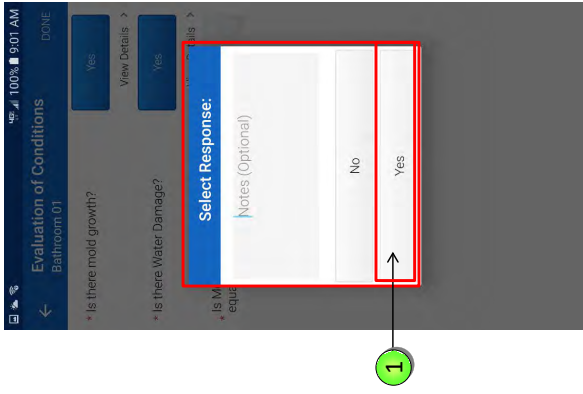
1 The last question on the Evaluation of Conditions is to evaluate the moisture level.

2 Evaluate the moisture measurement level (greater than) >= 599

3 Tap NONE



## Evaluate Moisture Measurement Level – (Continued)

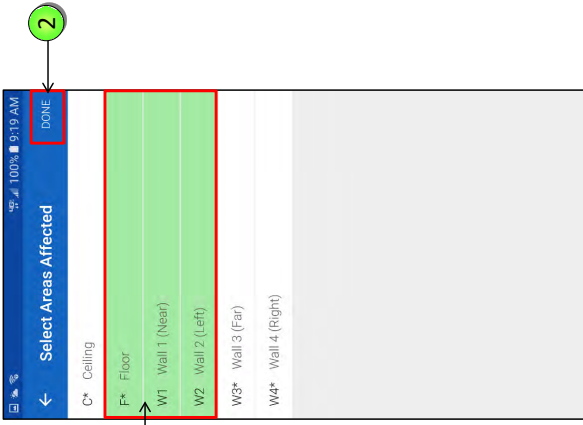


From the **Select Response** window box, select **YES** or **NO**.

1 Tap **YES**

If **YES** is selected, select the areas listed where the **Moisture Measurement Level** is greater than (>=25).

## Evaluate Moisture Measurement Level – (Continued)

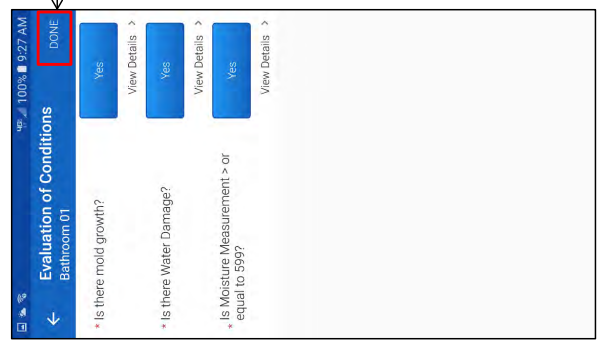


Tap and select the **Affected Areas:**

**F\* Floor**  
**W1\* Wall 1 (Near)**  
**W2\* Wall 2 (Left)**

2 Tap **DONE**

## Evaluate Moisture Measurement Level – (Continued)



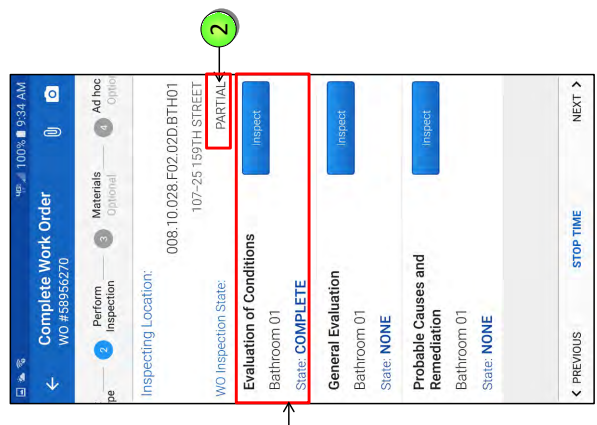
The **Evaluation of Conditions** screen is now complete.

1 Tap **DONE**

## Complete Evaluation of Conditions

1 The **Evaluation of Conditions** status is now **COMPLETE**, and **WO Inspection State** is **PARTIAL**.

2 **NOTE:** If the **Evaluation of Conditions (Task 1)** has all the answers as **NO** for **Mold Growth, Water Damage and Wet Reading** questions, then **do not** answer the rest of the inspection questions. **Inspection is complete.** The inspector can then take a **photo** and submit the inspection results to **Maximo**.





## Perform General Evaluation Inspection – (Continued)

The answers to the questions below determines the remediation methods used.

- **Interior Wall Finish: Sheetrock**
- **Framing Type: Wood**
- **Ceiling Type: Sheetrock**
- **Floor Type: Ceramic**
- **Cockroaches: Yes**
- **Rodent Droppings: Yes**

**NOTE: Maximo** will automatically generate **ONE** open Child Work Order for **every single Organism** found in the apartment. For example in the above, there would be 2 WOs 1 for **Cockroaches** and 1 for **Mice**.

1

## Perform General Evaluation Inspection – (Continued)

The Supervisor shall input the **Relative Humidity** of the room. Upon tapping the **Relative Humidity** field, the device keyboard appears.

- 1 Type 58
- 2 Tap **DONE** on the device to remove the keyboard.

## Perform General Evaluation Inspection – (Continued)

If the location is a bathroom or a kitchen, the Supervisor shall answer “**Is there an exhaust fan?**” question as **YES** or **NO**.

If there is an **Exhaust Fan**, **Maximo** will **automatically generate** a Work Order to clean the vent upon submission of the inspection results.

- 1 Tap **YES**

## Perform General Evaluation Inspection – (Continued)

The Supervisor shall enter the **CFMs (Cubic Feet Measurement)** at the exhaust vent in the appropriate field.

The **CFM's measurement is a mandatory field**.

- 1 Type 24 on the device keyboard.
- 2 Tap **DONE** on the device keyboard.
- 3 The **Notes** field is optional.

**NOTE: if CFM is less than (<25), Maximo will auto-generate a Work Order to check the roof fan, upon submission of the inspection results.**

- 4 Tap **DONE**



## Perform General Evaluation Inspection – (Continued)

The **View Details** below the **Exhaust Fan** field displays the information entered.

Tap on **View Details**

1

The screenshot shows the 'General Evaluation' app interface for 'Bathroom 01'. The 'Exhaust Fan' field is selected, and the 'View Details' button is highlighted with a red box and a circled '1'. Below the field, there are two options: 'Yes' and '(None)'. The 'Yes' option is selected, and its details are shown below: 'View Details >' and '5B'. The '(None)' option is also visible with 'View Details >'.

## Perform General Evaluation Inspection – (Continued)

Review the entered Result in the **FollowUp Info** Screen.

Tap the **back arrow** ← to return to the **General Evaluation** screen.

1

The screenshot shows the 'FollowUp Info' screen. The 'Result' field contains 'NEEDSCLEANING'. The 'Problem Code' is 'CFM's measure... 24'. There is a back arrow at the top left, highlighted with a red box and a circled '1'. A 'DONE' button is at the top right.

## Perform General Evaluation Inspection – (Continued)

If there was **NO** Exhaust Fan, the Supervisor shall answer **“Is Window Operable?”** question as **YES** or **NO**.

Tap on **View Details** below the **Window Operable** field to review information entered.

1

The screenshot shows the 'General Evaluation' app interface for 'Bathroom 01'. The 'Is Window Operable?' field is selected, and the 'View Details' button is highlighted with a red box and a circled '1'. Below the field, there are two options: 'Yes' and 'No'. The 'No' option is selected, and its details are shown below: 'View Details >' and '5B'. The 'Yes' option is also visible with 'View Details >'.

**NOTE:** If the Supervisor answers **NO** for **Window Operable** question, **Maximo** will **auto-generate** a **Work Order** to **fix the window**, upon submission of inspection results.

## Perform General Evaluation Inspection – (Continued)

If the location is a bathroom, the Supervisor must answer the question, **“Is sealant/caulking present around toilet bowl base?”** as **YES** or **NO**.

Tap **NONE** and select **NO** from the **Select Response** window.

1

**NOTE:** **Maximo** will auto-generate a **Work Order**, if the answer is **NO**, to **fix the caulking/sealant** with **mold resistant caulking**, upon submission of the inspection results.

2

The screenshot shows the 'General Evaluation' app interface for 'Bathroom 01'. The 'Is sealant/caulking present around toilet bowl base?' field is selected, and the 'No' button is highlighted with a red box and a circled '1'. Below the field, there are two options: 'Yes' and 'No'. The 'No' option is selected, and its details are shown below: 'View Details >' and '5B'. The 'Yes' option is also visible with 'View Details >'.

# Probable Causes And Remediation

The third task in a series of tasks is  
**Task 3: Probable Causes and Remediation**

1 Tap **INSPECT**

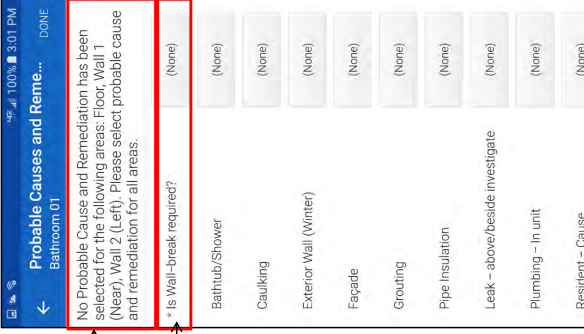


# Probable Causes And Remediation – (Continued)

1 On the top of the screen, iWMM is reminding the user to select a **Probable Cause** and **Remediation** method for the **Walls 1, Walls 2, and the Floor**. Those were the **Affected Areas** selected in **Task 1: Evaluation of Conditions**.

2 Selecting **Remediation** for all these walls is **mandatory**.

2 The **Wall-break** is a **Mandatory** question.



# Probable Causes And Remediation – (Continued)

1 The **Wall-break** is the only **Mandatory** question on the screen. You must select **at least ONE** other **Probable Cause** on the **Probable Causes And Remediation** screen.

The Supervisor will answer **YES** for whichever causes are applicable. **Only select what's needed**.

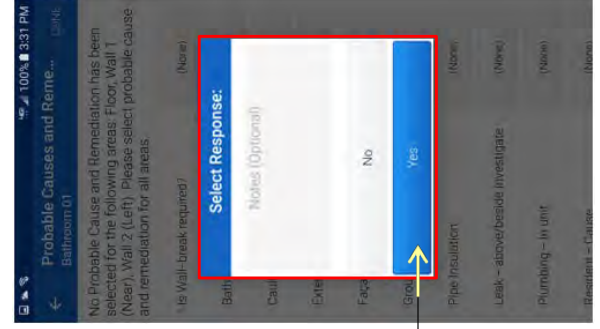
1 Tap **NONE** next **Wall-break** question.



# Probable Causes And Remediation – (Continued)

1 The **Select Response** window appears for the **Wall-break** question. The available answer is **YES** or **NO**.

1 Tap **YES**



## Probable Causes And Remediation – (Continued)

All the **Areas Affected** by the **Wall Break**.

Only the **“Areas Affected”** that were selected from **Task 1: Evaluation of Conditions** will show on the list.

Tap on each area **separately** and enter the remediation method.

1

Each **Probable Cause** for the selection will be listed as a question.

The Supervisor will answer **YES** for whichever causes are applicable. At least **ONE** cause must be answered **YES** (if an issue was found in **Task 1**).

Tap **FLOOR** to select it.

Tap **DONE**

1

2

## Probable Causes And Remediation – (Continued)

## Probable Causes And Remediation – (Continued)

If the Supervisor answered **YES** for the **Probable Root Cause**, select the **Areas Affected** by the specific cause.

**NOTE:** Only **“Areas Affected”** that were selected from **Task 1** will show in list. And **EACH** surface **Area Selected** from **Task 1** must be accounted for against a **Probable Cause**.

Multiple surface areas can be selected per **Probable Cause**.

Tap **NONE** next to **Bathtub/ Shower**

1

The **Select Response** window appears, the available answers **YES** or **NO**.

Tap **YES**

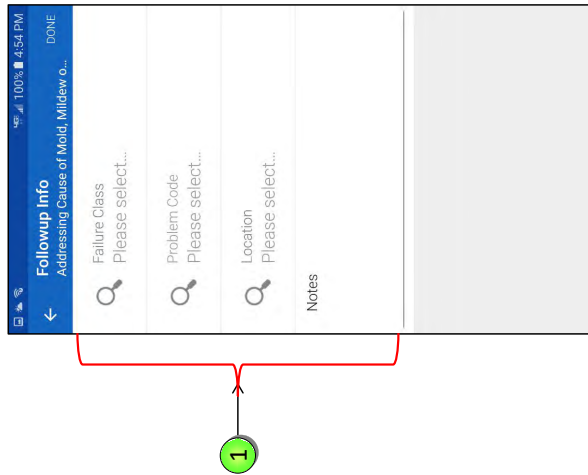
1

## Probable Causes And Remediation – (Continued)

The FollowUp Info screen displays, with 4 fields:

- Failure Class
- Problem Code
- Location
- Notes (Optional)

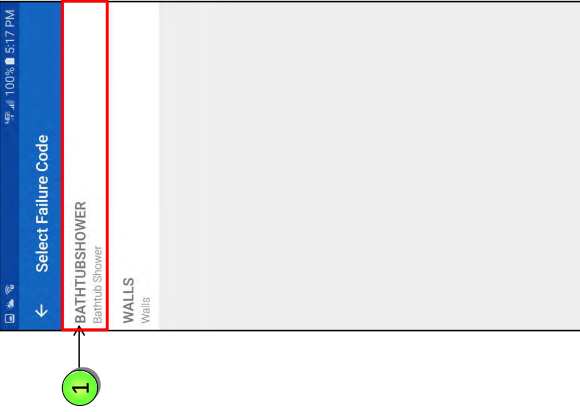
Tap Failure Class



## Probable Causes And Remediation – (Continued)

The Failure Class is a very limited list.

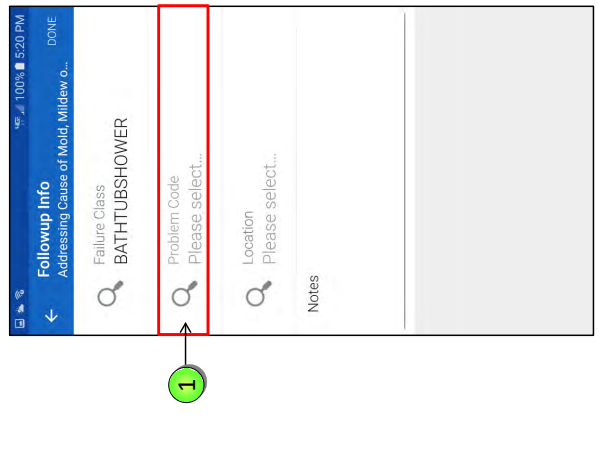
Tap BATHTUBSHOWER



## Probable Causes And Remediation – (Continued)

The FollowUp Info screen reappears, select a Problem Code appropriate to the Failure Class.

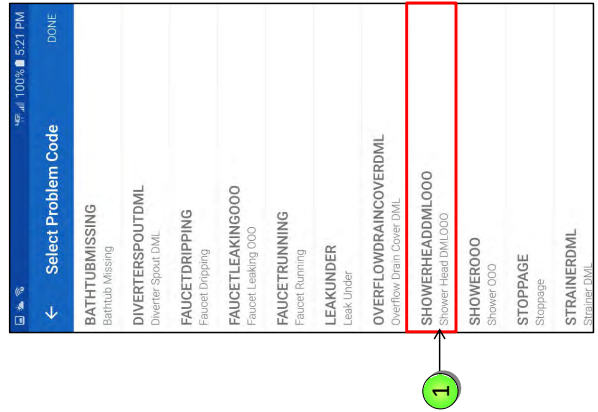
Tap Problem Code



## Probable Causes And Remediation – (Continued)

Scroll up and down and select the appropriate Problem Code from the list.

Tap SHOWERHEADMLOO





## Probable Causes And Remediation – (Continued)

**Followup Info**  
Addressing Cause of Mold, Mildew o...

Failure Class  
BATHTUBSHOWER

Problem Code  
SHOWERHEADML000

Location  
Please select...

Notes

The **FollowUp Info** screen reappears, select a **Location**.

1 Tap **Location**

1

## Probable Causes And Remediation – (Continued)

**Select Location**

Default Location:  
008.10.028.F02.02D.BTH01  
Bathroom 01

008.10.030.F03.03A.BTH01  
Bathroom 01

008.10.030.F01.01B.BTH01  
Bathroom 01

008.10.028.F01.01A.BTH01  
Bathroom 01

008.10.029.F02.02B.BTH01  
Bathroom 01

008.10.029.F01.01A.BTH01  
Bathroom 01

008.10.028.F02.02A.BTH01  
Bathroom 01

008.10.028.F01.01B.BTH01  
Bathroom 01

008.10.030.F01.01D.BTH01  
Bathroom 01

008.10.029.F02.02A.BTH01  
Bathroom 01

008.10.028.F03.03A.BTH01

1 The **Default Location** is where the inspection is happening.

2 Search for the other **Location** where it is the suspect of the problem.

1

2



## Probable Causes And Remediation – (Continued)

**Followup Info**  
Addressing Cause of Mold,...

Failure Class  
BATHTUBSHOWER

Problem Code  
SHOWERHEADML000

Location  
008.10.029.F02.02B.BTH01

Notes  
plumbing problems

The completed **FollowUp Info** screen, with all the fields.

1 Tap **DONE**

1

## Probable Causes And Remediation – (Continued)

**Select Areas Affected**

Areas with an asterisk (\*) have not yet been selected for cause / remediation

F\* Floor

W1\* Wall 1 (Near)

W2\* Wall 2 (Left)

Please select at least one area.

1 Select the **Areas Affected** by the **Wall-Break**, One area at a time.

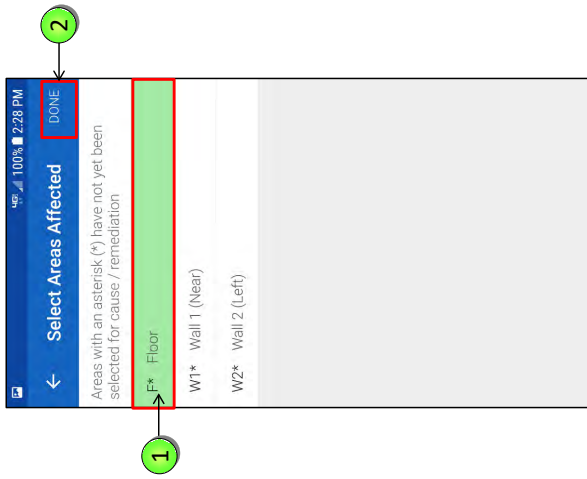
2 Tap **F\* Floor**

1

2



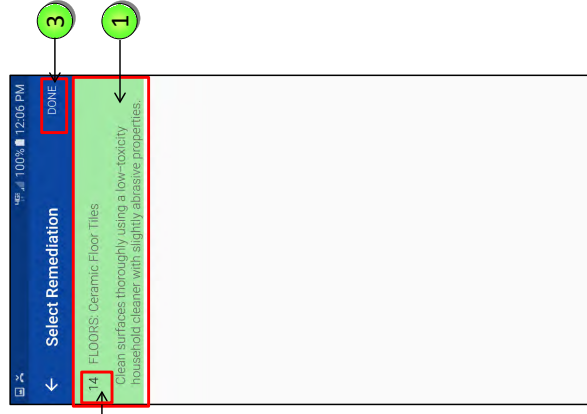
## Probable Causes And Remediation – (Continued)



1 Select the **Floor** by tapping on it. Once selected **iWM** will highlight it in **green** color.

2 Tap **DONE**

## Probable Causes And Remediation – (Continued)



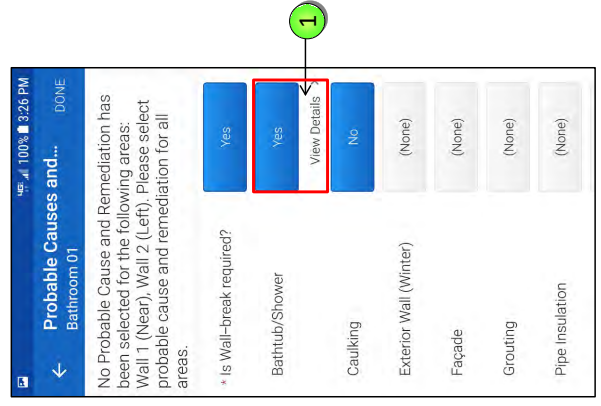
1 The **Select Remediation** screen appears. Select the **Remediation Method** from the displayed list. Tap on **No. 14, Floors** by tapping on it. Once selected **iWM** will highlight in **green** color.

2 Notice the **Reference Number** associated with the Remedy as this what will display in the **View Details**.

3 Tap **DONE**

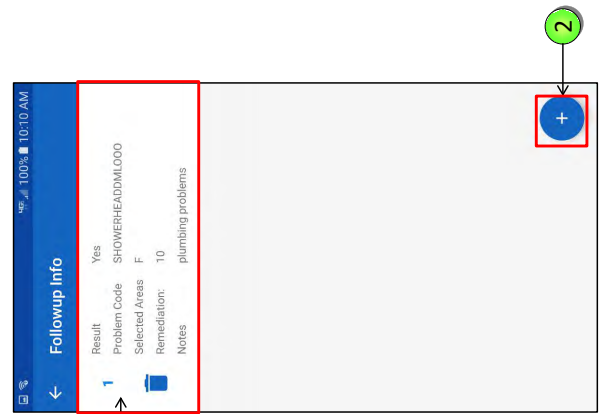


## Probable Causes And Remediation – (Continued)



1 Tap on **View Details** below the **Bathroom/Shower** field to review information entered.

## Probable Causes And Remediation – (Continued)



1 Notice the corresponding number is replacing the **Remediation** method that was selected. In this case is number **10**.


2 Tap **plus sign +**, to add more **Remediation** methods about the same wall. Then follow the same process as before.




# Probable Causes And Remediation – (Continued)

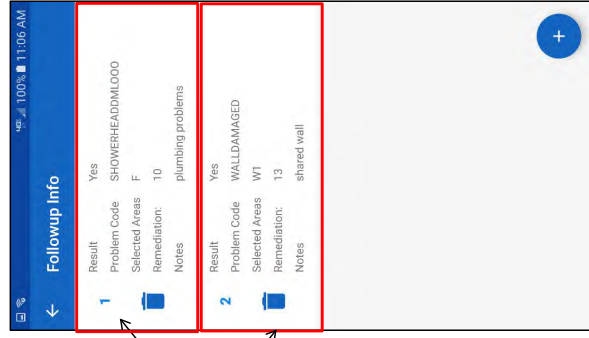
1

There are two **Remediation** methods for the same issue.

**NOTE:** to change the answers entered, tap on the **Garbage Pail** icon , to erase the information entered.

Confirm the message in the Pop-up Window, **“Are you sure you want to delete this result?”** tap **Yes**.

Tap the **back arrow**  to return to the **Evaluation of Conditions** screen.



1

Repeat the same process for all the **Areas Affected** selected from the **Evaluation of Conditions**.

Complete a **Probable Cause** and **Remediation** methods for **Wall 1** and **Wall 2** selected in **Task 1**.

1



1

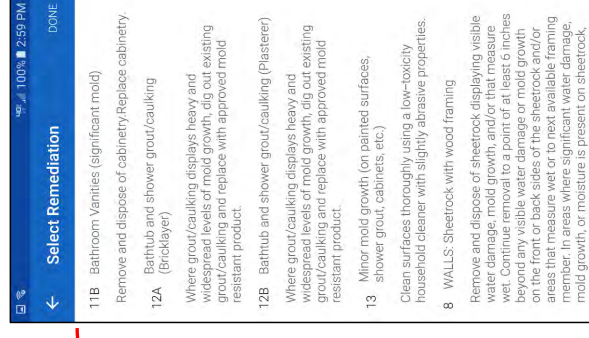
# Probable Causes And Remediation – (Continued)

# Probable Causes And Remediation – (Continued)

1

Depending on the wall type the **Remediation** methods can vary.

Choose what's the appropriate remedy by tapping on the different **Remediation** method.



1

# Probable Causes And Remediation – (Continued)

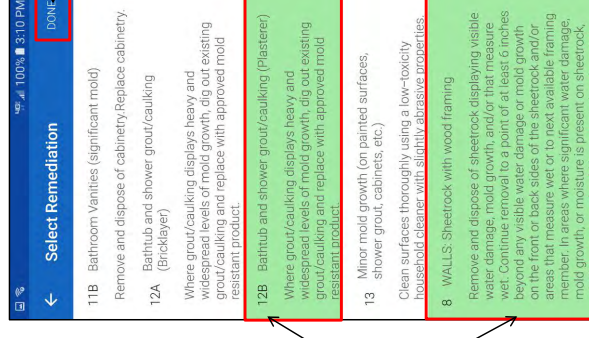
1

Tap on 1 or 2 **Remediation** Method. **iWMM** will highlight them in Green.

Tap **DONE**

The **Probable Causes** and **Remediation** screen redisplay.

Tap on **View Details**



1

# Probable Causes And Remediation – (Continued)

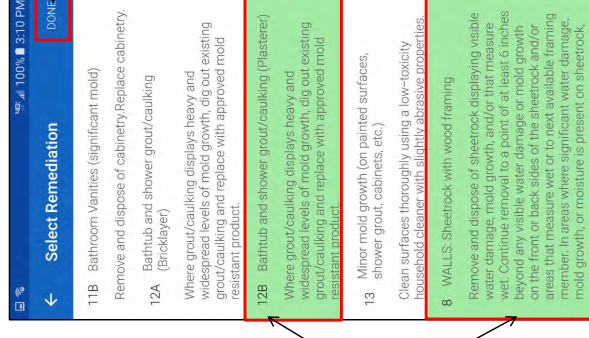
1

Tap on 1 or 2 **Remediation** Method. **iWMM** will highlight them in Green.

Tap **DONE**

The **Probable Causes** and **Remediation** screen redisplay.

Tap on **View Details**



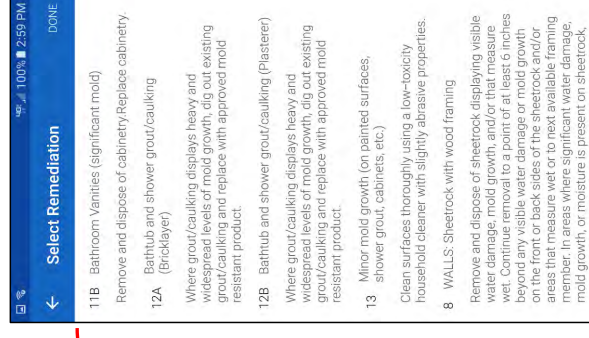
1

# Probable Causes And Remediation – (Continued)

1

Depending on the wall type the **Remediation** methods can vary.

Choose what's the appropriate remedy by tapping on the different **Remediation** method.



1

# Probable Causes And Remediation – (Continued)

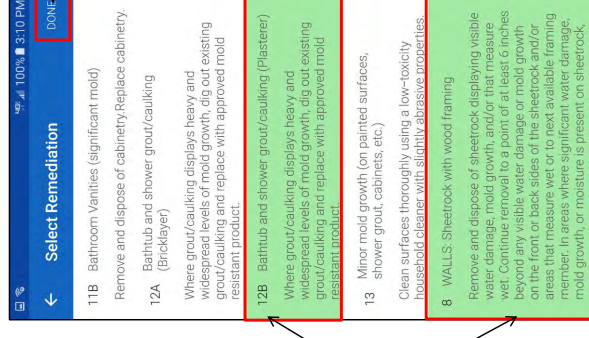
1

Tap on 1 or 2 **Remediation** Method. **iWMM** will highlight them in Green.

Tap **DONE**

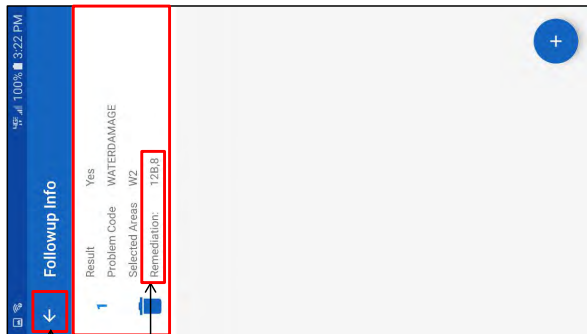
The **Probable Causes** and **Remediation** screen redisplay.

Tap on **View Details**



1

## Probable Causes And Remediation – (Continued)



1 The **FollowUp Info** screen displays the entered information. Notice the **Reference Numbers**.

2 Tap the **back arrow** to go back to the **Probable Causes and Remediation** screen.

December 2018



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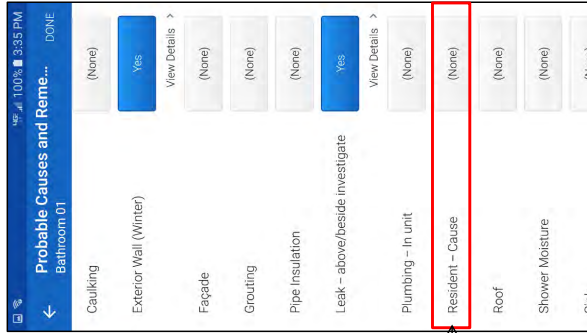
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## Probable Causes And Remediation – (Continued)



The remainder of the fields of **Probable Causes and Remediation** screen are the same.

Upon tapping on a field, the user **must** select a response, and follow the same process as before.

1 Tap **Resident – Cause**, there are different questions based upon whether an action is required by the **Resident**.

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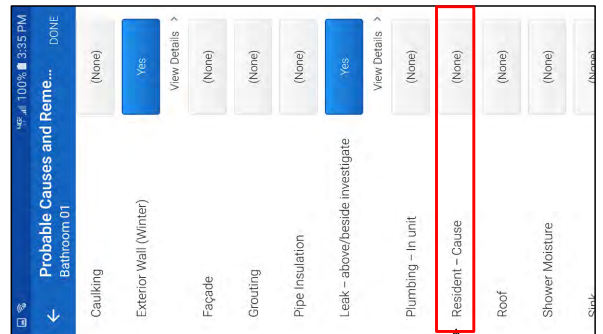


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## Probable Causes And Remediation – (Continued)



The remainder of the fields of **Probable Causes and Remediation** screen are the same.

Upon tapping on a field, the user **must** select a response, and follow the same process as before.

1 Tap on **NONE** next to the **Resident – Cause** field.

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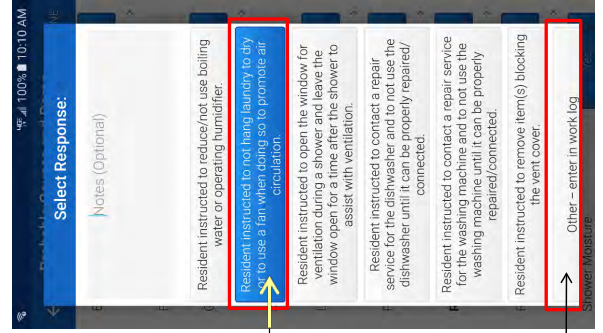
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## Probable Causes And Remediation – (Continued)



1 The **Select Response** screen displays all the possible causes that resulted from the Resident's actions.

You can select **One Action** at a time.

2 **NOTE:** if the user selected **Other** for the **Resident Cause**, the user **must** enter notes to explain this.

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## Probable Causes And Remediation – (Continued)

**1** Select the **Floor** by tapping on it. Once selected **iWM** will highlight in **green** color.

**2** Tap **DONE**

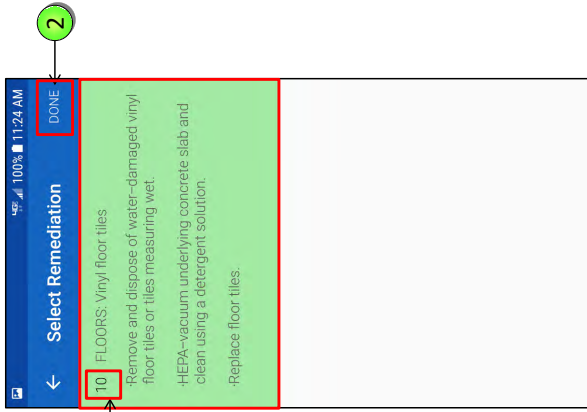


The screenshot shows the 'Select Areas Affected' screen with a list of areas: 'F\* Floor', 'W1\* Wall 1 (Near)', and 'W2\* Wall 2 (Left)'. The 'F\* Floor' option is highlighted in green. A red box highlights the 'DONE' button in the top right corner.

## Probable Causes And Remediation – (Continued)

**1** The **Select Remediation** screen appears. Select the **Remediation Method** from the displayed list. Tap on **No. 10, Floors** by tapping on it. Once selected **iWM** will highlight it in **green** color.

**2** Tap **DONE**

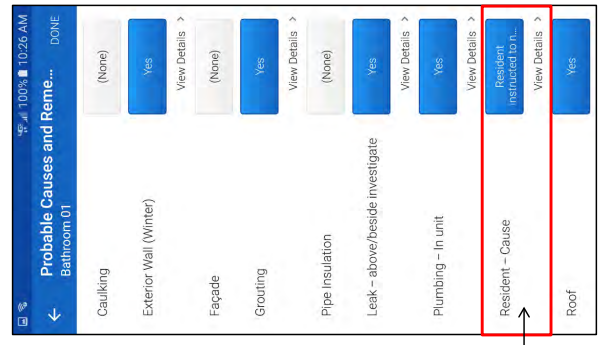


The screenshot shows the 'Select Remediation' screen with a list of remediation methods. The '10 FLOORS: Vinyl floor tiles' option is highlighted in green. A red box highlights the 'DONE' button in the top right corner.

## Probable Causes And Remediation – (Continued)

**1** On the **Probable Causes and Remediation** screen, tap on **View Details** next to the **Resident - Cause**.

**NOTE: Maximo Will Not** generate any Child Work Orders for any **Resident Cause** instructions.

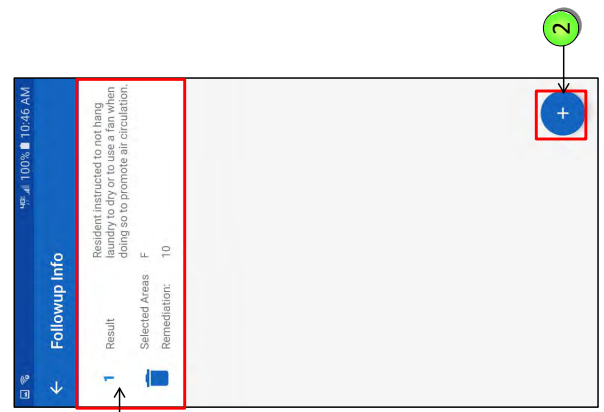


The screenshot shows the 'Probable Causes and Remediation' screen for 'Bathroom 01'. It lists various causes with 'Yes' or 'None' buttons and 'View Details' links. The 'Resident - Cause' row is highlighted in red, and a red box highlights the 'View Details' button next to it.

## Probable Causes And Remediation – (Continued)

**1** The **FollowUp Info** screen displays the entered results. You can add more **Resident** instructions from this screen.

**2** Tap the **plus sign** to add more **Resident's** instructions. Repeat the process again as before.



The screenshot shows the 'Followup Info' screen with a table of results. A red box highlights the plus sign button in the bottom right corner.

## Probable Causes And Remediation – (Continued)

1 Notice the instructions that were given to the Resident.

2 Tap the back arrow ← to go back to the Probable Causes and Remediation screen.

## Probable Causes And Remediation – (Continued)

1 Scroll down ↓ and select Toilet.

2 Tap NONE next to Toilet.

## Probable Causes And Remediation – (Continued)

1 The Select Response displays tap YES.

2 The FollowUp Info screen displays, repeat the same process as before.

3 Tap DONE when complete.

## Probable Causes And Remediation – (Continued)

1 The Probable Causes and Remediation screen reappears.

2 Tap View Details by the Toilet.

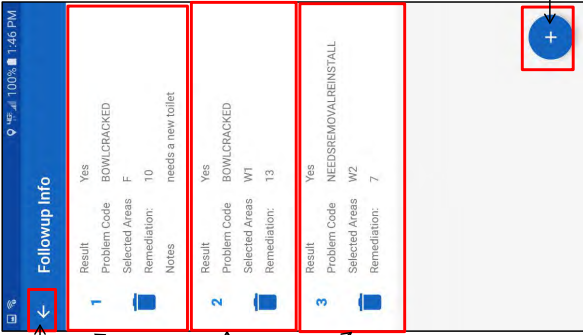
# Probable Causes and Remediation – (Continued)

**1** The Probable Causes and Remediation screen reappears.

**2** Tap plus sign **+**, to add more Remediation methods about the same wall.

**3** Then follow the same process as before.

**3** Tap the back arrow **←** to go back to the Probable Causes and Remediation screen.



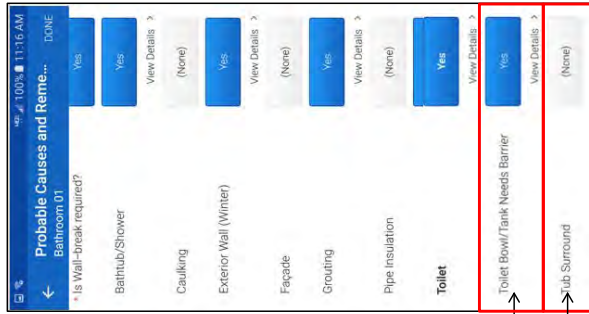
# Probable Causes and Remediation – (Continued)

**1** The Probable Causes and Remediation screen reappears.

**2** Tap Toilet Bowl/Tank Needs Barrier

**2** Tap Tub Surround


Repeat the same process for every Affected Area for Toilet Bowl/Tank Needs Barrier and Tub Surround, by selecting the Failure class, Problem Code, Location, and Notes when needed.



# Probable Causes and Remediation – (Continued)

**1** Now the Probable Causes and Remediation screen are the same.

Tap **DONE** to save all the information the user entered.

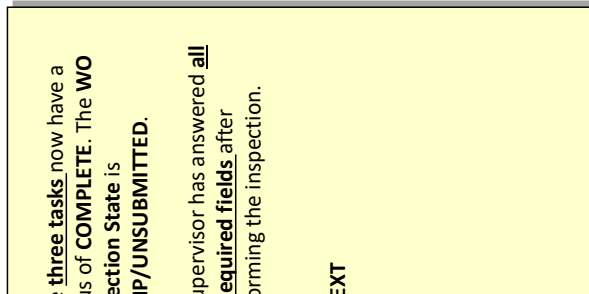



# Inspection Status

**1** All the three tasks now have a Status of **COMPLETE**. The WO Inspection State is **COMP/UNSUBMITTED**.

The Supervisor has answered all the required fields after performing the inspection.

**2** Tap **NEXT**

# Materials

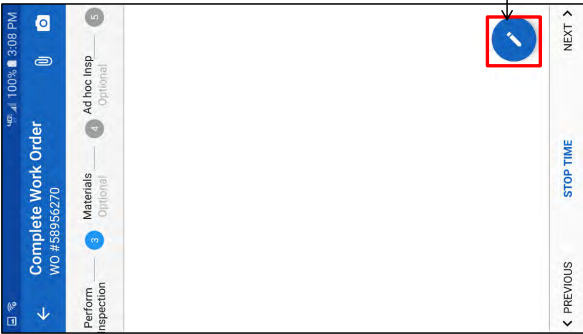
This screen allows workers to check the materials applied to the Work Order to ensure that the correct items were added by the Storeroom person.

Initially it is blank.

Any materials received from the Storeroom Keeper, can be found in your personal storeroom.

Tap the **pencil icon** to document the materials used for this Work Order from your personal storeroom.

1



# Materials - (Continued)

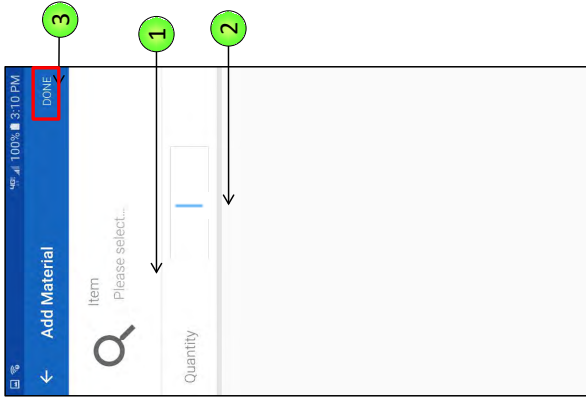
1 Select an **item** from the list of materials that are in your personal storeroom.

2 Enter the **Quantity** that was used to do the repair for the Work Order.

3 When completed, tap **DONE**.

This item will be moved to the previous **Materials** screen.

For this example, add **one Smoke Detector**.



# Returning Materials Issued - (Continued)

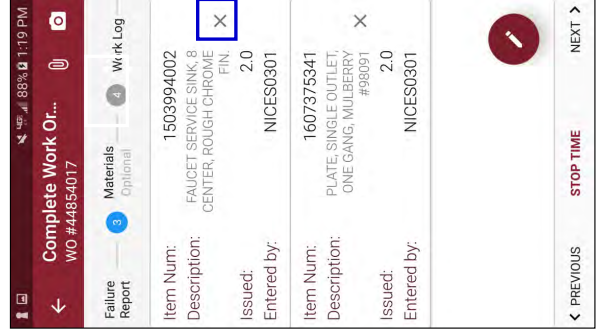
If the material issued is more than **ONE** in quantity and the Maintenance worker used less, the storeroom keeper will apply the return of the remaining material to the storeroom, only when **Maintenance workers physically** returns the material to the storeroom.



You can add materials to a Work Order from a personal storeroom

**NOTE:** if you realize a mistake was made, you can now remove the item by hitting the **X button** next to it. This puts the item back into your personal storeroom.

You **cannot remove** items that were added by another user or added by the storeroom person onto the Work Order - you can **ONLY** remove items you issued onto the Work Order.





## Returning Materials Issued - (Continued)

To remove items you issued on a Work Order:

- 1 Select the **item** from the list of materials that you want to remove by tapping the **X** button next to it.
- 2 Tap **OK**
- 3 This item will be moved to the previous Materials screen.

Tap **NEXT**

## Ad Hoc Inspection Details - Optional

The **Ad Hoc Inspection** is **Optional** for every Mold related Work order for an apartment.

The next 6 questions have different values as appears on next 2 pages: **Fire Safety Notice, CO Detector, Window Guard, Smoke Detector, GFCI Outlets, Apartment Door**

Tap the **No Value** button and select the appropriate option for each item.

## Ad Hoc Inspection Details – (Continued)

Scroll down to the second portion of the screen. For this WO, type in **Apartment Temp** and **Water Temp**.

**NOTE:** You must save any entries you have made.

- 1 Tap **SAVE**
- 2 Tap **NEXT**
- 3

## Ad Hoc Inspection – (Continued)

Tapping on **No Value** gives you options depending on the item chosen

\* **CAT** – Corrective Action Taken

**Fire Safety, Apt Door**

**GFCI Outlets**

**Window Guard**

# Ad Hoc Inspection – (Continued)

Ad Hoc values have changed slightly for **CO Detector** and **Smoke Detector**. The **CAT** values now have more details to show on what was done to correct the issue.

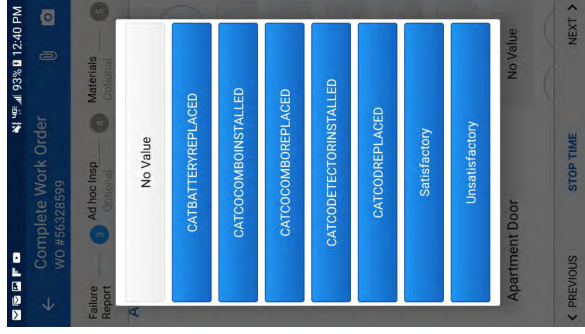
## CO Detector



## Smoke Detector



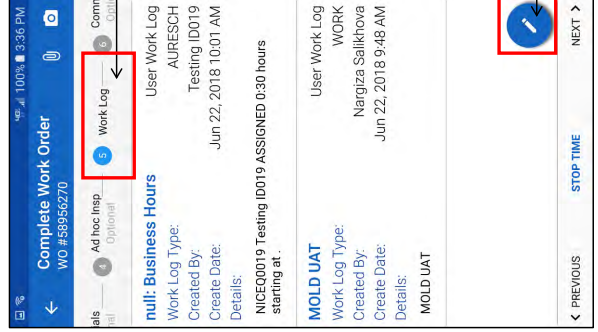
- **Satisfactory** - Issue meets NYCHA standard (No work needed)
- **Unsatisfactory** - You can not fix it, automatically creates an **Open Child Work Order**.
- **CAT** (Corrective Action Taken) offers a range of options from battery replaced to the item in question being replaced.



# Ad Hoc Inspection – (Continued)

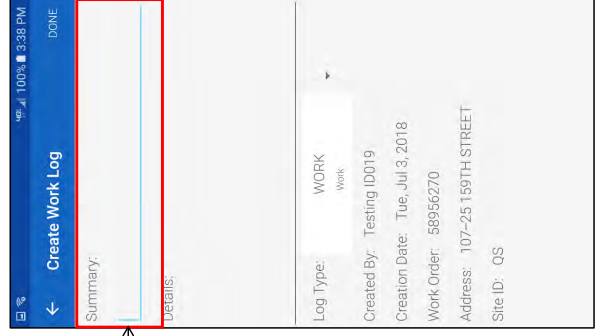
## Enter Work Log

- 1 The **Work Log** entries are displayed.
- 2 Tap the **pencil icon** to enter a summary of your work.



## Enter Work Log - (Continued)

- 1 Enter a **Summary** for the work completed in the **Work Order**.
- 1 Tap the **Summary** field, the keyboard will display.



## Enter Work Log - (Continued)

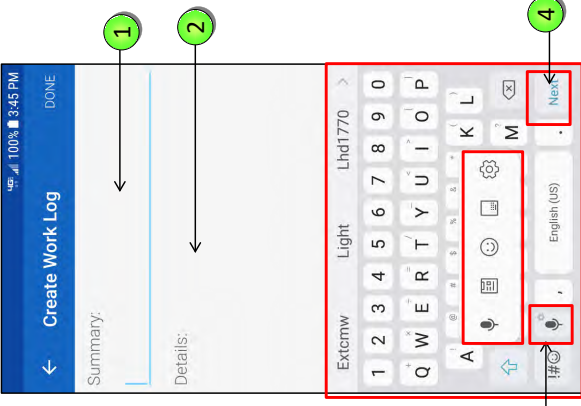
1 Using the keyboard, type a brief **Summary**.

2 Tap in the **Details** field notice the system will duplicate what you've typed in the Summary field to save you some typing.

3 Tap on the "microdevice" by "holding down the little gear ⚙️" on the bottom left of the keyboard and select the microphone icon and speak to dictate what will be typed.

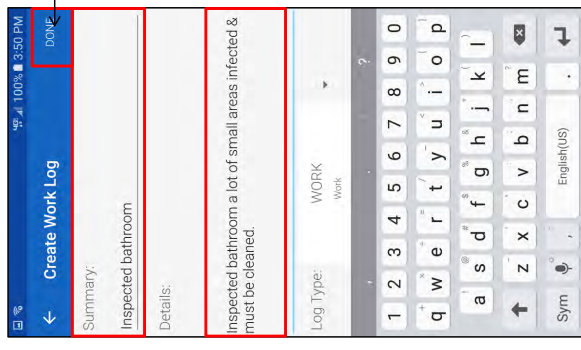
**NOTE:** Once it is used the system will remember the last time icon used and keep it selected.

4 Tap **NEXT**



## Enter Work Log - (Continued)

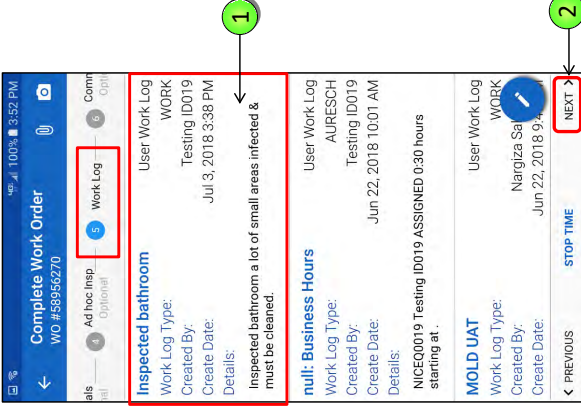
1 When you are done reviewing your **Summary** and the **Details** fields, tap **DONE**.



## Enter Work Log - (Continued)

1 Review the entered information. If you need to add information tap the **pencil icon** and repeat the process.

2 **Work Log** is completed, tap **NEXT**.




## Communication Log

Capture phone **Communication Log** or Call Log.

There are **3** methods for iMM user to make a phone call for any Apartment Location Work Order.

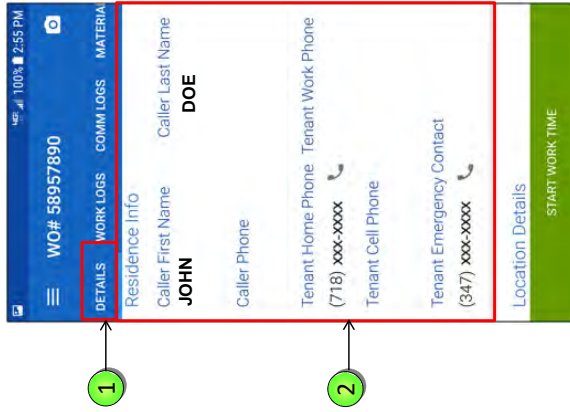
1 The **First** method:  
On the **COMM LOGS** tab before you **Start Timer**.





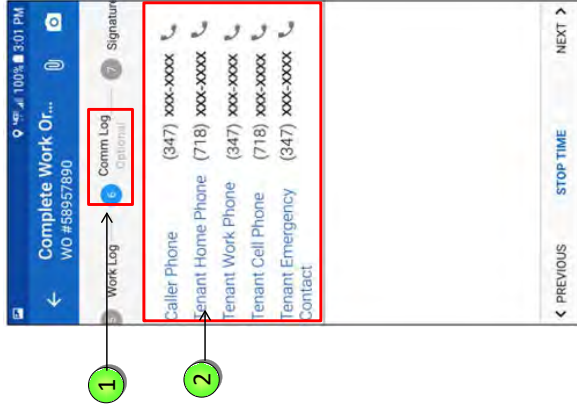
## Communication Log – (Continued)

- 1 The Second method:  
On the **Work Order Details** screen, **scroll down** to the **Resident Info** section.
- 2



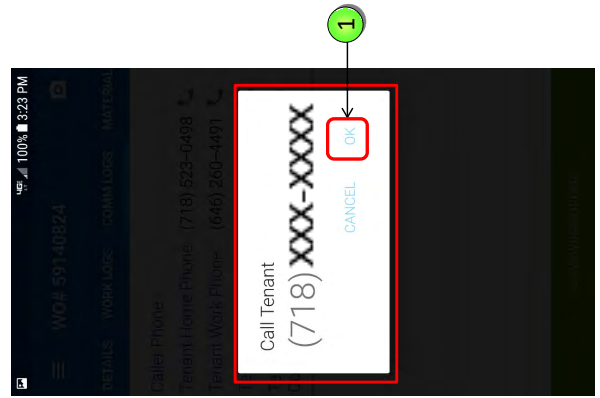
## Communication Log – (Continued)

- 1 The Third method:  
On the **COMM LOG** Step after you **Start Time**.
- 2 Decide on the method to use select a tenant's phone number from the list and tap on the phone icon.



## Communication Log – (Continued)

- 1 A **Call Tenant** window appears with the number you have picked.



- 1 Tap **OK** to call

## Communication Log – (Continued)

- 1 Dialing, you can press **Speaker** for **Speaker Phone**
- 2 To **end** the call press



## Communication Log – (Continued)

1 The **Call Ended** screen, wait for 2-3 seconds until the **COMM LOG** is created.



1

An entry is made on the **COMM LOGS** step which shows the following information:

- the **phone number** called
- the **iWM** user who made the call
- the **date and time** of the call
- the **duration** of the call

**NOTE:** The **Duration Time** is calculated by **iWM** when the user presses “**OK**” in the Second step until call ended.

The same log will appear in **Maximo** in the **Communication Log** tab.



## Communication Log – (Continued)

## Taking Photos for Work Orders

NYCHA has made it very easy to add photos to Work Orders. Photos can be taken anytime during the work flow and automatically attached to the Work Order.

**NOTE:** Photos are required for **Mold and Mildew Work Orders** as evidence for supervisors and courts to evaluate.

1 Tap on the **Camera icon** in the upper right corner to open the camera.



1

Tap the image on the preview screen to focus the camera.

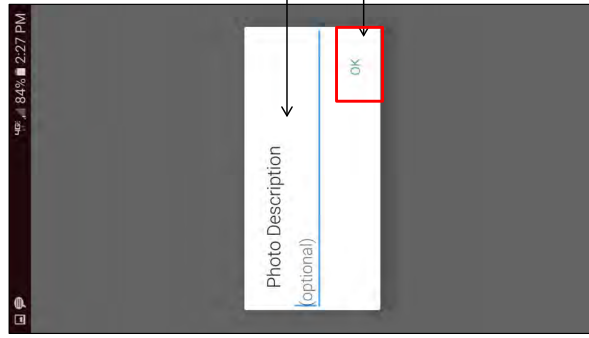
2

Then, tap the **Circle icon** at the bottom of the screen to take the photo.

**NOTE:** Once you save a picture you can not delete it.



# Taking Photos for Work Orders - (Continued)

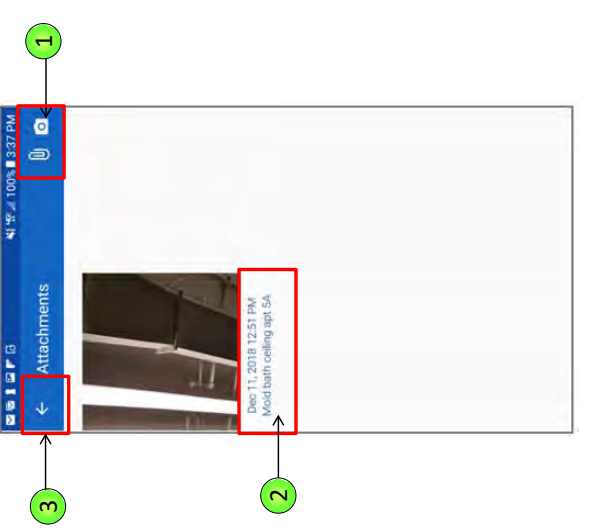


1 You can then type a **Description** to the photo taken.

2 Tap **OK**

**NOTE:** All photos taken are automatically saved and stamped with date and time when taken and appear under the **"Attachments"** page of the work flow for evaluation.

# Taking Photos for Work Orders - (Continued)



1 Tap the **paper clip** to see the picture taken.

2 All photos taken are automatically saved and stamped with date and time when taken and appear under the **"Attachments"** page of the work flow for evaluation.

3 Tap on the **back arrow** ← to return to the Work Order.

# Capture Signatures



1 The **Signatures** screen will display three selections **RESIDENT, WORKER and SUPERINTENDENT.**

**Worker Signature is Optional.**

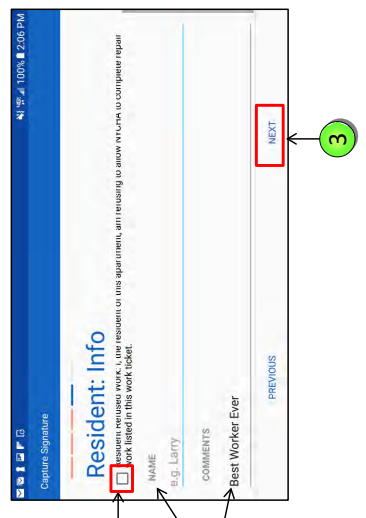
# Resident Info

1 The **Resident: Info** screen is displayed. If the **Resident Refused Work** to be completed, check the box.

2 The Resident can enter in their **NAME** and any **COMMENTS**, then tap **DONE.**

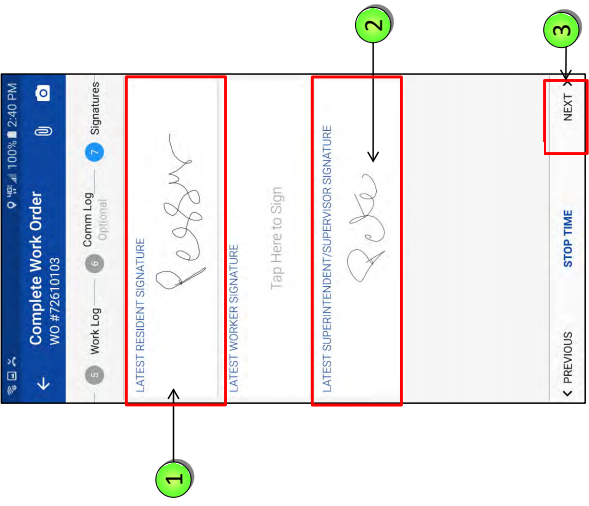
**NOTE:** This information is optional.

3 Tap **NEXT**



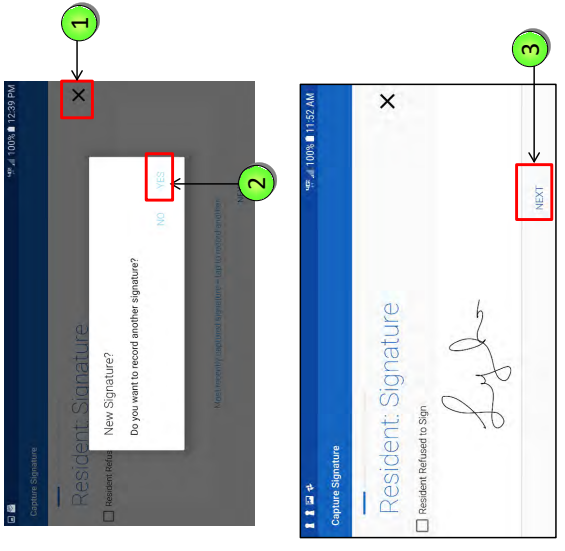
# Capture Signatures – (Continued)

1 The **RESIDENT** signs the Work Order.  
 2 The **SUPERVISOR** signature if required.  
 3 Tap **NEXT**



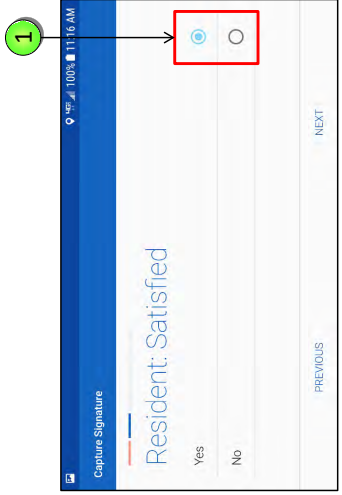
# Capture Resident Signature – (Continued)

1 To change or correct the **Resident** signature, tap the **X**  
 2 When the **New Signature** screen appears, tap **YES**  
 When the **Resident Signature** screen reappears where the **Resident** can sign again.  
 3 Tap **NEXT**



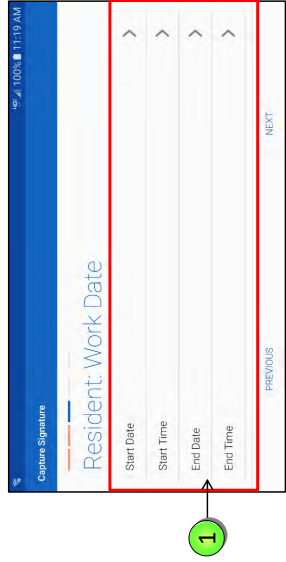
# Resident Satisfied?

The resident can fill out additional information. The next screen asks if the **Resident is Satisfied YES/NO**.  
 1 The resident can select **YES** or **NO** by tapping on the radio button.  
**NOTE:** This information is optional for the **Resident**.  
 Once the user answers the question, the **RESIDENT: WORK DATE** screen appears.



# Resident: Work Date

The **Resident: Work Date** screen asks the **Resident** to input the **Start Date and Time** and **End Date and Time** of the **Work**.  
 1 Tap on **Start Date** in order to enter in date.





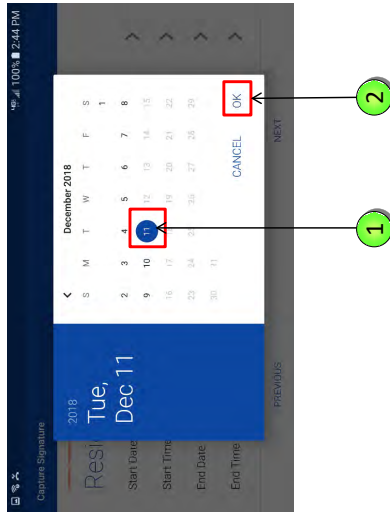
## Resident Confirmed Work

Using the **Calendar**, the resident will select the **Start Date** by tapping on the date.

In this example, the user selected **December 11<sup>th</sup>, 2018**.

Tap **OK** to confirm the date.

**NOTE:** Depending on **Android OS** version installed on your device the next screen will look different.



## Resident Confirmed Work – For Android 6 Users Only

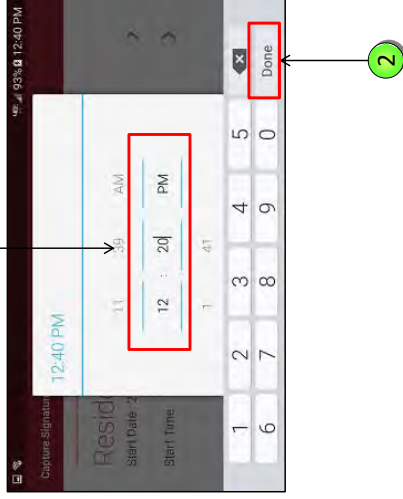
If the resident selected **Start Time**:

Using the clock, the resident will select the **Start Time** by scrolling through the hour, minute and AM/PM fields to select the desired time.

In this example, the user selected **12:20 pm**

Tap on **DONE** to confirm the time.

\*The clock will always start at the present time. Make sure they back the time up to reflect when you really started.



## Resident Confirmed Work – For Android 7 Users Only

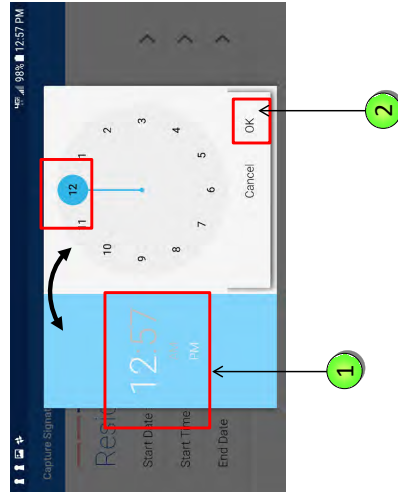
\*The clock will always start at the present time. Make sure the resident backs the time up to reflect when you really started.

If the resident selected **Start Time**:

Using the clock, the resident can select the **Start Time** by tapping on the **hour**, and the **minute** by moving the **blue circle** to the right or left accordingly. Then tap on **AM/PM** field to select the desired time.

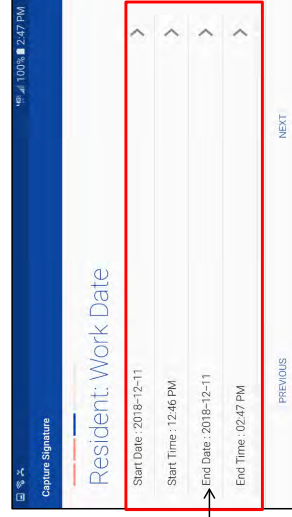
In this example, the user selected **11:45 am**

Tap on **OK** to confirm the time.



## Resident: Work Date

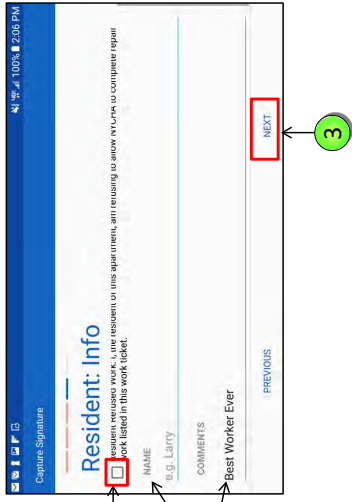
The resident entered the **Start Date/Time** and **End Date/Time** of the Work.





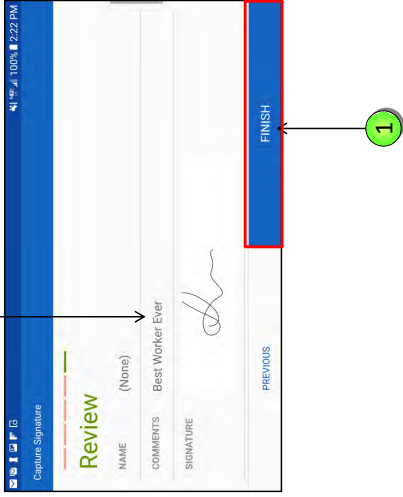
# Resident Info

- 1 The **Resident: Info** screen is displayed. If the **Resident Refused Work** to be completed, check the box.
- 2 The Resident can enter in their **NAME** and any **COMMENTS**, then tap **DONE**.
- 3 **NOTE:** This information is optional.
- 3 Tap **NEXT**



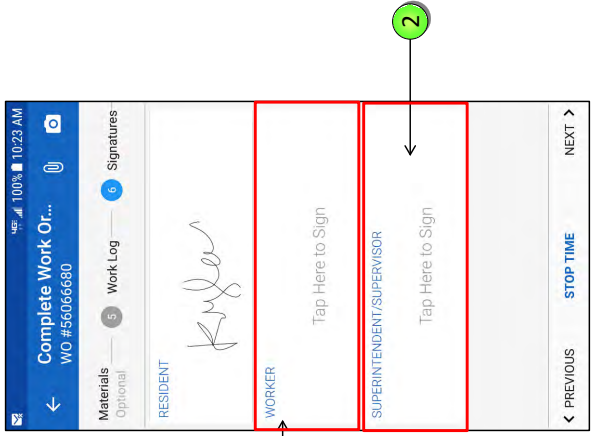
# Review Resident Signature

- 1 Review the resident Name, Comments, and Signature.
- 1 Tap **FINISH**.



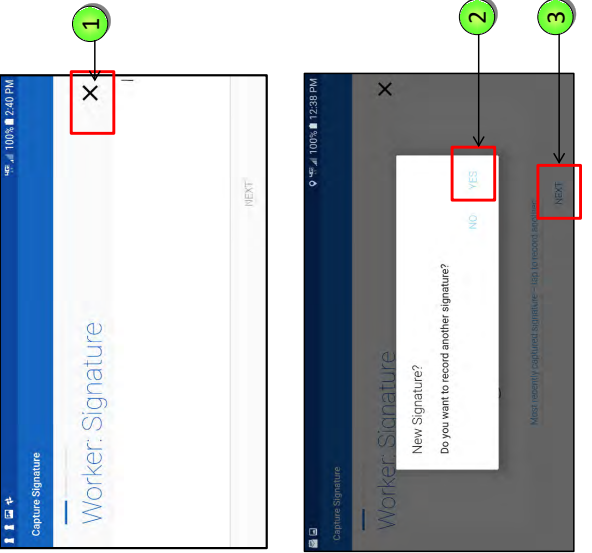
# Worker Signature - Optional

- 1 **WORKER** signature is Optional.
- 2 The signature should be added in the same way as the Resident's Signature.



# Worker Signature - Optional


- 1 This signature should be added in the same way as the Resident Signature was added
- 1 To change or correct the entered Signature, tap **X**
- 1 The **New Signature** screen appears, tap **YES**
- 2 Sign the screen again.
- 3 Tap **NEXT**



## Worker Signature - Optional

1 Answer the question for **Worker Was Skilled Trades Work (Yes/No)**

2 Tap **YES**

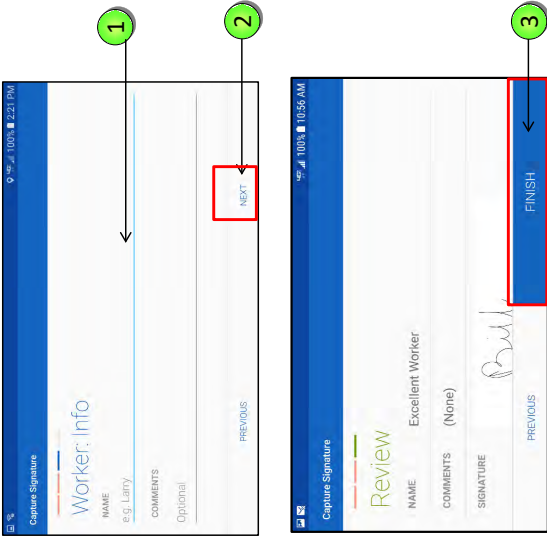


## Review Worker Information

1 Review the worker Name, Comments, and Signature.

2 Tap **NEXT** the Final review screen appears


3 Tap **FINISH**



## Supervisor Signature

1 If necessary obtain the **SUPERVISOR'S** signature if required.

2 This signature should be added in the **same way** as the **Resident Signature** was added.



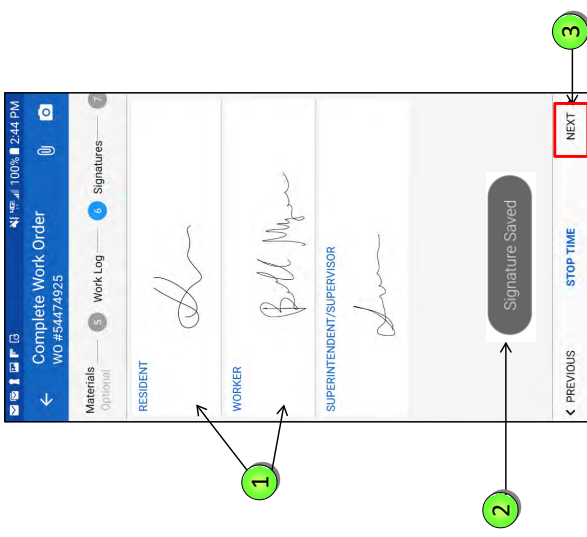
## Review Captured Signatures

1 The **Resident and Worker Signatures** are displayed.

2 **NOTE: ALL Signatures entered are saved.**

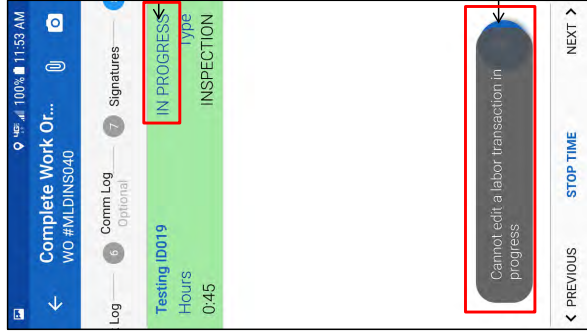
3 Tap **NEXT**

**NOTE: The Supervisor's Signature is mandatory in a Mold/Mildew Work Order in order to Submit /Close it.**



## Labor

- 1 **IN PROGRESS Labor Record** (in green) in the Labor tab, indicates the **Labor Timer** is running.
- 2 An **IN PROGRESS Labor Record** cannot be edited.



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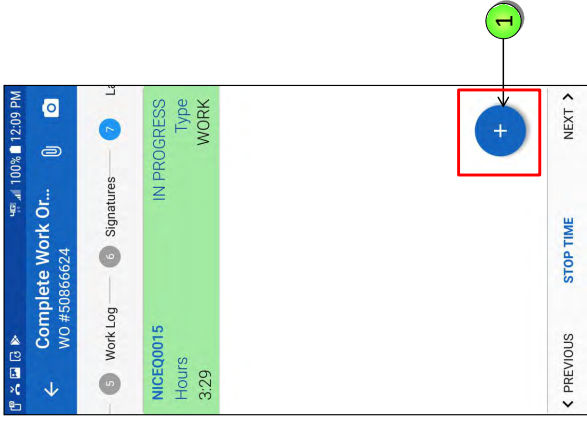
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## Additional Labor

This is your **Labor Log**. To add a helper or assistant that started work with you, you **must** add your helper's labor time.

- 1 Tap the **Plus icon** .



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
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
Handheld Informer Work Management Training – Mold Inspection




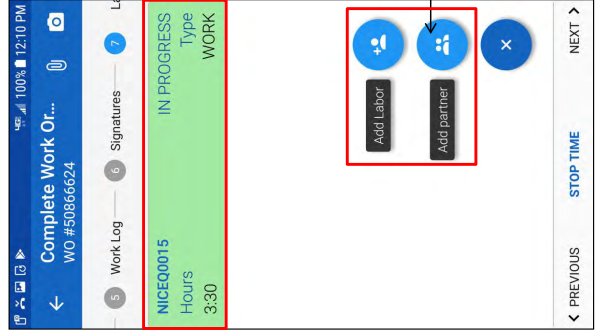
## Reviewing and Adding Additional Labor

**Add Labor**  to add a helper that has a different work time duration.

**Add Partner**  if you and your helper have identical work time duration.

**NOTE:** To add a partner you must tap the **Add Partner**  icon while the **timer is still running and the record is in green color.**

- 1 Tap **Add Partner** .



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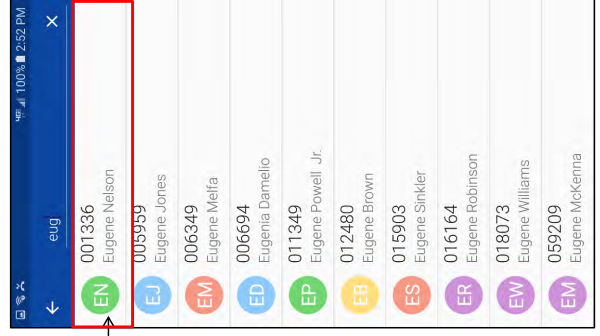


## Additional Labor - (Continued)

Select the name of an **Additional Laborer** to add as a contributor to this Work Order.

Search for your helper either by typing his badge ID or by first and last name.

Tap on the **selected name** to add the laborer name to the Work Order.



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## Additional Labor - (Continued)

Complete Work Or...  
WO #50866624

Work Log 6 Signatures 7

NICEQ00015	Hours	Type
Eugene Nelson	3:48	WORK
Hours	3:48	WORK

Buttons: Add Labor, Add partner, X

Navigation: PREVIOUS, STOP TIME, NEXT

1 Notice the **Labor Record** for you, and your partner are both colored green, and have an identical time duration.

2 To add an additional helper, that has a different work time, and contributed some labor to this Work Order, tap the **Plus icon** and tap **Add Labor**.

## Additional Labor - (Continued)

Enter Time

Labor NICEQ00034 Testing ID151

Start Date 12/11/18

Start Time 3:27 PM

End Date

End Time

Type

Hours

1 At the top of screen you will see the **Employee Number** and the **Name**.

2 Tap on the > symbol to select the Name from the additional Labor screen.

## Additional Labor

001970 John Nichols

001971 Joselito Roldan

001973 Luis Jusino

001977 Kathleen Nomikos

001979 Ivan Rodriguez

001984 Brett Owens

001985 William Santiago

060019 Shana Henderson

NICEQ0019 Testing ID019

PM0019 Gregory Privat

1 Select the name of the **Additional Laborer** to add as a contributor to this Work Order.

Search for your helper, either by typing your helper's badge ID, or by first and last name.

Tap on the **selected name**, to add the laborer name to the Work Order.

## Additional Labor - (Continued)

Enter Time

Labor 001985 William Santiago

Start Date 12/11/18

Start Time 3:27 PM

End Date

End Time

Type

Hours

1 The **Enter Time** screen is displayed. Edit the **Start Date and Time** and **End Date and Time** for the additional Laborer.

Make sure the **Start Date and Start Time** are accurate. When you first were on the screen, it started you out at the **present time**, not the time the work was started.

**NOTE:** You **CANNOT** click on **End Date and End Time**, without first adjusting and making sure that the **Start Time is at least 1 minute before End Time**.



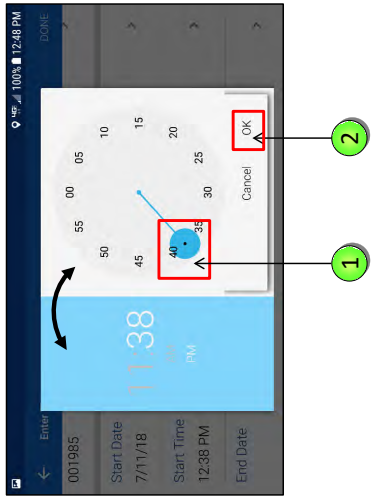
## Additional Labor - (Continued)

\*The clock will always start at the present time. Make sure to select the correct time when you really started.

Using the clock, you can select the **Start Time** by tapping on the **hour**, and the **minute** by moving the **blue circle** to the right or left accordingly. Then tap on **AM/PM** field to select the desired time.

In this example, the user selected **11:38 am**

Tap on **OK** to confirm the time.

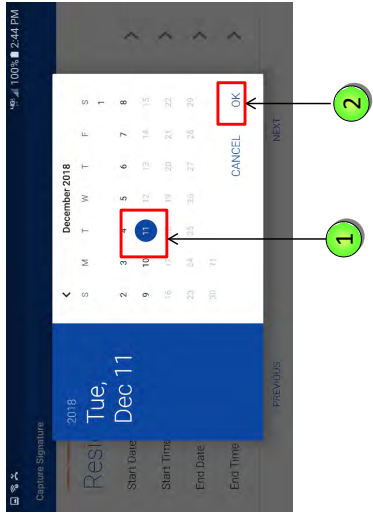


## Additional Labor - (Continued)

Using the **Calendar**, the Worker will select the **Start Date** by tapping on the date.

In this example, the user selected **December 11<sup>th</sup>, 2018**.

Tap **OK** to confirm the date.



## Additional Labor - (Continued)

Tap **End Date and End Time** and adjust them accordingly to when the work ended for the additional Laborer.

Tap on the **Type** field to select the **Labor Type**.

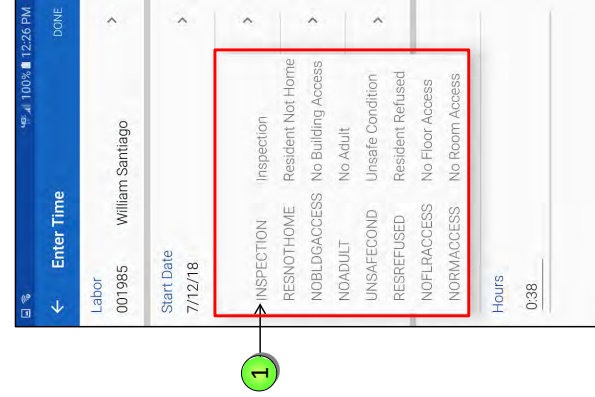


## Additional Labor - (Continued)

The **Type** field window selection appears, select the appropriate **Labor Type**.

For **all** Work Orders, the Labor record **Type** is required to match the primary laborer's type of labor performed, i.e., **INSPECTION**, or **UNSAFE CONDITION**.

Tap **INSPECTION**



## Additional Labor - (Continued)

The **Edit Labor Time** screen reappears, review the **Start Time** and **Date**, **End Date** and **Time**, and **Labor Type**.

Tap **DONE**

## Submit The Inspection Work Order

You must resolve any errors with the WO before continuing on. Errors will be preceded with an **Orange color Exclamation Mark**.

Tap on **Exclamation Mark** next to each error, read the screen and correct the errors.

**NOTE:** a photo is required for all Mold Inspection Work Order.

Tap **Stop Timer**

## Submit The Inspection Work Order – (Continued)

If you want to a **Create Child WO** for an issue other than **MOLD**, tap on **CREATE CHILD WO** gray bar.

When all the errors are corrected, you can click the **SUBMIT INSP/ UPDATE WO STATUS** gray bar.

## Auto-Generated Child Work Orders

Once the **Inspection Work Order** is Submitted, **Maximo** will **auto-generate** multiple **Child Work Orders** needed from this inspection. In our scenario, there are **27** Child Work Orders Generated.

The work on **ALL** the auto-generated **Child Work Orders** must be completed and closed. **Maximo** then waits **25-days** to auto-generate the **QA Work Order**.

Item of Work Order	Location	Abstract	Status	Craft
50139440	006.10.028.F02.020.BT101	WALLS, Sheetrock with steel framing	WTSCH	PAINTER
50139434	006.10.028.F02.020.BT101	Bathline and shower groutcaulking (B	WTSCH	REPLAYER
50139433	006.10.028.F02.020.BT101	Bathline/Shower test	WTSCH	MAINT
50139449	006.10.028.F02.020.BT101	le sealant/ caulking present amount (al	WTSCH	MAINT
50139432	006.10.028.F02.020	Exterior Wall (Water) test	WTSCH	MAINT
50139427	006.10.028.F02.020.BT101	Seal	WTSCH	MAINT
50139421	006.10.028.F02.020.BT101	Tank	WTSCH	MAINT
50139431	006.10.028.F02.020.BT101	Grouting	WTSCH	MAINT
50139442	006.10.028.F02.020	Bathline and shower groutcaulking (P)	WTSCH	PLASTER
50139446	006.10.028.F02.020	Recent Drappings	WTSCH	EXTERMIN

# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along: End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along: End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form



# After testing your devices...

## Lunch Time!

Please be back in an hour!



## Next Module: Mold Inspection Work Flow Exercises



# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along: End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along: End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

Assigned	Unassigned	All
3	3	3
SOUTH JAMAICA I 10626 19TH STREET TOILET 008.01.003.020.020.BTH01 RepOrder- 06/21/18 DE-0086	SOUTH JAMAICA I 10626 19TH STREET WATERRUNNING 008.01.003.020.020.BTH01 RepOrder- 06/21/18 CN / A/OLD DE-0086	MANHATTAN 599558336 Unscheduled WILLKNOX STAYUP Kitchen 01 CN / A/OLD DE-0086
SOUTH JAMAICA I 10704 19TH STREET WINDOWGLASS 008.03.007.020.020.KIT01 RepOrder- 06/21/18 DE-0086	SOUTH JAMAICA I 10704 19TH STREET WINDOWGLASS 008.03.007.020.020.KIT01 RepOrder- 06/21/18 CN / A/OLD DE-0086	MANHATTAN 599558335 Unscheduled WILLKNOX STAYUP Kitchen 01 CN / A/OLD DE-0086
SOUTH JAMAICA I 10704 19TH STREET ROACHES 008.03.007.020.020 Unit 026 CN / A/OLD DE-0086	SOUTH JAMAICA I 10704 19TH STREET ROACHES 008.03.007.020.020 Unit 026 CN / A/OLD DE-0086	MANHATTAN 599558333 Unscheduled WILLKNOX STAYUP Kitchen 01 CN / A/OLD DE-0086
SOUTH JAMAICA I 10704 19TH STREET CEILING 008.03.007.020.020.KIT01	SOUTH JAMAICA I 10704 19TH STREET CEILING 008.03.007.020.020.KIT01	MANHATTAN 599558332 Unscheduled NEEDSPAINING Kitchen 01 DE-0086



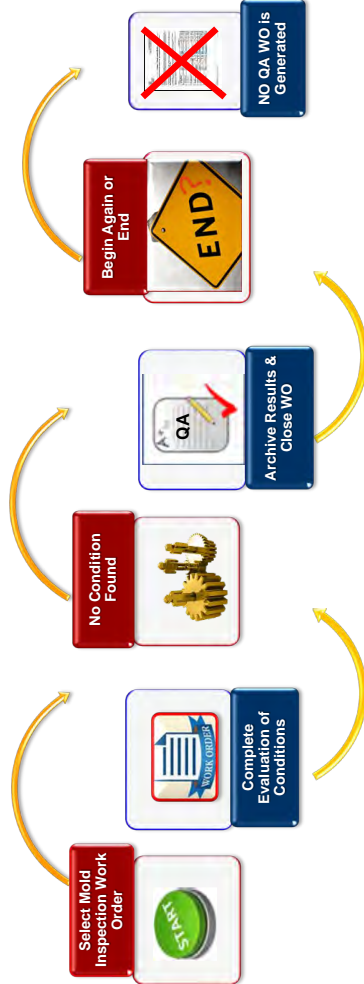
## QA and Re-Inspection Workflow Process





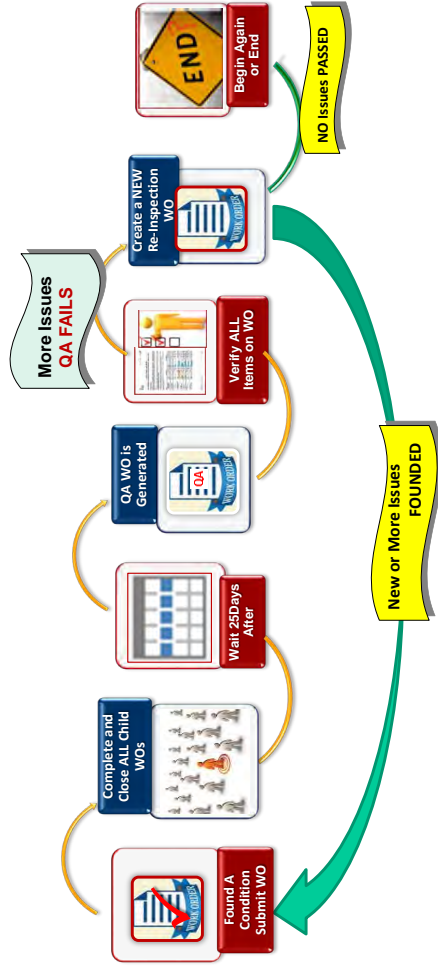
# QA: MOLD/MILDEW WO Workflow

## NO Mold was Found....

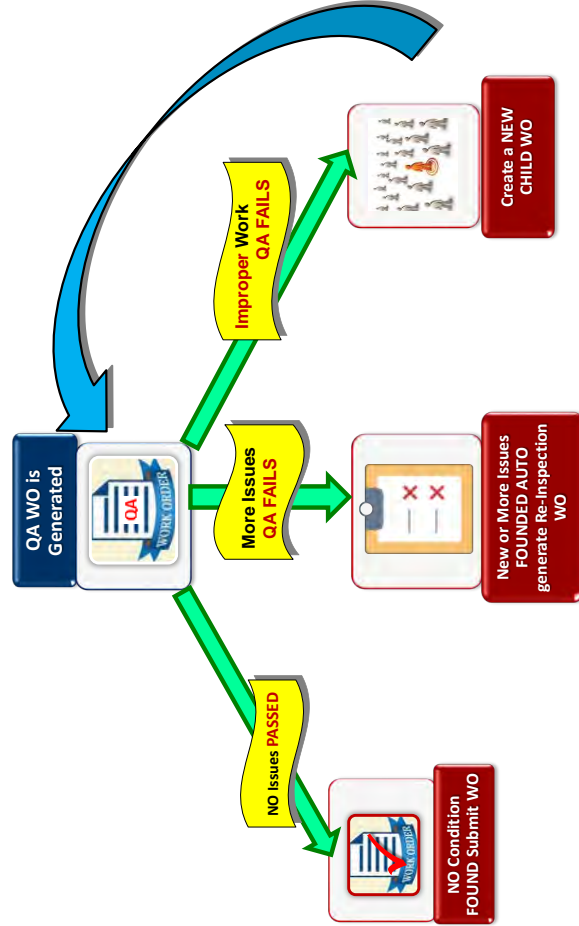


# QA and Re-Inspection Work Order Workflow

## Mold was Found....



## Different Paths for QA ...



## Mold Work Orders Process - QA

The first QA Work Order appears in:

- Show Unassigned Work Orders
- Show Inspection Work Orders

**NOTE:** The QA Work Order is automatically generated in **Maximo 25-days**, and the new **Target Start Date** will be set to **30 days** after the last Child Work Order is closed (or **25-days** after the mold inspection gets closed if no children are created).

The **Target Finish Date** is set to **15 days** after the **Target Start Date**.  
If either **Target Start Date** or **Target Finish Date** fall on a weekend or a holiday, then **next business day**.

Work Order Filtering:	Work Order Number
591139480	59955441
OTST/AVIP Kitchan 01 IN / W/O LD	altrroom 01
Show My Work Orders	
Show Assigned Work Orders	
Show Unassigned Work Orders	
Show Court Work Orders Today	
Show Reinspection Work Orders	
WorkType Filtering:	
Show All Work Types	
Show CM / DM Work Orders	
Show Inspection Work Orders	
Sort By:	Work Order Number
Go To:	
About	

1



## View QA Work Order Details

The start of the QA Process assumes **Mold Growth, Water Damage** or the **Moisture Measurement** question was answered **YES** in the **Mold inspection**. If any were **YES**, this means a condition was found, and therefore, a QA Inspection must be done.

If all were **NO**, this means no issue was found on the inspection, and no QA gets generated.

Remember the QA Work Orders are auto-generated **25 days** after the **last** Child Work Order is closed.

**Description** – Mold QA inspection

1



## View QA Work Order Details – (Continued)

The **Work Order Type** and **Job Plan** have changed in **Mold QA** as they appear on the screen.

**Work Type = IN**  
**Job Plan# = INSMOLDQA**  
**Sub-Work Type = MOLD**  
**Failure Class = MILDEWCONDITION**  
**Problem Code = MILDEWQA**

Tap **START WORK TIME**

1

2



## View and Select Labor

After reviewing the **WO Details** the user is now ready to begin the work. **START TIME** is displayed at the bottom of the screen.

1 **Select Inspection**

2 Tap **NEXT**

1

2



## QA: Evaluation of Conditions

**QA: Task 1: Evaluation of Conditions**  
**WO Inspection State is NONE**  
**Tap INSPECT**

1

2



# QA: Evaluation of Conditions – (Continued)



When a QA is generated, it brings over any of the **NO** answers from the **first 3 questions** from the initial inspection. So the user knows what the previous answers were.

So in this scenario, the question **“Is there Mold Growth?”** The answer was **YES**, and the other 2 answers were **NO**. That’s why the answer to the first question is blank. This way the user can quickly answer the question or address a new issue.

Tap **NONE** next to **Is there mold growth?**

If the user answers **YES** to any of these questions, this triggers the process for **Re-inspection** as the **QA has failed**. The remaining questions on the QA do not have to be answered.

**Maximo** will generate a **Re-inspection Work Order** once user submits their results on the QA.

On the **QA Work Order**, the user shall be asked:  
**Mold Growth?**  
**Water Damage?**  
**Moisture Measurement >= 599**

# QA: Evaluation of Conditions – (Continued)



When a QA is generated, it brings over any of the **NO** answers from the **first 3 questions** from the initial inspection. So the user knows what the previous answers were.

So in this scenario, the question **“Is there Mold Growth?”** The answer was **YES**, and the other 2 answers were **NO**. That’s why the answer to the first question is blank. This way the user can quickly answer the question or address a new issue.

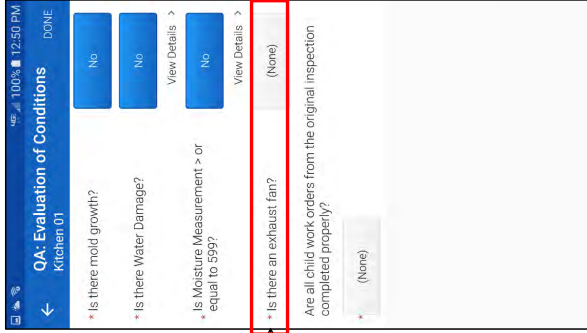
Tap **NONE** next to **Is there mold growth?**

If the user answers **YES** to any of these questions, this triggers the process for **Re-inspection** as the **QA has failed**. The remaining questions on the QA do not have to be answered.

**Maximo** will generate a **Re-inspection Work Order** once user submits their results on the QA.

On the **QA Work Order**, the user shall be asked:  
**Mold Growth?**  
**Water Damage?**  
**Moisture Measurement >= 599**

# QA: Evaluation of Conditions – (Continued)



When a QA is generated, it brings over any of the **NO** answers from the **first 3 questions** from the initial inspection. So the user knows what the previous answers were.

So in this scenario, the question **“Is there Mold Growth?”** The answer was **YES**, and the other 2 answers were **NO**. That’s why the answer to the first question is blank. This way the user can quickly answer the question or address a new issue.

Tap **NONE** next to **Is there mold growth?**

Answer **NO** for **“Is there Mold Growth”** question.

If **NO Mold Growth, Water Damage or Moisture Measurement** was found on the QA Work Order, then the remaining questions on the QA **must be answered**.

**Maximo** checks if the location of the QA Work Order was a bathroom or kitchen, as this drives logic for **Exhaust Fan** question to show.

## QA: Evaluation of Conditions – (Continued)

The **Select Response** Window display 3 options:

- **Notes** (optional)
- **No**
- **Yes**

In the **Notes** field, the user can input free text information.

Tap **YES**

**NOTE:** if the answer is **YES**, **Maximo doesn't auto-generate** a Work Order for the Roof fan.

1

2

## QA: Evaluation of Conditions – (Continued)

The Supervisor shall enter the **CFMs (Cubic Feet Measurement)** at the exhaust vent in the appropriate field.

The **CFM's measurement is a mandatory field.**

Type **26** on the device keyboard.

Tap **DONE** on the device keyboard.

The **Notes** field is optional.

**NOTE:** if **CFM** is less than (<25), **Maximo** will not auto-generate a Work Order to check the **roof fan**.

Tap **DONE**

3

4

1

2

## QA: Evaluation of Conditions – (Continued)

If **NO Mold Growth, Water Damage or Moisture Measurement** was found on the QA Work Order, the user must answer the question verifying if **"All children Work Orders from the original inspection were completed properly."**

If **YES**, the QA Work Order has passed and the process is complete.

If **NO**, the QA Work Order fails because the children Work Orders were not completed properly.

1

## QA: Evaluation of Conditions – (Continued)

**All Children Work Orders from the original inspection were completed properly:**

If the answer is **NO**, the user shall be mandated to create a **Child Work Order** off the **QA Work Order**.

This is to ensure the remaining underlying issue is fixed. Users can create multiple **Children Work Orders**.

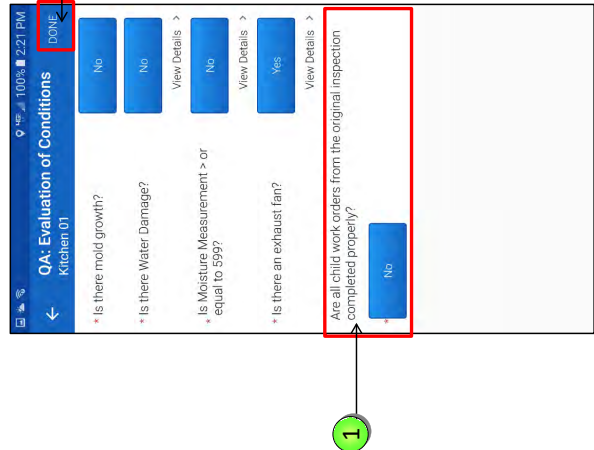
The **Child Work Order(s)** are completed by the responsible party. The process returns to step 1 as this triggers a new **QA Work Order** to get generated.

1

# QA: Evaluation of Conditions – (Continued)

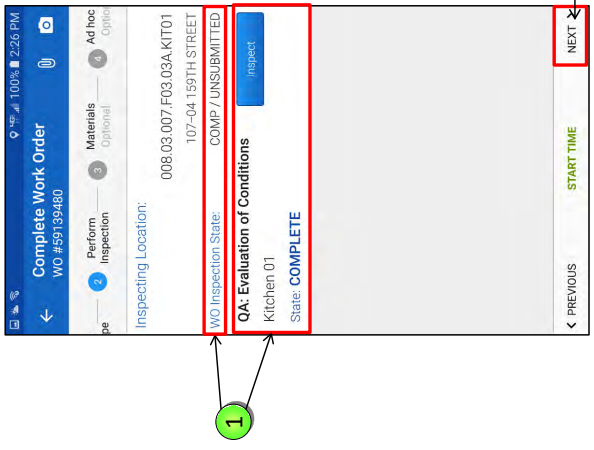
1 The Select Response window display, select **NO**.

2 Tap **DONE**



1 **QA: Evaluation of Conditions** status is now **COMPLETE**, and **WO Inspection State** is **COMP/UNSUBMITTED**.

2 Tap **NEXT**

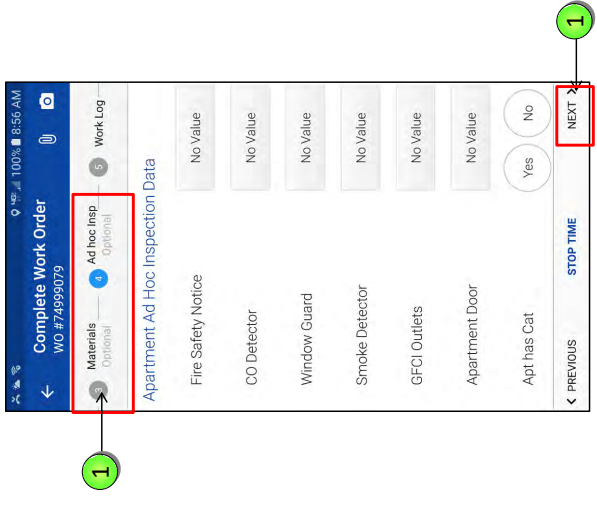


# QA: Complete Work Order

1 Complete the **QA: Work Order** by completing the steps below:

- **Materials: (Optional)** - record any **Materials** used from the Storeroom.
- **Ad Hoc Insp: (Optional)** – record any findings in the apartment not related to Mold Issue.

2 Tap **NEXT**



# QA: Work Log

**Work Log** now contains all the different **Child Work Orders** that were created and completed for this Mold Inspection.

The Supervisor can check what was done, check the quality of work, and what was reported as an issue.

If the Supervisor finds that the reported issues were not resolved correctly that meets NYCHA standards then, then Super can create another Child Work to fix the problem.

In this case, the process starts again.





# QA: Work Log – (Continued)

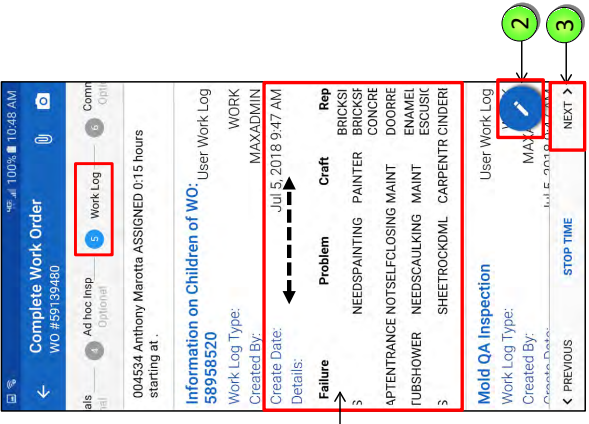
1 Swipe sideways ←→ to the right and left to see a summary of each Child Work Order that was created and completed for this QA.

2 Each **Child Work Order Number** has the **Location, Failure Class, Problem Codes, Responsible Craft,** and the **Repairs and resolution.**

3 The user can view the details for each closed and completed Work Order in **Maximo** desktop.

4 Tap the **pencil** icon to add more information of your findings.

5 Tap **NEXT**

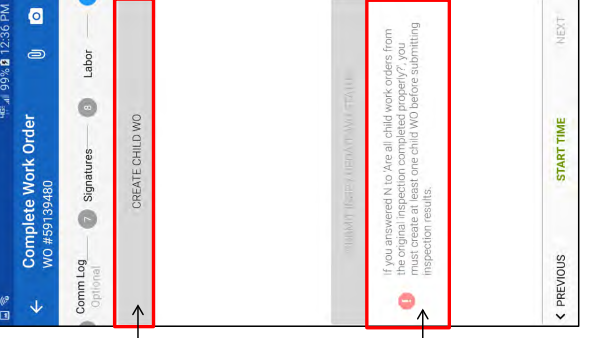


# QA: Submitting The Work Order – (Continued)

1 Complete the process as before in the Mold Inspection for **Comm Log, Signatures, and Labor** screens.

2 Remember if you answered **NO** for the question **"Are all Child Work Order from the Original Inspection completed properly?"** You must create a **Child Work Order** before submitting the **QA Inspection** results.

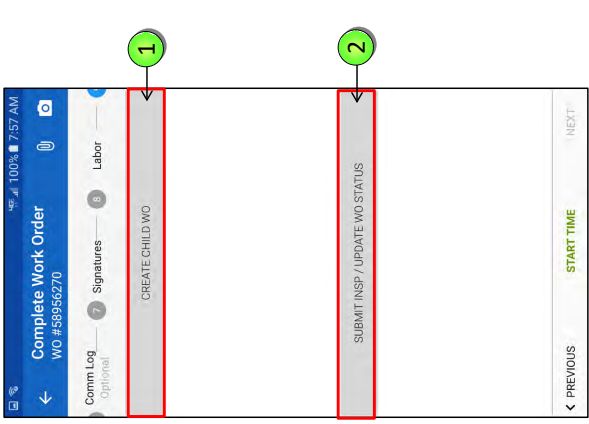
3 In this case, tap **CREATE CHILD WO** gray bar and follow the instruction for creating a **Child or Parent Work Order**.



# QA: Submit The Work Order

1 If you want to a **Create Child WO** for an issue other than mold, tap on **CREATE CHILD WO** gray bar.

2 When all the errors are corrected, you can click the **SUBMIT INSP/ UPDATE WO STATUS** gray bar.



# QA: Different Paths

There are **3 paths** for a **QA Work Order**:

- **FIRST QA** can pass. This will close the original inspection **WO**
- **SECOND QA** can fail immediately if mold growth, water damage or moisture measurement is answered **YES** (i.e., big issues still exist). This would immediately **AUTO-generate** a **REINSPECTION WO** (parent **WO**) upon submission.

When **Re-Inspection WO** and its children are done, it will generate another **QA**.



# QA: Different Paths – (Continued)

There are **3 paths** for a QA Work Order:

- **THIRD** QA can fail because a child Work Order to fix the issues from the **first** inspection wasn't done properly.  
So no mold/water damage/  
moisture was found (all **NO**), but child WO question indicates a failure. In this case they must **manually** create a child WO to fix the improperly done one.
- No **Re-Inspection** WO gets generated here. Once the child they created gets done, then it will **generate** another QA.



# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along; End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along; End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

## End to End Mold QA Work Flow - Summary

You have completed the module!

Please take a break!



**Next Module: Demonstration: End to End Mold Re-Inspection Work Flow**

# Re-Inspection



# Re-Inspection Work Order



The Re-Inspection Work Order is **autogenerated** if you answer **YES** to one of the first 3 questions on the QA (**Evaluation of Conditions**).

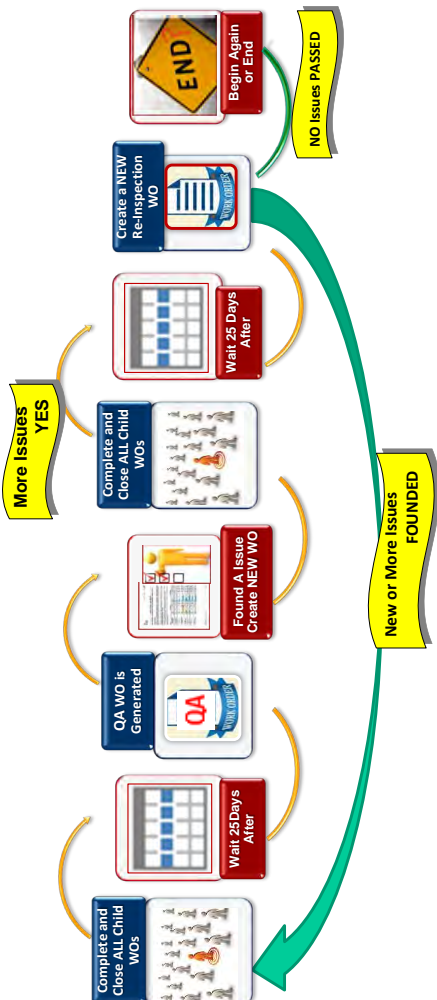
It's a new parent WO that is auto-related to the QA (and the first original inspection).

The **Re-Inspection Work Order** appears in **Show Reinspection Work Orders** and **Show CM/DM Work Orders**.

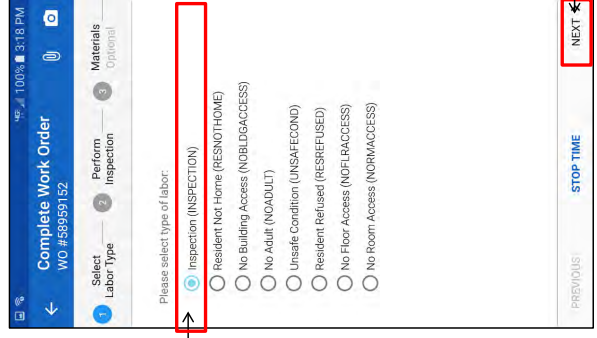
1

# Re-Inspection Work Order Cycle Workflow

## Mold was Found...



# Re-Inspection Work Order



After reviewing the WO Details the user is now ready to begin the work. **START TIME** is displayed at the bottom of the screen.

1 Select **Inspection**

2 Tap **NEXT**

1

2

# Re-Inspection Work Order Details



The **Work Order Type** and **Job Plan** have changed in **Mold QA** as they appear on the screen.

**Work Type = CM**  
**Job Plan# = INSMOLDRE**  
**Sub-Work Type = MOLD**  
**Failure Class = MILDEWCONDITION**  
**Problem Code = MILDEWREINSPECT**

1 Tap **START WORK TIME**

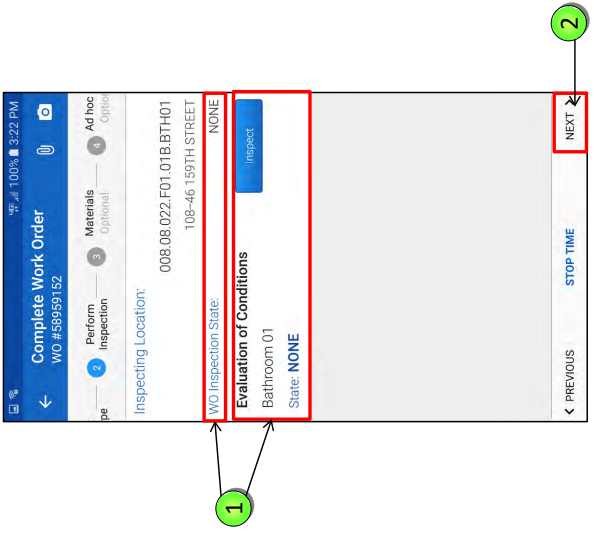
1



# Re-Inspection: Evaluation of Conditions

**1** Re-inspection: Evaluation of Conditions status is now **NONE**, and **WO Inspection State** is **NONE**.

**2** Tap **INSPECT**



# Re-Inspection: Evaluation of Conditions

The **Re-Inspection** will follow the same logic/rules as the original inspection. If an issue is found, another **QA** will be generated after the **Re-Inspection** and its children are completed.

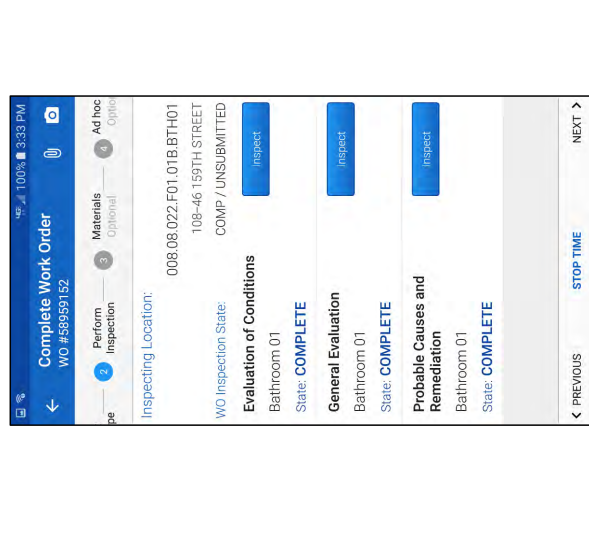
A **Re-Inspection** that is generated based on results from a **QA Work Order** **shall not be** considered a reoccurrence, as it just means the original issue/incident was not properly resolved.



# Re-Inspection: Completing The Work Order

The **Re-Inspection** will follow the same logic/rules as the original inspection. If an issue is found, another **QA** will be generated after the **Re-Inspection** and its children are completed.

A **Re-Inspection** that is generated based on results from a **QA Work Order** **shall not be** considered a reoccurrence, as it just means the original issue/incident was not properly resolved.



If as a result of the **Re-Inspection** there was a new issue, then **Maximo auto-generates** new **Child Work Orders**.

The work has to be completed on **all** the new **Child Work Orders**.

**Maximo** will **auto-generate** a new **QA Work Order 5-days** after closing all the new **Child Work Orders**.

Refer to the information at the beginning of this **Reference Guide**.



# Re-Inspection: Completing The Work Order – (Continued)



# End to End Mold Inspection Work Flow - Summary

You have completed the module!

Please take a break!



Next Module: **Follow Along: End to End Mold Inspection Work Flow**

# Creating Child and Parent Work Orders Manually

Instruction to create a Child and Parent Work Orders NOT related to Mold

## Create a Child Work Order

1

Parent Work Order Number

Default Location

1

Parent Work Order  
58957603

Description  
Enter description

Location  
008.01.003.F03.03A.KIT01

Asset  
Please select...

Work Type  
Please select...

Sub Work Type  
Please select...

Failure Class  
Please select...

## Creating the Child Work Order - (Continued)

1

Enter a Description.

To enter a Long Description, tap below the Long Description field and type a long description.

2

Tap DONE

1

2

Description/Long Description

Description  
Bad paint job

Long Description  
Bad paint job need to sand & repair again.

DONE

# Creating the Child Work Order - (Continued)

1 The **Description** has been added to the Child Work Order.

2 Tap on **Location** if the Child WO is going to be created for a different location within the apartment or even outside the apartment.

3 Tap on **Location**

4 Scroll **Down** for more selections to add this **Child WO**.

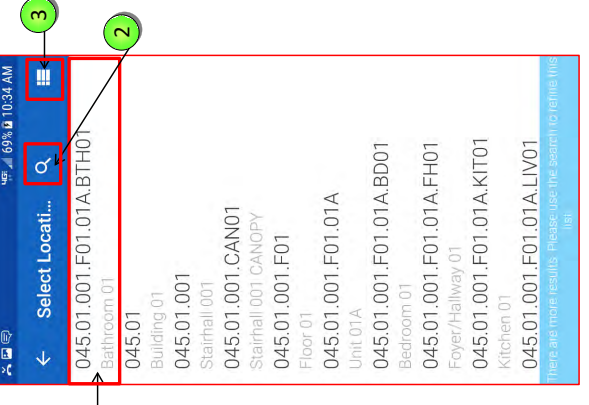


# Creating the Child Work Order - (Continued)

1 The default **Location** appears on the top of the screen. You can select the appropriate location by one of the following methods:

2 Tap the **Search** icon and type the preferred **Location String** or scroll down and select the **Location** you want.

3 Tap on **Location Lookup** button and select the desired **Location**.



# Creating the Child Work Order - (Continued)

1 The **Location Lookup** displays the following locations:

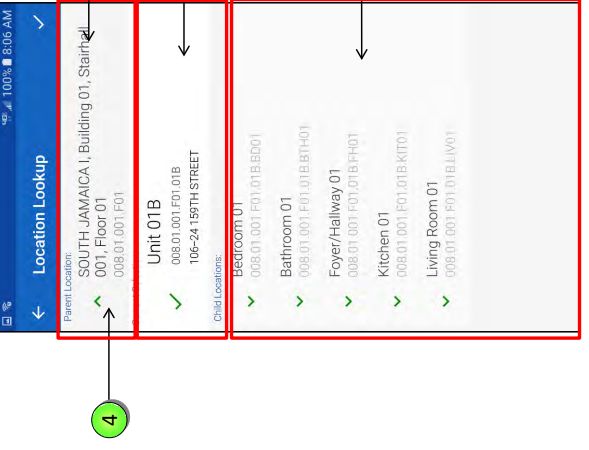
2 **Parent Work Order Location**

3 **Current Location**

4 Different **Child Locations** to choose from.

5 Tap on **^** below the **Parent Location**. It displays all of the apartment in that particular apartment.

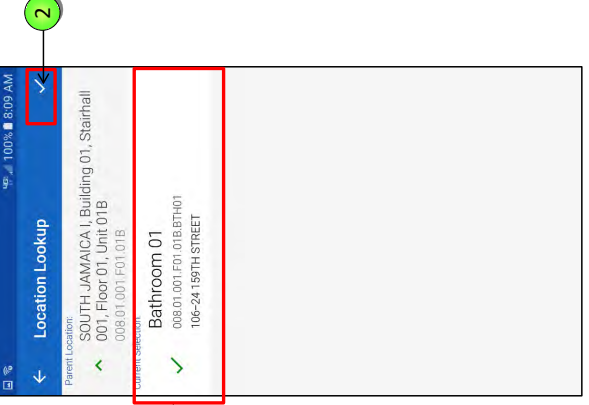
6 Select and tap on the **Location** you want.



# Creating the Child Work Order - (Continued)

1 Tap on the selected location for this **Child Work Order** again.

2 Tap on **✓** the check mark.



# Creating the Child Work Order - (Continued)

Add selections for each of these fields:

- **Failure Class**
- **Problem Code**
- **Craft**

1 Tap Failure Class



# Creating the Child Work Order - (Continued)

1 Tap on the Search icon.  
 Type the first few letters of the Failure Class. The system will filter out the list and display a shorter list to choose from.  
 2 Tap PIPES



# Creating the Child Work Order - (Continued)

1 Select and tap Problem Code.



# Creating the Child Work Order - (Continued)

1 Select a Problem Code from the list.



# Creating the Child Work Order - (Continued)

**1** Tap to select Craft.

# Creating the Child Work Order – (Continued)

**1** Select Craft

# Creating the Child Work Order – (Continued)

**1** Review your selections for this Child WO.  
**2** Tap DONE

# Submitting the Work Order – (Continued)

**1** After the Child Work Order is Created...  
 When all required fields are entered, the Child WO will successfully close.  
**1** Tap SUBMIT INSP / UPDATE WO STATUS



## Recently Create Child Work Order

When you create a Child Work Order on your device, it gets successfully created, it will show up on a new list in **“Show My Recently Created Child WOs”**

**NOTE:** This category will be removed from your list every night so it will not overload your device. However the ticket is still in the system and could be processed as appropriate.



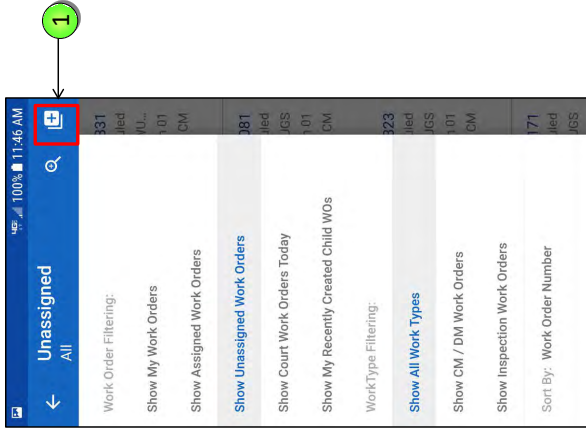
## Creating A Parent Work Order

**Parent Work Orders** can be created from any location, apartments as well as a non-apartment location like a boiler room, a tank room.

From the Work Order list screen tap on the upper right-hand corner icon.

Tap on

**NOTE:** Work Orders generated will not be duplicated, **Maximo** will not allow duplication.



## Type A Description For The Work Order

The only form needed to create a Parent Work Order.

Tap on the **Description** field The **Description** screen displays.



## Type A Description For The Work Order – (Continued)

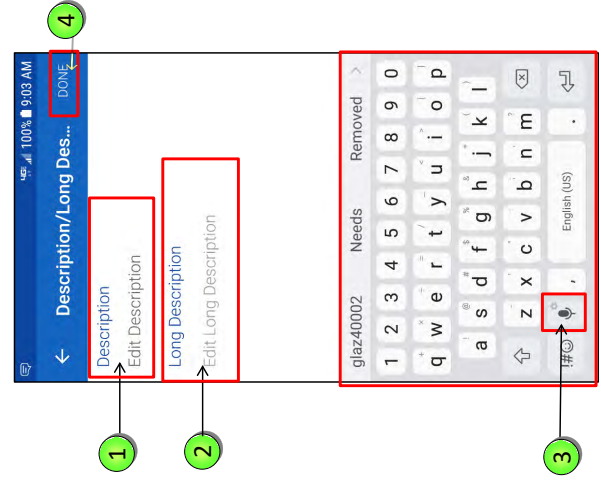
1 Type a brief description in the **Description**. This is **mandatory** and appears on the Work Order header.

2 Tap **Long Description** and type a summary of work done.

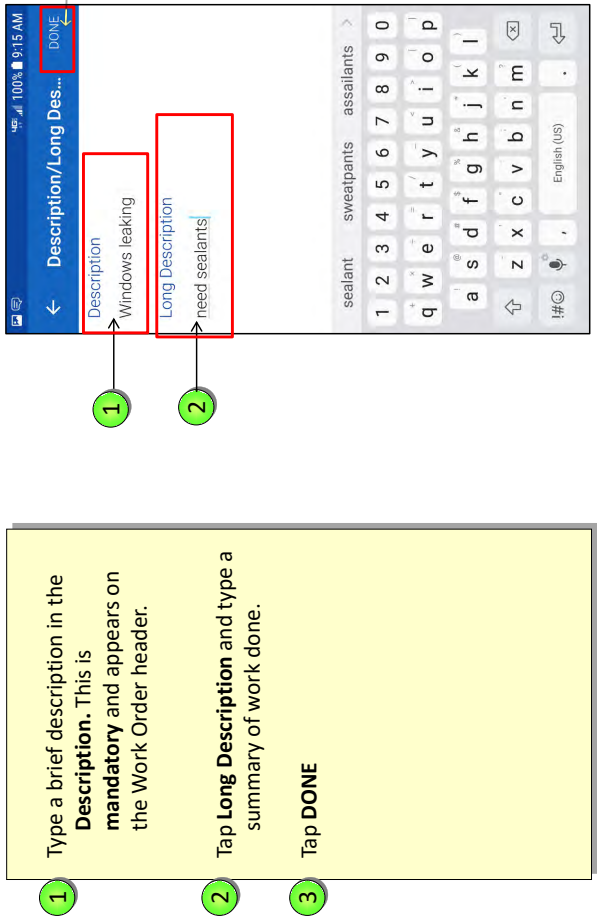
3 Tap on the **“microdevice”** by **“holding down the little gear”** on the bottom left of the keyboard and select the microphone icon and speak to dictate what will be typed.

**NOTE:** Once it is used the system will remember the last time icon used and keep it selected.

4 Tap **DONE**



# Type A Description For The Work Order – (Continued)

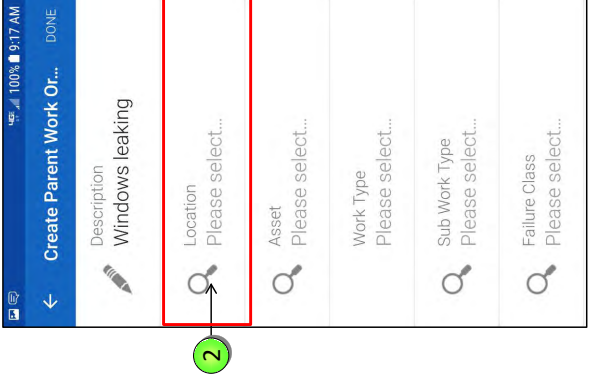


1 Type a brief description in the **Description**. This is **mandatory** and appears on the Work Order header.

2 Tap **Long Description** and type a summary of work done.

3 Tap **DONE**

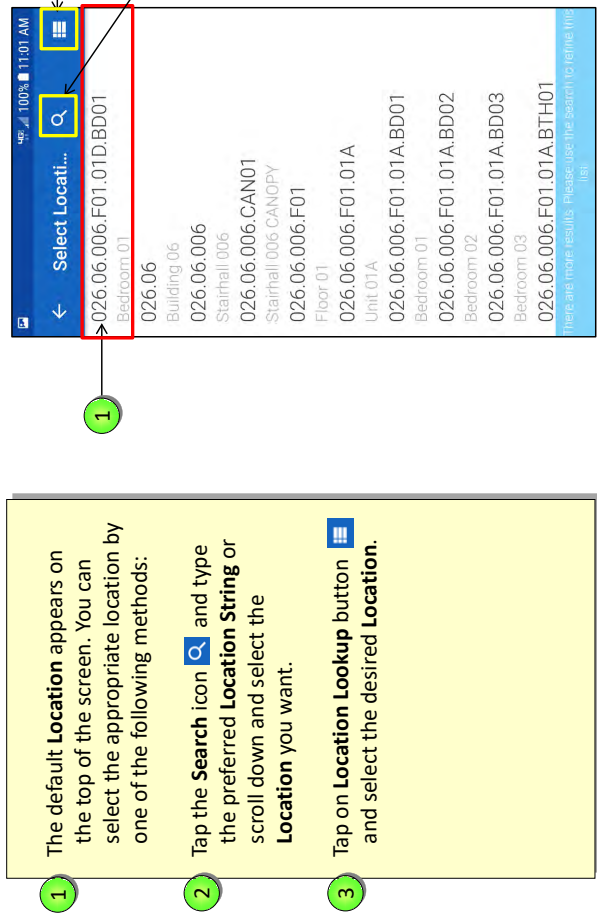
# Choosing A Location



1 You can choose any **Location**, apartment as well as a non-apartment location (within your **Development**).

2 Tap on the **Location** field

# Choosing A Location - (Continued)



1 The default **Location** appears on the top of the screen. You can select the appropriate location by one of the following methods:

2 Tap the **Search** icon and type the preferred **Location String** or scroll down and select the **Location** you want.

3 Tap on **Location Lookup** button and select the desired **Location**.

# Choosing A Location - (Continued)



The **Location Lookup** displays the following locations:

1 **Parent Work Order Location**

2 **Current Location**

3 Different **Parent Locations** to choose from.

4 Tap on below the **Parent Location**. It displays all of the rooms in that particular apartment.

Select and tap on the **Location** you want.

## Choosing A Location - (Continued)

1 Tap on the selected location for this **Parent Work Order** again.

2 Tap on **✓** the check mark.

## Creating a Parent Work Order – (Continued)

1

1 Choose **Failure Class, Problem Code, and Craft**.

Follow the same steps discussed earlier in creating Child Work Order.

## Creating a Parent Work Order – (Continued)

1 Review all of the **Parent Work Order** information.

2 Tap **DONE**

**NOTE:** Work Orders generated will not be duplicated, **Maximo** will not allow duplication

## Creating a Parent Work Order

1

After a Parent Work Order has been successfully created (meaning that it was sent and successfully created in **Maximo**), it will appear in a new list called “**Show My Recently Created Parent Work Orders**”

1 Tap on **Show My Recently Created Parent WOs**

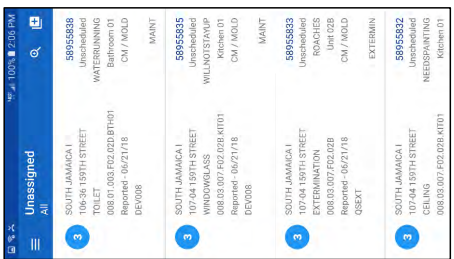
# Creating a Parent Work Order – (Continued)



Any Duplication cannot be created for same Location, Failure Class, Problem Code and Craft.

# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along; End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along; End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form



# End to End Mold Inspection Work Flow - Summary

You have completed the module!

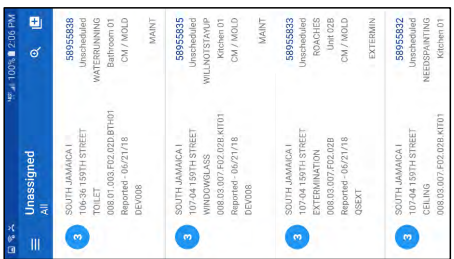
Please take a break!



Next Module: Follow Along: End to End Mold Inspection Work Flow

# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along; End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along; End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form







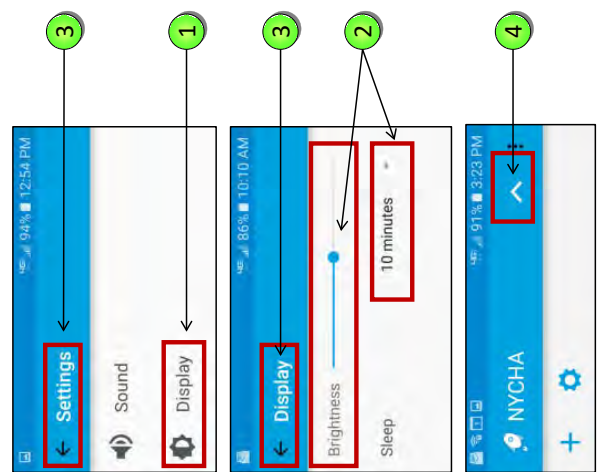
# Display Settings

1 Tap the **Display** icon to open the **Display Settings** for the device.

2 These include a sliding control for **Brightness**, and a **dropdown control for Sleep** to set the number of minutes your screen stays on before it 'goes to sleep' and locks.

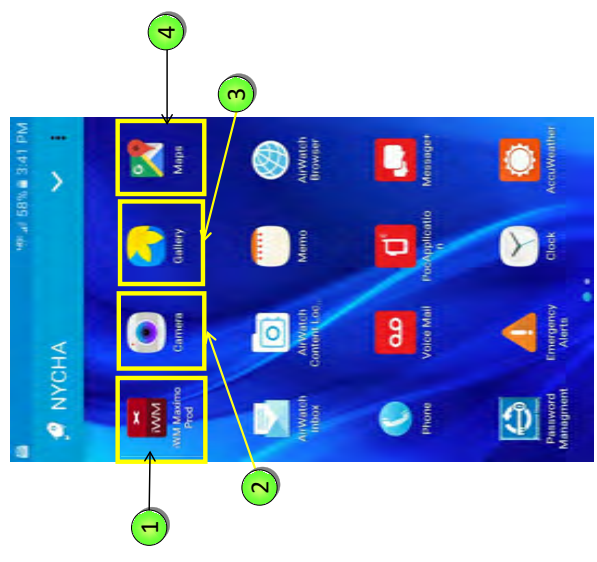
3 To go to the previous screen, tap the **black arrow ←** on the Header.

4 To close out of **Settings and Notifications**, tap the **UPWARD pointing arrow.**



# Display Settings

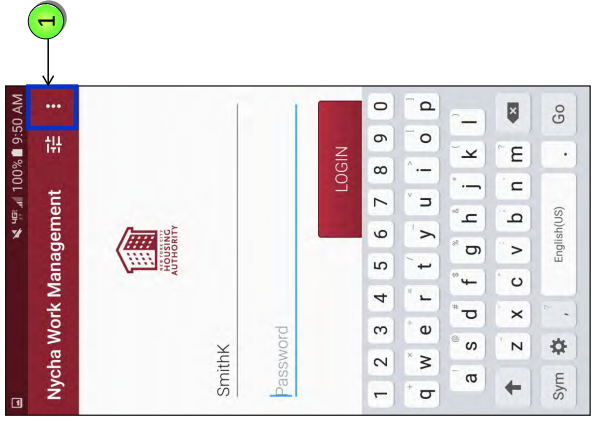
Term	Definition
1 IWM Maximo Prod	Informer Work Management allow, can search, work and close Work Orders.
2 Camera	User friendly, just point and shoot. Pictures taken are saved in the Gallery application.
3 Gallery	A place holder for all pictures taken. Can sort pictures by albums. Can easily search, upload and delete pictures.
4 Maps	Google maps reliable mapping service providing location information.



# Communicating with the Help Desk

1 Easily communicate with the **Help Desk** by sending your logs. Mobile send logs to a public location for **Air-Watch**.

You can now send device logs (when requested by help desk) easily by going to the app Login screen, tapping the **three dots** on the top right corner and selecting **Send Logs**.

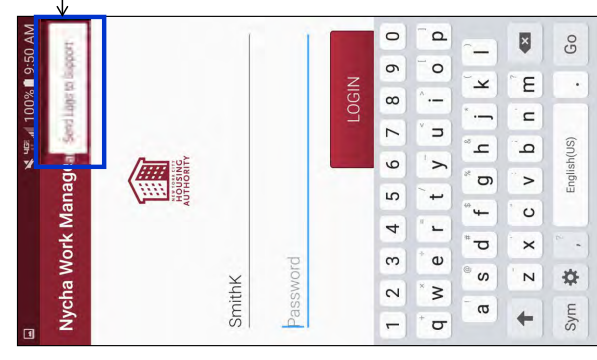


# Communicating with the Help Desk - (continued)

1 This will automatically open your email and the Service Desk email address will be automatically populated in the To field.

Tap **SEND** to send the email with the logs. This will help with issue resolution of devices.

**NOTE:** This should only be done when IT requests logs.



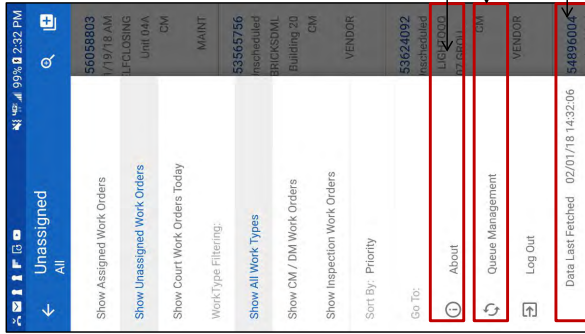
# Troubleshooting - Menu Button - (Continued)

The **Menu** is displayed.

Near the bottom of the **Home Screen** list are 3 items that may help to Troubleshoot your Device.

- About** - Provides confirmation of which version of iWM your device is using.
- Queue Management** - Lists items currently in your Queue.
- Data Last Fetched** - Displays the last Date and Time the Data was updated.

1 Tap on **About**

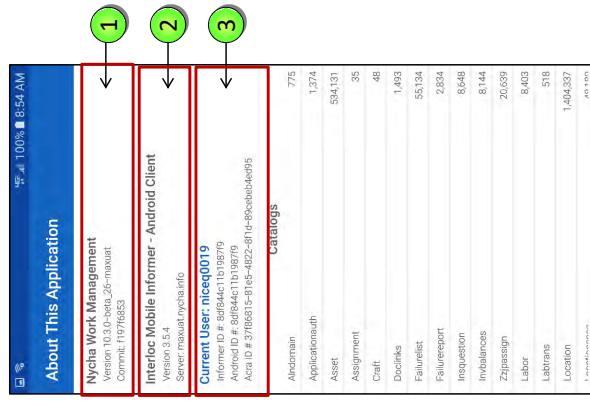


# Troubleshooting - About

If there is a problem with your device, the information in **About This Application** may help the Help Desk Associate in troubleshooting your issue including:

- What Version of iWM your device is using**
- Your Server connection**
- Your ID information**

Tap on **backward arrow** to go to **Main Menu**



# Troubleshooting - Queue Management

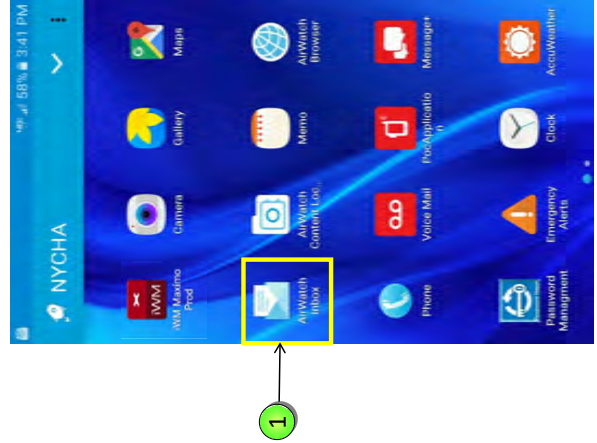
- Tap on Queue Management** to display your Queue.
- Data Last Fetched** - Displays the last Date and Time the Data was updated from **Maximo**.



# Login to your NYCHA Email Account

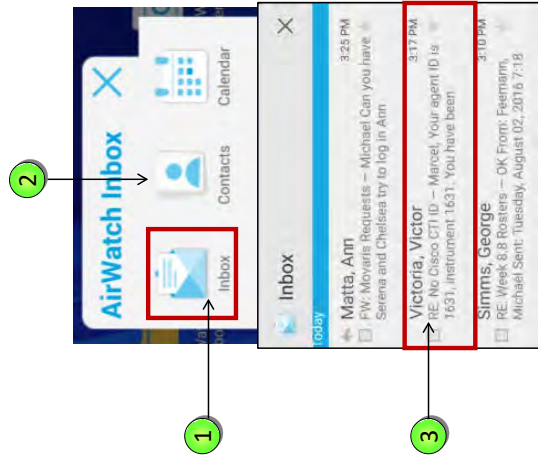
**AirWatch Inbox** is NYCHA's mobile app for Email Inbox, Contacts, and Calendar.

- Tap the AirWatch Inbox app**





## Login to your NYCHA Email Account – (Continued)



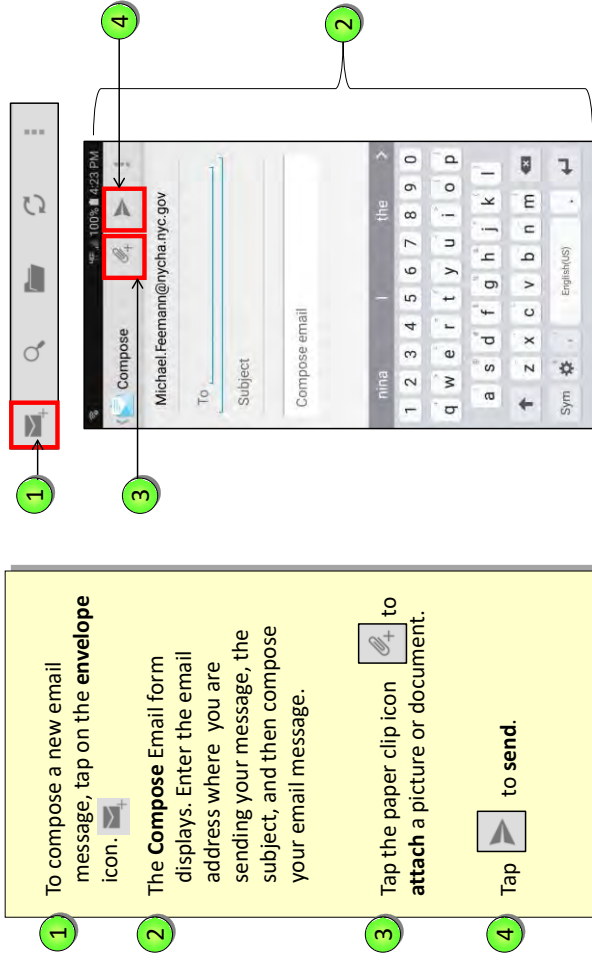
1 The AirWatch Inbox displays your choices: **Inbox, Contacts, or Calendar.**

2 Tap **Inbox**

3 Your **Inbox** displays. Tap a message to display it for reading, forwarding, and/or replying.



## Composing an email message



1 To compose a new email message, tap on the **envelope icon.**

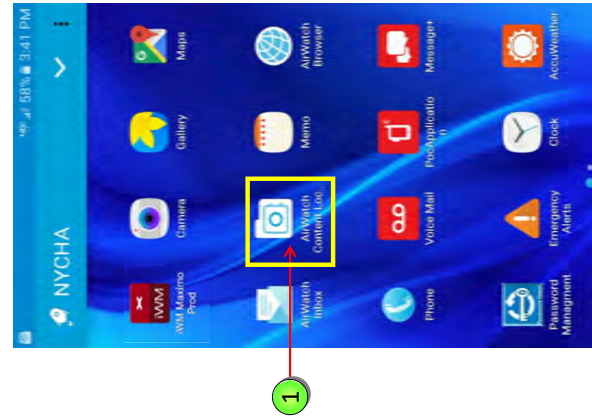
2 The **Compose Email** form displays. Enter the email address where you are sending your message, the subject, and then compose your email message.

3 Tap the paper clip icon to **attach a picture or document.**

4 Tap **send.**



## Accessing the Content Locker



1 **AirWatch Content Locker** is NYCHA's mobile app for viewing training docs on the device.

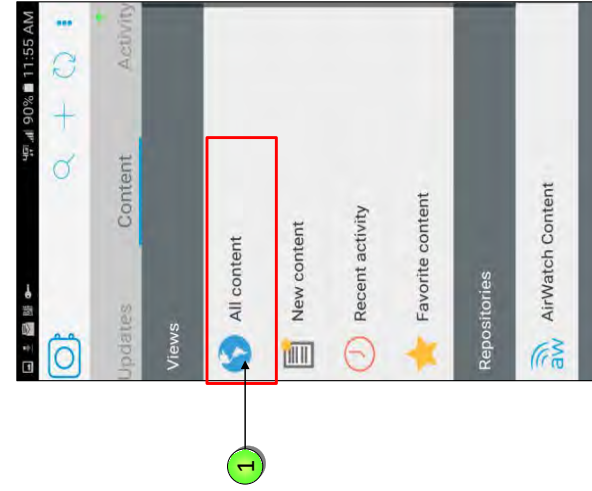


## Accessing the Content Locker – (Continued)

The **Content Locker** load-up screen displays. This could take up to a minute to load the content.

The **Content Locker** main screen displays.

1 Tap on **All Content.**

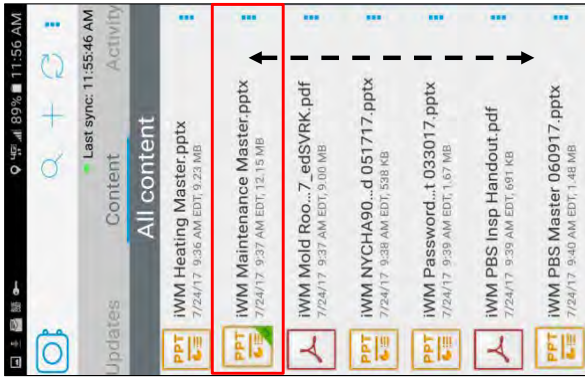


# Accessing the Content Locker – (Continued)

The **All Content** screen displays all the uploaded documents on the device.

Slide your finger up and down until you find the desired document, for example **iWM Maintenance Master**.

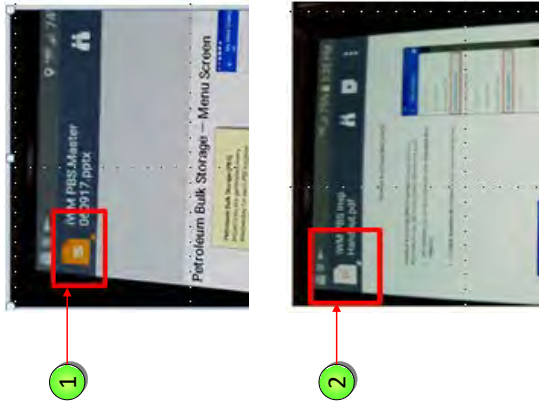
1 Tap on the **iWM Maintenance Master** document to view.



# Accessing the Content Locker – (Continued)

1 Depending on the format of the document, icons with the **letter S** or **P** will be visible (see images on the right).

2 To **Close** a document, tap on those icons **S** or **P** on the upper left.



# Accessing the Content Locker – (Continued)

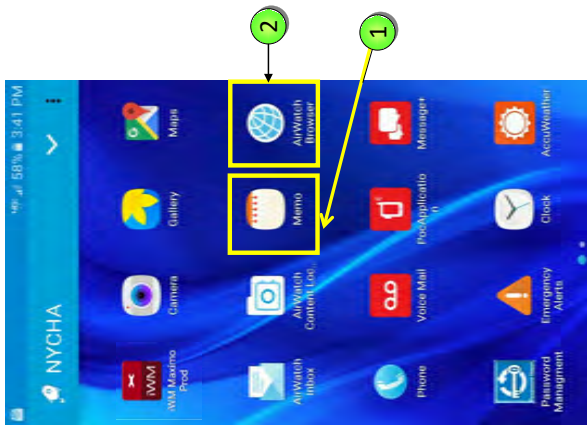
1 Tap on the **EXIT** icon. The **All Content** screen reappears.

Tap on another document to view, or tap the device's **Recent Apps** button on the bottom left to close the **Content Locker**.



# Basic Terms – (Continued)

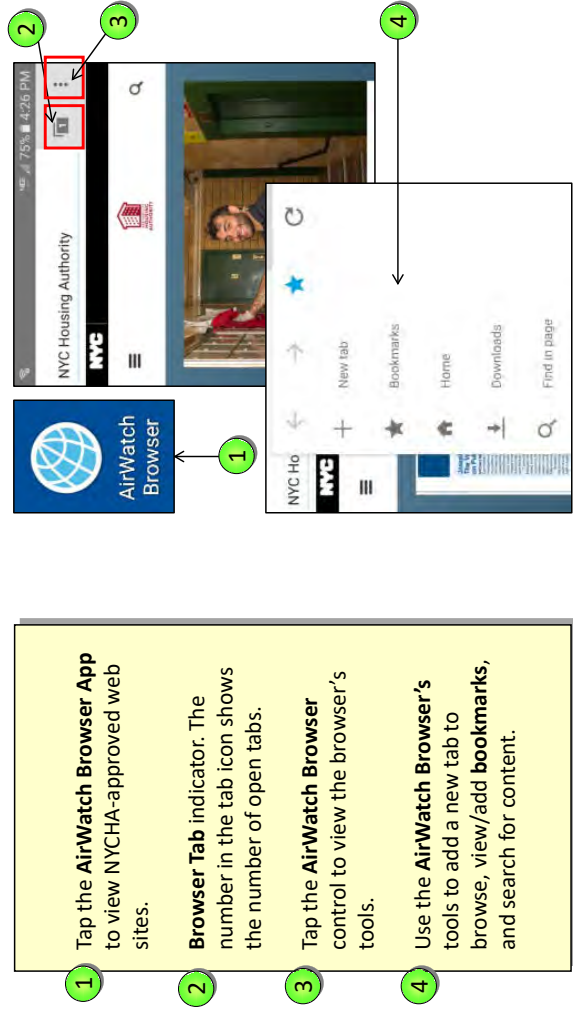
Term	Definition
1 Memo	Create notes and tasks can upload images and draw tool to draw images and voice or talk to create a memo.
2 AirWatch Browser	<b>AirWatch Browser</b> is NYCHA's mobile app for viewing web pages.



# Basic Terms – (Continued)

Term	Definition
1 Phone	Phone Application for making and receiving calls.
2 Voice Mail	Dial 1 to access Voice Mail. Can see a list of messages. Manage, listen and delete messages.
3 Push To Talk Application	Requires business justification and management approval.
4 Message+	Send and receive text messages. Can upload and attach pictures. Can see device phone number.

# AirWatch Browser App, Home Page, and Controls

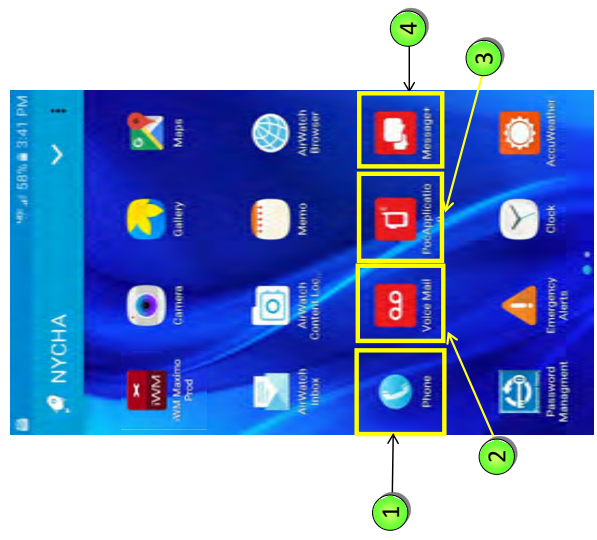


1 Tap the AirWatch Browser App to view NYCHA-approved web sites.

2 Browser Tab indicator. The number in the tab icon shows the number of open tabs.

3 Tap the AirWatch Browser control to view the browser's tools.

4 Use the AirWatch Browser's tools to add a new tab to browse, view/add bookmarks, and search for content.



1 Phone

2 Voice Mail

3 Message+

4 AirWatch Browser

# Switching Between Apps and Closing Apps

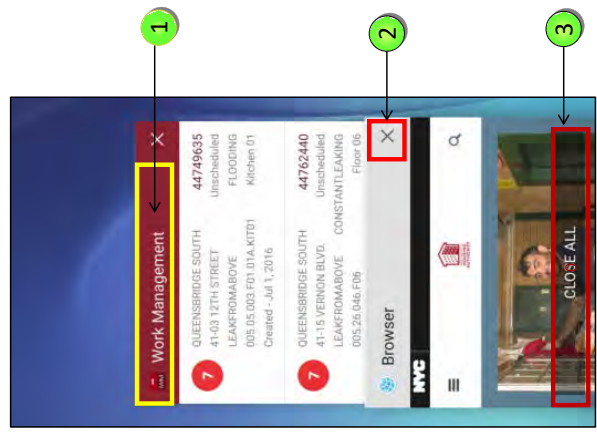
To display a stack of currently open apps, on the Home screen, tap the **Recent Apps icon (left of the Home button)**.

1 Swipe UP or DOWN to scroll through all the open apps.

2 Tap the app you want to use.

3 To close one app, tap and drag a **Recent App** window to the left or right, or tap the X in the right corner.

To close all running apps, tap **CLOSE ALL**.



1 Work Management

2 Browser

3 CLOSE ALL

# Camera/Gallery (not within the iWM App)

1 Take photos with the Camera app and view them in Gallery.

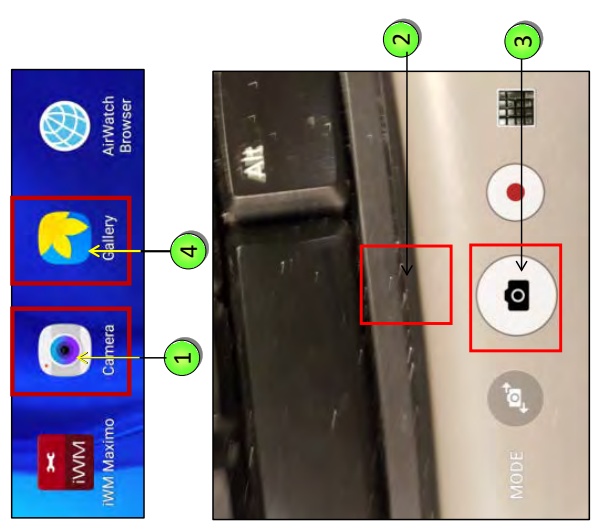
2 Tap the Camera app on the Home screen.

3 Tap the image on the preview screen where the Camera should focus.

4 Tap the Camera icon at the bottom of the screen to take the photo.

5 Tap the Gallery app to view your photo.

6 Camera Etiquette: Do not take photos of other people without their permission.



1 iWM

2 Camera

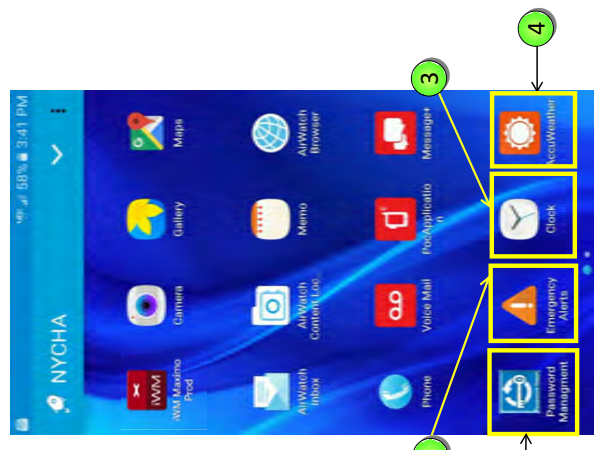
3 Gallery

4 AirWatch Browser



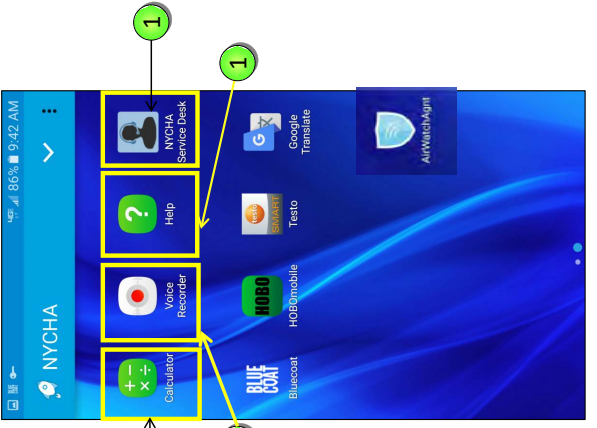
# Basic Terms – (Continued)

Term	Definition
1 Password Management	Password Management will allow you to change your password on the device.
2 Emergency Alerts	Any Alerts such as Amber Alerts and weather alert
3 Clock	Clock application
4 AccuWeather	Check the Weather forecast



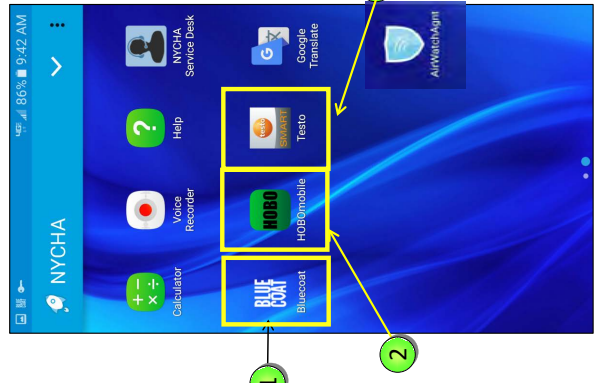
# Basic Terms - (Continued)

Term	Definition
1 Calculator	Use a calculator
2 Voice Recorder	Records Sounds
3 Help	Get help on your handheld device
4 NYCHA Service Desk icon	You can monitor the progress of your ticket from the Service Desk. You can <b>Create, View, Update, or Cancel</b> an existing ticket with the Service Desk.



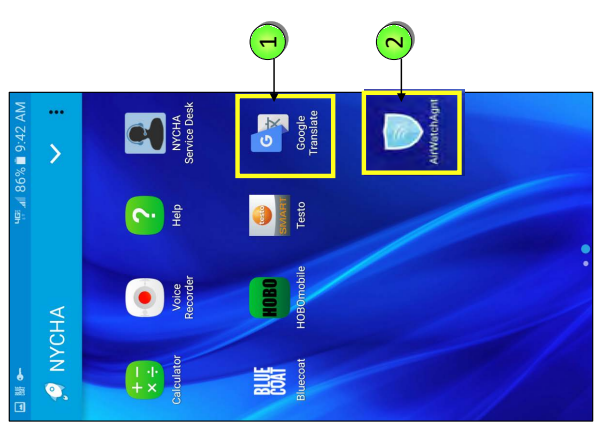
# Basic Terms - (Continued)

Term	Definition
1 Blue Coat	Is a "Blacklist" browser security overlay which prevents users from accessing inappropriate websites
2 HOBOMobile App	HOBO along with Bluetooth will enable you to record the temperature and other environmental readings in the room. You can connect and sync your "data logger device". Used by HPT workers.
3 Testo	Software for Moisture testing devices for Mold and Mildew.



# Basic Terms - (Continued)

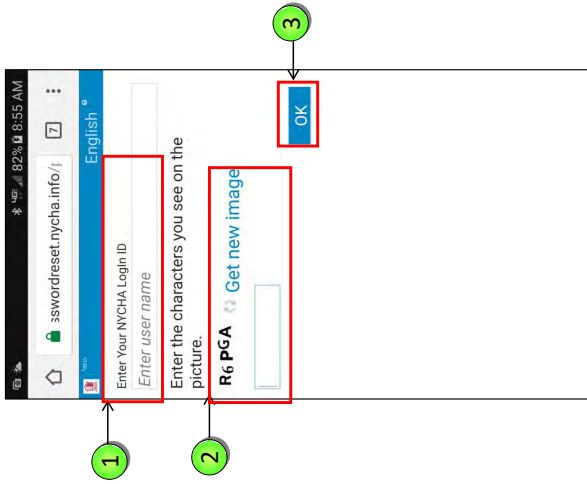
Term	Definition
1 Google Translate	Is an Android application that allows users to easily and accurately translate words and phrases across 90 languages
2 AirWatch Agent	Internal USE Only. Not to be used.



## Update your password

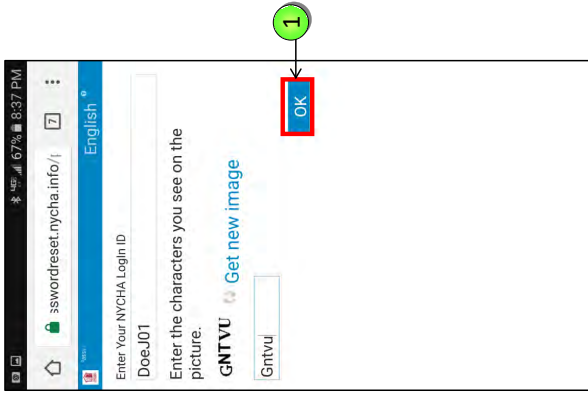
- 1 If the Maximo server does not find the user NYCHA Login ID automatically, type your **LAN ID** or **Login ID**
- 2 Tap in the **Text Box Below** and type the letters you see above it (the Captcha).
- 3 **NOTE:** If the image is not clear you can click on **Get New Image** to get a clearer image to type.

Click **OK**



## Update your password - (Continued)

- 1 Tap the **OK** button.

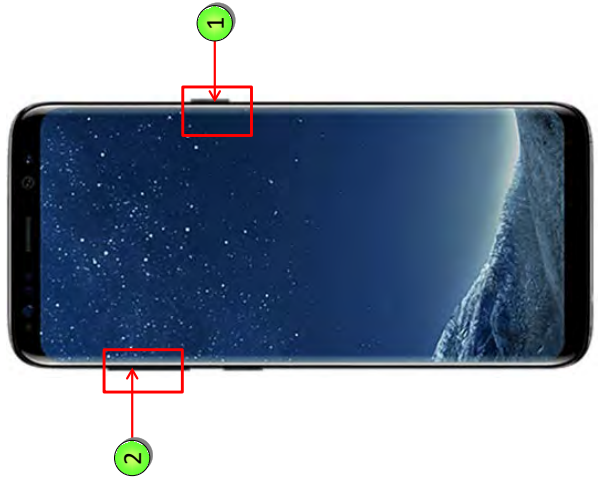


## Troubleshooting - Taking a Screenshot

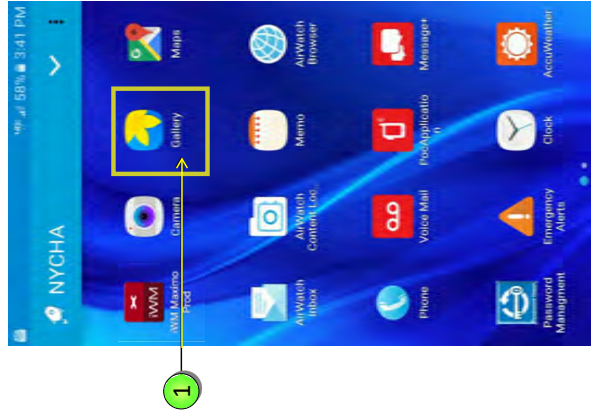
- 1 Now you are ready to take a screenshot of your **Display**.
- 2 Simply press the **Power/Lock Screen** button and
- 3 The **Volume** button simultaneously

You will hear the **Camera** click and your display will momentarily shrink and fade away.

You have successfully taken a Screenshot of your current display.



- 1 You now have the Screenshot image in your **Gallery**.



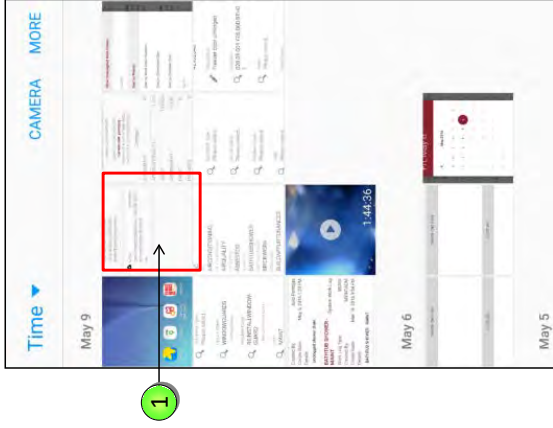
## Troubleshooting - Taking a Screenshot - (continued)



## Troubleshooting - Taking a Screenshot - (Continued)

1

Tap on the screenshot image that was just taken.



## Troubleshooting - Contacting the Service Center

There are **TWO** methods of contacting the Help Desk:

The best method to contact The Service Center is by tapping on icon **NYCHA Service Desk icon** on your device.

You can **Create, View, Update, or Cancel** an existing ticket with the Service Desk.

You can monitor the progress of your ticket from the Service Desk.



## Troubleshooting - Contacting the Service Center

The second method is by calling the Service Center:

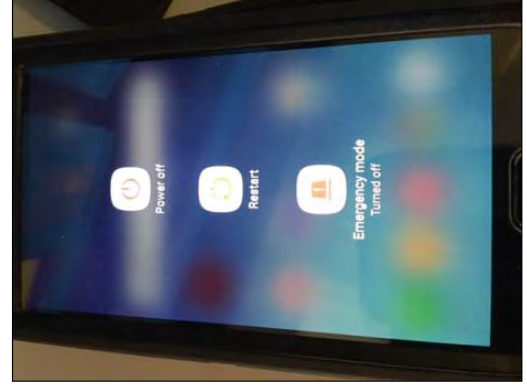
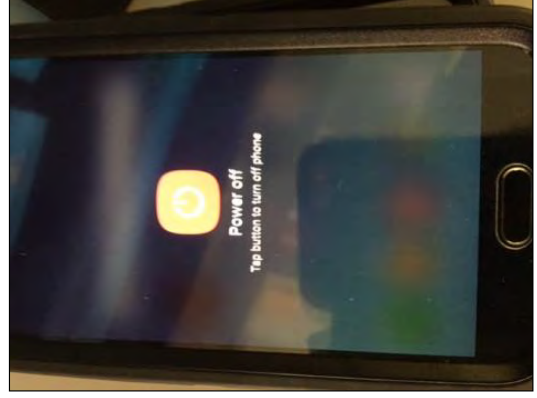
The Service Center is available M-F 8:30am to 4:30pm.

Please call **212.306.7000**

**Select Option 1.**

Critical or very important requests should always be called into the Service Center during scheduled hours to speak to one of the analysts. Only non-critical issues should be emailed to the Service Center.

## Power Off The Device



# Troubleshooting - Queue Management

1 Tap on Queue Management to display your Queue.

2 Data Last Fetched – Displays the last Date and Time the Data was updated from Maximo.



# Troubleshooting - Queue Management - (Continued)

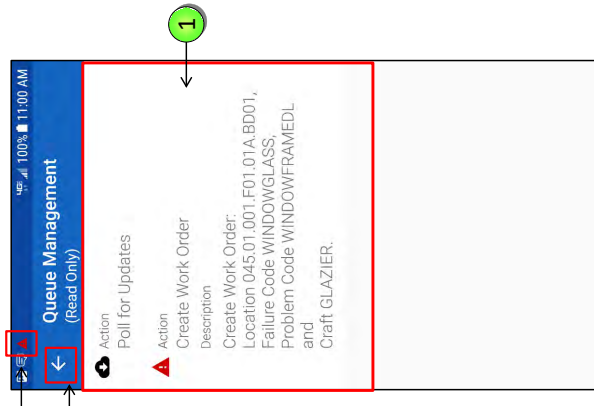
1 Queue Management displays Items currently in QUEUE.

2 iWM puts an entry in Queue Management, every time a Work Order is edited and then sends it to Maximo.

3 If there are a few entries, iWM is not communicating with Maximo. If you are on Wi-Fi, Get Off of Wi-Fi. If entries do not disappear, call the Service Center for help.

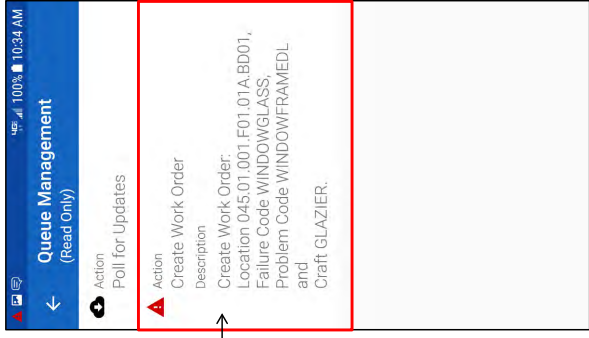
4 On the Status Bar shows the Emergency Alert icon

5 Back to Main Menu



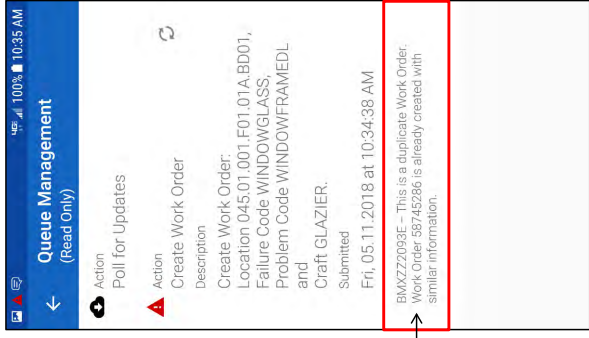
# Errors After A Work Order Is Closed

1 After the Work Order is Created... All the information is transferred to Maximo where it is checked for any duplication. Any duplication will appear in the Queue Management and the Work Order is not created.



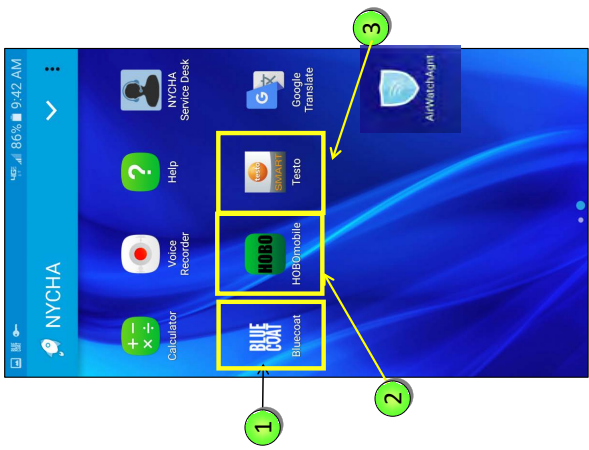
# Errors after a WO is closed - (Continued)

1 The error that needs to be fixed in Maximo shows. The second Work Order was not created because it is a duplicate of another Work Order.



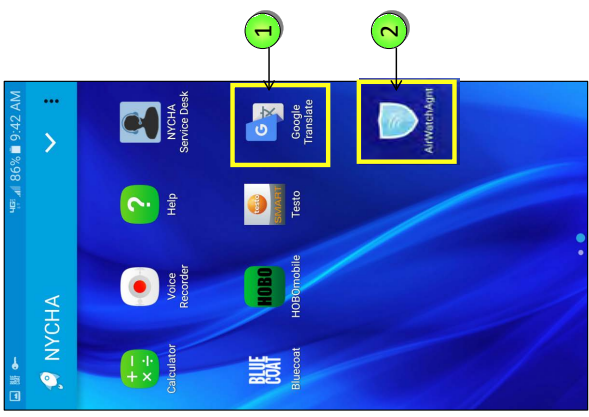
## Basic Terms - (Continued)

Term	Definition
<b>1 Blue Coat</b>	Is a "Blacklist" browser security overlay which prevents users from accessing inappropriate websites
<b>2 HOBOMobile App</b>	HOBO along with Bluetooth will enable you to record the temperature and other environmental readings in the room. You can connect and sync your "data logger device". Used by HPT workers.
<b>3 Testo</b>	Software for Moisture testing devices for Mold and Mildew.



## Basic Terms - (Continued)

Term	Definition
<b>1 Google Translate</b>	Is an Android application that allows users to easily and accurately translate words and phrases across 90 languages
<b>2 AirWatch Agent</b>	<b>Internal USE ONLY. Not to be used.</b>



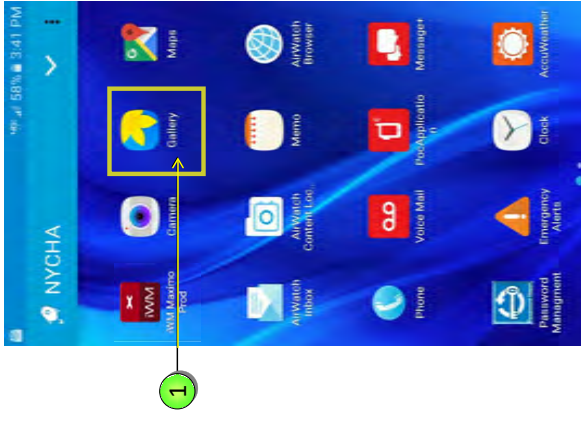
## Troubleshooting - Taking a Screenshot

- 1** Now you are ready to take a screenshot of your **Display**.
  - 1** Simply press the **Power/Lock Screen** button and
  - 2** The **HOME** button simultaneously
- You will hear the **Camera** click and your display will momentarily shrink and fade away.
- You have successfully taken a Screenshot of your current display.



## Troubleshooting - Taking a Screenshot - (continued)

- 1** You now have the Screenshot image in your **Gallery**.



# Check Your Understanding

Answer the following statements as **True or False**:

- 1. For optimum performance update the iWM application when requested.  
**True or False**
- 2. Expect total privacy of personal information and data when using a NYCHA device.  
**True or False**
- 3. Every time your network password changes, your device's email password automatically changes.  
**True or False**



# NYCHA Smart Device Policies

## Limited Personal Use

- Using NYCHA PDD equipment for purposes unrelated to NYCHA business activities is prohibited. However, limited personal use is permitted if kept within reasonable bounds. Users are expected to exercise common sense and good judgment when using NYCHA networks and other assets for personal use to ensure that it does not interfere with the performance of their job duties.
- Please note that “acceptable personal use” does not include use for personal gain or for the promotion of any business other than NYCHA, nor does it include any personal use that could have a negative impact on NYCHA business systems and network performance.



# NYCHA Smart Device Policies - (Continued)

The smart device that you have just received is the property of NYCHA and is solely for uses authorized by NYCHA;

- There is no reasonable expectation of privacy when using your NYCHA smart device
- Any information saved on any smart device owned by NYCHA is the property of NYCHA and may be subject to monitoring
- Unauthorized altering of or tampering with your NYCHA smart device is prohibited.

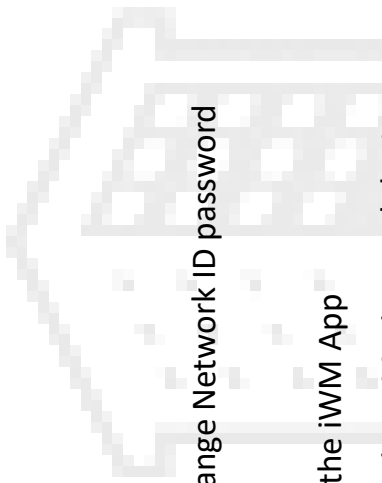


# Mobile Updates and Troubleshooting - Summary

You have completed this module!

You should be able to:

- Update device software
- Access Password app to change Network ID password
- Set up the email
- Update to new versions of the iWM App
- Troubleshoot Outages to Verizon, Maximo and the Internet
- Identify where to go for Help and Support





# Course Summary

## You have completed this course!

### You should be able to:

- Use the iWM application on your device
- Find and choose Work Orders
- Perform your work and edit the Work Order
- Create a QA and Re-Inspection Work Orders
- Create Parent and Child Work Orders
- Demonstrate your ability to complete a Work Order
- Troubleshoot basic device and application errors

# iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search and Select WOs from Menu List
- 3. Demonstration: End to End Mold Inspection Work Flow
- 4. Follow Along; End to End Mold Inspection Work Flow
- 5. Demonstration: End to End QA Inspection Work Order
- 6. Follow Along; End to End QA Inspection Work Flow
- 7. Demonstration: End to End Re-Inspection Work Flow
- 8. Mold Inspection Work Order Exercises
- 9. Conclusion: FAQs, Pet Policy, Kit Overview, Class Evaluation Form

Unassigned	All
<p>3 SOUTH JAMAJCA I 59958308 Unchecked</p> <p>10636 19TH STREET WATERBURNING TOILET 098301.003.032.028.BT01 Bathrooms 01 CM / MOLD DE/008</p> <p>MANIT</p>	<p>3 SOUTH JAMAJCA I 59958305 Unchecked</p> <p>10704 19TH STREET WINDOWGLASS WILLKINS STAYIP Kitchen 01 CM / MOLD DE/008</p> <p>MANIT</p>
<p>3 SOUTH JAMAJCA I 59958303 Unchecked</p> <p>10704 19TH STREET EXTERRINATION ROACHES 098303.007.032.028.UH1026 Reproter-09/27/18 CM / MOLD DE/008</p> <p>EXTERRIN</p>	<p>3 SOUTH JAMAJCA I 59958302 Unchecked</p> <p>10704 19TH STREET CEILING NEEDSPARTING 098303.007.032.028.KT01 Kitchen 01</p>

## Q & A Session

## Conclusion: Final Check List

- Return NYCHA Policy Device Form Signed
- Class Evaluation Form





## **MOLD INSPECTION 2.0**

## MOLD INSPECTION 2.0

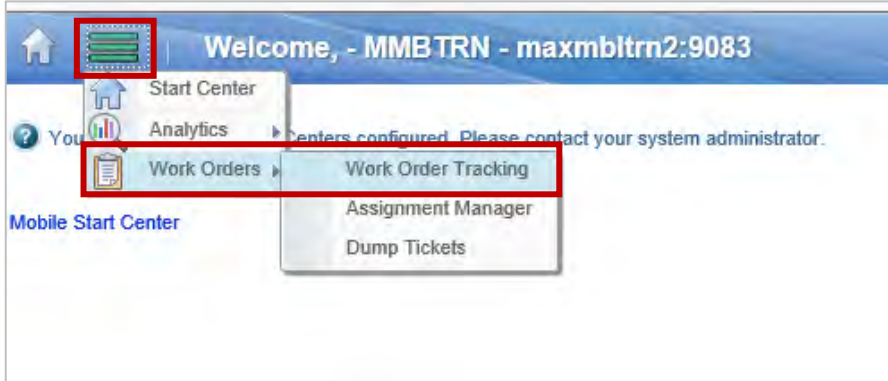
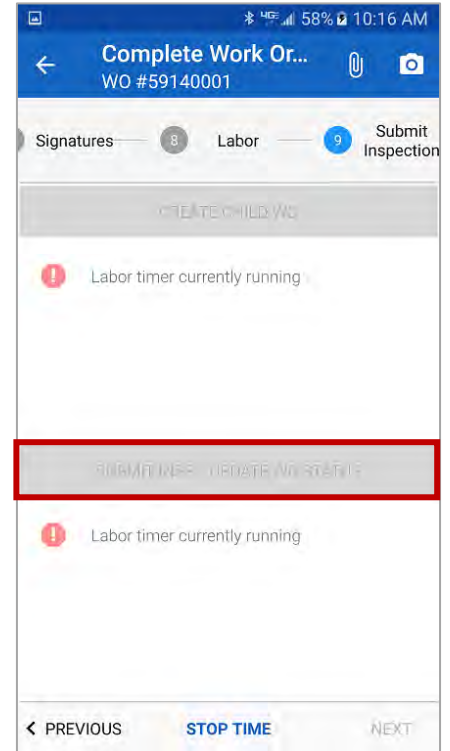
This document describes the process to check Maximo for the Child Work Orders and view the QA Inspection WO that gets generated, once the Mold Inspection Work Order is submitted.

Depending on the information gathered during Evaluation of Conditions, General Evaluation and Probable Causes and Remediation, Child Work Orders get created in the background to remedy those situations.

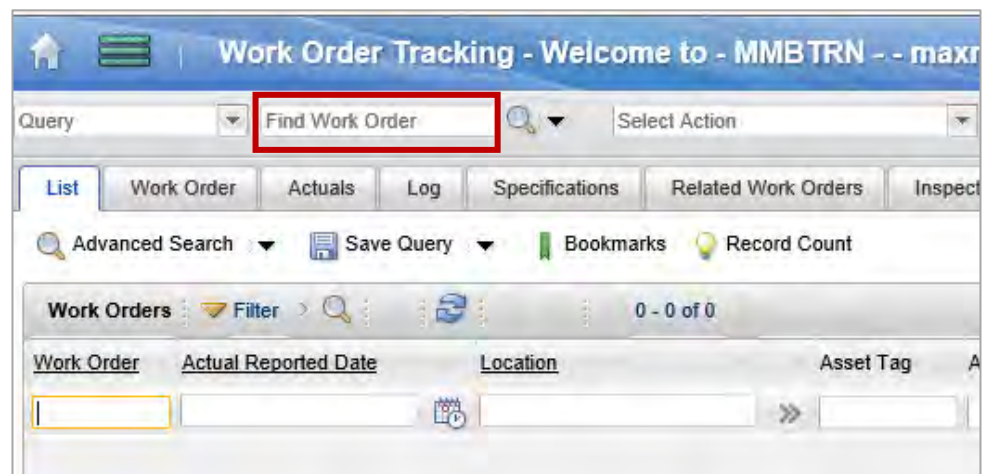
Five business days after all the Child Work Orders are closed, the QA Inspection Work Order gets auto-generated.

The following steps outline the process:

1. Log into Maximo (Log into the training instance of Maximo).  
<http://clamxt03:7070/maximo/ui/maximo.jsp>  
User ID: nices0XXX  
Password: pdt@2040
2. Click the Menu button.  
Go to Work Orders > Work Order Tracking



3. In the **Find Work Order** search text box, enter the Mold Inspection Work Order number.  
Hit the Enter key.





## Mold Inspection 2.0

4. The Work Order details display on the **Work Order** tab.

Work Order Tracking - Welcome to - MMBTRN - - maxmbtrn2:9083

Query Find Work Order Select Action

List **Work Order** Actuals Log Specifications Related Work Orders Inspection Pesticide Details

Temperature - F°: 82.00 Wind Chill - F°: 89.40

Work Order: ML5093399 \* MOLD PILOT TRAINING DAYS x

Asset: >>

Location: 008.03.007.F01.01C.LIV01 >> Living Room 01

Classification: LIVING

Address: 107-04 159TH STREET

Development: SOUTH JAMAICA I

Managed By: 008 SOUTHJAM

Property Management: QUEENS/SI - NGO

Work Type: CM

Sub-Work Type: MOLD

VI Child Type:

Dust Wipe Pending?

Failure Class: MILDEWCONI >> Mold/Mildew Condition

Problem Code: MILDEW >> Mildew

Job Plan: INSMOLDCM >>

Craft: SUPT >>

5. Click on the **Related Work Orders** tab. The Child Work Orders that got created display.

Work Order Tracking - Welcome to - MMBTRN - - maxmbtrn2:9083

Query Find Work Order Select Action

List Work Order Actuals Log Specifications **Related Work Orders** Inspection Pesticide Details Mold / Mildew / Excessive Moisture Plans

Work Order: ML5093399 \* MOLD PILOT TRAINING DAYS x Site: QS

Children of Work Order ML5093399 Filter 1 - 4 of 4

Sequence	Work Order	Summary	Location
>	61487154 >>	Leak - above/beside investigate	008.03.007.F01.01C.LIV01 >>
>	61487155 >>	WALLS: Sheetrock with steel framing	008.03.007.F01.01C.LIV01 >>
>	61487158 >>	Cockroaches	008.03.007.F01.01C >>
>	61487157 >>	WALLS: Sheetrock with steel framing	008.03.007.F01.01C.LIV01 >>

## Mold Inspection 2.0

- Five days after the last Child Work Order is closed, Maximo auto generates a QA Inspection Work Order. The QA Inspection Work Order is displayed under Related Work Orders.

The screenshot displays the Maximo Work Order Tracking interface. At the top, the title bar reads "Work Order Tracking - Welcome to - MMB TRN - - maxmbtrn1:9082". Below the title bar, there is a search bar with "Find Work Order" and a "Select Action" dropdown. A navigation menu includes "List", "Work Order", "Actuals", "Log", "Specifications", "Related Work Orders", "Inspection", "Pesticide Defald / Mildew / Excessive Moisture", "Asbestos", "PM Steps", and "Paint".

The main content area shows a work order for "ML5093399" with a status of "COMP" and a site of "QS". Below this, there is a section titled "Children of Work Order ML5093399" with a filter and "1 - 4 of 4" items. The table below lists these children work orders:

Sequence	Work Order	Summary	Location	Status	Craft	Priority
	61487155	WALLS: Sheetrock with steel framing	008.03.007.F01.01C.LIV01	CLOSE	CARPENTR	3
	61487157	WALLS: Sheetrock with steel framing	008.03.007.F01.01C.LIV01	CLOSE	PAINTER	3
	61487154	Leak - above/beside investigate	008.03.007.F01.01C.LIV01	CLOSE	MAINT	3
	61487158	Cockroaches	008.03.007.F01.01C	CLOSE	EXTERMIN	3

Below the children work orders, there is a section titled "Related Work Orders" with a filter and "1 - 1 of 1" item. The table below lists this related work order:

Work Order	Description	Class	Status	Craft
61487159	Mold QA Inspection	WORKORDEF	APPR	SUPT

- Depending on the QA Inspection findings/responses, a Re-Inspection Work Order gets generated if the QA Inspection fails. The Re-Inspection Work Order will also display under Related Work Orders.